Victaulic General Catalog

General Catalog

G-103
UPDATED 10/2011

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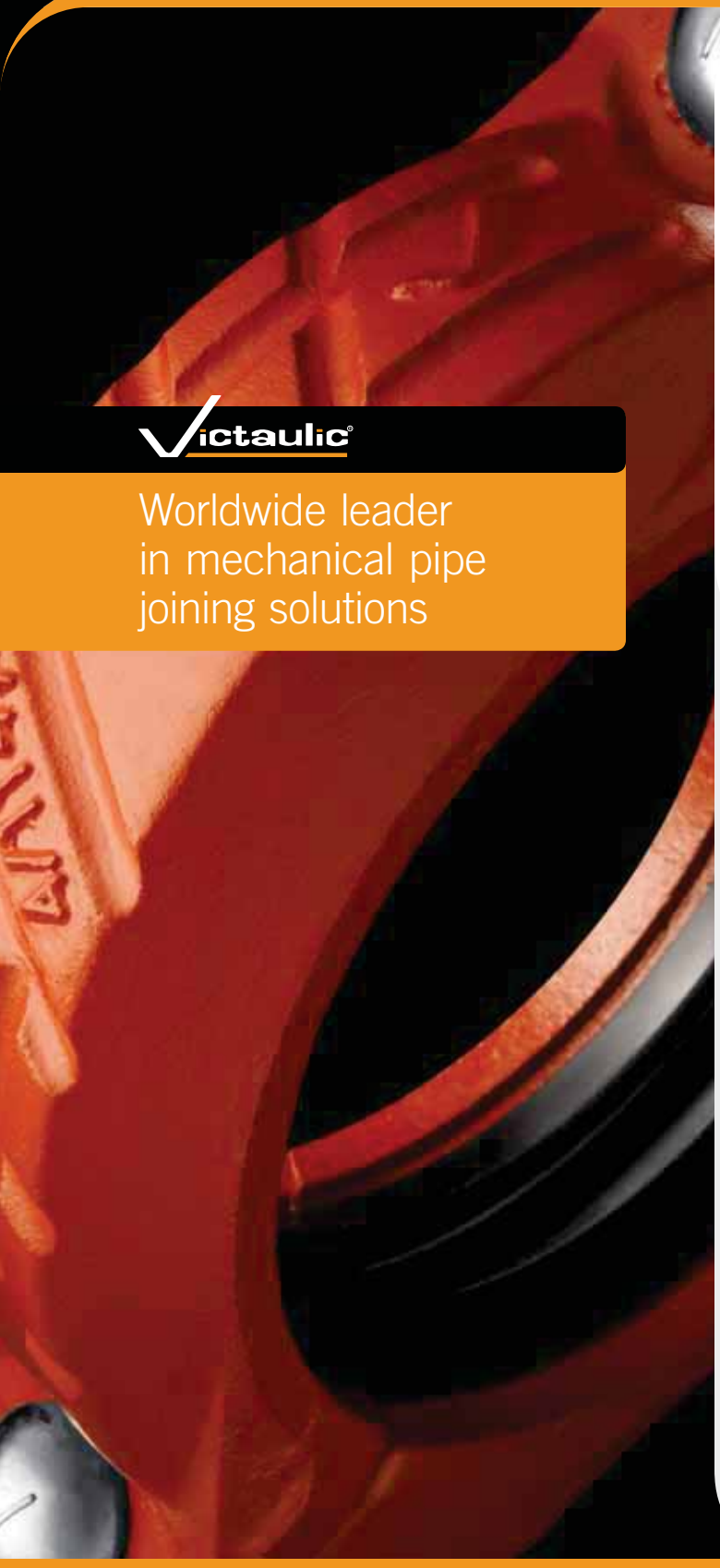
Victaulic®
Piping. Systems. Solutions.

Piping. Systems. Solutions.



Victaulic®

Worldwide leader in mechanical pipe joining solutions

Welcome to Victaulic.

The worldwide leader in mechanical pipe joining solutions. Since pioneering grooved end technology for mechanical pipe joining in 1925, Victaulic has been providing customers the world over with innovative, reliable piping systems solutions for multiple applications and markets.

Headquartered in the US with offices in Canada, Europe, the Middle East, United Kingdom, China and Belgium, Victaulic works closely with facility owners, engineers and contractors, in the installation of systems that compress schedules, reduce risk, improve productivity and facilitate system maintenance and expansion.

Technology Timeline

Since 1925, Victaulic has been at the forefront of mechanical piping systems innovation with over 1,500 patents for piping related products.

1925		Victaulic introduces the first grooved end coupling, the “Victory Joint”
1930		AWWA-size ductile iron system introduced
1946		First field-grade cut groovers brought to market
1957		Victaulic introduces roll grooving
1979		First mechanical coupling for joining high density polyethylene (HDPE) pipe
1983		First angled-bolt pad rigid coupling introduced
1991		Victaulic introduces first small diameter IPS-size pipe press connect system
2005		Advance Groove System large diameter pipe joining system introduced
2006		Victaulic introduces installation-ready technology

Multiple markets served

Victaulic piping system solutions span many markets. Our piping systems are found around the world in thousands of applications – in commercial comfort piping systems; industrial process and utility piping; residential and commercial fire protection systems; oil and offshore drilling platforms; coal and mineral mining operations; and water and wastewater plants and facilities.

Victaulic facilities worldwide

Our global presence as a company ensures that our worldwide customers are served with speed and efficiency. Victaulic engineering and sales support personnel are ready to assist you with the details of your project, regardless of the location.

Manufacturing facilities in the US, Poland, China, and Canada, combined with a worldwide distribution and delivery system, means Victaulic products are accessible from virtually any location around the world. Please consult the back of this catalog or our website for worldwide contact information.

Piping system innovation

Our customers know us for bringing a steady stream of product innovations to the marketplace year after year – innovations that significantly improve piping system performance; improve user productivity; and meet the specific design criteria of very complex piping system design challenges.

Victaulic ingenuity is driven, in part, from listening to our customers, and our commitment to finding practical solutions to the world's most demanding engineering and system installation challenges.

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Global Solutions

A world of applications at work

Our solutions are truly global.
Victaulic piping systems solutions are found in some of the world's most stunning and challenging engineering projects – buildings that arguably "push the design and construction envelope."

Custom solutions for demanding challenges

Whether new construction or retrofit, Victaulic delivers a level of versatility unmatched in mechanical piping systems technology for today's engineering marvels.

Victaulic solutions provide superior design flexibility, the ability to accommodate seismic moments, noise and vibration attenuation, system access, system scalability, installation-friendly products and service and more.

Projects spanning the globe

The projects illustrated here are just a few of the many buildings around the world for which Victaulic has provided innovative piping solutions.

For additional information on these and many other projects around the world, click on **Global Projects** from the home page of our website.

UNITED STATES

Hoover Dam

CANADA

Vancouver Convention Center

MEXICO

Arena Monterrey

UNITED ARAB EMIRATES

Jumeirah Burj Al Arab and Beach Hotels

FRANCE

La Grande Arche de la Défense

CHINA

Beijing National Stadium

MALAYSIA

Petronas Twin Towers

UNITED STATES

CANADA

EUROPE

CENTRAL & SOUTH AMERICA

MIDDLE EAST

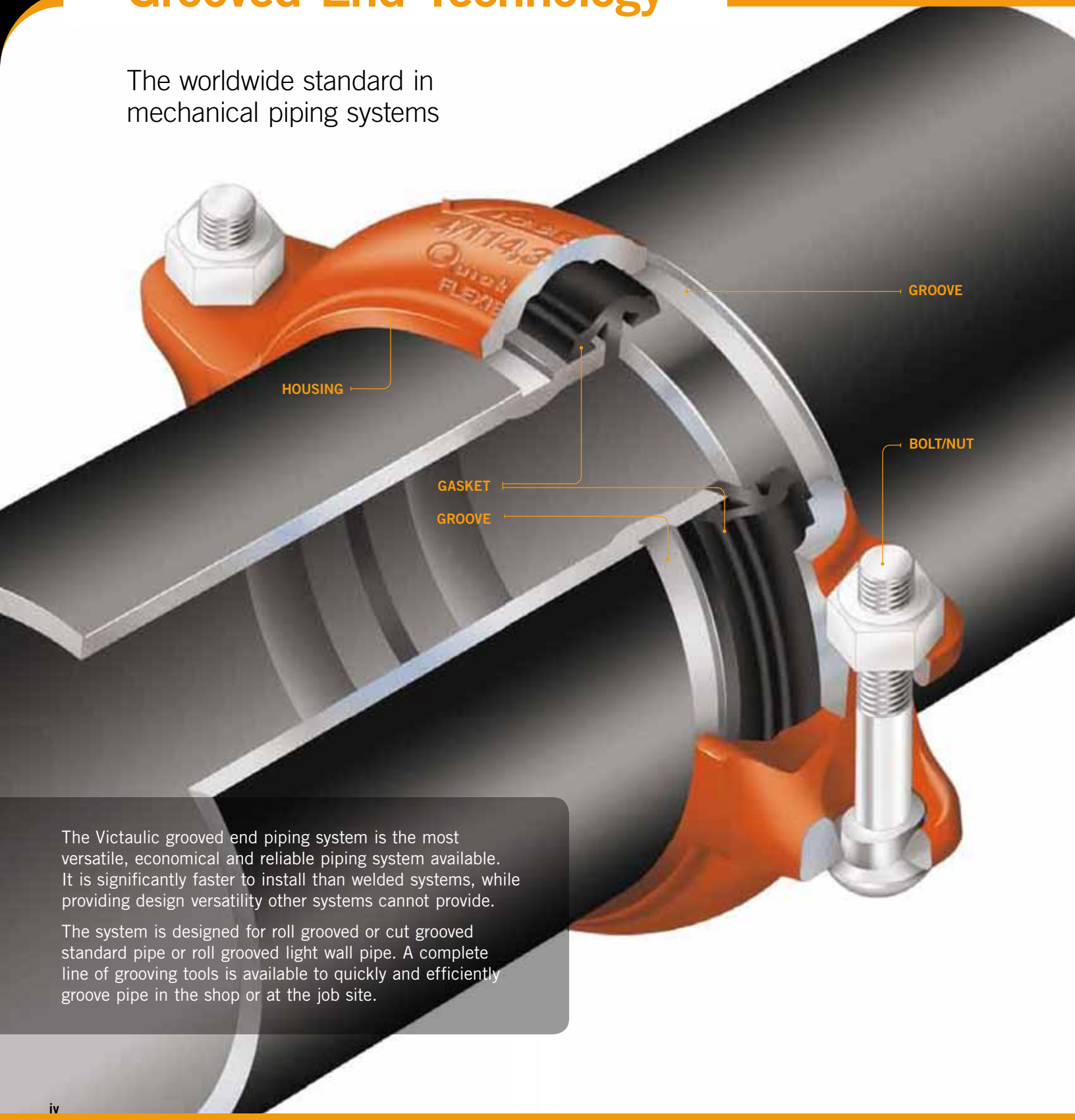
ASIA PACIFIC

MEXICO

AFRICA

Grooved End Technology

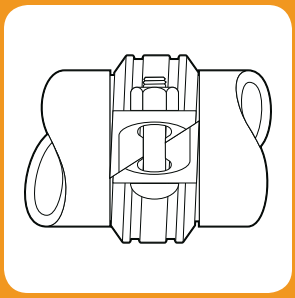
The worldwide standard in mechanical piping systems



The Victaulic grooved end piping system is the most versatile, economical and reliable piping system available. It is significantly faster to install than welded systems, while providing design versatility other systems cannot provide.

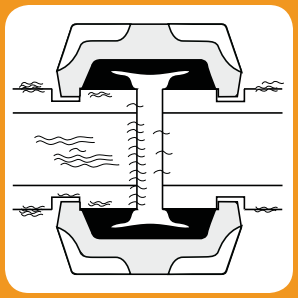
The system is designed for roll grooved or cut grooved standard pipe or roll grooved light wall pipe. A complete line of grooving tools is available to quickly and efficiently groove pipe in the shop or at the job site.

Features



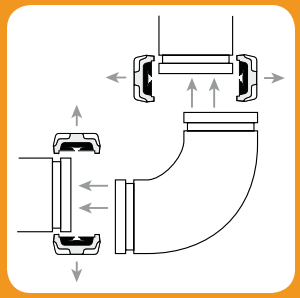
RIGIDITY

Rigidity is achieved with standard couplings. The unique angled pad design of Zero-Flex and other couplings provides positive clamping of the pipe to resist torsional and flexural loads.



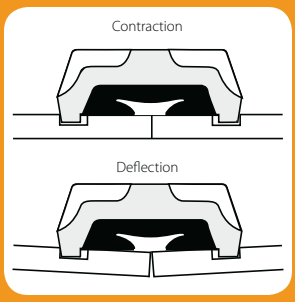
NOISE AND VIBRATION ATTENUATION

The basic design of independently grooved pipe sections reduces noise and vibration transmission, thus delivering superior vibration attenuation throughout the system.



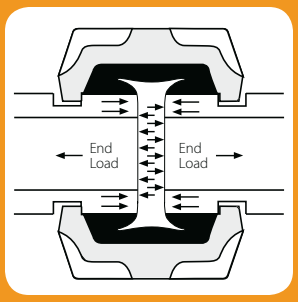
SYSTEM MAINTENANCE AND EXPANSION

Coupling disassembly provides easy access for maintenance or system expansion. Victaulic butterfly valves provide "dead-end" shut-off service to isolate equipment.



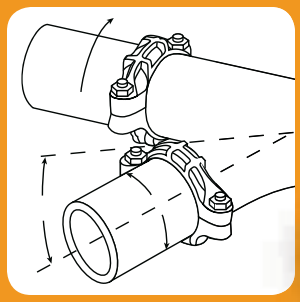
FLEXIBILITY

The Victaulic grooved end solution accommodates expansion/contraction/deflection and enables designing that takes advantage of these built-in system features.



SEISMIC STRESS ABSORPTION

The full engagement of the housing keys into grooves around the pipe circumference provides significant pressure restraint and end load capability to withstand pipe movement from internal and external sources.



ALIGNMENT EASE

The grooved system allows full rotation of the pipe and system components before tightening so that proper alignment can be achieved.

Reinventing Innovation

The result of continuous research and development, today's Victaulic system has evolved since it was first introduced in 1925. But the basic concept hasn't changed.

Product innovation is a Victaulic hallmark. We are dedicated to finding faster, easier and more reliable ways to mechanically join pipe.

Accepted Worldwide

Victaulic grooved end, plain end, press and other piping system components are tested and accepted for a variety of services throughout the world by the primary code and approval bodies.

A partial listing of the many agencies, associations, code group laboratories and organizations which have accepted, listed and tested Victaulic products are shown on the facing page. Copies of specific standards can be obtained by contacting your local Victaulic representative, or by requesting publication 02.02.

GENERAL CODE GROUPS, ASSOCIATIONS, LABORATORIES AND APPROVAL BODIES

ABS
American Bureau of Shipping

ANSI
American National Standards Institute

ANSI/AWWA
American Water Works Association – C-606

API
American Petroleum Institute – API Std. 5L, Sect. 7.5

AS
AS4041-1992 Australian Standard (3.24.10)

ASHRAE
American Society of Heating, Refrigerating and Air Conditioning Engineers

ASME
American Society of Mechanical Engineers
- Power Piping, B-31.1
- Chemical Plant and Petroleum Refinery Piping, B-31.3
- Refrigeration Piping, B-31.5
- Building Services Piping, B-31.9
- Slurry Pipelines, B-31.11

ASTM
American Society of Testing and Materials
- F-1476 Couplings
- F-1548 Fittings
- F-1155 Shipbuilding

BBA
British Board of Agrément

BOCA
Building Officials and Code Administrators

BV
Bureau Veritas

CCCF
China Certification Center for Fire Products

CE
0026
CE
Certification to the European Directive for Pressure Equipment

CNBOP
Centrum Naukowo-Badawcze Ochrony Przeciwpozarowej

CNPP APSAD
Centre National de Prévention et de Protection

CSA
Canadian Standards Association – B-242, registered to CAN 3-Z299.3

cULus
Underwriter's Laboratories, Inc. - Listed for the fire protection services

DIN GÖST TÜV
Zertifizerungssystem für Produkte

DNV
Det Norske Veritas

DVGW
Deutscher Verein des Gas- und Wasserfaches e.V.

EMI
Epitesugyi Minosegellenorzo Innovacious

FM
FM Approvals – Approved for fire protection services

GL
Germanischer Lloyd

GOST R

HDB
Singapore Housing Development Board

Hong Kong Fire Services Board

IAPMO
International Association of Plumbing & Mechanical Officials

Korean Registry of Shipping

Krajska Hygienicka

INSTAL
- AT/2000
- AT/2002
- AT/2003

LLOYD'S
Lloyd's Register of Shipping

LPCB
Loss Prevention Certification Board
New Zealand Insurance Council
New Zealand Building Act (1991)

NFPA
National Fire Protection Association

NK
Nippon Kaiji Kyokai

NSF/ANSI 61
Standard 61 for potable water service

NY-MEA
New York Materials and Equipment Acceptance

ÖVGW
Österreichische Vereinigung für das Gas- und Wasserfach

PED
CE 97/23

PZH
Panstwowy Zaklad Higieny

RINA
Registro Italiano Navale

SBCCI
Southern Building Code Congress International – Standard Plumbing and Mechanical Code

SBSC
Svensk Brand & Säkerhets Certifiering AB

SRIPS
Service de Recherche et d'Ingéniérie en Protection Sanitaire

SSL
Scientific Services Laboratory

Standards Australia

SVGW
Schweizerischer Verein des Gas- und Wasserfaches

TSU
Technický Skúšobný Ústav Piešťany, š.p.

UL
Underwriter's Laboratories, Inc. – Listed for fire protection services

ULC Underwriter's Laboratories of Canada – Listed for fire protection services

VdS
Verband der Schadenverhütung GmbH

VKF
Vereinigung Kantonaler Feuerversicherungen

W
Standards Australia Watermark Certification

WRAS
Water Regulations Advisory Scheme

GOVERNMENT AGENCIES

Bureau of Marine Inspection – Salt and fresh water, oil transfer

Bureau of Public Roads – Div. of Bridges – Drain lines and bridge crossings

Canadian Coast Guard

U.S. Coast Guard – Approves each vessel individually

COE
Corps of Engineers – CEGS 15000

FAA
Federal Aviation Administration – HVAC, Plumbing, Fire Protection Federal Code of Regulations –
- A-A-52598 – Couplings
- A-A-52592 – Fittings

FHA
Federal Housing Administration

GSA
General Services Administration – 15000 Series

MIL
Military Specifications
- MILP-10388 Fittings
- MIL-C-10387 Couplings
- MIL-P-11087A(CE) Steel Pipe, Grooved
- MIL-I-45208 Inspection Procedure

NASA
National Aeronautics and Space Administration – 15000 Series

NAVFAC
Naval Facilities Engineering Command – NFGS 15000 Series

NIH
National Institute of Health (Dept. of Health) – 15000 Series

TVA
Tennessee Valley Authority – Fire protection, storm drains

VA
Veterans Affairs – 15000 Series

Design Data

Introduction

This Victaulic General Catalog has been written for the piping system installer, designer, specification writer and owner as a basic reference guide for data about Victaulic mechanical piping methods. This catalog is organized to provide information in the context and form most readily usable. For easy identification of major sections of interest, see the condensed table of contents on pg. i, for a fully detailed index, see pg. 21-1. For more detailed information, consult Design Data, Section 26.01.

Important Information

Victaulic has developed, in more than 85 years in mechanical piping, variations of piping practice for use on a wide variety of piping materials.

Victaulic standard grooved pipe couplings are designed for use with pipe grooved to meet Victaulic groove specifications and Victaulic grooved end fittings, valves, and related grooved end components only. They are not intended for use with plain end pipe and/or fittings. Victaulic plain end couplings are designed for use only with plain end or beveled end steel pipe (unless otherwise indicated) and Victaulic plain end fittings. **Victaulic plain end couplings must not be used with grooved end or threaded end pipe and/or fittings. Nor are they intended for use with Advanced Groove System (AGS) components used on 14 – 60"/350 – 1500 mm pipe sizes.**

Pipe must be prepared to meet Victaulic specifications outlined for each specific product style. Performance data listed herein is based on proper pipe preparation. The proper gasket must be selected for the service intended. **It should be noted that there are various services for which Victaulic gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide (request publication 05.01) for specific gasket service recommendations and for a listing of services which are not recommended. Gaskets for Victaulic products always must be lubricated for proper assembly.** Gasket lubricant must meet manufacturer's specifications. Thorough lubrication of the gasket exterior, including the lips and/or pipe ends and housing interiors, is essential to prevent gasket pinching. Lubrication assists proper gasket seating and alignment during installation.

Victaulic has a complete line of tools for preparing pipe to Victaulic specifications. Use of these tools is recommended in preparing pipe to receive Victaulic products. Always read and understand the Tool Operating Instructions supplied with every Victaulic tool prior to using any tools. All data contained herein, is subject to change without notice.

Design Data

Notice

The technical and performance data, weights, dimensions and specifications published in this catalog supersede all previously published data.

Victaulic Company maintains a policy of continual product improvement and, therefore, reserves the right to change product specifications, designs, and standard equipment without notice and without incurring obligation.

For the most up-to-date Victaulic product information, please visit www.victaulic.com.

The material presented in this catalog is intended for piping design reference in utilization of Victaulic products for their intended application. It is not intended as a substitute for competent, professional assistance which is an obvious requisite to any specific application.

Design

Reference should always be made to design information available at no charge on request from Victaulic. Good piping practices should always prevail. Specific pressures, temperatures, external or internal loads, performance standards and tolerances must never be exceeded. Many applications require recognition of special conditions, code requirements and use of safety factors. Qualified engineers must make these decisions.

While every effort has been made to ensure its accuracy, Victaulic Company, its subsidiaries and affiliated companies, make no express or implied warranty of any kind respecting the information contained in this catalog or the material referred to herein.

Anyone making use of the information or material contained herein does so at their own risk and assumes any and all liability resulting from such use.

Installation

Reference should always be made to the specific Victaulic Field Installation Handbook for the product you are installing. The following is a list of handbooks that can be requested for free from Victaulic:

I-100	General Handbook
I-300	AWWA Products Handbook
I-500	Pressfit System Handbook
I-P500	Vic-Press Handbook
I-600	Copper Products Handbook
I-900	HDPE Products Handbook

Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Design Data

Global Pipe Size Designations

Victaulic product data is utilized worldwide and all technical data is shown in both imperial (U.S.) and metric terms. The following chart shows a comparison between typical metric and IPS pipe sizes.

Nominal Imperial Inches – Size Group	Outside Diameter mm/Spec Ref	DIN mm	JIS mm	ANSI inches	China Standard (GB) mm
½	21.3 mm	15	15 A/21.7 mm	½	15*/21.3 mm
¾	26.7 mm	20/26.9 mm	20 A/27.2 mm	¾	20*/26.9 mm
1	33.4 mm	25/33.7 mm	25 A/34 mm	1	25*/33.7 mm
1 ¼	42.2 mm	32/42.4 mm	32 A/42.7 mm	1 ¼	32*/42.4 mm
1 ½	48.3 mm	40	40 A/48.6 mm	1 ½	40*/48.3 mm
2	60.3 mm	DN & ISO 50	50 A/60.5 mm	2	50*/60.3 mm
2 ½	73.1 mm	—	—	2 ½	—
3	76.1 mm DIN/ISO (3 OD)	DN & ISO 65	65 A/76.3 mm	—	65*/76.1 mm
	88.9 mm	DN & ISO 80	JIS 80 A	3	80*/88.9 mm
4	108 mm China and old DIN	DIN 108 mm	—	—	108 mm
	114.3 mm	DN & ISO 100	JIS 100 A	4	100*/114.3 mm
5	133 mm China and old DIN	DIN 133 mm	—	—	133 mm
	139.7 mm DIN/ISO (5.5 OD)	DN & ISO 125	125 A/139.8 mm	—	125*/139.7 mm
	141.3 mm	—	—	5	—
6	159 mm China and old DIN	DIN 159 mm	—	—	159 mm
	165.1 mm JIS (6.5 OD)	—	150 A/165.2 mm	—	—
	168.3 mm	DN & ISO 150	—	6	150*/168.3 mm
8	216.3 JIS	—	JIS 200 A	—	—
	219.1 mm	DN 200	—	8	219.1 mm
10	267.4 JIS	—	JIS 250 A	—	—
	273 mm	DN 250	—	10	273 mm
12	318.5 JIS	—	JIS 300 A	—	—
	323.9 mm	DN 300	—	12	323.9 mm
14	355.6 mm	DN 350	JIS 350 A	14	355.6 mm
	377 mm China	—	—	—	377 mm
16	406.4 mm	DN 400	JIS 400 A	16	406.4 mm
	426 mm China	—	—	—	426 mm
18	457.2 mm	DN 450	JIS 450 A	18	457.2 mm
	480 mm China	—	—	—	480 mm
20	508 mm	DN 500	JIS 500 A	20	508 mm
	530 mm China	—	—	—	530 mm
22	558.8 mm	—	JIS 550 A	22	559 mm
24	610 mm	DN 600	JIS 600 A	24	610 mm
	630 mm China	—	—	—	630 mm
26	660 mm	—	JIS 650 A	26	660 mm
28	711 mm	DN 700	—	28	711 mm
30	762 mm	—	—	30	762 mm
32	813 mm	DN 800	—	32	813 mm
34	864 mm	—	—	34	864 mm
36	914 mm	DN 900	—	36	914 mm
40	1016 mm	DN 1000	—	40	1016 mm
42	1067 mm	DN 1050	—	42	1067 mm
44	1118 mm	DN 1100	—	44	1118 mm
46	1168 mm	DN 1150	—	46	1168 mm
48	1219 mm	DN 1200	—	48	1219 mm
54	1372 mm	DN 1350	JIS 1372	54	1372 mm
56	1422 mm	DN 1400	JIS 1422	56	1422 mm
60	1524 mm	DN 1500	JIS 1524	60	1524 mm

IMPORTANT NOTE:

Nominal designations are used where the actual OD of the pipe matches the ANSI size.
Otherwise both the nominal and actual OD are listed. China sizes are listed as actual OD in mm.
China sizes in orange are tubing sizes.

* Nominal sizes

Design Data

Imperial (U.S.)/Metric Conversion Chart

This chart is provided as a guide for converting imperial and metric measurements provided within this catalog.

Convert Imperial (U.S.) to Metric						Convert Metric to Imperial (U.S.)
25.4	×	Inches (In.)	⇔	Millimeters (mm)	×	0.03937
0.3048	×	Feet (Ft.)	⇔	Meters (m)	×	3.281
0.4536	×	Pounds (Lbs.)	⇔	Kilograms (kg)	×	2.205
28.35	×	Ounces (Oz.)	⇔	Grams (g)	×	0.03527
6.894	×	Pressure (psi)	⇔	Kilopascals (kPa)	×	0.145
.069	×	Pressure	⇔	Bar	×	14.5
4.45	×	End Load (Lbs.)	⇔	Newtons (N)	×	0.2248
1.356	×	Torque (Lb. Ft.)	⇔	Newton Meters (N•m)	×	0.738
F – 32 ÷ 1.8		Temp. (°F)	⇔	Celsius (°C)		C + 17.78 × 1.8
745.7	×	Horsepower (hp)	⇔	Watts (w)	×	1.341×10^{-3}
3.785	×	Gal. per Min. (GPM)	⇔	Liters per min. (L/M)	×	0.2642
3.7865	×	10^{-3} Gal. per Min. (GPM)	⇔	Cubic Meters per min. (m3/m)	×	264.2

Couplings

- Victaulic, the originator and innovator of grooved coupling technology, offers a variety of coupling sizes and styles for almost any piping application.
- Consisting of three basic components — the housing, the gasket, and bolts and nuts — Victaulic couplings provide a simple, economical method for joining carbon steel, copper, stainless steel, ductile iron, aluminum, HDPE and PVC plastic piping systems.
- Victaulic couplings provide designers with versatility not found in other pipe joining methods. Victaulic rigid and flexible couplings can be combined to allow for thermal growth within the system. Additionally, the use of three consecutive flexible couplings reduces noise and vibration and eliminates costly specialty noise dampeners.

QuickVic® Rigid Coupling

STYLE 107H, PG. 1-5

QuickVic® Flexible Coupling

STYLE 177, PG. 1-7

Advanced Groove System AGS®

For 14–60"/350–1525 mm piping systems Victaulic offers Advanced Groove System (AGS) couplings, see pg. 6-1.

Zero-Flex® Rigid Coupling

STYLE 07, PG. 1-6
AGS STYLE W07, PG. 6-3

Standard Flexible Coupling

STYLE 77, PG. 1-8
AGS STYLE W77, PG. 6-3

Flexible Coupling

STYLE 75, PG. 1-9

Reducing Coupling

STYLE 750, PG. 1-12

Vic-Flange® Adapter ANSI Class 150/PN10

STYLE 741, PG. 1-10
AGS STYLE W741, PG. 6-6

Vic-Flange Adapter ANSI Class 300/PN16

STYLE 743, PG. 1-11

Snap-Joint® Coupling

STYLE 78, PG. 1-13

Couplings

Gasket Types

Gasket Type	Style 107H	Style 177	Style 07	Style 77	Style 75	Style 770	Style 750	Style 78	Style 72 †	Style 791	Style HP-70	Style HP-70ES
STANDARD			●	●	●	●		●	●	●	●	
INSTALLATION-READY	●	●										
REDUCING							●					
FLUSHSEAL			●	●	●	●		●		●		
ENDSEAL												●

† Separate gasket specifically designed for outlet couplings.

Outlet Coupling

STYLE 72, PG. 1-14

Available with female threaded outlets (shown) and grooved outlets

Vic-Boltless® Coupling

STYLE 791 AND STYLE 792 ASSEMBLY TOOL, PG. 1-15

Rigid Coupling

STYLE HP-70, PG. 1-16

High Pressure Coupling

STYLE 808, PG. 1-17

Endseal® Coupling for Plastic Coated Pipe

STYLE HP-70ES, PG. 1-18

EndSeal Fittings for Plastic Coated Pipe

PG. 1-19

EndSeal products are specifically designed to meet the stringent requirements of oil field piping systems. The special groove profile and gasket design of "ES" products contribute to higher pressure ratings and longer life service.

Couplings

Rigid Coupling Systems and Performance §

Rigid couplings have a unique, patented angled pad design which constricts the housing keys into the groove around the full circumference to create a rigid joint. The housings slide on the angled pads rather than mating squarely.

This sliding movement also forces the key sections into opposed contact on the inside and the outside groove edges, which locks the coupling onto the pipe ends and creates a rigid connection.

These rigid couplings provide a rigid joint allowing no expansion/contraction or linear movement. The couplings will position the pipe ends so that there is a fixed pipe end separation that may be considered during design and installation (see chart below).

Rigid couplings create a rigid joint, useful for risers, mechanical rooms and other areas where flexibility is not desired. QuickVic Style 107H, Zero-Flex Style 07 and Style W07 AGS couplings are designed to provide rigidity to permit hanging to ASME B31.1 Power Piping Code, ASME B31.9 Building Services Piping Code and NFPA 13 Sprinkler Systems.

Size		Allow. Pipe End Sep.
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Inches mm
¾ 20	1.050 26.9	0.05 1.2
1 25	1.315 33.7	0.05 1.2
1 ¼ 32	1.660 42.4	0.05 1.2
1 ½ 40	1.900 48.3	0.05 1.2
2 50	2.375 60.3	0.07 1.7
2 ½ 65	2.875 73.0	0.07 1.7
76.1 mm	3.000 76.1	0.07 1.7
3 80	3.500 88.9	0.07 1.7
108.0 mm	4.250 108.0	0.16 4.1
4 100	4.500 114.3	0.16 4.1
133.0 mm	5.250 133.0	0.16 4.1
139.7 mm	5.500 139.7	0.16 4.1

Size		Allow. Pipe End Sep.
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Inches mm
5 125	5.563 141.3	0.16 4.1
159.0 mm	6.250 159.0	0.16 4.1
165.1 mm	6.500 165.1	0.16 4.1
6 150	6.625 168.3	0.16 4.1
8 200	8.625 219.1	0.19 4.8
10 250	10.750 273.0	0.13 3.3
12 300	12.750 323.9	0.13 3.3
14* 350	14.000 355.6	0.13 3.3
16* 400	16.000 406.4	0.13 3.3
18* 450	18.000 457.0	0.13 3.3
20* 500	20.000 559.0	0.13 3.3
24* 600	24.000 610.0	0.13 3.3

§ Except for HP-70 and HP-70ES coupling which have the following allowable pipe end separation:

HP-70:
2 – 4"/50 – 100 mm sizes: 0.14"/3.6 mm
6 – 12"/150 – 300 mm sizes: 0.25"/6.4 mm

HP-70ES:
2 – 4"/50 – 100 mm sizes: 0.19"/4.8 mm
6 – 8"/150 – 200 mm sizes: 0.27/6.7 mm
10 – 12"/250 – 300 mm sizes: 0.28"/7.1 mm

* These figures do NOT apply to 14 – 24"/350 – 600 mm Style W07 AGS rigid couplings. Allowable pipe end separation is 0.25"/6.9 mm for all sizes of Style W07.

IMPORTANT NOTES:

ONLY FLEXIBLE couplings are recommended for the installation of expansion loops as stated in Calculating and Accommodating Pipe Line Thermal Growth Section 26.02. All eight couplings assembling the four elbows of the loop must be flexible. The use of rigid couplings to install the straight run adjacent to the expansion loop is a recommended practice.

This also applies to couplings installed on the perpendicular leg(s) at the end(s) of a straight pipe run or on pipe line offsets. If system movement is to be accommodated, flexible couplings must be utilized.

Rigid couplings must NOT be utilized to accommodate any system movement.

Should you have any questions regarding the proper use of our products, contact Engineering Services at engrserv@victaulic.com.

⚠ WARNING

Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products. Failure to do so could result in personal injury, property damage, joint leakage and/or joint failure.

Couplings

Flexible Coupling Systems and Performance §

Standard flexible grooved-type couplings allow controlled angular, linear and rotational movement at each joint to accommodate expansion/contraction (see note below), settling, vibration, noise and other piping system movement. These features provide advantages in designing piping systems but must be considered when determining hanger and support spacing and location.

Victaulic couplings offer superior vibration attenuation characteristics to both flexible metal and elastomeric flexible arch-type connectors.

Independent vibration testing data (request publication 26.04) verifies that three Victaulic couplings in close proximity to a vibration source (pump, equipment, etc.) provide superior vibration attenuation in piping systems.

Both flexible and rigid couplings offer reduced construction schedules, plus the convenience of a union at every joint and the proven pressure-responsive "C" shaped Victaulic gasket. Both type products fit into standard roll or cut grooved pipe and provide the security of full circumferential engagement of the coupling housing into the groove for high pressure and end load service.

Size		Allow. Pipe End Sep. †	Deflect. Fr. C_L †	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Inches mm	Degrees per Coupling	Pipe In./Ft. mm/m
¾ 20	1.050 26.9	0 – 0.06 0 – 1.6	3° 24'	0.72 60
1 25	1.315 33.7	0 – 0.06 0 – 1.6	2° 43'	0.57 48
1 ¼ 32	1.660 42.4	0 – 0.06 0 – 1.6	2° 10'	0.45 38
1 ½ 40	1.900 48.3	0 – 0.06 0 – 1.6	1° 56'	0.40 33
2 50	2.375 60.3	0 – 0.06 0 – 1.6	1° 31'	0.32 27
2 ½ 65	2.875 73.0	0 – 0.06 0 – 1.6	1° 15'	0.26 22
76.1 mm	3.000 76.1	0 – 0.06 0 – 1.6	1° 12'	0.26 22
3 80	3.500 88.9	0 – 0.06 0 – 1.6	1° 2'	0.22 18
3 ½ 90	4.000 101.6	0 – 0.06 0 – 1.6	0° 54'	0.19 16
108.0 mm	4.250 108.0	0 – 0.13 0 – 3.2	1° 41'	0.35 29
4 100	4.500 114.3	0 – 0.13 0 – 3.2	1° 36'	0.34 28
4 ½ 120	5.000 127.0	0 – 0.13 0 – 3.2	1° 26'	0.25 21
133.0 mm	5.250 133.0	0 – 0.13 0 – 3.2	1° 21'	0.28 23
139.7 mm	5.500 139.7	0 – 0.13 0 – 3.2	1° 18'	0.28 23
5 125	5.563 141.3	0 – 0.13 0 – 3.2	1° 18'	0.27 22
152.4 mm	6.000 152.4	0 – 0.13 0 – 3.2	1° 12'	0.21 17

Size		Allow. Pipe End Sep. †	Deflect. Fr. C_L †	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Inches mm	Degrees per Coupling	Pipe In./Ft. mm/m
159.0 mm	6.250 159.0	0 – 0.13 0 – 3.2	1° 9'	0.24 20
165.1 mm	6.500 165.1	0 – 0.13 0 – 3.2	1° 6'	0.23 19
6 150	6.625 168.3	0 – 0.13 0 – 3.2	1° 5'	0.23 19
203.2 mm	8.000 203.2	0 – 0.13 0 – 3.2	0° 54'	0.16 13
8 200	8.625 219.1	0 – 0.13 0 – 3.2	0° 50'	0.18 15
254.0 mm	10.000 254.0	0 – 0.13 0 – 3.2	0° 43'	0.15 13
10 250	10.750 273.0	0 – 0.13 0 – 3.2	0° 40'	0.14 12
304.8 mm	12.000 304.8	0 – 0.13 0 – 3.2	0° 36'	0.13 11
12 300	12.750 323.9	0 – 0.13 0 – 3.2	0° 34'	0.12 10
14 @ 350	14.000 355.6	0 – 0.13 0 – 3.2	0° 31'	0.11 9
15 375	15.000 381.0	0 – 0.13 0 – 3.2	0° 29'	0.10 8
16 @ 400	16.000 406.4	0 – 0.13 0 – 3.2	0° 27'	0.10 8
18 @ 450	18.000 457.0	0 – 0.13 0 – 3.2	0° 24'	0.08 7
20 @ 500	20.000 508.0	0 – 0.13 0 – 3.2	0° 22'	0.08 7
22 550	22.000 559.0	0 – 0.13 0 – 3.2	0° 19'	0.07 6
24 @ 600	24.000 610.0	0 – 0.13 0 – 3.2	0° 18'	0.07 6

§ Except for Style 72 outlet couplings. Contact Victaulic for details.

† NOTE: These values are based on standard roll grooved pipe. Figures for standard cut grooved pipe may be doubled. See notes below.

@ Allowable pipe end separation for Style W77 AGS flexible couplings in this size range are 0.125 – 0.375"/3.1 – 9.5 mm.

⁕ GENERAL NOTES:

Working Pressure and **End Load** are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

Warning: For one time field test only, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown (except Style HP-70ES).

Allowable Pipe End Separation and **Deflection** figures show the maximum nominal range of movement available at each joint for standard **roll** grooved pipe. Figures for standard **cut** grooved pipe may be doubled. These figures are maximums; for design and installation purposes these figures should be reduced by: 50% for ¾ – 3½"/20 – 90 mm; 25% for 4"/100 mm and larger.

Important Notes:

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

Couplings

QuickVic® Rigid Coupling

STYLE 107H

For Complete Information Request Publication **06.21**

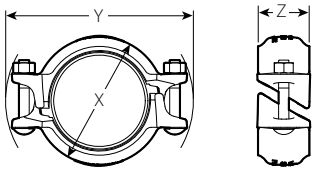
- Installation-ready design
- Angled-pad design for rigidity
- Pressure rated up to 580 psi/4000kPa
- Sizes from 2 – 8"/ 50 – 200mm

Size		Allow. Pipe End Sep. †	@ Bolt/Nut	Dimensions Inches/mm					Approx. Wgt. Each
				Preassembled (Installation-ready condition)		Joint Assembled			
Nominal Size Inches/ mm	Actual Outside Diameter Inches/ mm	Inches/ mm	No. – Size Inches/ mm	X	Y	X	Y	Z	Lbs/ Kg
2 50	2.375 60.3	0.15 3.8	2 – ⅜ x 2½	3.87 98.3	5.75 145.9	3.63 92.3	5.63 142.9	1.97 50.0	2.1 0.95
2½ 65	2.875 73.0	0.15 3.8	2 – ⅜ x 2½	4.37 111.0	6.26 159.1	4.15 105.5	6.15 156.3	1.97 50	2.5 1.1
76.1 mm	3.000 76.1	0.15 3.8	2 – M10 x 2½	4.43 112.6	6.39 162.2	4.25 107.9	6.28 159.5	1.97 50	2.4 1.09
3 80	3.500 88.9	0.15 3.8	2 – ½ x 3	4.95 125.7	7.36 186.8	4.71 119.8	7.24 184.0	1.97 50	3.1 1.4
4 100	4.500 114.3	0.15 3.8	2 – ½ x 3	5.97 151.6	8.39 213.2	5.73 145.6	8.29 210.4	2.04 51.8	3.9 1.8
139.7 mm	5.500 139.7	0.15 3.8	2 – M12 x 3	7.11 180.6	9.6 243.9	6.9 175.4	9.44 239.9	2.09 53.1	5.0 2.27
5 125	5.563 141.3	0.15 3.8	2 – ½ x 3	7.17 182.1	9.72 246.9	6.96 176.9	9.63 244.6	2.09 53.1	5.1 2.3
6 150	6.625 168.3	0.15 3.8	2 – ⅝ x 3¼ M16 x 3¼	8.31 211.1	11.32 287.5	8.13 206.6	11.23 285.3	2.04 51.8	6.8 3.1
8 200	8.625 219.1	0.22 5.6	2 – ⅝ x 4	10.57 268.6	13.56 344.3	10.32 262.2	13.44 341.3	2.55 64.8	10.5 4.7

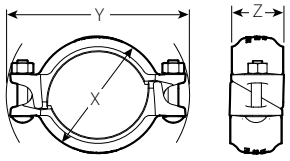
† The allowable pipe separation dimension shown is for system layout purposes only. Style 107H QuickVic rigid couplings are considered rigid connections and will not accommodate expansion or contraction of the piping system.

@ Number of bolts required equals number of housing segments.

WARNING: Depressurize and drain the piping system before attempting to install, remove or adjust any Victaulic piping products.



STYLE 107H PRE-ASSEMBLED (INSTALLATION-READY CONDITION)



STYLE 107H JOINT ASSEMBLED

ANSI STANDARD

Size		Schedule 10			Schedule 40		
Nominal Inches/ mm	Actual Outside Diameter Inches/ mm	Wall Thick. Inches/ mm	Max. *ŧ Joint Work. Press. psi/kPa	Max. * Permis. End Load Lbs./N	Wall Thick. Inches/ mm	Max. *§ Joint Work. Press. psi/kPa	Max. * Permis. End Load Lbs./N
2 50	2.375 60.3	0.109 2.77	600 4135	2658 11823	0.154 3.91	750 5170	3323 14780
2½ 65	2.875 73.0	0.120 3.05	600 4135	3895 17325	0.203 5.15	750 5170	4869 21658
3 80	3.500 88.9	0.120 3.05	600 4135	5773 25680	0.216 5.49	750 5170	7216 32098
4 100	4.500 114.3	0.120 3.05	500 3450	7952 35372	0.237 6.02	750 5170	11928 53058
5 125	5.563 141.3	0.134 3.40	500 3450	12153 54060	0.258 6.55	750 5170	18229 81086
6 150	6.625 168.3	0.134 3.40	500 3450	17236 76670	0.280 7.11	700 4825	24130 107335
8 200	8.625 219.1	0.148 3.76	300 2070	17528 77970	0.322 8.18	600 4135	35056 155936

* Working Pressure and End Load are total from all internal and external loads grooved in steel pipe in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

ŧ cULus approved for use on schedule 10 pipe: 2, 2 ½, 3 and 4 inch sizes rated to 363 psi/25 bar; 5 and 6 inch rated to 290 psi/20 bar; 8 inch rated to 232 psi/16 bar.

FM approved on schedule 10 pipe: 2, 2 ½, 3, 4, 6 and 8 inch sizes rated to 363 psi/25 bar.

§ cULus approved for use on schedule 40 pipe: 2, 2 ½, 3, 4, 5, 6 and 8 inch sizes rated to 363 psi/25 bar.

FM approved on schedule 40 pipe: 2, 2 ½, 3, 4, 6 and 8 inch sizes rated to 363 psi/25 bar.

Zero-Flex Rigid Coupling

STYLE 07

For Complete Information Request Publication **06.02**

- Angled-pad design for rigidity
- Resists flexural and torsional loads
- Pressure rated up to 750 psi/5170 kPa
- Sizes from 1 – 12"/25 – 300 mm

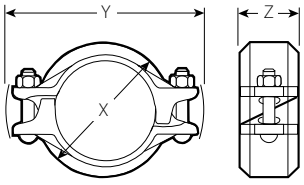
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
1 25	1.315 33.7	750 5175	650 2890	0.05 1.2	2.36 60	4.22 107	1.84 47	1.6 0.7
1 ¼ 32	1.660 42.4	750 5175	1,620 7210	0.05 1.2	2.69 68	4.62 117	1.84 47	1.6 0.7
1 ½ 40	1.900 48.3	750 5175	2,130 9480	0.05 1.2	2.94 75	5.81 148	1.84 47	1.6 0.7
2 50	2.375 60.3	750 5175	3,320 14775	0.07 1.7	3.35 85	5.78 147	1.84 47	2.3 1.0
2 ½ 65	2.875 73.0	750 5175	4,875 21695	0.07 1.7	3.88 98	6.38 162	1.84 47	2.6 1.2
76.1 mm	3.000 76.1	750 5175	5,300 23585	0.07 1.7	4.21 107	6.61 168	1.84 47	3.6 1.6
3 80	3.500 88.9	750 5175	7,215 32105	0.07 1.7	4.54 115	6.81 173	1.84 47	3.0 1.4
4 100	4.500 114.3	750 5175	11,925 53065	0.16 4.1	5.81 148	8.21 209	2.07 53	5.3 2.4
108.0 mm	4.250 108.0	750 5175	10,635 47325	0.16 4.1	5.56 141	7.98 203	2.07 53	5.2 2.4
5 125	5.563 141.3	750 5175	18,225 81100	0.16 4.1	7.03 179	9.89 251	2.07 53	7.4 3.4
133.0 mm	5.250 133.0	700 4825	15,145 67395	0.16 4.1	6.69 170	9.60 244	2.07 53	7.4 3.4
139.7 mm	5.500 139.7	700 4825	16,625 73980	0.16 4.1	6.94 176	9.82 249	2.07 53	7.6 3.4
6 150	6.625 168.3	700 4825	24,130 107380	0.16 4.1	8.26 210	10.83 275	2.07 53	8.3 3.8
159.0 mm	6.250 159.0	700 4825	21,465 95520	0.16 4.1	7.84 199	10.54 268	2.07 53	9.2 4.2
165.1 mm	6.500 165.1	700 4825	23,225 103305	0.16 4.1	8.13 207	10.84 275	2.07 53	8.3 3.8
8 § 200	8.625 219.1	600 4130	35,000 155750	0.19 4.8	10.54 268	13.74 349	2.51 64	15.1 6.8
10 § 250	10.750 273.0	500 3450	45,400 202030	0.13 3.3	12.86 327	16.98 431	2.56 65	23.5 10.7
12 § 300	12.750 323.9	400 2750	51,000 226950	0.13 3.3	14.86 377	18.88 480	2.56 65	28.2 12.8
14 – 60 350 – 1500	AGS® **For 14 – 60"/350 – 1500 mm sizes Victaulic offers the Advanced Groove System (AGS) line of products, pg. 6-3. Request publication 20.02 for information on the rigid W07 AGS coupling.**							

§ Couplings 8"/200 mm, 10"/250 mm, 12"/300 mm sizes are available to JIS standards. Refer to Publication 06.17 for details.

* Refer to General Notes on pg. 1-4.

IMPORTANT NOTES:

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.



TYPICAL FOR ALL SIZES

QuickVic Flexible Coupling

STYLE 177

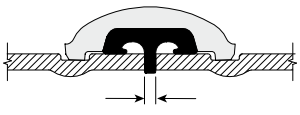
For Complete Information Request Publication **06.20**

- Installation-ready design with no loose components
- Pressure rated up to 1000 psi/6900kPa
- Sizes from 2-8"/50-200mm

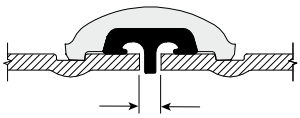
Size		Pipe End Sep. Inches mm			Bolt/Nut No. – Size	Dimensions – Inches/mm					Aprx. Wgt. Ea.
						Pre-assembled (Installation-ready condition)		Joint Assembled			
Nominal Size Inches mm	Actual Outside Diameter Inches mm	(1) Min	(2) Max	(3) Max	Inches mm	X	Y	X	Y	Z	Lbs. kg
2 50	2.375 60.3	0.13 3.2	0.19 4.8	0.25 6.4	2 – ⅜ x 2 ½	3.87 98	5.59 142	3.56 90	5.39 1.37	2.05 52	2.0 0.9
2½ 65	2.875 73.0	0.13 3.2	0.19 4.8	0.25 6.4	2 – ⅜ x 2 ½	4.36 111	6.13 156	4.05 103	5.89 150	2.05 52	2.4 1.1
76.1mm	3.000 76.1	0.13 3.2	0.19 4.8	0.25 6.4	2 – M10 x 2 ½	4.40 112	6.13 160	4.09 104	6.28 160	2.02 51	2.5 1.1
3 80	3.500 88.9	0.13 3.2	0.19 4.8	0.25 6.4	2 – ½ x 3	5.00 127	7.05 179	4.68 119	6.81 173	2.04 52	3.1 1.4
4 100	4.500 114.3	0.13 3.2	0.25 6.4	0.38 9.5	2 – ½ x 3	5.98 152	8.24 209	5.61 142	7.92 201	2.15 54	3.7 1.7
5 125	5.563 141.3	0.13 3.3	0.25 6.4	0.38 9.7	2 – ½ x 3	7.07 180	9.66 245	6.68 170	9.55 243	2.09 53	4.8 2.2
139.7mm	5.500 139.7	0.13 3.2	0.25 6.4	0.38 9.5	2 – M12 x 3	7.01 178	9.52 242	6.71 171	9.42 240	2.14 54	4.9 2.2
6 150	6.625 168.3	0.13 3.2	0.25 6.4	0.38 9.5	2 – ⅝ x 3 ¼	8.23 209	11.18 284	7.95 202	10.92 277	2.09 53	6.3 2.9
8 200	8.625 219.1	0.19 4.8	0.31 7.9	0.44 11.2	2 – ⅝ x 4	10.48 266	13.56 344	10.09 256	13.42 341	2.56 65	10.5 4.7

(1) The minimum pipe end separation as required by the gasket center leg for roll or cut grooved pipe. See illustrations below.

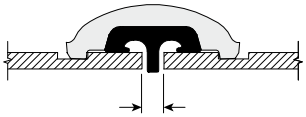
(2 & 3) Maximum pipe end separation to be used for determining overall piping system movement for roll (2) or cut (3) groove pipe. For design and installation purposes, the minimum and maximum pipe end separations should be reduced to the values shown in the table below. These design and installation considerations include thermal growth, settlement, installation misalignment and offsets. See illustrations below.



Minimum Pipe Separation (1)
Roll and Cut Groove

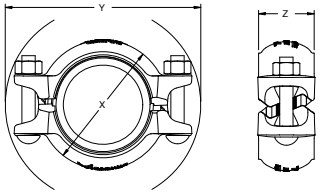


Maximum Pipe Separation (2)
Roll Groove

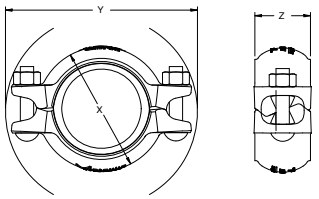


Maximum Pipe Separation (3)
Cut Groove

Exaggerated for clarity



STYLE 177 PRE-ASSEMBLED (INSTALLATION-READY CONDITION)



STYLE 177 JOINT ASSEMBLED

ANSI STANDARD PERFORMACE

Size		Schedule 10 (Steel Pipe)			Schedule 40 (Steel Pipe)		
Nominal Inches Actual mm	Actual Outside Diameter Inches mm	Wall Thick. Inches mm	Max. *ŧ Joint Work. Press. psi/kPa	Max. * Permis. End Load Lbs./N	Wall Thick. Inches mm	Max. *§ Joint Work. Press. psi/kPa	Max. * Permis. End Load Lbs./N
2 50	2.375 60.3	0.109 2.77	750 5170	3322 14780	0.154 3.91	1000 6900	4430 19706
2½ 60	2.875 73.0	0.120 3.05	600 4135	3895 17326	0.230 5.84	1000 6900	6492 28877
3 75	3.500 88.9	0.120 3.05	600 4135	5773 25678	0.216 5.49	1000 6900	9621 42797
4 100	4.500 114.3	0.120 3.05	600 4135	9543 42448	0.237 6.02	1000 6900	15904 70746
5 125	5.563 141.3	0.134 3.40	500 3445	12153 54059	0.258 6.55	750 5170	18229 81088
6 150	6.625 168.3	0.134 3.40	500 3445	17236 76669	0.28 7.11	700 4825	24130 107336
8 200	8.625 219.1	0.148 3.76	300 2065	17528 77968	0.322 8.18	600 4135	35056 155936

WARNING: Depressurize and drain the piping system before attempting to install, remove or adjust any Victaulic piping products.

* Working Pressure and End Load are total, from all internal and external loads, based on (ANSI) steel pipe, grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 11/2 times the figures shown.

ŧ cULus approved for use on schedule 10 pipe: 2, 2 ½, 3 and 4 inch sizes rated to 363 psi/25 bar; 5 inch rated to 290 psi/20 bar; 6 and 8 inch rated to 232 psi/16 bar.
FM approved on schedule 10 pipe: 2, 2 ½, 76.1mm, 3, 4, 139.7 mm, 5, 6 and 8 inch sizes rated to 363 psi/25 bar.

§ cULus approved for use on schedule 40 pipe: 2, 2 ½, 3, 4, 5, 6 and 8 inch sizes rated to 363 psi/25 bar.
FM approved for use on schedule 40 pipe: 2, 2 ½, 76.1mm, 3, 4, 139.7 mm, 5, 6 and 8 inch sizes rated to 363 psi/25 bar.

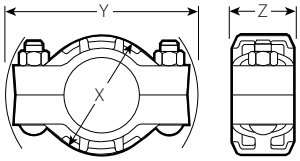
Couplings

Standard Flexible Coupling

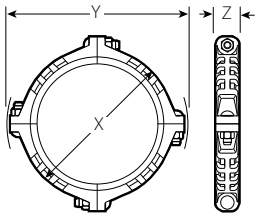
STYLE 77

For Complete Information Request Publication **06.04**

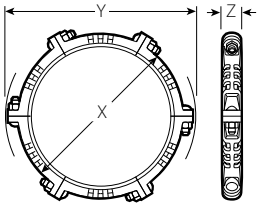
- Cross-ribbed construction design
- Provides flexibility for expansion, contraction, and deflection
- Pressure rated up to 1000 psi/6900 kPa
- Sizes from 3/4 - 12"/20-600mm for roll or cut grooved systems. Sizes from 14-24"/350-600mm for cut grooved systems only.
- For 14–60"/350–1500 mm AGS roll groove systems, see pg. 5-1



TYPICAL ¾–12"/20–300 mm SIZES



TYPICAL 14–22"/350–550 mm SIZES



TYPICAL 24"/600 mm SIZES

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
¾ 20	1.050 26.7	1,000 6900	865 3850	0 – 0.06 0 – 1.6	2.13 54	4.00 102	1.75 44	1.1 0.5
1 25	1.315 33.4	1,000 6900	1,360 6050	0 – 0.06 0 – 1.6	2.38 61	4.12 105	1.75 44	1.2 0.5
1 ¼ 32	1.660 42.2	1,000 6900	2,160 9610	0 – 0.06 0 – 1.6	2.65 67	5.00 127	1.88 48	2.0 0.9
1 ½ 40	1.900 48.3	1,000 6900	2,835 12615	0 – 0.06 0 – 1.6	3.13 79	5.38 137	1.88 48	2.1 1.0
2 50	2.375 60.3	1,000 6900	4,430 19715	0 – 0.06 0 – 1.6	3.63 92	5.88 149	1.88 48	2.6 1.2
57.0 mm	2.664 57.0	1,000 6900	3,955 17592	0 – 0.16 0 – 1.6	3.43 87	5.73 146	1.9 48	3.0 1.4
2 ½ 65	2.875 73.0	1,000 6900	6,490 28880	0 – 0.06 0 – 1.6	4.25 108	6.50 165	1.88 48	3.1 1.4
76.1 mm	3.000 76.1	1,000 6900	7,070 31460	0 – 0.06 0 – 1.6	4.38 111	6.63 168	1.88 48	3.2 1.5
3 80	3.500 88.9	1,000 6900	9,620 46810	0 – 0.06 0 – 1.6	5.00 127	7.13 181	1.88 48	3.7 1.7
3 ½ 90	4.000 101.6	1,000 6900	12,565 55915	0 – 0.06 0 – 1.6	5.63 143	8.25 210	1.88 48	5.6 2.5
4 100	4.500 114.3	1,000 6900	15,900 70755	0 – 0.13 0 – 3.2	6.13 156	8.88 226	2.13 54	6.7 3.0
108.0 mm	4.250 108.0	1,000 6900	14,180 63100	0 – 0.13 0 – 3.2	6.00 152	8.63 219	2.13 54	11.0 5.0
5 125	5.563 141.3	1,000 6900	24,300 108135	0 – 0.13 0 – 3.2	7.75 197	10.65 270	2.13 54	10.6 4.8
133.0 mm	5.250 133.0	1,000 6900	21,635 96275	0 – 0.13 0 – 3.2	7.63 194	10.38 264	2.13 54	10.0 4.5
139.7 mm	5.500 139.7	1,000 6900	23,745 105665	0 – 0.13 0 – 3.2	8.63 219	10.65 270	2.13 54	10.0 4.5
6 150	6.625 168.3	1,000 6900	34,470 153390	0 – 0.13 0 – 3.2	8.63 219	11.88 302	2.13 54	12.0 5.4
159.0 mm	6.250 159.0	1,000 6900	30,665 136460	0 – 0.13 0 – 3.2	8.63 219	11.50 292	2.13 54	13.2 6.0
165.1 mm	6.500 165.1	1,000 6900	33,185 147660	0 – 0.13 0 – 3.2	8.88 226	11.63 295	2.13 54	13.2 6.0
8 § 200	8.625 219.1	800 5500	46,740 207995	0 – 0.13 0 – 3.2	11.00 279	14.75 375	2.50 63	20.8 9.4
10 § 250	10.750 273.0	800 5500	73,280 326100	0 – 0.13 0 – 3.2	13.63 346	17.13 435	2.63 67	31.1 14.1
12 § 300	12.750 323.9	800 5500	102,000 453900	0 – 0.13 0 – 3.2	15.63 397	19.25 489	2.63 67	27.8 12.6
14# 350	14.000 355.6	300 2065	46,180 205500	0 – 0.13 0 – 3.2	16.75 425	20.25 514	3.00 76	39.2 17.8
377.0 mm µ	14.842 377.0	300 2065	51,875 230845	0 – 0.13 0 – 3.2	17.39 442	20.96 531	2.8 71	48.8 22.1
16# 400	16.000 406.4	300 2065	60,320 268425	0 – 0.13 0 – 3.2	18.75 476	22.25 565	3.00 76	45.0 20.4
426.0 mm µ	16.772 426	300 2065	66,245 294795	0 – 0.13 0 – 3.2	19.69 500	22.92 581	2.92 74	56.7 25.7
18# 450	18.000 457.2	300 2065	76,340 339710	0 – 0.13 0 – 3.2	21.56 548	25.00 635	3.13 80	64.1 29.1
480.0 mm µ	18.898 48	300 2065	84,105 374265	0 – 0.13 0 – 3.2	22.38 569	25.86 655	3.04 77	77.2 35
20# 500	20.000 508.0	300 2065	94,000 418300	0 – 0.13 0 – 3.2	23.63 600	27.00 686	3.13 80	74.8 34.0
22# 550	22.000 559.0	300 2065	114,000 507300	0 – 0.13 0 – 3.2	25.63 651	29.13 740	3.13 80	82.6 37.5
530.0 mm µ	20.866 530	300 2065	102,535 456280	0 – 0.13 0 – 3.2	24.29 617	27.8 704	3.07 77	91.7 41.6
580.0 mm µ	22.835 580	300 2065	102,380 455591	0 – 0.13 0 – 3.2	26.76 680	30.01 762	3.12 79	92.8 42.2
24# 600	24.000 609.6	250 1725	113,000 502850	0 – 0.13 0 – 3.2	27.75 705	31.00 787	3.19 81	89.6 40.7
630.0 mm µ	24.803 630	250 1725	102,790 457416	0 – 0.13 0 – 3.2	28.42 722	32.16 817	3.12 79	96.8 44
14 – 60 350 – 1525	AGS® **For 14 – 60"/350 – 1525 mm sizes Victaulic offers the Advanced Groove System (AGS) line of products, pg. 6-3. Request publication 20.03 for information on the flexible W77 AGS coupling.**							

§ Couplings 8"/200 mm, 10"/250 mm, 12"/300 mm sizes are available to JIS standards. Refer to Publication 06.17 for details.

For use on cut groove systems only. For roll grooved systems Victaulic offers the Advanced Groove System (AGS), see pg. 5-1. For cut groove fittings in this size contact our Engineered Products Group at 610-559-3300.

* Refer to General Notes on pg. 1-4.

µ CIS size product is designed with two housings and requires two bolts.

Flexible Coupling

STYLE 75

For Complete Information Request Publication **06.05**

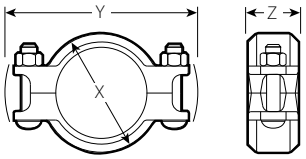
- For use where moderate pressures are expected and weight considerations are a factor
- 50% lighter in weight than Style 77
- Housings cast in two identical pieces in all sizes
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 1–12"/25–304.8 mm

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
1 25	1.315 33.4	500 3450	680 3025	0 – 0.06 0 – 1.6	2.38 61	4.27 108	1.77 45	1.3 0.6
1 ¼ 32	1.660 42.2	500 3450	1,080 4805	0 – 0.06 0 – 1.6	2.68 68	4.61 117	1.77 45	1.4 0.6
1 ½ 40	1.900 48.3	500 3450	1,420 6320	0 – 0.06 0 – 1.6	2.91 74	4.82 122	1.77 45	1.5 0.6
2 50	2.375 60.3	500 3450	2,215 9860	0 – 0.06 0 – 1.6	3.43 87	5.22 133	1.88 48	1.7 0.8
2 ½ 65	2.875 73.0	500 3450	3,245 14440	0 – 0.06 0 – 1.6	3.88 98	5.68 144	1.88 48	1.9 0.9
76.1 mm	3.000 76.1	500 3450	3,535 15730	0 – 0.06 0 – 1.6	4.00 102	5.90 150	1.88 48	1.9 0.9
3 80	3.500 88.9	500 3450	4,800 21360	0 – 0.06 0 – 1.6	4.50 114	7.00 178	1.88 48	2.9 1.3
3 ½ 90	4.000 101.6	500 3450	6,300 28035	0 – 0.06 0 – 1.6	5.00 127	7.50 191	1.88 48	2.9 1.3
4 100	4.500 114.3	500 3450	7,950 35380	0 – 0.13 0 – 3.2	5.80 147	8.03 204	2.13 54	4.1 1.9
108.0 mm	4.250 108.0	450 3100	6,380 28395	0 – 0.13 0 – 3.2	5.55 141	7.79 198	2.13 54	3.7 1.7
4 ½ 120	5.000 127.0	450 3100	8,820 39250	0 – 0.13 0 – 3.2	6.13 156	9.43 240	2.13 54	5.5 2.5
5 125	5.563 141.3	450 3100	10,935 48660	0 – 0.13 0 – 3.2	6.88 175	10.07 256	2.13 54	5.8 2.6
133.0 mm	5.250 133.0	450 3100	9,735 43325	0 – 0.13 0 – 3.2	6.55 166	9.37 238	2.13 54	6.0 2.7
139.7 mm	5.500 139.7	450 3100	10,665 47460	0 – 0.13 0 – 3.2	6.80 173	9.59 244	2.13 54	6.3 2.9
152.4 mm	6.000 152.4	450 3100	12,735 56670	0 – 0.13 0 – 3.2	7.38 187	10.48 266	1.88 48	6.2 2.8
6 150	6.625 168.3	450 3100	15,525 69085	0 – 0.13 0 – 3.2	8.00 203	11.07 281	2.13 54	7.0 3.2
159.0 mm	6.250 159.0	450 3100	13,800 61405	0 – 0.13 0 – 3.2	7.63 194	10.49 266	2.13 54	6.8 3.1
8 200	8.625 219.1	450 3100	26,280 116945	0 – 0.13 0 – 3.2	10.34 263	13.97 355	2.32 59	12.4 5.6

* Refer to General Notes on pg. 1-4.

IMPORTANT NOTES:

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.



TYPICAL FOR ALL SIZES

Vic-Flange Adapter ANSI Class 150/PN10

STYLE 741

For Complete Information Request Publication **06.06**

- Directly incorporates ANSI Class 125 or Class 150 flanged components into a grooved system
- Pressure rated up to 300 psi/2065 kPa
- Sizes from 2–12"/ 50–300 mm are hinged
- Sizes 14–24"/350–600 mm are cast in four identical segments

Size		Max. Work Pressure *	Max. End Load *	Sealing Surface		Dimensions		Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	A Max. Inches mm	B Min. Inches mm	W Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	300 2065	1,330 5920	2.38 60	3.41 87	6.75 172	0.75 19	3.1 1.4
2½ 65	2.875 73.0	300 2065	1,950 8680	2.88 73	3.91 99	7.87 200	0.88 22	4.8 2.1
3 80	3.500 88.9	300 2065	2,885 12840	3.50 89	4.53 115	8.29 211	0.94 24	5.3 2.4
4 100	4.500 114.3	300 2065	4,770 21225	4.50 114	5.53 141	9.87 251	0.94 24	7.4 3.4
5 125	5.563 141.3	300 2065	7,290 32440	5.56 141	6.71 171	10.90 277	1.00 25	8.6 3.9
6 150	6.625 168.3	300 2065	10,350 46060	6.63 168	7.78 198	11.90 302	1.00 25	9.9 4.5
165.1 mm	6.500 165.1	300 2065	9,960 44320	6.50 165	7.66 195	11.92 303	1.00 25	10.0 4.5
8 200	8.625 219.1	300 2065	17,500 77875	8.63 219	9.94 252	14.50 368	1.13 29	16.6 7.5
10 250	10.750 273.0	300 2065	27,215 121110	10.75 273	12.31 313	17.24 438	1.19 30	24.2 11.0
12 300	12.750 323.9	300 2065	38,285 170270	12.75 324	14.31 364	20.25 514	1.25 32	46.8 21.2
14# 350	14.000 355.6	300 2065	46,180 205500	14.00 356	16.39 416	24.50 622	1.44 37	62.0 28.1
16# 400	16.000 406.4	300 2065	60,300 268335	16.00 406	18.39 467	27.12 689	1.44 37	79.0 35.8
18# 450	18.000 457.0	300 2065	76,340 339700	18.00 457	20.00 508	29.00 737	1.56 40	82.3 37.3
20# 500	20.000 508.0	300 2065	94,250 419400	20.00 508	22.50 572	31.50 800	1.69 43	103.3 46.9
24# 600	24.000 610.0	300 2065	135,700 603865	24.00 610	27.75 705	36.00 914	1.94 49	142.0 64.4
14 – 24 350 – 600	AGS® **For 14 – 24"/350 – 600 mm sizes Victaulic offers the Advanced Groove System (AGS) line of products, pg. 6-5. Request publication 20.03 for information on the flexible W741 AGS coupling.**							

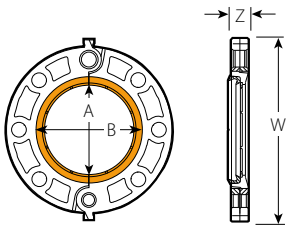
* Refer to Publication 06.06 for more details.

\# For cut groove systems only. For 14–24"/350–600 mm roll groove systems, AGS (Advanced Groove System) products are used. Style 741 is not compatible with the AGS system.

IMPORTANT NOTES:

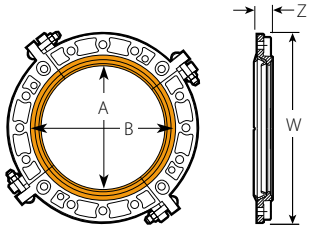
Style 741 Vic-Flange adapters provide rigid joints when used on pipe with standard cut or roll groove dimensions and consequently allow no linear or angular movement at the joint. When used with Victaulic Series 700 butterfly valves, plastic pipe or lightwall metallic pipe, small teeth in I.D. of key section should be removed and may be used on one side of the valve. Contact Victaulic for information on AS2129 - Table E; ISO 2084 (PN10); DIN 2532 (PN10) and JIS B-2210 (10K) flanges.. Total bolts required to be supplied by installer, may be ordered from Victaulic.

For restrictions on where and how Vic-Flange adapters and flange washers can be used, refer to Publication 06.06.



TYPICAL 2–12"/50–300 mm SIZES

Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.



TYPICAL 14–24"/350–600 mm SIZES

Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Vic-Flange Adapter ANSI Class 300/PN16

STYLE 743

For Complete Information Request Publication **06.06**

- Permits direct connection of ANSI Class 300 flanged components into a grooved system
- Designed to mate with raised-face flanges, but can be used with flat-face flanges by removing the raised projections on the outside face of the flange
- Pressure rated up to 720 psi/4960 kPa
- Sizes from 2–12"/50–300 mm

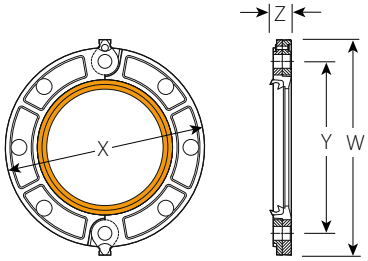
Size		Max. Work Pressure *	Max. End Load *	Sealing Surface		Dimensions		Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	A Max. Inches mm	B Min. Inches mm	W Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	720 4960	3,190 14200	2.38 60	3.41 87	7.70 196	0.93 24	4.8 2.2
2½ 65	2.875 73.0	720 4960	4,670 20780	2.88 73	3.91 99	8.61 219	1.06 27	7.4 3.4
3 80	3.500 88.9	720 4960	6,925 30815	3.50 89	4.53 115	9.48 241	1.18 30	9.1 4.1
4 100	4.500 114.3	720 4960	11,445 50930	4.50 114	5.53 141	11.35 288	1.31 33	15.3 6.9
5 125	5.563 141.3	720 4960	17,500 77875	5.56 141	6.72 171	12.31 313	1.43 36	17.7 8.0
6 150	6.625 168.3	720 4960	24,805 110380	6.63 168	7.78 198	13.77 350	1.50 38	23.4 10.6
8 200	8.625 219.1	720 4960	42,045 187100	8.63 219	9.94 252	16.68 424	1.68 43	34.3 15.6
10 250	10.750 273.0	720 4960	65,315 290650	10.75 273	12.31 313	19.25 489	1.93 49	48.3 21.9
12 300	12.750 323.9	720 4960	91,880 408870	12.75 324	14.31 364	22.25 565	2.06 52	70.5 32.0

* Refer to Publication 06.06 for more details.

IMPORTANT NOTES:

Style 743 Vic-Flange adapters must be ordered as a factory assembly when connected to a Victaulic fitting or valve. Contact Victaulic for details. Total bolts required to be supplied by installer, may be ordered from Victaulic.

For restrictions on where and how Vic-Flange adapters and flange washers can be used, refer to Publication 06.06.



TYPICAL FOR ALL SIZES

Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Reducing Coupling

STYLE 750

For Complete Information
Request Publication **06.08**

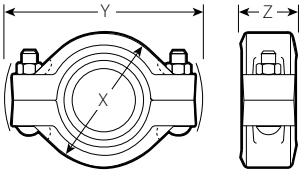
- Direct reduction on the piping run
- Designed to replace two couplings and a reducing fitting
- Special reducing gasket for pressure responsive sealing
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 2×1"/50×25 mm through 10×8"/270×220 mm

Size			Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm			psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	×	1 25	350 2400	1,000 4450	0 – 0.07 0 – 1.8	3.38 85	5.28 134	1.88 48	2.7 1.2
		1 ½ 40	350 2400	1,000 4450	0 – 0.07 0 – 1.8	3.38 85	5.28 134	1.88 48	2.0 1.0
2½ 65	×	2 50	500 3450	2,215 9850	0 – 0.07 0 – 1.8	4.00 102	5.93 151	1.88 48	3.1 1.4
76.1 mm	×	2 50	350 2410	1,550 6900	0 – 0.07 0 – 1.8	4.38 111	6.63 168	1.88 48	4.6 2.1
3 80	×	2 50	350 2410	1,550 6900	0 – 0.07 0 – 1.8	4.75 121	7.13 181	1.88 48	4.9 2.2
		2½ 65	500 3450	3,250 14460	0 – 0.07 0 – 1.8	4.75 121	7.13 181	1.88 48	4.3 2.0
88.9 mm	×	76.1	350 2410	2,275 10125	0 – 0.07 0 – 1.8	4.75 121	7.13 181	1.88 48	4.2 1.9
4 100	×	2 50	350 2410	1,550 6900	0 – 0.13 0 – 3.2	6.25 159	8.90 226	2.25 57	8.1 3.7
		2½ 65	350 2410	2,275 10125	0 – 0.13 0 – 3.2	6.25 159	8.90 226	2.25 57	8..6 3.9
		3 80	500 3450	4,810 21400	0 – 0.13 0 – 3.2	6.00 152	8.90 226	2.25 57	6.7 3.0
114.3 mm	×	76.1	350 2410	2,275 10125	0 – 0.13 0 – 3.2	6.25 159	8.90 226	2.25 57	6.9 3.1
5 125	×	4 100	350 2410	5,565 24765	0 – 0.13 0 – 3.2	7.18 182	10.70 272	2.13 54	11.2 5.1
6 150	×	4 100	350 2410	5,565 24765	0 – 0.13 0 – 3.2	8.63 219	11.90 302	2.25 57	16.7 7.6
		5 125	350 2410	8,500 37825	0 – 0.13 0 – 3.2	8.31 211	11.90 302	2.25 57	12.9 5.9
165.1 mm	×	4 100	350 2410	5,565 24765	0 – 0.13 0 – 3.2	8.63 219	11.90 302	2.25 57	15.2 6.9
8 200	×	6 150	350 2410	12,000 53400	0 – 0.13 0 – 3.2	10.81 275	14.88 378	2.50 64	22.4 10.2
219.1 mm	×	165.1 mm	350 2410	1,625	0 – 0.13 0 – 3.2	10.75 273	14.88 378	2.50 64	23.2 10.5
10 273	×	8 219.1	350 2410	20,450	0 – 0.13 0 – 3.2	13.12 333	17.26 438	2.62 67	31.4 14.2

* Refer to General Notes on pg. 1-4.

IMPORTANT NOTES:

Style 750 reducing couplings should not be used with end caps (No. 60) in systems where a vacuum may be developed. Contact Victaulic for details.



TYPICAL FOR ALL SIZES

Couplings

Snap-Joint Coupling

STYLE 78

For Complete Information Request Publication **06.09**

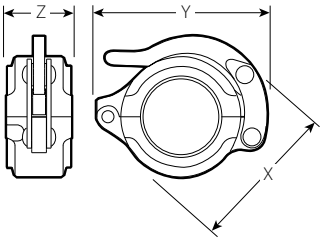
- Designed for quick disconnect service
- Mated housings are hinged with an attached locking handle for assembly
- Pressure rated up to 300 psi/2065 kPa
- Sizes from 1–8"/25–200 mm

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
1 25	1.315 33.4	300 2065	410 1825	0 – 0.06 0 – 1.6	2.75 70	3.25 83	1.75 44	0.8 0.4
1 ¼ 32	1.660 42.2	300 2065	650 2890	0 – 0.06 0 – 1.6	3.13 79	3.75 95	1.88 48	1.1 0.5
1 ½ 40	1.900 48.3	300 2065	850 3780	0 – 0.06 0 – 1.6	3.50 89	4.50 114	1.88 48	1.7 0.8
2 50	2.375 60.3	300 2065	1,330 5920	0 – 0.06 0 – 1.6	4.00 102	4.75 121	1.88 48	1.7 0.8
2 ½ 65	2.875 73.0	300 2065	1,950 8680	0 – 0.06 0 – 1.6	4.75 121	5.88 149	1.88 48	2.5 1.1
3 80	3.500 88.9	300 2065	2,885 12840	0 – 0.06 0 – 1.6	5.38 137	6.25 159	1.88 48	2.8 1.3
4 100	4.500 114.3	300 2065	4,770 21225	0 – 0.13 0 – 3.2	6.88 175	7.75 197	2.13 54	5.5 2.5
5 125	5.563 141.3	300 2065	7,290 32440	0 – 0.13 0 – 3.2	8.75 222	9.50 241	2.13 54	9.8 4.4
6 150	6.625 168.3	300 2065	10,350 46060	0 – 0.13 0 – 3.2	9.88 251	10.63 270	2.13 54	10.7 4.9
8 200	8.625 219.1	300 2065	17,500 77875	0 – 0.13 0 – 3.2	12.25 311	13.00 330	2.38 60	15.3 6.9

* Refer to General Notes on pg .1-4.

IMPORTANT NOTES:

Refer to Victaulic Pocket Handbook I-100 for special safety precautions when used for concrete pumping.



TYPICAL FOR ALL SIZES

Outlet Coupling

STYLE 72

For Complete Information Request Publication **06.10**

- Serves dual purpose as a coupling and outlet
- Designed to seal on the joined pipe ends and in the neck of the outlet
- Pressure rated up to 500psi/3450kPa
- Sizes from 1½×½"/40×15mm through 6×2"/150×50mm

Size		Max. Work Pressure *	Allow. Pipe End Sep. *	Dimensions					Approx. Wgt. Each
Run × Reducing Outlet Nominal Size Inches/mm		psi kPa	Inches mm	T † Inches mm	V § Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
1½ 40	× ½ 15	500 3450	0.75 – 0.88 19 – 22	2.06 52	2.63 67	2.94 75	4.50 114	2.75 70	1.4 0.6
	¾ 20	500 3450	0.75 – 0.88 19 – 22	2.06 52	2.63 67	2.94 75	4.50 114	2.75 70	1.4 0.6
	1 25	500 3450	0.75 – 0.88 19 – 22	1.94 49	2.63 67	2.94 75	4.50 114	2.75 70	1.4 0.6
2 50	× ½ 15	500 3450	0.81 – 0.88 20 – 22	2.47 63	3.03 77	3.38 86	5.00 127	2.75 70	3.5 1.6
	¾ 20	500 3450	0.81 – 0.88 20 – 22	2.47 63	3.03 77	3.38 86	5.00 127	2.75 70	2.5 1.1
	1 25	500 3450	0.81 – 0.88 20 – 22	2.34 60	3.03 77	3.38 86	5.00 127	2.75 70	2.5 1.1
2½ 65	× ½ 15	500 3450	0.81 – 0.88 20 – 22	2.56 65	3.13 79	3.88 98	6.00 152	2.75 70	4.5 2.0
	¾ 20	500 3450	0.81 – 0.88 20 – 22	2.56 65	3.13 79	3.88 98	6.00 152	2.75 70	4.6 2.1
	1 25	500 3450	0.81 – 0.88 20 – 22	2.44 62	3.13 79	3.88 98	6.00 152	2.75 70	4.6 2.1
	1¼ 32	500 3450	1.25 – 1.50 32 – 38	3.00 76	3.69 94	4.06 103	6.88 175	3.25 83	5.0 2.3
	1½ 40	500 3450	1.25 – 1.50 32 – 38	—	3.69 94	4.06 103	6.88 175	3.25 83	5.0 2.3
3 80	× ¾ 20	500 3450	0.50 – 0.63 13 – 16	2.75 70	3.31 84	4.50 114	7.00 178	2.38 60	3.4 1.5
	1 25	500 3450	1.25 – 1.50 32 – 38	4.06 103	4.75 121	4.75 121	8.00 203	3.25 83	7.0 3.2
	1¼ 32	500 3450	1.25 – 1.50 32 – 38	4.06 103	4.75 121	4.75 121	8.00 203	3.25 83	7.0 3.2
	1½ 40	500 3450	1.25 – 1.50 32 – 38	—	4.25 108	4.75 121	8.00 203	3.25 83	7.0 3.2
4 100	× ¾ 20	500 3450	0.44 – 0.63 11 – 16	3.25 83	3.81 97	5.69 145	8.38 213	2.50 64	6.8 3.1
	1 25	500 3450	0.44 – 0.63 11 – 16	—	3.81 97	5.69 145	8.38 213	2.50 64	6.8 3.1
	1½ 40	400 2750	1.63 – 1.81 41 – 46	3.91 99	4.59 117	6.13 156	9.00 229	3.69 94	11.4 5.2
	2 50	400 2750	1.63 – 1.81 41 – 46	—	4.59 117	6.13 156	9.00 229	3.69 94	11.4 5.2
6 150	× 1 25	400 2750	1.63 – 1.81 41 – 46	6.19 157	6.88 175	8.13 206	12.00 305	3.69 94	18.0 8.2
	1½ 40	400 2750	1.63 – 1.81 41 – 46	6.19 157	6.88 175	8.13 206	12.00 305	3.69 94	18.0 8.2
	2 50	400 2750	1.63 – 1.81 41 – 46	—	6.06 154	8.13 206	12.00 305	3.69 94	18.0 8.2

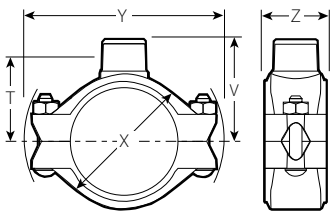
* Refer to General Notes on pg. 1-4.

§ Center of run to end of fittings.

† Center of run to the engaged pipe end. Female threaded outlet only (dimensions approximate).

IMPORTANT NOTES:

No. 60 Cap is not for use in vacuum services with Style 72 or 750 couplings. No. 61 bull plug should be used.



TYPICAL FOR ALL SIZES

Couplings

Vic-Boltless Coupling

STYLE 791 AND STYLE 792 ASSEMBLY TOOL

For Complete Information Request Publication **06.11**

- One-piece hinged coupling
- Features locking pin installation with a separate tool (Style 792) designed for assembly and disassembly
- Provides secure, tamper resistant, low profile joint
- Pressure rated up to 700 psi/4825 kPa
- Sizes from 2–8"/50–200 mm

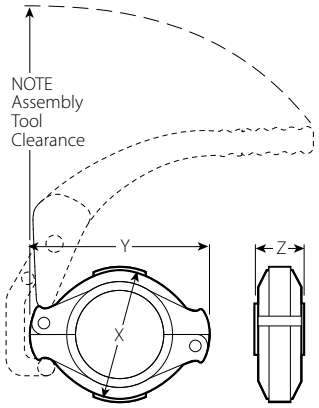
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Locking Pin Size	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	Dia. × Length Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	700 4825	3,100 13795	0 – 0.06 0 – 1.6	5/16 × 1 7/8 8 × 48	3.56 90	4.71 120	1.84 47	1.8 0.8
2 1/2 65	2.875 73.0	700 4825	4,540 20205	0 – 0.06 0 – 1.6	3/8 × 1 7/8 10 × 48	4.09 104	5.48 139	1.84 47	2.7 1.2
3 80	3.500 88.9	700 4825	6,730 29950	0 – 0.06 0 – 1.6	3/8 × 1 7/8 10 × 48	4.72 120	6.15 156	1.84 47	2.6 1.2
4 100	4.500 114.3	700 4825	11,130 49530	0 – 0.13 0 – 3.2	7/16 × 2 11 × 51	6.06 154	7.62 194	1.93 49	4.8 2.2
6 150	6.625 168.3	600 4135	20,675 92005	0 – 0.13 0 – 3.2	1/2 × 2 1/16 13 × 52	8.24 209	10.18 259	2.06 51	6.3 2.9
8 200	8.625 219.1	500 3450	29,200 129940	0 – 0.13 0 – 3.2	1/2 × 2 5/16 13 × 59	10.52 267	12.50 318	2.31 59	12.0 5.4

* Refer to General Notes on pg.1-4.

IMPORTANT NOTES:

Complete coupling includes one-piece hinged housing, gasket and locking pin only. Assembly tool Style 792 is required for assembly (one tool fits all size couplings).

Please see Publication 06.11 for tool clearance dimensions.



TYPICAL FOR ALL SIZES

Rigid Coupling

STYLE HP-70

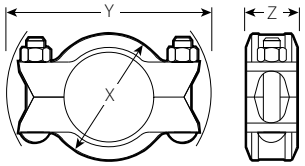
For Complete Information Request Publication **06.12**

- Designed with heavy housing for high pressure services
- Housing key is wider than standard
- Coupling housing is designed to clamp the bottom of the groove
- Essentially rigid joint
- Pressure rated up to 1000 psi/6900 kPa
- Sizes from 2–16"/50–400 mm

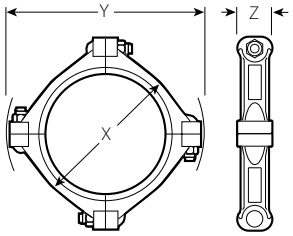
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	1000 6900	4,430 19715	0.14 3.6	3.50 89	6.68 168	2.00 51	3.2 1.5
2½ 65	2.875 73.0	1000 6900	6,490 28881	0.14 3.6	4.13 105	7.13 181	2.00 51	4.0 1.8
3 80	3.500 88.9	1000 6900	9,620 42810	0.14 3.6	4.75 121	7.75 197	2.00 51	4.4 2.0
4 100	4.500 114.3	1000 6900	15,900 70755	0.25 6.4	6.00 152	9.63 245	2.13 54	7.5 3.4
6 150	6.625 168.3	1000 6900	34,470 153390	0.25 6.4	8.63 219	12.68 321	2.50 64	16.0 7.3
8 200	8.625 219.1	800 5500	46,740 207995	0.25 6.4	11.00 279	15.00 381	2.75 70	26.1 11.8
10 250	10.750 273.0	800 5500	72,640 323250	0.25 6.4	13.50 343	17.25 438	3.00 76	32.8 14.9
12 300	12.750 323.9	800 5500	102,000 453900	0.25 6.4	15.63 397	19.13 486	3.13 80	46.0 20.9
14 † 350	14.000 355.6	600 4100	92,360 410800	0.25 6.4	16.75 425	22.00 559	3.88 99	64.0 29.0
16 † 400	16.000 406.4	600 4100	120,600 536400	0.25 6.4	18.75 476	24.13 613	3.88 99	72.0 32.7

† These sizes are not UL Listed or FM Approved. These sizes are not intended for use on Advanced Groove System (AGS) roll groove pipe.

* Refer to General Notes on pg. 1-4.



TYPICAL 2–12"/50–300 mm SIZES



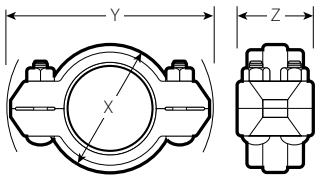
TYPICAL 14–16"/350–400 mm SIZES

Couplings

High Pressure Coupling

STYLE 808

For Complete Information Request Publication **15.01.**



Typical for all sizes

- Style 808 provides superior joint integrity at high pressures while maintaining a degree of flexibility to facilitate joining.
- Couplings engage directly into double grooved pipe without the need for special weld-on nipples or collars.
- Available for 6-12"/150-300mm
- Pressure rated up to 4000psi/27586kPa

DIMENSIONS

Pipe Size		Dimensions – Inches/mm			Bolt/Nut		Min. Bolt Torque @	Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	X	Y	Z	No.	Diameter X Length	Lb. Ft. N•m	Lbs. kg
6 150	6.625 168.3	8.75 222	13.81 351	5.00 127	4	1 x 5	450 610	36.0 16.3
8 200	8.625 219.1	11.18 284	16.08 408	5.75 146	4	1⅛ x 6	500 678	70.0 31.8
10 250	10.750 273.0	13.44 341	18.68 473	6.38 162	4	1⅛ x 6	500 678	85.0 38.6
12* 300	12.750 323.9	—	—	—	—	—	—	—

@ To achieve adequate tension on the bolts this is the minimum torque which must be applied.

*Available as special order item. Please contact Victaulic Engineered Products.

PERFORMANCE DATA

1	2	3	4	5	6	7	8	9
Pipe Size		Nominal Steel Pipe Dimension Inches mm		A Max. Joint Work. Press.	Max. Permiss. End Load	B, C Pipe End Sep. Standard Gasket Min. – Max.	B, C Pipe End Sep. "ES" Gasket Min. – Max.	B, C Max. Deflection From Center Line	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Wall Thick.	Sched. No.	psi kPa	Lbs. N	Inches mm	Inches mm	Degrees Per Cplg.	Pipe In./Ft. mm/m
6 150	6.625 168.3	0.432 11.0	80	3000 20690	103.410 459968	0.258 – 0.438 6.6 – 11.1	0.298 – 0.478 7.6 – 12.1	1° – 33′	0.35 29.2
6 150	6.625 168.3	0.719 18.3	160	4000 27586	137.880 613290	0.258 – 0.438 6.6 – 11.1	0.298 – 0.478 7.6 – 12.1		0.35 29.2
8 200	8.625 219.1	0.500 12.7	80	2500 17241	146.060 649675	0.188 – 0.438 4.8 – 11.1	0.260 – 0.510 6.6 – 13.0	1° – 39′	0.35 29.2
8 200	8.625 219.1	0.906 23.0	160	3500 24138	204.490 909572	0.188 – 0.438 4.8 – 11.1	0.260 – 0.510 6.6 – 13.0		0.35 29.2
10 250	10.750 273.0	0.593 15.1	80	2500 17241	226.900 1009251	0.188 – 0.438 4.8 – 11.1	0.260 – 0.510 6.6 – 13.0	1° – 20′	0.28 23.3
10 250	10.750 273.0	1.125 28.6	160	3000 20690	272.280 1211101	0.188 – 0.438 4.8 – 11.1	0.260 – 0.510 6.6 – 13.0		0.28 23.3
12 300	12.750 323.9	0.688 17.5	80	2000 13793	255.350 1135797	0.188 – 0.438 4.8 – 11.1	0.260 – 0.510 6.6 – 13.0	1° – 07″	0.24 20.0
12 300	12.750 323.9	1.312 33.3	160	2500 17241	319.190 1419757	0.188 – 0.438 4.8 – 11.1	0.260 – 0.510 6.6 – 13.0		0.24 20.0

COLUMN 1 – Victaulic couplings are identified by nominal pipe size.

COLUMN 2 – Nominal pipe wall thickness. For data with other wall thicknesses contact Victaulic.

COLUMN 3 – Pipe wall thickness schedule as established by ANSI Standard B36.10.

COLUMN 4 – Maximum line pressure, including surge, to which a joint should be subjected. This figure provides a nominal safety factor of 3. Working pressure ratings are based on pipe prepared in accordance with Victaulic double cut groove specifications. Maximum allowable working pressures for other pipe schedules or grades must be determined by applicable code requirements.

NOTE A: ONE TIME FIELD TEST ONLY. The Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

COLUMN 5 – Maximum end load from all internal and/or external forces to which the joint should be subjected under working conditions.

COLUMNS 6 & 7 – Range of pipe end separation normally available on double cut grooved steel pipe. Maximum allowable movement is the difference between minimum and maximum pipe end separation subject to tolerances (see Design Data).

COLUMNS 8 & 9 – Maximum allowable deflection of pipe from centerline, subject to tolerances (see Design Data). See Note B.

NOTE B: Maximum Pipe Movement will be reduced by Deflection (Col. 8 & 9) and vice versa.

NOTE C: Refer to Design Data for information on tolerances and pipe gap settings.

Endseal Coupling for Plastic Coated Pipe

STYLE HP-70ES

For Complete Information Request Publication **06.13**

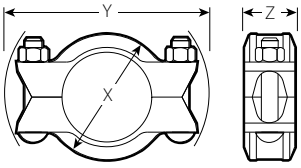
- Specially formulated and compounded oil-resistant nitrile gasket
- ES gasket design has integral central leg that positions between the pipe ends for use with plastic-coated or cement-lined pipe
- Designed for higher pressure systems rated up to 2500 psi/17250 kPa
- Sizes from 2–12"/50–300 mm

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	2500 17250	11,000 48950	0.19 4.8	3.44 87	6.51 765	1.88 48	3.2 1.5
2½ 65	2.875 73.0	2500 17250	16,200 72090	0.19 4.8	4.00 102	7.10 180	1.88 48	4.0 1.8
3 80	3.500 88.9	2500 17250	25,400 113030	0.19 4.8	4.69 119	7.74 197	1.88 48	4.6 2.1
4 100	4.500 114.3	2500 17250	39,000 173550	0.19 4.8	5.94 151	9.54 242	2.13 54	8.2 3.7
6 150	6.625 168.3	2000 13800	68,800 306160	0.27 6.7	8.50 216	12.61 320	2.38 60	16.4 7.4
8 200	8.625 219.1	1500 10350	87,500 389375	0.27 6.7	10.94 278	14.97 380	2.75 70	26.0 11.8
10 250	10.750 273.0	1250 8600	114,500 509525	0.28 7.1	13.43 341	17.22 437	2.88 73	37.2 16.9
12 300	12.750 323.9	1250 8600	160,800 715560	0.28 7.1	15.56 395	19.06 484	3.00 76	42.0 19.1

* Refer to General Notes on pg. 1-4.

IMPORTANT NOTES:

HP-70ES couplings must always be used with pipe or fittings grooved to Victaulic "ES" dimensions.
HP-70ES couplings cannot be used with Victaulic Series 700 butterfly valves.



TYPICAL FOR ALL SIZES

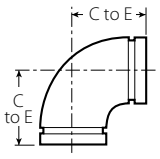
Couplings – EndSeal Fittings

EndSeal Fittings for Plastic Coated Pipe

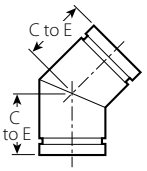
NO. 62-ES 90° Elbow
NO. 63-ES 45° Elbow
NO. 64-ES Tee
NO. 35-ES Cross
NO. 22-ES Header Tee

For Complete Information Request Publication **07.03**

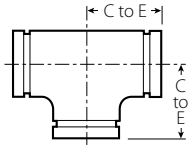
- Extra heavy wall thickness – Schedule 80
- "ES" EndSeal grooves for use with HP-70ES couplings only
- Special header tees for oil production headers designed with top (test) line is 2"/50mm and bottom production line is 3"/80mm or 4"/100mm
- Sizes from 2–6"/50–150mm



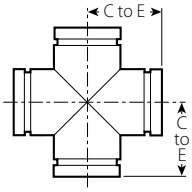
NO. 62-ES



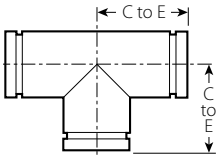
NO. 63-ES



NO. 64-ES



NO. 35-ES



NO. 22-ES

Size		No. 62-ES 90° Elbow		No. 63-ES* 45° Elbow		No. 64-ES* Tee		No. 35-ES* Cross		No. 22-ES Header Tee	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
2 50	2.375 60.3	3.25 83	2.5 1.1	2.00 51	1.8 0.8	3.25 83	4.2 1.9	3.25 83	3.9 1.8	—	—
2½ 65	2.875 73.0	3.75 95	5.0 2.3	2.25 57	2.9 1.3	3.75 95	7.9 3.6	3.75 95	6.6 3.0	—	—
2 – 3 50 – 90	2.375 – 3.500 60.3 – 88.9	—	—	—	—	—	—	—	—	4.25 108	3.4 1.5
2 – 4 50 – 100	2.375 – 4.500 60.3 – 114.3	—	—	—	—	—	—	—	—	5.00 127	4.1 1.9
3 80	3.500 88.9	4.25 108	6.0 2.7	2.50 64	4.3 1.9	4.25 108	16.0 7.3	4.25 108	14.2 6.4	—	—
4 100	4.500 114.3	5.00 127	10.3 4.7	3.00 76	8.5 3.9	5.00 127	23.5 10.7	5.00 127	15.8 7.2	—	—
6 † 150	6.625 168.3	6.50 165	27.2 12.3	3.50 89	16.5 7.5	6.50 165	27.0 12.2	6.50 165	46.0 20.9	—	—

* Steel Fabricated - Cast Full Flow.

† For sizes to 12"/300mm consult Victaulic.

IMPORTANT NOTES:

Steel Full Flow elbows available with longer center to end dimensions. Contact Victaulic for details.

Notes

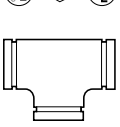
Fittings

- Standard fitting pressure ratings conform to ratings of installed coupling
- All fittings supplied with grooves or shoulders for fast installation
- Groove design permits flexibility for easy alignment (these fittings are not intended for use with Victaulic couplings for plain end pipe – refer to Publication 14.04 for fittings available for plain end pipe)
- Painted orange enamel with optional galvanized finish
- When connecting wafer or lug-type butterfly valves directly to Victaulic fittings with Style 741 or 743 Vic-Flange adapters, check disk clearance dimensions with I.D. dimension of fitting
- Request Publication 07.01

Advanced Groove System AGS®

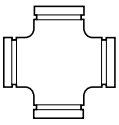
For 14–24"/350–600 mm piping systems Victaulic offers Advanced Groove System (AGS) fittings, see pg 6-1.

Tees, Crosses, Wyes, and Laterals



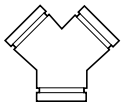
Tee

NO. 20, PG. 2-7
AGS NO. W20, PG. 6-7



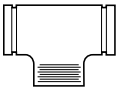
Cross

NO. 35, PG. 2-7
AGS NO. W35, PG. 6-7



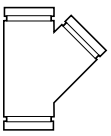
True Wye

NO. 33, PG. 2-7
AGS NO. W33, PG. 6-7



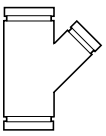
Tees with Threaded Branch

NO. 29M, PG. 2-7



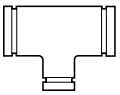
45° Lateral

NO. 30, PG. 2-10
AGS NO. W30, PG. 6-9



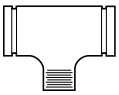
45° Reducing Lateral

NO. 30-R, PG. 2-10
AGS NO. W30-R, PG. 6-9



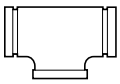
Reducing Tee

NO. 25, PGS. 2-8, 9
AGS NO. W25, PG. 6-8



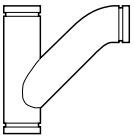
Reducing Tee with Threaded Branch

NO. 29T, PGS. 2-8, 9



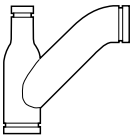
Bullhead Tee

NO. 21, PG. 2-9



Tee Wye

NO. 32, PG. 2-11



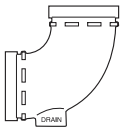
Reducing Tee Wye

NO. 32-R, PG. 2-11

Elbows

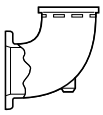
90° Elbow

NO. 10, PG. 2-3, 4
AGS NO. W10, PG. 6-7



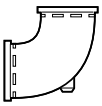
Drain Elbow

NO. 10-DR, PG. 2-5



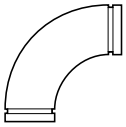
Reducing Base Support Elbow Grv. × Flange

NO. R-10F, PG. 2-5



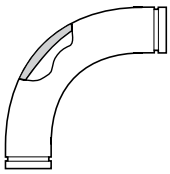
Reducing Base Support Elbow Grv. × Grv.

NO. R-10G, PG. 2-5



90° 1½ D Long Radius Elbow

NO. 100, PG. 2-3, 4
AGS NO. W100, PG. 6-7



90° 3 D Long Radius Elbow

NO. 100-3D, PG. 2-5

45° Elbow

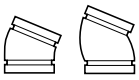
NO. 11, PG. 2-3, 4
AGS NO. W11, PG. 6-7

45° 1½ D Long Radius Elbow

NO. 110, PG. 2-3, 4
AGS NO. W110, PG. 6-7

45° 3 D Long Radius Elbow

NO. 110-3D, PG. 2-5

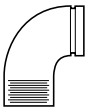


22½° Elbow

NO. 12, PG. 2-3, 4
AGS NO. W12, PG. 6-7

11¼° Elbow

NO. 13, PG. 2-3, 4
AGS NO. W13, PG. 6-7



90° Adapter Elbow

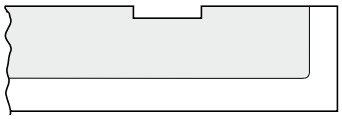
NO.18, PG. 2-6

45° Adapter Elbow

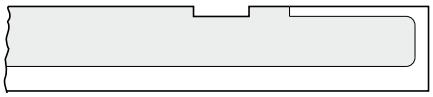
NO. 19, PG. 2-5

Alternate Style Fittings Machined for Rubber or Urethane Lining

- For severe abrasive services
- Fitting may be rubber or urethane lined
- Refer to Publication 25.03 for specific details



FOR ABRASION RESISTANCE ONLY



FOR CORROSION AND/OR ABRASION RESISTANCE

Adapters, Nipples, Caps, and Plugs

Adapter Nipple
Grv. × Thd.
NO. 40, PG. 2-12

Adapter Nipple
Grv. × Bev.
NO. 42, PG. 2-12
AGS NO. W42, PG. 6-10

Adapter Nipple
Grv. × Grv.
NO. 43, PG. 2-12
AGS NO. W43, PG. 6-10
AGS NO. W49, PG. 6-10

Flat Face Flanged
Adapter Nipple
NO. 41, NO. 45F, NO. 46F, PG. 2-13

Raised Face Flanged
Adapter Nipple
NO. 45R, NO. 46R, PG. 2-13
AGS NO. W45R, PG. 6-10

Female Threaded
Adapter
NO. 80, PG. 2-15

Swaged Nipple
Grv. × Grv.
NO. 53, PG. 2-14

Swaged Nipple
Grv. × Thd.
NO. 54, PG. 2-14

Swaged Nipple
Thd. × Grv.
NO. 55, PG. 2-14

Bull Plug
NO. 61, PG. 2-9

Cap
NO. 60, PG. 2-12
AGS NO. W60, PG. 6-10

Hose Nipple
NO. 48, PG. 2-15

Reducers

Concentric
Reducer
NO. 50, PG. 2-16, 17
AGS NO. W50, PG. 6-11

Eccentric
Reducer
NO. 51, PG. 2-16, 17
AGS NO. W51, PG. 6-11

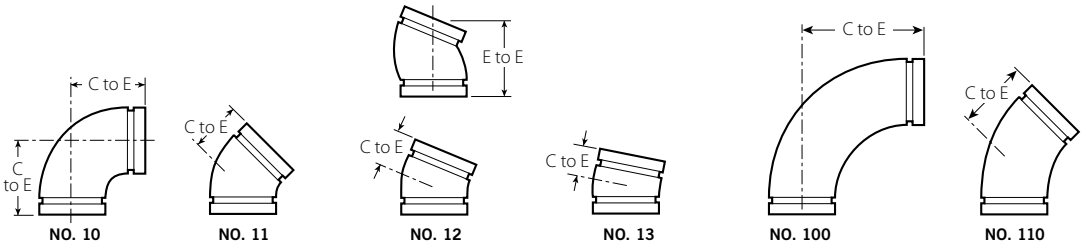
Small Threaded
Reducer
NO. 52, PG. 2-18

Fittings

Elbows

NO. 10 90° Elbow
NO. 11 45° Elbow
NO. 12 22½° Elbow
NO. 13 11¼° Elbow
NO. 100 90° LR Elbow
NO. 110 45° LR Elbow

For Complete Information Request Publication **07.01**



Size		No. 10 90° Elbow		No. 11 45° Elbow		No. 12 22½° Elbow		No. 13 11¼° Elbow		No. 100† 90° Long Radius Elbow (S)		No. 110† 45° Long Radius Elbow (S)	
Nominal Size In./mm	Actual Outside Diameter In./mm	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg
¾ 20	1.050 26.9	2.25 57	0.5 0.2	1.50 38	0.5 0.2	1.63sw 41	—	1.38sw 35	—	—	—	—	—
1 25	1.315 33.7	2.25 57	0.6 0.3	1.75 44	0.6 0.3	3.25 @ 83	0.6 0.3	1.38sw 35	0.3 0.1	—	—	—	—
1 ¼ 32	1.660 42.4	2.75 70	1.0 0.5	1.75 44	0.9 0.4	1.75 44	0.8 0.4	1.38sw 35	0.5 0.2	—	—	—	—
1 ½ 40	1.900 48.3	2.75 70	1.2 0.5	1.75 44	0.9 0.4	1.75 44	0.8 0.4	1.38sw 35	0.5 0.2	—	—	—	—
2 50	2.375 60.3	3.25 83	1.8 0.8	2.00 51	1.3 0.6	3.75 @ 95	1.4 0.6	1.38 35	1.0 0.5	4.38 111	2.5 1.1	2.75 70	1.8 0.8
2 ½ 65	2.875 73.0	3.75 95	3.2 1.5	2.25 57	2.2 1.0	4.00 @ 102	2.3 1.0	1.50 38	1.1 0.5	5.13 130	3.4 1.5	3.00 76	2.8 1.3
76.1 mm	3.000 76.1	3.75 95	3.7 1.7	2.25 57	3.4 1.5	2.24 57	—	1.50 38	—	—	—	—	—
3 80	3.500 88.9	4.25 108	4.5 2.0	2.50 64	3.1 1.4	4.50 @ 114	3.1 1.4	1.50 38	2.1 1.0	5.88 149	6.0 2.7	3.38 86	4.9 2.2
3 ½ 90	4.000 101.6	4.50 114	5.6 2.5	2.75 70	4.3 2.0	2.50sw 64	4.0 1.8	1.75sw 44	2.7 1.2	—	—	—	—
4 100	4.500 114.3	5.00 127	7.1 3.2	3.00 76	5.6 2.5	2.88 73	5.6 2.5	1.75 44	3.6 1.6	7.50 191	12.3 5.6	4.00 102	7.3 3.3
108.0 mm	4.250 108.0	5.00 127	11.0 5.0	3.00 76	5.6 2.5	—	—	—	—	—	—	—	—
4 ½ 120	5.000 127.0	5.25 sw 133	10.0 4.5	3.13 sw 79	6.0 2.7	3.50 89	6.6 3.0	1.88sw 48	4.2 1.9	—	—	—	—
5 125	5.563 141.3	5.50 140	11.7 5.3	3.25 83	8.3 3.8	2.88sw 73	7.8 3.5	2.00sw 51	5.0 2.2	+	18.2 8.3	+	14.8 6.7
133.0 mm	5.250 133.0	5.50 140	11.7 5.3	3.25 83	8.3 3.8	—	—	—	—	—	—	—	—
139.7 mm	5.500 139.7	5.50 140	11.7 5.3	3.25 83	8.3 3.8	2.87 73	—	2.00 51	—	—	—	—	—
6 150	6.625 168.3	6.50 165	17.2 7.8	3.50 89	10.8 4.9	6.25 @ 159	12.2 5.5	2.00 51	7.0 3.2	10.75 273	30.4 13.8	5.50 140	17.4 7.9
159.0 mm	6.250 159.0	6.50 165	18.6 8.4	3.50 89	10.8 4.9	—	—	—	—	—	—	—	—
165.1 mm	6.500 165.1	6.50 165	15.5 7.0	3.50 89	9.8 4.4	3.13 79	11.4 5.2	2.00 51	7.4 3.4	10.75 273	29.0 13.2	5.50 140	19.0 8.6

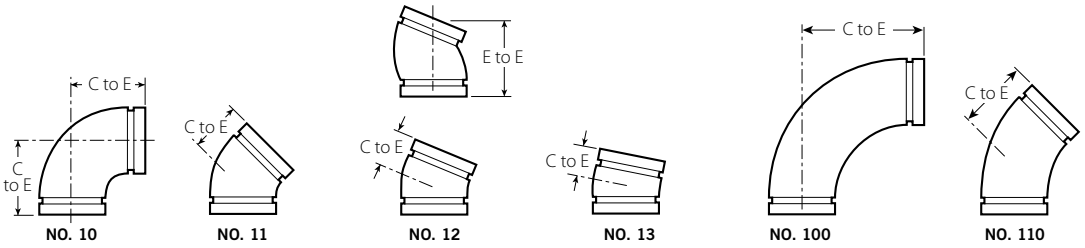
@ Gooseneck design, end-to-end dimension fittings in this size, contact your nearest Victaulic sales office.
† Chinese standard sizes
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded. S= Carbon Steel

Fittings

Elbows

NO. 10 90° Elbow
NO. 11 45° Elbow
NO. 12 22½° Elbow
NO. 13 11¼° Elbow
NO. 100 90° LR Elbow
NO. 110 45° LR Elbow

For Complete Information Request Publication **07.01**



Size		No. 10 90° Elbow		No. 11 45° Elbow		No. 12 22½° Elbow		No. 13 11¼° Elbow		No. 100† 90° Long Radius Elbow (S)		No. 110† 45° Long Radius Elbow (S)	
Nominal Size In./mm	Actual Outside Diameter In./mm	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg	C to E In./mm	Approx. Wgt. Each Lbs./kg
8 200	8.625 219.1	7.75 197	29.9 13.6	4.25 108	20.4 9.3	7.75 @ 197	20.0 9.1	2.00 51	10.1 4.6	14.25 362	66.0 30.0	7.25 184	36.0 16.3
10 250	10.750 273.0	9.00 229	63.3 28.7	4.75 121	37.5 17.0	4.38 111	30.0 13.6	2.13 54	11.8 5.3	15.00 381	107.0 48.5	6.25 159	57.0 25.9
12 300	12.750 323.9	10.00 254	74.0 33.6	5.25 133	66.7 30.3	4.88 124	40.0 18.1	2.25 57	29.3 13.3	18.00 457	156.0 70.8	7.50 191	90.0 40.8
14 # 350	14.000 355.6	14.00 355.6	136.0 61.7	5.75 146	65.0 29.5	5.00sw 127	46.0 20.9	3.50sw 89	32.0 14.5	21.00 s 533	164.0 74.4	8.75 s 222	82.0 37.2
377.0 mm †	14.843 377.0	14.84 376.9	149.3 67.7	6.15 156.2	82.0 37.2	—	—	—	—	—	—	—	—
16 # 400	16.000 406.4	16.00 406.4	171.0 77.6	6.63 168	88.0 39.9	5.00sw 127	58.0 26.3	4.00sw 102	42.0 19.1	24.00 s 610	210.0 95.3	10.00 s 254	100.0 45.4
426.0 mm †	16.772 426.0	16.77 426.0	198.6 90.1	6.95 176.5	101.3 45.9	—	—	—	—	—	—	—	—
18 # 450	18.000 457.0	18.00 457.2	228.0 103.4	7.46 189	108.0 50.0	5.50sw 140	65.0 29.5	4.50sw 114	53.2 24.1	27.00 s 686	273.0 123.8	11.25 s 286	135.0 61.2
480.0 mm †	18.898 480.0	18.90 480.0	291.0 132.0	7.83 198.8	141.7 64.3	—	—	—	—	—	—	—	—
20 # 500	20.000 508.0	20.00 508.0	298.0 135.2	8.28 210	138.0 62.6	6.00sw 152	78.6 36.0	5.00sw 127	65.0 29.5	30.00 s 762	343.0 155.6	12.50 s 318	174.0 78.9
530.0 mm †	20.866 530.0	20.87 530.0	355.0 161.0	8.64 219.4	179.0 81.2	—	—	—	—	—	—	—	—
24 # 600	24.000 610.0	24.00 609.6	438.0 198.7	9.94 252	221.0 100.2	7.00sw 178	140.0 63.5	6.00sw 152	60.0 27.2	36.00 s 914	516.0 234.1	15.00 s 381	251.0 113.9
630.0 mm †	24.803 630.0	24.80 630.0	545.0 247.2	10.27 261.0	255.2 115.7	—	—	—	—	—	—	—	—
14 – 24 350 – 600	AGS® **For AGS fitting information, see publication 20.05**												

@ Gooseneck design, end-to-end dimension

For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

† Chinese standard sizes

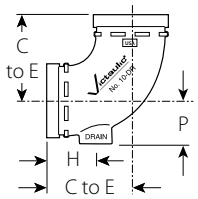
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded. S= Carbon Steel

Fittings

No. 10-DR Drain Elbow

NO. 10-DR Drain Elbow

For Complete Information
Request Publication **10.05**



NO. 10-DR

Size		Dimensions inches/mm		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E	H	P
2½ 65	2.875 73.0	3.75 95.3	2.75 69.9	1.68 42.7
3 80	3.500 88.9	4.25 108.0	2.75 69.9	2.10 53.3
4 100	4.500 114.3	5.00 127.0	2.75 69.9	2.60 66.0
6 150	6.625 168.3	6.50 165.1	2.75 69.9	3.65 89

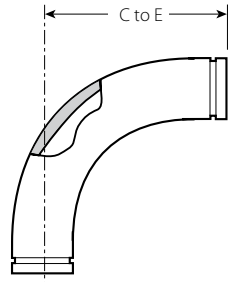
Note: The drain is drilled and tapped for a 1-inch/25-mm NPT outlet.

Long Radius Elbow 3D

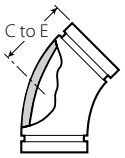
With added wall thickness
at bend for abrasive services.

NO. 100-3D 90° Long Radius Elbow 3D
NO. 110-3D 45° Long Radius Elbow 3D

For Complete Information
Request Publication **07.01**



NO. 100-3D



NO. 110-3D

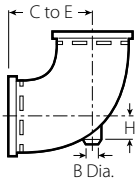
Size		Wall Thickness			No. 100-3D 90° Long Radius Elbow		No. 110-3D 45° Long Radius Elbow	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	In Non-critical Area Inches mm	At Back Wear Area Inches mm	Extra Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
2 50	2.375 60.3	0.184 4.67	0.309 7.85	0.125 3.18	10.00 254	5.0 2.3	6.50 165	4.7 2.1
3 80	3.500 88.9	0.246 6.25	0.371 9.42	0.125 3.18	13.00 330	16.0 7.3	7.75 197	10.4 4.7
4 100	4.500 114.3	0.267 6.78	0.455 11.56	0.188 4.78	16.00 406	25.5 11.6	9.00 229	17.2 7.8
6 150	6.625 168.3	0.310 7.87	0.560 14.22	0.250 6.35	24.00 610	70.0 31.8	13.50 343	45.0 20.4

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

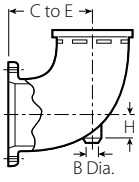
Reducing Base Support Elbow

NO. R-10G Grv. × Grv.
NO. R-10F Grv. × Flange

For Complete Information
Request Publication **07.01**



NO. R-10G



NO. R-10F

Size			No. R-10 Reducing Base Support Elbow			Approx. Weight Each	
Nominal Size Inches mm			C to E Inches mm	H Inches mm	B Diameter Inches mm	Grv. × Grv. Lbs. kg	Grv. × Flange Lbs. kg
6 150	×	4 100	9.00 229	1.25 32	1.50 38	19.0 8.6	33.0 15.0
		5 125	9.00 229	1.50 38	1.50 38	23.0 10.4	38.0 17.2
8 200	×	6 150	10.50 267	2.13 54	1.50 38	33.0 15.0	52.0 23.6
10 250	×	8 200	12.00 305	2.40 61	1.50 38	61.0 27.7	88.0 39.9

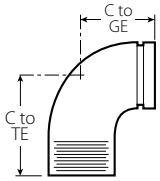
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Fittings

Adapter Elbow

NO. 18 90° Adapter Elbow
NO. 19 45° Adapter Elbow

For Complete Information
Request Publication **07.01**



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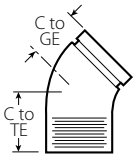


NO. 19

Size		No. 18 90° Adapter Elbow @			No. 19 45° Adapter Elbow @		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to GE Inches mm	C to TE Inches mm	Approx. Weight Each Lbs. kg	C to GE Inches mm	C to TE Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	2.25 57	2.25 57	0.5 0.2	1.50	1.50	0.5
1 25	1.315 33.7	2.25 57	2.25 57	0.5 0.2	—	—	—
1 ¼ 32	1.660 42.4	2.75 70	2.75 70	0.9 0.4	—	—	—
1 ½ 40	1.900 48.3	2.75 70	2.75 70	1.1 0.5	1.75 44	1.75 44	0.9 0.4
2 50	2.375 60.3	3.25 83	4.25 108	2.5 1.1	—	—	—
2 ½ 65	2.875 73.0	3.75 95	3.75 95	3.0 1.4	2.25 57	2.25 57	2.3 1.0
3 80	3.500 88.9	4.25 108	6.00 152	5.8 2.6	2.50 64	4.25 108	5.0 2.3
3 ½ 90	4.000 101.6	4.50 114	6.25 159	8.0 3.6	5.25 133	5.25 133	8.8 4.0
6 150	6.625 168.3	6.50 165	6.50 165	17.6 8.0	3.50 89	3.50 89	12.7 5.8

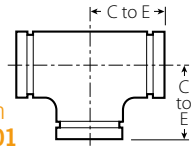
@ Available with British Standard Pipe Threads, specify "BSP" clearly on order.
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Fittings

Tees, Crosses and True Wyes

NO. 20 Tee
NO. 35 Cross
NO. 33 True Wye
NO. 29M Tee with Threaded Branch

For Complete Information Request Publication **07.01**



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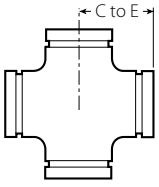

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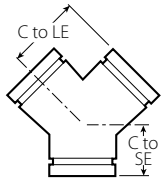

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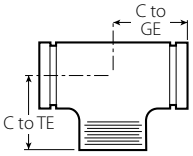


NO. 29M

Size		No. 20 Tee		No. 35 Cross (sw)		No. 33 True Wye (sw)			No. 29M Tee with Threaded Branch		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg	C to GE Inches mm	C to TE Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	2.25 57	0.6 0.3	2.25 57	0.9 0.4	—	—	—	2.25 57	2.25 57	0.6 0.3
1 25	1.315 33.7	2.25 57	1.0 0.5	2.25 57	1.3 0.6	2.25 57	2.25 57	1.1 0.5	—	—	—
1 ¼ 32	1.660 42.4	2.75 70	1.5 0.7	2.75 70	2.1 1.0	2.75 70	2.50 64	1.5 0.7	2.75 70	2.75 70	1.5 0.7
1 ½ 40	1.900 48.3	2.75 70	2.0 0.9	2.75 70	2.5 1.1	2.75 70	2.75 70	1.8 0.8	2.75 70	2.75 70	2.0 0.9
2 50	2.375 60.3	3.25 83	3.0 1.4	3.25 83	3.8 1.7	3.25 83	2.75 70	2.5 1.1	3.25 83	4.25 108	3.00 1.4
2 ½ 65	2.875 73.0	3.75 95	4.3 2.0	3.75 95	6.1 2.8	3.75 95	3.00 76	4.3 2.0	—	—	—
76.1 mm	3.000 76.1	3.75 95	5.2 2.4	—	—	—	—	—	3.75(sw) 95	3.75 95	5.2 2.4
3 80	3.500 88.9	4.25 108	6.8 3.0	4.25 108	10.5 4.8	4.25 108	3.25 83	6.1 2.8	—	—	—
3 ½ 90	4.000 101.6	4.50 (sw) 114	7.9 3.6	4.50 114	11.5 5.2	4.50 114	3.50 89	9.6 4.4	4.50(sw) 114	4.50 114	7.9 3.6
4 100	4.500 114.3	5.00 127	11.9 5.4	5.00 127	15.8 7.2	5.00 127	3.75 95	10.0 4.5	5.00 127	7.25 184	11.9 5.4
108.0 mm	4.250 108.0	5.00 127	15.5 7.0	—	—	—	—	—	5.00 127	5.00 127	15.5 7.0
4 ½ 120	5.000 127.0	5.25 (sw) 133	15.0 6.8	5.25 133	18.5 8.4	—	—	—	5.25(sw) 133	5.25 133	15.0 6.8
5 125	5.563 141.3	5.50 140	17.8 8.1	5.50 140	20.0 9.1	5.50 140	4.00 102	15.0 6.8	5.50(sw) 140	5.50 140	17.8 8.1
133.0 mm	5.250 133.0	5.50 140	17.8 8.1	—	—	—	—	—	5.50 140	5.50 140	17.8 8.1
139.7 mm	5.500 139.7	5.50 140	17.8 8.1	—	—	—	—	—	5.50 140	5.50 140	17.8 8.1
6 150	6.625 168.3	6.50 165	25.7 11.7	6.50 165	28.0 12.7	6.50 165	4.50 114	22.3 10.1	6.50(sw) 165	6.50 165	25.7 11.7
159.0 mm	6.250 159.0	6.50 165	27.1 12.3	—	—	—	—	—	6.50 165	6.50 165	27.1 12.3
165.1 mm	6.500 165.1	6.50 165	22.0 10.0	6.50 165	28.0 12.7	—	—	—	6.50 165	6.50 165	22.0 10.0
8 200	8.625 219.1	7.75 197	47.6 21.6	7.75 197	48.0 21.8	7.75 197	6.00 152	36.0 16.3	7.75(sw) 197	7.75 197	47.6 21.6
10 250	10.750 273.0	9.00 229	99.0 44.9	9.00 229	121.5 55.1	9.00 229	6.50 155	69.9 31.7	9.00 229	9.00 229	73.0 33.1
12 300	12.750 323.9	10.00 254	133.0 60.3	10.00 254	110.0 49.9	10.00 254	7.00 178	80.0 36.3	10.00 254	10.00 254	99.0 44.9
14 – 24 350 – 600	AGS® **See AGS Roll Groove Fittings, pg. 6-2; for 14–24"/350–600 mm Cut Groove Systems Request Publication 07.01**								—	—	—

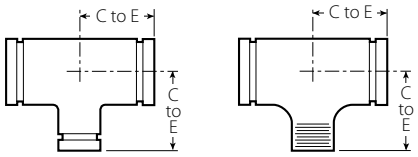
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Fittings

Reducing Tee

NO. 25 Grooved Branch
NO. 29T Threaded Branch

For Complete Information
Request Publication **07.01**



NO. 25 **NO. 29T**

Size									No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size Inches mm									C to E Inches mm	C to E Inches mm	Lbs. kg
1 25	×	1 25	×	¾ 20					+	+	1.0 0.5
1 ¼ 32	×	1 ¼ 32	×	1 25					+	+	1.3 0.6
1 ½ 40	×	1 ½ 40	×	¾ 20					+	+	1.5 0.7
				1 25					+	+	1.5 0.7
				1 ¼ 32					+	+	1.7 0.8
2 50	×	2 50	×	¾ 20					3.25 83	3.25 83	2.5 1.1
				1 25					3.25 83	3.25 83	2.7 1.2
				1 ¼ 32					+	+	1.8 0.8
				1 ½ 40					3.25 83	3.25 (sw) 83	3.0 1.4
2 ½ 65	×	2 ½ 65	×	¾ 20					+	+	3.9 1.8
				1 25					3.75 95	3.75 (sw) 95	3.8 1.7
				1 ¼ 32					+	+	4.2 1.7
				1 ½ 40					3.75 95	3.75 95	3.9 1.8
				2 50					3.75 95	3.75 (sw) 95	4.5 2.0
3 80	×	3 80	×	¾ 20					+	+	5.7 2.6
				1 25					4.25 108	4.25 108	6.1 2.8
				1 ¼ 32					+	+	8.0 3.6
				1 ½ 40					4.25 108	4.25 (sw) 108	6.5 2.9
				2 50					4.25 108	4.25 (sw) 108	6.2 2.8
				2 ½ 65					4.25 108	4.25 (sw) 108	6.4 2.9
4 100	×	4 100	×	¾ 20					+	+	8.0 3.6
				1 25					5.00 127	5.00 127	7.8 3.5
				1 ¼ 32					+	+	9.6 4.4
				1 ½ 40					5.00 127	5.00 127	10.2 4.6
				2 50					5.00 127	5.00 127	11.2 5.1
				2 ½ 65					5.00 127	5.00 127	11.4 5.2
				3 80					5.00 127	5.00 127	11.6 5.3

Size									No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size Inches mm									C to E Inches mm	C to E Inches mm	Lbs. kg
5 125	×	5 125	×	1 25					+	+	14.0 6.4
				1 ½ 40					+	+	14.3 6.5
				2 50					5.50 (sw) 140	5.50 (sw) 140	14.5 6.6
				2 ½ 65					5.50 140	5.50 (sw) 140	15.2 6.9
				3 80					5.50 140	5.50 (sw) 140	16.6 7.5
				4 100					5.50 140	5.50 (sw) 140	16.7 7.6
6 150	×	6 150	×	1 25					+	+	23.0 10.4
				1 ½ 40					+	+	24.0 10.9
				2 50					6.50 165	6.50 165	21.6 9.8
				2 ½ 65					6.50 165	6.50 165	21.4 11.7
				3 80					6.50 165	6.50 165	26.5 12.0
				4 100					6.50 165	6.50 165	25.0 11.3
				5 125					6.50 165	6.50 165	23.2 10.5
6 ½ 165.1	×	6 ½ 165.1	×	3 80					6.50 165	6.50 (sw) 165	24.0 10.9
				4 100					6.50 165	6.50 (sw) 165	25.0 11.3
8 200	×	8 200	×	1 ½ 40					+	+	33.0 15.0
				2 50					7.75 (sw) 197	7.75 (sw) 197	33.5 15.2
				2 ½ 65					+	+	39.0 17.7
				3 80					7.75 (sw) 197	7.75 (sw) 197	33.6 15.2
				4 100					7.75 197	7.75 197	41.8 19.0
				5 125					7.75 (sw) 197	7.75 (sw) 197	34.0 15.4
				6 150					7.75 197	7.75 197	42.3 19.2
				165.1					7.75 (sw) 197	7.75 (sw) 197	48.0 21.8

+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

IMPORTANT NOTE:

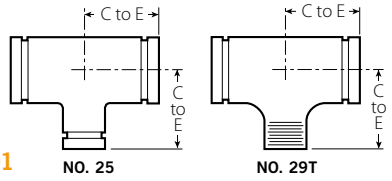
No. 29T Threaded Outlet Reducing Tees are supplied NPT and are available with British Standard threads. For British Standard specify "BSP" clearly on order.

Fittings

Reducing Tee

NO. 25 Grooved Branch
NO. 29T Threaded Branch

For Complete Information
Request Publication **07.01**



NO. 25 NO. 29T

Size				No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size Inches mm				C to E Inches mm	C to E Inches mm	Lbs. kg
TABLE CONTINUED FROM PG. 2-8						
10 250	×	10 250	× 1½ 40	+	+	62.0 28.1
			2 50	9.00 (sw) 229	9.00 (sw) 229	62.0 28.1
			2½ 65	+	+	62.4 28.3
			3 80	+	+	60.0 27.2
			4 100	9.00 (sw) 229	9.00 (sw) 229	61.0 27.7
			5 125	9.00 (sw) 229	9.00 (sw) 229	52.0 23.6
			6 150	9.00 (sw) 229	9.00 (sw) 229	59.0 26.8
			8 200	9.00 (sw) 229	9.00 (sw) 229	64.7 29.3
12 300	×	12 300	× 1 25	+	+	77.0 34.9
			2 50	+	+	80.0 36.3
			2½ 65	+	+	78.0 35.4
			3 80	10.00 (sw) 254	10.00 (sw) 254	82.0 37.2
			4 100	10.00 (sw) 254	10.00 (sw) 254	80.0 36.3
			5 125	10.00 (sw) 254	10.00 (sw) 254	75.0 34.0
			6 150	10.00 (sw) 254	10.00 (sw) 254	75.0 34.0
			8 200	10.00 (sw) 254	10.00 (sw) 254	80.0 36.3
			10 250	10.00 (sw) 254	10.00 (sw) 254	84.0 38.1
14 – 24 350 – 600				—	—	—

\+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

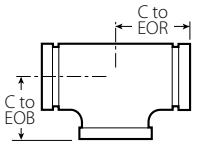
IMPORTANT NOTE:

No. 29T Threaded Outlet Reducing Tees are supplied NPT and are available with British Standard threads. For British Standard specify "BSP" clearly on order.

Bullhead Tee

NO. 21

For Complete Information
Request Publication **07.01**



NO. 21

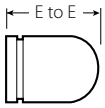
Size				No. 21 Bullhead Tee		
Nominal Size Inches mm				C to EOR Inches mm	C to EOB Inches mm	Approx. Weight Each Lbs. kg
5 125	×	5 125	× 8 200	7.75 197	5.50 140	28.7 13.0
6 150	×	6 150	× 8 200	7.75 197	6.50 165	37.5 17.0

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Bull Plug

NO. 61

For Complete Information
Request Publication **07.01**



NO. 61

Size		No. 61 Bull Plug (S)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
2 50	2.375 60.3	4.00 102	2.5 1.1
2½ 65	2.875 73.0	5.00 127	3.0 1.4
3 80	3.500 88.9	6.00 152	4.5 2.0
4 100	4.500 114.3	7.00 178	7.5 3.4
5 125	5.563 141.3	8.00 203	12.0 5.4
6 150	6.625 168.3	10.00 254	17.0 7.7

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

IMPORTANT NOTES:

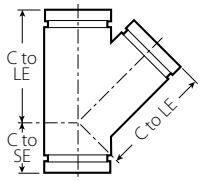
Steel dish caps available through 24"/600 mm, contact Victaulic.

No. 61 Bull Plugs should be used in vacuum service with Style 72 or 750 couplings.

45° Lateral

NO. 30

For Complete Information
Request Publication **07.01**



NO. 30

Size		No. 30 45° Lateral (SW)		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	4.50 114	2.00 51	1.0 0.5
1 25	1.315 33.7	5.00 127	2.25 57	1.7 0.8
1 ¼ 32	1.660 42.4	5.75 146	2.50 64	2.5 (d) 1.1
1 ½ 40	1.900 48.3	6.25 159	2.75 70	3.5 1.6
2 50	2.375 60.3	7.00 178	2.75 70	4.6 (d) 2.1
2 ½ 65	2.875 73.0	7.75 197	3.00 76	9.0 4.1
76.1 mm	3.000 76.1	8.50 216	3.25 83	11.0 5.0
3 80	3.500 88.9	8.50 216	3.25 83	11.7 (d) 5.4
3 ½ 90	4.000 101.6	10.00 254	3.50 89	17.8 8.1
4 100	4.500 114.3	10.50 267	3.75 95	22.2 (d) 10.1
5 125	5.563 141.3	12.50 318	4.00 102	21.8 9.9
165.1 mm	6.500 165.1	14.00 356	4.50 114	43.6 19.8
6 150	6.625 168.3	14.00 356	4.50 114	43.6 19.8
8 200	8.625 219.1	18.00 457	6.00 152	72.0 32.7
10 250	10.750 273.0	20.50 521	6.50 165	105.0 47.6
12 300	12.750 323.9	23.00 584	7.00 178	165.0 74.8
14 – 24 350 – 600	AGS® **See AGS Roll Groove Fittings, pg. 6-2; for 14–24"/350–600 mm Cut Groove Systems Request Publication 07.01**			

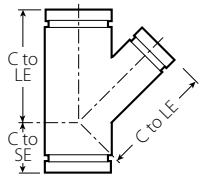
For use on cut grooved systems only. For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

45° Reducing Lateral

NO. 30-R

For Complete Information
Request Publication **07.01**



NO. 30-R

Size							No. 30-R 45° Reducing Lateral (SW)		
Nominal Size Inches mm							C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
3 80	×	3 80	×	2 50			8.50 216	3.25 83	9.8 4.4
				2 ½ 65			8.50 216	3.25 83	9.8 4.4
4 100	×	4 100	×	2 50			10.50 267	3.75 95	10.0 4.5
				2 ½ 65			10.50 267	3.75 95	10.0 4.5
				3 80			10.50 267	3.75 95	18.3 8.3
5 125	×	5 125	×	2 50			12.50 318	4.00 102	24.0 10.9
				3 80			12.50 318	4.00 102	27.0 12.2
				4 100			12.50 318	4.00 102	26.5 12.0
6 150	×	6 150	×	3 80			14.00 356	4.50 114	37.0 16.8
				4 100			14.00 356	4.50 114	36.0 16.3
				5 125			14.00 356	4.50 114	44.7 20.3
8 200	×	8 200	×	4 100			18.00 457	6.00 152	62.0 28.1
				5 125			18.00 457	6.00 152	75.5 34.2
				6 150			18.00 457	6.00 152	82.0 37.2
10 250	×	10 250	×	4 100			20.50 521	6.50 165	104.8 47.5
				5 125			20.50 521	6.50 165	99.0 44.9
				6 150			20.50 521	6.50 165	105.8 48.0
				8 200			20.50 521	6.50 165	118.0 53.5
12 300	×	12 300	×	5 125			23.00 584	7.00 178	122.0 55.3
				6 150			23.00 584	7.00 178	137.0 62.1
				8 200			23.00 584	7.00 178	147.0 66.7
				10 250			23.00 584	7.00 178	167.0 75.8

For use on cut grooved systems only. For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

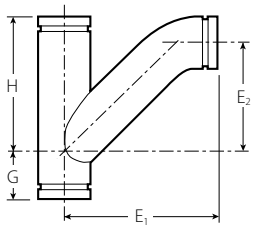
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Fittings

Tee Wye

NO. 32

For Complete Information
Request Publication **07.01**



NO. 32

Size				No. 32 Tee Wye (SW)				
Nominal Size Inches mm				G Inches mm	H Inches mm	E_1 Inches mm	E_2 Inches mm	Approx. Wgt. Each Lbs. kg
2 50	×	2 50	× 2 50	2.75 70	7.00 178	9.00 229	4.63 118	6.4 2.9
2½ 65	×	2½ 65	× 2½ 65	3.00 76	7.75 197	10.50 267	5.75 146	11.5 5.2
3 80	×	3 80	× 3 80	3.25 83	8.50 216	11.50 292	6.50 165	14.3 6.5
3½ 90	×	3½ 90	× 3½ 90	3.25 89	10.00 254	13.00 330	7.75 197	22.9 10.4
4 100	×	4 100	× 4 100	3.75 95	10.50 267	13.63 346	8.13 207	26.0 11.8
5 125	×	5 125	× 5 125	4.00 102	12.50 318	16.13 410	10.00 254	48.0 21.8
6 150	×	6 150	× 6 150	4.50 114	14.00 356	18.25 464	11.50 292	60.5 27.4
8 200	×	8 200	× 8 200	6.00 152	18.00 457	23.25 591	15.25 387	127.1 57.7
10 250	×	10 250	× 10 250	6.50 165	20.50 521	27.25 692	18.00 457	190.0 86.2
12 300	×	12 300	× 12 300	7.00 178	23.00 584	31.00 787	20.50 521	240.0 108.9
14 – 24 350 – 600				AGS®	**See AGS Roll Groove Fittings, pg. 6-2; for 14–24"/350–600 mm Cut Groove Systems Request Publication 07.01**			

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Reducing Tee Wye

NO. 32-R

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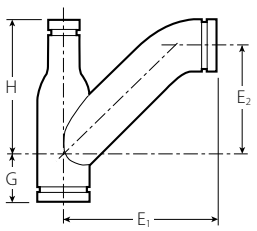

NO. 32-R

Size				No. 32-R Reducing Tee Wye (SW)				
Nominal Size Inches mm				G Inches mm	H Inches mm	E_1 Inches mm	E_2 Inches mm	Approx. Wgt. Each Lbs. kg
4 100	×	3 80	× 3 80	3.50 89	9.50 241	10.75 273	5.75 146	16.0 7.3
			× 4 100	3.75 95	10.50 267	13.63 346	8.13 206	16.0 7.3
4 100	×	4 100	× 3 80	3.75 95	10.50 267	12.88 327	7.88 200	23.0 10.4
5 125	×	3 80	× 3 80	1.25 32	9.75 248	11.50 292	7.63 194	25.0 11.3
			× 5 125	4.00 102	12.50 318	16.13 410	11.13 283	43.4 19.5
5 125	×	4 100	× 3 80	1.88 48	9.13 232	11.88 302	6.88 175	21.0 9.5
			× 4 100	1.88 48	9.13 232	12.75 324	7.25 184	25.0 11.3
5 125	×	5 125	× 3 80	4.00 102	12.50 318	14.25 362	9.25 235	29.0 13.2
			× 4 100	4.00 102	12.50 318	15.13 384	9.63 245	36.7 16.6
6 150	×	4 100	× 6 150	4.50 114	14.00 356	18.25 464	11.50 292	61.0 27.7
6 150	×	5 125	× 3 80	1.25 32	10.75 273	13.00 330	8.00 203	27.0 12.2
			× 4 100	1.25 32	10.75 273	13.88 352	8.38 213	31.0 14.1
6 150	×	6 150	× 3 80	4.50 114	14.00 356	15.31 389	10.31 262	37.3 16.9
			× 4 100	4.50 114	14.00 356	16.25 413	10.75 273	46.3 21.0
			× 5 125	4.50 114	14.00 356	17.25 438	11.13 283	55.0 24.9
8 200	×	6 150	× 4 100	1.00 25	12.00 304	14.75 375	9.25 235	45.0 20.4
			× 8 200	6.00 152	18.00 457	23.25 591	15.25 387	112.0 50.8
8 200	×	8 200	× 3 80	6.00 152	18.00 457	18.19 462	13.19 335	76.0 34.5
			× 4 100	6.00 152	18.00 457	19.00 483	13.50 343	76.4 34.7
			× 5 125	6.00 152	18.00 457	20.00 508	13.88 352	85.6 38.8
			× 6 150	6.00 152	18.00 457	21.13 537	14.38 365	112.0 50.8
10 250	×	10 250	× 3 80	6.50 165	20.50 521	19.88 505	14.88 378	96.0 43.5
			× 4 100	6.50 165	20.50 521	20.75 527	15.25 387	97.4 44.2
			× 5 125	6.50 165	20.50 521	21.88 556	15.75 400	115.0 52.2
10 250	×	10 250	× 6 150	6.50 165	20.50 521	22.88 581	16.13 410	133.1 60.4
			× 8 200	6.50 165	20.50 521	27.25 692	19.25 489	156.0 70.8

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Adapter Nipple

NO. 40 Grv. × Thd.
NO. 42 Grv. × Bev.
NO. 43 Grv. × Grv.

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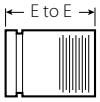
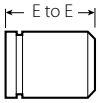
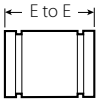


NO. 40#



NO. 42



NO. 43

Size		No. 40, 42, 43 Adapter Nipple (S)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	3.00 76	0.3 0.1
1 25	1.315 33.7	3.00 76	0.4 0.2
1 ¼ 32	1.660 42.4	4.00 102	0.8 0.4
1 ½ 40	1.900 48.3	4.00 102	0.9 0.4
2 50	2.375 60.3	4.00 102	1.2 0.5
2 ½ 65	2.875 73.0	4.00 102	1.9 0.9
3 80	3.500 88.9	4.00 102	2.5 1.1
3 ½ 90	4.000 101.6	4.00 102	2.1 0.9
4 100	4.500 114.3	6.00 152	5.5 2.5
5 125	5.563 141.3	6.00 152	7.4 3.4
6 150	6.625 168.3	6.00 152	9.5 4.3
8 200	8.625 219.1	6.00 152	14.2 6.4
10 250	10.750 273.0	8.00 203	27.0 12.2
12 300	12.750 323.9	8.00 203	33.0 15.0
14 – 24 350 – 600	—	AGS® **See AGS Roll Groove Fittings, pg. 6-2; for 14–24"/350–600 mm Cut Groove Systems Request Publication 07.01**	

Available with British Standard Pipe Threads, specify "BSP" clearly on order.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

IMPORTANT NOTES:

For pump package nipples with 1 ½"/40 mm hole cut to receive Style 923 Vic-Let or Style 924 Vic-O-Well request special No. 40, 42 or 43 nipples and specify No. 40-H, 42-H or 43-H on order. NOTE: 4 – 12"/100 – 300 mm diameter – 8"/200 mm minimum length required.

Cap

NO. 60

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NO. 60

Size		No. 60 Cap	
Nominal Size Inches/mm	Actual Outside Diameter Inches/mm	T Thickness Inches/mm	Approx. Weight Each Lbs./kg
¾ 20	1.050 26.9	0.88 22	0.2 0.1
1 25	1.315 33.7	0.88 22	0.3 0.1
1 ¼ 32	1.660 42.4	0.88 22	0.3 0.1
1 ½ 40	1.900 48.3	0.88 22	0.5 0.2
2 50	2.375 60.3	0.88 22	0.6 0.3
2 ½ 65	2.875 73.0	0.88 22	1.0 0.5
76.1 mm	3.000 76.1	0.88 22	1.2 0.5
3 80	3.500 88.9	0.88 22	1.2 0.5
3 ½ 90	4.000 101.6	0.88 22	2.5 1.1
108.0 mm	4.250 108.0	1.00 25	2.3 1.0
4 100	4.500 114.3	1.00 25	2.5 1.1
133.0 mm	5.250 133.0	1.00 25	4.5 2.0
139.7 mm	5.500 139.7	1.00 25	4.5 2.0
5 125	5.563 141.3	1.00 25	4.6 2.1
159.0 mm	6.250 159.0	1.00 25	6.8 3.1
165.1 mm	6.500 165.1	1.00 25	7.3 3.3
6 150	6.625 168.3	1.00 25	6.1 2.8
8 200	8.625 219.1	1.19 30	13.1 5.9
10 250	10.750 273.0	1.25 32	21.0 9.5
12 300	12.750 323.9	1.25 32	35.6 16.2
14 # (s) 350	14.000 355.6	9.50 241	*
16 # (s) 400	16.000 406.4	10.00 254	*
18 # (s) 450	18.000 457.0	11.00 279	*
20 # (s) 500	20.000 508.0	12.00 305	*
24 # (s) 600	24.000 610.0	13.50 343	*
14 – 24 350 – 600	AGS® **See AGS Roll Groove Fittings, pg. 6-2; for 14–24"/350–600 mm Cut Groove Systems Request Publication 07.01**		

For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

IMPORTANT NOTES:

Steel dish caps available through 24"/600 mm. No. 60 cap available tapped. Contact Victaulic for details.

No. 60 cap is not suitable for use in vacuum service with Style 72 or 750 couplings. No. 61 bull plugs should be used, see pg. 2-9.

Fittings

Flanged Adapter Nipple

NO. 41 ANSI Class 125
NO. 45F ANSI Class 150 Flat Face
NO. 45R ANSI Class 150 Raised Face
NO. 46F ANSI Class 300 Flat Face
NO. 46R ANSI Class 300 Raised Face

For Complete Information
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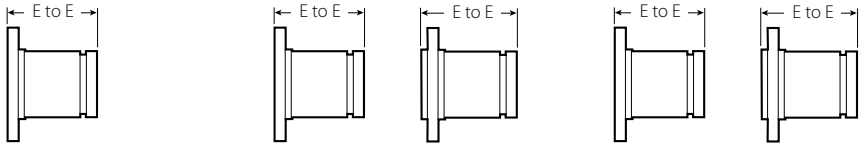

NO. 41 **NO. 45F** **NO. 45R** **NO. 46F** **NO. 46R**

Size		No. 41 ANSI 125 Flange Adapter Nipple		No. 45F and No. 45R ANSI 150 Flange Adapter Nipple (S)		No. 46F and No. 46R ANSI 300 Flange Adapter Nipple (S)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	3.00 76	2.3 1.0	3.00 76	2.3 1.0	3.00 76	3.3 1.5
1 25	1.315 33.7	3.00 76	2.5 1.1	3.00 76	2.7 1.2	3.00 76	3.9 1.8
1 ¼ 32	1.660 42.4	4.00 102	3.0 1.4	4.00 102	3.3 1.5	4.00 102	4.8 2.2
1 ½ 40	1.900 48.3	4.00 102	3.5 1.6	4.00 102	3.9 1.8	4.00 102	6.9 3.1
2 50	2.375 60.3	4.00 102	5.5 2.5	4.00 102	6.2 2.8	4.00 102	8.2 3.7
2 ½ 65	2.875 73.0	4.00 102	8.0 3.6	4.00 102	9.9 4.5	4.00 102	11.9 5.4
3 80	3.500 88.9	4.00 102	9.5 4.3	4.00 102	11.4 5.2	4.00 102	16.5 7.5
3 ½ 90	4.000 101.6	4.00 102	12.0 5.4	4.00 102	15.1 6.8	4.00 102	20.1 9.1
4 100	4.500 114.3	6.00 152	16.7 7.6	6.00 152	18.4 8.3	6.00 152	27.4 12.4
5 125	5.563 141.3	6.00 152	21.5 9.8	6.00 152	21.3 9.7	6.00 152	35.3 16.0
6 150	6.625 168.3	6.00 152	26.5 12.0	6.00 152	27.5 12.5	6.00 152	47.5 21.5
8 200	8.625 219.1	6.00 152	39.0 17.7	6.00 152	41.3 18.8	6.00 152	70.3 31.9
10 250	10.750 273.0	8.00 203	57.0 25.9	8.00 203	59.8 27.1	8.00 203	100.8 45.7
12 300	12.750 323.9	8.00 203	41.0 18.6	8.00 203	88.2 40.0	8.00 203	146.2 66.3
14 – 24 350 – 600	—	—	—	—	AGS® **See AGS Roll Groove Fittings, pg. 6-2; for 14–24"/ 350–600 mm Cut Groove Systems Request Publication 07.01**	—	—

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

IMPORTANT NOTES:

Flanged adapter nipples are supplied with standard rolled grooves. Standard cut grooves or machining for rubber lining are optionally available. Contact Victaulic for details.

Fittings

Swaged Nipple

NO. 53 Grv. × Grv.
NO. 54 Grv. × Thd.
NO. 55 Thd. × Grv.

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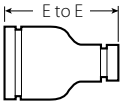
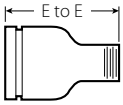
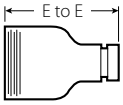


NO. 53



NO. 54



NO. 55

Size			No. 53, 54 and 55 Swaged Nipples (S)	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
2 50	×	1 25	6.50 165	2.0 0.9
		1 ¼ 32	6.50 165	2.0 0.9
		1 ½ 40	6.50 165	2.0 0.9
2 ½ 65	×	1 25	7.00 178	3.0 1.4
		1 ¼ 32	7.00 178	3.0 1.4
		1 ½ 40	7.00 178	3.0 1.4
		2 50	7.00 178	3.0 1.4
3 80	×	1 25	8.00 203	4.5 2.0
		1 ¼ 32	8.00 203	4.5 2.0
		1 ½ 40	8.00 203	4.4 2.0
		2 50	8.00 203	4.5 2.0
		2 ½ 65	8.00 203	4.5 2.0
3 ½ 90	×	3 80	8.00 203	6.8 3.1
4 100	×	1 25	9.00 229	7.5 3.4
		1 ¼ 32	9.00 229	7.5 3.4
		1 ½ 40	9.00 229	7.5 3.4
		2 50	9.00 229	7.5 3.4

Size			No. 53, 54 and 55 Swaged Nipples (S)	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
4 100	×	2 ½ 65	9.00 229	7.5 3.4
		3 80	9.00 229	7.5 3.4
		3 ½ 90	9.00 229	7.5 3.4
5 125	×	2 50	11.00 279	11.5 5.2
		3 80	11.00 279	11.3 5.1
		4 100	11.00 279	11.5 5.2
6 150	×	1 25	12.00 305	17.0 7.7
		1 ¼ 32	12.00 305	17.0 7.7
		1 ½ 40	12.00 305	17.2 7.8
		2 50	12.00 305	17.4 7.9
		2 ½ 65	12.00 305	17.4 7.9
		3 80	12.00 305	17.4 7.9
		3 ½ 90	12.00 305	17.4 7.9
		4 100	12.00 305	17.5 7.9
		4 ½ 120	12.00 305	17.5 7.9
		5 125	12.00 305	17.5 7.9
8 200	×	6 150	+	20.0 9.1

+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Fittings

Female Threaded Adapter

NO. 80

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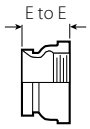

NO. 80

Size		No. 80 Female Threaded Adapter	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	2.00 51	1.0 0.5
1 25	1.315 33.7	2.06 52	1.0 0.5
1 ¼ 32	1.660 42.4	2.31 (sw) 59	1.5 0.7
1 ½ 40	1.900 48.3	2.31 (sw) 59	1.5 0.7
2 50	2.375 60.3	2.50 64	1.4 0.6
2 ½ 65	2.875 73.0	2.75 70	1.5 0.7
3 80	3.500 88.9	2.75 70	2.9 1.3
4 100	4.500 114.3	3.25 83	4.5 2.0

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

IMPORTANT NOTE:

Available with British Standard Pipe threads, specify "BSP" clearly on order.

Hose Nipple

NO. 48

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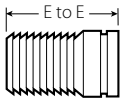

NO. 48

Size		No. 48 Hose Nipples (S)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	3.12 79	0.3 0.1
1 25	1.315 33.7	3.38 86	0.4 0.2
1 ¼ 32	1.660 42.4	3.88 98	0.6 0.3
1 ½ 40	1.900 48.3	3.88 98	0.8 0.4
2 50	2.375 60.3	4.50 114	1.1 0.5
2 ½ 65	2.875 73.0	5.38 137	2.0 0.9
3 80	3.500 88.9	5.75 146	3.2 1.5
4 100	4.500 114.3	7.00 178	4.9 2.2
5 125	5.563 141.3	8.75 222	8.0 3.6
6 150	6.625 168.3	10.12 257	14.3 6.5
8 200	8.625 219.1	11.88 302	24.7 11.2
10 250	10.750 273.0	12.50 318	40.1 18.2
12 300	12.750 323.9	14.50 368	62.0 28.1

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW = Segmentally Welded. S = Carbon Steel.

Fittings

Concentric/Eccentric Reducer

NO. 50 Concentric
NO. 51 Eccentric

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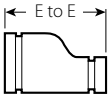
NO. 50



NO. 51

Size			No. 50 Concentric Reducer		No. 51 Eccentric Reducer	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
1 ¼ 32	×	¾ 20	+	1.9 0.9	—	—
		1 25	+	1.9 0.9	—	—
1 ½ 40	×	¾ 20	+	1.4 0.6	—	—
		1 25	2.50 64	0.8 0.4	8.50 (SW) 216	4.5 2.0
		1 ¼ 32	2.50 64	1.0 0.5	—	—
2 50	×	¾ 20	2.50 64	0.9 0.3	9.00 (SW) 229	2.0 0.9
		1 25	2.50 64	0.7 0.3	9.00 (SW) 229	2.3 1.0
		1 ¼ 32	2.50 64	1.2 0.5	9.00 (SW) 229	4.6 2.1
		1 ½ 40	3.50 89	1.0 0.5	3.50 89	1.1 0.5
2 ½ 65	×	¾ 20	+	1.3 0.6	+	3.3 1.5
		1 25	2.50 64	1.1 0.5	9.50 241	3.5 1.6
		1 ¼ 32	3.50 89	3.3 1.5	3.50 89	1.4 0.6
		1 ½ 40	2.50 64	3.6 1.6	9.50 (SW) 241	3.7 1.7
		2 50	2.50 64	3.9 1.8	9.50 (SW) 241	4.3 2.0
3 80	×	¾ 20	+	1.5 0.7	+	4.5 2.0
		1 25	2.50 241	1.3 0.6	9.50 (SW) 241	4.8 2.2
		1 ¼ 32	2.50 64	1.4 0.6	+	4.8 2.2
		1 ½ 40	2.50 64	5.1 2.3	9.50 (SW) 241	5.1 2.3
		2 50	2.50 64	1.6 0.7	3.50 89	6.0 2.7
		2 ½ 65	2.50 64	1.8 0.8	3.50 89	7.0 3.2
		76.1	2.50 64	2.1 1.0	—	—
3 ½ 90	×	3 80	2.50 64	2.0 0.9	9.50 (SW) 241	7.0 3.2
4 100	×	1 25	3.00 76	3.0 1.4	13.00 (SW) 330	6.5 2.9
		1 ¼ 32	+	4.6 2.1	—	—
		1 ½ 40	3.00 (SW) 76	2.6 1.2	10.00 (SW) 254	8.1 3.7
		2 50	3.00 76	2.4 1.1	4.00 102	3.3 1.5
		2 ½ 65	3.00 76	2.7 1.2	4.00 102	3.4 1.5
		3 80	3.00 76	3.2 1.4	4.00 102	3.5 1.6
		3 ½ 90	3.00 76	2.9 1.3	10.00 (SW) 254	8.0 3.6
5 125	×	2 50	11.00 (SW) 279	9.0 4.1	11.00 (SW) 279	5.2 2.4
		2 ½ 65	4.00 102	4.3 2.0	11.00 (SW) 279	10.8 4.9
		3 80	4.00 102	55 2.5	11.00 (SW) 279	11.1 5.0
		4 100	3.50 89	4.3 1.9	5.00 127	12.0 5.4
6 150	×	1 25	4.00 102	5.0 2.3	11.50 (SW) 292	14.5 6.6
		1 ½ 40	+	5.5 2.5	+	+
		2 50	4.00 102	6.6 3.0	11.50 (SW) 292	14.5 6.6
		2 ½ 65	4.00 102	6.4 2.9	11.50 (SW) 292	14.2 6.4
		3 80	4.00 102	6.4 2.9	5.50 140	15.0 6.8
		4 100	4.00 102	6.5 2.9	5.50 140	17.0 7.7
		5 125	4.00 102	6.4 2.9	5.50 140	17.0 7.7
8 200	×	2 ½ 65	16.00 406	7.9 3.6	12.00 (SW) 305	26.1 11.8
		3 80	5.00 127	9.3 4.2	12.00 (SW) 305	22.0 10.0

Note: All fittings are ductile iron unless otherwise noted with an "sw".
SW = Segmentally Welded.

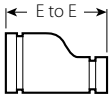
Fittings

Concentric/Eccentric Reducer

NO. 50 Concentric
NO. 51 Eccentric

For Complete Information
Request Publication **07.01**

NO. 50



NO. 51

Size			No. 50 Concentric Reducer		No. 51 Eccentric Reducer	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
8 200	×	4 100	5.00 127	10.4 4.8	12.00 (SW) 305	23.0 10.4
		5 125	5.00 127	11.6 5.2	12.00 (SW) 305	23.0 10.4
		6 150	5.00 127	11.9 5.4	6.00 152	24.0 10.9
10 250	×	4 100	6.00 152	19.7 8.9	13.00 (SW) 330	32.0 14.5
		5 125	+	34.3 15.6	+	34.6 15.7
		6 150	6.00 152	20.0 9.1	13.00 (SW) 330	36.9 16.7
		8 200	6.00 152	22.0 10.0	7.00 178	21.6 9.8
12 300	×	4 100	+	44.0 20.0	14.00 (SW) 356	48.0 21.8
		6 150	7.00 178	24.6 11.2	14.00 (SW) 356	50.0 22.7
		8 200	7.00 178	52.0 23.6	14.00 (SW) 356	53.5 24.3
		10 250	7.00 178	39.0 17.7	14.00 (SW) 356	57.0 25.9
# 14 350	×	6 150	13.00 330	65.0 29.5	13.00 330	60.0 27.2
		8 200	13.00 330	65.0 29.5	13.00 330	60.0 27.2
		10 250	13.00 330	66.0 29.9	13.00 330	65.0 29.5
		12 300	13.00 330	68.0 30.8	13.00 330	66.0 29.9
# 16 400	×	8 200	14.00 356	73.0 33.1	14.00 355	73.0 33.1
		10 § 250	14.00 356	73.0 33.1	14.00 355	73.0 33.1
		12 300	14.00 356	73.0 33.1	14.00 355	73.0 33.1
		14 350	14.00 356	73.0 33.1	14.00 355	73.0 33.1
# 18 450	×	10 250	15.00 381	91.0 41.3	15.00 381	91.0 41.3
		12 300	15.00 381	91.0 41.3	15.00 381	91.0 41.3
		14 350	15.00 381	91.0 41.3	15.00 381	91.0 41.3
		16 400	15.00 381	91.0 41.3	15.00 381	91.0 41.3
# 20 500	×	10 250	20.00 508	110.0 49.9	20.00 508	177.0 80.3
		12 300	20.00 508	120.0 54.4	20.00 508	120.0 54.4
		14 350	20.00 508	149.0 67.9	20.00 508	149.0 67.9
		16 400	20.00 508	120.0 54.4	20.00 508	120.0 54.4
		18 450	20.00 508	136.0 61.7	20.00 508	136.0 61.7
# 24 600	×	10 250	20.00 508	142.0 64.4	20.00 508	142.0 64.4
		12 300	20.00 508	150.0 68.0	20.00 508	150.0 68.0
		14 350	20.00 508	162.0 73.5	20.00 508	162.0 73.5
		16 400	20.00 508	162.0 73.5	20.00 508	162.0 73.5
		18 450	20.00 508	162.0 73.5	20.00 508	162.0 73.5
		20 500	20.00 508	151.0 68.5	20.00 508	190.0 86.2
14 – 24 350 – 600			AGS® **For AGS fitting information, see publication 20.05**			

+ Contact Victaulic for details.

* Available with male threaded small end No. 52.

Note: All fittings are ductile iron unless otherwise noted with an "sw". SW = Segmentally Welded.

IMPORTANT NOTE:

Steel eccentric reducers available through 30"/750 mm, contact Victaulic for dimensions.

For use on cut grooved systems only. For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

§ Cast fitting available for JIS size. Contact Victaulic for details.

Fittings

Small Threaded Reducer

NO. 52
NO. 52F (BSPT)

For Complete Information
Request Publication **07.01**

NO. 52

NO. 52F

Size			No. 52 Small Threaded Reducer		No. 52F Concentric Reducer with BSPT Female Threaded End	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
1 ½ 40	×	1 25	2.50 64	0.8 0.4	—	—
		1 ¼ 32	2.50 64	0.9 0.4	—	—
2 50	×	¾ 20	2.50 64	0.9 0.4	—	—
		1 25	2.50 64	0.7 0.3	—	—
		1 ¼ 32	2.50 64	1.2 0.5	—	—
		1 ½ 40	2.50 64	1.0 0.5	—	—
2 ½ 65	×	1 25	2.50 64	1.1 0.5	—	—
		1 ¼ 32	2.50 (sw) 64	1.2 0.5	—	—
		1 ½ 40	2.50 (sw) 64	1.3 0.6	—	—
		2 50	3.00 76	1.4 0.6	—	—
76.1	×	48.3	63.5	0.8	63.5	0.77
		60	—	—	63.5	0.85
3 80	×	¾ 20	+ (sw)	1.5 0.7	—	—
		1 25	2.50 64	1.3 0.6	—	—
		1 ¼ 32	2.50 64	1.5 0.7	—	—
		1 ½ 40	2.50 (sw) 64	1.5 0.7	—	—
		2 50	2.50 64	1.5 0.7	—	—
		2 ½ 65	2.50 64	2.4 1.1	—	—
88.9	×	42.4	63.5	0.9	63.5	0.82
		48.3	63.5	0.9	63.5	0.85
		60	—	—	63.5	0.89
4 100	×	1 25	3.00 76	2.3 1.0	—	—
		1 ½ 40	3.00 76	2.7 1.2	—	—
		2 50	3.00 76	2.6 1.2	—	—

Size			No. 52 Small Threaded Reducer		No. 52F Concentric Reducer with BSPT Female Threaded End	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
4 100	×	2 ½ 65	3.00 76	2.6 1.2	—	—
		3 80	3.00 76	2.5 1.1	—	—
108	×	42.4	76.2	1.3	76.2	1.32
		48.3	76.2	1.3	76.2	1.35
		60	—	—	76.2	1.39
114.3	×	42.4	76.2	1.3	76.2	1.30
		48.3	76.2	1.3	76.2	1.34
		60	—	—	76.2	1.40
5 125	×	4 100	+	4.5 2.0	—	—
133	×	60	—	—	114.3	2.17
139	×	60	—	—	114.3	2.26
6 150	×	1 25	4.00 102	5.5 2.5	—	—
		2 50	4.00 102	5.7 2.6	—	—
		2 ½ 65	4.00 102	5.8 2.6	—	—
		3 80	4.00 102	5.8 2.6	—	—
		4 100	+ (sw)	6.5 2.9	—	—
		5 125	+ (sw)	2.0 0.9	—	—
159	x	42.4	114.3	2.2	114.3	2.45
		48.3	114.3	2.2	114.3	2.51
		60	—	—	114.3	2.60
165.1	x	42.4	101.6	2.4	101.6	2.90
		48.3	101.6	2.6	101.6	2.95
		60	—	—	101.6	3.00
8 200	×	2 50	16.00 406	1.5 0.7	—	—
		2 ½ 65	16.00 406	1.7 0.8	—	—

\+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw".
SW = Segmentally Welded.

IMPORTANT NOTE:

Available with British Standard Pipe Threads, specify "BSP" clearly on order

Valves

Designed for a wide variety of applications, Victaulic valves are engineered and manufactured for dependable, trouble-free performance, superior flow control and durable, long-lasting reliability.

Victaulic offers a full complement of butterfly, check, ball, triple service, hydronic balancing and plug valves in a variety of wear-resistant materials and coatings to satisfy your specific piping application requirements.

Advanced Groove System AGS®

For 14–24"/350–600 mm piping systems Victaulic offers Advanced Groove System (AGS) butterfly and check valves, see pg. 6-1.

Butterfly Valves

Victaulic butterfly valves deliver excellent performance characteristics, including low torque, high flow, dead-end service, and bi-directional flow capability to full rated pressure. Available in sizes from 1½–24"/40–600 mm, our butterfly valves are offered in a variety of housing, disc and seat seal configurations, including bodies constructed of durable ductile iron, stainless steel, and bronze with EPDM, nitrile, or fluoroelastomer seat materials.

All butterfly valves are available with manual handles, gear operators or automated configurations.

Check Valves

Vic-Check® valves are available in several configurations. A spring-assisted, single disc design is used on Series 716H/716 check valves, which can be installed in the horizontal or vertical position. The Series 779 Venturi check valve allows for calibrated flow measurement and easily connects to Series 761 Vic-300 MasterSeal butterfly valves or Series 377 Vic-Plug valves for triple service assemblies. Also available are swing check valves (ductile or stainless) for oil field applications.

Ball Valves

Vic-Ball® valves are high-pressure, standard-port ball valves with grooved ends. Their internal design has been streamlined to provide excellent flow characteristics, and comes available in ductile iron and stainless steel versions. A three-port diverter ball for redirecting flow 90° left or right is available for carbon steel or stainless steel piping systems. Vic-Ball valves are sized 1½–6"/40–150 mm depending on body construction type. A ¼–2"/10–50 mm threaded brass ball valve is also available for a variety of services.

Valves

Valve Application Guide

Valve Type	Building Services	Industrial	Water and Wastewater	Mining	Oil Field	Plumbing
BUTTERFLY VALVES	●	●	●	●	●	●
CHECK VALVES	●	●	●	●	●	
BALL VALVES	●	●	●	●	●	●
BALANCING VALVES*	●	●				●
PLUG VALVES	●		●			
TRIPLE SERVICE VALVES	●	●				

* Please refer to 4-1 for product information.

Plug Valves

Made of ductile iron in a variety of coatings, Series 365 Vic-Plug™ valves are the lightest, most easily installed eccentric plug valves on the market today. The round port design with welded-in nickel seat provides reliable, long-lasting service. Available in 3–12"/80–300 mm, 175 psi/1200 kPa, and 14–18"/350–450 mm, 150 psi/1035 kPa.

Series 377 Vic-Plug balancing valves are the only eccentric grooved end plug valves on the market made specifically for throttling services, and are available in 3–6"/80–150 mm sizes for systems pressure rated up to 175 psi/1200 kPa.

Triple Service Valves

The Victaulic tri-service valve assembly consists (shipped as individual components) of a standard Victaulic butterfly or Vic-Plug valve and a check valve. This combination provides shut-off, throttling with positive mechanical memory and non-slam check service in one unit.

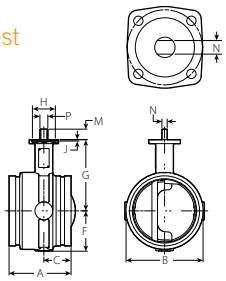
The Series 779 check valve features accurate flow measurement capabilities plus spring assisted closing in a high flow design. The venturi-like inlet is drilled, tapped and plugged, ready to receive the flow measuring taps (included).

Valves – Butterfly Valves

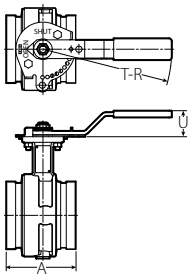
Vic-300® MasterSeal™ Butterfly Valve

SERIES 761

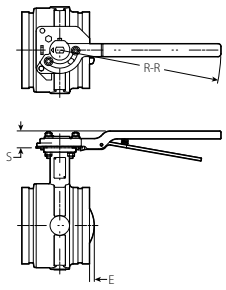
For Complete Information Request Publication **08.20**



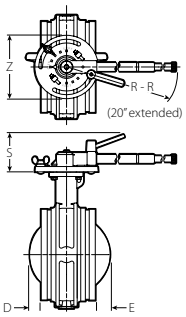
BARE VALVE TYPICAL 2–12"/50–300 mm SIZES



VALVE WITH 10-POSITION HANDLE TYPICAL 2–6"/50–150 mm SIZES



VALVE WITH LEVER LOCK AND MEMORY STOP TYPICAL FOR 8"/200 mm SIZES ONLY



VALVE WITH LEVER LOCK AND MEMORY STOP TYPICAL 10–12"/250–300 mm SIZES

Size @		Dimensions																	Approx. Weight Each	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Inches mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	G Inches mm	H Inches mm	J Inches mm	M Inches mm	N Inches mm	P Inches mm	R-R Inches mm	S Inches mm	T-R Inches mm	U Inches mm	Z Inches mm	Bare Lbs. kg	Lever Lbs. kg
2 50	2.375 60.3	3.21 81.5	3.25 82.6	1.44 36.6	—	—	1.81 46.0	3.81 96.8	2.17 55.2	0.13 3.3	0.88 22.4	0.32 8.0	0.43 11.0	—	—	7.10 180.3	1.67 42.4	—	3.5 1.6	6.0 2.7
2½ 65	2.875 73.0	3.77 95.8	4.00 101.6	1.77 45.0	—	—	2.10 53.3	4.25 108.0	2.17 55.2	0.13 3.3	0.88 22.4	0.32 8.0	0.43 11.0	—	—	7.10 180.3	1.67 42.4	—	5.0 2.3	7.5 3.4
76.1 mm	3.000 76.1	3.77 95.8	4.00 101.6	1.77 45.0	—	—	2.10 53.3	4.25 108.0	2.17 55.2	0.13 3.3	0.88 22.4	0.32 8.0	0.43 11.0	—	—	7.10 180.3	1.67 42.4	—	5.0 2.3	7.5 3.4
3 80	3.500 88.9	3.77 95.8	4.50 114.3	1.77 45.0	—	—	2.35 59.7	4.50 114.3	2.17 55.2	0.13 3.3	0.88 22.4	0.32 8.0	0.43 11.0	—	—	7.10 180.3	1.67 42.4	—	6.0 2.7	8.5 3.9
4 100	4.500 114.3	4.63 117.6	5.50 139.7	2.18 55.4	—	—	2.88 73.2	5.25 133.4	2.17 55.2	0.13 3.3	0.89 22.6	0.43 11.0	0.59 15.0	—	—	8.60 218.4	1.74 44.2	—	9.3 4.2	11.8 5.4
108.0 mm †	4.250 108.0	4.63 117.6	5.50 139.7	2.18 55.4	—	—	2.88 73.2	5.25 133.4	2.17 55.2	0.13 3.3	0.89 22.6	0.43 11.0	0.59 15.0	—	—	8.60 218.4	1.74 44.2	—	9.3 4.2	11.8 5.4
5 125	5.563 141.3	5.88 149.4	6.30 160.0	2.18 55.4	—	—	3.34 84.8	6.25 158.8	2.17 55.2	0.13 3.3	1.12 28.5	0.50 12.7	0.75 19.1	—	—	12.10 307.3	1.74 44.2	—	16.8 7.6	20.0 9.1
133.0 mm †	5.250 133.0	5.88 149.4	6.30 160.0	2.18 55.4	—	—	3.34 84.8	6.25 158.8	2.17 55.2	0.13 3.3	1.12 28.5	0.50 12.7	0.75 19.1	—	—	12.10 307.3	1.74 44.2	—	16.8 7.6	20.0 9.1
139.7 mm	5.500 139.7	5.88 149.4	6.30 160.0	2.18 55.4	—	—	3.34 84.8	6.25 158.8	2.17 55.2	0.13 3.3	1.12 28.5	0.50 12.7	0.75 19.1	—	—	12.10 307.3	1.74 44.2	—	16.8 7.6	20.0 9.1
6 150	6.625 168.3	5.88 149.4	7.30 185.4	2.33 59.2	0.42 10.6	—	3.83 97.3	6.75 171.5	2.17 55.2	0.13 3.3	1.12 28.5	0.50 12.7	0.75 19.1	—	—	12.10 307.3	1.74 44.2	—	20.0 9.1	23.2 10.5
159.0 mm †	6.250 159.0	5.88 149.4	7.30 185.4	2.33 59.2	0.42 10.6	—	3.83 97.3	6.75 171.5	2.17 55.2	0.13 3.3	1.12 28.5	0.50 12.7	0.75 19.1	—	—	12.10 307.3	1.74 44.2	—	20.0 9.1	23.2 10.5
165.1 mm	6.500 165.1	5.88 149.4	7.30 185.4	2.33 59.2	0.42 10.6	—	3.83 97.3	6.75 171.5	2.17 55.2	0.13 3.3	1.12 28.5	0.50 12.7	0.75 19.1	—	—	12.10 307.3	1.74 44.2	—	20.0 9.1	23.2 10.5
8 200	8.625 219.1	5.33 135.4	10.00 254.0	2.33 59.2	1.47 37.4	0.80 20.3	5.00 127.0	8.00 203.2	2.17 55.2	0.13 3.3	1.30 33.0	—	0.88 22.2	14.00 355.6	1.51 38.4	—	—	—	34.3 15.6	37.5 17.0
10 250	10.750 273.0	6.40 162.6	12.25 311.2	3.00 76.2	1.81 45.9	1.41 35.8	6.13 155.7	9.75 247.7	2.76 70.1	0.13 3.3	2.25 57.2	—	1.25 31.8	11.66 296.2	4.50 114.3	—	—	7.50 190.5	72.0 32.7	84.0 38.1
12 300	12.750 323.9	6.50 165.1	14.25 362.0	3.00 76.2	2.80 71.0	2.30 58.4	7.13 181.1	10.75 273.1	2.76 70.1	0.13 3.3	2.24 56.9	—	1.25 31.8	11.66 296.2	4.50 114.3	—	—	7.50 190.5	88.0 39.9	100.0 45.4
14 – 24 350 – 600	AGS®	**See Style Vic-300 MasterSeal AGS Butterfly Valve, pg. 6-12, Request Publication 20.06**																		

- Pressure enhanced rubber seat within the valve body seals equally on both sides of the valve
- Stem bearings and pressure enhanced rubber seat keeps torque consistent over the life of the valve
- Standard ISO mounting flange for actuation
- 10-position handle is infinitely variable, padlockable and includes memory stop.
- Full bi-directional shut-off and dead end service capabilities to the full pressure rated up to 300 psi/2065 kPa
- Sizes from 2–12"/50–300 mm

@ See pg. 3-4 for flow coefficient.

† Contact Victaulic for availability.

IMPORTANT NOTE:

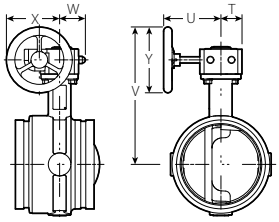
2–8"/50–200 mm sizes are ISO Flange Designation F07; 10"/250 mm and 12"/300 mm sizes are ISO Flange Designation F10.

Valves – Butterfly Valves

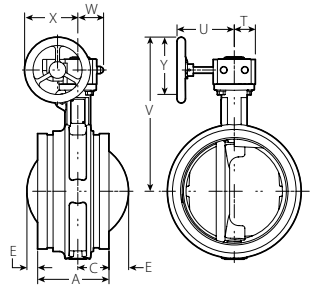
Vic-300 MasterSeal Butterfly Valve

SERIES 761 WITH GEAR OPERATOR

For Complete Information
Request Publication **08.20**



VALVE WITH GEAR OPERATOR HANDLE TYPICAL 2–6"/50–165.1 mm SIZES



VALVE WITH GEAR OPERATOR HANDLE TYPICAL 8–12"/200–300 mm SIZES

Size		Dimensions									Approx. Weight Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Inches mm	C Inches mm	E Inches mm	T Inches mm	U Inches mm	V Inches mm	W Inches mm	X Inches mm	Y Inches mm	Lbs. kg	C_v Values K_v Values
2 50	2.375 60.3	3.21 81.5	1.44 36.6	—	1.58 40.1	4.43 112.5	6.84 173.7	1.75 44.5	3.64 92.5	3.94 100.1	6.0 2.7	115 99.5
2½ 65	2.875 73.0	3.77 95.8	1.77 45.0	—	1.58 40.1	4.43 112.5	7.28 184.9	1.75 44.5	3.64 92.5	3.94 100.1	7.5 3.4	260 224.9
76.1 mm	3.000 76.1	3.77 95.8	1.77 45.0	—	1.58 40.1	4.43 112.5	7.28 184.9	1.75 44.5	3.64 92.5	3.94 100.1	7.5 3.4	260 224.9
3 80	3.500 88.9	3.77 95.8	1.77 45.0	—	1.58 40.1	4.43 112.5	7.53 191.3	1.75 44.5	3.64 92.5	3.94 100.1	8.5 3.9	440 380.6
4 100	4.500 114.3	4.63 117.6	2.18 55.4	—	1.58 40.1	4.43 112.5	8.28 210.3	1.75 44.5	3.64 92.5	3.94 100.1	11.8 5.4	820 709.3
108.0 mm †	4.250 108.0	4.63 117.6	2.18 55.4	—	1.58 40.1	4.43 112.5	8.28 210.3	1.75 44.5	3.64 92.5	3.94 100.1	11.8 5.4	820 709.3
5 125	5.563 141.3	5.88 149.4	2.18 55.4	—	1.97 50.0	4.84 122.9	9.81 249.2	2.28 57.9	4.43 112.5	4.92 125.0	20.8 9.4	1200 1038.0
133.0 mm †	5.525 133.0	5.88 149.4	2.18 55.4	—	1.97 50.0	4.84 122.9	9.81 249.2	2.28 57.9	4.43 112.5	4.92 125.0	20.8 9.4	1200 1038.0
139.7 mm	5.500 139.7	5.88 149.4	2.18 55.4	—	1.97 50.0	4.84 122.9	9.81 249.2	2.28 57.9	4.43 112.5	4.92 125.0	20.8 9.4	1200 1038.0
6 150	6.625 168.3	5.88 149.4	2.33 59.2	—	1.97 50.0	4.84 122.9	10.31 261.9	2.28 57.9	4.43 112.5	4.92 125.0	24.0 10.9	1800 1557.0
159.0 mm †	6.250 159.0	5.88 149.4	2.33 59.2	—	1.97 50.0	4.84 122.9	10.31 261.9	2.28 57.9	4.43 112.5	4.92 125.0	24.0 10.9	1800 1557.0
165.1 mm	6.500 165.1	5.88 149.4	2.33 59.2	—	1.97 50.0	4.84 122.9	10.31 261.9	2.28 57.9	4.43 112.5	4.92 125.0	24.0 10.9	1800 1557.0
8 200	8.625 219.1	5.33 135.4	2.33 59.2	0.80 20.3	1.97 50.0	4.84 122.9	11.56 293.6	2.28 57.9	4.43 112.5	4.92 125.0	38.3 17.4	3400 2941.0
10 250	10.750 273.0	6.40 162.6	3.00 76.2	1.41 35.8	2.88 73.2	7.76 197.1	15.13 384.3	3.25 82.6	6.30 160.0	7.87 199.9	81.5 39.0	5800 5017.0
12 300	12.750 323.9	6.50 165.1	3.00 76.2	2.30 58.4	2.88 73.2	7.76 197.1	16.13 409.7	3.25 82.6	6.30 160.0	7.87 199.9	97.5 44.2	9000 7785.0
14 – 24 350 – 600	AGS® See Style Vic-300 MasterSeal AGS Butterfly Valve, pg. 6-12, Request Publication 20.06											

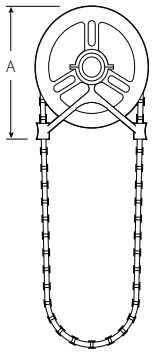
@ C_v/K_v values for flow of water at +60°F/16°C with valve fully open.

† Contact Victaulic for availability.

IMPORTANT NOTE:

2–8"/50–200 mm sizes are ISO Flange Designation F07; 10"/250 mm and 12"/300 mm sizes are ISO Flange Designation F10.

CHAIN WHEEL AND GUIDE FOR GEAR OPERATED BUTTERFLY VALVES



Size	Dimensions			Approx. Weight Each
Nominal Size Inches mm	Sprocket Size	Chain Wheel Size (Dia.) Inches mm	A Inches mm	Lbs. kg
2 – 4 50 – 100	0	4.00 10	4.63 118	2.0 0.9
5 – 8 125 – 200	1	5.75 146	6.38 162	4.0 1.8
10 – 12 250 – 300	2	9.00 229	10.50 267	10.0 4.5

IMPORTANT NOTES:

Chain wheels are mounted to the gear operator hand wheels. Sprocket rim and guide arms are made of cast aluminum and chain is galvanized steel.

Always specify length of chain required. For insulation and locking device, contact Victaulic for details.

Triple Service Valve Assembly

For Complete Information Request Publication **08.09**

- Victaulic tri-service valves provide shut-off, throttling and non-slam check service in a single assembly
- Series 779 check valve features a venturi-like inlet that is drilled, tapped, and plugged to receive flow-measuring taps
- The 779 check valve can be combined with either the Series 761 Vic-300 MasterSeal butterfly valve or the Series 377 Vic-Plug balancing valve
- For 2½–3"/65–80 mm configurations use a Series 716H check valve
- Both configurations are available with memory stop
- Working pressures for the 2½–12"/65–300 mm butterfly/check combination are 300 psi/2065 kPa and 175 psi/1200 kPa for the 3–12"/80–300 mm plug/check combination

TRIPLE SERVICE BUTTERFLY/CHECK VALVE ASSEMBLY

Size		Dimensions				Approx. Weight Each	
		Center to Top					
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Handle Inches mm	Gear Inches mm	Center to Bottom Inches mm	End to End Inches mm	Manual Handle Lbs. kg	Gear Operator Lbs. kg
2½ 65	2.875 73.0	5.62 143	6.72 170	2.13‡ 54	7.75 197	11.6 5.3	12.7 5.8
3 80	3.500 88.9	5.62 143	7.02 178	2.50‡ 64	8.12 206	13.5 6.1	14.6 6.6
4 100	4.500 114.3	7.62 193	8.08 205	4.00 102	14.38 365	37.0 16.8	40.1 18.2
5 125	5.563 141.3	8.12 206	8.60 218	4.62 117	16.50 419	52.0 23.6	55.0 25.0
6 150	6.625 168.3	8.62 219	10.58 269	5.00 127	17.50 444	69.0 31.3	72.0 32.7
8 200	8.625 219.1	10.50 267	12.50 318	6.12 155	19.50 495	125.0 56.7	125.0 56.7
10 250	10.750 273.0	—	14.05 357	7.18 182	23.50 597	—	187.0 84.8
12 300	12.750 323.9	—	15.37 390	8.12 206	26.12 663	—	260.0 117.9

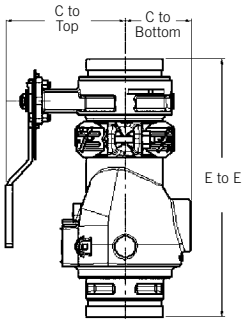
‡ Based on Style 77 couplings. When using Style 07 dimensions are 1.94"/49 mm for 2½"/65 mm size and 2.25"/57 mm for 3"/80 mm size.

TRIPLE SERVICE PLUG/CHECK VALVE ASSEMBLY

Size		Dimensions				Approx. Weight Each	
		Center to Top					
AWWA Nominal Size Inches mm	AWWA Outside Diameter Inches mm	Handle Inches mm	Gear Inches mm	Center to Bottom Inches mm	End to End Inches mm	Manual Handle Lbs. kg	Gear Operator Lbs. kg
3 80	3.96 100.6	8.25 210	12.38 315	3.75 95	12.25 311	40.0 18.1	50.0 22.7
4 100	4.80 121.9	8.75 222	12.87 327	4.44 113	18.62 473	60.0 27.2	70.0 31.8
6 150	6.90 175.3	10.00 254	13.75 349	5.56 141	22.00 559	110.0 49.9	130.0 59.0
8 200	9.05 229.9	—	17.10 434	6.87 175	25.50 648	180.0 81.6	210.0 95.3
10 250	11.10 281.9	—	22.63 575	8.00 203	30.00 762	—	307.0 139.3
12 300	13.20 335.3	—	24.50 622	9.50 241	33.50 851	—	412.0 186.9

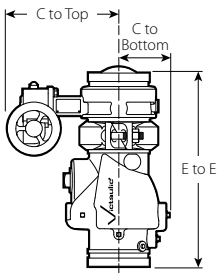
IMPORTANT NOTE:

For connecting Vic-Plug valve to Vic-check valve or IPS steel pipe (3 – 12"/80 – 300 mm), refer to Style 307 Transition coupling in 23.03.



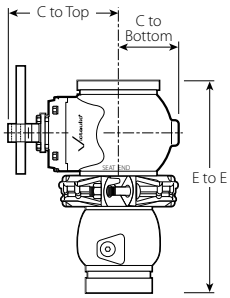
TYPICAL 2½–3"/ 65–80 mm SIZES

Vic-300 MasterSeal butterfly valve and Series 716H Vic-Check valve and Style 07 coupling



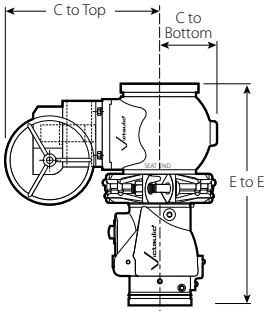
TYPICAL 4–12"/ 100–300 mm SIZES

Vic-300 MasterSeal gear operator butterfly valve and Series 712 or 779 Vic-Check valve and Style 07 coupling



TYPICAL 3"/80 mm SIZE

Series 377 Vic-Plug with manual handle, Series 716 Vic-Check valve, and Style 307 coupling



TYPICAL 4–12"/ 100–300 mm SIZES

Series 377 Vic-Plug with gear operator, Series 779 Vic-Check valve, and Style 307 coupling

IMPORTANT NOTE: ASSEMBLY REQUIRED WITH EITHER STYLE 07 ZERO-FLEX RIGID COUPLINGS OR STYLE 77 STANDARD FLEXIBLE COUPLINGS.

Butterfly Valve

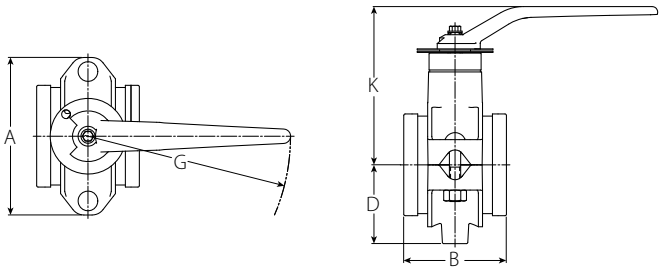
SERIES 700

For Complete Information
Request Publication **08.05**

- Designed for bubble-tight shut-off for pressure rated up to 200 psi/1400 kPa
- Narrow disc design for low pressure drop performance
- Self-centering for positive shut-off
- Available with EPDM for water services to +230°F/+110°C
- Nitrile for oil services to 180°F/+82°C liners
- Body is fully rubber lined, standard disc is aluminum bronze (also available in 316 stainless steel)
- Lockable feature sizes 1½–6"/40–150 mm and 165.1 mm

STANDARD PROFILE BUTTERFLY VALVE

Size		Dimensions					Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A	B	D	G	K	Lbs. kg
1½ 40	1.900 48.3	3.63 92.2	3.38 85.9	1.63 41.4	5.50 139.7	4.44 112.8	2.8 1.3
2 50	2.375 60.3	4.06 103.1	3.19 81.0	1.87 47.5	5.50 139.7	4.71 119.6	3.3 1.5
2½ 65	2.875 73.0	4.87 123.7	3.81 96.8	2.50 63.5	7.00 177.8	5.31 134.9	6.4 2.9
3 80	3.500 88.9	5.62 142.7	3.81 96.8	2.75 69.9	7.00 177.8	5.62 142.7	6.8 3.1
4 100	4.500 114.3	7.00 177.8	4.56 115.8	3.50 88.9	9.00 228.6	6.69 179.9	12.1 5.5
5 125	5.563 141.3	8.50 215.9	5.81 147.6	4.00 101.6	12.00 304.8	8.25 209.6	26.1 11.8
6 150	6.625 168.3	9.50 241.3	5.81 147.6	4.50 114.3	12.00 304.8	8.78 223.0	32.5 14.7
165.1 mm	6.500 165.1	9.50 241.3	5.81 147.6	4.50 114.3	12.00 304.8	8.78 223.0	30.5 13.8



1½–6"/40 – 150 mm SIZES (TYPICAL)

Vic-Check® Valve

SERIES 716H/716

For Complete Information Request Publication **08.08**

Sizes 2 – 3"/50 – 80 mm

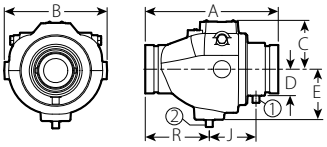
Sizes 4 – 12"/100 – 300 mm

- Utilizes spring-assisted, single-disc design
- Achieves a leak-free seal with as little as 5 ft./1.5 m of head
- Installed in horizontal and vertical positions (upward flow only)
- Vic-Check valves combine high pressure capabilities with low pressure drop performance
- The grooved end design permits fast, easy installation
- Drains are provided both upstream and downstream of the disc
- Every valve factory tested to its working pressure rated up to 300 psi/2065 kPa
- Sizes from 2 – 12"/50 – 300 mm
- AGS Series W715 check valve available for sizes 14 – 24"/350 – 600 mm, see pg. 5-10

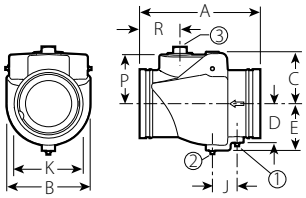
Size		Dimensions – Inches/mm									Approx. Wgt. Each
Nominal Size Inches/ mm	Actual Outside Diameter Inches/ mm	E-E A	Overall Width B	C	D	E	J	K	P	R	Lbs. kg
2 50	2.375 50.8	8.66 220	6.46 164	3.23 82	1.48 38	3.02 77	2.80 71	–	–	4.25 108.0	10.7 4.9
2½ 65	2.875 73.0	9.37 238	6.94 176	3.31 84	1.66 42	3.40 86	3.38 86	–	–	4.38 111.3	3.6 1.6
76.1 mm	3.000 76.1	9.37 238	6.94 176	3.31 84	1.66 42	3.40 86	3.38 86	–	–	4.38 111.3	3.6 1.6
3 80	3.500 88.9	9.62 244	7.44 189	3.53 90	1.91 49	3.65 93	3.38 86	–	–	4.63 117.6	4.5 2.0
4 100	4.500 114.3	9.63 245	6.00 152	3.90 99	2.75 70	3.50 89	2.00 51	4.50 114	3.50 89	3.35 85	16.0 7.3
139.7 mm	5.500 139.7	10.50 267	6.80 173	4.50 114	4.17 106	4.17 106	2.15 55	5.88 149	4.08 104	4.02 102	27.0 12.3
5 125	5.563 141.3	10.50 267	6.80 173	4.50 114	4.17 106	4.17 106	2.15 55	5.88 149	4.08 104	4.02 102	20.0 9.1
6 150	6.625 168.3	11.50 292	8.00 203	5.00 127	4.50 114	4.50 114	2.38 61	6.67 169	4.73 120	3.89 99	28.0 12.7
165.1 mm	6.500 165.1	11.50 292	8.00 203	5.00 127	4.50 114	4.50 114	2.38 61	6.67 169	4.73 120	3.89 99	28.0 12.7
8 200	8.625 219.1	14.00 356	9.88 251	6.10 155	5..05 128	5.65 144	2.15 55	8.75 222	5.70 145	5.75 146	40.0 18.1
10 250	10.750 273.0	17.00 432	12.00 305	7.10 180	5.96 151	6.69 170	2.15 55	10.92 277	6.93 176	–	100.0 45.4
12 300	12.750 323.9	19.50 495	14.00 356	8.10 206	6.91 176	7.64 194	2.51 64	12.81 325	7.93 201	–	140.0 63.5

IMPORTANT NOTES:

Placement of check valves too close to sources of unstable flow will shorten the life of the valve and potentially may damage the system. To extend valve life, valves should be installed a reasonable distance downstream from pumps, elbows, expanders, reducers or other similar devices. Sound piping practices dictate a minimum of five (5) times the pipe diameter for general use. Distances between three (3) and five (5) diameters are allowable provided the flow velocity is less than eight (8) ft. per second (2.4 mps). Distances less than three (3) diameters are not recommended and will violate the Victaulic product warranty.

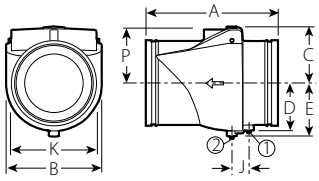


TYPICAL 2 – 3"/50 – 80 mm SIZES



TYPICAL 4 – 8"/100 – 200 mm SIZES

1 ½" NPT Upstream drain (optional)
2 ½" NPT downstream drain (optional)
3 2" NPT drain (optional)



TYPICAL 10 – 12"/250 – 300 mm SIZES

1 ½" NPT Upstream drain (optional)
2 ½" NPT downstream drain (optional)

Venturi Check Valve

SERIES 779

For Complete Information
Request Publication **08.10**

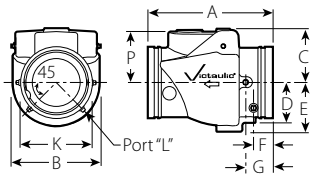
- CAD-designed hydrodynamic inlet profile provides a natural venturi as part of the valve
- Inlet is drilled, tapped, and plugged, ready to receive the flow kit (optional in Canada)
- Venturi provides much greater measurement accuracy, valve turbulence and interference across the valve seat is negligible
- Twin taps on both sides provide positioning of measurement outlets for convenient meter connection and accurate flow measurement independent of the style of throttling valve or the position of the throttling element (ball, plug, disc, etc.)
- All sizes can be installed in horizontal and vertical positions (upward flow only)
- Provides leak-free sealing under conditions as low as 5 ft./1.5 m of head pressure
- Every valve is factory tested and pressure rated up to 300 psi/2065 kPa
- Sizes from 4–12"/100–300 mm

Size		Dimensions									Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	G Inches mm	K Inches mm	P Inches mm	Lbs. kg	C_V Values K_V Values
4† 100	4.500 114.3	9.63 245	5.88 149	3.88 99	2.75 70	3.50 89	1.50 38	2.38 60	4.50 114	3.50 89	16.0 7.3	390 337.4
5† 125	5.563 141.3	10.50 267	6.75 171	4.50 114	4.25 108	4.25 108	1.65 42	2.38 60	5.88 149	4.08 104	20.0 9.1	700 605.5
139.7mm†	5.500 139.7	10.50 267	6.75 171	4.50 114	4.25 108	4.25 108	1.65 42	2.38 60	5.88 149	4.08 104	20.0 9.1	700 605.5
6† 150	6.625 168.3	11.50 292	8.00 203	5.00 127	4.50 114	4.50 114	1.58 40	2.68 68	6.68 170	4.75 121	28.0 12.7	1000 865.0
165.1mm†	6.500 165.1	11.50 292	8.00 203	5.00 127	4.50 114	4.50 114	1.58 40	2.68 68	6.68 170	4.75 121	28.0 12.7	1000 865.0
8* 200	8.625 219.1	14.00 356	9.88 251	6.06 154	5.06 129	5.68 144	1.75 44	3.25 83	8.88 226	5.75 146	40.0 18.1	1800 1557.0
10* 250	10.750 273.0	17.00 432	12.00 305	7.12 181	6.00 152	6.68 170	1.82 46	3.94 100	10.94 278	6.94 176	100.0 45.4	3000 2595.0
12* 300	12.750 323.9	19.50 495	14.00 356	8.06 205	6.91 176	7.68 195	1.82 46	3.32 84	12.82 326	7.93 201	140.0 63.5	4200 3633.0

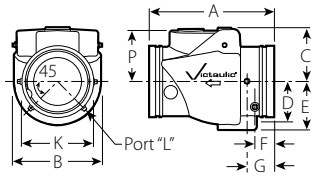
† Port "L" located 45° off center line of valve body.

* Both ports on center line of valve body.

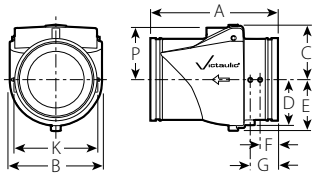
@ C_V/K_V values for flow of water at +60°F/16°C with valve fully open.



TYPICAL 4"/100 mm SIZES



TYPICAL 5–6"/125–165.1 mm SIZES



TYPICAL 8–12"/200–300 mm SIZES

Swinger® Swing Check Valve

SERIES 712
SERIES 713

For Complete Information Request Publication **08.11**

SERIES 712

SERIES 713

- Designed for use with standard Victaulic grooved fittings and couplings
- Large closure access bonnet permits easy internal coating for corrosive services
- 316 stainless steel clapper features a bonded disc for coating protection
- Series 712 and Series 713 should not be installed in vertical pipelines

SERIES 712:

- Pressure rated up to 300 psi/2065 kPa
- Sizes from 2–4"/50–100 mm

SERIES 713:

- Can be used with high pressure lines rated up to 1000 psi/6900 kPa
- Size for 2"/50 mm only

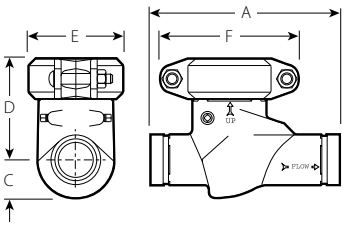
SERIES 712

Size		Max. Work Pressure	Dimensions					Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	A End to End Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	Lbs. kg	C_V Values K_V Values
2 50	2.375 60.3	300 2065	9.00 229	1.81 46	4.88 124	4.38 111	6.38 162	11.6 55.3	78 67.5
2½ 65	2.875 73.0	300 2065	9.25 235	2.25 57	5.50 140	5.69 145	7.69 195	18.0 8.2	125 108.1
3 80	3.500 88.9	300 2065	10.75 273	2.50 64	5.75 146	6.25 159	9.00 229	22.5 10.2	210 181.7
4 100	4.500 114.3	300 2065	12.00 305	3.38 86	7.63 194	7.96 202	10.75 273	38.0 17.2	358 309.7

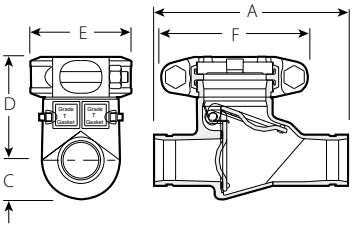
SERIES 713

2 50	2.375 60.3	1000 6900	9.00 229	1.81 46	4.88 4.69	4.96 119	6.75 172	12.0 5.4	78 67.5

@ C_V/K_V values for flow of water at +60°F/16°C with valve fully open.



SERIES 712
TYPICAL 2–4"/50–100 mm SIZES



SERIES 713
TYPICAL 2"/50 mm SIZE

Vic-Plug Balancing Valve

SERIES 377

For Complete Information Request Publication **08.12**

- Only eccentric grooved end plug valve made specifically for throttling services
- Cast of ductile iron and coated with alkyd enamel
- Eccentric design assures shut-off sealing up to 175 psi/1200 kPa on 3–12"/80–300 mm
- For 3–12"/80–300 mm systems Victaulic Style 307 Transition couplings are available to directly connect Vic-Plug valves to grooved end steel and other IPS pipe – refer to Publication 23.03 for details

VALVE DIMENSIONS

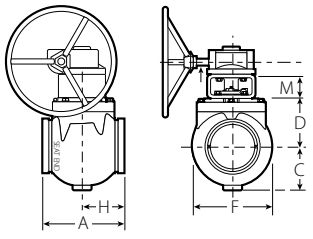
Size		Dimensions									Approx. Wgt. Each		Flow Coefficient@ (Fully Open)
AWWA Nominal Size Inches mm	AWWA Outside Diameter Inches mm	A End to End Inches mm	C Inches mm	D Inches mm	F Inches mm	G Inches mm	H Inches mm	K Inches (mm)	M Inches mm	V Inches (mm)	Valve with Gear Operator Lbs. kg	Valve with Lever Handle Lbs. kg	C_V Values K_V Values
3* 80	3.96 100.6	8.00 203	3.75 95	4.25 108	6.56 167	—	4.00 102	2.00 51	4.00 102	18.50 470	32.0 14.5	32.0 14.5	600 519.0
4* 100	4.80 121.9	9.00 229	4.44 113	4.75 121	7.74 197	—	4.50 114	2.00 51	4.00 102	18.50 470	42.0 19.1	39.0 17.7	1040 899.6
6* 150	6.90 175.3	10.50 267	5.50 140	7.50 191	10.32 262	—	5.25 133	2.00 51	—	18.50 470	80.0 36.3	74.0 33.6	2100 1816.5
8 200	9.05 229.9	11.50 292	6.87 175	10.80 274	12.30 312	16.38 416	5.75 145	—	—	—	120.0 55.0	—	3850 3330.3
10 250	11.10 281.9	13.00 330	8.00 203	12.00 305	14.78 375	18.75 476	6.50 165	—	—	—	185.0 84.0	—	5500 4757.5
12 300	13.20 335.3	14.00 356	9.50 241	13.75 349	17.00 432	21.00 533	7.00 178	—	—	—	240.0 109.0	—	8400 7266.0

* 3"/80 mm, 4"/100 mm, 6"/150 mm valves do not include side support lugs.

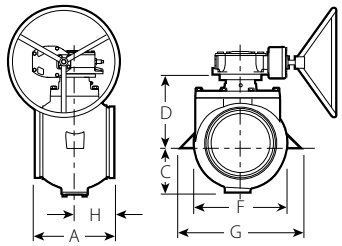
@ C_V/K_V values for flow of water at +60°F/16°C with valve fully open.

IMPORTANT NOTE:

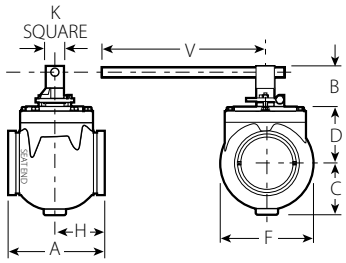
Gear operators can be installed in various positions, contact Victaulic for details.



VALVE WITH GEAR OPERATOR TYPICAL 3–6"/80–150 mm SIZES



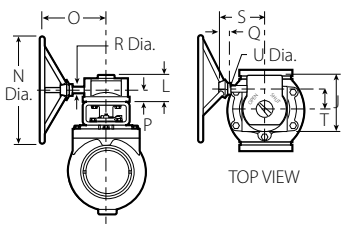
VALVE WITH GEAR OPERATOR TYPICAL 8–12"/200–300 mm SIZES



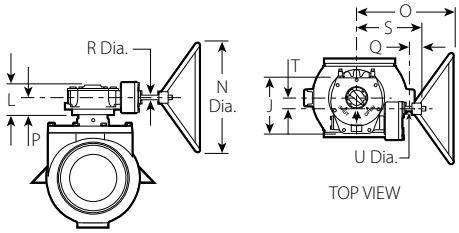
VALVE WITH LEVER HANDLE TYPICAL 3–6"/80–150 mm SIZES

GEAR OPERATOR DIMENSIONS

Gear Oper.	Dimensions										Turns to Close	Approx. Wgt. Each
Style No.	J Inches mm	L Inches mm	N Dia. Inches mm	O Inches mm	P Inches mm	Q Inches mm	R Dia. Inches mm	S Inches mm	T Inches mm	U Dia. Inches mm	No.	Lbs. kg
MX	4.76 121	2.07 53	6.00 152	4.00 102	1.13 29	1.30 33	0.63 16	4.00 102	1.95 50	0.19 5	7.5	7.5 3.4
MZ	5.50 140	2.62 67	10.00 250	5.00 127	1.25 32	1.30 33	0.63 16	4.50 114	2.36 60	0.19 5	7.5	15.0 6.8
MV	7.25 184	3.29 84	18.00 457	9.00 229	1.62 41	2.25 57	0.88 22	6.00 152	2.63 67	0.25 6	7.8	20.0 9.1
MA	8.24 209	3.55 90	18.00 457	10.00 254	1.75 45	2.25 57	0.88 22	7.00 178	3.38 86	0.25 6	7.8	33.0 15.0
MC	11.12 283	4.03 102	18.00 457	10.38 264	1.87 48	2.25 57	1.00 25	7.38 188	5.38 137	0.25 6	18	68.0 30.8



TYPICAL 3–6"/80–150 mm SIZES



TYPICAL 8–12"/200–300 mm SIZES

Valves – Ball Valves

Brass Body Ball Valve

SERIES 722

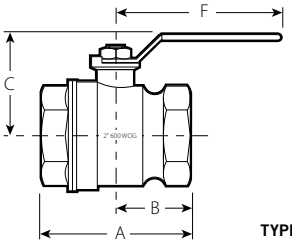
For Complete Information Request Publication **08.15**

- Standard port, female threaded end ball valve
- Constructed from forged brass
- Pressure rated up to 600 psi/4135 kPa WOG service
- Sizes from ¼ – 2"/8 – 50 mm

Size		Dimensions				Approx. Weight Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Inches mm	B Inches mm	C Inches mm	F Inches mm	Lbs. kg	C_v Values K_v Values
¼ 8	0.540 13.7	1.54 39	0.77 20	1.03 26	1.65 42	0.2 0.09	7 6.1
⅜ 10	0.675 17.1	1.77 45	0.88 22	1.28 33	3.07 78	0.3 0.14	7 6.1
½* 15	0.084 21.3	2.13 54	1.06 27	1.33 34	3.07 78	0.4 0.18	10 8.7
¾* 20	1.050 26.7	2.44 62	1.22 31	1.79 45	3.78 96	0.7 0.32	25 21.6
1* 25	1.315 33.4	2.95 75	1.48 37	1.95 50	3.78 96	1.0 0.45	37 32.0
1 ¼* 32	1.660 42.2	3.31 84	1.65 42	2.17 55	3.78 96	1.5 0.68	50 43.3
1 ½* 40	1.900 48.3	3.66 93	1.83 46	2.68 68	5.43 138	2.1 0.95	87 75.3
2* 50	2.375 60.3	4.21 107	2.11 53	2.89 73	5.43 138	2.4 1.09	110 95.2

@ C_v/K_v values for flow of water at +60°F/16°C with valve fully open.

* Valve sizes ½"/15 mm and above are UL Listed at 175 psi/1200 kPa and FM Approved at 600 psi/4135 kPa for ½"/15 mm and ¾"/20 mm sizes and 500 psi/3450 kPa for 1 – 2"/25 – 50 mm sizes.



TYPICAL FOR ALL SIZES

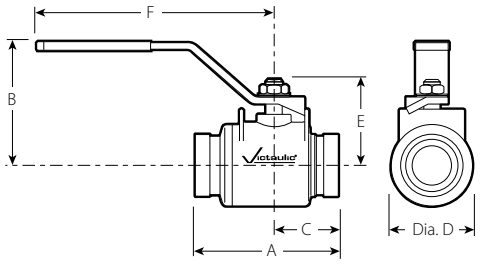
Vic®-Ball Valves

SERIES 721

For Complete Information Request Publication **08.14**

- Streamlined design provides excellent flow characteristics
- Standard port, end-entry valve designed for 800 psi/5515 kPa WOG service
- Ductile Iron valve body and end cap
- Supplied standard with manual handles; pinned handle extensions available
- Reinforced Tetrafluoroethylene (TFE) seal rated to +450°F/+232°F
- Sizes 4-6"/ 100-150mm

Size		Dimensions – Inches/mm						Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	End to End A	Height B	C	Diameter D	E	F	Lbs. kg
4* 114.3	4.500 114.3	8.25 210	6.92 176	4.50 114	6.00 152	5.21 132	16.13 410	32.4 14.7
6 168.3	6.625 168.3	10.10 257	9.14 232	5.30 135	8.00 203	7.26 184	28.13 715	75.0 34.0



VALVES

Vic®-Ball Valve

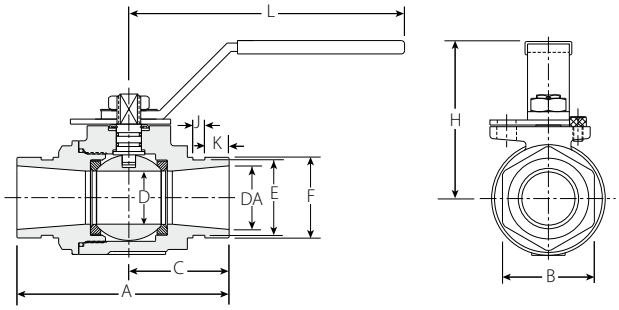
SERIES 726

For Complete Information Request Publication **08.23**

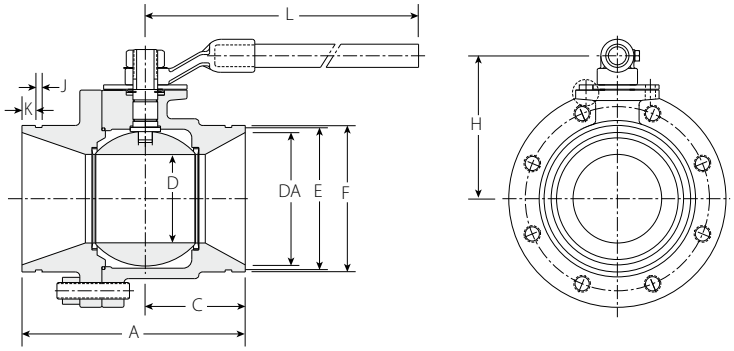
- High-pressure standard port ball valve with grooved ends
- Two-piece, end-entry valve
- Features floating ball for lower torque requirements
- NACE-MR-01-75 compliant
- Pressure rated up to 1000 psi/6900 kPa in sizes 1½–3"/40–80 mm
- Pressure rated up to 800 psi/5515 kPa for sizes 4–6"/100–150 mm
- Sizes from 1½–6"/40–150 mm

Size		Dimensions											Approx. Wgt Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Inches mm	B Inches mm	C Inches mm	D Inches mm	DA Inches mm	E Inches mm	F Inches mm	H Inches mm	J Inches mm	K Inches mm	L Inches mm	Lbs. kg	C_V Values K_V Values
1 ½ 40	1.900 48.3	5.12 130	2.00 51	2.36 60	1.25 32	1.50 38	1.78 45	1.90 48	3.00 76	0.28 7	0.56 14	6.97 177	4.4 2.0	130 112.5
2 50	2.375 60.3	5.50 140	2.64 67	2.48 63	1.50 38	2.00 51	2.25 57	2.38 60	3.31 84	0.34 9	0.56 14	6.97 177	6.5 3.0	180 155.7
2 ½ 65	2.875 73.0	6.25 159	3.03 77	2.80 71	1.97 50	2.50 64	2.72 69	2.88 73	4.00 102	0.34 9	0.56 14	9.84 250	10.4 4.7	340 294.1
3 80	3.500 88.9	6.56 167	3.50 89	3.15 80	2.50 64	3.00 76	3.34 85	3.50 89	4.53 115	0.34 9	0.56 14	9.84 250	14.9 6.8	600 519.0
4 100	4.500 114.3	8.25 210	—	3.35 85	2.99 76	4.00 102	4.33 111	4.52 115	5.48 139	0.34 9	0.61 15	15.67 398	41.5 18.9	650 562.3
6 150	6.625 168.3	10.10 257	—	4.53 115	4.00 102	6.00 152	6.46 164	6.64 169	6.48 165	0.34 9	0.61 15	18.07 459	78.5 35.7	800 692.0

@ C_V/K_V values for flow of water at +60°F/16°C with valve fully open.



TYPICAL 1½–3"/40–80 mm SIZES



TYPICAL 4–6"/100–150 mm SIZES

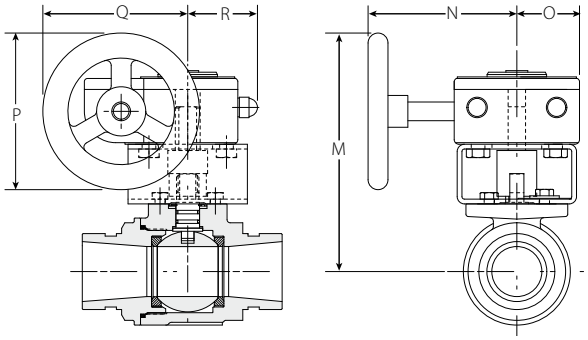
Vic®-Ball Valve (cont'd)

SERIES 726 WITH GEAR OPERATOR

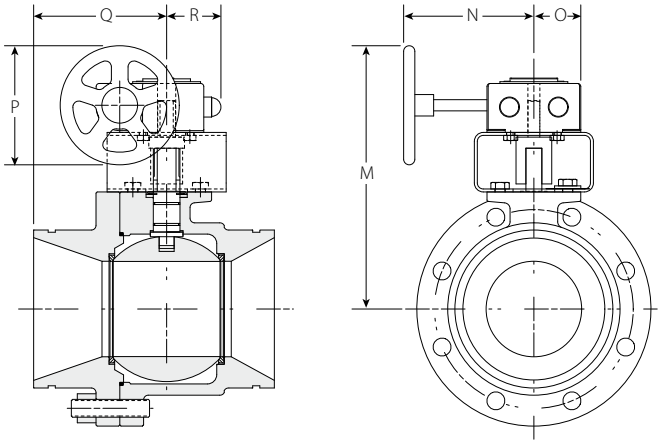
For Complete Information Request Publication **08.23**

Size		Dimensions						Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	M Inches mm	N Inches mm	O Inches mm	P Inches mm	Q Inches mm	R Inches mm	Lbs. kg	C_V Values K_V Values
1 ½ 40	1.900 48.3	6.03 153	4.29 109	1.58 40	3.94 100	2.64 92	1.75 44	7.1 3.2	130 112.5
2 50	2.375 60.3	6.30 160	4.29 109	1.58 40	3.94 100	2.64 92	1.75 44	9.1 4.1	180 155.7
2 ½ 65	2.875 73.0	7.43 189	4.65 118	1.97 50	4.92 125	4.43 112	2.28 58	12.9 5.9	340 294.1
76.1 mm	3.000 76.1	7.43 189	4.65 118	1.97 50	4.92 125	4.43 112	2.28 58	12.9 5.9	340 294.1
3 80	3.500 88.9	7.94 202	4.65 118	1.97 50	4.92 125	4.43 112	2.28 58	20.0 9.1	600 519.0
4 100	4.500 114.3	9.95 253	4.65 118	1.97 50	4.92 125	4.43 112	2.28 58	44.7 20.3	650 562.3
6 150	6.625 168.3	11.02 280	4.65 118	1.97 50	4.92 125	4.43 112	2.28 58	89.0 40.3	800 692.0
165.1 mm	6.500 165.1	11.02 280	4.65 118	1.97 50	4.92 125	4.43 112	2.28 58	89.0 40.3	800 692.0

@ C_V/K_V values for flow of water at +60°F/16°C with valve fully open.



TYPICAL 1½–3"/40–80 mm SIZES



TYPICAL 4–6"/100–150 mm SIZES

Notes

Hydronic Balancing Products

Balancing Valves

TA balancing valves, provided by Victaulic, offer a reliable, efficient and cost effective method of balancing and measuring all system flow rates. Full throttling range is achieved by 4, 8, 12, 16, 20, or 22 full turns of the handwheel, enabling a precise setting. The result is a high degree of accurate adjustment and precise system balancing.

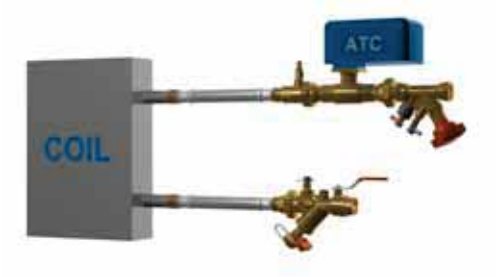
TA balancing valves, provided by Victaulic, are offered in a variety of end configurations and sizes for a variety of heating and cooling applications.

Balancing Instruments

There are several balancing instruments available to meet a variety of needs. The latest instrument to be released is the Series 734 TA Scope. The TA Scope is designed to help professionals verify, measure and maintain complex systems quickly and efficiently. The TA Scope is a wireless, hand-held device for the swift and accurate measurement of differential pressure, flow, temperature and power.

Differential Pressure Controller

Use in conjunction with balancing valves, the TA Differential Pressure Controller ensures the correct pressure is delivered to the coil and balancing valve. By eliminating pressure changes, the controller enables the balancing valve to maintain the proper flow rate at the coil and keep the system in balance.



KOIL-KIT™ Coil Packs

Victaulic KOIL-KIT Coil Packs provide a simplified, quality coil circuit installation while ensuring optimal hydronic system design requirements are met. The KOIL-KIT is suitable for a variety of hot and cold water applications including treated and untreated water systems.

The Victaulic KOIL-KIT Coil Pack consists of the following components: Series 78Y Y-Strainer/Ball Valve or Series 78T Ball Valve Union Combination, two Coil Hoses, a Series 78U Union Port Fitting, and a TA balancing valve.

Hydronic Balancing Products

Balancing Valves

- Reliable, simple, and cost effective
- Full throttling range is achieved by 4, 8, 12, 16, 20, or 22 full turns
- Service governed by the connecting coupling gasket ratings for grooved and flanged valves
- Pressure rated up to 300 psi/2065 kPa for temperature ratings from –4°F/–20°C to +250°F/+120°C

Balancing Valve
Solder End

TA SERIES 786, PG. 4-3

Balancing Valve
Female Threaded End

TA SERIES 787, PG. 4-3

Balancing Valve
Male x Female

TA SERIES 78K, PG. 4-4

Balancing Valve
Flanged End

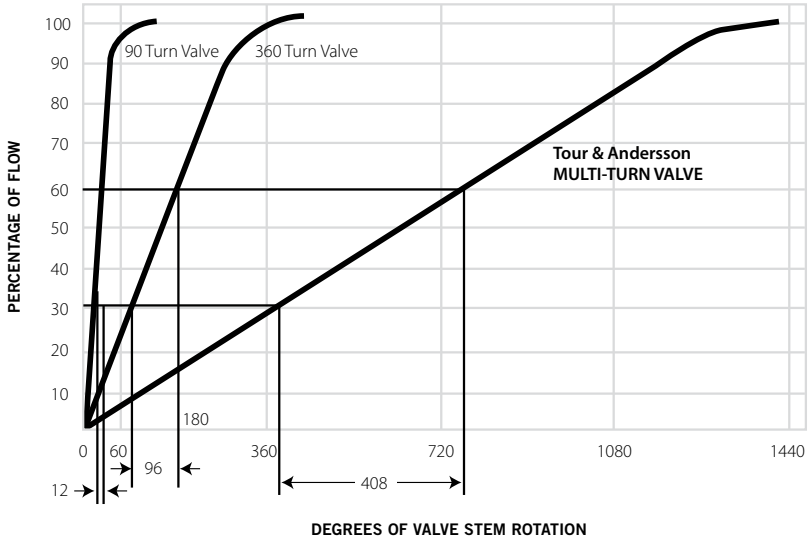
TA SERIES 788, PG. 4-6

Balancing Valve
Grooved End

TA SERIES 789, PG. 4-6

COMPARISON OF THROTTLING CHARACTERISTICS

- This curve illustrates the advantage of the four (4) turn adjustment available with TA balancing valves ½–2"/15–50 mm, valves 2½"/65 mm and larger have 8, 12, 16, 20 or 22 turns
- A 90° fully open to closed valve requires just a 12° change in adjustment to equal 30% change in flow
- A 360° fully open to closed valve would require 96° change in adjustment to equal the same 30% change in the flow measurement
- TA balancing valves would require a 408° change in adjustment to equal the same 30% change in flow

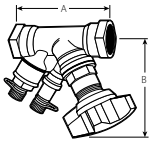


Hydronic Balancing Products

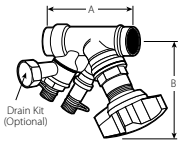
Balancing Valve

TA SERIES 786 Solder End
TA SERIES 787 Female Threaded End

For Complete Information
Request Publication **08.16**



TYPICAL ½–2"/15–50 mm SIZES



TYPICAL ½–2"/15–50 mm SIZES

Size		TA Series 786 Solder End (300 psi/2065 kPa) Balancing Valve			TA Series 787 NPT (Female) Threaded End (300 psi/2065 kPa) Balancing Valve		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	B Center to Top Inches mm	Approx. Weight Each Lbs. kg	A End to End Inches mm	B Center to Top Inches mm	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	3.50 89	4.00 102	1.4 0.6	3.50 89	4.00 102	1.5 0.7
¾ 20	1.050 26.7	3.81 97	4.00 102	1.4 0.6	3.81 97	4.00 102	1.6 0.7
1 25	1.315 33.7	4.31 110	4.50 114	1.9 0.9	4.31 110	4.50 114	2.0 0.9
1 ¼ 32	1.660 42.4	4.88 124	4.31 110	2.4 1.1	4.88 124	4.31 110	2.6 1.2
1 ½ 40	1.900 48.3	5.13 130	4.75 121	3.1 1.4	5.13 130	4.75 121	3.3 1.5
2 50	2.375 60.3	6.13 156	4.75 121	4.5 2.0	6.13 156	4.75 121	5.0 2.3

VALVE SELECTION GUIDE

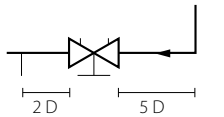
Size		TA Series 786 Solder End (300 psi/2065 kPa) Balancing Valve			TA Series 787 NPT (Female) Threaded End (300 psi/2065 kPa) Balancing Valve		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Minimum Flow GPM LPM	Nominal Flow GPM LPM	Maximum Flow GPM LPM	Minimum Flow GPM LPM	Nominal Flow GPM LPM	Maximum Flow GPM LPM
½ 15	0.840 21.3	0.13 0.49	2.7 10.2	8.6 32.6	0.13 0.49	2.7 10.2	8.6 32.6
¾ 20	1.050 26.7	0.39 1.48	6.2 23.5	20.0 75.7	0.39 1.48	6.2 23.5	20.0 75.7
1 25	1.315 33.7	0.45 1.70	9.4 35.6	30.0 113.6	0.45 1.70	9.4 35.6	30.0 113.6
1 ¼ 32	1.660 42.4	0.87 3.29	15.0 56.8	48.0 181.7	0.87 3.29	15.0 56.8	48.0 181.7
1 ½ 40	1.900 48.3	1.30 4.92	21.0 79.5	66.0 249.8	1.30 4.92	21.0 79.5	66.0 249.8
2 50	2.375 60.3	2.00 7.57	36.0 136.3	110.0 416.4	2.00 7.57	36.0 136.3	110.0 416.4

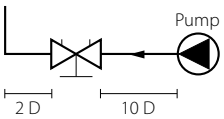
IMPORTANT NOTES:

Balancing valves should be sized in relation to the GPM flows (and not in relation to pipeline size). The Minimum Flow is calculated from the minimum open setting of the valve and a minimum pressure drop 1 Ft. WG (= 3 kPa). The Nominal Flow is calculated from the maximum open setting of the valve and the minimum recommended pressure drop, 2 Ft. WG (= 6 kPa). The Maximum Flow is calculated from the maximum open setting of the valve and the maximum pressure drop, 20 Ft. WG (= 60 kPa). A computer program, TA-Select, is available from Tour & Andersson for calculation of pre-setting values and other applications.

MEASURING ACCURACY:

The hand wheel zero position is calibrated and must not be changed. Valves have an accuracy of flow measurement of 2% to 3%* when used within their recommended flow range and installed in accordance with the figure below. * For the most accurate results, a Series 737 TA CBI-II should be used. However, any differential pressure meter may be used.

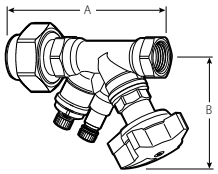




Balancing Valve

TA SERIES 78K Male x Female

For Complete Information Request Publication **08.16**



SERIES 78K

Optional tailpieces are available for double reductions, or for changing end configurations from sweat to threaded or threaded to sweat. If needed, specify tailpiece option when ordering.

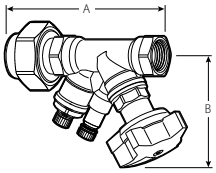
Nominal Size Inches/mm			Series 78K Male x Female (300 psi/ 2065 kpa) Balancing Valve			
MPT Union		FPT Valve	A End to End Inches/mm	A End to PermaLynx End Inches/mm	B Center to End Inches/mm	Approx. Weight Each Lbs./kg
½ 15	x	½ 15	5.75 146	6.76 172	4.00 102	1.7 0.8
	x	¾ 20	5.94 151	–	4.00 102	1.8 0.8
	x	1 25	6.27 159	–	4.50 114	2.7 1.2
	x	1 ¼ 32	7.37 187	–	4.72 120	4.1 1.9
¾ 20	x	¾ 20	5.99 152	7.97 202	4.00 102	2.3 1
	x	1 25	6.81 173	–	4.50 114	2.2 1.0
	x	1 ½ 40	7.66 195	–	4.75 121	5.0 2.3
1 25	x	1 25	7.70 186	9.01 229	5.30 135	4.02 1.8
	x	1 ¼ 32	7.83 199	–	4.31 109	2.8 1.3
	x	1 ½ 40	7.66 195	–	4.75 121	5.2 2.4
	x	2 50	8.91 226	–	4.75 121	7.3 3.3
1 ¼ 32	x	1 ¼ 32	8.18 208	9.66 245	4.72 120	5.52 2.5
	x	1 ½ 40	8.21 209	–	4.75 121	3.6 1.6
	x	2 50	8.91 226	–	4.75 121	7.5 3.4
1 ½ 40	x	1 ½ 40	9.00 229	10.37 263	4.75 121	7.16 3.2
	x	2 50	9.02 229	–	4.75 121	5.3 2.4
2 50	x	2 50	8.86 2.25	–	4.75 121	7.19 3.3

Hydronic Balancing Products

Balancing Valve

TA SERIES 78K Male x Female

For Complete Information Request Publication **08.16**



SERIES 78K

VALVE SELECTION GUIDE

Nominal Size Inches/mm			Flow Data for Series 78K		
MPT Union		FPT Valve	Absolute Min Flow GPM LPM	Nominal Range of Flow GPM LPM	Absolute Max. Flow GPM LPM
½ 15	x	½ 15	0.1 05	0.6 – 2.8 2.3 – 10.6	8.6 32.6
	x	¾ 20	0.4 1.5	2.0 – 6.0 7.6 – 22.7	20.0 75.7
	x	1 25	0.5 1.7	3.9 – 10.0 14.8 – 37.9	30.0 114.0
	x	1 ¼ 32	0.9 3.3	5.0 – 15.0 18.9 – 56.8	48.0 182.0
¾ 20	x	¾ 20	0.4 1.5	2.0 – 6.0 7.6 – 22.7	20.0 75.7
	x	1 25	0.5 1.7	3.9 – 10.0 14.8 – 37.9	30.0 114.0
	x	1 ½ 40	1.3 4.9	6.6 – 20.0 25.0 – 75.7	66.0 250.0
1 25	x	1 25	0.5 1.7	3.9 – 10.0 14.8 – 37.9	30.0 114.0
	x	1 ¼ 32	0.9 3.3	5.0 – 15.0 18.9 – 56.8	48.0 182.0
	x	1 ½ 40	1.3 4.9	6.6 – 20.0 25.0 – 75.7	66.0 250
	x	2 50	2.0 7.6	12.6 – 36.0 47.7 – 136.0	110.0 416.0
1 ¼ 32	x	1 ¼ 32	0.9 3.3	5.0 – 15.0 18.9 – 56.8	48.0 182.0
	x	1 ½ 40	1.3 4.9	6.6 – 20.0 25.0 – 75.7	66.0 250.0
	x	2 50	2.0 7.6	12.6 – 36.0 47.7 – 136.0	110.0 416.0
1 ½ 40	x	1 ½ 40	1.3 4.9	6.6 – 20.0 25.0 – 75.7	66.0 250.0
	x	2 50	2.0 7.6	12.6 – 36.0 47.7 – 136.0	110.0 416.0
2 50	x	2 50	2.0 7.6	12.6 – 36.0 47.7 – 136.0	110.0 416.0

IMPORTANT NOTES:

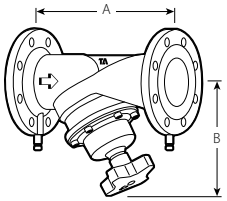
Balancing valves should be sized in accordance with the GPM/LPM flows (and not in relation to pipeline size). Sizing balancing valves based on the minimum or maximum flow rates is not recommended. Valves should be sized using the nominal flow rate only. The Minimum Flow is calculated from the minimum open setting of the valve and a minimum pressure drop 1 Ft. WG (= 3 kPa). The Nominal Flow is calculated from the maximum open setting of the valve and the minimum recommended pressure drop, 2 Ft. WG (= 6 kPa). The Maximum Flow is calculated from the maximum open setting of the valve and the maximum pressure drop, 20 Ft. WG (= 60 kPa).

Note: A computer program, TA-Select, is available for calculation of valve handwheel pre-set position and other applications.
Note: For the most accurate results, a Series 734 TA SCOPE or Series 73M CMI should be used. However, any differential pressure meter may be used.

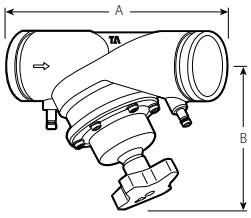
Balancing Valve

TA SERIES 788 Flanged End
TA SERIES 789 Grooved End

For Complete Information
Request Publication **08.16**



TA SERIES 788
TYPICAL 2½–16"/65–400 mm SIZES



TA SERIES 789
TYPICAL 2½–12"/65–300 mm SIZES

Size		TA Series 788 Flange End (250 psi/1720 kPa) Balancing Valve			TA Series 789 Groove End (350 psi/2400 kPa) Balancing Valve		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	B Height Inches mm	Approx. Weight Each Lbs. kg	A End to End Inches mm	B Height Inches mm	Approx. Weight Each Lbs. kg
2½ 65	2.875 73.0	11.38 289	8.00 203	24.0 10.9	11.38 289	8.00 203	14.0 6.4
3 80	3.500 88.9	12.25 311	8.63 219	31.0 14.1	12.25 311	8.63 219	20.0 9.1
4 100	4.500 114.3	13.75 350	9.44 240	43.0 19.6	13.75 350	9.44 240	31.0 14.1
5 125	5.563 141.3	15.75 400	10.88 276	62.0 28.5	15.75 400	10.88 276	50.0 22.7
6 150	6.625 168.3	18.88 480	11.25 286	82.0 37.5	18.88 480	11.25 286	69.0 31.3
8 200	8.625 219.1	23.63 600	17.00 432	168.0 76.5	23.63 600	17.00 432	140.0 63.7
10 250	10.750 273.0	28.75 730	17.75 451	270.0 122.9	28.75 730	17.75 451	202.0 91.9
12 300	12.750 323.9	33.50 851	19.00 483	360.0 163.9	33.50 851	19.00 483	280.0 127.4

VALVE SELECTION GUIDE

Size		TA Series 788 Flange End (250 psi/1720 kPa) Balancing Valve			TA Series 789 Groove End (350 psi/2400 kPa) Balancing Valve		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Minimum Flow GPM LPM	Nominal Flow GPM LPM	Maximum Flow GPM LPM	Minimum Flow GPM LPM	Nominal Flow GPM LPM	Maximum Flow GPM LPM
2½ 65	2.875 73.0	1.40 5.30	92.0 348.2	290.0 1097.7	1.40 5.30	92.0 348.2	290.0 1097.7
3 80	3.500 88.9	1.50 5.68	130.0 492.1	410.0 1551.9	1.50 5.68	130.0 492.1	410.0 1551.9
4 100	4.500 114.3	1.90 7.19	200.0 757.0	650.0 2460.3	1.90 7.19	200.0 757.0	650.0 2460.3
5 125	5.563 141.3	4.20 15.90	320.0 1211.2	1020.0 3860.7	4.20 15.90	320.0 1211.2	1020.0 3860.7
6 150	6.625 168.3	5.00 18.93	450.0 1703.3	1430.0 5412.6	5.00 18.93	450.0 1703.3	1430.0 5412.6
8 200	8.625 219.1	30.00 113.55	820.0 3103.7	2600.0 9841.0	30.00 113.55	820.0 3103.7	2600.0 9841.0
10 250	10.750 273.0	70.00 264.95	1280.0 4844.4	4040.0 15291.4	70.00 264.95	1280.0 4844.4	4040.0 15291.4
12 300	12.750 323.9	115.00 435.28	1550.0 5866.8	4950.0 18735.8	115.00 435.28	1550.0 5866.8	4950.0 18735.8

IMPORTANT NOTES:

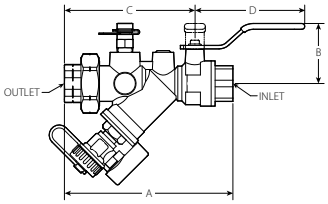
Balancing valves should be sized in relation to the GPM flows (and not in relation to pipeline size). The Minimum Flow is calculated from the minimum open
setting of the valve and a minimum pressure drop 1 Ft. WG (= 3 kPa). The Nominal Flow is calculated from the maximum open setting of the valve and the
minimum recommended pressure drop, 2 Ft. WG (= 6 kPa). The Maximum Flow is calculated from the maximum open setting of the valve and the maximum pressure drop, 20 Ft. WG (= 60 kPa). A computer program, TA-Select, is available from Tour & Andersson for calculation of pre-setting values and other applications.

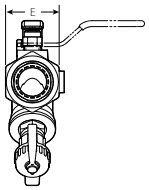
Hydronic Balancing Products

KOIL-KIT™ Coil Pack Y-Strainer/Ball Valve Combination

SERIES 78Y

For Complete Information, Request Publication **08.30**





The Series 78Y Y-Strainer/Ball Valve Combination provides a simplified, quality terminal hookup that protects both coils and thermostatic control valves from pipe scale, sand or weld slag. The Series 78Y features a 20 mesh stainless steel strainer (removable without breaking the line), a blow-out proof valve stem, Teflon® packing, plated ball and a strainer-blowdown & drain valve with hose thread, cap & retainer. Equipped standard with a pressure/temperature port, an extra plugged port on top, and a union end with tailpiece. Available end connections are female thread by female thread; sweat by sweat; female by sweat; sweat by thread; PermaLynx by PermaLynx.

Rated up to 400 psi/2758 kPa and 230°F/110°C.

Notes:
Optional tailpieces must be ordered for double reductions and for changing end configurations from sweat to threaded or threaded to sweat. If needed, specify tailpiece option when ordering.

Nominal Size			Dimensions						Approx. Weight Each
			Inlet/Outlet Options*						
INLET Inches mm		OUTLET Inches mm	A Sweat or Female Threaded End Inches/mm	A PermaLynx End Inches/mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	Lbs. Kg.
½ 15	x	½ 15	5.1 130	7.30 185	1.9 49	3.8 97	4.0 100	1.5 38	1.7 0.8
¾ 20	x	½ 15	5.9 150	8.79 223	2.0 51	4.5 114	4.0 100	1.8 46	2.4 1.1
		¾ 20	6.1 155	9.47 241	2.0 51	4.6 117	4.0 100	1.8 46	2.4 1.1
1 25	x	½ 15	6.1 155	9.30 236	2.0 51	4.5 114	4.0 100	1.8 46	2.4 1.1
		¾ 20	6.2 157	9.98 254	2.0 51	4.6 117	4.0 100	1.8 46	2.4 1.1
		1 25	6.4 163	10.71 272	2.0 51	4.9 124	4.0 100	1.8 46	2.4 1.1
1¼ 32	x	¾ 20	7.8 198	11.47 291	2.4 61	5.9 150	5.3 135	2.6 66	5.4 2.4
		1 25	8.0 203	11.98 304	2.4 61	6.1 155	5.3 135	2.6 66	5.4 2.4
		1¼ 32	8.0 203	11.97 304	2.4 61	6.1 155	5.3 135	2.6 66	5.3 2.4
1½ 40	x	1 25	8.1 206	12.21 310	2.4 61	6.1 155	5.3 135	2.6 66	5.4 2.4
		1¼ 32	8.1 206	12.21 310	2.4 61	6.1 155	5.3 135	2.6 66	5.4 2.4
		1½ 40	8.3 211	12.79 325	2.4 61	6.3 160	5.3 135	2.6 66	5.4 2.4
2 50	x	1¼ 32	11.2 284	-	3.1 79	8.5 216	5.9 151	3.3 84	11.3 5.1
		1½ 40	11.2 284	-	3.1 79	8.5 216	5.9 151	3.3 84	11.5 5.2
		2 50	11.2 284	-	3.1 79	8.5 216	5.9 151	3.3 84	11.5 5.2

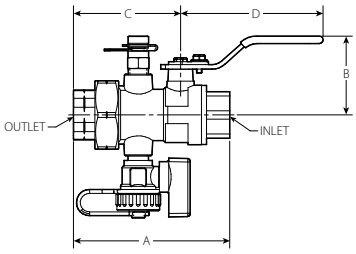
* The Series 7U is available with the following end configurations:
swt x swt union
swt x fem union
swt x male union
fem x swt union
fem x fem union
fem x male union
PermaLynx (Style PL604 Adapter) x swt union
PermaLynx x fem union
PermaLynx x male union

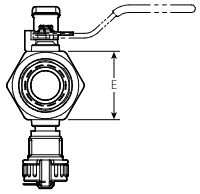
KOIL-KIT™ Coil Pack

Ball Valve Union Combination

SERIES 78T

For Complete Information, Request Publication **08.30**





The Series 78T Ball Valve Union Combination is an efficient, simplified, quality terminal hookup that provides coil isolation, a pressure-temperature port, a drain feature, and a union with tailpiece. The Series 78T does not include a strainer. The Series 78T features a blow-out proof valve stem, Teflon® packing, a plated ball and a drain valve with hose thread, cap and retainer. Equipped standard with a pressure/temperature port and a union end with tailpiece.

Rated up to 400 psi/2758kPa and 230°F/110°C.

Notes:
Optional tailpieces must be ordered for double reductions and for changing end configurations from sweat to threaded or threaded to sweat. If needed, specify tailpiece option when ordering.

Nominal Size			Dimensions						Approx. Weight-Each
			Inlet/Outlet Options*						
INLET Inches mm		OUTLET Inches mm	A Sweat or Female Threaded End Inches/mm	A PermaLynx End Inches/mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	Lbs. Kg.
½ 15	x	½ 15	4.1 105	6.41 163	1.9 49	2.8 71	4.0 100	1.5 37	1.4 0.6
¾ 20	x	½ 15	4.3 109	7.29 185	2.0 51	2.9 73	4.0 100	1.8 46	1.7 0.8
		¾ 20	4.4 112	8.07 205	2.0 51	2.9 73	4.0 100	1.8 46	1.7 0.8
1 25	x	½ 15	4.6 117	7.95 202	2.2 55	3.0 75	5.3 135	1.8 46	2.0 0.9
		¾ 20	4.8 121	8.83 224	2.2 55	3.0 75	5.3 135	1.8 46	2.0 0.9
		1 25	5.0 126	9.39 239	2.2 55	3.3 84	5.3 135	1.8 46	2.1 1.0
1¼ 32	x	¾ 20	5.2 131	9.21 234	2.4 60	3.2 80	5.3 135	2.6 67	3.6 1.6
		1 25	5.4 136	9.76 248	2.4 60	3.5 89	5.3 135	2.6 67	3.6 1.6
		1¼ 32	5.4 136	9.76 248	2.4 60	3.5 89	5.3 135	2.6 67	3.5 1.6
1½ 40	x	1 25	5.9 150	10.50 267	2.8 71	3.7 94	5.9 151	2.6 67	4.9 2.2
		1¼ 32	5.9 150	10.48 266	2.8 71	3.7 94	5.9 151	2.6 67	4.9 2.2
		1½ 40	6.1 155	10.91 277	2.8 71	3.9 99	5.9 151	2.6 67	4.9 2.2
2 50	x	1¼ 32	6.9 174	-	3.0 77	3.8 97	5.9 151	3.3 83	7.1 3.2
		1½ 40	6.9 174	-	3.0 77	4.0 102	5.9 151	3.3 83	7.2 3.3
		2 50	6.9 174	-	3.0 77	4.1 104	5.9 151	3.3 83	7.3 3.3

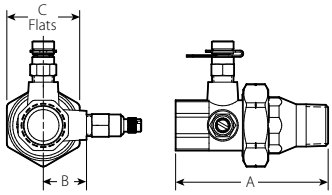
* The Series 78T is available with the following end configurations:
swt x swt union
swt x fem union
swt x male union
fem x swt union
fem x fem union
fem x male union
PermaLynx (Style PL604 Adapter) x swt union
PermaLynx x fem union
PermaLynx x male union
PermaLynx x PermaLynx

Hydronic Balancing Products

KOIL-KIT™ Coil Pack Union Port Fitting

SERIES 78U

For Complete Information, Request Publication **08.30**



The Series 78U Union Port Fitting provides a simplified, quality terminal hookup for installation at coil outlet. The Series 78U features a port section equipped standard with a manual air vent, pressure/temperature port, union and male threaded tailpiece. This configuration allows for easy venting of the coil, pressure and temperature readings, and easy thermostatic valve assembly. The Series 78U is equipped with an EPDM o-ring.

Rated up to 400 psi/2758 kPa and 230°F/110°C.

Notes:

Optional tailpieces must be ordered for double or triple reductions and for changing end configurations from sweat to threaded or threaded to sweat. If needed, specify tailpiece option when ordering.

Size			Dimensions				Approx. Weight Each
INLET Inches mm		OUTLET Inches mm	Inlet Options*		B Inches mm	C Inches mm	Lbs. Kg.
			A Sweat or Female Threaded End Inches/mm	A PermaLynx End Inches/mm			
½ 15	x	½ 15	3.48 89	4.66 118	0.84 21	1.46 37	0.7 0.3
¾ 20	x	½ 15	3.87 98	5.63 143	1.08 27	1.81 46	1.0 0.5
		¾ 20	3.87 98	5.63 143	1.08 27	1.81 46	0.9 0.4
1 25	x	½ 15	4.03 102	6.10 155	1.08 27	1.81 46	1.0 0.5
		¾ 20	4.03 102	6.10 155	1.08 27	1.81 46	1.1 0.5
		1 25	4.14 105	6.20 158	1.08 27	1.81 46	1.1 0.5
1¼ 32	x	½ 15	4.36 111	6.37 162	1.46 37	2.63 67	1.9 0.9
		¾ 20	4.36 111	6.37 162	1.46 37	2.63 67	1.9 0.9
		1 25	4.36 111	6.37 162	1.46 37	2.63 67	1.9 0.9
		1¼ 32	4.19 106	6.37 162	1.46 37	2.63 67	2.1 1.0
1½ 40	x	¾ 20	4.19 106	6.61 168	1.46 37	2.63 67	2.2 1.0
		1 25	4.19 106	6.61 168	1.46 36	2.63 67	2.2 1.0
		1¼ 32	4.19 106	6.61 168	1.46 37	2.63 67	2.3 1.0
		1½ 40	4.40 112	6.81 173	1.46 37	2.63 67	2.3 1.0
2 50	x	1 25	4.47 114	-	1.76 45	3.26 83	3.1 1.4
		1¼ 32	4.47 114	-	1.76 45	3.26 83	3.1 1.4
		1½ 40	4.47 114	-	1.76 45	3.26 83	3.2 1.5
		2 50	4.47 114	-	1.76 45	3.26 83	3.2 1.5

* The Series 7U is available with the following end configurations:
swt x swt union
swt x fem union
swt x male union
fem x swt union
fem x fem union
fem x male union
PermaLynx (Style PL604 Adapter) x swt union
PermaLynx x fem union
PermaLynx x male union

KOIL-KIT™ Coil Pack Coil Hose

For Complete Information, Request Publication **08.30**

Victaulic Coil Hoses feature a stainless steel braided hose and a synthetic polymer core with stainless ferrules. Victaulic Coil Hoses are available as male x female swivel and male x male swivel. Victaulic Coil Hoses are available in three lengths: 12"/300 mm, 24"/610 mm or 36"/914 mm. Specify choice when ordering.

Rated up to 230°F/110°C.

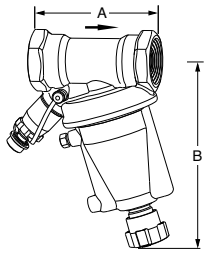
Size		Inlet Options					Approx. Weight Each
Inches mm		A Male End Thread	B NPSM MNPT Swivel Union	PSI/ kPa	Bend Radius Inches mm	Length Inches mm	Lbs. Kg.
½ 15	x	½ NPT	½	375 2585	2.6 66.7	12 300	0.3 0.1
						24 610	0.5 0.2
						36 914	0.7 0.3
¾ 20	x	¾ NPT	¾	300 2068	4.5 114.3	12 300	0.6 0.3
						24 610	1.0 0.5
						36 914	1.5 0.7
1 25	x	1 NPT	1	300 2068	5.5 139.7	12 300	1.0 0.5
						24 610	1.5 0.7
						36 914	2.3 1.0
1¼ 32	x	1¼ NPT	1¼	225 1550	6.8 171.5	12 300	1.2 0.5
						24 610	2.0 0.9
						36 914	3.0 1.4
1½ 40	x	1½ NPT	1½	150 1034	8.4 212.7	12 300	2.2 1.0
						24 610	4.4 2.0
						36 914	6.6 3.0
2 50	x	2 NPT	2	150 1034	11.3 285.8	12 300	2.5 1.1
						24 610	4.8 2.2
						36 914	7.2 3.3

Hydronic Balancing Products

Differential Pressure Controller

TA SERIES 793
Threaded End

For Complete Information, Request Publication **08.29**



TA Differential Pressure Controllers come standard with a drain kit, measuring port, transition nipple and adjusting tool.
End connection on ½"/15 mm to 2"/50 mm sizes are all female IPS thread only.
Sweat is not available.

Nominal Size Inches mm	Actual Outside Diameter Inches mm	Differential Pressure Range psi/kPa	A End to End Inches mm	B Center to Top Inches mm	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	1.45-8.70 10-60	3.31 84	5.39 137	2.4 1.1
¾ 20	1.050 26.7	1.45-8.70 10-60	3.58 91	5.47 139	2.6 1.2
1 25	1.315 33.7	1.45-8.70 10-60	3.66 93	5.55 141	2.9 1.3
1¼ 32	1.660 42.4	2.90-11.6 20-80	5.24 133	7.05 179	5.7 2.6
1½ 40	1.900 48.3	2.90-11.6 20-80	5.32 135	7.13 181	6.4 2.9
2 50	2.375 60.3	2.90-11.6 20-80	5.39 137	7.36 187	7.7 3.5

VALVE SELECTION GUIDE TA SERIES 793

English Measurements in Pounds per Square Inch and Gallons per Minute

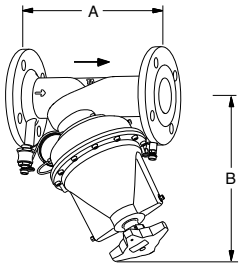
Size	Dp_L (psi)																	
	1.5			2.9			4.4			5.8			7.3			8.7		
Inches	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax
½	0.1	1.4	2.0	0.1	2.0	2.7	0.2	2.4	3.4	0.2	2.8	3.9	0.2	3.1	4.3	0.2	3.4	4.7
¾	0.2	3.1	4.3	0.3	4.3	6.0	0.4	5.3	7.4	0.4	6.1	8.6	0.5	6.8	9.6	0.5	7.4	10.5
1	0.4	5.3	7.7	0.5	7.4	10.7	0.7	9.1	13.2	0.8	10.5	15.2	0.9	11.8	17.0	0.9	12.8	18.6

Size	Dp_L (psi)																				
	2.9			4.4			5.8			7.3			8.7			10.2			11.6		
Inches	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax
1¼	0.8	11.7	16.6	1.0	14.4	20.4	1.2	16.6	23.5	1.3	18.6	26.3	1.4	20.3	28.7	1.5	22.0	31.1	1.6	23.4	33.2
1½	1.2	17.6	25.0	1.5	21.6	30.8	1.8	24.8	35.3	2.0	27.9	39.6	2.2	30.4	43.3	2.3	32.9	46.8	2.5	35.1	49.9
2	2.3	33.2	47.6	2.9	40.9	58.6	3.3	46.9	67.3	3.7	52.6	75.5	4.1	57.4	82.4	4.4	62.2	89.3	4.7	66.3	95.2

Differential Pressure Controller

TA SERIES 794
Flanged End

For Complete Information, Request Publication **08.29**



TA Pressure Differential Controllers come standard with a drain kit, measuring port, transition nipple and adjusting tool.
End connections are ANSI flanges only, grooved ends are not available.

Nominal Size Inches mm	Actual Outside Diameter Inches mm	Differential Pressure Range psi/kPa	A End to End Inches mm	B Center to Top Inches mm	Approx. Weight Each Lbs. kg
2½ 65	2.875 73.0	2.90-11.6 20-80	11.42 290	16.3 414	46.3 21
3 80	3.500 88.9	2.90-11.6 20-80	12.21 310	17.17 436	52.9 24
4 100	4.500 114.3	2.90-11.6 20-80	13.78 350	18.11 460	72.8 33

VALVE SELECTION GUIDE

English Measurements in Pounds per Square Inch and Gallons per Minute (Spring Option 1)

Size	Dp_L (psi)																				
	2.9			4.4			5.8			7.3			8.7			10.2			11.6		
Inches	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax
2½	2.7	48.8	70.2	3.4	60.1	86.5	3.9	69.0	99.3	4.3	77.4	111.4	4.7	84.5	121.6	5.1	91.5	131.7	5.5	97.5	140.5
3	4.3	74.1	107.3	5.3	91.3	132.2	6.1	104.8	151.7	6.8	117.6	170.2	7.4	128.4	185.9	8.0	139.0	201.2	8.6	148.3	214.6
4	8.6	150.2	214.6	10.6	185.0	264.3	12.1	212.4	303.5	13.6	238.3	340.5	14.9	260.2	371.7	16.1	281.7	402.5	17.2	300.4	429.2

English Measurements in Pounds per Square Inch and Gallons per Minute (Spring Option 2)

Size	Dp_L (psi)																				
	5.8			7.3			8.7			10.2			11.6			13.1			14.5		
Inches	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax
2½	3.9	69.0	99.3	4.3	77.4	111.4	4.7	84.5	121.6	5.1	91.5	131.7	5.5	97.5	140.5	5.8	103.7	149.3	6.1	109.1	157.0
3	6.1	104.8	151.7	6.8	117.6	170.2	7.4	128.4	185.9	8.0	139.0	201.2	8.6	148.3	214.6	9.1	157.6	228.1	9.6	165.8	239.9
4	12.1	212.4	303.5	13.6	238.3	340.5	14.9	260.2	371.7	16.1	281.7	402.5	17.2	300.4	429.2	18.2	319.3	456.1	19.2	335.9	479.9

Size	Dp_L (psi)																	
	16.0			17.4			18.9			20.3			21.8			23.2		
Inches	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax	qmin	qnom	qmax
2½	6.4	114.6	165.0	6.7	119.5	172.0	7.0	124.5	179.3	7.2	129.0	185.8	7.5	133.7	192.6	7.7	138.0	198.6
3	10.1	174.1	252.0	10.5	181.6	262.8	11.0	189.3	273.9	11.4	196.1	283.9	11.8	203.3	294.2	12.1	209.7	303.5
4	20.2	352.9	504.1	21.0	368.0	525.7	21.9	383.5	547.9	22.7	397.4	567.8	23.5	411.9	588.4	24.3	424.9	607.0

Hydronic Balancing Products

Link Differential Pressure Sensor

TA SERIES 736

For Complete Information
Request Publication **08.16**

- Provides connection between a building's heating and cooling circuits and building's monitoring system (BMS)
- Continuously measures the flow and differential pressure through and across the TA balancing valves
- Measurement probes provided for direct connection to the measurement points on all TA Series 786, 787, 788, and 789 balancing valves

TA Select Computer Program

TA Select assists in choosing the right balancing valve, taking the desired flow rate and pressure drop into consideration. The software will advise the correct combination of valve, handwheel position and pipe size to correctly balance the system. A sophisticated viscosity correction procedure displays the density, viscosity, specific heat and freezing point of fluids such as glycols and brines. It also shows the true value of flows in the valves.

The program will also size the pipe, generate Cv/Kv values for the ATC valves and give pre-set information for all the TA valves on the project.

CMI Pressure Differential Meter

TA SERIES 73M

TA CMI is a computer programmed measuring instrument. It is a handheld instrument for measuring differential pressure, temperature and flow through balancing valves in hydronic systems. It consists of a sensor unit and an instrument unit that has been programmed with the TA valve characteristics, which makes it possible to take a direct reading of flow differential pressures.

TA SCOPE

TA SERIES 734

- Series 734 TA SCOPE is an instrument designed to help professionals verify, measure and maintain complex systems quickly and efficiently, lowering maintenance costs by saving time and removing the hassle from the balancing and measuring process.
- Series 734 TA SCOPE is a wireless, handheld device for the swift and accurate measurement of differential pressure, flow, temperature and power.
- An independent sensor communicates with the TA SCOPE to deliver data quickly, thereby enabling contractors to balance a system, troubleshoot hydronic problems and log system performance.

Notes

Accessories

- Victaulic offers a complete line of accessories for equipment protection, special applications and flow measurement
- The Victaulic line of suction diffusers and strainers reduces maintenance downtime and allows easy access to the system
- Victaulic expansion joints accommodate expansion and contraction to meet system requirements
- To ensure system flow requirements are being met, Victaulic offers a line of flow measuring devices that are easy to install and simple to use

Advanced Groove System AGS®

For 14–24"/350–600 mm piping systems Victaulic offers Advanced Groove System (AGS) accessories, see pg. 6-1.

Suction Diffuser

SERIES 731-D, PG. 5-3
AGS SERIES W731-D, PG. 6-16

Vic-Strainer® – Tee Type

STYLE 730, PG. 5-5
AGS SERIES W730, PG. 6-17

Vic-Strainer – Wye Type

SERIES 732, PG. 5-6
AGS SERIES W732, PG. 6-18

Mover® Expansion Joint

STYLE 150, PG. 5-7

Standard Expansion Joint

STYLE 155, PG. 5-8,
AGS SERIES W155. PG. 6-5

Dielectric Waterway Fitting

STYLE 47, PG. 4-9

Faster, easier maintenance

Victaulic grooved accessories allow fast, easy maintenance of the system by reducing down time. Simply remove one nut and bolt, then the closure cap and basket. In a matter of minutes the basket can be cleaned and reinstalled so the system is quickly back in service.

Remove one nut and bolt to access the system

Remove coupling and closure cap

Remove basket, clean, then reinstall

NOTE:
Always read and understand operating instructions before attempting installation or system maintenance.

WARNING:
Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

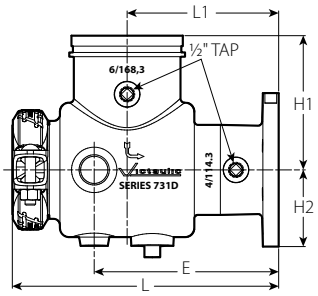
Accessories

Suction Diffuser

SERIES 731-D

For Complete Information
Request Publication **09.20**

Size			Dimensions – Inches/mm						Approx. Wgt. Each
System Side Grooved	×	Pump Side Flange ANSI Class 150							
Nominal Size Inches/mm			L	L_1	H_1	H_2	Thread Size	E	Lbs. kg
3 80	×	2 50	11.00 279	6.30 160	5.51 140	3.30 83	1-11.5 NPT	7.48 190	20.1 9.1
		2.5 65	11.00 279	6.30 160	5.51 140	3.70 93	1-11.5 NPT	7.48 190	26.0 11.8
		3 80	11.00 279	6.30 160	5.51 140	4.00 101	1-11.5 NPT	7.48 190	27.7 12.6
4 100	×	2.5 65	13.00 330	7.40 187	6.50 165	3.70 93	1-11.5 NPT	8.74 222	29.7 13.5
		3 80	13.00 330	7.40 187	6.50 165	4.00 101	1-11.5 NPT	8.74 222	31.6 15.0
		4 100	13.00 330	7.40 187	6.50 165	4.60 116	1-11.5 NPT	8.74 222	34.6 15.7
5 125	×	3 80	15.00 381	8.40 213	7.52 191	4.00 101	1.25-11.5 NPT	9.84 250	46.2 21.0
		4 100	15.00 381	8.40 213	7.52 191	4.60 116	1.25-11.5 NPT	9.84 250	49.4 22.4
		5 125	15.00 381	8.40 213	7.52 191	5.10 130	1.25-11.5 NPT	9.84 250	52.3 23.7
6 150	×	4 100	16.00 406	9.00 229	8.00 203	4.60 116	1.25-11.5 NPT	10.98 279	64.0 29.0
		5 125	15.80 406	9.00 229	8.00 203	5.10 130	1.25-11.5 NPT	10.98 279	67.3 30.0
		6 150	15.80 406	9.00 229	8.00 203	5.70 144	1.25-11.5 NPT	10.98 279	70.3 31.9
8 200	×	5 125	19.00 483	10.20 260	9.02 229	5.10 130	1.25-11.5 NPT	12.52 318	98.5 44.7
		6 150	19.00 483	10.20 260	9.02 229	5.70 144	1.25-11.5 NPT	12.52 318	102.1 46.3
		8 200	19.00 483	10.20 260	9.02 229	6.80 172	1.25-11.5 NPT	12.52 318	110.7 50.2
10 250	×	6 150	23.00 584	12.40 315	11.00 279	5.70 144	1.25-11.5 NPT	15.55 395	150.6 68.3
		8 200	22.50 584	12.40 315	11.00 279	6.80 172	1.25-11.5 NPT	15.55 395	159.9 72.5
		10 250	22.50 584	12.40 315	11.00 279	8.07 205	1.25-11.5 NPT	15.55 395	172.0 78.0
12 300	×	8 200	27.00 686	15.43 392	13.19 335	6.75 172	1.25-11.5 NPT	18.58 472	245.4 111.3
		10 250	26.84 686	15.43 392	13.19 335	8.07 205	1.25-11.5 NPT	18.58 472	260.3 118.1
		12 300	26.84 686	15.43 392	13.19 335	9.50 241	1.25-11.5 NPT	18.58 472	273.2 123.9
14 – 24 350 – 600			AGS® See AGS Series W730, pg. 6-17.						



3" – 12" /80-300 MM SIZES

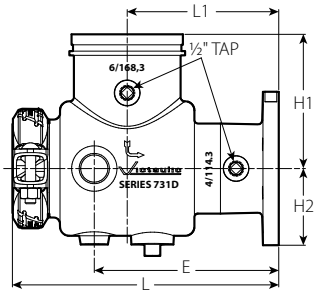
ACCESSORIES

Suction Diffuser

SERIES 731-D

For Complete Information
Request Publication **09.20**

Size			Dimensions – mm/inches						Approx. Wgt. Each
System Side Grooved	×	Pump Side Flange PN10/ PN16							
Millimeters/ Inches			L	L_1	H_1	H_2	Thread Size	E	kg Lbs.
76.1 mm	×	50 2	279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
80 3	×	50 2	279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
		76.1 mm	279 11.00	160 6.30	140 5.50	93 3.70	1-11 ISO 7-1	190 7.50	12.6 27.7
		80 3	279 11.00	160 6.30	140 5.50	101 4.00	1-11 ISO 7-1	190 7.50	12.6 27.7
100 4	×	76.1 mm	330 13.00	187 7.40	165 6.50	93 3.70	1-11 ISO 7-1	222 8.70	15.0 31.6
		80 3	330 13.00	187 7.40	165 6.50	101 4.00	1-11 ISO 7-1	222 8.70	15.0 31.6
		100 4	330 13.00	187 7.40	165 6.50	116 4.60	1-11 ISO 7-1	222 8.70	15.7 34.6
139.7 mm	×	76.1 mm	381 15.00	213 8.40	191 7.50	93 3.70	1.25-11 ISO 7-1	250 9.80	16.8 37.0
		80 3	381 15.00	213 8.40	191 7.50	101 4.00	1.25-11 ISO 7-1	250 9.80	19.1 42.0
		100 4	381 15.00	213 8.40	191 7.50	116 4.60	1.25-11 ISO 7-1	250 9.80	20.0 44.0
		139.7 mm	381 15.00	213 8.40	191 7.50	130 5.10	1.25-11 ISO 7-1	250 9.80	22.2 49.0
125 5	×	80 3	381 15.00	213 8.40	191 7.50	101 4.00	1.25-11 ISO 7-1	250 9.80	21.0 46.2
		100 4	381 15.00	213 8.40	191 7.50	116 4.60	1.25-11 ISO 7-1	250 9.80	22.4 49.4
		125 5	381 15.00	213 8.40	191 7.50	130 5.10	1.25-11 ISO 7-1	250 9.80	23.7 52.3
150 6	×	100 4	406 16.00	229 9.00	203 8.00	116 4.60	1.25-11 ISO 7-1	279 11.00	29.0 64.0
		139.7 mm	406 16.00	229 9.00	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	30.0 67.3
		125 5	406 16.00	229 9.00	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	30.0 67.3
		150 6	406 16.00	229 9.00	203 8.00	144 5.70	1.25-11 ISO 7-1	279 11.00	31.9 70.3
200 8	×	139.7 mm	483 19.00	260 10.20	229 9.00	130 5.10	1.25-11 ISO 7-1	318 12.50	44.7 98.5
		125 5	483 19.00	260 10.20	229 9.00	130 5.10	1.25-11 ISO 7-1	318 12.50	44.7 98.5
		150 6	483 19.00	260 10.20	229 9.00	144 5.70	1.25-11 ISO 7-1	318 12.50	46.3 102.1
		200 8	483 19.00	260 10.20	229 9.00	172 6.80	1.25-11 ISO 7-1	318 12.50	50.2 110.7
250 10	×	150 6	584 23.00	315 12.40	279 11.00	144 5.70	1.25-11 ISO 7-1	395 15.60	68.3 150.6
		200 8	584 23.00	315 12.40	279 11.00	172 6.80	1.25-11 ISO 7-1	395 15.60	72.5 159.9
		250 10	584 23.00	315 12.40	279 11.00	205 8.10	1.25-11 ISO 7-1	395 15.60	78.0 172.0
300 12	×	200 8	686 27.00	392 15.40	335 13.20	172 6.80	1.25-11 ISO 7-1	472 18.60	111.3 245.4
		250 10	686 27.00	392 15.40	335 13.20	205 8.10	1.25-11 ISO 7-1	472 18.60	118.1 260.3
		300 12	686 27.00	392 15.40	335 13.20	241 9.50	1.25-11 ISO 7-1	472 18.60	123.9 273.2
14 – 24 350 – 600			AGS® See AGS Series W730, pg. 6-16.						



DN80 – DN300 MM SIZES

Accessories

Vic-Strainer – Tee Type

STYLE 730

For Complete Information Request Publication **09.02**

- Series 730 Vic-Strainer is lighter than flanged "Y" type strainers and provides straight-through flow for lower pressure drop
- The Series 730 Vic-Strainer installs with two Victaulic couplings, and is rated up to 300 psi/2065 kPa
- A durable type 304 stainless steel screen is provided. The standard mesh sizes are 12 mesh for sizes 1½–3"/40–80 mm; 6 mesh for sizes 4–12"/100–300 mm; other smaller sizes available

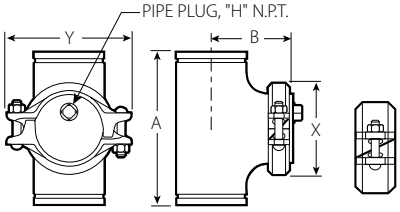
Size		Max. Work Pressure †	Dimensions					Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	A Inches mm	B Inches mm	X Inches mm	Y Inches mm	H Inches mm	Lbs. kg	C_V Values K_V Values
1½ 40	1.900 48.3	750 5175	5.50 140	3.75 95	2.94 75	5.81 148	0.25 6	7.0 3.2	61 52.8
2 50	2.375 60.3	750 5175	6.50 165	4.25 108	3.35 85	5.78 147	0.50 13	5.8 2.6	190 164.4
2½ 65	2.875 73.0	750 5175	7.50 191	4.75 121	3.88 98	6.38 162	0.50 13	8.9 4.0	230 199.0
3 80	3.500 88.9	750 5175	8.50 216	5.25 133	4.54 115	6.81 173	0.75 19	21.0 9.5	290 250.9
4 100	4.500 114.3	750 5175	10.00 254	6.00 152	5.83 148	8.21 209	1.00 25	19.6 8.9	425 367.6
5 125	5.563 141.3	750 5175	11.00 279	6.50 165	7.03 179	9.89 251	1.25 32	31.3 14.2	685 592.5
6 150	6.625 168.3	700 4825	13.00 330	7.50 191	8.26 210	10.83 275	1.25 32	43.3 19.6	950 821.8
8 200	8.625 219.1	600 4130	15.50 394	9.00 229	10.54 268	13.74 349	2.00 51	75.0 34.0	2108 1823.4
10 250	10.750 273.0	500 3450	18.00 457	10.25 260	12.86 327	16.98 431	2.00 51	136.0 61.7	2683 2320.8
12 300	12.750 323.9	400 2750	20.00 508	11.25 286	14.86 377	18.88 480	2.00 51	197.2 89.4	3872 3349.3
14 – 24 350 – 600	AGS®	See AGS Series W730, pg. 6-17.							

† Working pressure is maximum based on Style 07 access coupling and will be governed by couplings used for installation and related system components. Maximum differential pressure from inlet to outlet must not exceed 10 psi/69 kPa.

@ C_V/K_V values for flow of water at +60°F/+16°C.

IMPORTANT NOTE:

For 20 – 30"/500 – 750 mm sizes contact Victaulic.



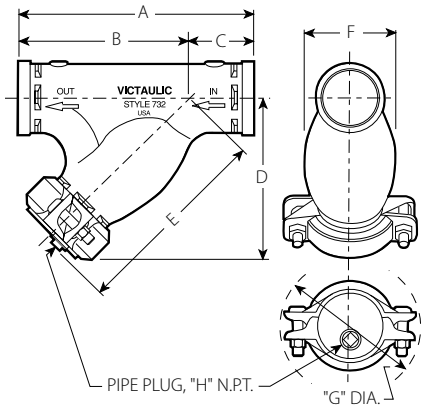
TYPICAL FOR ALL SIZES

ACCESSORIES

Vic-Strainer – Wye Type

SERIES 732

For Complete Information Request Publication **09.03**



TYPICAL FOR ALL SIZES

- Provides straight through flow for lower pressure drop
- Installs with two Victaulic couplings
- Durable type 304 stainless steel perforated basket
- Pressure rated up to 300 psi/2065 kPa
- Sizes from 2–12"/50–300 mm

Accessories

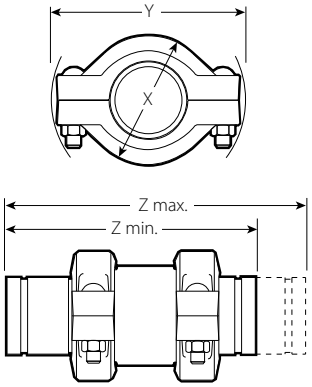
Mover Expansion Joint

STYLE 150

For Complete Information Request Publication **09.04**

Size		Max. Work Pressure	Dimensions					Approx. Wgt. Each
						Length Z		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Maximum Available Movement Inches mm	X Height Inches mm	Y Width Inches mm	Minimum Inches mm	Maximum Inches mm	Lbs. kg
2 50	2.375 60.3	350 2410	3.00 76.2	3.38 86	5.50 139	11.88 302	14.88 378	15.9 7.2
76.1 mm	3.000 76.1	350 2410	3.00 76.2	4.38 111	6.75 171	12.13 308	15.13 384	38.0 17.2
3 80	3.500 88.9	350 2410	3.00 76.2	4.75 121	7.25 184	12.13 308	15.13 384	25.6 11.6
4 100	4.500 114.3	350 2410	3.00 76.2	6.25 159	9.00 229	14.13 359	17.13 435	39.6 18.0
139.7 mm	5.500 139.7	350 2410	3.00 76.2	6.25 159	9.00 229	14.13 359	17.13 435	56.0 25.4
5 125	5.563 141.3	350 2410	3.00 76.2	7.12 181	10.75 273	14.13 359	17.13 435	55.0 24.9
165.1 mm	6.500 165.1	350 2410	3.00 76.2	8.63 219	12.00 305	16.00 406	19.00 483	75.0 34.0
6 150	6.625 168.3	350 2410	3.00 76.2	8.63 219	12.00 305	16.00 406	19.00 483	75.0 34.0

- Slip-type expansion joint
- Up to 3/80mm axial end movement
- Permits easy adjustments prior to installation to accommodate expansion, contraction or both
- Service up to +230°F/+110°C
- Pressure rated up to 350psi/2400kPa depending on type of coupling installed
- Sizes from 2–6"/50–150mm



TYPICAL FOR ALL SIZES

Expansion Joint Installation

For Complete Information Request Publication **09.06**

For proper expansion joint operation, the piping system must be sectioned into individual straight pipe runs with suitable anchor installations. Within each pipe section, properly spaced alignment guides and weight support devices are also necessary to permit free axial pipe movement. Refer to installation instructions supplied with each unit.

Whenever possible, the expansion joint should be located adjacent to an anchor within four (4) pipe diameters. The first and second alignment guides on the opposite side of the expansion joint should be located at maximum distances of four (4) and fourteen (14) pipe diameters, respectively. Additional intermediate guides should be placed. If expansion joint cannot be located adjacent to an anchor, install guides on both sides of the unit.

In addition, where long length, low pressure applications may require few intermediate alignment guides, the pipe weight, including any liquid contents, must be adequately supported. (For recommended spacing for a water system request publication 26.01)

When installed the expansion joint can provide compensation for 3"/80mm of axial pipe movement. Expansion joint may be set to compensate for pipe expansion, contraction, or some combination. The movement caused by installation at a temperature other than the minimum or maximum operation temperature should also be accounted for. Refer to installation instructions supplied with each unit, or contact Victaulic for recommendations.

Standard Expansion Joint

STYLE 155

For Complete Information Request Publication **09.05**

The ties holding the couplings in position must be removed after installation

- Combination of couplings and short nipples joined in tandem
- May be used as flexible connectors; but they will not simultaneously provide full expansion and full deflection
- Joints installed horizontally require independent support to prevent deflection, that will reduce available expansion
- Sizes from ¾–12"/20–300 mm

Standard Units †

Size		Style	Dimensions					Approx. Wgt. Each
			L - Length (ref.) §					
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Coupling Style	Compressed Inches mm	Expanded Inches mm	X Height Inches mm	Y Width Inches mm	Total Movement Capability Inches mm	Lbs. kg
¾ 20	1.050 26.7	77	26.25 667	28.13 715	2.13 54	3.63 92	1.88 48	17.0 7.7
1 25	1.315 33.7	77	26.25 667	28.13 715	2.38 61	3.88 99	1.88 48	20.0 9.1
1 ¼ 32	1.660 42.4	77	28.25 718	30.13 765	2.63 67	4.63 118	1.88 48	28.0 12.7
1 ½ 40	1.900 48.3	77	28.25 718	30.13 765	3.00 76	5.00 127	1.88 48	31.0 14.1
2 50	2.375 60.3	75	28.25 718	30.13 765	3.50 89	5.13 130	1.88 48	27.0 12.2
2 ½ 65	2.875 73.0	75	28.25 718	30.13 765	4.00 102	5.88 149	1.88 48	36.0 16.3
3 80	3.500 88.9	75	28.25 718	30.13 765	4.63 118	6.75 172	1.88 48	46.0 20.9
3 ½ 90	4.000 101.6	75	28.25 718	30.13 765	5.25 133	7.38 188	1.88 48	54.0 24.5
4 100	4.500 114.3	75	26.25 667	28.00 711	5.88 149	8.00 203	1.75 45	54.0 24.5
5 125	5.563 141.3	75	26.25 667	28.00 711	7.00 178	10.18 259	1.75 45	72.0 32.7
6 150	6.625 168.3	75	26.25 667	28.00 711	8.13 207	11.00 279	1.75 45	90.0 40.8
8 200	8.625 219.1	75	28.50 724	30.25 768	10.38 264	14.00 356	1.75 45	150.0 68.0
10 250	10.750 273.0	77	32.50 826	34.25 870	13.50 343	16.75 426	1.75 45	320.0 145.2
12 300	12.750 323.9	77	32.50 826	34.25 870	15.50 394	19.00 483	1.75 45	373.0 169.2
14 – 24 350 – 600	AGS® **See AGS Series W155, pg.6-5.**							

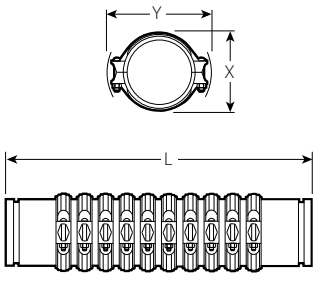
† Contact Victaulic for performance requirements not listed above.

§ Dimensions may vary slightly due to tolerances.

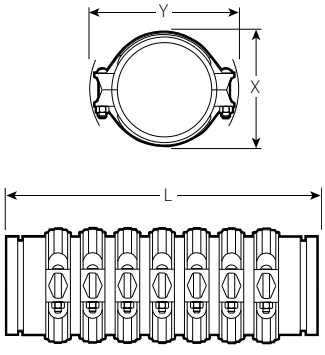
IMPORTANT NOTE:

For Performance Data refer to 06.05 for Style 75 and 06.04 for Style 77.

14 – 24"/350 – 600 mm sizes available in the Advanced Grooved System. Contact Victaulic for details.



TYPICAL ¾–3½/20–90 mm SIZES



TYPICAL 4–12"/100–300 mm SIZES

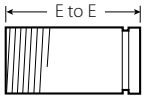
Dielectric Waterway Fitting

STYLE 47

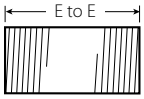
For Complete Information Request Publication **09.07**

- Clearflow®* dielectric waterway fittings utilize an inert non-corrosive thermoplastic lining that is NSF/FDA listed
- The thermoplastic lining insulates the inside of the waterway thereby inhibiting formation of local galvanic cell corrosion that occurs between dissimilar metals in the presence of water
- Designed for continuous use at temperatures up to +230°F/+110°C
- Style 47-GT (grv. × thd.) and TT (thd. × thd.) NSF Listed in accordance with ANSI/NSF 61 for up to 180°F/82°C potable water service
- Pressure rated up to 300 psi/2065 kPa
- Sizes from ½–4"/15–100 mm

* ClearFlow is a registered trademark of Perfection Corp.



STYLE 47-GT GRV. × THD.



STYLE 47-TT THD. × THD.

Size		Style 47-GT Grooved × Threaded			Style 47-TT Threaded × Threaded		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Max. Working Pressure psi kPa	End to End Inches mm	Approx. Wgt. Each Lbs. kg	Max. Working Pressure psi kPa	End to End Inches mm	Approx. Wgt. Each Lbs. kg
½ 15	0.840 21.3	—	—	—	300 2065	3.00 76	0.2 0.1
¾ 20	1.050 26.7	—	—	—	300 2065	3.00 76	0.2 0.1
1 25	1.315 33.7	300 2065	4.00 102	0.3 0.2	300 2065	4.00 102	0.3 0.2
1 ¼ 32	1.660 42.4	300 2065	4.00 102	0.6 0.3	300 2065	4.00 102	0.6 0.3
1 ½ 40	1.900 48.3	300 2065	4.00 102	0.8 0.3	300 2065	4.00 102	0.8 0.3
2 50	2.375 60.3	300 2065	4.00 102	1.0 0.5	300 2065	4.00 102	1.0 0.5
2 ½ 65	2.875 73.0	300 2065	6.00 152	1.6 0.7	300 2065	6.00 152	1.6 0.7
3 80	3.500 88.9	300 2065	6.00 152	2.0 0.9	300 2065	6.00 152	2.0 0.9
3 ½ 90	4.000 101.6	300 2065	6.00 152	2.3 1.1	300 2065	6.00 152	2.3 1.1
4 100	4.500 114.3	300 2065	6.00 152	4.5 2.0	300 2065	6.00 152	4.5 2.0

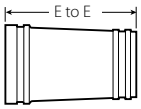
Dielectric Waterway Fitting

STYLE 47

For Complete Information Request Publication **09.07**

- Clearflow®* dielectric waterway fittings utilize an inert non-corrosive thermoplastic lining that is NSF/FDA listed
- The thermoplastic lining insulates the inside of the waterway thereby inhibiting formation of local galvanic cell corrosion that occurs between dissimilar metals in the presence of water
- Designed for continuous use at temperatures up to +230°F/+110°C
- Style 47-GG (grv. × grv.) is UL-Listed and classified in accordance with ANSI/NSF 61 up to 180°F/82°C for potable water service
- Pressure rated up to 300 psi/2065 kPa
- Sizes from 2–8"/50–200 mm

* ClearFlow is a registered trademark of Perfection Corp.



STYLE 47-GG GRV. × GRV.
GROOVED END STEEL TO GROOVED COPPER TRANSITION

Size			Maximum Working Pressure	Dimensions	Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter				
	Steel (IPS) Inches mm	Copper (CTS) Inches mm	psi kPa	End to End Inches mm	Lbs. kg
2 50	2.375 60.3	2.125 54.0	300 2065	4.19 106	1.3 0.6
2½ 65	2.875 73.0	2.625 66.7	300 2065	6.19 157	3.3 1.5
3 80	3.500 88.9	3.125 79.4	300 2065	6.19 157	4.5 2.0
4 100	4.500 114.3	4.125 104.8	300 2065	6.19 157	5.8 2.6
5 125	5.563 141.3	5.125 130.2	300 2065	6.19 157	7.8 3.5
6 150	6.625 168.3	6.125 155.6	300 2065	6.19 157	10.1 4.6
8 200	8.625 219.1	8.125 206.4	300 2065	6.19 157	15.0 6.8

Advanced Groove System

AGS®

Victaulic offers Advanced Groove System (AGS) couplings for systems 14-60"/350-1525mm) and a full range of 14-24"/350-600mm AGS fittings, valves and accessories – making AGS a comprehensive solution for large diameter piping. Because the AGS coupling system provides great strength and dependability in addition to speed, it's an excellent choice over welding. Other advantages AGS joints provide over welded joints include no flame, superior seismic-shock resistance and a union at every joint for easy adjustment, system maintenance or system expansion.

AGS Couplings

Rigid Coupling
STYLE W07, PG. 6-3

Flexible Coupling
STYLE W77, PG. 6-4

Rigid Coupling for Stainless Steel Pipe
STYLE W89, PG. 6-5

Vic-Flange® Adapter
STYLE W741, PG. 6-6

AGS Valves

Dual Disc Vic Check Valve
SERIES W715, PG. 6-12

Vic-300® MasterSeal™ Butterfly Valve
SERIES W761, PG. 6-13, 14

Triple Service Valve Assembly
PG. 6-15

AGS Expansion Joint

Expansion Joint
STYLE W155, PG. 6-5

AGS Accessories

Suction Diffuser
SERIES W731-D, PG. 6-16

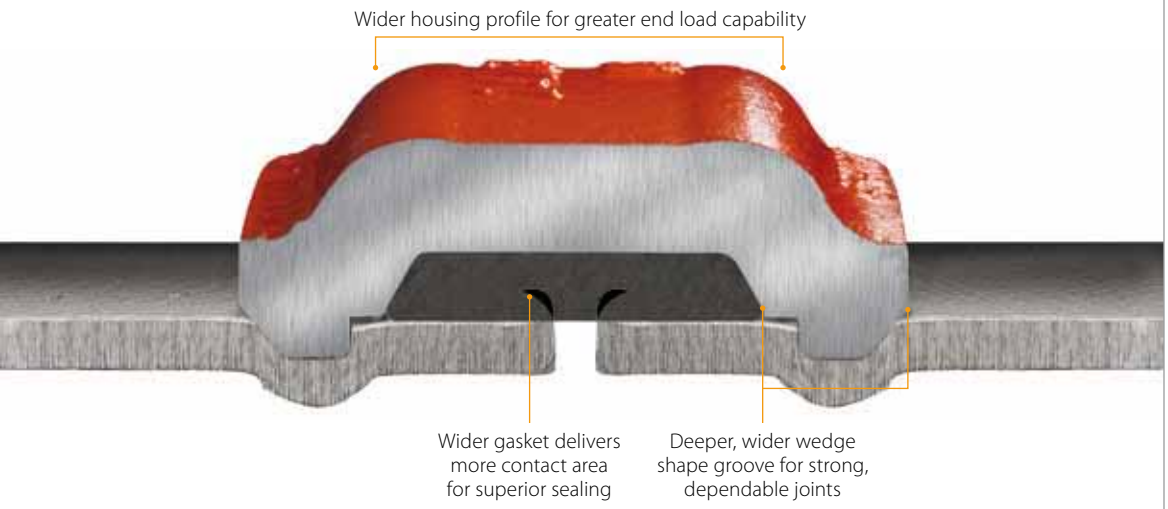
Vic-Strainer® – Tee Type
SERIES W730, PG. 6-17

Vic-Strainer® Wye Type
SERIES W732, PG. 6-18

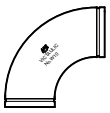
Advanced Groove System

AGS®

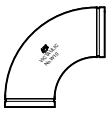
A complete piping system, for sizes 14–24"/350–600 mm, couplings for up to 60"/1525mm.



AGS Fittings



90° Elbow
NO. W10, PG. 6-7



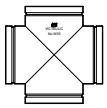
90° 1½D Long Radius Elbow
NO. W100, PG. 6-7

True Wye
NO. W33, PG. 6-7

Adapter Nipple AGS Grv. × Bev.
NO. W42, PG. 6-10

45° Elbow
NO. W11, PG. 6-7

45° 1½D Long Radius Elbow
NO. W110, PG. 6-7

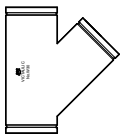


Cross
NO. W35, PG. 6-7

Adapter Nipple AGS Grv. × AGS Grv.
NO. W43, PG. 6-10

22½° Elbow
NO. W12, PG. 6-7

Tee
NO. W20, PG. 6-7



45° Lateral
NO. W30, PG. 6-9

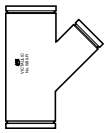
Adapter Nipple* AGS Grv. × Non-AGS Grv.
NO. W49, PG. 6-10

Concentric Reducer
NO. W50, PG. 6-11

Cap
NO. W60, PG. 6-10

11¼° Elbow
NO. W13, PG. 6-7

Reducing Tee
NO. W25, PG. 6-8



45° Reducing Lateral
NO. W30-R, PG. 6-9

Flanged Adapter Nipple
NO. W45R, PG. 6-10

Eccentric Reducer
NO. W51, PG. 6-11

* ANSI/AWWA C606 Grooved and Shouldered Joints

Rigid Coupling

STYLE W07

For Complete Information Request Publication **20.02**

- Style W07 is the first two-piece, flat pad, metal-to-metal rigid coupling in this size range
- Support and hanging requirements correspond to ASME B31.1 Power Piping code and ASME B31.9 Building Services code
- Pressure rated up to 350 psi/2400 kPa

Size		Max. Working Pressure* psi/kPa			Max. End Load* Lbs./N			Allow. Pipe End Sep.#	Bolt/Nut No - Size	Dimensions Ø – Inches/mm			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Std. Wall	Light Wall ‡	Extra Heavy ½"/12.7 mm	Std. Wall	Light Wall ‡	Extra Heavy ½"/12.7 mm	Inches mm	Inches	X	Y	Z	Lbs. kg
14 350	14.000 355.6	350 2500	350 2500	-	55800 248310	55800 248310	-	0.25 6.4	2 – 1 x 5½	15.87 403	20.59 523	4.75 121	49 22.2
16 400	16.000 406.4	350 2500	350 2500	-	72885 324338	72885 324338	-	0.25 6.4	2 – 1 x 5½	18.12 460	23.51 597	4.75 121	61 27.7
18 450	18.000 457.0	350 2500	350 2500	-	92245 410490	92245 410490	-	0.25 6.4	2 – 1 x 5½	20.22 514	25.53 648	4.75 121	71 32.2
20 500	20.000 508.0	350 2500	350 2500	-	113880 506766	113880 506766	-	0.25 6.4	2 – 1⅛ x 5½	22.44 570	27.13 689	4.75 121	82 37.2
24 600	24.000 610.0	350 2500	225 1600	-	163990 729756	104955 467050	-	0.25 6.4	2 – 1⅛ x 5½	26.64 677	32.31 821	4.75 121	116 52.6
26 660	26.000 660.4	300 2065	-	300 2065	159279 708508	-	159279 708508	0.38 9.6	4 – 1⅛ x 6	30.07 764	35.23 895	5.68 144	205 93.0
28 710	28.000 711.2	300 2065	-	300 2065	184726 821702	-	184726 821702	0.38 9.6	4 – 1⅛ x 6	32.23 819	37.22 945	5.68 144	220 99.8
30 760	30.000 762.0	300 2065	-	300 2065	212058 943281	-	212058 943281	0.38 9.6	4 – 1¼ x 7	33.90 863	39.64 1007	5.68 144	227 103.0
32 810	32.000 812.8	300 2065	-	300 2065	241274 1073240	-	241274 1073240	0.38 9.6	4 – 1¼ x 7	36.07 916	41.74 1060	5.68 144	242 109.8
36 915	36.000 914.4	300 2065	-	300 2065	305363 1358322	-	305363 1358322	0.38 9.6	4 – 1¼ x 7	40.23 1022	45.72 1161	5.68 144	268 121.6
40 1015	40.000 1016.0	300 2065	-	300 2065	376991 1676940	-	376991 1676940	0.44 11.1	4 – 1½ x 7	43.98 1117	50.51 1283	6.50 165	340 154.2
42 1070	42.000 1066.8	300 2065	-	300 2065	415632 1848823	-	415632 1848823	0.44 11.1	4 – 1½ x 7	45.98 1168	52.50 1334	6.50 165	360 163.3
46 1170	46.000 1168.4	-	-	232 1600	-	-	385561 1715746	0.44 11.1	4 – 1½ x 7	50.28 1277	56.48 1435	6.50 165	415 188.2
48 1220	48.000 1219.2	-	-	232 1600	-	-	419820 1868199	0.44 11.1	4 – 1½ x 7	52.28 1328	58.47 1485	6.50 165	425 192.8
54 1370	54.000 1371.6	-	-	175 1200	-	-	400790 1782803	0.50 12.7	4 – 1½ x 7	59.03 1499	65.16 1655	10.00 254	648 293.9
56 1420	56.000 1422.2	-	-	175 1200	-	-	431030 1917317	0.50 12.7	4 – 1½ x 7	61.03 1550	67.65 1718	10.00 254	676 306.6
60 1525	60.000 1524.0	-	-	175 1200	-	-	494800 2201025	0.50 12.7	4 – 1½ x 7	65.03 1652	72.13 1832	10.00 254	720 326.6

* Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, AGS **roll** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

§ Pressure ratings have been rounded for global use. Actual maximum working pressure for lightwall in 14-20"/350-500mm sizes is 363 psi/2500kPa; 24"/600mm is 232 psi/1600kPa and standard wall 14-24"/350-500mm sizes is 363 psi/2500kPa.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

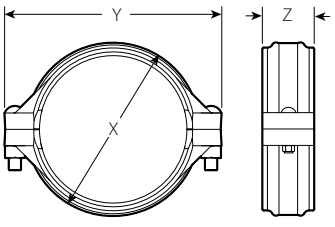
‡ Lightwall 14"/350mm=.22"/5.6mm; 16-24"/400-600mm=0.25"/6.35 mm

For field installation only on roll grooved pipe. Style W07 AGS couplings are essentially rigid and do not permit expansion/contraction.

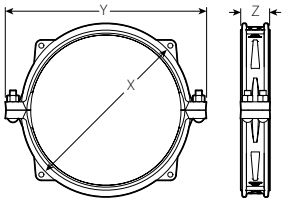
IMPORTANT NOTES:

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

Style W07 AGS couplings must **not** be used to join PVC pipe.



TYPICAL FOR 14-24"/350-600 MM



TYPICAL FOR 26-60"/660-1525 MM

Flexible Coupling

STYLE W77

For Complete Information Request Publication **20.03**

- Style W77 is the only flexible two-piece housing for this size range on the market today
- Style W77 provides limited linear angular movement to accommodate thermal pipe growth, vibration attenuation, seismic and other design considerations that require flexibility
- Pressure rated up to 350 psi/2400 kPa

Size		Max. Working Pressure* psi/kPa			Max. End Load* Lbs./N			Allow. Pipe End Sep.†	Deflect. From CL †		Bolt/Nut No - Size	Dimensions Ø – Inches/mm			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Std. Wall	Light Wall ‡	Extra Heavy ½"/12.7 mm	Std. Wall	Light Wall ‡	Extra Heavy ½"/12.7 mm	Inches mm	Per Cplg. Deg.	Pipe In./Ft. mm/m	Inches	X	Y	Z	Lbs. kg
14 ¤ 350	14.000 355.6	350 2500	350 2500	-	55800 248310	55800 248310	-	0.13 – 0.31 3.3 – 7.9	0.73	0.15 13	2 - 1 x 5 ½	16.00 406	20.59 523	4.50 114	48 21.8
16 400	16.000 406.4	350 2500	350 2500	-	72885 324338	72885 324338	-	0.13 – 0.31 3.3 – 7.9	0.63	0.13 11	2 - 1 x 5 ½	18.18 462	23.51 597	4.50 114	58 26.3
18 450	18.000 457.2	350 2500	350 2500	-	92245 410490	92245 410490	-	0.13 – 0.31 3.3 – 7.9	0.57	0.12 10	2 - 1 x 5 ½	20.36 517	25.46 647	4.50 114	65.0 29.5
20 500	20.000 508.0	350 2500	350 2500	-	113880 506766	113880 506766	-	0.13 – 0.31 3.3 – 7.9	0.50	0.10 9	2 - 1 ⅛ x 5 ½	22.56 573	27.13 689	4.50 114	82 37.2
24 600	24.000 609.6	350 2500	225 1600	-	163990 729756	104955 467050	-	0.13 – 0.31 3.3 – 7.9	0.42	0.09 8	2 - 1 ⅛ x 5 ½	26.88 683	32.31 821	4.50 114	107 48.5
26 660	26.000 660.4	300 2065	-	300 2065	159279 708508	-	159279 708508	0.15-0.53 3.81-13.46	0.83	0.18 15	4- 1 ⅛ x 6	30.07 764	35.23 895	5.68 144	205 93.0
28 710	28.000 711.2	300 2065	-	300 2065	184726 821702	-	184726 821702	0.15-0.53 3.81-13.46	0.78	0.16 14	4- 1 ⅛ x 6	32.23 819	37.22 945	5.68 144	220 99.8
30 760	30.000 762.0	300 2065	-	300 2065	212058 943281	-	212058 943281	0.15-0.53 3.81-13.46	0.73	0.16 13	4- 1 ¼ x 7	33.90 863	39.64 1007	5.68 144	227 103.0
32 810	32.000 812.8	300 2065	-	300 2065	241274 1073240	-	241274 1073240	0.15-0.53 3.81-13.46	0.68	0.14 11	4- 1 ¼ x 7	36.07 916	41.74 1060	5.68 144	242 109.8
34 865	34.000 865.0	300 2065	-	300 2065	272375 121207	-	-	0.21-0.59 5.33-14.99	0.69	0.13 11	4- 1 ¼ x 7	38.25 972	43.75 1111	5.68 144	255.0 115.7
36 915	36.000 914.4	300 2065	-	300 2065	305363 1358322	-	305363 1358322	0.15-0.53 3.81-13.46	0.60	0.13 11	4- 1 ¼ x 7	40.23 1022	45.72 1161	5.68 144	268 121.6
40 1015	40.000 1016.0	300 2065	-	300 2065	376991 1676940	-	376991 1676940	0.21-0.59 5.33-14.99	0.55	0.12 10	4- 1 ½ x 7	43.98 1117	50.51 1283	6.50 165	340 154.2
42 1070	42.000 1066.8	300 2065	-	300 2065	415632 1848823	-	415632 1848823	0.21-0.59 5.33-14.99	0.52	0.11 9	4- 1 ½ x 7	45.98 1168	52.50 1334	6.50 165	360 163.3
44 1150	44.000 1150.0	-	-	232 1600	-	-	385561 1715746	0.21-0.59 5.33-14.99	0.47	0.10 8	4- 1 ½ x 7	50.28 1277	56.48 1435	6.50 165	415 188.2
46 1170	46.000 1168.4	-	-	232 1600	-	-	385561 1715746	0.21-0.59 5.33-14.99	0.47	0.10 8	4- 1 ½ x 7	50.28 1277	56.48 1435	6.50 165	415 188.2
48 1220	48.000 1219.2	-	-	232 1600	-	-	419820 1868199	0.21-0.59 5.33-14.99	0.45	0.10 8	4- 1 ½ x 7	52.28 1328	58.47 1485	6.50 165	425 192.8
54 1370	54.000 1371.6	-	-	175 1200	-	-	400790 1782803	0.28-0.66 7.11-16.76	0.40	0.08 7	4- 1 ½ x 7	59.03 1499	65.16 1655	10.00 254	648 293.9
56 1420	56.000 1422.2	-	-	175 1200	-	-	431030 1917317	0.28-0.66 7.11-16.76	0.38	0.08 7	4- 1 ½ x 7	61.03 1550	67.65 1718	10.00 254	676 306.6
60 1525	60.000 1524.0	-	-	175 1200	-	-	494800 2201025	0.28-0.66 7.11-16.76	0.36	0.08 7	4- 1 ½ x 7	65.03 1652	72.13 1832	10.00 254	720 326.6

* Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, AGS **roll** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

§ Pressure ratings have been rounded for global use. Actual maximum working pressure for lightwall in 14-20"/350-500mm sizes is 363 psi/2500 kPa; 24"/600mm is 232 psi/1600 kPa and standard all 14-24"/350-500mm sizes is 363psi/2500kPa.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

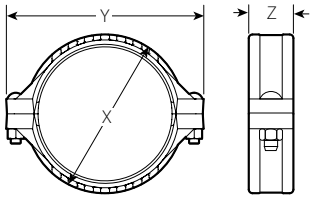
¤ The 14"/350 mm size Style W77 AGS coupling is FM approved for a maximum working pressure of 350 psi/2415kPa on cut grooved Sch 30 pipe and roll grooved 0.188"/5 mm wall pipe.

† Allowable Pipe End Separation figures show the maximum nominal range of movement available at each joint for AGS roll grooved pipe. These figures are maximums; for design and installation purposes these figures should be reduced by 25%.

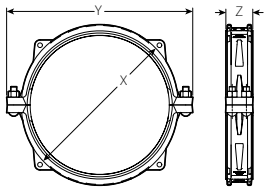
IMPORTANT NOTES:

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

Style W77 AGS couplings must **not** be used to join PVC pipe.



TYPICAL FOR 14-24"/350-600 MM



TYPICAL FOR 26-60"/660-1525 MM

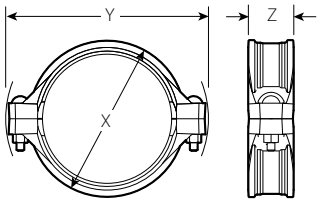
Rigid Coupling for Stainless Steel Pipe

STYLE W89

For Complete Information Request Publication **20.15**

- Pressure rated up to 300 psi/2065 kPa
- Style W89 Rigid Coupling greatly reduces linear or angular movement where rigid joint is required

Size		Schedule 10S		Allow. Pipe End Sep.†	Bolt/Nut No - Size	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Max. Work. Pressure* psi kPa	Max. End Load* Lbs. N	Inches mm	Inches	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
14 350	14.000 355.6	300 2065	46200 205590	0.25 6.4	2 - 1 1/8 x 5 1/2	16.50 419	21.38 543	4.81 122	65.0 29.5
16 400	16.000 406.4	300 2065	60320 268424	0.25 6.4	2 - 1 1/8 x 5 1/2	18.88 480	23.50 597	4.81 122	80.0 36.4
18 450	18.000 457.0	300 2065	76350 339758	0.25 6.4	2 - 1 1/8 x 5 1/2	21.00 533	25.63 651	4.81 122	93.0 42.3
20 500	20.000 508.0	300 2065	94250 419413	0.25 6.4	2 - 1 1/8 x 5 1/2	23.75 603	27.63 702	4.81 122	114.0 51.8
22 550	22.000 559.0	300 2065	94250 419413	0.25 6.4	2 - 1 1/8 x 6	24.72 628	14.91 379	4.75 121	110.0 49.9
24 600	24.000 610.0	300 2065	135700 603865	0.25 6.4	2 - 1 1/8 x 5 1/2	30.00 762	32.00 813	4.81 122	182.0 82.6



TYPICAL FOR ALL SIZES

* Working Pressure and End Load are total, from all internal and external loads, based on stainless steel pipe, AGS **roll** grooved in accordance with Victaulic specifications. "RWX" rolls must be used for Schedule 10S. Contact Victaulic for performance on other pipe.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

† For field installation only on roll grooved pipe. Style W89 AGS couplings are essentially rigid and do not permit expansion/contraction.

IMPORTANT NOTES:

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

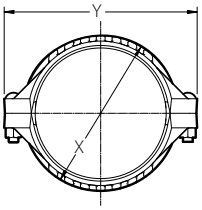
Expansion Joint

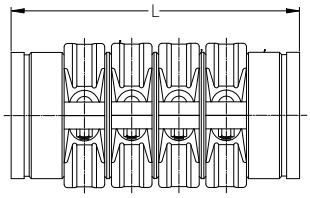
STYLE W155

For Complete Information Request Publication **20.12**

- Combination of couplings and short nipples joined in tandem
- Nipples are precisely grooved to provide full linear allowance at each joint
- May be used as flexible connectors, but will not simultaneously provide full expansion and full deflection
- Expansion joints installed horizontally require independent support to prevent deflection that will reduce the available expansion
- Sizes from 14-24"/ 350-600mm

Size		Style	Dimensions – Inches/mm					Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Coupling Style	L – Length (ref.) § Compressed	L – Length (ref.) § Expanded	X Height	Y Width	Total Minimum Movement Capability	Lbs. kg
14 350	14.000 355.6	W77	30.00 762	31.75 807	16.63 422	20.00 508	1.75 45	423.0 191.9
16 400	16.000 406.4	W77	30.00 762	31.75 807	19.00 483	22.38 569	1.75 45	500.0 226.8
18 450	18.000 457.0	W77	30.00 762	28.00 31.75	21.25 540	24.38 619	1.75 45	632.0 286.7
20 500	20.000 508.0	W77	30.00 762	31.75 807	23.63 600	27.50 699	1.75 45	800.0 362.9
24 600	24.000 610.0	W77	30.00 762	31.75 807	27.63 702	31.38 797	1.75 45	840.0 381.0





TYPICAL FOR SIZES 14-16"/350-600MM

Vic-Flange® Adapter

STYLE W741

For Complete Information Request Publication **20.04**

- Pressure rated up to 300 psi/2065 kPa
- Directly incorporates flanged components to AGS grooved piping systems
- Available in sizes 14-24"/350-600mm

Size		Max. Working Pressure* psi/kPa		Max. End Load* Lbs./N		Assembly Bolts †		Draw Bolts §		Sealing Surface Inches/mm		Dimensions Inches/millimeters							Aprx. Wgt Each
Nml Size Inches mm	Actual Outside Diameter Inches mm	Std. Wall	Light Wall ‡	Std. Wall	Light Wall	† No. Bolts Req'd.	Size Inches	No. Bolts	Size Inches	"A" Max.	"B" Min.	T	U	V	W	X	Y	Z	Lbs. kg
14 350	14.000 355.6	300 2065	300 2065	46180 205501	46180 205501	12	1 x 4 ½	2	⅝ x 3 ½	14.00 356	16.00 406	19.4 493	1.44 37	0.94 24	24.5 622	21.0 533	18.75 476	2.38 60	66 30
16 400	16.000 406.4	300 2065	300 2065	60315 268402	60315 268402	16	1 x 4 ½	2	⅝ x 3 ½	16.00 406	18.00 457	21.5 546	1.44 37	0.94 24	27.1 688	23.5 597	21.25 540	2.38 60	81 37
18 450	18.000 457.0	300 2065	300 2065	76340 339713	76340 339713	16	1 ⅛ x 4 ¾	2	¾ x 4 ¼	18.00 457	20.00 508	22.3 566	1.56 40	1.00 25	29.0 737	25.0 635	22.75 578	2.56 65	84 38
20 500	20.000 508.0	300 2065	300 2065	94250 419413	94250 419413	20	1 ⅛ x 5 ¼	2	¾ x 4 ¼	20.00 508	22.00 559	24.0 610	1.69 43	1.00 25	31.5 800	27.5 698	25.00 635	2.69 68	110 50
24 600	24.000 610.0	300 2065	225# 1600	135715 603932	101785 452943	20	1 ¼ x 5 ¾	2	¾ x 4 ¼	24.00 610	26.00 660	29.0 737	1.94 49	0.80 20	36.0 914	32.0 813	29.50 749	2.74 70	155 70

* Working Pressure and End Load are total, from all internal and external loads, based on carbon steel pipe AGS roll grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

† Total bolts required to be supplied by installer, may be ordered from Victaulic. Bolt sizes for conventional flange-to-flange connection. Longer bolts required when Vic-Flange utilized with wafer-type valves.

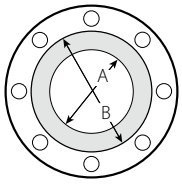
§ Draw bolts supplied with 14 – 24"/350 – 600 mm Vic-Flange adapters.

‡ Lightwall 14"/350 mm = 0.22"/5.6 mm; 16 – 24"/400 – 600 mm = 0.25"/6.35 mm

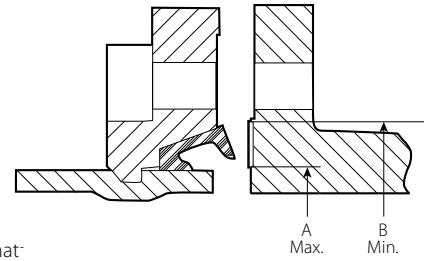
Rounded for global use. Actual maximum working pressure is 232 psi/1600 kPa.

IMPORTANT NOTE:

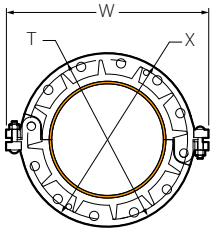
Style W741 AGS Vic-Flange adapter provides rigid joints when used on pipe with AGS groove dimensions and consequently allows no linear or angular movement at the joint.

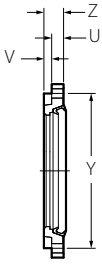


Note: Shaded area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.



Exaggerated for clarity

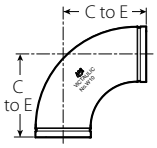




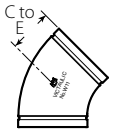
Elbows

NO. W10 90° Elbow
NO. W11 45° Elbow
NO. W12 22½° Elbow
NO. W13 11¼° Elbow
NO. W100 90° Long Radius
NO. W110 45° Long Radius
(Ductile Iron#)

Request Publication **20.05**

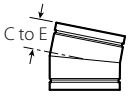


NO. W10

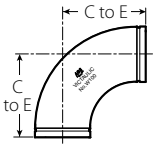


NO. W11

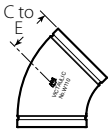
NO. W12



NO. W13



NO. W100



NO. W110

Size		No. W10 90° Elbow		No. W11 45° Elbow		No. W12 22½° Elbow (sw)		No. W13 11¼° Elbow (sw)		No. W100†* 90° Long Radius Elbow (S)		No. W110†* 45° Long Radius Elbow (S)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg
14 350	14.000 355.6	14.00 355.6	150.8 68.4	5.80 147	63.0 28.7	5.00 127	46.0 20.9	3.50 89	32.0 14.5	21.00 533	158.0 71.7	8.75 222	83.0 37.6
16 400	16.000 406.4	16.00 406.4	184.3 83.6	6.63 168	93.8 42.5	5.00 127	52.1 23.6	4.00 102	42.0 19.1	24.00 610	204.3 92.7	10.00 254	101.0 45.8
18 450	18.000 457.0	18.00 457.0	272.3 123.5	7.46 189	129.0 58.5	5.50 140	65.0 29.5	4.50 114	53.2 24.1	27.00 686	260.0 118.0	11.25 286	127.0 57.6
20 500	20.000 508.0	20.00 508.0	312.0 141.5	8.28 210	165.3 75.0	6.00 152	78.6 36.0	5.00 127	65.0 29.5	30.00 762	328.5 149.0	12.50 318	167.0 75.7
24 600	24.000 610.0	24.00 610.0	559.8 253.9	9.94 252	264.5 120.0	7.00 178	110.3 50.0	6.00 152	94.5 42.9	36.00 914	490.0 222.3	15.00 381	244.8 110.1

Ductile iron except those marked (sw) which are segmentally welded steel or (S) which are steel.

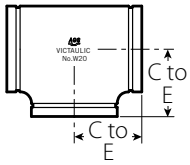
† For the U.S. 14"/350 mm, 16"/400 mm, 18"/450 mm, 20"/500 mm, 24"/600 mm elbows (90°, 45°) are 1 ½ D long radius forged steel elbows No. W100 and No. W110.

* Available for special order.

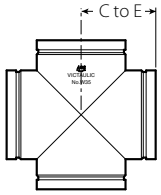
Tees, Crosses and Wyes

NO. W20 Tee
NO. W35 Cross
NO. W33 True Wye
(Ductile Iron#)

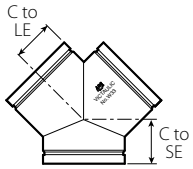
For Complete Information Request Publication **20.05**



NO. W20



NO. W35



NO. W33

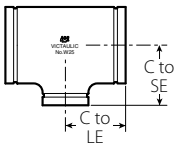
Size		No. W20 Tee		No. W35 Cross (sw)		No. W33 True Wye (sw)		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
14 350	14.000 355.6	11.00 279	102.0 46.3	11.00 279	121.0 54.9	11.00 279	7.50 191	98.0 44.4
16 400	16.000 406.4	12.00 305	123.5 56.0	12.00 305	146.4 66.4	12.00 305	8.00 203	119.3 54.1
18 450	18.000 457.0	13.50 343	281.0 127.5	13.50 343	185.4 84.1	13.50 343	8.50 216	148.3 67.3
20 500	20.000 508.0	15.00 381	350.0 158.7	15.00 381	229.1 103.9	15.00 381	9.00 229	180.4 81.8
24 600	24.000 610.0	17.00 432	503.7 228.5	17.00 432	298.7 135.5	17.00 432	10.00 254	238.3 108.1

Ductile iron except those marked with (sw) which are segmentally welded.

Reducing Tee

NO. W25
(Segmentally Welded Steel)

For Complete Information
Request Publication **20.05**



NO. W25

Size			No. W25 Reducing Tee		Approx. Weight Each
Nominal Size Inches mm			C to LE Inches mm	C to SE Inches mm	Lbs. kg
14 350	× 14 350	× 6 150	11.00 279	9.38 238	101.4 46.0
		8 200	11.00 279	9.75 248	102.5 46.5
		10 250	11.00 279	10.12 257	105.1 47.7
		12 300	11.00 279	10.62 270	108.1 49.0
16 400	× 16 400	× 6 150	12.00 305	10.38 264	126.2 57.2
		8 200	12.00 305	10.75 273	127.4 57.8
		10 250	12.00 305	11.12 282	129.8 58.9
		12 300	12.00 305	11.62 295	132.5 60.1
		14 350	12.00 305	12.00 305	134.6 61.1
18 450	× 18 450	× 6 150	13.50 343	11.38 289	160.0 72.6
		8 200	13.50 343	11.75 298	161.0 73.0
		10 250	13.50 343	12.12 308	163.1 74.0
		12 300	13.50 343	12.62 321	165.6 75.1
		14 350	13.50 343	13.00 330	167.6 76.0
		16 400	13.50 343	13.00 330	168.2 76.3

Size			No. W25 Reducing Tee		Approx. Weight Each
Nominal Size Inches mm			C to LE Inches mm	C to SE Inches mm	Lbs. kg
20 500	× 20 500	× 6 150	15.00 381	12.38 314	197.0 89.5
		8 200	15.00 381	12.75 324	198.5 90.0
		10 250	15.00 381	13.12 333	200.5 90.9
		12 300	15.00 381	13.62 346	202.9 92.0
		14* 350	15.00 381	14.00 356	204.7 92.9
		16* 400	15.00 381	14.00 356	205.0 93.0
		18 450	15.00 381	14.50 368	208.4 94.5
24 600	× 24 600	× 6 150	17.00 432	14.38 365	260.9 122.0
		8 200	17.00 432	14.75 375	270.0 123.0
		10 250	17.00 432	15.12 384	271.7 123.2
		12 300	17.00 432	15.62 397	273.8 124.2
		14 350	17.00 432	16.00 406	275.4 125.0
		16 400	17.00 432	16.00 406	275.4 125.0
		18 450	17.00 432	16.50 419	278.1 127.1
		20 500	17.00 432	17.00 432	282.1 128.0

* Cast fitting available. Contact Victaulic for details.

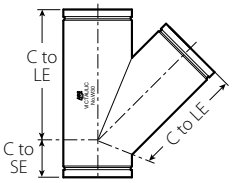
IMPORTANT NOTE:

Outlets 12"/300 mm and smaller will be provided with standard Victaulic roll or cut grooves, suitable for use with standard Victaulic grooved couplings in that size range.

45° Lateral

NO. W30
(Segmentally Welded Steel)

For Complete Information
Request Publication **20.05**



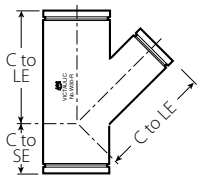
NO. W30

Size		No. W30 45° Lateral		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
14 350	14.000 355.6	26.50 673	7.50 191	219.1 99.4
16 400	16.000 406.4	29.00 737	8.00 203	270.5 122.7
18 450	18.000 457.0	32.00 813	8.50 216	332.7 150.9
20 500	20.000 508.0	35.00 889	9.00 229	401.3 182.0
24 600	24.000 610.0	40.00 1016	10.00 254	541.3 245.5

45° Reducing Lateral

NO. W30-R
(Segmentally Welded Steel)

For Complete Information
Request Publication **20.05**



NO. W30-R

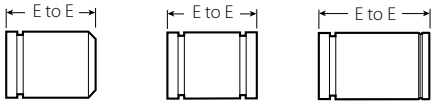
Size			No. W30-R Reducing Lateral		
Nominal Size Inches mm			C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
14 350	× 14 350	× 4 100	26.50 673	7.50 191	175.9 79.8
		6 150	26.50 673	7.50 191	185.9 84.3
		8 200	26.50 673	7.50 191	195.0 88.4
		10 250	26.50 673	7.50 191	204.4 92.7
		12 300	26.50 673	7.50 191	213.3 96.8
16 400	× 16 400	× 6 150	29.00 737	8.00 203	226.4 102.7
		8 200	29.00 737	8.00 203	236.0 107.1
		10 250	29.00 737	8.00 203	246.0 111.6
		12 300	29.00 737	8.00 203	255.1 115.7
		14 350	29.00 737	8.00 203	260.9 118.4
18 450	× 18 450	× 6 150	32.00 813	8.50 216	274.8 214.6
		8 200	32.00 813	8.50 216	285.3 129.4
		12 300	32.00 813	8.50 216	306.2 138.9
		14 350	32.00 813	8.50 216	312.4 141.7
		16 400	32.00 813	8.50 216	322.4 146.2
20 500	× 20 500	× 12 300	35.00 889	9.00 229	362.1 164.3
		14 350	35.00 889	9.00 229	368.7 167.2
		16 400	35.00 889	9.00 229	379.4 172.1
24 600	× 24 600	× 16 400	40.00 1016	10.00 254	494.9 224.5
		20 600	40.00 1016	10.00 254	517.7 254.8

IMPORTANT NOTE:
Outlets 12"/300 mm and smaller will be provided with standard Victaulic roll or cut groove, suitable for use with standard Victaulic grooved couplings in that size range.

Adapter Nipple

NO. W42 AGS Grv. × Bev.
NO. W43 AGS Grv. × AGS Grv.
NO. W49 AGS Grv. × Non-AGS Grv.
(Steel)

For Complete Information Request Publication **20.05**



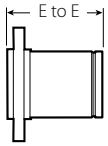
NO. W42 NO. W43 NO. W49

Size		No. W42, W43, W49 Adapter Nipple (sw)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
14 350	14.000 355.6	8.00 203	36.0 16.3
16 400	16.000 406.4	8.00 203	42.0 19.1
18 450	18.000 457.0	8.00 203	47.0 21.3
20 500	20.000 508.0	8.00 203	52.0 23.6
24 600	24.000 610.0	8.00 203	63.0 28.6

Flanged Adapter Nipple

NO. W45R ANSI Class 150 Raised Face
(Steel)

For Complete Information Request Publication **20.05**



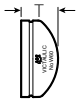
NO. W45R

Size		No. W45R Flanged Adapter Nipple	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
14 350	14.000 355.6	8.00 203	122.0 55.3
16 400	16.000 406.4	8.00 203	136.0 61.7
18 450	18.000 457.0	8.00 203	168.0 76.2
20 500	20.000 508.0	8.00 203	208.0 94.3
24 600	24.000 610.0	8.00 203	274.0 124.3

Cap

NO. W60
(Steel)

For Complete Information Request Publication **20.05**



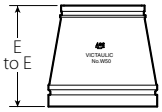
NO. W60

Size		No. W60 Cap	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	T Thickness Inches mm	Approx. Weight Each Lbs. kg
14 350	14.000 355.6	6.50 165	33.2 15.1
16 400	16.000 406.4	7.00 178	41.2 18.7
18 450	18.000 457.0	8.00 203	54.6 24.8
20 500	20.000 508.0	9.00 229	67.5 30.6
24 600	24.000 610.0	10.50 267	96.0 43.5

Concentric/Eccentric Reducer

NO. W50 Concentric
NO. W51 Eccentric
(Steel †)

For Complete Information
Request Publication **20.05**



NO. W50

NO. W51

Size			No. W50 Concentric Reducer		No. W51 Eccentric Reducer	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
14 350	×	6 150	13.00 330	68.0 30.8	13.00 330	68.0 30.8
		8 200	13.00 330	70.0 31.8	13.00 330	70.0 31.8
		10 250	13.00 330	72.0 32.7	13.00 330	72.0 32.7
		12 300	13.00 330	74.0 33.6	13.00 330	74.0 33.6
16 400	×	8 200	14.00 356	88.0 39.9	14.00 356	88.0 39.9
		10 250	14.00 356	91.0 41.3	14.00 356	91.0 41.3
		12 300	14.00 356	93.0 42.2	14.00 356	93.0 42.2
		14 350	14.00 356	95.0 43.1	14.00 356	95.0 43.1
18 450	×	14 350	15.00 381	118.0 53.5	15.00 381	118.0 53.5
		16 400	15.00 381	115.0 52.2	15.00 381	115.0 52.2
		18 450	15.00 381	118.0 53.5	15.00 381	118.0 53.5
		20 500	15.00 381	121.1 54.9	15.00 381	121.1 54.9
20 500	×	12 300	20.00 508	160.0 72.6	20.00 508	160.0 72.6
		14 350	20.00 508	164.0 74.4	20.00 508	164.0 74.4
		16 400	20.00 508	168.0 76.2	20.00 508	168.0 76.2
		18 450	20.00 508	172.0 78.0	20.00 508	172.0 78.0
24 600	×	16 400	20.00 508	198.0 89.9	20.00 508	198.0 89.9
		18 450	20.00 508	200.0 90.7	20.00 508	200.0 90.7
		20 500	20.00 508	204.0 92.5	20.00 508	204.0 92.5

† Some fitting sizes are available in cast ductile iron. Contact Victaulic for details.

IMPORTANT NOTE:

Outlets 12"/300 mm and smaller will be provided with standard Victaulic roll or cut grooves, suitable for use with standard Victaulic grooved couplings in that size range.

Dual Disc Vic Check Valve

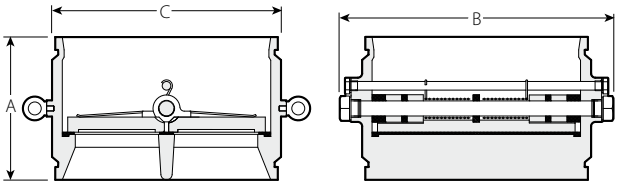
SERIES W715

For Complete Information Request Publication **20.08**

- Can be installed in both horizontal or vertical "flow up" positions
- Constructed of rugged ductile iron, the valve features an EPDM seat bonded to the body and a 304 stainless steel disc and shaft
- Utilizes a spring-assisted, dual disc design that achieves drop tight sealing over the full 230 psi/16 Bar pressure rating
- Sizes from 14 – 24"/350 – 600 mm

Size		Dimensions			Approx. Weight Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	B Inches mm	C Inches mm	Lbs. kg	C_v Values K_v Values
14 350	14.000 355.6	10.75 273	16.93 430	14.38 366	140.0 64.0	6000 5190.0
16 400	16.000 406.4	12.00 305	19.88 505	16.38 416	160.0 73.0	8300 7179.5
18 450	18.000 457.0	14.25 362	21.54 547	18.38 467	180.0 82.0	10500 9082.5
20 500	20.000 508.0	14.50 368	24.75 628	20.38 518	200.0 91.0	13800 11937.0
24 600	24.000 610.0	15.50 394	28.81 732	24.38 620	240.0 109.0	20500 17732.5

@ C_v/K_v values for flow of water at +60°F/+16°C with valve fully open.



TYPICAL FOR ALL SIZES

Vic-300® MasterSeal™ Butterfly Valve Without Gear Operator

SERIES W761

For Complete Information Request Publication **20.06**

- Available with handwheel gear operator, electric, pneumatic or hydraulic actuators and two and three way configurations
- Easier to install than cumbersome multi-bolt wafer, lug type or flanged valves
- Features AGS grooved ends for 14–24"/350–600mm systems for 300psi/2065kPa bi-directional services

AGS VIC-300 MASTERSEAL BUTTERFLY VALVE WITHOUT GEAR OPERATOR

Size		Dimensions										Approx. Wgt. Each
									Mounting †			
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	B Overall Height Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	G Inches mm	H_1 Dia. Inches mm	H_2 Dia. Inches mm	I Dia. Inches mm	w/o Oper. Lbs. kg
14 350	14.000 355.6	10.00 254	24.45 621	9.68 246	12.89 327	1.16 29	16.00 406	14.77 375	4.96 126	0.578 15	1.38 35	125.0 56.7
16 400	16.000 406.4	10.50 267	27.14 689	10.94 278	14.10 358	1.90 48	18.00 457	16.20 412	4.96 126	0.578 15	1.50 38	153.0 69.4
18 450	18.000 457.0	11.00 279	29.56 751	12.31 313	15.00 381	2.64 59	20.00 508	17.25 438	4.96 126	0.578 15	1.75 45	199.0 90.3
20 500	20.000 508.0	11.50 292	32.64 829	14.06 357	16.10 409	3.42 87	23.00 584	18.58 472	5.51 140	0.672 17	2.00 51	285.0 129.3
24 600	24.000 610.0	12.00 305	38.89 988	16.06 408	20.10 511	5.17 131	26.70 678	22.83 580	6.50 165	0.844 21	2.25 57	451.0 204.6

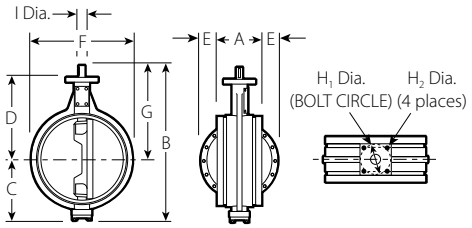
† MOUNTING KEY:

14"/350mm – ⅜ Sq. × 1⅞
16"/400mm – ⅜ Sq. × 2½
18"/450mm – (2) ⅜ Sq. × 2
20"/500mm – (2) ½ Sq. × 2¼
24"/600mm – (2) ⅝ Sq. × 3

IMPORTANT NOTES:

Dimensions provided without operator are for sizing data only. AGS Vic-300 MasterSeal butterfly valves should never be installed without operators.

AGS Vic-300 MasterSeal butterfly valves have longer end to end dimensions and AGS groove dimensions and cannot be used to replace existing Series 706 butterfly valves.



TYPICAL FOR ALL SIZES

Vic-300® MasterSeal™ Butterfly Valve With Gear Operator

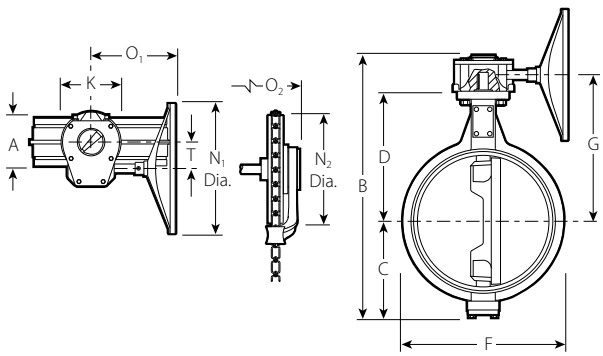
SERIES W761

For Complete Information
Request Publication **20.06**

AGS VIC-300 MASTERSEAL BUTTERFLY VALVE WITH GEAR OPERATOR

Size		Dimensions														Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
									Handwheel		Chain Wheel						
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	B Overall Height Inches mm	C Inches mm	D Inches mm	F Inches mm	G Inches mm	K Inches mm	N_1 Dia. Inches mm	O_1 Inches mm	N_2 Dia. Inches mm	O_2 Inches mm	T Inches mm	No. Turns to Close	Lbs. kg	C_V Values K_V Values
14 350	14.000 355.6	10.00 254	26.17 665	9.68 246	12.89 327	16.00 406	14.54 367	7.87 200	19.70 500	12.86 327	21.50 546	16.00 406	3.02 77	9.5	156.0 70.8	9360 7984
16 400	16.000 406.4	10.50 267	29.00 737	10.94 278	14.10 358	18.00 457	15.99 406	8.66 220	19.70 500	14.34 364	21.50 546	17.47 444	3.38 86	13.75	201.0 91.2	12400 10577
18 450	18.000 457.0	11.00 279	32.17 817	12.31 313	15.00 381	20.00 508	17.17 436	11.22 285	27.60 700	15.55 395	30.00 762	18.68 474	4.38 111	21	269.5 122.2	15900 13562
20 500	20.000 508.0	11.50 292	36.23 920	14.06 357	16.10 409	23.00 584	18.27 464	11.22 285	27.60 700	18.43 468	30.00 762	21.60 549	5.38 137	52	384.2 174.3	19800 16889
24 600	24.000 610.0	12.00 305	42.41 1017	16.06 408	20.10 511	26.70 678	22.42 569	14.57 370	27.60 700	20.51 521	30.00 762	23.60 599	5.38 137	79.25	605.0 274.4	28900 24651

@ C_V/K_V values for flow of water at +60°F/+16°C with valve fully open.



TYPICAL FOR ALL SIZES

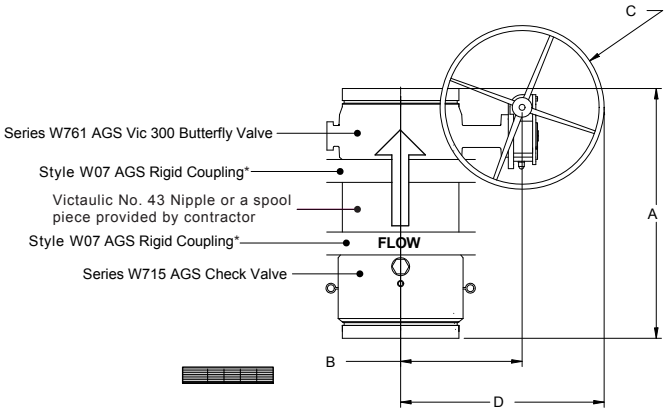
Triple Service Valve Assembly

For Complete Information Request Publication **20.18**

- Assembly of the Series W761 AGS Vic-300 butterfly valve and Series W715 AGS Vic-Check valve
- Provides shut-off, throttling with positive mechanical memory and non-slam check service in one unit.
- Available in sizes 14-24"/350-600mm
- Pressure rated up to 232psi/1600kPa

AGS TRIPLE BUTTERFLY/CHECK VALVE COMBINATION DIMENSIONS

Valve Size		Dimensions – Inches/millimeters				Approx. Assembly Wgt. Lbs/kg
Nominal Diameter Inches/mm	Actual Outside Diameter Inches/mm	A Inches/mm	B Inches/mm	C Inches/mm	D Inches/mm	
14 350	14 355.6	29.25 743.0	14.50 368.3	19.75 501.7	24.50 622.3	430 195.0
16 400	16 406.4	31.00 787.4	16.00 406.4	19.75 501.7	25.88 657.4	525 238.1
18 450	18 457.2	33.75 857.3	17.13 435.1	27.63 701.8	31.00 787.4	639 289.9
20 500	20 508.0	34.50 876.3	18.25 463.6	27.63 701.8	32.13 816.1	799 362.4
24 600	24 609.6	36.00 914.4	22.50 571.5	27.63 701.8	36.25 920.8	1140 517.1



14 – 24"/350 – 600MM TYPICAL WITH SERIES W761 AGS VIC-300 BUTTERFLY VALVES AND SERIES W715 AGS VIC-CHECK VALVES

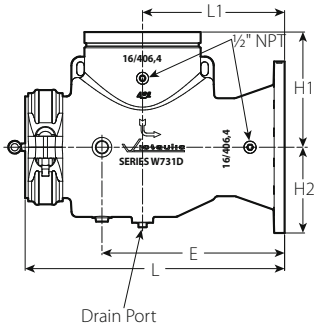
Suction Diffuser

SERIES W731-D

For Complete Information Request Publication **20.20**

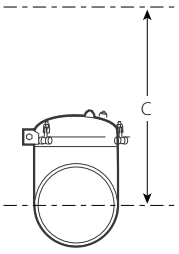
- Series W731-D provides optimum flow conditions at the inlet side of the pump
- Bosses are provided on either side for pressure measurement
- Coupling secures closure cap greatly reducing down time for maintenance
- Pressure rated up to 300 psi/2065 kPa

Size			Dimensions Inches/mm						Approx. Wgt. Each
System Side Grooved	×	Pump Side Flange ANSI Class 150							
Nominal Size Inches/mm			L	L_1	H_1	H_2	Drain Port Thread Size	E	Lbs./ kg
14 350	×	10 250	29 737	16.1 410	14.4 365	8.1 205	1.5-11.5 NPT	21.3 540	328.9 149.2
		12 300	29 737	16.1 410	14.4 365	9.5 241	1.5-11.5 NPT	21.3 540	345.8 156.9
		14 350	29 737	16.1 410	14.4 365	10.6 268	1.5-11.5 NPT	21.3 540	367.6 166.7
16 400	×	12 300	36 914	19.6 497	15.9 403	9.5 241	1.5-11.5 NPT	25.2 639	464.5 210.7
		14 350	36 914	19.6 497	15.9 403	10.6 268	1.5-11.5 NPT	25.2 639	489.9 222.2
		16 400	36 914	19.6 497	15.9 403	11.8 300	1.5-11.5 NPT	25.2 639	514.2 233.2
18 450	×	14 350	39 991	21.7 550	17.2 438	10.6 268	1.5-11.5 NPT	27.6 700	788.6 357.7
		16 400	39 991	21.7 550	17.2 438	11.8 300	1.5-11.5 NPT	27.6 700	812.9 368.7
		18 450	39 991	21.7 550	17.2 438	12.6 321	1.5-11.5 NPT	27.6 700	828.3 375.7
20 500	×	16 400	43 1092	24.4 620	18.9 480	11.8 300	2-11.5 NPT	32.3 820	955.0 433.2
		18 450	43 1092	24.4 620	18.9 480	12.6 321	2-11.5 NPT	32.3 820	970.5 440.2
		20 500	43 1092	24.4 620	18.9 480	14.1 358	2-11.5 NPT	32.3 820	1019.0 462.2
24 600	×	18 450	47 1194	26.4 670	21.7 550	12.6 321	2-11.5 NPT	36.2 920	1255.8 569.6
		20 500	47 1194	26.4 670	21.7 550	14.1 358	2-11.5 NPT	36.2 920	1337.4 606.6
		24 600	47 1194	26.4 670	21.7 550	16.5 419	2-11.5 NPT	36.2 920	1401.3 635.6



14" – 24" /350-600 MM SIZES

Recommended Minimum Clearance Required to Remove Diffuser Basket



Recommended Minimum Clearance Required to Remove Strainer Basket		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C Strainer Basket Clearance† Dimensions Inches mm
14 350	14.000 355.6	30.00 762
16 400	16.000 406.4	32.00 813
18 450	18.000 457.0	35.00 889
20 500	20.000 508.0	38.00 965
24 600	24.000 610.0	44.00 1118

† Measurement is from the center line to the top of the basket during removal.

Vic-Strainer® Tee Type

SERIES W730

For Complete Information Request Publication **20.11**

- Series W730 provides straight-through flow for low pressure drop
- Access cap permits easy cleaning
- Pressure rated up to 300 psi/2065 kPa

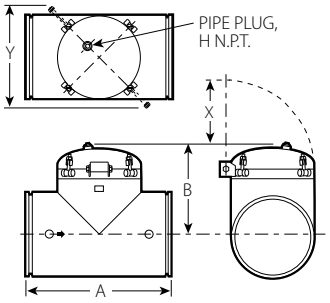
Size		Max. Work Pressure	Dimensions					Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	A Inches mm	B Inches mm	X* Inches mm	Y* Inches mm	H N.P.T. Inches mm	Lbs. kg	C_V Values K_V Values
14 350	14.000 355.6	300 2065	22.00 559	17.75 451	12.25 311	17.70 450	2.00 51	300.0 136.1	5050 4368.3
16 400	16.000 406.4	300 2065	24.00 610	18.75 476	13.75 349	20.50 521	2.00 51	350.0 158.8	8000 6920.0
18 450	18.000 457.0	300 2065	31.00 787	23.25 591	15.25 387	23.30 592	2.00 51	400.0 181.4	10540 9117.1
20 500	20.000 508.0	300 2065	34.50 876	25.88 657	16.94 430	25.50 648	2.00 51	565.0 256.3	11960 10345.4
24 600	24.000 610.0	300 2065	40.00 1016	30.13 765	19.94 506	28.30 719	2.00 51	830.0 376.5	17222 14897.0

@ C_V/K_V values for flow of water at +60°F/+16°C.

* See minimum clearance requirement table below.

IMPORTANT NOTE:

Maximum differential pressure from inlet to outlet must not exceed 10 psi/69 kPa.



TYPICAL FOR ALL SIZES

Vic-Strainer® Wye Type

SERIES W732

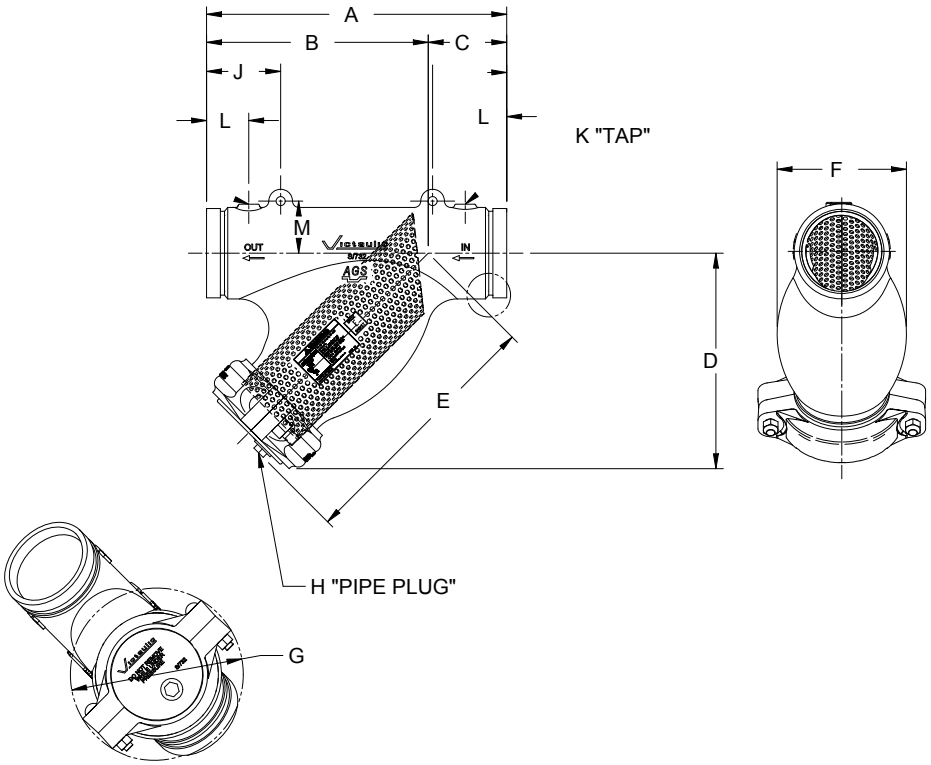
For Complete Information Request Publication **20.19**

- Provides straight through flow for lower pressure drop
- Access cap provides easy cleaning
- Pressure rated up to 300 psi/2065 kPA
- Available in sizes 14-18"/350-450mm

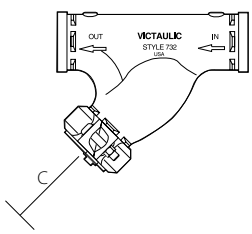
Size		Max. Work Pressure	Dimensions – Inches/mm													Approx. Wgt. Each
Nominal Size Inches/ mm	Actual Outside Diameter Inches/ mm	psi kPa	End to End A	B	C	D	E	F	G	H	J	K "TAP"	L	M	Lbs. kg
14	14.00	300	34.00	25.93	8.07	25.27	29.13	18.15	20.59	2 NPT	7.09	¼" NPT	3.35	7.87	425
350	355.60	2065	863.6	658.6	205	641.8	739.8	461	523.0		180		85	200.0	192.8
16	16.00	300	37.00	27.35	9.65	27.15	30.70	20.47	23.51	2 NPT	7.87	¼" NPT	3.74	8.88	600
400	406.40	2065	939.8	694.8	245	689.5	779.8	520	597.2		200		95	225.5	272.2
18	18.00	300	40.51	30.27	10.24	29.94	33.61	23.39	25.53	2 NPT	7.87	¼" NPT	3.74	9.88	800
450	457.20	2065	1028.9	768.9	260	760.5	853.8	594	648.5		200		95	251.0	362.9

#Working pressure is maximum and will be governed by couplings used for installation and related system components. Maximum differential pressure from inlet to outlet must not exceed 10 psi/69 kPa.

*Dimensions will vary depending upon coupling orientation.



Recommended Minimum Clearance Required to Remove Diffuser Basket



Recommended Minimum Clearance Required to Remove Strainer Basket		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C Strainer Basket Clearance† Dimensions Inches mm
14 350	14.000 355.6	30.00 762
16 400	16.000 406.4	32.00 813
18 450	18.000 457.0	35.00 889

† Measurement is from the center line to the top of the basket during removal.

Hole Cut Piping System

- Victaulic developed the concept of a fast, easy mid-pipe outlet that would not require welding
- Gaskets are molded to conform to the O.D. of the pipe and are of a pressure responsive design
- Victaulic hole cut products are mounted to the pipe using either a locating collar (Style 920 and 920N) or a toe and heel (Style 923/924), and provide a smooth flow area
- Request publication 11.01

Hole Cutting Tools

The Vic-Tap is perfect for applications where systems cannot be shut down to add branch connections. Capable of tapping into steel pipe systems under pressures up to 500 psi/3450 kPa Vic-Tap automatically reduces the piping coupon avoiding possible damage to equipment in the pipe line, see pg. 20-11.

Mechanical-T® Bolted Branch Outlet

STYLE 920 AND STYLE 920N GROOVED OUTLET, PG. 7-2

Mechanical-T Bolted Branch Outlet

STYLE 920 AND STYLE 920N FEMALE THREADED OUTLET, PG. 7-2

Mechanical-T Bolted Branch Outlet

STYLE 920 CROSS, PG. 7-4

Vic-Let™ Strapless Outlet

STYLE 923, PG. 7-5

Vic-O-Well™ Strapless Thermometer Outlet

STYLE 924, PG. 7-6

Mechanical-T Bolted Branch Outlet

STYLE 622, PG. 13-5

Mechanical-T Bolted Branch Crosses

STYLE 622, PG. 13-5

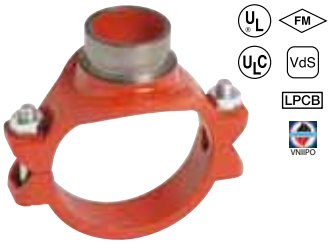
PRODUCTS

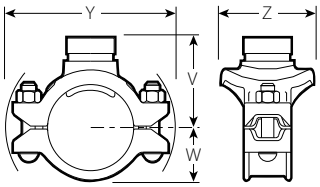
Hole Cut Piping System

Mechanical-T Bolted Branch Outlet

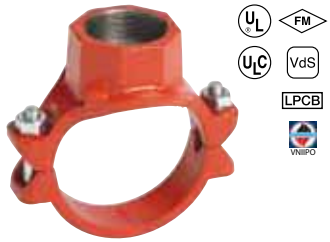
STYLE 920/920N
Grooved/Female Threaded Outlet

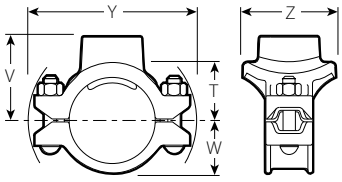
For Complete Information
Request Publication **11.02**





GROOVED OUTLET





FEMALE THREADED OUTLET

- Provide a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 2×½"/50×15 mm through 8×4"/200×100 mm

IMPORTANT NOTES:
Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

Size		Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each	
Run × Branch Nominal Size Inches mm		920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Female Thd. Lbs. kg	Grv. Lbs. kg
2 50	× ½ (a) ¤ 15	920N	500 3450	1.50 38.1	2.00 51	2.53 64	—	1.61 41	5.35 136	2.75 70	3.1 1.5	—
	¾ (a) ¤ 20	920N	500 3450	1.50 38.1	1.97 50	2.53 64	—	1.61 41	5.35 136	2.75 70	3.1 1.5	—
	1 (a) ¤ 25	920N	500 3450	1.50 38.1	1.85 47	2.53 64	—	1.61 41	5.35 136	2.75 70	3.0 1.4	—
	1 ¼ (a) †¤ 32	920N	500 3450	1.75 44.5	2.05 52	2.75 70	3.00 76	1.61 41	5.35 136	3.00 76	3.5 1.7	3.2 1.5
	1 ½ (a) †¤ 40	920N	500 3450	1.75 44.5	2.03 52	2.75 70	3.12 79	1.61 41	5.35 136	3.25 83	3.6 1.7	3.2 1.5
2 ½ 65	× ½ (a) §¤ 15	920N	500 3450	1.50 38.1	2.21 56	2.74 70	—	91.82 46	5.64 143	2.75 70	3.0 1.4	—
	¾ (a) §¤ 20	920N	500 3450	1.50 38.1	2.18 55	2.74 70	—	1.82 46	5.64 143	2.75 70	3.0 1.4	—
	1 (a) §¤ 25	920N	500 3450	1.50 38.1	2.06 52	2.74 70	—	1.82 46	5.64 143	2.75 70	2.9 1.4	—
	1 ¼ † (a) ¤ 32	920N	500 3450	1.75 44.5	2.30 58	3.00 76	3.25 83	1.82 46	6.29 160	3.00 76	3.5 1.7	3.2 1.5
	1 ½ † (a) ¤ 40	920N	500 3450	2.00 50.8	2.28 58	3.00 76	3.25 83	1.82 46	6.26 159	3.25 83	3.6 1.7	3.3 1.6
76.1	× ½ (a) 15	920N	300 2065	1.50 38.1	2.22 56	2.75 70	—	2.25 57	6.46 164	3.18 81	3.9 1.8	—
	¾ (a) 20	920N	300 2065	1.50 38.1	2.19 56	2.75 70	—	2.25 57	6.46 164	3.18 81	3.9 1.8	—
	1 (a) 25	920N	300 2065	1.50 38.1	2.07 53	2.75 70	—	2.25 57	6.46 164	3.18 81	3.8 1.7	—
	1 ¼ (a) ¤ 32	920N	500 3450	1.75 44.5	2.30 58	3.00 76	3.31 84	1.92 49	6.29 160	3.00 76	3.5 1.6	3.2 1.5
	1 ½ (a) ¤ 40	920N	500 3450	2.00 50.8	2.28 58	3.00 76	3.31 84	1.92 49	6.29 160	3.25 83	3.5 1.6	3.3 1.5
3 80	× ½ (a) ¤ 15	920N	500 3450	1.50 38.1	2.52 64	3.05 78	—	2.28 58	6.15 156	2.75 70	3.4 1.6	—
	¾ (a) ¤ 20	920N	500 3450	1.50 38.1	2.49 63	3.05 78	—	2.28 58	6.15 156	2.75 70	3.4 1.6	—
	1 (a) 25	920N	500 3450	1.50 38.1	2.38 61	3.06 78	—	2.28 58	6.15 156	2.75 70	3.3 1.6	—
	1 ¼ (a) †¤ 32 (b)	920N	500 3450	1.75 44.5	2.55 65	3.25 83	3.56 90	2.28 58	6.15 156	3.00 76	3.8 1.8	3.7 1.8
	1 ½ (a) †¤ 40 (b)	920N	500 3450	2.00 50.8	2.78 71	3.50 89	3.56 90	2.28 58	6.15 156	3.25 83	4.1 1.9	3.8 1.8
	2 (a) ¤ 50	920N	500 3450	2.50 63.5	2.75 70	3.50 89	3.56 90	2.28 58	6.75 172	3.88 99	4.9 2.3	4.6 2.1
3 ½ 90	× 2 50	920N	500 3450	2.50 63.5	3.00 76	—	3.75 95	2.44 62	6.72 171	3.88 99	—	3.8 1.8
4 100	× ½ (a) ¤ 15	920N	500 3450	1.50 38.1	3.03 77	3.56 90	—	2.69 68	7.01 178	2.75 70	3.7 1.8	—
	¾ (a) ¤ 20	920N	500 3450	1.50 38.1	3.00 76	3.56 90	—	2.69 68	7.01 178	2.75 70	3.7 1.8	—
	1 (a) ¤ 25	920N	500 3450	1.50 38.1	2.88 73	3.56 90	—	2.69 68	7.01 178	2.75 70	3.6 1.8	—
	1 ¼ (a) †¤ 32 (b)	920N	500 3450	1.75 44.5	3.08 78	3.78 96	4.00 102	2.69 68	7.01 178	3.00 76	4.0 1.9	3.6 1.8
	1 ½ (a) †¤ 40 (b)	920N	500 3450	2.00 50.8	3.28 83	4.00 102	4.00 102	2.69 68	7.01 178	3.25 83	4.2 2.0	3.9 1.9
	2 (a) †¤ 50	920N	500 3450	2.50 63.5	3.25 83	4.00 102	4.00 102	2.69 68	7.01 178	3.88 99	5.0 2.3	4.6 2.1
	2 ½ (a) † 65	920	500 3450	2.75 69.9	2.88 73	4.00 102	4.00 102	2.69 68	7.34 186	4.63 118	5.8 2.6	5.0 2.3
	76.1 mm	920	500 3450	2.75 69.9	2.88 73	—	4.00 102	2.69 68	7.34 186	4.63 118	—	6.4 2.9
	3 (a) † 80	920	500 3450	3.50 88.9	3.31 84	4.50 114	4.12 105	2.69 68	7.73 196	5.12 130	8.4 3.8	6.4 2.9

TABLE CONTINUED ON PG. 7-3

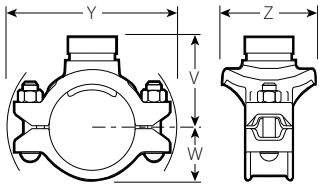
** Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).
† Available with grooved or female threaded outlet. Specify choice on order.
‡ Center of run to end of fitting.
# Female threaded outlets are available to NPT and BSPT specifications.
@ See page 7 for Fire Protection approvals and pressure ratings.
(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.
(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.
§ Vds approved for fire protection services
¤ LPCB approved for fire protection services
Ø Approved for use in China by Tianjin Approvals Company.

Hole Cut Piping System

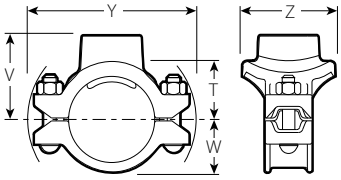
Mechanical-T Bolted Branch Outlet (cont'd)

STYLE 920/920N
Grooved/Female Threaded Outlet

For Complete Information Request Publication **11.02**



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provide a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 2×½"/50×15 mm through 8×4"/200×100 mm

IMPORTANT NOTES:
Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

Size Run × Branch Nominal Size Inches mm			Style No. 920 or 920N	Max. Work Pressure@ psi kPa	Dimensions Hole Diameter +0.13 -0.00 Inches mm	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Approx. Weight Each Female Thd. Lbs. kg	Grv. Lbs. kg
TABLE CONTINUED FROM PAGE 7-2													
108.0	×	1 ¼ (a)¤ 32	920N	500 3450	1.75 44.5	3.08 78	3.78 96	—	2.63 67	7.64 194	3.05 78	5.0 2.3	—
		1 ½ (a)¤ 40	920N	500 3450	2.00 50.8	3.28 83	4.00 102	—	2.63 67	7.64 194	3.25 83	5.0 2.3	—
		2 (a) 50	920N	500 3450	2.50 63.5	3.25 83	4.00 102	—	2.63 67	7.64 194	4.00 102	4.0 1.9	—
		76.1 mm	920	500 3450	2.75 69.9	2.88 73	4.00 102	4.00 102	2.63 67	7.64 194	4.29 109	8.0 3.6	7.8 3.5
		3 (a) 80	920	500 3450	3.50 88.9	3.31 84	4.50 114	4.50 114	2.63 67	7.63 194	4.88 124	6.8 3.1	6.5 3.0
5 125	×	1 ½ (a) † 40	920	500 3450	2.00 50.8	4.03 102	4.75 121	4.75 121	3.16 80	9.70 246	3.69 94	7.4 3.4	7.6 3.4
		2 (a) † 50	920	500 3450	2.50 63.5	4.00 102	4.75 121	4.75 121	3.16 80	9.70 246	4.38 111	8.2 3.7	8.0 3.6
		2½ (a) † 65	920	500 3450	2.75 69.9	3.63 92	4.75 121	4.75 121	3.16 80	9.70 246	4.63 118	8.3 3.8	7.9 3.6
		76.1 mm ¤	920	500 3450	2.75 69.9	3.75 95	—	4.75 121	3.16 80	9.70 246	4.63 118	—	8.0 3.6
		3 (a) † 80	920	500 3450	3.50 88.9	3.81 97	5.00 127	4.63 118	3.16 80	9.70 246	5.31 135	8.4 3.8	8.8 4.0
133.0	×	2 50	920N	500 3450	2.50 63.5	3.75 95	4.50 114	—	3.17 81	8.00 203	3.88 99	8.0 3.6	—
		3 80	920	500 3450	3.50 88.9	3.81 97	5.00 127	—	3.00 76	9.46 240	5.31 135	8.0 3.6	—
139.7	×	1 ½ † 40	920N	500 3450	2.00 50.8	3.78 96	4.50 114	—	3.30 84	8.23 209	3.25 83	7.0 3.2	—
		2 † 50	920N	500 3450	2.50 63.5	3.75 95	4.50 114	—	3.30 84	8.23 209	3.88 99	9.0 4.1	—
6 150	×	1 ¼ (a) 32 (b)	920N	500 3450	1.75 44.5	4.43 112	513 130	513 130	3.79 96	9.15 232	3.25 83	5.1 2.3	4.8 2.2
		1 ½ (a) †¤ 40 (b)	920N	500 3450	2.00 50.8	4.40 112	5.13 130	5.13 130	3.79 96	9.15 232	3.25 83	5.4 2.4	5.1 2.3
		2 (a) †¤ 50	920N	500 3450	2.50 63.5	4.38 111	5.13 130	5.13 130	3.79 96	9.15 232	3.88 99	6.0 2.7	5.6 2.5
		76.1 mm ¤	920	500 3450	2.75 69.9	4.15 105	—	5.21 132	3.69 94	10.51 267	4.63 118	—	8.4 3.8
		3 (a) † 80	920	500 3450	3.50 88.9	4.31 110	5.50 140	5.13 130	3.69 94	10.51 267	5.31 135	9.9 4.5	8.4 3.8
		4 (a) †¤ 100	920	500 3450	4.50 114.3	3.81 97	5.75 146	5.38 137	3.69 94	10.51 267	6.25 159	10.1 4.6	10.1 4.6
159.0	×	1 ½ (a) 40	920N	500 3450	2.00 50.8	4.41 112	5.13 130	—	3.63 92	9.40 239	3.25 83	7.8 3.5	—
		2 (a) 50	920N	500 3450	2.50 63.5	4.38 111	5.13 130	—	3.63 92	9.40 239	3.88 99	8.0 3.6	—
		76.1 mm	920	500 3450	2.75 69.9	4.38 111	5.50 140	5.13 130	3.63 92	9.40 239	4.63 118	9.5 4.3	9.5 4.3
		3 80	920	500 3450	3.50 88.9	4.31 110	5.50 140	5.13 130	3.63 92	9.40 239	5.31 135	8.1 3.7	14.0 6.4
		108.0 mm	920	500 3450	4.50 114.3	4.45 113	—	5.38 137	3.63 92	9.40 239	6.12 155	—	10.0 4.5
		4 100	920	500 3450	4.50 114.3	3.81 96.80	5.75 146	—	3.63 92	9.40 239	6.25 159	18.0 8.2	—
165.1	×	1 25	920N	500 3450	1.50 38.1	3.88 99	4.56 116	—	3.79 96	9.34 237	2.75 70	8.0 3.6	—
		1 ¼ ¤ 32	920N	500 3450	1.75 44.5	4.43 113	5.13 130	—	3.79 96	9.34 237	3.25 83	8.4 3.8	—
		1 ½ (a) †¤ 40	920N	500 3450	2.00 50.8	4.41 112	5.13 130	5.13 130	3.79 96	9.34 237	3.25 83	8.4 3.8	5.4 2.4
TABLE CONTINUED ON PG. 7-4													

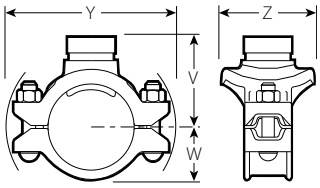
** Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).
† Available with grooved or female threaded outlet. Specify choice on order.
‡ Center of run to end of fitting.
# Female threaded outlets are available to NPT and BSPT specifications.
@ See page 7 for Fire Protection approvals and pressure ratings.
(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.
(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.
§ Vds approved for fire protection services
¤ LPCB approved for fire protection services
Ø Approved for use in China by Tianjin Approvals Company.

Hole Cut Piping System

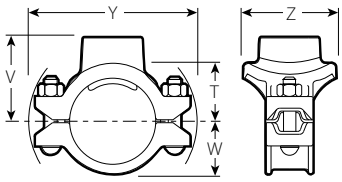
Mechanical-T Bolted Branch Outlet (cont'd)

STYLE 920/920N
Grooved/Female Threaded Outlet

For Complete Information
Request Publication **11.02**



GROOVED OUTLET



FEMALE THREADED OUTLET

Size		Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each	
Run × Branch Nominal Size Inches mm		920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Female Thd. Lbs. kg	Grv. Lbs. kg
TABLE CONTINUED FROM PAGE 7-3												
165.1 ×	2 (a) † 50	920N	500 3450	2.50 63.5	4.38 111	5.13 130	5.13 130	3.79 96	9.34 237	3.88 99	8.5 3.9	6.0 2.7
	76.1 mm	920	500 3450	2.75 69.9	4.01 110	5.13 130	5.21 132	3.63 92	10.51 267	4.63 118	8.6 3.9	7.6 3.4
	3 (a) † ø 80	920	500 3450	3.50 88.9	4.31 110	5.50 140	5.13 130	3.63 92	10.51 267	5.31 135	10.2 4.6	8.4 3.8
	4 (a) †¤ 100	920	500 3450	4.50 114.3	3.81 97	5.75 146	5.38 137	3.63 92	10.51 267	6.25 159	10.5 4.8	8.4 3.8
8 200 ×	2 (a) † 50	920	500 3450	2.75 69.9	5.44 138	6.19 157	6.25 159	4.81 122	12.42 316	4.50 114	11.6 5.3	11.6 5.3
	2½ (a) † 65	920	500 3450	2.75 69.9	5.07 129	6.19 157	6.19 157	4.81 122	12.42 316	4.50 114	11.6 5.3	11.6 5.3
	76.1 mm ¤	920	500 3450	2.75 69.9	5.25 133	—	6.25 159	4.81 122	12.42 316	4.56 116	—	11.6 5.3
	3 (a) †¤ 80	920	500 3450	3.50 88.9	5.31 135	6.50 165	6.50 165	4.81 122	12.42 316	5.31 135	12.6 5.7	11.6 5.3
	4 (a) †¤ 100	920	500 3450	4.50 114.3	4.81 122	6.75 171	6.38 162	4.81 122	12.42 316	6.25 159	15.3 6.9	12.5 5.7

** Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).
† Available with grooved or female threaded outlet. Specify choice on order.
‡ Center of run to end of fitting.
# Female threaded outlets are available to NPT and BSPT specifications.
@ See page 7 for Fire Protection approvals and pressure ratings.`
(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.
(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.
§ Vds approved for fire protection services
¤ LPCB approved for fire protection services
Ø Approved for use in China by Tianjin Approvals Company.

- Provide a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 2×½"/50×15 mm through 8×4"/200×100 mm

IMPORTANT NOTES:
Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

Mechanical-T Bolted Branch Outlet

STYLE 920 CROSS

For Complete Information
Request Publication **11.03**

Mechanical-T Cross assemblies can be achieved with the use of two Style 920 or 920N of the same run size and the same or differing outlet size. Most sizes of Mechanical-T are available with either grooved or female threaded outlets. Your choice must be specified on each order.

NOTE: Style 920 and Style 920N housings cannot be mated to achieve cross connections.

Hole Cut Piping System

Vic-Let Strapless Outlet

STYLE 923

For Complete Information Request Publication **11.05**

TYPICAL 4–8"/100–200 mm IPS SIZES

TYPICAL 10"/250 mm AND LARGER SIZES

- Fast, easy pipe outlet eliminates the need for welded outlets
- Pressure rated up to 300 psi/2065 kPa
- Standard wall pipe steel pipe for sizes 4–8"/100–200 mm and Schedules 10 – 40 steel pipe for sizes 10"/250 mm and larger

Size		Max. Work Pressure	Dimensions					Approx. Weight Each
Run × Branch Nominal Size Inches mm			Hole Dimensions		Vic-Let Dimensions			
		psi * kPa	Hole Saw Size Inches mm	Max. Perm. Dia. Inches mm	T ** Inches mm	X Inches mm	Y *** Inches mm	Lbs. kg
4 – 8 100 – 200	× ½ 15	300 2065	1.50 38.1	1.56 39.6	2.47 63	3.00 76	3.09 78	1.9 0.9
	¾ 20	300 2065	1.50 38.1	1.56 39.6	2.44 62	3.00 76	3.09 78	1.6 0.7
10 – larger 250 – larger	× ½ 15	300 2065	1.50 38.1	1.56 39.6	2.47 63	3.00 76	3.00 76	1.9 0.9
	¾ 20	300 2065	1.50 38.1	1.56 39.6	2.44 62	3.00 76	3.00 76	1.6 0.7

* On schedule 40 pipe 4 – 8"/100 – 200 mm and Schedule 10 – 40 for sizes 10"/250 mm and larger. Minimum 0.165"/4.2 mm, maximum 0.375"/9.5 mm wall thickness on large pipe or flat plate. Pressure rating is for Vic-Let outlet only, pipe used must also be rated at this pressure or higher.

** Inside wall of run to engaged pipe end.

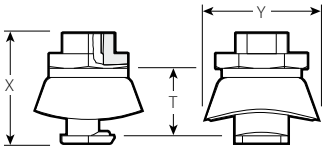
*** Width of collar is as supplied, width assembled changes due to collar deformation at assembly.

IMPORTANT NOTES:

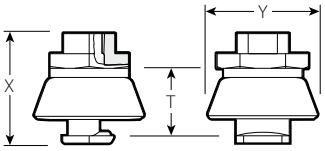
Flow Data: Flow area equivalent to ¾"/20 mm pipe. Accepts 7⁄16"/11 mm diameter probe.

Warning: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

Due to deformation of the collar, Vic-O-Well thermometer well outlet should not be re-used after initial installation.



TYPICAL 4–8"/100–200 mm IPS SIZES



TYPICAL 10"/250 mm AND LARGER SIZES

Hole Cut Piping System

Vic-O-Well Strapless Thermometer Outlet

STYLE 924

For Complete Information Request Publication **11.06**

TYPICAL 4–8"/ 100–200 mm IPS SIZES

TYPICAL 10"/250 mm AND LARGER SIZES

- Fast, easy connection combining features of thermowell and strapless mechanical outlet
- Main body is machined internally to standard thread well dimension 1¼"/32mm outlet – 1¼ – NEF18 – 2B
- Eliminates the need for welded outlets
- Ideal for a variety of industrial glass thermometers with a 6/150 mm nominal bulb length
- Provides 2½"/65 mm for insulation and lagging
- Pressure rated up to 300 psi/2065 kPa on steel pipe
- Sizes from 4–8"/ 100–200 mm through 10"/250 mm and larger

Size	Max. Work Pressure	Dimensions					Approx. Weight Each
		Hole Dimensions		Vic-O-Well Dimensions			
Run × Branch Nominal Size Inches mm	psi* kPa	Hole Saw Size Inches mm	Max. Perm. Dia. Inches mm	T** Inches mm	X Inches mm	Y*** Inches mm	Lbs. kg
4 – 8 for 6" Stem † 100 – 200 for 150 mm Stem	300 2065	1.50 38.1	1.56 39.6	3.00 76	7.09 180	3.09 78	2.4 1.1
10 – larger for 6" Stem † 250 – larger for 150 mm Stem	300 2065	1.50 38.1	1.56 39.6	3.00 76	7.09 180	3.09 78	2.3 1.0

* Pressure rating for steel pipe minimum, 0.165"/4.2 mm, maximum 0.375"/9.5 mm wall. Not for use on Schedule 10 for 4 – 8"/100 – 200 mm pipe. Pressure rating is 200 psi/1375 kPa for standard wall aluminum pipe.

** Inside wall of run to end of probe.

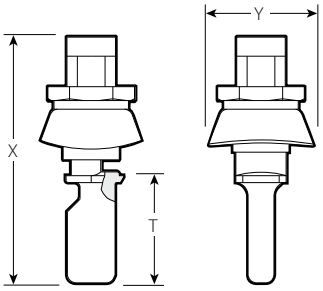
*** Width of collar is as supplied, width assembled changes due to collar deformation at assembly.

IMPORTANT NOTES:

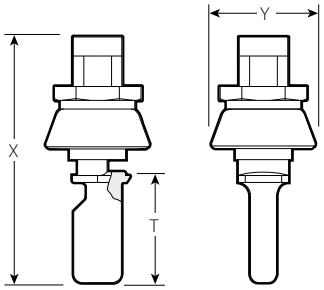
Flow Data: Flow characteristics for Vic-O-Well Style 924 and Vic-Let Style 923 are superior to standard welded or threaded outlets of equivalent branch sizes.

Warning: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

Due to deformation of the collar, Vic-O-Well thermometer should not be re-used after initial installation.



TYPICAL 4–8"/100–200 mm IPS SIZES



TYPICAL 10"/250 mm AND LARGER SIZES

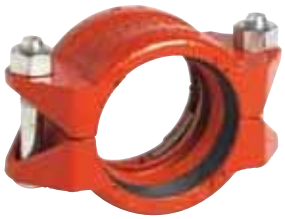
Plain End Piping System

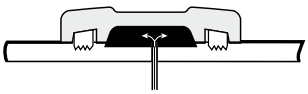
The Victaulic plain end piping method is ideal for maintenance and repairs as well as new systems such as roof drains, slurries, tailings and oil field services. Roust-A-Bout couplings and plain end fittings are UL and ULC Listed for fire protection services.

Victaulic plain end couplings are primarily designed for use on standard weight steel pipe (Schedule 40), but may be used on lightwall steel or other metallic pipe such as aluminum or stainless steel. They are not intended for use on plastic pipe, plastic-coated pipe or brittle pipe, such as asbestos cement or cast iron. Nor are they intended for use on pipe with a surface hardness greater than 150 Brinell.

Roust-A-Bout® Coupling

STYLE 99, PG. 8-3

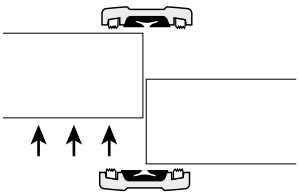




All illustrations shown are exaggerated for clarity

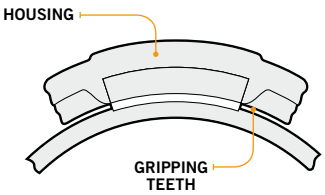
RELIABLE AND LEAK-FREE

- Pressure responsive gasket design seals under pressure or vacuum
- Standard gaskets cover most services
- Special gaskets available for many chemical services



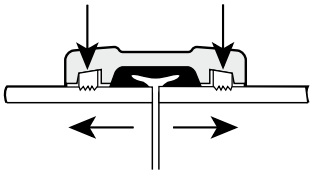
UNION AT EVERY JOINT

- Permits easy access to existing lines
- Removal of only two couplings permits removal of pipe, valves or equipment
- Permits rotation of pipe



JAWS CONFORM TO PIPE

- Roust-A-Bout jaws are circumferentially curved to match pipe contour
- Provide greater pipe contact for positive grip
- Pinned into housing to prevent loss before installation



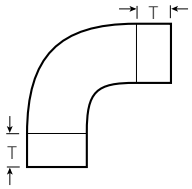
ROUST-A-BOUT JAWS RIGID TO GRIP PIPE

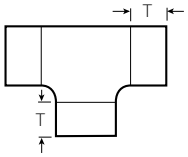
- Set at right angle to the pipe for gripping efficiency

Plain End Piping System

Plain End Fittings Required Tangent Length

- Use chart to the right to figure out tangent length
- For use with Style 99 Roust-A-Bout couplings
- With plain end or beveled end pipe
- Cast of ductile iron and finished with a dip coat of enamel
- Request Publication 14.04

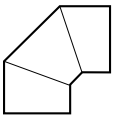




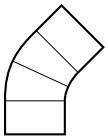
Size		Tangent Length
Nominal Size Inches mm	Actual Outside Diameter Inches mm	T Minimum Inches mm
1 ½ 40	1.900 48.3	1.50 38
2 50	2.375 60.3	1.75 45
2 ½ 65	2.875 73.0	1.75 45
3 80	3.500 88.9	1.75 45
3 ½ 90	4.000 101.6	1.75 45
4 100	4.500 114.3	2.00 51
5 125	5.563 141.3	2.13 54

Size		Tangent Length
Nominal Size Inches mm	Actual Outside Diameter Inches mm	T Minimum Inches mm
165.1 mm	6.500 165.1	2.13 54
6 150	6.625 168.3	2.13 54
8 200	8.625 219.1	2.25 57
10 250	1.750 273.0	2.25 57
12 300	12.750 323.9	2.25 57
14 350	14.000 355.6	2.25 57
16 400	16.000 406.4	2.25 57

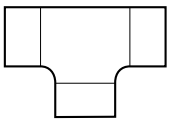
Fittings



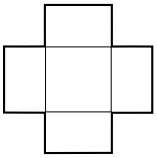
90° Elbow
Seg. Welded Steel
NO. 10P, PG. 8-4



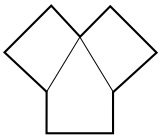
45° Elbow
Seg. Welded Steel
NO. 11P, PG. 8-4



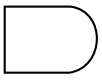
Tee
NO. 20P, PG. 8-5



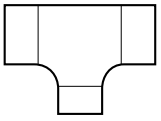
Cross
NO. 35P, PG. 8-5



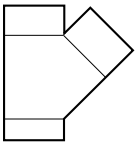
True Wye
NO. 33P, PG. 8-5



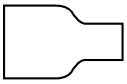
Steel Bull Plug
NO. 61P, PG. 8-5



Reducing Tee
NO. 25P, PG. 8-6



45° Lateral
NO. 30P, PG. 8-6



Swaged Nipple
NO. 53P, PG. 8-7

Adapter Nipple
Plain End × Thd.
NO. 40P, PG. 8-8

Adapter Nipple
Plain End × Bev.
NO. 42P, PG. 8-8

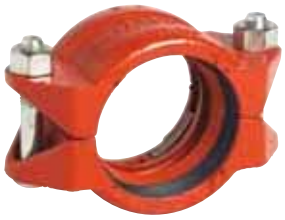
Adapter Nipple
Plain End × Grv.
NO. 43P, PG. 8-8

Plain End Piping System – Couplings

Roust-A-Bout Coupling

STYLE 99

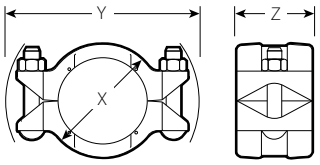
For Complete Information Request Publication **14.02**



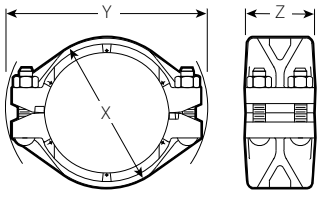
- Specifically designed for plain end steel and stainless steel pipe
- Gripping teeth provide a strong component for joining plain and beveled end (including Schedule 80 steel pipe)
- Not to be used on plastic pipe, pipe with brittle linings, cast or ductile iron pipe nor any pipe with a surface hardness greater than 150 Brinell
- Pressure rated up to 750 psi/5175 kPa
- Sizes from 1 – 18"/25 – 450 mm

Size		Max. Work Pressure*	Max. End Load*	Dimensions			Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. kg	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
1 25	1.315 33.7	600 4130	800 3560	2.56 65	4.25 108	2.25 57	1.7 0.8
1 ½ 40	1.900 48.3	750 5175	2100 9345	3.25 83	5.50 140	2.88 73	3.6 1.6
2 50	2.375 60.3	750 5175	3300 14685	3.75 95	6.75 171	3.38 86	5.3 2.4
2 ½ 65	2.875 73.0	600 4130	3890 17310	4.25 108	7.13 181	3.38 86	5.7 2.5
76.1 mm	3.000 76.1	400 2700	2825 12500	4.69 119	6.25 159	2.75 70	4.4 2.0
3 80	3.500 88.9	600 4130	5770 25676	5.00 127	8.50 216	3.38 86	8.7 3.9
3 ½ 90	4.000 101.6	500 3450	6280 27946	5.50 140	9.25 235	3.63 92	10.6 4.8
4 100	4.500 114.3	450 3100	7155 31840	6.13 156	10.00 254	4.00 102	12.8 5.8
5 125	5.563 141.3	350 2400	8500 37825	7.25 184	11.38 289	4.38 111	17.3 7.8
139.7 mm	5.500 139.7	250 1700	5940 26440	7.80 200	10.75 260	3.19 81	9.0 4.1
6 150	6.625 168.3	300 2065	10340 46013	850 216	13.38 340	4.38 111	23.2 10.5
165.1 mm	6.500 165.1	300 2065	9955 44300	8.38 213	13.25 337	4.38 111	22.2 10.1
8 200	8.625 219.1	250 1700	14600 64970	10.88 276	14.38 365	5.00 127	37.2 16.9
10 250	10.750 273.0	250 1700	22700 101015	13.38 340	16.38 416	5.00 127	48.2 21.9
12 300	12.750 323.9	250 1700	31900 141955	15.50 394	19.63 499	5.13 130	60.0 27.2
14 350	14.000 355.6	200 1400	30800 137060	16.75 425	20.75 527	5.38 137	89.0 40.4
16 400	16.000 406.4	150 1000	30200 134390	19.00 483	22.63 575	5.38 137	105.0 47.6
18 450	18.000 457.0	150 1000	38200 169990	21.00 533	23.50 597	5.38 137	125.0 56.7

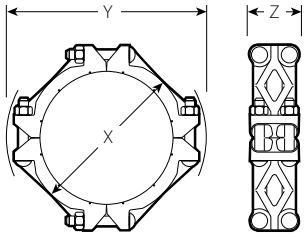
* Working Pressure and End Load are total, from all internal and external loads, based on coupling properly assembled, with bolts fully torqued to listed specifications, on plain end or beveled end standard weight (ANSI) steel pipe and Victaulic plain end fittings. Couplings are designed to be used with plain end pipe and Victaulic plain end fittings only.



TYPICAL 1 – 6"/25 – 150 mm SIZES



TYPICAL 8 – 12"/200 – 300 mm SIZES



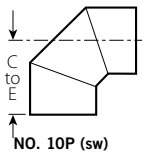
TYPICAL 14 – 18"/350 – 450 mm SIZES

Plain End Piping System – Fittings

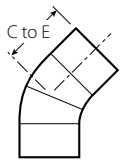
Elbow

NO. 10P 90° Elbow
NO. 11P 45° Elbow
(Segmentally welded steel #)

For Complete Information Request Publication **14.04**



NO. 10P (sw)



NO. 11P (sw)

Size		No. 10P 90° Elbow		No. 11P 45° Elbow	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg
1 25	1.315 33.7	2.25 (d) 57	0.6 0.3	1.75 (d) 44	0.6 0.3
1 ½ 40	1.900 48.3	4.00 102	1.4 0.6	2.88 73	1.0 0.5
2 50	2.375 60.3	4.75 121	2.9 1.3	3.13 80	1.4 0.6
2 ½ 65	2.875 73.0	5.50 140	3.9 1.8	3.50 89	2.3 1.0
3 80	3.500 88.9	6.25 159	6.15 2.8	3.75 95	4.3 2.0
3 ½ 90	4.000 101.6	7.00 178	7.0 3.2	4.00 102	5.5 2.5
4 100	4.500 114.3	7.75 197	9.9 4.5	4.25 108	7.0 3.2
5 125	5.563 141.3	9.50 (d) 241	20.4 9.3	5.13 130	18.0 8.2
6 150	6.625 168.3	6.50 (d) 165	20.4 9.3	3.50 (d) 89	11.9 5.4
8 200	8.625 219.1	10.00 254	42.0 19.1	6.00 152	28.5 12.9
10 250	10.750 273.0	11.50 292	50.0 22.7	6.50 165	41.0 18.6
12 300	12.750 323.9	13.50 343	156.0 70.8	7.00 178	57.8 26.2

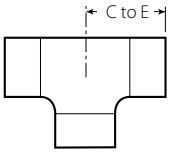
Segmentally welded steel except those marked (d) which are ductile iron.

Plain End Piping System – Fittings

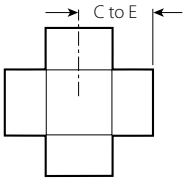
Tee, Cross, True Wye, and Bull Plug

NO. 20P Tee
NO. 35P Cross
NO. 33P True Wye
NO. 61P Bull Plug
(Segmentally welded steel #)

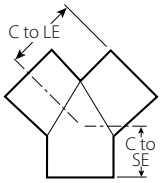
For Complete Information
Request Publication **14.04**



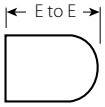
NO. 20P



NO. 35P



NO. 33P



NO. 61P

Size		No. 20P Tee		No. 35P Cross		No. 33P True Wye			No. 61P Steel Bull Plug	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Wgt. Each Lbs. kg	E to E Inches mm	Approx. Wgt. Each Lbs. kg
1 25	1.315 33.7	2.25 (d) 57	1.0 0.5	3.25 83	1.7 0.8	3.25 83	2.25 57	1.1 0.5	3.00 76	0.7 0.3
1 ½ 40	1.900 48.3	2.75 70	1.7 0.8	4.00 102	3.5 1.6	4.00 102	2.75 70	1.8 0.8	3.50 89	1.2 0.5
2 50	2.375 60.3	3.25 83	3.0 1.4	4.25 108	5.2 2.4	4.25 108	2.75 70	2.9 1.3	4.00 102	2.0 0.9
2 ½ 65	2.875 73.0	3.75 95	6.8 3.1	4.75 121	5.4 2.4	4.75 121	3.00 76	9.0 4.1	5.00 127	3.0 1.4
3 80	3.500 88.9	4.25 108	9.0 4.1	5.13 130	8.5 3.9	5.13 130	3.25 83	8.5 3.9	6.00 152	4.5 2.0
3 ½ 90	4.000 101.6	5.50 140	12.5 5.7	5.50 140	9.0 4.1	5.50 140	3.50 89	10.0 4.5	6.50 165	6.0 2.7
4 100	4.500 114.3	5.00 (d) 127	11.9 5.4	5.88 149	10.8 4.9	5.88 149	3.75 95	14.0 6.4	7.00 178	7.5 3.4
5 125	5.563 141.3	6.88 175	17.1 7.8	6.88 175	20.0 9.1	6.88 175	4.00 102	21.6 9.8	8.50 216	11.5 5.2
6 150	6.625 168.3	6.50 (d) 165	29.5 13.3	7.63 194	30.0 13.6	7.63 194	4.50 114	31.2 14.2	10.00 254	17.0 7.7
8 200	8.625 219.1	10.00 254	71.5 32.4	10.00 254	66.4 30.1	10.00 254	6.00 152	36.0 16.3	11.00 279	29.0 13.2
10 250	10.750 273.0	11.50 292	116.0 52.6	11.50 292	103.0 46.7	11.50 292	6.50 165	52.0 23.6	13.00 330	48.0 21.8
12 300	12.750 323.9	13.50 343	120.0 54.4	13.50 343	158.0 71.7	13.50 343	7.00 178	81.2 36.8	14.00 356	60.0 27.2

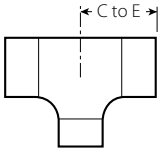
Segmentally welded steel except those marked (d) which are ductile iron.

Plain End Piping System – Fittings

Reducing Tee

NO. 25P
(Ductile Iron)

For Complete Information
Request Publication **14.04**



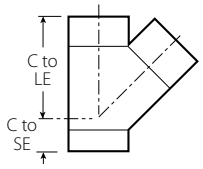
NO. 25P

Size						No. 25P Reducing Tee	
Nominal Size Inches mm						C to E Inches mm	Approx. Weight Each Lbs. kg
1 ½ 40	×	1 ½ 40	×	1 25		4.00 102	2.2 1.0
2 50	×	2 50	×	1 25		4.25 108	2.9 1.3
				1 ½ 40		4.25 108	3.1 1.4
3 80	×	3 80	×	1 25		5.13 130	6.7 3.0
				1 ½ 40		5.13 130	6.9 3.1
				2 50		5.13 130	7.1 3.2
4 100	×	4 100	×	1 25		5.88 149	10.9 4.9
				1 ½ 40		5.88 149	11.1 5.0
				2 50		5.88 149	11.3 5.1
				2 ½ 65		5.88 149	11.6 5.3
				3 80		5.88 149	11.9 5.4
6 150	×	6 150	×	2 50		7.63 194	24.7 11.2
				3 80		7.63 194	25.4 11.5
				4 100		7.63 194	26.2 11.9
8 200	×	8 200	×	2 50		10.00 254	42.0 15.2
				3 80		10.00 254	44.0 20.0
				4 100		10.00 254	46.0 20.9
				5 125		10.00 254	48.0 21.8
				6 150		10.00 254	50.0 22.7
10 250	×	10 250	×	4 100		11.50 292	74.0 33.6
				6 150		11.50 292	78.0 35.4
				8 200		11.50 292	86.0 39.0
12 300	×	12 300	×	6 150		13.50 343	112.0 50.8
				8 200		13.50 343	118.0 53.5
				10 250		13.50 343	130.0 59.0

45° Lateral

NO. 30P
(Segmentally Welded Steel)

For Complete Information
Request Publication **14.04**



NO. 30P

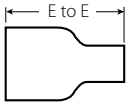
Size		No. 30P 45° Lateral		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
1 25	1.315 33.7	5.00 127	2.25 57	3.5 1.6
1 ½ 40	1.900 48.3	6.25 159	2.75 70	3.5 1.6
2 50	2.375 60.3	7.25 184	2.75 70	5.1 2.3
2 ½ 65	2.875 73.0	7.75 197	3.00 76	9.3 4.2
3 80	3.500 88.9	8.75 222	3.25 83	12.8 5.8
3 ½ 90	4.000 101.6	10.00 254	3.50 89	20.0 9.1
4 100	4.500 114.3	10.75 263	3.75 95	19.0 8.6
5 125	5.563 141.3	12.75 324	4.00 102	30.0 13.6
6 150	6.625 168.3	14.00 356	4.50 114	43.3 19.6
8 200	8.625 219.1	18.00 457	6.00 152	92.0 41.7
10 250	10.750 273.0	20.75 527	6.50 165	106.0 48.1
12 300	12.750 323.9	24.50 622	7.00 178	167.0 75.8

Plain End Piping System – Fittings

Swaged Nipple

NO. 53P
(Steel)

For Complete Information
Request Publication **14.04**



NO. 53P

Size			No. 53P Swaged Nipple	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
1 ½ 40	×	1 25	4.50 114	1.2 0.6
2 50	×	1 25	6.50 165	2.0 0.9
		1 ½ 40	6.50 165	2.0 0.9
2 ½ 65	×	1 25	7.00 178	3.0 1.4
		1 ½ 40	7.00 178	3.0 1.4
		2 50	7.00 178	3.0 1.4
3 80	×	1 25	8.0 203	4.5 2.0
		1 ½ 40	8.00 203	4.5 2.0
		2 50	8.00 203	4.5 2.0
		2 ½ 65	8.00 203	4.5 2.0
3 ½ 90	×	3 80	8.00 203	6.8 3.1
4 100	×	1 25	9.00 229	7.5 3.4
		1 ½ 40	9.00 229	7.5 3.4
		2 50	9.00 229	7.5 3.4
		2 ½ 65	9.00 229	7.5 3.4
		3 80	9.00 229	7.5 3.4
		3 ½ 90	9.00 229	7.5 3.4
5 125	×	2 50	11.00 279	11.5 5.2
		3 80	11.00 279	11.5 5.2
		4 100	11.00 279	11.5 5.2

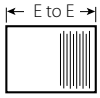
Size			No. 53P Swaged Nipple	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
6 150	×	1 25	12.00 305	16.0 7.3
		1 ½ 40	12.00 305	16.0 7.3
		2 50	12.00 305	17.0 7.7
		2 ½ 65	12.00 305	17.0 7.7
		3 80	12.00 305	17.0 7.7
		3 ½ 90	12.00 305	17.0 7.7
		4 100	12.00 305	17.0 7.7
		5 125	12.00 305	17.0 7.7
8 200	×	3 80	13.00 330	29.0 13.2
		4 100	13.00 330	29.0 13.2
		5 125	13.00 330	29.0 13.2
		6 150	13.00 330	48.0 21.8
10 250	×	3 80	15.00 381	48.0 21.8
		4 100	15.00 381	48.0 21.8
		6 150	15.00 381	48.0 21.8
		8 200	15.00 381	48.0 21.8
12 300	×	6 150	16.00 406	59.0 26.8
		8 200	16.00 406	59.0 26.8
		10 250	16.00 406	59.0 26.8

Plain End Piping System – Fittings

Adapter Nipple

NO. 40P Plain End × Thd.
NO. 42P Plain End × Bev.
NO. 43P Plain End × Grv.
(Steel)

For Complete Information
Request Publication **14.04**



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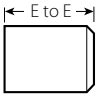

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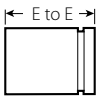


NO. 43P

Size		Dimensions	Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Lbs. kg
1 25	1.315 33.7	3.00 76	0.9 0.4
1 ½ 40	1.900 48.3	4.00 102	0.9 0.4
2 50	2.375 60.3	4.00 102	1.2 0.5
2 ½ 65	2.875 73.0	4.00 102	1.9 0.9
3 80	3.500 88.9	4.00 102	2.5 1.1
4 100	4.500 114.3	6.00 152	5.4 2.5
6 150	6.625 168.3	6.00 152	9.4 4.3

Grooved System for Stainless Steel Pipe

- Fast, easy and reliable method for joining Sch. 5S, 10S or 40S stainless pipe
- Fittings are supplied with grooves, ready to install
- Couplings available for rigid or flexible joints

Couplings

Rigid Coupling
STYLE 489, PG. 9-3

Rigid Coupling
STYLE 89, PG. 9-4
AGS STYLE W89, PG. 6-5

Flexible Coupling
STYLE 77S, PG. 9-5

Flexible Coupling
STYLE 475, PG. 9-6

Vic-Flange Adapter ANSI Class 150
STYLE 441, PG. 9-7

Grooved System for Stainless Steel Pipe

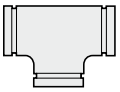
Stainless Steel Sch. 10S Fittings

90° Elbow

NO. 410 SS, PG. 9-8

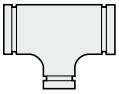
45° Elbow

NO. 411 SS, PG. 9-8



Tee

NO. 420 SS, PG. 9-8

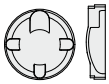


Reducing Tee

NO. 425 SS, PG. 9-9

Concentric Reducer

NO. 450 SS, PG. 9-9



Cap

NO. 460 SS, PG. 9-8

Valves

Butterfly Valve

SERIES 763, PG. 9-10

Swinger Check Valve

SERIES 712S, PG. 9-12

Vic-Ball Valve

SERIES 726S, PG. 9-13

Grooved System for Stainless Steel Pipe – Couplings

Rigid Coupling

STYLE 489

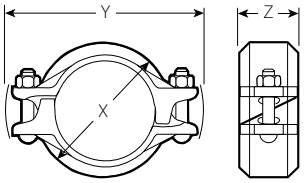
For Complete Information Request Publication **17.25**

- CF8M stainless steel for corrosion resistance and strength
- Provides an essentially rigid joint
- Pressure rated up to 1200psi/4136kPa for Schedule 40S duplex or super duplex, 600 psi/4136 kPa for Schedule 40S, 300 psi/2065 kPa for Schedule 10S, and 200 psi/1375 kPa for Schedule 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.25
- Sizes from 1½–12"/40–300 mm

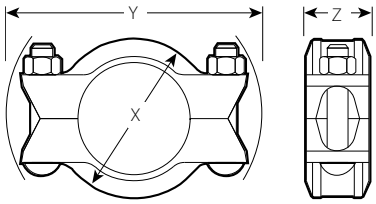
Size		Schedule 40S			Schedule 40S††			Schedule 10S			Schedule 5S		
Nominal Dia. Inches mm	Actual Outside Diameter Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm
1½ 40	1.900 48.3	600 4136	1700 7565	0.145 3.7	– –	– –	– –	300 2065	850 3783	0.109 2.8	200 1379	570 2537	0.065 1.7
2 50	2.375 60.3	600 4136	2660 11837	0.154 3.9	– –	– –	– –	300 2065	1330 5919	0.109 2.8	200 1379	890 3961	0.065 1.7
2½ 65	2.875 73.0	600 4136	3900 17355	0.203 5.1	– –	– –	– –	300 2065	1950 8678	0.120 3.1	200 1379	1300 5785	0.083 2.1
76.1 mm	3.000 76.1	600 4136	4240 18868	0.203 5.1	– –	– –	– –	300 2065	2120 9434	0.120 3.1	200 1379	1415 6297	0.083 2.1
3 80	3.500 88.9	600 4136	5775 25699	0.216 3.5	– –	– –	– –	300 2065	2890 12861	0.120 3.1	200 1379	1925 8566	0.083 2.1
4 100	4.500 114.3	600 4136	9540 42453	0.237 6.0	– –	– –	– –	300 2065	4775 21249	0.120 3.1	200 1379	3180 14151	0.083 2.1
139.7 mm	5.500 139.7	600 4136	14250 63413	0.258 6.6	1200†† 8273	28500†† 126826	0.258 6.6	300 2065	7130 31729	0.134 3.4	200 1379	4750 21138	0.109 2.8
165.1 mm	6.500 165.1	600 4136	19910 88600	0.280 7.1	1200†† 8273	39820†† 177200	0.280 7.1	300 2065	9955 44300	0.134 3.4	200 1379	6640 29548	0.109 2.8
6 150	6.625 168.3	600 4136	20680 92026	0.280 7.1	1200†† 8273	41370†† 184030	0.280 7.1	300 2065	10340 46015	0.134 3.4	200 1379	6895 30685	0.109 2.8
216.3 mm	8.515 216.3	600 4136	34175 152079	0.322 8.2	– –	– –	– –	300 2065	17090 76051	0.148 3.8	200 1379	11390 50686	0.109 2.8
8 200	8.625 219.1	600 4136	35055 155995	0.322 8.2	1200†† 8273	70110†† 311870	0.322 8.2	300 2065	17530 78010	0.148 3.8	200 1379	11685 52000	0.109 2.8
267.4 mm	10.528 267.4	600 4136	52230 232424	0.365 9.3	– –	– –	– –	300 2065	26115 116212	0.165 4.2	200 1379	17410 77475	0.134 3.4
10 250	10.750 273.0	600 4136	54460 242345	0.365 9.3	1200†† 8273	108920†† 484500	0.365 9.3	300 2065	27230 121175	0.165 4.2	200 1379	18150 80770	0.134 3.4
318.5 mm	12.539 318.5	600 4136	74100 329745	0.375 9.5	– –	– –	– –	300 2065	37050 164873	0.180 4.6	200 1379	24700 109915	0.156 4.0
12 300	12.750 323.9	600 4136	76605 340890	0.375 9.5	1200†† 8273	153210†† 681520	0.375 9.5	300 2065	38300 170435	0.180 4.6	200 1379	25535 113630	0.156 4.0

* Refer to General Notes on pg. 1-4.

†† Cut grooved, sch. 40S duplex pipe



TYPICAL 1½–4"/40–100 mm SIZES



TYPICAL 6–12"/139.7–300 mm SIZES

Grooved System for Stainless Steel Pipe – Couplings

Rigid Coupling

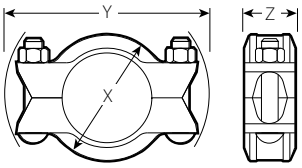
STYLE 89

For Complete Information
Request Publication **17.24**

- Heavy-duty, galvanized ductile iron housing designed for use specifically with stainless steel systems
- Wider housing key than standard coupling
- Provides an essentially rigid joint
- Pressure rated up to 1200 psi/8273 kPA for Schedule 40S duplex or Standard Wall, 750 psi/5175 kPa for Schedule 40S, 300 psi/2065 kPa for Schedule 10S, and 200 psi/1375 kPa for Schedule 5S;
  For specific pressure ratings by size and schedule, please refer to Publication 17.24
- Sizes from 2–12"/50–300 mm

Size		Schedule 40S			Schedule 40S Duplex†			Schedule 10S			Schedule 5S		
Nominal Dia. Inches mm	Actual Outside Diameter Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm
2 50	2.375 60.3	750 5171	3320 14774	0.154 3.9	1200 8273	5320 23676	0.154 3.9	300 2065	1330 5919	0.109 2.8	200 1379	890 3961	0.065 1.7
2½ 65	2.875 73.0	750 5171	4875 21694	0.203 5.2	1200 8273	7800 34712	0.203 5.2	300 2065	1950 8678	0.120 3.1	200 1379	1300 5785	0.083 2.1
76.1 mm	3.000 76.1	750 5171	5300 23585	0.203 5.2	1200 8273	8480 37736	0.203 5.2	300 2065	2120 9434	0.120 3.1	200 1379	1415 6297	0.083 2.1
3 80	3.500 88.9	750 5171	7215 32107	0.216 5.5	1200 8273	11560 51444	0.216 5.5	300 2065	2890 12861	0.120 3.1	200 1379	1925 8566	0.083 2.1
4 100	4.500 114.3	750 5171	11930 53089	0.237 6.0	1200 8273	19100 84996	0.237 6.0	300 2065	4775 21249	0.120 3.1	200 1379	3180 14151	0.083 2.1
5 125	5.500 139.7	750 5171	17820 79299	0.258 6.6	1200 8273	28520 126916	0.258 6.6	300 2065	7130 31729	0.134 3.4	200 1379	4750 21138	0.109 2.8
165.1 mm	6.500 165.1	750 5171	24890 110761	0.280 7.1	1200 8273	39820 177200	0.280 7.1	300 2065	9955 44300	0.134 3.4	200 1379	6640 29548	0.109 2.8
6 150	6.625 168.3	750 5171	25850 115035	0.280 7.1	1200 8273	41360 184060	0.280 7.1	300 2065	10340 46015	0.134 3.4	200 1379	6890 30660	0.109 2.8
216.3 mm	8.515 216.3	600 4136	34175 152079	0.322 8.2	1200 8273	68360 304204	0.322 8.2	300 2065	17090 76051	0.148 3.8	200 1379	11390 50686	0.109 2.8
8 200	8.625 219.1	600 4136	35055 155995	0.322 8.2	1200 8273	70100 311940	0.322 8.2	300 2065	17525 77985	0.148 3.8	200 1379	11685 51600	0.109 2.8
267.4 mm	10.528 267.4	600 4136	52230 232424	0.365 9.3	1200 8273	104460 464848	0.365 9.3	300 2065	26115 116212	0.165 4.2	200 1379	17410 77475	0.134 3.4
10 250	10.750 273.0	600 4136	54460 242345	0.365 9.3	1200 8273	108900 484600	0.365 9.3	300 2065	27225 121150	0.165 4.2	200 1379	18150 80770	0.134 3.4
318.5 mm	12.539 318.5	600 4136	74100 329745	0.375 9.5	1200 8273	148200 659492	0.375 9.5	300 2065	37050 164873	0.180 4.6	200 1379	24700 109915	0.156 4.0
12 300	12.750 323.9	600 4136	76605 340890	0.375 9.5	1200 8273	153200 681740	0.375 9.5	300 2065	38300 170435	0.180 4.6	200 1379	25535 113630	0.156 4.0

* Refer to General Notes on pg. 1-4.
† Cut grooved, Standard Wall or Schedule 40S stainless steel duplex pipe



TYPICAL FOR ALL SIZES

Grooved System for Stainless Steel Pipe – Couplings

Flexible Coupling

STYLE 77S

For Complete Information Request Publication **17.03**

- CE8MN duplex stainless steel or CF8M Type 316 stainless steel for corrosion resistance and strength
- Provides rugged, flexible mechanical joint for grooved stainless steel piping systems
- Pressure dependent on pipe size and wall thickness
- Pressure rated up to 1200psi/8273kPa on cut grooved Schedule 40S Duplex, 750 psi/5175 kPa for Schedule 40S, 500 psi/3445 kPa for Schedule 10S, and 325 psi/2240 kPa for Schedule 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.03
- Sizes from ¾ – 18"/20 – 450 mm

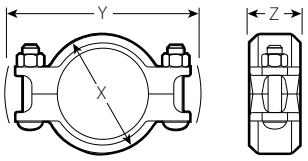
		Schedule 40S §			Schedule 40S ††			Schedule 10S			Schedule 5S		
Nominal Size In./mm	Actual Outside Diameter In./mm	Max. Joint Work. Press.* psi/kPa	Max. Perm. End Load Lbs./N	Nom. Wall Thick. In./mm	Max. Joint Work. Press.* psi/kPa	Max. Perm. End Load Lbs./N	Nom. Wall Thick. In./mm	Max. Joint Work. Press.* psi/kPa	Max. Perm. End Load Lbs./N	Nom. Wall Thick. In./mm	Max. Joint Work. Press.* psi/kPa	Max. Perm. End Load Lbs./N	Nom. Wall Thick. In./mm
¾ 20	1.050 26.9	750 5175	650 2893	0.113 2.87	1200 †† 8273	1000 †† 4450	0.113 2.87	500 3445	430 1915	0.083 2.11	325 2241	280 1245	0.065 1.65
1 25	1.315 33.7	750 5175	1000 4450	0.133 3.38	1200 †† 8273	1600 †† 7120	0.133 3.38	500 3445	680 3025	0.109 2.77	325 2241	440 1960	0.065 1.65
1 ¼ 32	1.660 42.4	750 5175	1600 7120	0.140 3.56	1200 †† 8273	2500 †† 11120	0.140 3.56	500 3445	1080 4805	0.109 2.77	325 2241	700 3115	0.065 1.65
1 ½ 40	1.900 48.3	750 5175	2100 9345	0.145 3.68	1200 †† 8273	3400 †† 15120	0.145 3.68	500 3445	1415 6295	0.109 2.77	325 2241	920 4095	0.065 1.65
2 50	2.375 60.3	750 5175	3300 14685	0.154 3.91	1200 †† 8273	5300 †† 23575	0.154 3.91	500 3445	2215 9855	0.109 2.77	325 2241	1440 6408	0.065 1.65
2 ½ 65	2.875 73.0	750 5175	4900 21805	0.203 5.16	1200 †† 8273	7700 †† 34250	0.203 5.16	500 3445	3245 14440	0.120 3.05	325 2241	2110 9390	0.083 2.11
3 80	3.500 88.9	750 5175	7200 32040	0.216 5.49	1200 †† 8273	11500 †† 51150	0.216 5.49	400 2760	3850 17133	0.120 3.05	250 1724	2405 10702	0.083 2.11
4 100	4.500 114.3	400 † 2760	6360 28302	0.237 6.02	1200 †† 8273	19000 †† 84500	0.237 6.02	350 2413	5565 24764	0.120 3.05	225 1551	3580 15931	0.083 2.11
6 150	6.625 168.3	300 † 2068	10340 46013	0.280 7.11	1200 †† 8273	41365 †† 184000	0.280 7.11	200 1379	6900 30705	0.134 3.40	125 862	4300 19135	0.109 2.77
8 200	8.625 219.1	300 † 2068	17525 77986	0.322 8.18	- -	- -	- -	125 862	7300 32485	0.148 3.76	75 517	4380 19491	0.109 2.77
10 250	10.750 273.0	300 † 2068	27225 121151	0.365 9.27	- -	- -	- -	75 517	6810 30305	0.165 4.19	50 345	4540 20203	0.134 3.40
12 300	12.750 323.9	300 † 2068	38300 170435	0.375 9.53	- -	- -	- -	125 862	15960 71022	0.180 4.57	75 517	9575 42609	0.156 3.96
14 350	14.000 355.6	200 1379	30800 137060	0.375 § 9.53	- -	- -	- -	100 689	15400 68530	0.188 4.77	65 448	10000 44500	0.156 3.96
16 400	16.000 406.4	125 862	25130 111829	0.375 § 9.53	- -	- -	- -	45 276	9050 40273	0.188 4.77	35 241	7040 31328	0.165 4.19
18 450	18.000 457.0	100 689	25450 113253	0.375 § 9.53	- -	- -	- -	40 345	10180 45301	0.188 4.77	30 207	7635 33976	0.165 4.19

* Refer to General Notes on pg. 1-4.

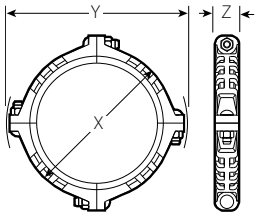
‡ Sizes 1-4"/25-100mm come standard in CE8MN duplex stainless steel. 3/4"/20mm, 6-18"/150-450mm come standard in CF8M Type 316 Stainless Steel.

† Not for use with AGS (Advance Groove System) products.

†† Cut grooved, sch. 40S duplex.



TYPICAL ¾ – 14"/20 – 350 mm SIZES



TYPICAL 16 – 18"/400 – 450 mm SIZES

Grooved System for Stainless Steel Pipe – Couplings

Flexible Coupling

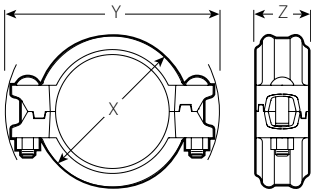
STYLE 475

For Complete Information Request Publication **17.14**

Size		Schedule 40S			Schedule 10S			Schedule 5S		
Nominal Size In./mm	Actual Outside Diameter In./mm	Max. Joint Work. Press.* psi/kPa	Max. Perm. End Load Lbs./N	Nom. Wall Thick. In./mm	Max. Joint Work. Press.* psi/kPa	Max. Perm. End Load Lbs./N	Nom. Wall Thick. In./mm	Max. Joint Work. Press.* psi/kPa	Max. Perm. End Load Lbs./N	Nom. Wall Thick. In./mm
1 25	1.315 33.7	500 3447	680 3026	0.133 3.38	350 2413	475 2113	0.109 2.77	225 1551	305 1357	0.065 1.65
1 ¼ 32	1.660 42.4	500 3447	1080 4806	0.140 3.56	350 2413	755 3358	0.109 2.77	225 1551	485 2157	0.065 1.65
1 ½ 40	1.900 48.3	500 3447	1415 6295	0.145 3.68	350 2413	990 4404	0.109 2.77	225 1551	635 2825	0.065 1.65
2 50	2.375 60.3	500 3447	2215 9857	0.154 3.91	350 2413	1550 6898	0.109 2.77	225 1551	1000 4450	0.065 1.65
2 ½ 65	2.875 73.0	500 3447	3250 14463	0.203 5.16	350 2413	2275 10124	0.120 3.05	225 1551	1460 6497	0.083 2.11
76.1 mm	3.000 76.1	500 3447	3535 15731	0.203 5.16	350 2413	2475 11014	0.120 3.05	225 1551	1590 7076	0.083 2.11
3 80	3.500 88.9	500 3447	4810 21405	0.216 5.49	350 2413	3370 14997	0.120 3.05	225 1551	2170 9657	0.083 2.11
4 100	4.500 114.3	325 # 2241	5170 23007	0.237 6.02	300 2068	4775 21250	0.120 3.05	200 1379	3180 14150	0.083 2.11
139.7 mm	5.500 139.7	200 1379	4750 21138	0.258 6.55	200 1379	4750 21138	0.134 3.40	125 862	2970 13217	0.109 2.77
‡165.1 mm	6.500 165.1	200 1379	6640 29550	0.280 7.11	200 1379	6640 29550	0.134 3.40	125 862	4150 18470	0.109 2.77

* Refer to General Notes on pg. 1-4.

‡ Denotes JIS pipe size.



TYPICAL FOR ALL SIZES

- CF8M stainless steel for corrosion resistance and strength
- Flexible system accommodates expansion/ contraction/deflection
- Pressure rated up to 750 psi/ 5175 kPa for Schedule 40S, 500 psi/3447 kPa for Schedule 10S, and 325 psi/ 2240 kPa for Schedule 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.14
- Sizes from 1–4"/25–165.1 mm

Grooved System for Stainless Steel Pipe – Couplings

Vic-Flange Adapter ANSI Class 150

STYLE 441

For Complete Information Request Publication **17.27**

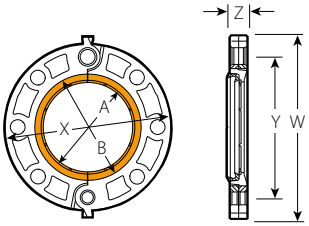
Size		Max. Work Press.	Max. End Load *	Bolts		Sealing Surface		Dimensions				Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	PSI*# kPa	Lbs. N	No. Bolts† Req'd.	Bolt Size† Inches	A Max. Inches mm	B Min. Inches mm	W Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	275 1896	1220 5429	4	5/8 x 2 3/4	2.40 61	3.40 86	6.84 174	6.00 152	4.75 121	0.82 21	3.0 1.4
2 1/2 65	2.875 73.0	275 1896	1785 7943	4	5/8 x 3	2.90 74	3.90 99	7.72 196	7.00 178	5.50 140	0.88 22	4.3 2.0
3 80	3.500 88.9	275 1896	2645 11770	4	5/8 x 3	3.50 89	4.50 114	8.22 209	7.50 191	6.00 152	0.94 24	4.8 2.2
4 100	4.500 114.3	275 1896	4375 19469	8	5/8 x 3	4.50 114	5.50 140	9.72 247	9.00 229	7.50 191	0.94 24	6.9 3.1
6 150	6.625 168.3	200 1379	6895 30683	8	3/4 x 3 1/2	6.60 168	7.80 198	11.78 299	11.00 279	9.50 241	1.00 25	9.5 4.3

* Refer to Publication 17.27 for more details.
† Total bolts required to be supplied by installer. Bolt sizes for conventional flange-to-flange connection.
# Based on Schedule 10S pipe roll grooved with Victaulic "Rx" stainless steel rolls.

IMPORTANT NOTES:

For restrictions on where and how Vic-Flange adapters and flange washers can be used, refer to Publication 17.27.

- Designed to directly incorporate stainless flanged components with ANSI Class 150 bolt hole patterns into grooved stainless steel pipe system
- Pressure rated up to 275psi/1900kPa for Schedules 10S and 40S, and 200psi/1300kPa for Schedule 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.27
- Sizes from 2–6"/50–150mm



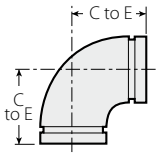
TYPICAL FOR ALL SIZES

Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

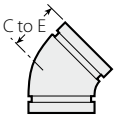
Grooved System for Stainless Steel Pipe – Fittings

NO. 410 SS 90° Elbow
NO. 411 SS 45° Elbow
NO. 420 SS Tee
NO. 460 SS Cap

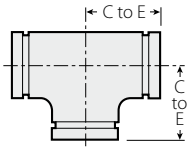
For Complete Information
Request Publication **17.16**



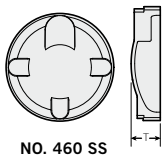
NO. 410 SS



NO. 411 SS



NO. 420 SS



NO. 460 SS

Size	No. 410 SS 90° Elbow		No. 411 SS 45° Elbow		No. 420 SS Tee		No. 460 SS Cap	
Nominal Size Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	T Thickness Actual mm	Approx. Weight Each Lbs. kg
¾ 26.9	—	—	—	—	—	—	0.79 20.0	0.12 0.05
1 33.7	2.88* 73.2	0.7 0.3	2.00* 50.8	0.6 0.3	—	—	0.79 20.0	0.18 0.08
1¼ 42.4	3.13 79.5	1.0 0.5	2.00* 50.8	0.8 0.4	—	—	0.79 20.0	0.26 0.10
1½ 48.3	3.50* 88.9	1.3 0.6	2.19* 55.6	1.0 0.4	3.38* 113.6	2.2 1.0	0.79 20.0	0.38 0.20
2 60.3	4.50* 114.3	2.2 1.0	2.75* 69.9	1.6 0.7	2.75* 69.6	2.4 1.1	0.98 25.0	0.57 0.30
2½ 73.0	5.00* 127	3.3 1.5	2.81* 71.4	2.2 1.0	3.07* 78.0	3.7 1.7	1.08 27.0	0.90 0.40
3 88.9	4.50 114.3	2.6 1.2	2.00 50.8	1.3 0.6	3.77 95.7	3.1 0.4	1.03 26.0	1.10 0.50
4 114.3	6.00 152.4	4.7 2.1	2.50 63.5	2.3 2.5	4.47 113.6	4.9 2.2	1.22 31.1	1.80 0.80
6 168.3	9.00 228.6	11.0 5.0	3.75 95.3	5.5 2.5	5.91 150.00	11.7 5.3	1.75 44.0	4.00 1.80
8 219.1	12.00 304.8	21.2 9.6	5.00 127	11.0 5.0	7.79 197.8	20.4 9.3	2.23 57.0	7.00 3.20
10 273.0	15.00 381	36.6 16.6	6.25 158.8	18.5 8.4	8.89 225.9	34.4 15.6	2.72 69	17.8 8.10
12 323.9	18.00 457.2	59.6 25.8	7.50 190.5	28.4 12.9	10.39 264.0	52.4 23.8	3.17 83	26.7 12.10

IMPORTANT NOTES:
Schedule 10S, Type 304 or 316 stainless steel, roll grooved from matieral conforming to ASTM A-403.
*Schedule 10S, Grade CF8M (Type 316 stainless steel) conforming to ASTM A-351, A743 and A-744.

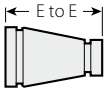
- Offered in a variety of standard fitting configurations
- Sizes to 12"/300 mm

Grooved System for Stainless Steel Pipe – Fittings

Concentric Reducer

NO. 450 SS

For Complete Information
Request Publication **17.16**



NO. 450 SS

Size			No. 450 SS Concentric Reducer	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
2 50	×	1½ 40	5.00 127	2.5 1.1
2½ 65	×	2 50	5.00 127	1.1 0 .49
3 80	×	2½ 65	5.00 127	1.5 0.7
4 100	×	3 80	5.00 127	2.0 0.9
6 150	×	3 80	5.50 139.7	6.9 3.1
		4 100	5.50 139.7	7.0 3.2
8 200	×	4 (sw) 100	6.00 152.4	4.2 1.9
		6 150	6.00 152.4	7.0 3.2
10 250	×	6 (sw) 150	7.00 177.8	18.0 8.2
		8 (sw) 200	7.00 177.8	19.6 8.9
12 300	×	8 (sw) 200	8.00 203.2	26.4 12.0
		10 (sw) 250	8.00 203.2	28.4 12.9

IMPORTANT NOTE:

Schedule 10S, Type 304 or 316 stainless steel, roll grooved from matieral conforming to ASTM A-403.

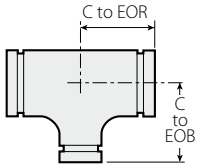
*Schedule 10S, Grade CF8M (Type 316 stainless steel) conforming to ASTM A-351, A743 and A-744.

(sw) Segmentally welded, not CR class fitting. Exception is 8"x4" concentric reducers which are CR class.

Reducing Tee

NO. 425 SS

For Complete Information
Request Publication **17.16**



NO. 425 SS

Size					No. 425 SS Reducing Tee		
Nominal Size Inches mm					C to E Run Inches mm	C to E Branch Inches mm	Approx. Weight Each Lbs. kg
2 50	×	2 50	×	1½ 40	2.75 70.0	2.75 70.0	2.0 0.9
2½ 65	×	2½ 65	×	2 50	3.07 77.9	3.07 77.9	2.4 1.1
3 80	×	3 80	×	2½ 65	3.77 95.7	3.23 82.0	3.1 1.4
4 100	×	4 100	×	3 80	4.47 113.5	3.88 98.5	4.9 2.2
6 150	×	6 150	×	3 80	5.91 150.0	4.88 123.9	8.8 4.0
				4 100	5.91 150.0	5.12 130.0	9.5 4.3
8 200	×	8 200	×	4 100	7.79 197.8	6.31 160.2	18.1 8.2
				6 150	7.79 197.8	6.62 168.1	18.5 8.4
10 250	×	10 250	×	6 150	8.89 225.8	7.70 195.5	28.2 12.8
				8 200	8.89 225.8	8.59 218.1	31.3 14.2
12 300	×	12 300	×	8 200	10.39 263.9	9.51 241.5	40.1 18.2
				10 250	10.39 263.9	9.89 251.2	47.6 21.6

IMPORTANT NOTE:

No. 425 SS is manufactured from material conforming to ASTM A-403 Schedule 10S 304L or 316L.

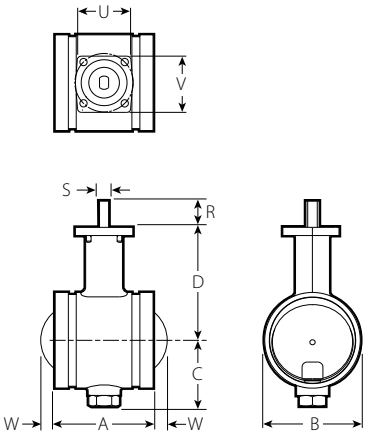
Grooved System for Stainless Steel Pipe – Valves

Butterfly Valve

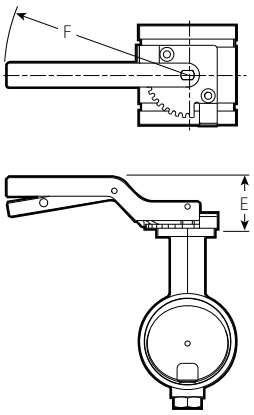
SERIES 763

For Complete Information
Request Publication **17.23**

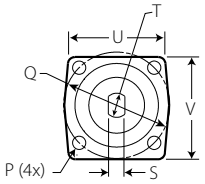
SERIES 763
WITH LEVER HANDLE



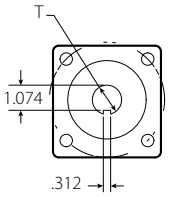
SERIES 763 BUTTERFLY VALVE BARE
TYPICAL FOR ALL SIZES



SERIES 763 BUTTERFLY VALVE
WITH LEVER LOCK HANDLE
TYPICAL FOR ALL SIZES



ENLARGED MOUNTING FLANGE
TYPICAL 2 – 8"/50 – 200 mm SIZES
(VALVE SHOWN CLOSED)



ENLARGED MOUNTING FLANGE
TYPICAL 10"/250 mm SIZES
(VALVE SHOWN CLOSED)

BARE VALVE AND WITH LEVER LOCK HANDLE

Size		Dimensions														Approx. Wgt. Each		Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Inches mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	P Inches mm	Q Inches mm	R Inches mm	S Inches mm	T Inches mm	U Inches mm	V Inches mm	W Inches mm	Bare Valve Lbs. kg	Lever Handle Lbs. kg	C_V Values K_V Values
2 50	2.375 60.3	3.20 81	2.37 60	2.09 53	4.17 106	2.38 60	8.51 216	0.34 9	2.76 70	1.25 32	0.31 8	0.43 11	2.48 63	2.65 67	—	3.5 1.6	4.7 2.1	110 95.2
2½ 65	2.875 73.0	3.77 96	3.00 76	2.47 63	4.38 111	2.38 60	8.51 216	0.34 9	2.76 70	1.25 31	0.31 8	0.43 11	2.48 63	2.65 67	—	4.5 2.0	5.7 2.6	200 173.0
76.1 mm	3.000 76.1	3.77 96	3.00 76	2.47 63	4.38 111	2.38 60	8.51 216	0.34 9	2.76 70	1.25 31	0.31 8	0.43 11	2.48 63	2.65 67	—	4.5 2.0	5.7 2.6	200 173.0
3 80	3.500 88.9	3.77 96	3.50 89	2.60 66	4.97 126	2.38 60	8.51 216	0.34 9	2.76 70	1.23 31	0.31 8	0.43 11	2.48 63	2.65 67	—	5.0 2.3	6.2 2.8	250 216.3
4 100	4.500 114.3	4.64 118	4.52 115	3.14 80	5.33 135	2.38 60	8.51 216	0.34 9	2.76 70	1.23 31	0.43 11	0.63 16	2.47 63	2.65 67	—	9.0 4.1	10.2 4.6	600 519.0
6 150	6.625 168.3	5.88 149	6.64 169	4.76 121	7.25 184	1.37 35	12.01 305	0.43 11	4.02 102	1.37 35	0.50 13	0.75 19	3.51 89	3.85 98	—	26.0 11.8	28.4 12.9	1400 1211.0
165.1 mm	6.500 165.1	5.88 149	6.64 169	4.76 121	7.25 184	1.37 35	12.01 305	0.43 11	4.02 102	1.37 35	0.50 13	0.75 19	3.51 89	3.85 98	—	26.0 11.8	28.4 12.9	1400 1211.0
8 200	8.625 219.1	5.32 135	9.75 248	5.73 145	8.57 218	1.37 35	12.01 305	0.43 11	4.02 102	1.37 35	0.75 19	1.00 25	3.40 86	3.85 98	1.24 32	41.0 18.6	43.4 19.7	3400 2941.0
10 250	10.750 273.0	6.40 163	12.10 307	7.05 179	10.09 256	—	—	0.53 13	4.92 125	2.13 54	—	1.25 32	4.62 117	4.77 121	1.72 44	65.0 29.5	—	5500 4757.5

- Stainless steel body with cast neck to accommodate insulation requirements
- ISO top flange will accept mounting of all major manual and power operators
- Seat options include EPDM, nitrile, fluoroelastomer, and lubricated nitrile (air and gas services only)
- Disc is stainless steel and provides bubble-tight shut-off at full rated pressure and temperature
- Pressure rates 300 psi/2065 kPa bi-directional and dead-end service
- Sizes from 2–10"/50–250 mm

@ C_V/K_V values for flow of water at +60°F/+16°C with valve fully open.

SERIES 763
WITH POWER ACTUATOR

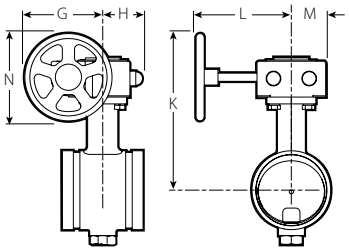
SERIES 763
WITH GEAR OPERATOR

Grooved System for Stainless Steel Pipe – Valves

Butterfly Valve

SERIES 763

For Complete Information
Request Publication **17.23**



TYPICAL FOR ALL SIZES

ALUMINUM GEAR OPERATOR

Size		Dimensions						Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	G Inches mm	H Inches mm	K Inches mm	L Inches mm	M Inches mm	N Inches mm	Lbs. kg
2 50	2.375 60.3	2.64 92	1.75 44	7.00 178	4.29 109	1.58 40	3.94 100	7.4 3.4
2½ 65	2.875 73.0	2.64 92	1.75 44	7.18 182	4.29 109	1.58 40	3.94 100	8.4 3.8
76.1 mm	3.000 76.1	2.64 92	1.75 44	7.18 182	4.29 109	1.58 40	3.94 100	8.4 3.8
3 80	3.500 88.9	2.64 92	1.75 44	7.77 197	4.29 109	1.58 40	3.94 100	8.9 4.0
4 100	4.500 114.3	4.43 112	2.28 58	8.93 227	4.65 118	1.97 50	4.92 125	12.9 5.9
6 150	6.625 168.3	6.30 160	3.25 82	12.62 320	7.75 197	2.87 73	7.87 200	33.2 15.1
165.1 mm	6.500 165.1	6.30 160	3.25 82	12.62 320	7.75 197	2.87 73	7.87 200	33.2 15.1
8 200	8.625 219.1	6.30 160	3.25 82	13.95 354	7.75 197	2.87 73	7.87 200	48.2 21.9
10 250	10.750 273.0	6.30 160	3.25 82	15.47 393	7.75 197	2.87 73	7.87 200	74.0 33.6

STAINLESS STEEL GEAR OPERATOR

Size		Dimensions						Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	G Inches mm	H Inches mm	K Inches mm	L Inches mm	M Inches mm	N Inches mm	Lbs. kg
2 50	2.375 60.3	3.93 100	2.80 71	7.28 185	5.13 130	2.22 56	3.94 100	6.4 2.0
2½ 65	2.875 73.0	3.93 100	2.80 71	7.49 190	5.13 130	2.22 56	3.94 100	7.4 3.4
76.1 mm	3.000 76.1	3.93 100	2.80 71	7.49 190	5.13 130	2.22 56	3.94 100	7.4 3.4
3 80	3.500 88.9	3.93 100	2.80 71	8.08 205	5.13 130	2.22 56	3.94 100	7.9 3.6
4 100	4.500 114.3	4.92 125	2.80 71	9.42 239	5.32 135	2.22 56	5.90 150	11.9 5.4
6 150	6.625 168.3	6.59 167	3.54 90	12.92 328	9.00 229	2.97 75	8.46 215	32.2 14.6
165.1 mm	6.500 165.1	6.59 167	3.54 90	12.92 328	9.00 229	2.97 75	8.46 215	32.2 14.6
8 200	8.625 219.1	6.59 167	3.54 90	14.24 362	9.00 229	2.97 75	8.46 215	47.2 21.4
10 250	10.750 273.0	9.33 237	4.02 102	17.76 451	8.03 204	3.70 94	12.40 315	80.4 36.6

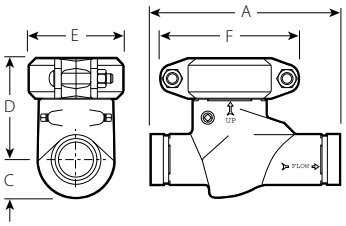
Grooved System for Stainless Steel Pipe – Valves

Swinger Check Valve

SERIES 712S

For Complete Information Request Publication **17.08**

- Series 712S Swinger Check valves must not be installed in vertical pipe lines
- Supplied with bonnet cap drilled and tapped with ½"/15 mm NPT pipe plug for chemical injection or other auxiliary connections
- Type 316 stainless steel body and trim in 2"/50 mm size



TYPICAL FOR 2"/50 mm SIZE

Size		Dimensions					Approx. Weight Each without Operator
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	Lbs. kg
2 50	2.375 60.3	9.00 229	1.75 45	4.88 124	3.38 86	6.38 162	12.0 5.4

Grooved System for Stainless Steel Pipe – Valves

Vic-Ball Valve

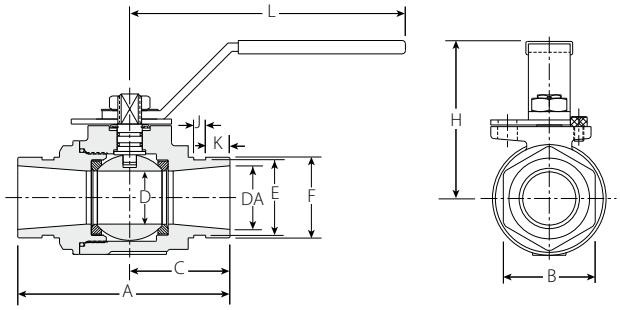
SERIES 726S

For Complete Information
Request Publication **17.22**

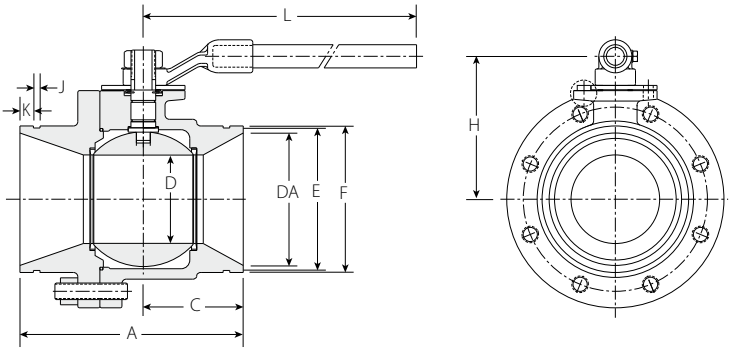
Size		Dimensions											Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Inches mm	B Inches mm	C Inches mm	D Inches mm	DA Inches mm	E Inches mm	F Inches mm	H Inches mm	J Inches mm	K Inches mm	L Inches mm	Lbs. kg	C_V Values K_V Values
1½ 40	1.900 48.3	5.12 130	2.00 51	2.36 60	1.25 32	1.50 38	1.78 45	1.90 48	3.00 76	0.28 7	0.56 14	6.97 177	4.7 2.1	130 112.5
2 50	2.375 60.3	5.50 140	2.64 67	2.48 63	1.50 38	2.00 51	2.25 57	2.38 60	3.31 84	0.34 9	0.56 14	6.97 177	7.5 3.4	180 155.7
2½ 65	2.875 73.0	6.25 159	3.03 77	2.80 71	1.97 50	2.50 64	2.72 69	2.88 73	4.00 102	0.34 9	0.56 14	9.84 250	11.5 5.2	340 294.1
3 80	3.500 88.9	6.56 167	3.50 89	3.15 80	2.50 64	3.00 76	3.34 85	3.50 89	4.53 115	0.34 9	0.56 14	9.84 250	17.3 7.8	600 519.0
4 100	4.500 114.3	8.25 210	—	3.35 85	2.99 76	4.00 102	4.33 111	4.52 115	5.48 139	0.34 9	0.61 15	15.67 398	44.0 20.5	650 562.3
6 150	6.625 168.3	10.10 257	—	4.53 115	4.00 102	6.00 152	6.46 164	6.64 169	6.48 165	0.34 9	0.61 15	18.07 459	82.0 37.3	800 692.0

@ C_V/K_V values for flow of water at +60°F/+16°C with valve fully open.

- High-pressure standard port ball valve with grooved ends
- Two-piece, end-entry features floating ball for lower torque requirements
- NACE compliant
- Streamline internal design provides excellent flow characteristics
- Valve features stainless steel ball and stem
- Pressure rated up to 1000 psi/6900 kPa for sizes 1½–3"/40–80 mm
- Pressure rated up to 800 psi/5515 kPa for sizes 4–6"/100–150 mm
- Sizes from 1½–6"/40–150 mm



TYPICAL 1½–3"/40–80 mm SIZES



TYPICAL 4"/100 mm AND 6"/150 mm SIZES

Notes

Pressfit System for Stainless Steel Pipe

The Pressfit system is a small diameter, quick-connect piping system solution that delivers speed, economy and reliability to building owners, contractors, and specifying engineers.

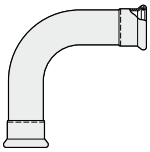
Pressfit delivers real on-the-job pipe joining advantages to fitters and installers – benefits that you won't find in standard threaded, welded or flanged systems.

The Pressfit system is ideal for a wide variety of process and utility applications requiring the corrosion-resistant properties of stainless steel. Pressfit integrates well with larger stainless steel piping systems, especially those designed with our grooved end products.

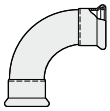
Product Line

Standard Coupling, pg. 10-4

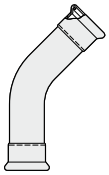
Slip Coupling, pg. 10-4



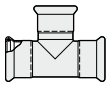
90° Elbow, pg. 10-5



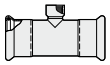
Short Tangent 90° Elbow, pg. 10-5



45° Elbow, pg. 10-5

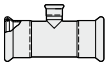


Tee, pg. 10-6



Tee with Thd. Branch, pg. 10-6

PRESSFIT	Standard Coupling, pg. 10-4	Slip Coupling, pg. 10-4	90° Elbow, pg. 10-5	Short Tangent 90° Elbow, pg. 10-5	45° Elbow, pg. 10-5	Tee, pg. 10-6	Tee with Thd. Branch, pg. 10-6
304	STYLE 597	–	STYLE 590	STYLE 586	STYLE 591	STYLE 592	STYLE 588
316	STYLE 507	STYLE 508	STYLE 570	STYLE 568	STYLE 571	STYLE 572	STYLE 578

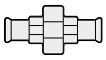


Tee with Reducing Branch, pg. 10-7

Male Adapter, pg. 10-7

Female Thd. Adapter, pg. 10-8

Weld Adapter, pg. 10-8



Threaded Union, pg. 10-8

Flange Adapter, pg. 10-9

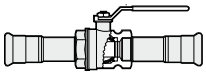
Van Stone Flange Adapter, pg. 10-9

PRESSFIT	Tee with Reducing Branch, pg. 10-7	Male Adapter, pg. 10-7	Female Thd. Adapter, pg. 10-8	Weld Adapter, pg. 10-8	Threaded Union, pg. 10-8	Flange Adapter, pg. 10-9	Van Stone Flange Adapter, pg. 10-9
304	STYLE 593	STYLE 596	STYLE 599	STYLE 561	STYLE 584	STYLE 595	STYLE 565
316	STYLE 573	STYLE 576	STYLE 579	–	STYLE 585	STYLE 575	STYLE 566

Transition Nipple, pg. 10-10

Reducer Insert, pg. 10-10

Concentric Reducer, pg. 10-10

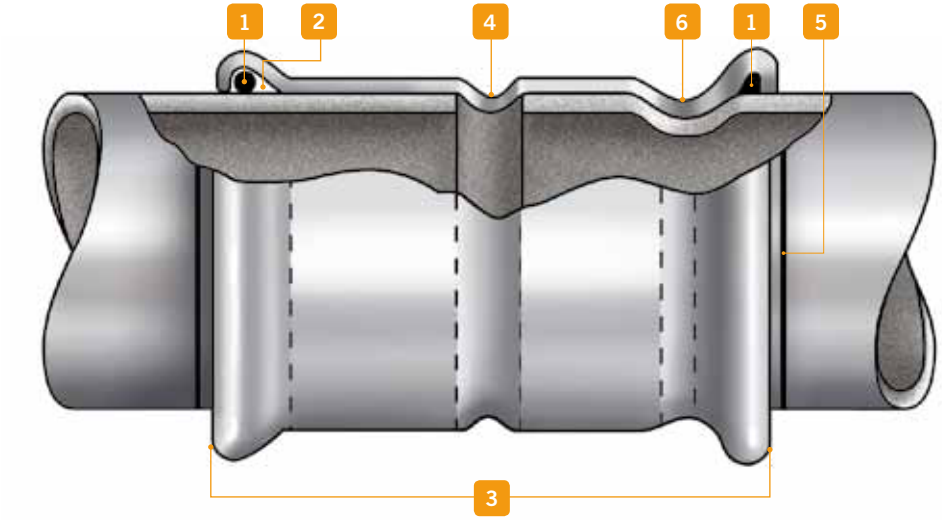


Ball Valve, pgs. 10-11, 12

PRESSFIT	Transition Nipple, pg. 10-10	Reducer Insert, pg. 10-10	Concentric Reducer, pg. 10-10	Ball Valve, pgs. 10-11, 12
304	STYLE 587	STYLE 582	STYLE 594	STYLE 589
316	STYLE 577	STYLE 583	STYLE 574	STYLE 569

Pressfit System for Stainless Steel Pipe

How It Works



1 O-RING

Precisely molded gasket made of synthetic rubber in several application grades for a variety of wet and dry services.

2 O-RING POCKET

Sized to contain the ring before assembly, the pocket is deformed around the o-ring during compression to fully surround the pipe for a leak-free seal.

3 HOUSING

Precision formed stainless steel construction incorporating the pipe stop and o-ring. Adapters are available for easy field make-up of fitting combinations to threaded components.

4 PIPE STOP

An internal pipe stop locates pipe position to ensure positive joining.

5 INSERTION MARK

A witness mark on the pipe ensures visual verification that the pipe has been fully inserted for proper installation.

6 TOOL INDENT

The Pressfit hand tool engages the entire circumference of the bead on the fitting housing to ensure a secure attachment of pipe to fitting.

Pressfit Tools

PFT 509

PFT 505

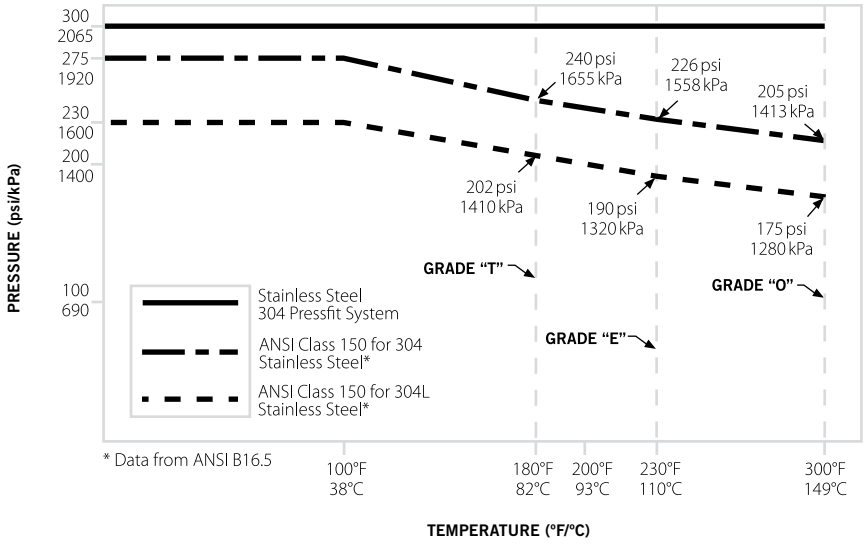
The Pressfit System requires a Pressfit tool designed for securing Pressfit products onto pipe. The Pressfit tool packages include the actual pressing tool and any customer-specified press jaws. Jaws are available separately for rental or purchase. The PFT505 and PFT509 Pressfit tools are designed for industrial and trade use only. See pg. 20-11 for more details.

Pressfit System for Stainless Steel Pipe

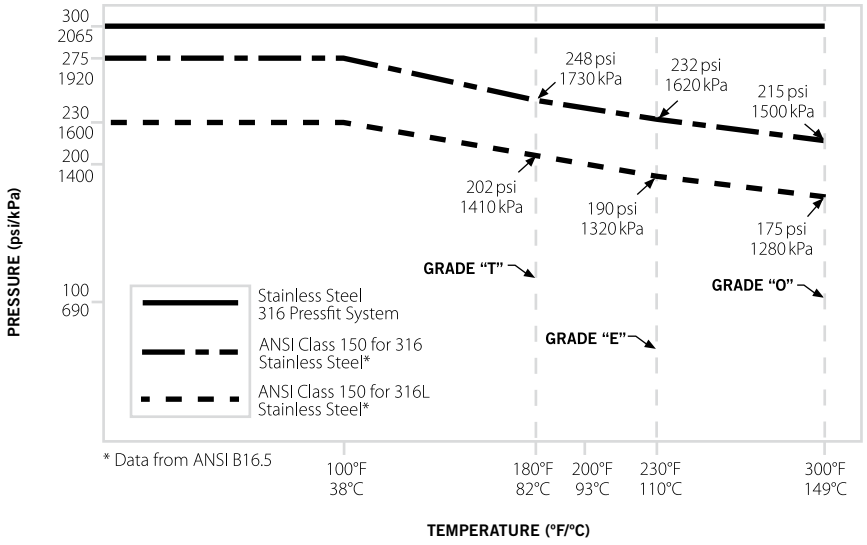
Stainless Steel Pipe System – Performance

- Available for Type 304 or Type 316 stainless steel systems
- Full range of couplings, fittings and valves
- Handheld tools used to join pipe in seconds
- Up to four times faster than stainless steel socket weld systems
- UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service
- Meets hanging requirements of ASME B31.1, B31.3 and B31.9
- Request Publication 18.01 for Type 316 or 18.02 for Type 304
- Pressure rated up to 300 psi/2065 kPa in all sizes
- Sizes from ½–2"/ 15–50 mm Schedule 5 stainless steel piping is fast, easy, clean and reliable method for joining

Pressfit 304



Pressfit 316

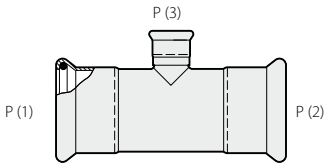


Pressfit System for Stainless Steel Pipe

Dimensional Information

Products in the Pressfit 304/316 System have unique center-to-end or end-to-end dimensions which incorporate specific, uniform "takeout" dimensions for easy fabrication calculations.

Use of threaded products employing special features such as probes, escutcheon cups, etc., should be checked to be certain the thread standard and length of insertion are compatible with fitting dimensions. Failure to verify dimensional suitability in advance may result in difficulties in assembly.

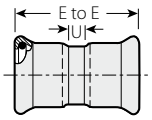


END TYPE CODE

P = Pressfit
F = Female Pipe Thread
M = Male Pipe Thread
T = Plain End
L = Flanged
G = Grooved

Standard Coupling

STYLE 597 (P × P)
STYLE 507 (P × P)



STYLE 597 & 507

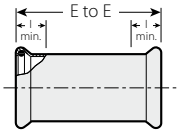
Size		Dimensions		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	U Takeout Inches mm	Lbs. kg
½ 15	0.840 21.3	2.00 51	0.35 9	0.1 0.1
¾ 20	1.050 26.7	2.17 55	0.28 7	0.2 0.1
1 25	1.315 33.7	2.44 62	0.39 10	0.2 0.1
1 ½ 40	1.900 48.3	3.15 80	0.32 8	0.5 0.2
2 50	2.375 60.3	3.94 100	0.33 8	0.7 0.3

STANDARD COUPLING

PRESSFIT	304	STYLE 597	Request Publication 18.02
	316	STYLE 507	Request Publication 18.01

Slip Coupling

STYLE 508 (P × P)



STYLE 508

Size		Dimensions		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	l Min. Tube Insert Inches mm	Lbs. kg
½ 15	0.840 21.3	3.31 84	1.00 25	0.1 0.1
¾ 20	1.050 26.7	3.54 90	1.00 25	0.2 0.1
1 25	1.315 33.7	3.94 100	1.00 25	0.3 0.1
1 ½ 40	1.900 48.3	4.72 120	1.00 25	0.6 0.3
2 50	2.375 60.3	5.51 140	1.25 32	0.9 0.4

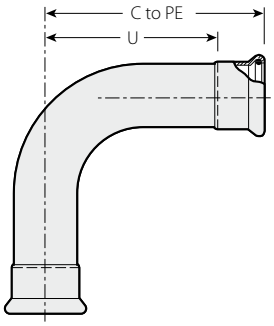
SLIP COUPLING

PRESSFIT	316	STYLE 508	Request Publication 18.01

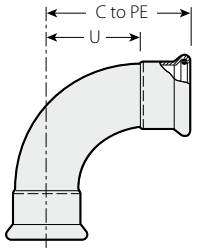
Pressfit System for Stainless Steel Pipe

Elbows

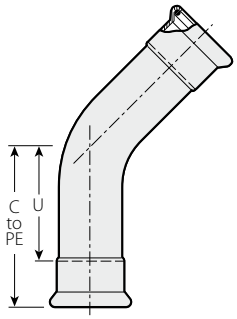
STYLE 590 90° Elbow (P × P)
STYLE 570 90° Elbow (P × P)
STYLE 586 Short Tangent 90° Elbow (P × P)
STYLE 568 Short Tangent 90° Elbow (P × P)
STYLE 591 45° Elbow (P × P)
STYLE 571 45° Elbow (P × P)



STYLE 590 & 570



STYLE 586 & 568



STYLE 591 & 571

Size		Style 590 & 570 90° Elbow			Style 586 & 568 Short Tangent 90° Elbow			Style 591 & 571 45° Elbow		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to PE Inches mm	U Takeout Inches mm	Approx. Weight Each Lbs. kg	C to PE Inches mm	U Takeout Inches mm	Approx. Weight Each Lbs. kg	C to PE Inches mm	U Takeout Inches mm	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	2.67 68	1.88 48	0.3 0.1	—	—	—	1.65 42	0.82 21	0.2 0.1
¾ 20	1.050 26.7	3.43 87	2.48 63	0.4 0.2	2.83 72	1.88 48	0.3 0.2	2.44 62	1.50 38	0.3 0.1
1 25	1.315 33.7	4.33 110	3.31 84	0.6 0.3	3.36 85	2.34 59	0.5 0.2	3.11 79	2.09 53	0.5 0.2
1 ½ 40	1.900 48.3	6.73 171	5.32 135	1.4 0.6	4.60 117	3.19 81	1.0 0.5	5.00 127	3.59 91	1.3 0.6
2 50	2.375 60.3	8.19 208	6.38 162	2.3 1.0	5.71 145	3.90 99	1.5 0.7	6.02 153	4.22 107	2.0 0.9

90° ELBOW

PRESSFIT			
	304	STYLE 590	Request Publication 18.02
	316	STYLE 570	Request Publication 18.01

SHORT TANGENT 90° ELBOW

PRESSFIT			
	304	STYLE 586	Request Publication 18.02
	316	STYLE 568	Request Publication 18.01

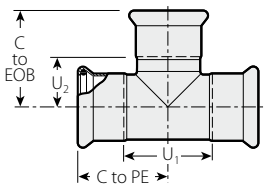
45° ELBOW

PRESSFIT			
	304	STYLE 591	Request Publication 18.02
	316	STYLE 571	Request Publication 18.01

Pressfit System for Stainless Steel Pipe

Tee

STYLE 592 (P × P × P)
STYLE 572 (P × P × P)



STYLE 592 & 572

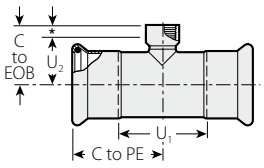
Size		Dimensions				Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to PE Inches mm	U_1 Inches mm	C to EOB Inches mm	U_2 Inches mm	Lbs. kg
½ 15	0.840 21.3	1.40 36	1.04 26	1.60 41	0.72 18	0.2 0.1
¾ 20	1.050 26.7	1.89 48	1.89 48	1.89 48	0.95 24	0.3 0.1
1 25	1.315 33.7	2.11 54	2.17 55	2.15 55	1.13 29	0.4 0.2
1 ½ 40	1.900 48.3	2.76 70	2.69 68	2.80 71	1.39 35	0.9 0.4
2 50	2.375 60.3	3.39 86	3.17 81	3.62 92	1.81 46	1.4 0.6

TEE

PRESSFIT			
	304	**STYLE 592**	Request Publication 18.02
	316	**STYLE 572**	Request Publication 18.01

Tee with Threaded Branch

STYLE 588 (P × P × F)
STYLE 578 (P × P × F)



STYLE 588 & 578

* Length of effective thread.

Size							Dimensions				Approx. Wgt. Each
Nominal Size Inches mm							C to PE Inches mm	U_1 Inches mm	C to EOB Inches mm	U_2 Inches mm	Lbs. kg
½ 15	×	½ 15	×	½ 15			1.50 38	1.35 34	1.50 38	0.97 25	0.2 0.1
¾ 20	×	¾ 20	×	½ 15			1.89 48	1.89 48	1.64 42	1.11 28	0.3 0.2
				¾ 20			1.89 48	1.89 48	1.71 43	1.16 29	0.4 0.2
1 25	×	1 25	×	½ 15			2.11 54	2.17 55	1.78 45	1.25 32	0.4 0.2
				¾ 20			2.11 54	2.17 55	1.85 47	1.30 33	0.5 0.2
				1 25			2.11 54	2.17 55	2.02 51	1.34 34	0.6 0.3
1 ½ 40	×	1 ½ 40	×	½ 15			2.76 70	2.69 68	2.07 53	1.54 39	0.8 0.4
				¾ 20			2.76 70	2.69 68	2.14 54	1.59 40	0.9 0.4
				1 25			2.76 70	2.69 68	2.31 59	1.63 40	0.9 0.4
2 50	×	2 50	×	½ 15			3.39 86	3.16 80	2.31 59	1.78 45	1.2 0.5
				¾ 20			3.39 86	3.16 80	2.38 60	1.83 46	1.3 0.6
				1 25			3.39 86	3.16 80	2.55 65	1.87 48	1.3 0.6

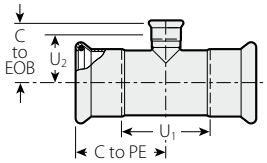
TEE WITH THREADED BRANCH

PRESSFIT			
	304	**STYLE 588**	Request Publication 18.02
	316	**STYLE 578**	Request Publication 18.01

Pressfit System for Stainless Steel Pipe

Tee with Reducing Branch

STYLE 593 (P × P × P)
STYLE 573 (P × P × P)



STYLE 593 & 573

Size					Dimensions				Approx. Weight Each
Nominal Size Inches mm					C to PE Inches mm	U_1 Inches mm	C to EOB Inches mm	U_2 Inches mm	Lbs. kg
¾ 20	×	¾ 20	×	½ 15	1.90 48	1.91 48	2.10 53	1.27 32	0.3 0.1
1 25	×	1 25	×	½ 15	2.10 53	2.15 55	2.30 58	1.47 37	0.3 0.1
				¾ 20	2.11 54	2.17 55	2.03 52	1.09 28	0.4 0.2
1 ½ 40	×	1 ½ 40	×	½ 15	2.76 70	2.69 68	2.60 66	1.77 45	0.6 0.3
				¾ 20	2.76 70	2.69 68	2.32 59	1.68 43	0.7 0.3
				1 25	2.76 70	2.69 68	2.44 62	1.42 36	0.8 0.4
2 50	×	2 50	×	½ 15	3.39 86	3.17 81	2.80 71	1.97 50	1.2 0.5
				¾ 20	3.39 86	3.17 81	2.56 65	1.62 41	1.3 0.6
				1 25	3.39 86	3.17 81	2.68 68	1.66 42	1.1 0.5
				1 ½ 40	3.39 86	3.17 81	3.03 77	1.62 41	1.3 0.6

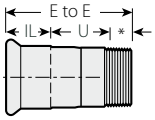
TEE WITH REDUCING BRANCH†

PRESSFIT	304	STYLE 593	Request Publication 18.02
	316	STYLE 573	Request Publication 18.01

† Available with female threaded outlet. Contact Victaulic.

Male Threaded Adapter

STYLE 596 (P × M)
STYLE 576 (P × M)



STYLE 596 & 576

* Length of effective thread.

Size			Dimensions			Approx. Weight Each
Nominal Size Inches mm			E to E Inches mm	U Takeout Inches mm	IL Insert. Length Inches mm	Lbs. kg
½ 15	×	½ 15	3.68 93	2.32 59	0.83 21	0.2 0.1
¾ 20	×	½ 15	3.22 82	1.75 44	0.95 24	0.3 0.1
		¾ 20	3.72 94	2.22 56	0.95 24	0.3 0.1
		1 25	3.22 82	1.60 41	0.95 24	0.4 0.2
1 25	×	¾ 20	3.34 85	1.77 45	1.02 26	0.4 0.1
		1 25	4.02 102	2.32 59	1.02 26	0.4 0.2
1 ½ 40	×	¾ 20	3.69 94	1.73 44	1.42 36	0.6 0.3
		1 ½ 40	4.40 112	2.27 58	1.42 36	0.7 0.3
2 50	×	2 50	5.03 128	2.46 62	1.81 46	1.0 0.5

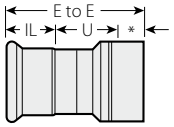
MALE THREADED ADAPTER

PRESSFIT	304	STYLE 596	Request Publication 18.02
	316	STYLE 576	Request Publication 18.01

Pressfit System for Stainless Steel Pipe

Female Threaded Adapter

STYLE 599 (P × F)
STYLE 579 (P × F)



STYLE 599 & 579

* Length of effective thread.

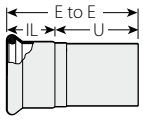
Size			Dimensions			Approx. Weight Each
Nominal Size Inches mm			E to E Inches mm	U Takeout Inches mm	IL Insert. Length Inches mm	Lbs. kg
½ 15	×	½ 15	2.15 55	0.79 20	0.83 21	0.2 0.1
¾ 20	×	½ 15	2.20 56	0.71 18	0.95 24	0.2 0.1
		¾ 20	2.20 56	0.79 20	0.95 24	0.2 0.1
1 25	×	½ 15	2.30 58	0.75 19	1.02 26	0.4 0.2
		¾ 20	2.30 58	0.73 19	1.02 26	0.3 0.1
		1 25	2.40 61	0.75 19	1.02 26	0.4 0.2
1 ½ 40	×	1 25	2.96 75	0.92 23	1.42 36	0.8 0.4
		1 ¼ 32	2.96 75	0.87 22	1.42 36	0.6 0.3
		1 ½ 40	2.96 75	0.87 22	1.42 36	0.8 0.4
2 50	×	1 ¼ 32	3.75 95	1.27 32	1.81 46	0.9 0.4
		1 ½ 40	3.75 95	1.27 32	1.81 46	1.1 0.5
		2 50	3.75 95	1.27 32	1.81 46	1.0 0.5

FEMALE THREADED ADAPTER

PRESSFIT			
	304	**STYLE 599**	Request Publication 18.02
	316	**STYLE 579**	Request Publication 18.01

Weld Adapter

STYLE 561 (P × T)



STYLE 561

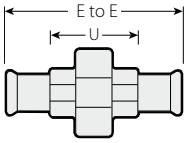
Size			Dimensions			Approx. Weight Each
Nominal Size Inches mm			E to E Inches mm	U Takeout Inches mm	IL Insert. Length Inches mm	Lbs. kg
½ 15	×	½ 15	3.68 93	2.85 72	0.83 21	0.2 0.1
¾ 20	×	¾ 20	3.72 94	2.77 70	0.95 24	0.3 0.1
1 25	×	1 25	4.02 102	3.00 76	1.02 26	0.4 0.2
1 ½ 40	×	1 ½ 40	4.40 112	2.98 76	1.42 36	0.7 0.3
2 50	×	2 50	5.03 128	3.22 82	1.81 46	1.0 0.5

WELD ADAPTER

PRESSFIT			
	304	**STYLE 561**	Request Publication 18.02

Threaded Union

STYLE 584 (P × P)
STYLE 585 (P × P)



STYLE 584 & 585

Size		Dimensions		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	U Takeout Inches mm	Lbs. kg
½ 15	0.840 21.3	7.02 178	5.27 134	2.80 1.3
¾ 20	1.050 26.7	7.14 181	5.14 131	3.50 1.6
1 25	1.315 33.7	7.26 184	5.26 134	3.80 1.7
1 ½ 40	1.900 48.3	8.44 214	5.44 138	5.40 2.4
2 50	2.375 60.3	8.38 213	4.67 119	6.10 2.8

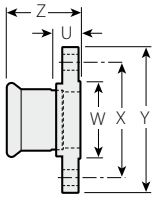
THREADED UNION

PRESSFIT			
	304	**STYLE 584**	Request Publication 18.02
	316	**STYLE 585**	Request Publication 18.01

Pressfit System for Stainless Steel Pipe

Flange Adapter

STYLE 595 (P × L)
STYLE 575 (P × L)



STYLE 595 & 575

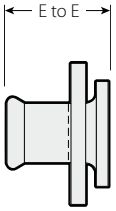
Size		Dimensions					Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	U Takeout Inches mm	W Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
½ 15	0.840 21.3	2.34 59	1.38 35	2.38 60	3.50 89	3.22 82	2.3 1.1
¾ 20	1.050 26.7	2.27 58	1.69 43	2.75 70	3.88 99	3.22 82	1.7 0.8
1 25	1.315 33.7	2.27 58	2.00 51	3.12 79	4.25 108	3.29 84	2.2 1.0
1 ½ 40	1.900 48.3	2.07 53	2.88 73	3.88 99	5.00 127	3.48 88	3.6 1.6
2 50	2.375 60.3	1.80 46	3.62 92	4.75 121	6.00 152	3.60 92	5.4 2.4

FLANGE ADAPTER

PRESSFIT	304	STYLE 595	Request Publication 18.02
	316	STYLE 575	Request Publication 18.01

Van Stone Flange Adapter

STYLE 565 (P × L)
STYLE 566 (P × L)



STYLE 565 & 566

Size		Dimensions	Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Lbs. kg
½ 15	0.840 21.3	3.12 79	3.00 1.4
¾ 20	1.050 26.7	3.17 81	3.30 1.5
1 25	1.315 33.7	3.28 83	3.60 1.6
1 ½ 40	1.900 48.3	3.64 93	5.00 2.3
2 50	2.375 60.3	4.73 120	5.90 2.7

VAN STONE FLANGE ADAPTER†

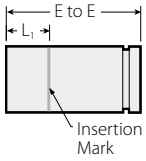
PRESSFIT	304	STYLE 565	Request Publication 18.02
	316	STYLE 566	Request Publication 18.01

† Available with carbon steel (standard) or 316 stainless steel (optional) back-up flange. Specify choice on order.

Pressfit System for Stainless Steel Pipe

Transition Nipple

STYLE 587 (G × T)
STYLE 577 (G × T)



STYLE 587 & 577

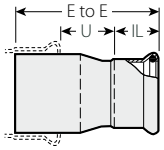
Size		Dimensions		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	L_1 Minimum Inches mm	Lbs. kg
¾ 20	1.050 26.7	4.00 102	1.00 25	0.2 0.1
1 25	1.315 33.7	4.00 102	1.00 25	0.3 0.1
1 ½ 40	1.900 48.3	4.00 102	1.50 38	0.4 0.2
2 50	2.375 60.3	4.00 102	1.88 48	0.5 0.2

TRANSITION NIPPLE

PRESSFIT			
	304	**STYLE 587**	Request Publication 18.02
	316	**STYLE 577**	Request Publication 18.01

Reducer Insert

STYLE 582 (T × P)
STYLE 583 (T × P)



STYLE 582 & 583

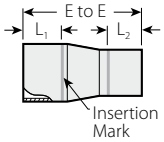
Size		Dimensions			Approx. Weight Each
Nominal Size Inches mm		E to E Inches mm	U Takeout Inches mm	IL Insertion Length Inches mm	Lbs. kg
1 25	× ¾ 20	2.95 75	0.98 25	0.95 24	0.2 0.1
2 50	× 1 ½ 40	4.33 110	1.11 28	1.42 36	0.6 0.3

REDUCER INSERT

PRESSFIT			
	304	**STYLE 582**	Request Publication 18.02
	316	**STYLE 583**	Request Publication 18.01

Concentric Reducer

STYLE 594 (T × T)
STYLE 574 (T × T)



STYLE 594 & 574

Size			Dimensions			Approx. Weight Each
Nominal Size Inches mm			E to E Inches mm	L_1 Minimum Inches mm	L_2 Minimum Inches mm	Lbs. kg
¾ 20	×	½ 15	3.50 89	1.00 25	0.88 22	0.2 0.1
1 25	×	½ 15	3.56 90	1.03 26	0.88 22	0.2 0.1
		¾ 20	3.56 90	1.03 26	1.00 25	0.2 0.1
1 ½ 40	×	½ 15	4.25 108	1.44 37	0.88 22	0.3 0.1
		¾ 20	4.25 108	1.44 37	1.00 25	0.4 0.2
		1 25	4.25 108	1.44 37	1.03 26	0.4 0.2
2 50	×	½ 15	5.00 127	1.81 46	0.88 22	0.6 0.3
		¾ 20	5.00 127	1.81 46	1.00 25	0.6 0.3
		1 25	5.00 127	1.81 46	1.03 26	0.6 0.3
		1 ½ 40	5.00 127	1.81 46	1.44 37	0.7 0.3

CONCENTRIC REDUCER

PRESSFIT			
	304	**STYLE 594**	Request Publication 18.02
	316	**STYLE 574**	Request Publication 18.01

Pressfit System for Stainless Steel Pipe

Pressfit 304™ Brass Body Ball Valve with Stainless Steel Pressfit Ends

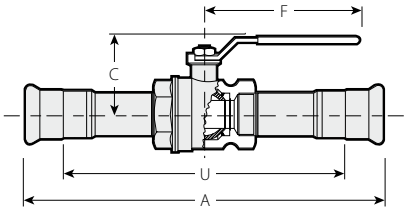
SERIES 589 (P × P)

Request Publication 18.02

Size		Dimensions				Approx. Weight Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	C Inches mm	F Inches mm	U Takeout Inches mm	Lbs. kg	C_V Values K_V Values
½ 15	0.840 21.3	8.49 216	1.33 34	3.07 78	6.84 174	0.9 0.4	10 8.7
¾ 20	1.050 26.7	8.88 226	1.79 46	3.78 96	6.99 178	1.3 0.6	25 21.6
1 25	1.315 33.7	9.74 247	1.95 50	3.78 96	7.69 195	1.8 0.8	37 32.0
1½ 40	1.900 48.3	11.09 282	2.68 68	5.43 138	8.26 210	3.4 1.5	87 75.3
2 50	2.375 60.3	12.90 328	2.89 73	5.43 138	9.29 236	4.4 2.0	110 95.2

@ C_V/K_V values for flow of water at +60°F/+16°C with valve fully open.

- Valve body constructed of forged brass
- Chrome plated brass ball and seals on TFE seats
- Standard port valve with Pressfit ends
- Pressure rated up to 300 psi/2065 kPa
- Sizes from ½–2"/15–50 mm



TYPICAL FOR ALL SIZES

Pressfit System for Stainless Steel Pipe

Pressfit 316™ Type 316 Stainless Steel Ball Valve

SERIES 569

Request Publication 18.01

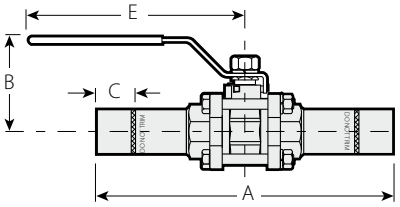
- Body and trim constructed of rugged Type 316 (CF8M) stainless steel with PTFE seats
- Blow-out proof stem self-adjusting floating ball
- Full-port design minimizes pressure drop for flow efficiency
- Three-piece swing-out design permits easy in-line maintenance
- Pressure rated up to 300 psi/2065 kPa with plain ends
- Pressure rated up to 400 psi/2750 kPa with grooved ends
- Sizes from ½–2"/15–50 mm
- Repair Kits and replacement parts are available for the Series 569 valve
- The Repair Kit consists of two seats, two gaskets, one stem seal, and one thrust washer, all made of PTFE. A replacement ball of CF8M stainless steel is also available
- For replacement stem information, contact Victaulic

Size		Dimensions				Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	B Inches mm	C Inches mm	E Inches mm	Lbs. kg
½* 15	0.840 21.3	7.98 200.0	2.36 59.9	0.88 22.4	5.12 130.0	1.5 0.7
¾ 20	1.050 26.7	8.57 217.2	2.52 64.0	1.00 25.4	5.12 130.0	2.4 1.1
1 25	1.315 33.7	8.89 225.8	2.80 71.1	1.00 25.4	6.50 165.1	3.6 1.6
1 ½ 40	1.900 48.3	11.20 284.5	3.39 86.1	1.50 38.1	7.48 190.0	6.9 3.1
2 50	2.375 60.3	12.52 318.0	3.74 95.0	1.88 47.8	7.48 190.0	9.5 4.3

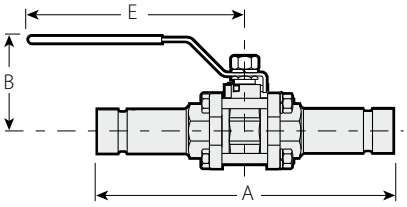
* ½"/15 mm only available in plain end × plain end.

IMPORTANT NOTE:

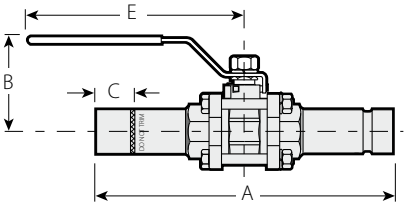
For dimensions and weights with gear operator contact Victaulic.



PLAIN END × PLAIN END



GROOVED × GROOVED



PLAIN END × GROOVED

REPAIR KITS AND REPLACEMENT PARTS FOR SERIES 569 BALL VALVE

Size		Repair Kit	Replacement Ball
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Part No.	Part No.
½ 15	0.840 21.3	K-004-569-001	K-004-569-000
¾ 20	1.050 26.7	K-006-569-001	K-006-569-000
1 25	1.315 33.7	K-010-569-001	K-010-569-000
1 ½ 40	1.900 48.3	K-014-569-001	K-014-569-000
2 50	2.375 60.3	K-020-569-001	K-020-569-000

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Revolutionary Vic-Press™ technology is now globally available for use on ASTM A-312 Schedule 10S stainless steel pipe.

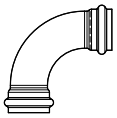
The Vic-Press for Schedule 10S system features an established and reliable technology that does not require special pipe. Vic-Press is now available for standard off-the-shelf stainless steel pipe, providing quick, easy and safe installation and maintenance.

The Vic-Press for Schedule 10S system has the integrity to stand up to the rigorous demands of industrial applications by providing a positive mechanical interlock between the pipe and the fitting.

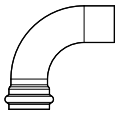
Product Line

Standard Coupling, pg. 11-3

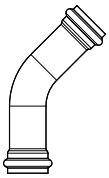
Slip Coupling, pg. 11-3



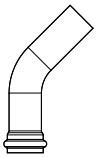
Short Tangent 90° Elbow, pg. 11-4



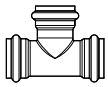
90° degree Street Elbow, pg. 11-4



45° Elbow, pg. 11-4

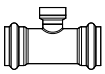


45° degree Street Elbow, pg. 11-4

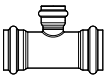


Tee, pg. 11-5

VIC-PRESS								
	304	STYLE P597	–	STYLE P586	STYLE P542	STYLE P591	STYLE P543	STYLE P592
	316	STYLE P507	STYLE P508	STYLE P568	STYLE P562	STYLE P571	STYLE P563	STYLE P572

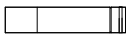


Tee with Thd. Branch, pg. 11-5



Tee with Reducing Branch, pg. 11-6

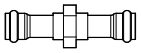
Male Thd. Adapter, pg. 11-6



End Cap, pg. 11-6

Female Thd. Adapter, pg. 11-7

Weld Adapter, pg. 11-7



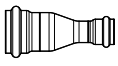
Threaded Union, pg. 11-7

VIC-PRESS								
	304	STYLE P588	STYLE P593	STYLE P596	STYLE P540	STYLE P599	STYLE P561	STYLE P584
	316	STYLE P578	STYLE P573	STYLE P576	STYLE P560	STYLE P579	–	STYLE P585

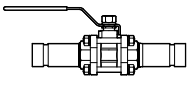
Flange Adapter, pg. 11-8

Van Stone Flange Adapter, pg. 11-8

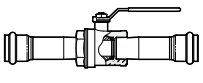
Transition Nipple, pg. 11-9



Concentric Reducer, pg. 11-9



Ball Valve, pg. 11-10



Ball Valve, pgs. 11-11

VIC-PRESS							
	304	STYLE P595	STYLE P565	STYLE P587	STYLE P594	–	STYLE P589
	316	STYLE P575	STYLE P566	STYLE P577	STYLE P574	STYLE P569	STYLE P589

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Stainless Steel Pipe System

VIC-PRESS SCHEDULE 10S FOR TYPE 316 STAINLESS STEEL

The Victaulic Vic-Press for Schedule 10S system using Type 316/316L stainless steel pipe provides a fast, easy, clean, and reliable means for joining ½ – 2"/15 – 50mm standard ASTM A-312 Schedule 10S stainless steel pipe. Vic-Press for Schedule 10S products are designed for pressure service up to 500 psi/3450 kPa or ANSI Class 150 for water, oil, gases and general chemical services.*

The Vic-Press for Schedule 10S system requires no flame or arc as with welding, and no cutting oil, chips or preparation time as with threading or flanging. Off-the-shelf Type 316 ASTM A-312 Schedule 10S stainless steel pipe is cut to size, inserted into the coupling and the coupling is pressed onto the pipe and fitting in seconds.

The Vic-Press for Schedule 10S system meets the requirements of ASME B31.1, B31.3 and B31.9.

Vic-Press for Schedule 10S Type 316 couplings and fittings are recommended for varying concentrations of hot petroleum/water mixtures, hydrocarbons, air with oil vapors, vegetable and mineral oils, as well as automotive fluids such as engine oil and transmission fluid within the temperature range of -30°F to +300°F/-34°C to +149°C, depending on seal material selected.

ANSI/NSF 61 Certified for cold (+86°F/+30°C) and hot (+180°F/+82°C) potable water service for Grade H and Grade E seal materials.

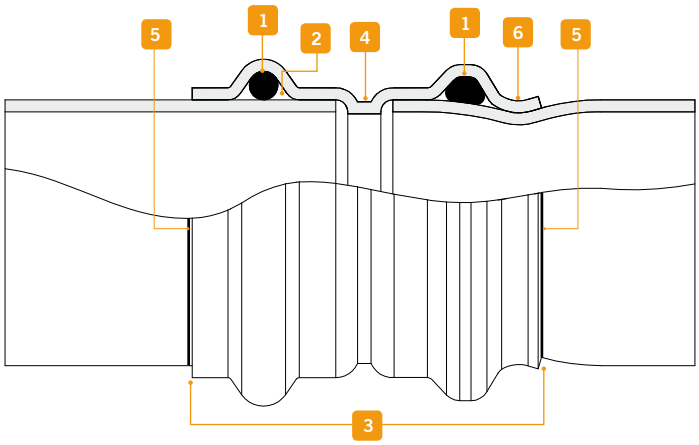
For product installation instructions, refer to Victaulic Product Assembly Instructions (I-P500) and the appropriate Tool Operating and Maintenance Instructions Manual (TM-PFT510).

* Pressure rated up to 300 psi/2065 kPa when used on Schedule 5S pipe.

Victaulic's PFT510 tool is the only press tool approved for use on the Vic-Press™ Schedule 10S System.

VIC-PRESS FOR SCHEDULE 10S COMPONENTS

1. SEAL
2. SEAL POCKET
3. HOUSING
4. PIPE STOP
5. INSERTION MARK
6. MECHANICAL INTERFERENCE



Vic-Press Tools

The Vic-Press System requires a Vic-Press tool designed for securing Vic-Press products onto pipe. The Vic-Press tool packages include the actual pressing tool and any customer-specified press jaws. Jaws are available separately for rental or purchase. The PFT510 Vic-Press tool is designed for industrial and trade use only. See pg. 20-11 for more details.

PFT510

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Stainless Steel Pipe System – Performance

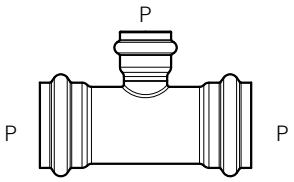
- Available for Type 304(L) or Type 316(L) stainless steel systems
- Full range of couplings, fittings and valves
- Handheld tools used to join pipe in seconds
- Up to four times faster than stainless steel socket weld systems
- ANSI/NSF 61 Certified for cold +86°F/+30°C and hot +180°F/+82°C potable water service
- Meets requirements of ASME B31.1, B31.3 and B31.9
- Request Publication 18.11 for Type 316 or 18.12 for Type 304
- Pressure rated up to 500 psi/3450 kPa in all sizes
- Sizes from ½–2"/ 15–50 mm Schedule 10S stainless steel piping is fast, easy, clean and reliable method for joining

Dimensional Information

Products in the Vic-Press for Schedule 10S system using Type 316 stainless steel have unique center-to-end or end-to-end dimensions which incorporate specific, uniform "takeout" dimensions for easy fabrication calculations.

Use of threaded products employing special features such as probes, escutcheon cups, etc., should be checked to be certain the thread standard and length of insertion are compatible with fitting dimensions.

Failure to verify dimensional suitability in advance may result in difficulties in assembly.

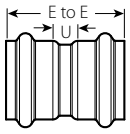


END TYPE CODE

P = Vic-Press Schedule 10S
F = Female Pipe Thread
M = Male Pipe Thread
T = Plain End
L = Flanged
G = Grooved
W = Welded
EOB = End of Branch

Standard Coupling

STYLE P597 (P × P)
STYLE P507 (P × P)



STYLE P597 & P507

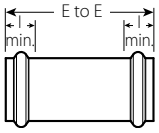
Size		Dimensions – Inches/mm		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E	U Takeout	Lbs. kg
½ 15	0.840 21.3	2.78 70.6	0.65 16.5	0.2 0.1
¾ 20	1.050 26.7	2.78 70.6	0.65 16.5	0.3 0.1
1 25	1.315 33.7	3.11 79.0	0.73 18.5	0.5 0.2
1 ½ 40	1.900 48.3	3.48 88.4	0.72 18.3	0.7 0.3
2 50	2.375 60.3	3.96 100.6	0.71 18.0	1.0 0.5

STANDARD COUPLING

VIC-PRESS			
304	STYLE P597	Request Publication 18.12
316	STYLE P507	Request Publication 18.11

Slip Coupling

STYLE P508 (P × P)



STYLE P508

Size		Dimensions – Inches/mm		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E	l Min. Tube Insert	Lbs. kg
½ 15	0.840 21.3	3.79 96.2	1.06 26.9	0.3 0.1
¾ 20	1.050 26.7	3.92 99.6	1.06 26.9	0.4 0.2
1 25	1.315 33.4	4.55 115.6	1.19 30.2	0.7 0.3
1½ 40	1.900 48.3	5.33 135.3	1.38 35.1	1.1 0.5
2 50	2.375 60.3	6.18 157.1	1.63 41.4	1.6 0.7

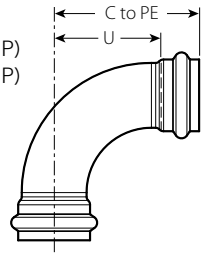
STANDARD COUPLING

VIC-PRESS			
316	STYLE P508	Request Publication 18.11

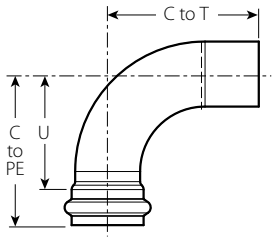
Vic-Press™ for Schedule 10S Stainless Steel Pipe

Elbows

STYLE P586 Short Tangent 90° Elbow (P × P)
STYLE P568 Short Tangent 90° Elbow (P × P)
STYLE P542 90° Street Elbow (P × P)
STYLE P562 90° Street Elbow (P x P)



STYLE P586 & P568



STYLE P542 & P562

Size		Style P586 & P568 Short Tangent 90° Elbow			Style P542 & P562 90° Street Elbow			
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to P Inches mm	U Takeout Inches mm	Approx. Weight Each Lbs. kg	C to P Inches mm	U Takeout Inches mm	C to T	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	2.64 67.1	1.53 38.9	0.3 0.1	2.64 67.1	1.53 38.9	3.04 77.2	0.3 0.1
¾ 20	1.050 26.7	2.95 74.9	1.89 48.0	0.4 0.2	2.95 74.9	1.89 48.0	3.35 85.1	0.4 0.2
1 25	1.315 33.4	3.52 89.4	2.33 59.2	0.8 0.4	3.52 89.4	2.33 59.2	4.32 109.7	0.7 0.3
1 ½ 40	1.900 48.3	4.55 115.6	3.18 80.8	1.4 0.6	4.55 115.6	3.18 80.8	4.55 115.6	1.4 0.6
2 50	2.375 60.3	5.52 140.2	3.90 99.1	2.0 0.9	5.52 140.2	3.90 99.1	5.52 140.2	2.0 0.9

SHORT TANGENT 90° ELBOW

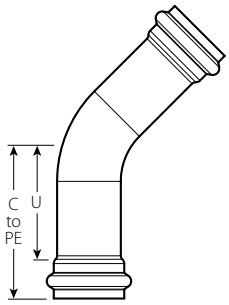
VIC-PRESS			
304	STYLE P586	Request Publication 18.12
316	STYLE P568	Request Publication 18.11

90° STREET ELBOW

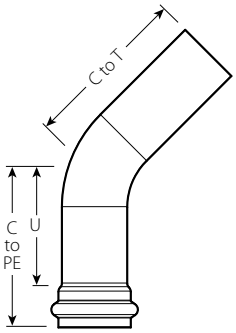
VIC-PRESS			
304	STYLE P542	Request Publication 18.12
316	STYLE P562	Request Publication 18.11

Elbows

STYLE P543 45° Street Elbow (P x P)
STYLE P563 45° Street Elbow (P x P)
STYLE P591 45° Elbow (P × P)
STYLE P571 45° Elbow (P × P)



STYLE P591 & P571



STYLE P543 & P563

Size		Style P586 & P568 Short Tangent 90° Elbow			Style P543 & P563 45° Street Elbow			
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to P Inches mm	U Takeout Inches mm	Approx. Weight Each Lbs. kg	C to P Inches mm	U Takeout Inches mm	C to T	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	2.64 67.1	1.53 38.9	0.3 0.1	1.89 48.0	0.83 21.1	1.89 48.0	0.2 0.1
¾ 20	1.050 26.7	2.95 74.9	1.89 48.0	0.4 0.2	2.56 65.0	1.50 38.1	2.56 65.0	0.4 0.2
1 25	1.315 33.4	3.52 89.4	2.33 59.2	0.8 0.4	3.27 83.1	2.09 53.1	3.27 83.1	0.8 0.4
1 ½ 40	1.900 48.3	4.55 115.6	3.18 80.8	1.4 0.6	4.96 126.0	3.59 91.2	4.96 126.0	1.7 0.8
2 50	2.375 60.3	5.52 140.2	3.90 99.1	2.0 0.9	5.84 148.3	4.22 107.2	5.84 148.3	2.5 1.1

45° ELBOW

VIC-PRESS			
304	STYLE P591	Request Publication 18.12
316	STYLE P571	Request Publication 18.11

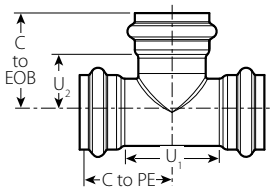
45° STREET ELBOW

VIC-PRESS			
304	STYLE P543	Request Publication 18.12
316	STYLE P563	Request Publication 18.11

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Tee

STYLE P592 (P × P × P)
STYLE P572 (P × P × P)



STYLE P592 & P572

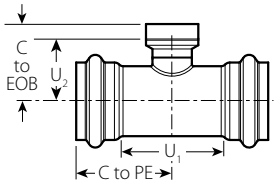
Size		Dimensions – Inches/mm				Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to P	U_1	C to EOB	U_2	Lbs. kg
½ 15	0.840 21.3	1.71 43.4	1.29 32.8	1.91 48.5	0.84 21.3	0.4 0.2
¾ 20	1.050 26.7	2.01 51.1	1.89 48.0	1.93 49.0	0.87 22.1	0.5 0.2
1 25	1.315 33.4	2.27 57.7	2.17 55.1	2.24 56.9	1.05 26.7	0.9 0.4
1 ½ 40	1.900 48.3	2.72 69.1	2.68 68.1	2.74 69.6	1.37 34.8	1.5 0.7
2 50	2.375 60.3	3.21 81.5	3.17 80.5	3.36 85.3	1.73 43.9	2.1 1.0

TEE

VIC-PRESS			
	304	**STYLE P592**	Request Publication 18.12
	316	**STYLE P572**	Request Publication 18.11

Tee with Threaded Branch

STYLE P588 (P × P × F)
STYLE P578 (P × P × F)



STYLE P588 & P578

* Length of effective thread.

Size					Dimensions – Inches/mm				Approx. Wgt. Each
Nominal Size Inches mm					C to P	U_1 Takeout	C to EOB	U_2 Takeout	Lbs. kg
½ 15	×	½ 15	×	½ 15	1.71 43.4	1.29 32.8	1.46 37.1	0.93 23.6	0.4 0.2
¾ 20	×	¾ 20	×	½ 15	2.01 51.1	1.89 48.0	1.57 39.9	1.04 26.4	0.5 0.2
				¾ 20	2.01 51.1	1.89 48.0	1.56 39.6	1.02 25.9	0.6 0.3
1 25	×	1 25	×	½ 15	2.27 57.7	2.17 55.1	1.70 43.2	1.17 29.7	0.9 0.4
				¾ 20	2.27 57.7	2.17 55.1	1.70 43.2	1.15 29.2	0.9 0.4
				1 25	2.27 57.7	2.17 55.1	1.83 46.5	1.15 29.2	1.1 0.5
1 ½ 40	×	1 ½ 40	×	½ 15	2.72 69.1	2.68 68.1	1.99 50.5	1.46 37.1	1.4 0.6
				¾ 20	2.72 69.1	2.68 68.1	1.99 50.5	1.44 36.6	1.5 0.7
				1 25	2.72 69.1	2.68 68.1	2.12 53.8	1.44 36.6	1.5 0.7
2 50	×	2 50	×	½ 15	3.21 85.1	3.17 80.5	2.23 56.6	1.70 43.2	1.7 0.8
				¾ 20	3.21 85.1	3.17 80.5	2.23 56.6	1.68 42.7	1.7 0.8
				1 25	3.21 85.1	3.17 80.5	2.36 59.9	1.68 42.7	2.0 0.9

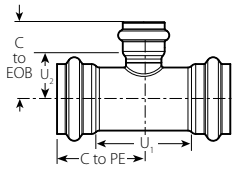
TEE WITH THREADED BRANCH

VIC-PRESS			
	304	**STYLE P588**	Request Publication 18.12
	316	**STYLE P578**	Request Publication 18.11

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Tee with Reducing Branch

STYLE P593 (P × P × P)
STYLE P573 (P × P × P)



STYLE P593 & P573

Size					Dimensions – Inches/mm				Approx. Weight Each
Nominal Size Inches mm					C to PE	U_1 Takeout	C to EOB	U_2 Takeout	Lbs. kg
¾ 20	×	¾ 20	×	½ 15	2.01 51.1	1.89 48.0	2.01 51.1	0.95 24.1	0.5 0.2
1 25	×	1 25	×	½ 15	2.27 57.7	2.17 55.1	2.14 54.4	1.08 27.4	0.8 0.4
				¾ 20	2.27 57.7	2.17 55.1	2.07 52.6	1.00 25.4	0.8 0.4
1 ½ 40	×	1 ½ 40	×	½ 15	2.72 69.1	2.69 68.3	2.44 62.0	1.17 29.7	1.2 0.5
				¾ 20	2.72 69.1	2.69 68.3	2.36 59.9	1.29 32.8	1.3 0.6
				1 25	2.72 69.1	2.69 68.3	2.53 62.3	1.34 34.0	1.4 0.6
2 50	×	2 50	×	½ 15	3.21 81.5	3.16 80.3	2.67 67.8	1.61 40.9	1.7 0.8
				¾ 20	3.21 81.5	3.16 80.3	2.60 66.0	1.53 38.9	1.7 0.8
				1 25	3.21 81.5	3.16 80.3	2.77 70.4	1.58 40.1	1.8 0.8
				1 ½ 40	3.21 81.5	3.16 80.3	2.98 75.7	1.60 40.6	2.0 0.9

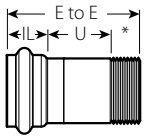
TEE WITH REDUCING BRANCH†

VIC-PRESS			
	304	STYLE P593	Request Publication 18.12
	316	STYLE P573	Request Publication 18.11

† Available with female threaded outlet. Contact Victaulic.

Male Threaded Adapter

STYLE P596 (P × M)
STYLE P576 (P × M)



* Length of effective thread.

STYLE P596 & P576

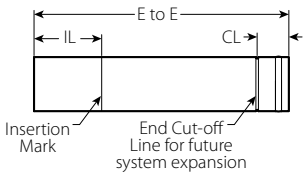
Size			Dimensions – Inches/mm			Approx. Weight Each
Nominal Size Inches mm			E to E	U Takeout	IL Insert. Length	Lbs. kg
½ 15	×	½ 15	3.93 99.8	2.32 58.9	1.06 26.9	0.3 0.1
¾ 20	×	½ 15	3.34 84.8	1.75 44.5	1.06 26.9	0.4 0.2
		¾ 20	3.85 97.8	2.22 56.4	1.06 26.9	0.4 0.2
		1 25	3.34 84.8	1.60 40.6	1.06 26.9	0.5 0.2
1 25	×	¾ 20	3.50 88.9	1.77 45.0	1.19 30.2	0.5 0.2
		1 25	4.19 106.4	2.32 58.9	1.19 30.2	0.6 0.3
1 ½ 40	×	¾ 20	3.65 92.7	1.73 43.9	1.38 35.1	0.8 0.4
		1 ½ 40	4.38 111.3	2.28 57.9	1.38 35.1	1.0 0.5
2 50	×	2 50	4.86 123.4	2.46 62.5	1.63 41.4	1.4 0.6

MALE THREADED ADAPTER

VIC-PRESS			
	304	STYLE P596	Request Publication 18.12
	316	STYLE P576	Request Publication 18.11

End Cap

STYLE P560



Size		Dimensions – Inches/mm		Approx. Wgt. Each
Nominal Size Inches mm	E to E	IL Insertion Length	CL Cut-off Line	Lbs. kg
½ 15	4.00 101.60	1.06 26.9	0.5 12.7	0.24 0.11
¾ 20	4.00 101.60	1.06 26.9	0.5 12.7	0.30 0.14
1 25	4.38 111.25	1.19 30.2	0.5 12.7	0.54 0.24
1½ 40	4.75 120.65	1.38 35.1	0.5 12.7	0.87 0.39
2 50	5.25 133.35	1.63 41.4	0.5 12.7	1.22 0.55

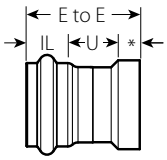
END CAP

VIC-PRESS			
	304	STYLE P560	Request Publication 18.12
	316	STYLE P540	Request Publication 18.11

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Female Threaded Adapter

STYLE P599 (P × F)
STYLE P579 (P × F)



STYLE P599 & P579

* Length of effective thread.

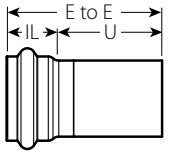
Size			Dimensions – Inches/mm			Approx. Weight Each
Nominal Size Inches mm			E to E	U Takeout	IL Insert. Length	Lbs. kg
½ 15	×	½ 15	2.39 60.7	0.79 20.1	1.06 26.9	0.3 0.1
¾ 20	×	½ 15	2.31 58.7	0.71 18.0	1.06 26.9	0.3 0.1
		¾ 20	2.31 58.7	0.79 20.1	1.06 26.9	0.4 0.2
1 25	×	½ 15	2.47 62.7	0.75 19.1	1.19 30.2	0.7 0.3
		¾ 20	2.47 62.7	0.73 18.5	1.19 30.2	0.6 0.3
		1 25	2.60 66.0	0.88 22.4	1.19 30.2	0.6 0.3
1 ½ 40	×	1 25	2.92 74.2	0.91 23.1	1.38 35.1	1.0 0.5
		1 ¼ 32	2.92 74.2	0.86 21.8	1.38 35.1	0.8 0.4
		1 ½ 40	2.92 74.2	0.86 21.8	1.38 35.1	1.0 0.5
2 50	×	1 ¼ 32	3.57 90.7	1.24 31.5	1.63 41.4	1.1 0.5
		1 ½ 40	3.57 90.7	1.24 31.5	1.63 41.4	1.3 0.6
		2 50	3.57 90.7	1.24 31.5	1.63 41.4	1.2 0.5

FEMALE THREADED ADAPTER

VIC-PRESS			
	304	STYLE P599	Request Publication 18.12
	316	STYLE P579	Request Publication 18.11

Weld Adapter

STYLE P561 (P × T)



STYLE P561

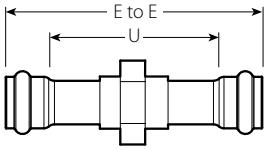
Size		Dimensions – Inches/mm			Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E	U Takeout	IL Insert. Length	Lbs. kg
½ 15	0.840 21.3	3.92 99.6	2.85 72.4	1.06 26.9	0.3 0.1
¾ 20	1.050 26.7	3.84 97.5	2.77 70.4	1.06 26.9	0.4 0.2
1 25	1.315 33.4	4.18 106.2	3.00 76.2	1.19 30.2	0.6 0.3
1 ½ 40	1.900 48.3	4.37 111.0	2.98 75.7	1.38 35.1	0.9 0.4
2 50	2.375 60.3	4.85 123.2	3.22 81.8	1.63 41.4	1.4 0.6

WELD ADAPTER

VIC-PRESS			
	304	STYLE P561	Request Publication 18.12

Threaded Union

STYLE P584 (P × P)
STYLE P585 (P × P)



STYLE P584 & P585

Size		Dimensions – Inches/mm		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E	U Takeout	Lbs. kg
½ 15	0.840 21.3	7.50 190.5	5.37 136.4	3.0 1.4
¾ 20	1.050 26.7	7.37 187.2	5.24 133.1	3.7 1.7
1 25	1.315 33.4	7.59 192.8	5.21 132.3	4.3 2.0
1 ½ 40	1.900 48.3	8.36 212.3	5.61 142.5	6.0 2.7
2 50	2.375 60.3	8.01 203.5	4.76 120.9	6.8 3.1

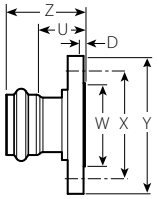
THREADED UNION

VIC-PRESS			
	304	STYLE P584	Request Publication 18.12
	316	STYLE P585	Request Publication 18.11

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Flange Adapter

STYLE P595 (P × L)
STYLE P575 (P × L)



STYLE P595 & P575

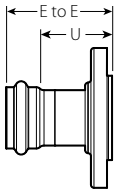
Size		Dimensions - Inches/mm					Approx. Weight Each
Nominal Size Inches mm	Actual Out. Dia. Inches mm	W	X	Y	Z	U Takeout	Lbs. kg
½ 15	0.840 21.3	1.38 35.0	2.38 60.5	3.50 88.9	3.46 87.9	2.39 60.7	2.2 1.0
¾ 20	1.050 26.7	1.69 42.9	2.75 69.9	3.88 98.6	3.34 84.8	2.27 57.7	2.3 1.0
1 25	1.315 33.4	2.00 50.8	3.12 79.3	4.25 108.0	3.46 87.9	2.27 57.7	2.8 1.3
1 ½ 40	1.900 48.3	2.88 73.2	3.88 98.6	5.00 127.0	3.45 87.6	2.06 52.3	3.6 1.6
2 50	2.375 60.3	3.62 92.0	4.75 120.7	6.00 152.4	3.42 86.9	1.79 45.5	5.8 2.6

FLANGE ADAPTER

VIC-PRESS			
	304	STYLE P595	Request Publication 18.12
	316	STYLE P575	Request Publication 18.11

Van Stone Flange Adapter

STYLE P565 (P × L)
STYLE P566 (P × L)



STYLE P565 & P566

Size		Dimensions – Inches/mm		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E	U Takeout	Lbs. kg
½ 15	0.840 21.3	3.37 85.6	2.30 58.4	2.4 1.1
¾ 20	1.050 26.7	3.29 83.6	2.22 56.4	2.5 1.1
1 25	1.315 33.4	3.45 87.6	2.26 57.4	3.0 1.4
1 ½ 40	1.900 48.3	3.61 91.7	2.22 56.4	4.1 1.9
2 50	2.375 60.3	4.55 115.6	2.92 74.2	6.8 3.1

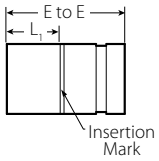
VAN STONE FLANGE ADAPTER

VIC-PRESS			
	304	STYLE P565	Request Publication 18.12
	316	STYLE P566	Request Publication 18.11

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Transition Nipple

STYLE P587 (G × T)
STYLE P577 (G × T)



STYLE P587 & P577

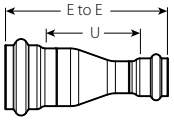
Size		Dimensions – Inches/mm		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E	L_1 Minimum	Lbs. kg
¾ 20	1.050 26.7	4.00 101.6	1.06 26.9	0.3 0.1
1 25	1.315 33.4	4.00 101.6	1.19 30.2	0.5 0.2
1 ½ 40	1.900 48.3	4.00 101.6	1.38 35.1	0.7 0.3
2 50	2.375 60.3	4.00 101.6	1.63 41.4	0.9 0.4

TRANSITION NIPPLE

VIC-PRESS			
	304	**STYLE P587**	Request Publication 18.12
	316	**STYLE P577**	Request Publication 18.11

Concentric Reducer

STYLE P594 (T × T)
STYLE P574 (T × T)



STYLE P594 & P574

Size			Dimensions – Inches/mm		Approx. Weight Each
Nominal Size Inches mm			E to E	U Takeout	Lbs. kg
¾ 20	×	½ 15	4.25 108.0	2.13 54.1	0.5 0.2
1 25	×	½ 15	4.92 125.0	2.67 67.8	0.6 0.3
		¾ 20	4.84 122.9	2.59 65.8	0.7 0.3
1 ½ 40	×	½ 15	5.57 414.5	3.13 79.5	0.9 0.4
		¾ 20	5.49 139.4	3.06 77.7	1.0 0.5
		1 25	5.66 143.8	3.09 78.5	1.1 0.5
2 50	×	½ 15	6.52 168.5	3.84 97.5	1.2 0.5
		¾ 20	6.44 163.6	3.76 95.5	1.3 0.6
		1 25	6.60 167.6	3.79 96.3	1.4 0.6
		1 ½ 40	6.75 171.5	3.76 95.5	1.6 0.7

CONCENTRIC REDUCER

VIC-PRESS			
	304	**STYLE P594**	Request Publication 18.12
	316	**STYLE P574**	Request Publication 18.11

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Vic-Press Schedule 10S Type 316 Stainless Steel Ball Valve

SERIES P569

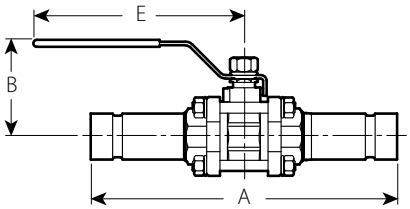
Request Publication 18.11

- Body and trim constructed of rugged Type 316 (CF8M) stainless steel with PTFE seats
- Blow-out proof stem self-adjusting floating ball
- Full-port design minimizes pressure drop for flow efficiency
- Three-piece swing-out design permits easy in-line maintenance
- Pressure rated up to 300 psi/2065 kPa
- Pressure rated up to 400 psi/2750 kPa with grooved ends
- Sizes from ½–2"/15–50 mm
- Repair Kits and replacement parts are available for the Series P569 valve
- The Repair Kit consists of two seats, two gaskets, one stem seal, and one thrust washer, all made of PTFE. A replacement ball of CF8M stainless steel is also available
- For replacement stem information, contact Victaulic

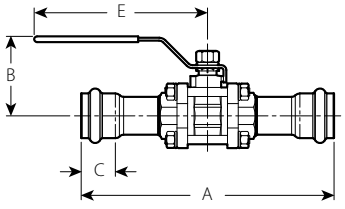
Size		Dimensions – Inches/mm				Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End	B	C	E	Lbs. kg
½ 15	0.840 21.3	8.26 209.8	2.17 55.1	1.06 26.9	5.24 133.1	1.5 0.7
¾ 20	1.050 26.7	8.36 212.3	2.32 58.9	1.06 26.9	5.24 133.1	2.4 1.1
1 25	1.315 33.4	8.77 222.8	2.76 70.1	1.19 30.2	6.02 152.9	3.6 1.6
1 ½ 40	1.900 48.3	9.76 247.9	3.31 84.1	1.38 35.1	7.52 191.0	6.9 3.1
2 50	2.375 60.3	9.83 249.7	3.62 91.9	1.63 41.4	7.52 191.0	9.5 4.3

IMPORTANT NOTE:

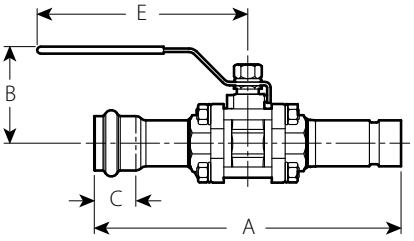
For dimensions and weights with gear operator contact Victaulic.



PLAIN END × PLAIN END



GROOVED × GROOVED



PLAIN END × GROOVED

REPAIR KITS AND REPLACEMENT PARTS FOR SERIES P569 BALL VALVE

Size		Repair Kit	Replacement Ball
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Part No.	Part No.
½ 15	0.840 21.3	K-004-569-001	K-004-569-000
¾ 20	1.050 26.7	K-006-569-001	K-006-569-000
1 25	1.315 33.7	K-010-569-001	K-010-569-000
1 ½ 40	1.900 48.3	K-014-569-001	K-014-569-000
2 50	2.375 60.3	K-020-569-001	K-020-569-000

Vic-Press™ for Schedule 10S Stainless Steel Pipe

Vic-Press Brass Body Ball Valve with Stainless Steel Vic-Press Schedule 10S Ends

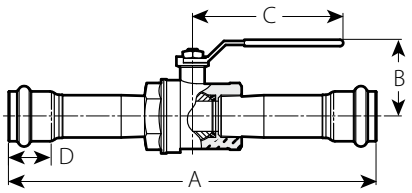
SERIES P589 (P × P)

Request Publication 18.12

- Available with either Type 304 or Type 316 stainless steel press ends
- Valve body constructed of forged brass
- Chrome plated brass ball and seals on TFE seats
- Standard port valve with Vic-Press ends
- Pressure rated up to 300 psi/2065 kPa
- Sizes from ½–2"/15–50 mm

Size		Dimensions - Inceches/mm				Approx. Weight Each	
Nominal Size Inches mm	Actual Outside Diameter Inches/mm	A ± 0.125 3.18	B	C	D	Lbs. kg	Flow Coefficient@ (Fully Open) CV Values KV Values
½ 15	0.840 21.3	9.030 229.36	1.42 36.1	3.03 77.0	1.06 26.9	1.0 0.5	1.1 9.4
¾ 20	1.050 26.7	9.120 234.65	1.90 48.3	3.74 95.0	1.06 26.9	1.6 0.7	25 21.3
1 25	1.315 33.4	10.108 256.74	2.05 52.1	3.74 95.0	1.19 30.2	2.8 1.3	36 30.7
1 ½ 40	1.900 48.3	11.180 283.97	2.76 70.1	5.40 137.2	1.38 35.1	4.7 2.1	112 95.5
2 50	2.375 60.3	12.690 322.33	3.15 80.0	5.40 137.2	1.63 41.4	6.9 3.1	195 166.3

@ C_V/K_V values for flow of water at +60°F/+16°C with valve fully open.

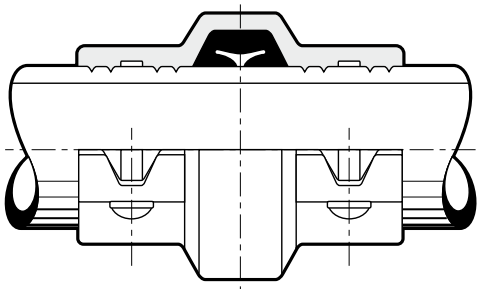


TYPICAL FOR ALL SIZES

Notes

Plain End Piping System for HDPE Pipe

- Victaulic HDPE products have integral rows of gripping teeth that bite into the entire circumference of the HDPE pipe
- Eliminates the need for special heat fusion, solvent joining or special adapters
- Victaulic products are rated to the working pressure of the pipe
- Fast, easiest way to mechanically join HDPE pipe at wall thicknesses from SDR 32.5 to 7.3
- Sizes from 2–20"/50–500 mm
- Up to seven times faster than fusion welding



EXAGGERATED FOR CLARITY

IMPORTANT NOTES:

Victaulic HDPE products are not intended for use on PVC pipe or other materials

Victaulic lubricant should **NOT** be used with HDPE pipe

Coupling

STYLE 995, PG. 12-2

FM

Transition Coupling – HDPE to Steel

STYLE 997, PG. 12-3

FM

Vic-Flange Adapter ANSI Class 150

STYLE 994, PG. 12-4

FM

HDPE Pipe Dimensions

Size		Dimensions		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Outside Diameter Size Inches mm	Outside Diameter Tol.* Inches mm	Maximum Out of Round Tol.* Inches mm
2 50	2.375 60.3	2.375 60.3	± 0.016 0.406	± 0.040 1.016
3 80	3.500 88.9	3.500 88.9	± 0.016 0.406	± 0.040 1.016
4 100	4.500 114.3	4.500 114.3	± 0.020 0.508	± 0.040 1.016
5 125	5.563 141.3	5.563 141.3	± 0.025 0.635	± 0.050 1.270
6 150	6.625 168.3	6.625 168.3	± 0.030 0.762	± 0.050 1.270
8 200	8.625 219.1	8.625 219.1	± 0.039 0.990	± 0.075 1.905

Size		Dimensions		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Outside Diameter Size Inches mm	Outside Diameter Tol.* Inches mm	Maximum Out of Round Tol.* Inches mm
10 250	10.750 273.0	10.750 273.0	± 0.048 1.219	± 0.075 1.905
12 300	12.750 323.9	12.750 323.9	± 0.057 1.448	± 0.075 1.905
14 † 350	14.000 355.6	14.000 355.6	± 0.063 1.600	± 0.075 1.905
16 400	16.000 406.4	16.000 406.4	± 0.072 1.830	§
18 450	18.000 457.0	18.000 457.0	± 0.081 2.060	§
20 500	20.000 508.0	20.000 508.0	± 0.090 2.290	§

* At ambient temperatures.

§ See pipe manufacturer for maximum out of round tolerance.

Plain End Piping System for HDPE Pipe

Coupling

STYLE 995

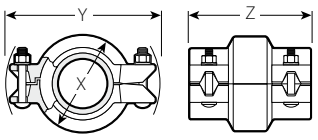
For Complete Information
Request Publication **19.02**

FM

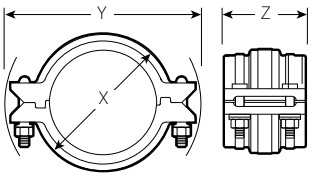
- Sharp gripping teeth on both housing sides grip into outside diameter of HDPE pipe
- Design permits direct joining without fusing equipment
- Up to seven times faster than fusion welding
- No special pipe preparation required
- Sizes from 2–20"/50–500 mm

Size		Dimensions			Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	3.69 94	5.94 151	3.63 92	3.5 1.6
3 80	3.500 88.9	4.63 118	7.00 178	4.56 116	7.7 3.5
90†	90.9	116	178	116	3.4
110†	111.0	145	202	146	5.3
4 100	4.500 114.3	5.88 149	8.13 207	5.81 148	11.6 5.3
140†	141.3	176	250	149	6.8
5 125	5.563 141.3	6.94 176	9.88 251	5.88 149	15.0 6.8
160†	161.5	195	268	149	7.3
6 150	6.625 168.3	8.00 203	10.88 276	5.88 149	16.4 7.4
200†	201.8	259	336	152	9.7
8 200	8.625 219.1	10.19 259	13.25 377	6.00 152	24.9 11.3
225†	227.1	265	345	152	10.9
250†	252.3	314	402	165	17.0
10 250	10.750 273.0	12.38 314	15.88 403	6.50 165	37.4 17.0
280†	282.6	321	408	165	17.6
315†	317.9	356	448	178	20.7
12 300	12.750 323.9	14.38 365	18.00 457	7.00 178	49.0 22.2
14 350	14.000 355.6	16.25 413	19.88 505	8.58 218	81.0 36.7
355†	358.2	414	525	218	36.7
400†	403.6	465	605	229	45.5
16 400	16.000 406.4	18.30 465	23.88 607	9.00 229	100.0 45.5
450†	453.8	516	650	241	57.7
18 450	18.000 457.0	20.30 516	25.63 651	9.50 241	127.0 57.7
500†	504.0	566	699	254	64.5
20 500	20.000 508.0	22.30 566	27.44 697	10.00 254	142.0 64.5

† Available in metric sizes only.



TYPICAL 3–12"/80–300 mm SIZES (2"/50 mm HAS ONE BOLT PER SIDE)



TYPICAL 14–20"/350–500 mm SIZES

Plain End Piping System for HDPE Pipe

Transition Coupling – HDPE to Steel

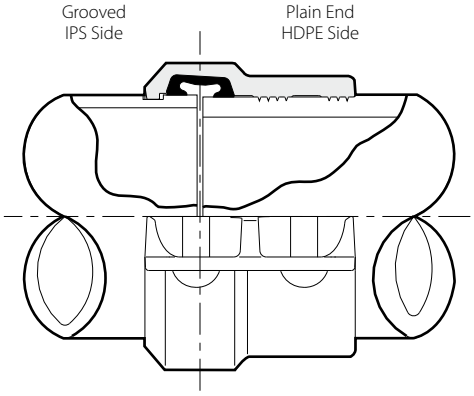
STYLE 997

For Complete Information Request Publication **19.03**

Size		Dimensions			Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	3.31 84	5.22 133	2.78 71	3.0 1.4
3 80	3.500 88.9	4.38 111	6.99 178	3.20 81	6.6 3.0
4 100	4.500 114.3	5.68 144	8.25 210	3.90 99	8.7 4.0
5 125	5.563 141.3	6.75 172	9.77 248	3.97 101	11.5 5.2
6 150	6.625 168.3	7.84 199	11.25 286	4.00 102	14.8 6.7
8 200	8.625 219.1	10.18 259	13.96 355	4.16 106	21.7 9.8
10 250	10.750 273.0	12.63 321	16.81 427	4.56 116	34.3 15.6
12 300	12.750 323.9	14.58 370	18.76 477	4.85 123	37.5 17.0

FM

- Fastest and easiest way to join plain end HDPE pipe to grooved IPS pipe, valves, and fittings
- Designed for use with HDPE with pipe wall thickness from SDR 32.5 to 7.3
- Grooved side has conventional key section to engage standard roll or cut grooved IPS pipe of same size as mating HDPE pipe
- Up to seven times faster than fusion welding
- No special pipe preparation required
- Sizes from 2–12"/50–300 mm



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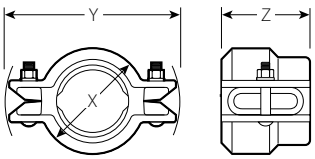
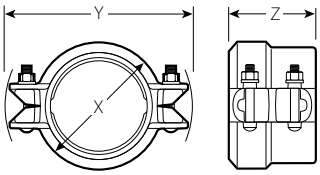


TYPICAL 2"/50 mm SIZE



TYPICAL 3–12"/80–300 mm SIZES

Plain End Piping System for HDPE Pipe

Vic-Flange Adapter ANSI Class 150

STYLE 994

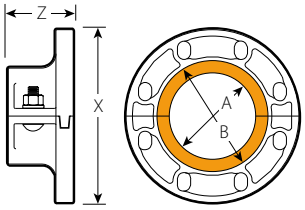
For Complete Information Request Publication **19.04**

FM

- Permits direct connection of ANSI Class 125 and 150 flanged components into HDPE systems
- Up to seven times faster than fusion welding
- No special pipe preparation required
- Sizes from 4–8"/100–200 mm

Size		Sealing Surface*		Dimensions		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Minimum Inches mm	B Maximum Inches mm	X Inches mm	Z Inches mm	Lbs. kg
4 100	4.500 114.3	4.50 114	5.78 147	9.00 229	3.38 86	12.5 5.7
6 150	6.625 168.3	6.63 168	7.97 202	11.00 279	4.00 102	17.3 7.8
8 200	8.625 219.1	8.63 220	10.00 254	13.50 343	4.50 114	30.8 14.0

* Minimum/maximum sealing surface on mating flange must be available for proper gasket seating. Entire area must be flat. Heavy serrated (phonograph record) finishes are not acceptable. When used with rubber seated wafer butterfly valves, a flat metal adapter plate is needed.



TYPICAL FOR ALL SIZES

Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Grooved Copper

- Cold formed system eliminates the need for soldering or brazing
- Full line of couplings, fittings and valves for systems rated up to 300 psi/2065 kPa
- Line of roll grooving tools available for on-site grooving
- Copper connection system joins 2–8"/ 50–200 mm Type K, L, M, or DWV copper

Couplings

QuickVic® Rigid Coupling

STYLE 607, PG. 13-3

Rigid Coupling

STYLE 606, PG. 13-4

Vic-Flange Adapter

STYLE 641, PG. 13-4

Mechanical-T Bolted Branch Outlet

STYLE 622, PG. 13-5

Mechanical-T Bolted Branch Crosses

STYLE 622, PG. 13-5

Valves

Butterfly Valve

SERIES 608, PG.13-9

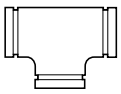
PRODUCTS

Grooved Copper

Fittings

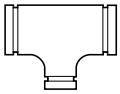
90° Elbow

NO. 610, PG. 13-6



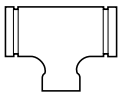
Tee

NO. 620, PG. 13-6



Reducing Tee
Grv. × Grv. × Grv.

NO. 625, PG. 13-8



Reducing Tee
Grv. × Grv. × Cup

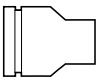
NO. 626, PG. 13-8

45° Elbow

NO. 611, PG. 13-6

Concentric Reducer
Grv. × Grv.

NO. 650, PG. 13-7



Concentric Reducer
Grv. × Cup

NO. 652, PG. 13-7

Cap

NO. 660, PG. 13-6

Grooved Copper – Couplings

Performance

The Victaulic copper connection system has been thoroughly tested on Types K, L, M, and DWV copper tubing. Victaulic products are routinely tested to failure in unrestrained hydrostatic and flexure tests. Using our normal minimum 3-to-1 safety factor, these tests provided regular verification of the product working pressures. The ratings in this table apply to all copper connection products for the indicated types of tubing.

Size	Type "K" ASTM B-88			Type "L" ASTM B-88			Type "M" ASTM B-88			DWV ASTM B-306		
Nominal Inches Actual mm	Wall Thick. Inches mm	Max. Joint Working Press. psi kPa	Max. Permis. End Load Lbs. N	Wall Thick. Inches mm	Max. Joint Working Press. psi kPa	Max. Permis. End Load Lbs. N	Wall Thick. Inches mm	Max. Joint Working Press. psi kPa	Max. Permis. End Load Lbs. N	Wall Thick. Inches mm	Max. Joint Working Press. psi kPa	Max. Permis. End Load Lbs. N
2 54.0	0.083 2.1	300 2065	1,065 4740	0.070 1.8	300 2065	1,065 4740	0.058 1.5	250 1725	890 3960	0.042 1.1	100 690	354 1576
2 ½ 66.7	0.095 2.4	300 2065	1,625 7230	0.080 2.0	300 2065	1,625 7230	0.065 1.7	250 1725	1,350 6010	—	—	—
3 79.4	0.109 2.8	300 2065	2,300 10235	0.090 2.3	300 2065	2,300 10235	0.072 1.8	250 1725	1,415 6300	0.045 1.1	100 690	765 3405
4 104.8	0.134 3.4	300 2065	4,005 17825	0.110 2.8	300 2065	4,005 17825	0.095 2.4	250 1725	3,340 14865	0.058 1.5	100 690	1,335 5940
5 130.2	0.160 4.1	300 2065	6,190 27550	0.125 3.2	300 2065	6,190 27550	0.109 2.8	20 1375	4,125 18360	0.072 1.8	100 690	2,060 9170
6 155.6	0.192 4.9	300 2065	8,840 39340	0.140 3.6	300 2065	8,840 39340	0.122 3.1	200 1375	5,890 26210	0.083 2.1	100 690	2,945 13105
8 206.4	0.271 6.9	300 2065	15,550 69200	0.200 5.1	300 2065	15,550 69200	0.170 4.3	200 1375	10,370 46,100	0.109 2.8	100 690	5,180 23000

Working Pressure and End Load are total, from all internal and external loads, based on the indicated type of copper tubing, standard roll grooved in accordance with Victaulic specifications.

IMPORTANT NOTE:

For one time field test only, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

Grooved Copper – Couplings

QuickVic® Rigid Coupling

STYLE 607

For Complete Information Request Publication **22.13**

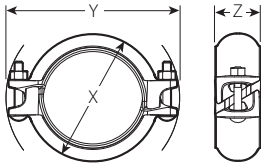
- Installation-ready design
- Eliminates brazing and soldering
- Angled-pad design creates a rigid joint
- Pressure rated up to 300 psi/2065kPa
- Sizes from 2-8"/54-206.4mm to fit copper tubing (CTS)

Size	Allow. Pipe End Sep. †	@ Bolt/Nut No. – Size	Dimensions – Inches/mm					Aprx. Wgt. Ea.
TUBING Nominal Inches Actual mm	Inches mm	Inches mm	Pre-assembled (Installation-ready condition)		Joint Assembled			Lbs. kg
			X	Y	X	Y	Z	
2 54.0	0.16 4	2 – ⅜ x 2 ½	3.63 92	5.50 138	3.38 86	5.50 138	2.00 51	1.9 0.9
2 ½ 66.7	0.16 4	2 – ⅜ x 2 ½	4.19 106	6.00 152	3.94 100	6.00 152	2.00 51	2.2 1.0
3 79.4	0.16 4	2 – ½ x 3	4.75 121	7.00 178	4.50 114	7.00 178	2.00 51	3.0 1.4
4 104.8	0.16 4	2 – ½ x 3	5.63 143	8.00 203	5.38 137	8.00 203	2.00 51	3.6 1.6
5 130.2	0.16 4	2 – ⅝ x 3 ¼	6.63 1.68	9.63 245	6.38 163	9.63 245	2.00 51	5.2 2.4
6 155.6	0.16 4	2 – ⅝ x 3 ¼	7.75 197	10.63 270	7.50 191	10.63 270	2.00 51	5.8 2.6
8 206.4	0.16 4	2 – ⅝ x 4	9.88 251	12.75 324	9.63 245	12.75 324	2.00 51	7.7 3.5

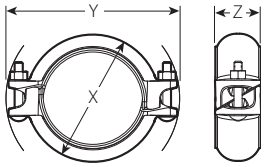
† The allowable pipe separation dimension shown is for system layout purposes only. Style 607 QuickVic rigid couplings for copper are considered rigid connections and will not accommodate expansion or contraction of the piping system.

@ Number of bolts required equals number of housing segments.

WARNING: Depressurize and drain the piping system before attempting to install, remove or adjust any Victaulic piping products.



STYLE 607 PRE-ASSEMBLED (INSTALLATION-READY CONDITION)



STYLE 607 JOINT ASSEMBLED

Grooved Copper – Couplings

Rigid Coupling

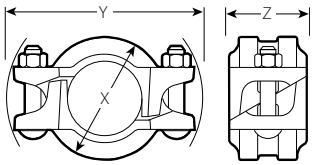
STYLE 606

For Complete Information Request Publication **22.02**

- Eliminates brazing or soldering
- Unique patented angled-pad creates a rigid joint
- Available for:
  - British Standard (BS) Request publication 22.08
  - DIN Standard (DIN) Request publication 22.09
  - Australian Standard (AS) Request publication 22.10
- Pressure rated up to 300 psi/2065 kPa
- Sizes from 2–8"/54–206.4 mm to fit copper tubing (CTS)

Size	Allow Pipe End Sep. #	Dimensions			Approx. Weight Each
Nominal Inches Actual mm	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 54.0	0.06 1.5	3.17 81	4.86 123	1.75 45	1.5 0.7
2½ 66.7	0.06 1.5	3.67 93	5.34 136	1.75 45	2.0 0.9
3 79.4	0.06 1.5	4.17 106	6.50 165	1.75 45	2.2 1.0
4 104.8	0.06 1.5	5.17 131	7.34 186	1.75 45	3.2 1.5
5 130.2	0.06 1.5	6.23 158	9.21 234	1.75 45	4.9 2.2
6 155.6	0.06 1.5	7.20 183	10.13 257	1.75 45	5.7 2.6
8 206.4	0.06 1.5	9.40 239	12.42 315	1.88 48	7.2 3.3

For field installation only. Style 606 is essentially rigid and does not permit expansion/contraction.



TYPICAL FOR ALL SIZES

Vic-Flange Adapter

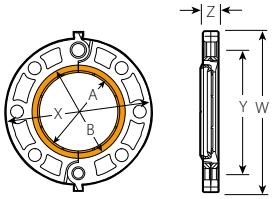
STYLE 641

For Complete Information Request Publication **22.03**

- Direct connection from flanged components to grooved copper tubing
- Integral tabs ease handling
- For 2–6"/54.0–155.6 mm K, L, M, or DWV tubing

Size	Sealing Surface		Dimensions				Approx. Weight Each
Nominal Inches Actual mm	A Maximum Inches mm	B Minimum Inches mm	W Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 54.0	2.13 54	3.20 81	6.88 175	6.00 152	4.75 121	0.78 20	3.8 1.7
2½ 66.7	2.63 67	3.91 99	7.88 200	7.00 178	5.50 140	0.88 22	4.7 2.1
3 79.4	3.13 80	4.53 115	8.44 214	7.50 191	6.00 152	0.94 24	5.4 2.5
4 104.8	4.13 105	5.53 140	9.94 253	9.00 229	7.50 191	0.94 24	7.7 3.5
5 130.2	5.13 130	6.71 170	11.00 279	10.00 254	8.50 216	1.00 25	9.3 4.2
6 155.6	6.13 156	7.78 198	12.00 305	11.00 279	9.50 241	1.00 25	10.3 4.7

IMPORTANT NOTE:
Style 641 Vic-Flange adapters for copper tubing provide rigid joints when used on copper tubing that is roll grooved to Victaulic dimensions and consequently allow no linear or angular movement at the joint.
For restrictions on where and how Vic-Flange adapters and flange washers can be used, refer to Publication 22.03.



TYPICAL FOR ALL SIZES
Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Mechanical-T Bolted Branch Outlet

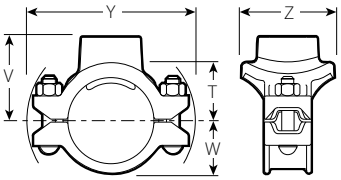
STYLE 622

For Complete Information Request Publication **22.12**

Size			Dimensions						Approx. Weight Each
Run × Branch Nominal Size Inches mm			Hole Diameter +0.13 -0.00	T ** Inches mm	V ‡ Thd. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2½ 65	×	¾ 20	1.50 38	2.05 52	2.61 66	1.73 44	5.90 150	2.75 70	3.1 1.4
		1 25	1.50 38	1.93 49	2.61 66	1.73 44	5.90 150	2.75 70	3.2 1.5
		1½ 40	2.00 51	2.15 55	2.87 73	1.73 44	6.06 154	3.38 86	4.1 1.9
3 80	×	¾ 20	1.50 38	2.30 58	2.86 73	2.09 53	6.30 160	2.75 70	3.4 1.5
		1 25	1.50 38	2.19 56	2.87 73	2.09 53	6.30 160	2.75 70	3.6 1.6
		1½ 40	2.00 51	2.59 66	3.31 84	2.09 53	6.30 160	3.38 86	4.5 2.0
4 100	×	¾ 20	1.50 38	2.81 71	3.37 86	2.50 64	7.25 184	2.75 70	3.3 1.7
		1 25	1.50 38	2.69 68	3.37 86	2.50 64	7.25 184	2.75 70	4.0 1.8
		1½ 40	2.00 51	3.09 79	3.81 97	2.50 64	7.25 184	3.38 86	5.0 2.3

** Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

‡ Center of run to end of fitting.



Mechanical-T Bolted Branch Crosses

STYLE 622

For Complete Information Request Publication **22.12**

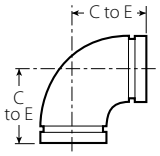
- Combination of upper housings from Style 622 Mechanical-T
- Available in sizes from 2½–4"/65–100 mm
- Working pressure equivalent to Style 622 Mechanical-T

Grooved Copper – Fittings

Elbows, Tee and Cap

NO. 610 90° Elbow
NO. 611 45° Elbow
NO. 620 Tee
NO. 660 Cap

For Complete Information Request Publication **22.04**



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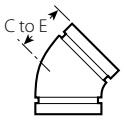

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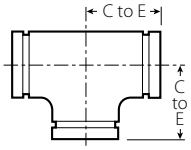


NO. 620

NO. 660

Size	No. 610 90° Elbow		No. 611 45° Elbow		No. 620 Tee		No. 660 Cap	
Nominal Inches Actual mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	T Inches mm	Approx. Weight Each Lbs. kg
2 54.0	2.91 74	0.9 0.4	2.19 56	0.8 0.4	2.69 62	1.1 c 0.5	0.96 24	1.2 c 0.5
2½ 66.7	3.31 84	1.3 0.6	2.31 59	1.1 0.5	3.20 81	1.8 c 0.8	0.96 24	1.4 c 0.6
3 79.4	3.81 97	4.1 c 1.9	2.59 66	1.6 0.7	3.52 89	3.2 c 1.5	0.96 24	1.4 c 0.6
4 104.8	4.75 121	6.7 c 3.0	3.19 81	3.4 1.5	4.25 108	6.1 c 2.8	0.96 24	2.4 c 1.1
5 130.2	5.94 151	15.0 c 6.8	3.25 83	10.0 c 4.5	5.94 151	18.5 c 8.4	0.96 24	3.5 c 1.6
6 155.6	6.94 176	20.0 c 9.1	3.63 92	13.0 c 5.9	6.94 176	25.5 c 11.6	0.96 24	4.2 c 1.9
8 206.4	7.75 197	26.0 c 11.8	4.25 108	15.6 c 7.1	7.75 197	45.0 c 20.4	—	—

c = Bronze casting; all others, drawn copper.

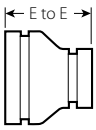
- Full flow standard radius copper fittings are supplied as either roll grooved wrought copper or bronze castings
- Designed for installation into copper systems using either a Style 606 coupling or Style 641 Vic-Flange adapter
- Pressures rates up to 300 psi/2065 kPa
- Sizes from 2–8"/54.0–206.4 mm

Grooved Copper – Fittings

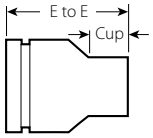
Concentric Reducer

NO. 650 Grv. × Grv.
NO. 652 Grv. × Cup

For Complete Information
Request Publication **22.04**



NO. 650



NO. 652

Size			No. 650 Grv. × Grv.		No. 652 Grv. × Cup		
Nominal Inches Actual mm			E to E Inches mm	Approx. Wgt. Each Lbs. kg	E to E Inches mm	Cup Inches mm	Approx. Wgt. Each Lbs. kg
2 54.0	×	1 28.6	—	—	2.70 69	0.91 23	0.50 0.2
		1 ¼ 34.9	—	—	3.00 76	0.97 25	0.45 0.2
		1 ½ 41.3	—	—	2.94 75	1.09 28	0.45 0.2
2½ 66.7	×	1 28.6	—	—	3.25 83	0.91 23	0.78 0.4
		1 ¼ 34.9	—	—	3.52 89	0.97 25	0.60 0.3
		1 ½ 41.3	—	—	3.45 88	1.09 28	0.65 0.3
		2 54.0	3.29 83	1.00 0.5	3.30 84	1.34 34	0.65 0.3
3 79.4	×	1 ½ 41.3	—	—	3.68 93	1.09 28	1.06 0.5
		2 54.0	2.50 64	0.95 c 0.4	4.10 104	1.34 34	0.99 0.5
		2½ 66.7	2.50 64	0.92 0.4	—	—	—
4 104.8	×	2 54.0	4.75 121	1.65 c 0.8	4.75 121	1.34 34	1.95 0.9
		2½ 66.7	3.00 76	1.95 c 0.9	—	—	—
		3 79.4	3.00 76	2.02 0.9	—	—	—
5 130.2	×	3 79.4	3.88 99	6.30 c 2.9	—	—	—
		4 104.8	3.38 86	6.30 c 2.9	—	—	—
6 155.6	×	3 79.4	4.38 111	6.40 c 2.9	—	—	—
		4 104.8	3.88 99	6.50 c 2.9	—	—	—
		5 130.2	3.38 86	6.70 c 3.0	—	—	—
8 206.4	×	6 155.6	5.00 127	10.0 c 4.5	—	—	—

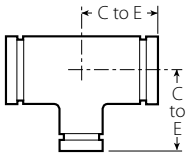
c = Bronze casting; all others, drawn copper.

Grooved Copper – Fittings

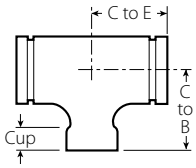
Reducing Tee

NO. 625 Grv. × Grv. × Grv.
NO. 626 Grv. × Grv. × Cup

For Complete Information
Request Publication **22.04**



No. 625



No. 626

Size					No. 625 Grv. × Grv. × Grv.			No. 626 Grv. × Grv. × Cup			
Nominal Inches Actual mm					C to E Inches mm	C to B Inches mm	Approx. Wgt. Lbs. kg	C to E Inches mm	C to B Inches mm	Cup Inches mm	Approx. Wgt. Lbs. kg
2 54.0	×	2 54.0	×	¾ 22.5	—	—	—	2.20 56	1.98 50	0.75 19	0.75 0.3
				1 28.6	—	—	—	2.33 59	2.20 56	0.91 23	0.81 0.4
				1 ¼ 34.9	—	—	—	2.48 63	2.35 60	0.97 25	0.85 0.4
				1 ½ 41.3	—	—	—	2.55 65	2.28 58	1.09 28	0.87 0.4
2½ 66.7	×	2½ 66.7	×	¾ 22.5	—	—	—	2.26 57	2.23 57	0.75 19	1.00 0.5
				1 28.6	—	—	—	2.40 61	2.40 61	0.91 23	1.17 0.5
				1 ¼ 34.9	—	—	—	2.52 64	2.57 65	0.97 25	1.23 0.5
				1 ½ 41.3	—	—	—	2.70 69	2.68 68	1.09 28	1.32 0.6
				2 54.0	3.28 83	3.38 86	1.58 0.7	—	—	—	—
3 79.4	×	3 79.4	×	¾ 22.5	—	—	—	2.41 61	2.56 65	0.75 19	1.40 0.6
				1 28.6	—	—	—	2.54 65	2.79 71	0.91 23	1.45 0.7
				1 ¼ 34.9	—	—	—	2.63 67	2.89 73	0.97 25	1.74 0.8
				1 ½ 41.3	—	—	—	2.85 73	3.00 76	1.09 28	1.74 0.8
				2 54.0	3.00 76	3.38 86	2.14 c 1.0	—	—	—	—
				2½ 66.7	3.25 83	3.50 89	2.43 c 1.1	—	—	—	—
4 104.8	×	4 104.8	×	¾ 22.5	—	—	—	3.04 77	2.97 75	0.75 19	2.75 1.2
				1 22.5	—	—	—	31.0 79	3.22 82	0.91 23	2.86 1.3
				1 ¼ 34.9	—	—	—	3.25 83	3.47 88	0.97 25	3.03 1.4
				1 ½ 41.3	—	—	—	3.35 85	3.65 93	1.09 28	3.16 1.4
				2 54.0	3.66 93	4.13 105	5.25 c 2.4	—	—	—	—
				2½ 66.7	3.94 100	4.06 103	5.75 c 2.6	—	—	—	—
				3 79.4	4.19 106	4.16 106	6.25 c 2.8	—	—	—	—
5 130.2	×	5 130.2	×	3 79.4	3.75 95	4.63 118	5.41 c 2.5	—	—	—	—
				4 104.8	4.25 108	4.56 116	8.75 c 4.0	—	—	—	—
6 155.6	×	6 155.6	×	2½ 66.7	3.63 92	5.13 130	6.66 c 3.0	—	—	—	—
				3 79.4	3.69 94	5.19 132	8.12 c 3.7	—	—	—	—
				4 104.8	4.19 106	5.13 130	9.75 c 4.4	—	—	—	—
				5 130.2	4.69 119	5.19 132	11.25 c 5.1	—	—	—	—

c = Bronze casting; all others, drawn copper.

Grooved Copper – Valves

Butterfly Valve

SERIES 608

For Complete Information Request Publication **22.05**

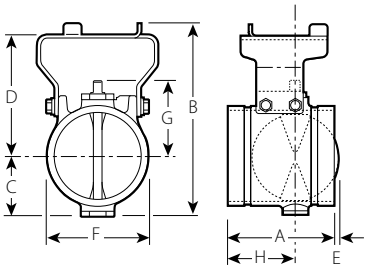
- Dead end service provided to full working pressure in both directions
- Pressure rated up to 300 psi/2065 kPa bubble-tight shut-off
- Sizes from 2½–6"/ 66.7–155.6 mm CTS

Size	Dimensions								Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Inches Actual mm	A End to End Inches mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	G Inches mm	H Inches mm	w/o Oper. Lbs. kg	C_V Values K_V Values
2½ 66.7	3.77 96	6.12 155	1.81 46	3.02 77	—	2.63 67	2.25 57	2.31 59	4.4 2.0	325 281.1
3 79.4	3.77 96	6.58 167	2.06 52	3.33 85	0.08 2	3.13 79	2.54 65	2.31 59	5.1 2.3	480 415.2
4 104.8	4.63 118	9.25 235	2.75 70	5.15 131	0.13 3	4.13 105	3.19 81	2.82 72	10.5 4.8	600 519.0
5 130.2	5.88 149	10.13 257	3.12 79	5.67 144	0.50 13	5.13 130	3.75 95	4.00 102	14.0 6.4	1150 994.8
6 155.6	5.88 149	11.15 283	3.62 92	6.25 159	1.00 25	6.13 156	4.16 106	4.00 102	19.0 8.6	1850 1600.3

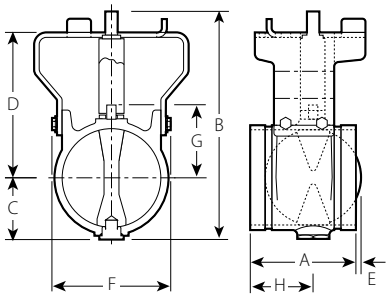
@ C_V/K_V values for flow of water at +60°F/+16°C with a fully open valve.

IMPORTANT NOTE:

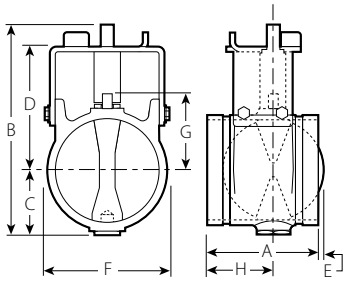
All Series 608 butterfly valves are bronze castings.



TYPICAL 2½–3"/66.7–79.4 mm SIZES



TYPICAL 4–5"/104.8–130.2 mm SIZES



TYPICAL 6"/155.6 mm SIZES

Notes

PermaLynx System for Copper Tube

Align

Insert

Push-to Connect

The Victaulic PermaLynx product line offers a complete system of push-to-connect couplings, fittings, valves and specialty adapters for ½-1 ½"/15-40 mm for ASTM B88 hard-drawn (K, L & M) copper tube.

The PermaLynx system is rated to 200 psi/1380 kPa* and is recommended for use in potable hot and cold water distribution systems up to 180°F/82°C. In addition, PermaLynx products are recommended for use in ambient, oil-free compressed air systems.

For complete information, request publication 22.20.

*All PermaLynx products are rated to 200 psi/1380 kPa with the exception of the supply stop valve which is rated to 125 psi/860 kPa.

PermaLynx Products

- Push-to-connect technology offers a safer alternative to a solder system by providing a flame-free method of installation
- PermaLynx products install twice as fast as sweat and 20% faster than "press" products.
- Fast, easy installation reduces downtime
- Reduces rework on brazed or soldered systems by 10-15%
- Installs on wet lines. No need to drain the system during maintenance or retrofit.

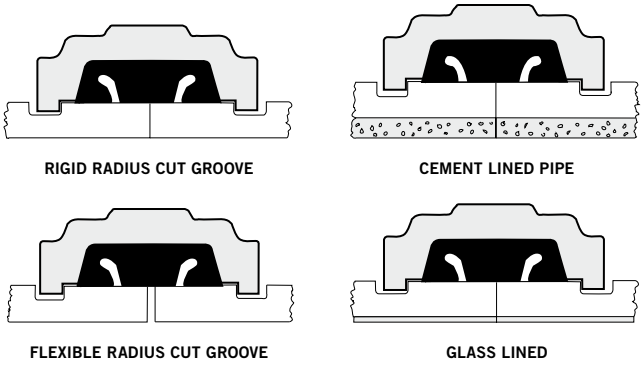
Notes

Grooved AWWA Ductile Iron Pipe

- Victaulic grooved piping components are available for use on AWWA C-606 Class 53 pipe or heavier
- Fastest, easiest method for joining AWWA size pipe - 75% fewer bolts than flanging
- FlushSeal® gasket specifically designed to seal on ductile iron pipe surfaces provides triple-seal to promote leak-free service for the life of the system
- Request publication 23.01
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 3–36"/80–900 mm

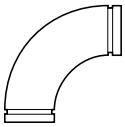
Grooves can be cut into the pipe to provide a rigid or flexible connection as needed.

Pipe and fittings can be coated for abrasive services.



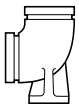
Illustrations exaggerated for clarity

Elbows



90° Long Radius Elbow
NO. 100-C, PG. 15-7

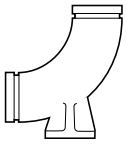
11 ¼° Elbow
NO. 13-C, PG. 15-7



Base Elbow
NO. 10-CB, PG. 15-13

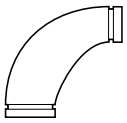
90° Elbow
NO. 10-C, PG. 15-7

90° Reducing Elbow
NO. 10-CR, PG. 15-11



Long Radius Base Elbow
NO. 100-CB, PG. 15-13

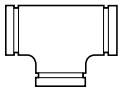
45° Elbow
NO. 11-C, PG. 15-7



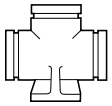
90° Long Radius Reducing Elbow
NO. 100-CR, PG. 15-11

22 ½° Elbow
NO. 12-C, PG. 15-7

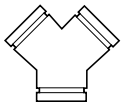
Tees, Crosses, Wyes, and Laterals



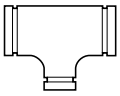
Tee
NO. 20-C, PG. 15-8



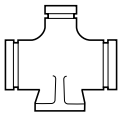
Base Tee
NO. 20-CB, PG. 15-13



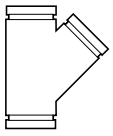
True Wye
NO. 33-C, PG. 15-8



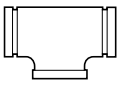
Reducing Tee
NO. 25-C, PG. 15-9



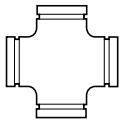
Reducing Base Tee
NO. 25-CB, PG. 15-13



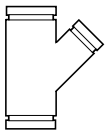
45° Lateral
NO. 30-C, PG. 15-8



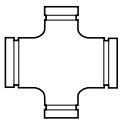
Bullhead Tee
NO. 21-C, PG. 15-8



Cross
NO. 35-C, PG. 15-8



45° Reducing Lateral
NO. 30-CR, PG. 15-9



Reducing Cross
NO. 35-CR, PG. 15-9

Cap
NO. 60-C, PG. 15-8

Grooved AWWA Ductile Iron Pipe

Couplings

Coupling
STYLE 31, PG. 15-3

Vic-Flange Adapter
STYLE 341, 15-4

Transition Coupling – AWWA to IPS
STYLE 307, PG. 15-5

Valves

Vic-Plug Valve
SERIES 365, PG. 15-15

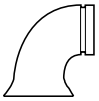
Check Valve
SERIES 317, PG. 15-16

Reducers

Concentric Reducer
NO. 50-C, PG. 15-11

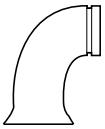
Eccentric Reducer
NO. 51-C, PG. 15-11

Flared and Outlet Fittings

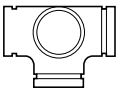


90° Flare
NO. 10-CF, PG. 15-14

Straight Flare
NO. 43-CF, PG. 15-14



90° Long Radius Flare
NO. 100-CF, PG. 15-14



Tee Side Outlet
NO. 20-CS, PG. 15-14

90° Side Outlet
NO. 10-CS, PG. 15-14

Gaskets for Grooved End Ductile/Cast Pipe of AWWA Dimensions

Grade	Temperature Range	Compound	Color Code	General Service Recommendations*
S	-20°F to +180°F -29°C to +82°C	Nitrile	Red Stripe	Specially compounded to conform to ductile pipe surfaces. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range; except hot dry air over +140°F/60°C and water over +150°F/66°C. **Not recommended for hot water services.**
M	-20°F to +200°F -29°C to +93°C	Halogenated Butyl	Brown Stripe	Specially compounded to conform to ductile pipe surfaces. Recommended for water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. **Not recommended for petroleum services.**
L	-30°F to +350°F -34°C to +177°C	Silicone	Red Gasket	Recommended for dry heat, air without hydrocarbons to +350°F/177°C and certain chemical services.

* Refer to Victaulic Gasket Selection Guide (Request 05.01) for specific service recommendations.

Services listed are Gasket Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

Grooved AWWA Ductile Iron Pipe – Couplings

Coupling

STYLE 31

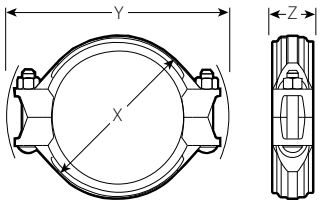
For Complete Information
Request Publication **23.02**

- Can provide a rigid or flexible joint depending on groove position
- Reduces number of bolts by up to 75%
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 3–36"/80–900 mm

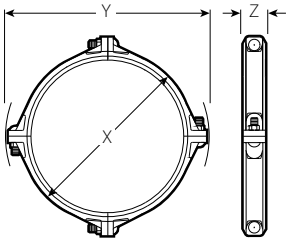
Size		Max. Working Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
3 80	3.960 100.6	500 3450	6200 27590	0 – 0.09 0 – 2.4	5.50 140	7.63 194	2.13 54	4.8 2.2
4 100	4.800 121.9	500 3450	9000 40050	0 – 0.09 0 – 2.4	6.25 159	9.20 234	2.09 53	7.5 3.4
6 150	6.900 175.3	400 2750	14950 66528	0 – 0.09 0 – 2.4	8.28 210	11.19 284	2.22 56	9.4 4.3
8 200	9.050 229.9	400 2750	25600 113920	0 – 0.09 0 – 2.4	10.74 273	14.33 364	2.59 66	16.5 7.5
10 250	11.100 281.9	350 2410	33850 150632	0 – 0.16 0 – 4.0	12.84 326	16.44 418	2.75 70	22.5 10.2
12 300	13.200 335.3	350 2410	47900 21150	0 – 0.16 0 – 4.0	15.27 388	19.16 487	2.75 70	30.0 14.0
14 350	15.300 388.6	250 1725	45950 204470	0 – 0.16 0 – 4.0	17.21 437	21.96 558	2.75 70	40.8 18.5
16 400	17.400 442.0	250 1725	59400 264330	0 – 0.25 0 – 6.4	19.90 505	23.96 609	3.50 89	61.3 27.8
18‡ 450	19.500 495.3	250 1725	74650 332190	0 – 0.25 0 – 6.4	22.03 560	26.33 669	3.50 89	80.0 36.3
20 500	21.600 548.6	150 1035	54900 244305	0 – 0.25 0 – 6.4	24.13 613	28.69 729	3.50 89	76.0 34.5
24 600	25.800 655.3	150 1035	78400 34880	0 – 0.25 0 – 6.4	28.31 719	33.06 840	3.50 89	104.0 47.2
30 750	32.000 812.8	150 1035	120570 536530	0 – 0.47 0 – 11.9	35.02 890	39.39 1001	4.38 111	162.0 73.5
36 900	38.300 972.8	150 1035	172815 769030	0 – 0.47 0 – 11.9	41.56 1056	46.04 1169	4.44 113	200.0 90.7

* Refer to General Notes on pg. 1-4.

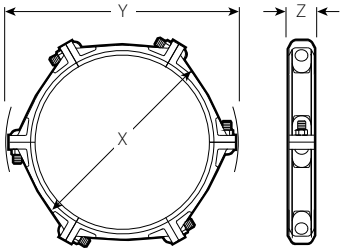
‡ For Class 53 pipe rating is 150 psi/1035 kPa.



TYPICAL 3–12"/80–300 mm SIZES



TYPICAL 14–20"/350–500 mm SIZES



TYPICAL 24–36"/600–900 mm SIZES

Grooved AWWA Ductile Iron Pipe – Couplings

Vic-Flange Adapter

STYLE 341

For Complete Information Request Publication **23.04**

- Direct connection of flanged components into a radius grooved (to AWWA C-606 standards) cast or ductile iron pipe system
- Provide rigid joint on rigid radius grooved ductile pipe
- Allow limited movement on flexible radius grooved ductile iron pipe
- Pressure rated up to 250 psi/1725 kPa
- Sizes from 3–12"/80–300 mm hinged for easy handling with integral tabs
- Sizes from 14–24"/350–600 mm cast in four identical segments which are interconnected as assembly is completed

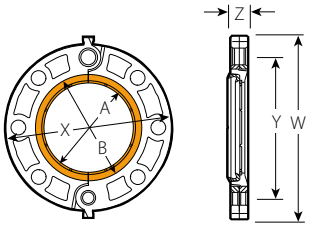
Size		Max. Work Pressure *	Max. End Load *	Sealing Surface		Dimensions				Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	A Maximum Inches mm	B Minimum Inches mm	W Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
3 80	3.9600 100.6	250 1725	3100 13795	3.96 101	4.94 125	8.44 214	7.50 191	6.00 152	0.94 24	5.4 2.4
4 100	4.800 121.9	250 1725	4500 20025	4.80 122	5.88 149	9.94 252	9.00 229	7.50 191	0.94 24	8.2 3.7
6 150	6.900 175.3	250 1725	9300 41385	6.90 175	8.00 203	12.00 305	11.00 279	9.50 241	1.00 25	12.0 5.4
8 200	9.050 229.9	250 1725	16000 71200	9.05 230	10.13 257	14.63 372	13.50 343	11.75 298	1.13 29	17.4 7.9
10 250	11.100 281.9	250 1725	23700 105465	11.10 282	12.50 318	17.13 435	16.00 406	14.25 362	1.19 30	24.6 11.2
12 300	13.200 335.3	250 1725	34000 151300	13.20 335	14.75 375	20.13 511	19.00 483	17.00 432	1.25 32	34.4 15.6
14 350	15.300 388.6	200 1375	36700 163315	15.30 389	16.38 416	24.63 626	21.00 533	18.75 476	1.50 38	55.0 25.0
16 400	17.400 442.0	150 1035	35600 158420	17.40 442	18.38 467	27.25 692	23.50 597	21.25 540	1.88 48	80.0 36.3
18 450	19.500 495.3	150 1035	44700 198915	19.50 495	20.00 508	29.13 740	25.00 635	22.75 578	2.25 57	95.0 43.1
20 500	21.600 548.6	150 1035	54900 244305	21.60 549	22.50 572	31.63 803	27.50 699	25.00 635	2.38 61	115.0 52.2
24 600	25.800 655.3	150 1035	78400 348880	25.80 655	27.75 705	36.13 918	32.00 813	29.50 749	2.50 64	150.0 68.0

* Refer to Publication 23.04 for more details.

IMPORTANT NOTE:

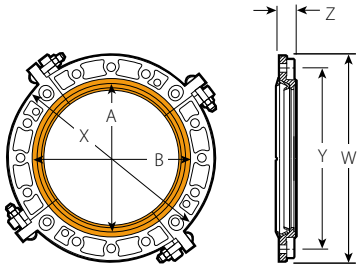
Style 341 requires sufficient clearance behind groove to permit proper assembly.

For restrictions on where and how Vic-Flange adapters and flange washers can be used, refer to Publication 23.04.



TYPICAL 3–12"/80– 300 mm SIZES

Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.



TYPICAL 14–24"/350–600 mm SIZES

Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Grooved AWWA Ductile Iron Pipe – Couplings

Transition Coupling

STYLE 307
Transition for grooved AWWA ductile iron to grooved IPS steel.

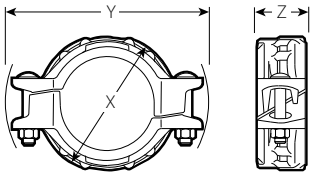
For Complete Information Request Publication **23.03**

- Direct single coupling connection for grooved end IPS steel pipe, valves or fittings to grooved end AWWA ductile iron pipe, valves or fittings of the same nominal size
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 3–12"/80–300 mm

Size		Mating Pipe Actual Size		Max. Work Pressure *	Max. End Load *	Fixed End Pipe Sep.*†	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	IPS Steel Inches mm	AWWA Ductile Inches mm	psi kPa	Lbs. kg	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
3 80	3.960 100.6	3.500 88.9	3.960 100.6	500 3450	4810 21405	0.03 1	5.50 140	7.38 187	2.07 53	6.0 2.7
4 100	4.800 121.9	4.500 114.3	4.800 121.9	500 3450	7950 35377	0.06 2	6.38 162	9.00 229	2.19 56	8.0 3.6
6 150	6.900 175.3	6.625 168.3	6.900 175.3	400 2750	13780 61321	0.06 2	8.44 214	11.13 283	2.31 59	9.0 4.1
8 200	9.050 229.9	8.625 219.1	9.050 229.9	400 2750	23370 103997	0.03 1	11.00 279	13.88 353	2.63 67	18.0 8.2
10 250	11.100 281.9	10.750 273.0	11.100 281.9	350 2410	31760 141332	0.03 1	13.13 334	16.50 419	2.63 67	22.0 10.0
12 300	13.200 335.3	12.750 323.9	13.200 335.3	350 2410	44680 198826	0.03 1	15.38 391	18.94 481	2.63 67	31.0 14.1

† For field installation only. Style 307 transition couplings are essentially rigid and do not permit expansion/contraction.

* Refer to General Notes on pg. 1-4.



TYPICAL FOR ALL SIZES

Grooved AWWA Ductile Iron Pipe – Fittings

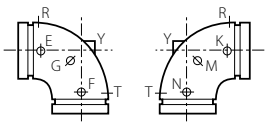
AWWA Fittings

For Complete Information Request Publication **23.05**

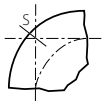
- AWWA size fittings are supplied with rigid radius grooves in accordance with ANSI/AWWA C-606
- Fittings conform to ANSI 21.10/AWWA C-110 for center-to-end dimensions and AWWA C-153 or ANSI 21.10/AWWA C-110 for wall thicknesses
- Available with a wide variety of coatings and linings
- Victaulic can supply tapped fittings on order to ANSI B16.1 dimension locations; specify fitting size, tap location by letter (as shown below and tap size – NPT dimensions) on order
- Pressure rated up to 350 psi/2400 kPa
- Sizes from 3–36"/80–900 mm

Tapped Fittings

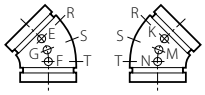
Elbows



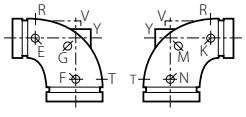
90° ELBOW – STRAIGHT SIZE



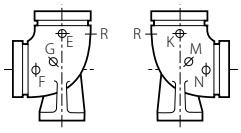
90° ELBOW



45° ELBOW BASE FITTINGS

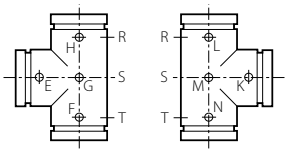


90° ELBOW REDUCING SIZES

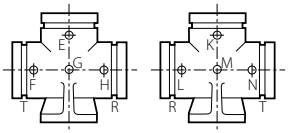


90° BASE ELBOW – STRAIGHT & REDUCING

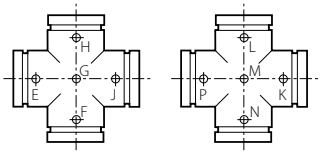
Tees, Crosses, Wyes, and Laterals



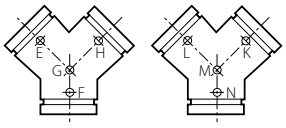
TEE – STRAIGHT SIZES



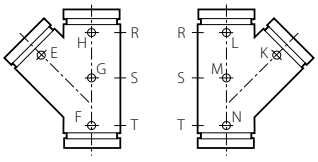
BASE TEE



CROSS – STRAIGHT SIZE

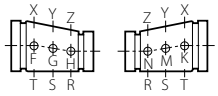


TRUE WYE

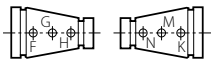


45° LATERAL – STRAIGHT & REDUCING

Reducers



ECCENTRIC REDUCER



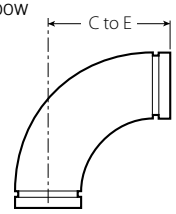
CONCENTRIC REDUCER

Grooved AWWA Ductile Iron Pipe – Fittings

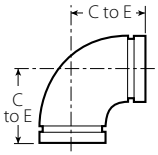
Elbows

NO. 100-C 90° Long Radius Elbow
NO. 10-C 90° Elbow
NO. 11-C 45° Elbow
NO. 12-C 22½° Elbow
NO. 13-C 11¼° Elbow

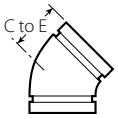
For Complete Information
Request Publication **23.05**



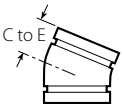
NO. 100-C



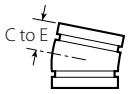
NO. 10-C



NO. 11-C



NO. 12-C



NO. 13-C

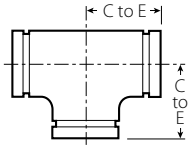
Size		No. 100-C 90° Long Radius Elbow		No. 10-C 90° Elbow		No. 11-C 45° Elbow		No. 12-C 22½° Elbow		No. 13-C 11¼° Elbow	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Weight Each Lbs kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
3 80	3.960 100.6	7.75 197	19.3 8.8	5.50 140	8.6 3.9	3.00 76	5.8 2.6	3.00 76	12.5 5.7	3.00 76	9.0 4.1
4 100	4.800 121.9	9.00 229	28.0 12.7	6.50 165	12.0 5.4	4.00 102	8.4 3.8	4.00 102	11.5 5.2	4.00 102	11.5 5.2
6 150	6.900 175.3	11.50 292	55.0 25.0	8.00 203	22.0 10.0	5.00 127	15.0 6.8	5.00 127	25.0 11.3	5.00 127	21.5 9.8
8 200	9.050 229.9	14.00 356	83.0 37.7	9.00 229	38.0 17.2	5.50 140	28.8 13.1	5.50 140	39.5 17.9	5.50 140	39.0 17.7
10 250	11.100 281.9	16.50 419	160.0 72.6	11.00 279	76.0 34.5	6.50 165	43.3 19.6	6.50 165	67.0 30.4	6.50 165	77.0 34.9
12 300	13.200 335.3	19.00 483	210.0 95.3	12.00 305	92.0 41.7	7.50 191	72.0 032.7	7.50 191	108.0 49.0	7.50 191	120.0 54.4
14 350	15.300 388.6	21.50 546	261.0 118.4	14.00 356	174.0 78.9	7.50 191	104.0 47.2	7.50 191	92.0 41.7	7.50 191	101.0 45.8
16 400	17.400 442.0	24.00 610	337.0 152.9	15.00 381	239.0 108.4	8.00 203	142.0 64.4	8.00 203	112.0 50.8	8.00 203	121.0 54.9
18 450	19.500 495.3	26.50 673	451.0 204.6	16.50 419	328.0 148.8	8.50 216	186.0 84.4	8.50 216	145.0 65.8	8.50 216	146.0 66.2
20 500	21.600 548.6	29.00 737	588.0 266.7	18.00 457	413.0 187.3	9.50 241	246.0 111.6	9.50 241	200.0 90.7	9.50 241	202.0 91.6
24 600	25.800 655.3	34.00 864	909.0 412.3	22.00 559	668.0 303.0	11.00 279	414.0 187.8	11.00 279	282.0 127.9	11.00 279	284.0 128.8
30 750	32.000 762.0	41.50 1054	2136.0 968.9	25.00 635	1002.0 454.4	15.00 381	720.0 326.6	15.00 381	681.0 308.9	15.00 381	699.0 317.1
36 900	38.300 914.4	49.00 1245	3120.0 1415.2	28.00 711	1608.0 729.4	18.00 457	1152.0 522.6	18.00 457	975.0 442.3	18.00 457	1124.0 509.8

Grooved AWWA Ductile Iron Pipe – Fittings

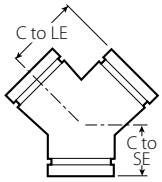
Tee, True Wye, Cross, Lateral, and Cap

NO. 20-C Tee
NO. 33-C True Wye
NO. 35-C Cross
NO. 30-C 45° Lateral
NO. 60-C Cap

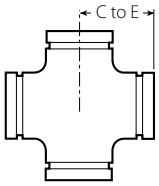
For Complete Information Request Publication **23.05**



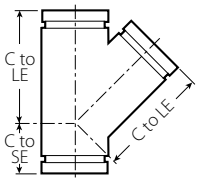
NO. 20-C



NO. 33-C



NO. 35-C



NO. 30-C

NO. 60-C

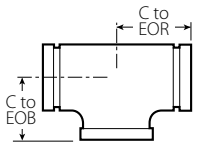
Size		No. 20-C Tee		No. 33-C True Wye			No. 35-C Cross		No. 30-C 45° Lateral			No. 60-C Cap†	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Wgt. Each Lbs. kg	T Thickness Inches mm	Approx. Wgt. Each Lbs. kg
3 80	3.960 100.6	5.50 140	14.2 6.4	3.00 140	3.00 76	25.00 635	5.50 140	24.0 10.9	10.00 254	3.00 76	28.0 12.7	1.22 31	3.0 1.4
4 100	4.800 121.9	6.50 165	19.0 8.6	6.50 165	3.00 76	55.0 25.0	6.50 165	40.0 18.1	12.00 305	3.00 76	38.4 12.7	1.16 29	5.0 2.3
6 150	6.900 175.3	8.00 203	34.0 15.4	8.00 203	3.50 89	90.0 40.8	8.00 203	71.0 32.2	14.50 368	3.50 89	67.0 30.4	1.16 29	9.0 4.1
8 200	9.050 229.9	9.00 229	59.0 26.8	9.00 229	4.50 114	140.0 63.5	9.00 229	106.0 48.1	17.50 445	4.50 114	120.0 54.4	1.34 34	16.0 7.3
10 250	11.100 281.9	11.00 279	111.0 50.4	11.00 279	5.00 127	220.0 99.8	11.00 279	225.0 102.1	20.50 521	5.00 127	215.0 97.5	1.53 39	37.2 16.9
12 300	13.200 335.3	12.00 305	136.0 61.7	12.00 305	5.50 140	315.0 142.9	12.00 305	310.0 140.6	24.50 622	5.50 140	346.0 157.0	1.53 39	52.0 23.6
14 350	15.300 388.6	14.00 356	262.0 118.8	14.00 356	6.00 152	+	14.00 356	307.0 139.3	27.00 686	6.00 152	492.0 223.2	2.75* 70	55.0 25.0
16 400	17.400 442.0	15.00 381	304.0 137.9	15.00 381	6.50 165	+	15.00 381	426.0 193.2	30.00 762	6.50 165	696.0 315.7	2.75* 70	68.0 30.9
18 450	19.500 495.3	16.50 419	408.0 185.1	16.50 419	7.00 178	+	16.50 419	567.0 254.9	32.00 813	7.00 178	870.0 394.6	2.75* 70	90.0 40.8
20 500	21.600 548.6	18.00 457	552.0 250.4	18.00 457	8.00 203	+	18.00 457	717.0 325.2	35.00 889	8.00 203	1103.0 500.3	2.75* 70	110.0 50.0
24 600	25.800 655.3	22.00 559	980.0 444.5	22.00 559	9.00 229	+	22.00 559	1177.0 533.9	40.50 1029	9.00 229	1746.0 792.0	2.75* 70	165.0 74.8
30 750	32.000 762.0	25.00 635	1552.0 704.0	25.00 635	10.00 254	+	25.00 635	1366.0 619.6	49.00 1245	10.00 254	3280.0 1487.8	4.00* 102	300.0 136.1
36 900	38.300 914.4	28.00 711	2050.0 929.9	28.00 711	15.25 387	+	28.00 711	1885.0 855.0	56.00 1422	15.25 387	5020.0 2277.1	4.00* 102	536.0 243.1

* Dish caps.
\+ Contact Victaulic for details.
† Caps from ½ – 3"/15 – 80 mm tap sizes.

Bullhead Tee

NO. 21-C

For Complete Information Request Publication **23.05**



NO. 21-C

Size							Dimensions		Approx. Weight Each
Nominal Size Inches mm							C to EOR Inches mm	C to EOB Inches mm	Lbs. kg
4 100	×	4 100	×	6 150			+	+	47.0 21.3
6 150	×	6 150	×	8 200			8.00 203	8.00 203	79.0 35.8
8 200	×	8 200	×	10 250			11.00 279	11.00 279	164.0 74.4
10 250	×	10 250	×	12 300			+	+	226.0 102.5

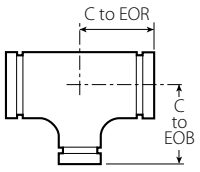
\+ Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

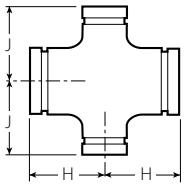
Reducing Fittings

NO. 25-C Reducing Tee
NO. 35-CR Reducing Cross
NO. 30-CR 45° Reducing Lateral

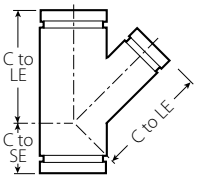
For Complete Information
Request Publication **23.05**



NO. 25-C



NO. 35-CR



NO. 30-CR

Size			No. 25-C Reducing Tee			No. 35-CR Reducing Cross			No. 30-CR 45° Reducing Lateral		
Nominal Size Inches mm			C to EOR Inches mm	C to EOB Inches mm	Approx. Weight Each Lbs. kg	H Inches mm	J Inches mm	Approx. Weight Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
4 100	×	3 80	6.50 165	6.50 165	26.4 12.0	6.50 165	6.50 165	22.0 10.0	12.00 305	3.00 76	45.0 20.4
6 150	×	3 80	8.00 203	8.00 203	30.0 13.6	8.00 203	8.00 203	46.0 20.9	14.50 368	3.50 89	74.0 33.6
		4 100	8.00 203	8.00 203	34.0 15.4	8.00 203	8.00 203	38.0 17.2	14.50 368	3.50 89	80.0 36.3
8 200	×	3 80	9.00 229	9.00 229	+	—	—	—	—	—	—
		4 100	9.00 229	9.00 229	78.0 35.4	9.00 229	9.00 229	76.0 34.5	17.50 445	4.50 114	125.0 56.7
		6 150	9.00 229	9.00 229	80.0 36.3	9.00 229	9.00 229	59.0 26.8	17.50 445	4.50 114	140.0 63.5
10 250	×	4 100	11.00 279	11.00 279	120.0 54.4	11.00 279	11.00 279	120.0 54.4	20.50 521	5.00 127	204.0 92.5
		6 150	11.00 279	11.00 279	128.0 58.1	11.00 279	11.00 279	114.0 51.7	20.50 521	5.00 127	212.0 96.2
		8 200	11.00 279	11.00 279	130.0 59.0	11.00 279	11.00 279	123.0 56.8	20.50 521	5.00 127	236.0 107.1
12 300	×	4 100	12.00 305	12.00 305	112.0 50.8	12.00 305	12.00 305	174.0 78.9	24.50 622	5.50 140	290.0 131.5
		6 150	12.00 305	12.00 305	180.0 81.7	12.00 305	12.00 305	130.0 59.0	24.50 622	5.50 140	302.0 137.0
		8 200	12.00 305	12.00 305	186.0 84.4	12.00 305	12.00 305	139.0 63.1	24.50 622	5.50 140	324.0 147.0
		10 250	12.00 305	12.00 305	192.0 87.1	12.00 305	12.00 305	154.0 69.9	24.50 622	5.50 140	356.0 161.5
14 350	×	6 150	14.00 356	14.00 356	238.0 108.0	14.00 356	14.00 356	215.0 97.5	27.00 686	6.00 152	330.0 149.7
		8 200	14.00 356	14.00 356	241.0 109.3	14.00 356	14.00 356	221.0 100.3	27.00 686	6.00 152	346.0 156.9
		10 250	14.00 356	14.00 356	258.0 114.8	14.00 356	14.00 356	235.0 106.6	27.00 686	6.00 152	540.0 244.9
		12 300	14.00 356	14.00 356	267.0 121.1	14.00 356	14.00 356	244.0 110.7	27.00 686	6.00 152	625.0 283.5
16 400	×	6 150	15.00 381	15.00 381	288.0 130.6	15.00 381	15.00 381	266.0 120.7	30.00 762	6.50 165	570.0 258.6
		8 200	15.00 381	15.00 381	315.0 142.9	15.00 381	15.00 381	276.0 125.2	30.00 762	6.50 165	585.0 265.4
		10 250	15.00 381	15.00 381	319.0 144.7	15.00 381	15.00 381	291.0 132.0	30.00 762	6.50 165	630.0 285.8
		12 300	15.00 381	15.00 381	330.0 149.7	15.00 381	15.00 381	305.0 138.4	30.00 762	6.50 165	650.0 294.8
		14 350	15.00 381	15.00 381	341.0 154.7	15.00 381	15.00 381	280.0 127.0	30.00 762	6.50 165	692.0 313.9
18 450	×	8 200	13.00 330	15.50 394	326.0 147.9	15.50 394	13.00 330	272.0 123.4	+	+	+
		10 250	13.00 330	15.50 394	332.0 150.6	15.50 394	13.00 330	277.0 125.6	32.00 813	7.00 178	765.0 347.0
		12 300	13.00 330	15.50 394	339.0 153.8	15.50 394	13.00 330	291.0 132.0	32.00 813	7.00 178	800.0 362.9
		14 350	16.50 419	16.50 419	441.0 200.0	16.50 419	16.50 419	361.0 163.7	32.00 813	7.00 178	865.0 392.4
		16 400	16.50 419	16.50 419	453.0 205.5	16.50 419	16.50 419	367.0 166.5	32.00 813	7.00 178	895.0 406.0

TABLE CONTINUED ON PG. 15-10

+ Contact Victaulic for details.

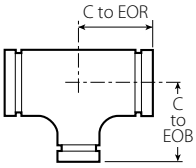
IMPORTANT NOTE: Non-standard reducing cross sizes are available. Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

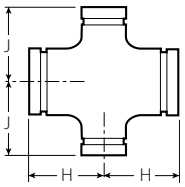
Reducing Fittings (cont'd)

NO. 25-C Reducing Tee
NO. 35-CR Reducing Cross
NO. 30-CR 45° Reducing Lateral

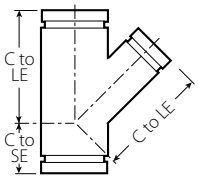
For Complete Information
Request Publication **23.05**



NO. 25-C



NO. 35-CR



NO. 30-CR

Size		No. 25-C Reducing Tee			No. 35-CR Reducing Cross			No. 30-CR 45° Reducing Lateral		
Nominal Size Inches mm		C to EOR Inches mm	C to EOB Inches mm	Approx. Weight Each Lbs. kg	H Inches mm	J Inches mm	Approx. Weight Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
TABLE CONTINUED FROM PG. 15-9										
20 500	× 6 150	14.00 356	17.00 432	+	—	—	—	—	—	—
	8 200	14.00 356	17.00 432	412.0 186.9	17.00 432	14.00 356	343.0 155.6	—	—	—
	10 250	14.00 356	17.00 432	419.0 190.1	17.00 432	14.00 356	343.0 155.6	+	+	+
	12 300	14.00 356	17.00 432	426.0 193.2	17.00 432	14.00 356	357.0 161.9	35.00 889	8.00 203	1000.0 453.6
	14 350	14.00 356	17.00 432	443.0 201.0	17.00 432	14.00 356	327.0 148.3	35.00 889	8.00 203	1062.0 481.7
	16 400	18.00 457	18.00 457	571.0 259.0	18.00 457	18.00 457	458.0 207.7	35.00 889	8.00 203	1105.0 501.2
	18 450	18.00 457	18.00 457	584.0 264.9	18.00 457	18.00 457	469.0 212.7	35.00 889	8.00 203	1150.0 521.6
24 600	× 6 150	15.00 381	19.00 483	+	—	—	—	—	—	—
	8 200	15.00 381	19.00 483	+	+	+	+	+	+	+
	10 250	15.00 381	19.00 483	+	+	+	+	+	+	+
	12 300	15.00 381	19.00 483	593.0 269.0	15.00 381	19.00 483	475.0 215.5	+	+	+
	14 350	15.00 381	19.00 483	610.0 276.7	15.00 381	19.00 483	450.0 204.1	40.50 1029	9.00 229	1510.0 684.9
	16 400	15.00 381	19.00 483	620.0 281.2	15.00 381	19.00 483	446.0 202.3	40.50 1029	9.00 229	1580.0 716.7
	18 450	22.00 559	22.00 559	918.0 416.4	22.00 559	22.00 559	782.0 354.7	40.50 1029	9.00 229	1306.0 592.4
	20 500	22.00 559	22.00 559	937.0 425.0	22.00 559	22.00 559	788.0 357.4	40.50 1029	9.00 229	1705.0 773.4
30 750	× 6 150	18.00 457	23.00 584	+	—	—	—	—	—	—
	8 200	18.00 457	23.00 584	+	+	+	+	+	+	+
	10 250	18.00 457	23.00 584	+	+	+	+	+	+	+
	12 300	18.00 457	23.00 584	1175.0 533.0	18.00 457	23.00 584	888.0 402.8	49.00 1245	10.00 254	2178.0 987.9
	14 350	18.00 457	23.00 584	1250.0 567.0	18.00 457	23.00 584	853.0 386.9	49.00 1245	10.00 254	2208.0 1001.5
	16 400	18.00 457	23.00 584	1437.0 651.0	18.00 457	23.00 584	843.0 382.4	49.00 1245	10.00 254	2248.0 1019.7
	18 450	18.00 457	23.00 584	1450.0 657.7	18.00 457	23.00 584	839.0 380.6	49.00 1245	10.00 254	2294.0 1040.6
	20 500	18.00 457	23.00 584	1462.0 663.2	18.00 457	23.00 584	835.0 378.8	49.00 1245	10.00 254	2339.0 1061.0
	24 600	25.00 635	25.00 635	1475.0 669.1	25.00 635	25.00 635	1304.0 591.5	49.00 1245	10.00 254	2451.0 1111.8
36 900	× 8 200	20.00 508	26.00 660	+	+	+	+	+	+	+
	10 250	20.00 508	26.00 660	+	+	+	+	+	+	+
	12 300	20.00 508	26.00 660	+	20.00 508	26.00 660	1262.0 572.4	+	+	+
	14 350	20.00 508	26.00 660	+	20.00 508	26.00 660	1222.0 554.3	+	15.25 387	+
	16 400	20.00 508	26.00 660	+	20.00 508	26.00 660	1213.0 550.2	54.00 1372	15.25 387	3493.0 1584.4
	18 450	20.00 508	26.00 660	+	20.00 508	26.00 660	1204.0 546.1	54.00 1372	15.25 387	3533.0 1602.6
	20 500	20.00 508	26.00 660	+	20.00 508	26.00 660	1190.0 539.8	54.00 1372	15.25 387	3574.0 1621.2
	24 600	20.00 508	26.00 660	+	20.00 508	26.00 660	1163.0 527.5	54.00 1372	15.25 387	3675.0 1667.0
	30 750	28.00 711	28.00 711	+	28.00 711	28.00 711	1865.0 846.0	56.00 1422	15.25 387	3879.0 1759.5

+ Contact Victaulic for details.

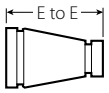
IMPORTANT NOTES: For 30"/750 mm sizes and larger contact Victaulic for details.
Non-standard reducing cross sizes are available. Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

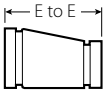
Reducers and Reducing Elbows

NO. 50-C Concentric Reducer
NO. 51-C Eccentric Reducer
NO. 10-CR 90° Reducing Elbow
NO. 100-CR 90° Long Radius Reducing Elbow

For Complete Information Request Publication **23.05**



NO. 50-C



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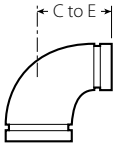
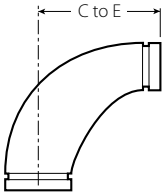


NO. 10-CR



NO. 100-CR

Size			No. 50-C Concentric Reducer		No. 51-C Eccentric Reducer		No. 10-CR 90° Reducing Elbow		No. 100-CR 90° Long Radius Red. El.	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
4 100	×	3 80	7.00 178	10.0 4.5	7.00 178	12.0 5.4	6.50 165	17.0 7.7	9.00 229	20.0 8.1
6 150	×	3 80	9.00 229	15.0 6.8	9.00 229	20.0 9.1	8.00 203	28.5 12.9	11.50 292	36.0 16.3
		4 100	9.00 229	16.5 7.5	9.00 229	25.0 11.3	8.00 203	29.6 13.4	11.50 292	40.0 18.1
8 200	×	3 80	11.00 279	33.0 15.0	11.00 279	+	—	—	—	—
		4 100	11.00 279	28.0 12.7	11.00 279	35.0 15.9	9.00 229	46.5 21.1	14.00 356	60.0 27.2
		6 150	11.00 279	34.0 15.4	11.00 279	44.0 20.0	9.00 229	48.5 22.0	14.00 356	71.0 32.2
10 250	×	4 100	12.00 305	42.0 19.1	12.00 305	54.0 24.5	11.00 279	68.0 30.8	16.50 419	90.0 40.8
		6 150	12.00 305	46.0 20.9	12.00 305	60.0 27.2	11.00 279	77.0 34.9	16.50 419	106.0 48.1
		8 200	12.00 305	50.0 22.7	12.00 305	70.0 31.8	11.00 279	88.0 39.9	16.50 419	121.0 54.9
12 300	×	4 100	14.00 356	60.0 27.2	14.00 356	82.0 37.2	12.00 305	+	+	+
		6 150	14.00 356	70.0 31.8	14.00 356	84.0 38.1	12.00 305	110.0 49.9	19.00 483	143.0 64.9
		8 200	14.00 356	74.0 33.6	14.00 356	91.0 41.3	12.00 305	126.0 57.2	19.00 483	163.0 73.9
		10 250	14.00 356	84.0 38.1	14.00 356	110.0 49.9	12.00 305	150.0 68.0	19.00 483	188.0 85.3
14 350	×	6 150	16.00 406	89.0 40.4	16.00 406	104.0 47.2	14.00 356	+	+	+
		8 200	16.00 406	102.0 46.3	16.00 406	121.0 54.9	14.00 356	135.0 61.2	21.50 546	183.0 83.0
		10 250	16.00 406	112.0 50.8	16.00 406	135.0 61.2	14.00 356	170.0 77.1	21.50 546	213.0 96.6
		12 300	16.00 406	126.0 57.4	16.00 406	150.0 68.0	14.00 356	195.0 88.5	21.50 546	240.0 108.9
16 400	×	6 150	18.00 457	11.0 49.9	18.00 457	140.0 63.5	—	—	+	+
		8 200	18.00 457	122.0 55.3	18.00 457	160.0 72.6	15.00 381	+	24.00 610	228.0 103.4
		10 250	18.00 457	135.0 61.2	18.00 457	168.0 76.2	15.00 381	195.0 88.5	24.00 610	263.0 119.3
		12 300	18.00 457	146.0 66.2	18.00 457	190.0 86.2	15.00 381	240.0 108.9	24.00 610	295.0 133.8
		14 350	18.00 457	173.0 78.5	18.00 457	210.0 95.3	15.00 381	280.0 127.0	24.00 610	290.0 131.5
18 450	×	8 200	19.00 483	148.0 67.1	19.00 483	180.0 81.6	16.50 419	+	—	—
		10 250	19.00 483	158.0 71.1	19.00 483	215.0 97.5	16.50 419	+	26.50 673	+
		12 300	19.00 483	173.0 78.5)	19.00 483	215.0 97.5	16.50 419	305.0 138.3	26.50 673	336.0 152.4
		14 350	19.00 483	200.0 90.7	19.00 483	230.0 104.3	16.50 419	345.0 156.5	26.50 673	355.0 161.0
		16 400	19.00 483	220.0 100.0	19.00 483	275.0 124.7	16.50 419	360.0 163.3	26.50 673	386.0 175.1

TABLE CONTINUED ON PG. 15-12

\+ Contact Victaulic for details.

IMPORTANT NOTE:

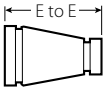
For 30"/750 mm sizes and larger contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

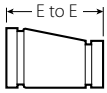
Reducers and Reducing Elbows (cont'd)

NO. 50-C Concentric Reducer
NO. 51-C Eccentric Reducer
NO. 10-CR 90° Reducing Elbow
NO. 100-CR 90° Long Radius Reducing Elbow

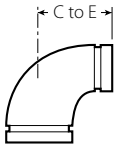
For Complete Information Request Publication **23.05**



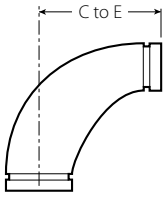
NO. 50-C



NO. 51-C



NO. 10-CR



NO. 100-CR

Size			No. 50-C Concentric Reducer		No. 51-C Eccentric Reducer		No. 10-CR 90° Reducing Elbow		No. 100-CR 90° Long Radius Red. El.	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
TABLE CONTINUED FROM PG. 15-11										
20 500	×	8 200	20.00 508	173.0 78.5	20.00 508	+	—	—	—	—
		10 250	20.00 508	182.0 82.6	20.00 508	215.0 97.5	18.00 457	+	29.00 737	+
		12 300	20.00 508	201.0 91.2	20.00 508	250.0 113.4	18.00 457	365.0 165.6	29.00 737	+
		14 350	20.00 508	230.0 104.3	20.00 508	270.0 122.5	18.00 457	405.0 183.7	29.00 737	+
		16 400	20.00 508	251.0 113.9	20.00 508	300.0 136.1	18.00 457	440.0 199.6	29.00 737	466.0 211.4
		18 450	20.00 508	275.0 124.7	20.00 508	320.0 145.2	18.00 457	485.0 220.0	29.00 737	507.0 230.0
24 600	×	8 200	24.00 610	257.0 116.6	24.00 610	300.0 136.1	+	+	+	+
		10 250	24.00 610	274.0 124.3	24.00 610	300.0 136.1	+	+	+	+
		12 300	24.00 610	293.0 132.9	24.00 610	395.0 179.2	22.00 559	590.0 267.6	34.00 864	+
		14 350	24.00 610	331.0 150.1	24.00 610	425.0 192.8	22.00 559	630.0 285.8	34.00 864	+
		16 400	24.00 610	358.0 162.4	24.00 610	455.0 206.4	22.00 559	690.0 313.0	34.00 864	658.0 298.5
		18 450	24.00 610	386.0 175.1	24.00 610	465.0 210.9	22.00 559	735.0 333.4	34.00 864	+
		20 500	24.00 610	418.0 189.6	24.00 610	525.0 238.1	22.00 559	815.0 369.7	34.00 864	759.0 344.3
30 750	×	8 200	+	+	+	+	+	+	—	—
		10 250	+	+	+	+	+	+	—	—
		12 300	30.00 762	+	30.00 762	+	+	+	—	—
		14 350	30.00 762	+	30.00 762	+	25.00 635.0	+	—	—
		16 400	30.00 762	+	30.00 762	+	25.00 635.0	+	41.50 1054	+
		18 450	30.00 762	+	30.00 762	+	25.00 635.0	+	41.50 1054	+
		20 500	30.00 762	+	30.00 762	+	25.00 635.0	+	41.50 1054	+
		24 600	30.00 762	+	30.00 762	+	25.00 635.0	1170.0 530.7	41.50 1054	+
36 900	×	8 200	+	+	+	+	+	+	—	—
		10 250	+	+	+	+	+	+	—	—
		12 300	+	+	+	+	+	+	—	—
		14 350	36.00 914	+	36.00 914	+	+	+	—	—
		16 400	36.00 914	+	36.00 914	+	+	+	—	—
		18 450	36.00 914	+	36.00 914	+	+	+	—	—
		20 500	36.00 914	1280.0 580.6	36.00 914	+	+	+	49.00 1245	+
		24 600	36.00 914	1370.0 621.4	36.00 914	+	+	+	49.00 1245	+
		30 750	36.00 914	1450.0 657.7	36.00 914	+	+	+	49.00 1245	+

+ Contact Victaulic for details.

IMPORTANT NOTE:

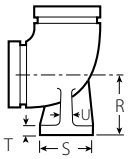
For 30"/750 mm sizes and larger contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

Base Fittings

NO. 10-CB Base Elbow
NO. 20-CB Base Tee
NO. 25-CB Reducing Base Tee
NO. 100-CB Long Radius Base Tee

For Complete Information
Request Publication **23.05**



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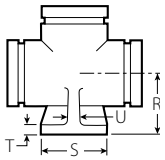
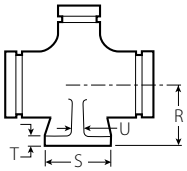
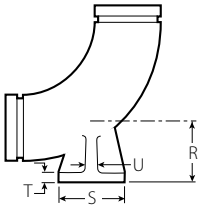


NO. 20-CB



NO. 25-CB



NO. 100-CB

ROUND BASE

Size		Dimensions					Approx. Weight Each			
Nominal Size Inches mm	Actual Outside Diameter Inches mm	R Inches mm	U Inches mm	T Inches mm	S Inches mm	W Inches mm	No. 10-CB Base Elbow Lbs. kg	No. 20-CB Base Tee Lbs. kg	No. 100-CB LR Base Elbow Lbs. kg	No. 25-CB Red. Base Tee Lbs. kg
3 80	3.960 100.6	4.88 124	0.50 13	0.56 14	5.00 127	3.88 99	19.0 8.6	19.0 8.6	–	+
4 100	4.800 121.9	5.50 140	0.50 13	0.62 16	6.00 152	4.75 121	23.6 10.7	26.0 11.8	–	+
6 150	6.900 175.3	7.00 178	0.62 16	0.69 18	7.00 178	5.50 140	42.0 19.1	50.0 22.7	–	+
8 200	9.050 229.9	8.38 213	0.88 22	0.94 24	9.00 229	7.50 191	75.0 34.0	92.0 41.7	–	+
10 250	11.100 281.9	9.75 248	0.88 22	0.94 24	9.00 229	7.50 191	114.0 51.7	125.0 56.7	–	+
12 300	13.200 335.3	11.25 286	1.00 25	1.00 25	11.00 279	9.50 241	152.0 69.0	183.0 83.0	–	+
14 350	15.300 388.6	12.50 318	1.00 25	1.00 25	11.00 279	9.50 241	–	–	340.0 154.2	+
16 400	17.400 442.0	13.75 349	1.00 25	1.00 25	11.00 279	9.50 241	–	–	425.0 192.8	+
18 450	19.500 495.3	15.00 381	1.12 29	1.12 29	13.50 343	11.75 299	–	–	591.0 268.1	+
20 500	21.600 548.6	16.00 406	1.12 29	1.12 29	13.50 343	11.75 299	–	–	717.0 325.2	+
24 600	25.800 655.3	18.50 470	1.12 29	1.12 29	13.50 343	11.75 299	–	–	1056.0 479.0	+

+ 90° reducing elbows are available with a base. Contact Victaulic for details.

IMPORTANT NOTES:

Bolt hole template shown for round base is the same as for the flange of the supporting pipe size, except using only four holes in all cases so placed as to straddle center lines.

The bases of these fittings are intended for support in compression and are not to be used for anchors or supports in tension or sheer.

Grooved end base 90° elbows (#X-90 CDI) and base tees (#X-CDI) are available with dimensions to ANSI B16.1.

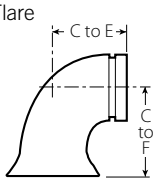
Side base fittings are available. Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

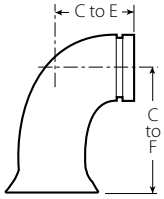
Flared and Outlet Fittings

NO. 10-CF 90° Flare
NO. 100-CF 90° Long Radius Flare
NO. 43-CF Straight Flare
NO. 10-CS 90° Side Outlet
NO. 20-CS Tee Side Outlet

For Complete Information
Request Publication **23.05**



NO. 10-CF



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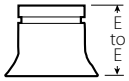

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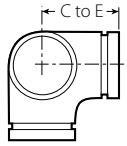
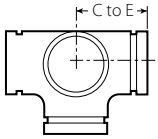


NO. 10-CS*



NO. 20-CS*

Size		No. 10-CF 90° Flare			No. 100-CF 90° Long Radius Flare			No. 43-CF Straight Flare		No. 10-CS* 90° Side Outlet		No. 20-CS* Tee Side Outlet	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	C to F Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	C to F Inches mm	Approx. Wgt. Each Lbs. kg	E to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg
3 80	3.960 100.6	5.50 140	9.00 229	18.0 8.2	7.75 197	11.25 286	23.0 10.4	8.00 203	13.0 5.9	5.50 140	13.0 5.9	5.50 140	28.0 12.7
4 100	4.800 121.9	6.50 165	9.50 241	35.0 15.9	9.00 229	12.50 318	42.0 19.1	8.00 203	17.0 7.7	6.50 165	30.0 13.6	6.50 165	42.0 19.1
6 150	6.900 175.3	8.00 203	11.50 292	70.0 31.8	11.50 292	15.00 381	68.0 30.9	8.00 203	23.0 10.4	8.00 203	58.0 26.3	8.00 203	85.0 38.6
8 200	9.050 229.9	9.00 229	13.50 343	120.0 54.4	14.00 356	18.50 470	118.0 53.5	10.00 254	43.0 19.5	9.00 229	90.0 40.8	9.00 229	114.0 51.7
10 250	11.100 281.9	11.00 279	16.50 419	157.0 71.2	16.50 419	22.50 572	188.0 85.3	10.00 254	58.0 26.3	11.00 279	124.0 56.3	11.00 279	219.0 99.3
12 300	13.200 335.3	12.00 305	18.50 470	190.0 86.2	19.00 483	25.50 648	275.0 124.7	12.00 305	100.0 45.4	12.00 305	170.0 77.1	12.00 305	295.0 133.8
14 350	15.300 388.6	14.00 356	21.50 546	235.0 106.6	21.50 546	29.00 737	325.0 147.4	12.00 305	90.0 40.8	14.00 356	+	+	+
16 400	17.400 442.0	15.00 381	23.00 584	300.0 136.1	24.00 610	32.00 813	435.0 197.3	16.00 406	145.0 65.8	15.00 381	+	+	+
18 450	19.500 495.3	16.50 419	25.00 635	391.0 177.4	26.50 673	35.00 889	571.0 259.0	16.00 406	205.0 93.0	16.50 419	+	+	+
20 500	21.600 548.6	18.00 457	27.00 686	496.0 255.0	29.00 737	38.00 965	731.0 331.6	18.00 457	221.0 100.3	18.00 457	+	+	+
24 600	25.800 655.3	22.00 559	32.50 826	808.0 366.5	34.00 864	44.50 1130	1642.0 744.8	18.00 457	293.0 132.9	22.00 559	+	+	+
30 750	32.000 762.0	+	+	+	+	+	+	24.00 610	567.0 257.2	+	+	+	+
36 900	38.300 914.4	+	+	+	+	+	+	24.00 610	736.0 333.9	+	+	+	+

\+ Contact Victaulic for details.

* Reducing side outlet 90° Elbows, Tees, and Crosses are available. Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Valves

Vic-Plug Valve with AWWA Standard Ends

SERIES 365

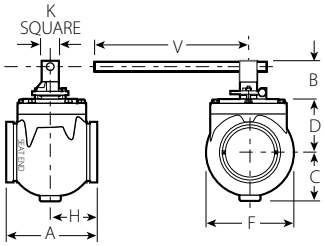
For Complete Information Request Publication **23.06**

SERIES 365 GEAR OPERATOR

- Grooved eccentric plug valves designed to ANSI/AWWA standards primarily for water and wastewater treatment services
- The torque required to open Vic-Plug valves will vary with pressure differential across the closed valve; using the maximum pressure differential select the correct gear operator from the chart on pg. 15-16
- Eccentric plug assures bubble-tight sealing up to 175 psi/1200 kPa
- Bi-directional sealing to 25 psi/175 kPa is standard with full bi-directional sealing optionally available
- Sizes from 3 – 12"/80 – 300 mm

Size		Dimensions – Inches/mm								Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End	B	C	D	F	H	V	K	w/o Handle Lbs. kg
3 80	3.960 100.6	8.00 203	4.06 103	3.75 95	4.25 108	6.40 163	4.00 102	18.50 470	2.00 51	25.0 11.3
4 100	4.800 121.9	9.00 229	4.06 103	4.44 113	4.75 121	7.52 191	4.50 114	18.50 470	2.00 51	35.0 15.9
6 150	6.900 175.3	10.50 267	3.20 81	5.50 140	7.50 191	10.32 262	5.25 133	18.50 470	2.00 51	70.0 31.8

Manual Handle



Valve with Gear Operator †

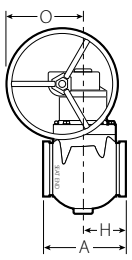
The torque required to open Vic-Plug valves will vary with pressure differential across the closed valve.

A complete range of automatic operators and accessories are available with the Vic-Plug valve. Please contact Victaulic with your requirements.

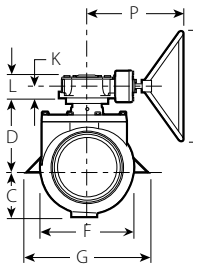
Size		Dimensions – Inches/mm														Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End	C	D	F	G	H	K	L	M	N.Dia	O	P	GO Series	Lbs. kg
3* 80	3.960 100.6	8.00 203	3.75 95	4.25 108	6.56 167	—	4.00 102	1.65 42	3.19 81	4.00 102	6.00 152	5.63 143	6.60 168	M12	32.0 14.5
4* 100	4.800 121.9	9.00 229	4.44 113	4.75 121	7.74 197	—	4.50 114	1.65 42	3.19 81	4.00 102	6.00 152	5.63 143	6.60 168	M12	42.0 19.1
6* 150	6.900 175.3	10.50 267	5.50 140	7.50 191	10.32 262	—	5.25 133	1.65 42	3.19 81	—	10.00 254	7.63 194	8.41 214	M12	80.0 36.3
8 200	9.050 229.9	11.50 292	6.87 175	10.80 274	12.30 312	16.38 416	5.75 145	1.65 42	3.19 81	—	18.00 457	11.63 295	10.25 261	M12	120.0 55.0
10 250	11.100 281.9	13.00 330	8.00 203	12.00 305	14.78 375	18.75 476	6.50 165	2.00 50	3.68 93	—	18.00 457	12.50 318	11.00 278	M14	185.0 84.0
12 300	13.200 335.3	14.00 356	9.50 241	13.75 349	17.00 432	21.00 533	7.00 178	2.00 50	4.15 105	—	18.00 457	13.88 352	13.00 331	M15	240.0 109.0

† Gear operators can be installed in various positions. Contact Victaulic for details.

*3, 4, 6"/80, 100, 150 mm valves do not include side support lugs.



TYPICAL 3 – 6"/80 – 100 MM SIZES



TYPICAL 8 – 12"/200 – 300 MM SIZES

Grooved AWWA Ductile Iron Pipe – Valves

Check Valve

SERIES 317

For Complete Information Request Publication **23.09**

- Grooved end AWWA check valve
- The body conforms to AWWA C-508 standard end-to-end dimensions
- Grooved ends conform to ANSI/AWWA C-606 rigid groove specifications
- Allows easy installation with just two Victaulic couplings
- Various accessories available; lever, counter-weight, lever and spring, and adjustable air cushions
- Pressure rated up to 175 psi/1200 kPa
- Sizes from 3–12"/80–300 mm

SERIES 317 SPRING AND LEVER

SERIES 317 AIR CUSHION

SERIES 317 WEIGHT AND LEVER

Important Installation Considerations

Option[1]	Horizontal Orientation	Vertical Orientation
Bare	Yes	Yes
Lever with Weight	Yes	Yes[2]
Lever with Spring	Yes	Yes
Lever with Adjustable Spring[3] and Air Cushion	Yes	Yes

IMPORTANT NOTES:

1 Valves supplied without air cushions are subject to slamming.

2 For proper operation in vertical orientation, lever must be rotated 90°.

3 All valves supplied with an air cushion will also be supplied with the adjustable spring. This is not the same spring provided with the non-air cushion options.

- Field retrofit kits are available
- Excessive packing nut tightness may impede rate of clapper closure
- Valves are supplied without pressure taps and drains; Upon ordering, please specify if taps or drains are required, refer to publication 23.09 for more details

Grooved AWWA Ductile Iron Pipe – Valves

Check Valve

SERIES 317

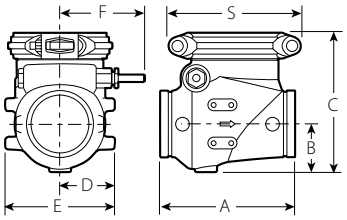
For Complete Information
Request Publication **23.09**

Size		Dimensions															Approx. Weight Each*	Accessory Kits Approx. Weight		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Inches mm	B Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	G Inches mm	H Inches mm	J Inches mm	K Inches mm	L Inches mm	M Inches mm	N Inches mm	R Inches mm	S Inches mm	Bare Valve Lbs. kg	Spring & Lever Lbs. kg	Weight & Lever Lbs. kg	Air Cushion Lbs. kg
3 80	3.960 100.6	9.50 241	3.28 83	10.13 257	3.87 98	7.74 197	7.05 179	13.56 344	13.22 336	8.00 203	11.28 287	14.65 372	14.07 357	7.30 185	6.82 173	9.50 241	50.0 22.7	4.0 1.8	7.0 3.2	15.0 6.8
4 100	4.800 121.9	11.50 292	4.05 103	11.38 289	4.62 117	9.24 235	7.80 198	13.93 354	13.91 353	8.75 222	10.74 273	15.03 382	14.74 374	8.05 204	7.54 192	11.74 298	70.0 31.8	4.0 1.8	7.0 3.2	15.0 6.8
6 150	6.900 175.3	14.00 356	4.98 126	14.43 367	5.68 144	11.36 289	8.86 225	14.50 368	15.26 388	9.81 249	9.47 241	15.59 396	16.07 408	9.11 231	8.60 218	14.57 370	120.0 54.4	4.0 1.8	7.0 3.2	15.0 6.8
8 200	9.050 229.9	19.50 495	6.12 155	18.14 461	7.15 182	14.30 363	11.34 288	20.25 514	21.37 543	12.65 321	12.74 324	21.52 547	22.21 564	11.64 296	10.37 263	17.94 456	225.0 102.1	8.0 3.6	17.0 7.7	34.0 15.4
10 250	11.100 281.9	22.00 559	7.38 187	20.90 531	8.28 210	16.56 421	12.48 317	20.39 518	22.61 574	13.78 350	11.51 292	21.65 550	23.45 596	12.77 324	11.50 292	20.42 519	350.0 158.8	8.0 3.6	17.0 7.7	34.0 15.4
12 300	13.200 335.3	26.00 660	8.60 218	27.04 687	9.62 244	19.24 489	13.81 351	21.00 533	24.00 610	15.12 384	10.13 257	22.27 566	24.83 631	14.11 358	12.84 326	23.05 585	460.0 217.7	8.0 3.6	17.0 7.7	34.0 15.4

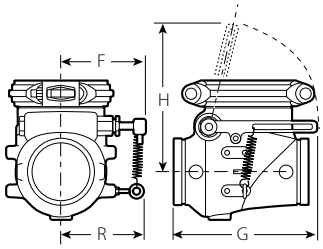
* Weights listed above are for the bare valve. Accessory kit weights are listed separately in right hand columns.

IMPORTANT NOTE:

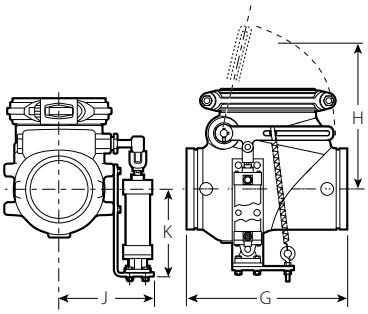
Valve may be installed horizontally or vertically. See table on pg. 13-17 for approved usage of accessory options.



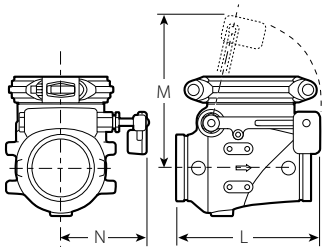
SERIES 317 BARE



SERIES 317 SPRING AND LEVER



SERIES 317 AIR CUSHION WITH ADJUSTABLE SPRING



SERIES 317 WEIGHT AND LEVER

Notes

Vic-Ring® Systems

Victaulic offers two Vic-Ring Systems for large diameter abrasive and corrosive services. Each system maintains full pipe wall thickness for maximum service life.

OGS System – Style 44 coupling – request publication 16.05

- Designed specifically for use with Style 44 Vic-Ring couplings
- OGS ring system available with Type “D” or “E” rings. Request publication 16.01
- For systems from 4 – 60”/100 – 1525 mm

AGS System – Style W07 rigid coupling – request publication 16.11
or **Style W77 flexible coupling** – request publication 16.12

- Features patented Advance Groove System for higher pressure service
- Both couplings feature two piece housings for easier assembly
- Available in sizes from 26" – 60/650 – 1525 mm for pressures up to 350 psi/2400 kPa
- Compatible for most lining options for abrasion or abrasion and corrosive services

Vic-Ring Coupling

STYLE 44, PG. 16-2

AGS Vic-Ring Rigid Coupling

STYLE W07, PG. 16-3

AGS Vic-Ring Flexible Coupling

STYLE W77, PG. 16-4

PRODUCTS

Vic-Ring® Systems

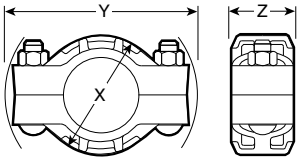
Vic-Ring® Rigid Coupling

STYLE 44

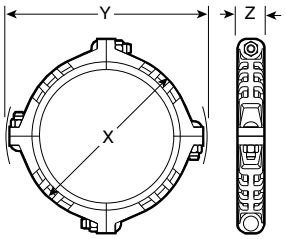
For Complete Information Request Publication **06.05**

- Cross-ribbed construction provides a strong component for use on steel pipe with applied Vic-Ring adapters
- Sizes from 4–60"/100–1500 mm

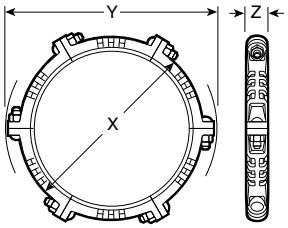
Size		Coupling Dimensions Inches/mm			Bolt Dimensions Inches/mm				Approx. Wgt. Each
Nominal Diameter Inches mm	Actual Outside Diameter Inches mm	Height X	Width Y	Depth Z	No.	Diameter	x	Length	Lbs. kg
4 100	4.500 114.3	7.0 178	9.65 245	2.25 57	2	5/8	x	4	8.0 3.6
6 150	6.625 168.3	9.25 235	12.05 306	2.38 60	2	5/8	x	4	11.0 5.0
8 200	8.625 219.1	12.00 305	15.00 381	2.63 67	2	3/4	x	5	17.0 7.7
10 250	10.750 273.0	14.25 362	17.75 450	2.88 73	2	3/4	x	5	23.0 10.4
12 300	12.750 323.9	16.75 425	20.03 509	3.00 76	2	7/8	x	5 1/2	31.0 14.1
14 350	14.000 355.6	18.88 480	22.75 578	3.63 92	4	1	x	3 1/2	43.0 19.5
16 400	16.000 406.4	21.13 538	25.68 652	3.63 92	4	1	x	3 1/2	63.0 28.6
18 450	18.000 457.0	24.63 626	28.25 717	3.75 95	4	1	x	3 1/2	85.0 38.6
20 500	20.000 508.0	26.25 668	30.88 784	3.75 95	4	1 1/4	x	5 1/2	90.0 40.8
24 600	24.000 610.0	30.25 768	35.00 889	3.75 95	6	1 1/4	x	3 1/2	107.0 48.5
30 750	30.000 762.0	37.75 959	49.21 1098	5.38 137	6	1 1/2	x	5 3/4	225.0 102.1
36 900	36.000 914.0	44.38 1127	50.00 1270	5.38 137	6	1 1/2	x	5 3/4	270.0 122.5
42 1050	42.000 1067.0	50.75 1289	57.50 1461	5.38 137	8	1 3/4	x	6	380.0 172.4
48 1200	48.000 1219.2	57.75 1467	63.00 1600	5.50 140	16	1 3/8	x	5 3/4	515.0 233.6
54 1375	54.000 1371.6	64.63 1642	70.50 1791	5.63 143	16	1 1/2	x	5 3/4	615.0 279.0
60 1500	60.000 1524.0	71.38 1813	77.00 1956	5.75 146	20	1 1/2	x	5 3/4	688.0 312.1



4–12"/100–300 mm SIZES



14–20"/350–500 mm SIZES



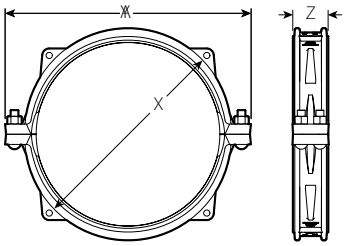
24–36"/600–900 mm SIZES

Vic-Ring® Systems

AGS Vic-Ring® Rigid Coupling

STYLE W07

For Complete Information Request Publication **06.11**



- Designed to provide a strong connection for large diameter pressure piping systems
- Pressure rated up to 350 psi/2400 kPa
- Sizes from 26–48"/660–1200 mm

Size		Max. Working Pressure* psi/kPa			Max. End Load* Lbs./N			Allow. Pipe End Sep.	Bolt/Nut No - Size	Dimensions – Inches/mm			Approx. Wgt. Each
Nominal Pipe Size Inches mm	Coupling/Ring Size Inches mm	Std. Wall	Light Wall ‡	Extra Heavy ½"/12.7 mm	Std. Wall	Light Wall ‡	Extra Heavy ½"/12.7 mm	Inches mm	Inches	X	Y	Z	Coupling Only Lbs. kg
12 300	14.000 355.6	350 2500	350 2500	- -	53900 239757	53900 239757	- -	0.25 6.4	2 – 1 x 5½	15.87 403	20.59 523	4.75 121	49 22.2
14 350	16.000 406.4	350 2500	350 2500	- -	70400 313155	70400 313155	- -	0.25 6.4	2 – 1 x 5½	18.12 460	23.51 597	4.75 121	61 27.7
16 400	18.000 457.0	350 2500	350 2500	- -	89100 396335	89100 396335	- -	0.25 6.4	2 – 1 x 5½	20.22 514	25.53 648	4.75 121	71 32.2
18 450	20.000 508.0	350 2500	350 2500	- -	109950 489304	109950 489304	- -	0.25 6.4	2 – 1⅛ x 5½	22.44 570	27.13 689	4.75 121	82 37.2
20 500	22.000 558.8	350 2500	350 2500	- -	133046 592055	133046 592055	- -	0.25 6.4	2 – 1⅛ x 6	24.72 628	29.25 743	4.75 121	99 44.9
22 550	24.000 610.0	350 2500	232 1600	- -	135750 603941	135750 603941	- -	0.25 6.4	2 – 1⅛ x 5½	26.64 677	32.31 821	4.75 121	116 52.6
24 600	26.000 660.4	300 2065	- -	300 2065	159279 708508	159279 708508	- -	0.38 9.6	4 – 1⅛ x 6	30.07 764	35.23 895	5.68 144	205 93.0
26 650	28.000 711.2	300 2065	- -	300 2065	184726 821702	184726 821702	- -	0.38 9.6	4 – 1⅛ x 6	32.23 819	37.22 945	5.68 144	220 99.8
28 700	30.000 762.0	300 2065	- -	300 2065	212058 943281	212058 943281	- -	0.38 9.6	4 – 1¼ x 7	33.90 863	39.64 1007	5.68 144	227 103.0
30 750	32.000 812.8	300 2065	- -	300 2065	241274 1073240	241274 1073240	- -	0.38 9.6	4 – 1¼ x 7	36.07 916	41.74 1060	5.68 144	242 109.8
32 800	34.000# 865	300 2065	- -	300 2065	- -	- -	272375 1212070	0.38 9.6	4-1 1/4 x 7	38.25 972	43.75 1111	5.68 144	255.0 115.7
34 850	36.000 914.4	300 2065	- -	300 2065	305363 1358322	305363 1358322	- -	0.38 9.6	4 – 1¼ x 7	40.23 1022	45.72 1161	5.68 144	268 121.6
36 900	38.000 965.2	300 2065	- -	300 2065	305363 1358322	- -	305363 1358322	0.38 9.6	4 – 1¼ x 7	40.23 1022	45.72 1161	5.68 144	268 121.6
38 950	40.000 1016.0	300 2065	- -	300 2065	376991 1676940	- -	376991 1676940	0.44 11.1	4 – 1½ x 7	43.98 1117	50.51 1283	6.50 165	340 154.2
40 1000	42.000 1066.8	300 2065	- -	300 2065	415632 1848823	- -	415632 1848823	0.44 11.1	4 – 1½ x 7	45.98 1168	52.50 1334	6.50 165	360 163.3
42 1050	44.000# 1150	- -	- -	232 1600	- -	- -	352763 1569795	0.44 11.1	4- 1 1/2 x 7	48.00 1219	54.50 1384	6.50 165	390.0 176.9
44 1100	46.000 1168.4	- -	- -	232 1600	- -	- -	385561 1715746	0.44 11.1	4 – 1½ x 7	50.28 1277	56.48 1435	6.50 165	415 188.2
46 1150	48.000 1219.2	- -	- -	232 1600	- -	- -	419820 1868199	0.44 11.1	4 – 1½ x 7	52.28 1328	58.47 1485	6.50 165	425 192.8

* **Working Pressure** and **End Load** are total, from all internal and external loads, based on carbon steel, AGS rings installed in accordance with Victaulic® specifications. Contact Victaulic for performance on other ring materials.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 times the figures shown.

Style W07 AGS couplings are essentially rigid and do not permit expansion/contraction.

NOTE: Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

‡ Light Wall for 14"/350 mm = 0.22/5.6mm; 16 - 24"/400 - 600 mm = 0.24/6.4 mm

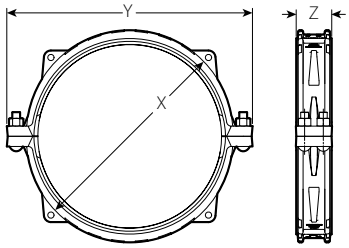
Available third quarter of 2011. Other sizes may be used to join 32"/800mm and 42"/1050 mm systems.

Vic-Ring® Systems

AGS Vic-Ring® Flexible Coupling

STYLE W77

For Complete Information
Request Publication **06.12**



- Provides limited linear and angular pipe movement at the pipe joint that can be used to compensate for thermal growth of piping systems, vibration attenuation, seismic, and other applications requiring flexibility
- Pressure rated up to 350 psi/2400 kPa
- Sizes from 26–60"/660–1520 mm

Size		Max. Working Pressure* psi/kPa			Max. End Load* Lbs./N			Allow. Pipe End Sep.	Deflect. From CL		Bolt/Nut No - Size	Dimensions – Inches/mm			Approx. Wgt. Each
Nominal Pipe Size Inches mm	Coupling/ Ring Size In./mm	Std. Wall	Light Wall ‡	Extra Heavy ½"/12.7 mm	Std. Wall	Light Wall ‡	Extra Heavy ½"/12.7 mm	Inches mm	Per Cplg. Deg.	Pipe In./Ft. mm/m	Inches	X	Y	Z	Coupling Only Lbs. kg
12 300	14.000 355.6	350 2500	350 2500	- -	53900 239757	53900 239757	- -	0.13 – 0.31 3.3 – 7.9	0.73	0.15 13	2 - 1 x 5½	16.00 406	20.59 523	4.50 114	48 21.8
14 350	16.000 406.4	350 2500	350 2500	- -	70400 313155	70400 313155	- -	0.13 – 0.31 3.3 – 7.9	0.63	0.13 11	2 - 1 x 5½	18.18 462	23.51 597	4.50 114	58 26.3
16 400	18.000 457.2	350 2500	350 2500	- -	89100 396335	313155 396335	- -	0.13 – 0.31 3.3 – 7.9	0.57	0.12 10	2 - 1 x 5½	20.36 517	25.46 647	4.50 114	65.0 29.5
18 450	20.000 508.0	350 2500	350 2500	- -	109950 489304	109950 489304	- -	0.13 – 0.31 3.3 – 7.9	0.50	0.10 9	2 - 1⅛ x 5½	22.56 573	27.13 689	4.50 114	82 37.2
20 500	22.000 558.8	350 2500	350 2500	- -	113050 592075	133050 592705	- -	0.13 – 0.31 3.3 – 7.9	0.50	0.10 9	2 - 1⅛ x 6	24.75 628.7	29.25 743.0	4.50 114	99 44.9
22 550	24.000 609.6	350 2500	232 1600	- -	135750 603941	135750 603941	- -	0.13 – 0.31 3.3 – 7.9	0.42	0.09 8	2 - 1⅛ x 5½	26.88 683	32.31 821	4.50 114	107 48.5
24 600	26.000 660.4	300 2065	- -	300 2065	159279 708508	- -	159279 708508	0.15-0.53 3.81-13.46	0.83	0.18 15	4- 1⅛ x 6	30.07 764	35.23 895	5.68 144	205 93.0
26 650	28.000 711.2	300 2065	- -	300 2065	184726 821702	- -	184726 821702	0.15-0.53 3.81-13.46	0.78	0.16 14	4- 1⅛ x 6	32.23 819	37.22 945	5.68 144	220 99.8
28 700	30.000 762.0	300 2065	- -	300 2065	212058 943281	- -	212058 943281	0.15-0.53 3.81-13.46	0.73	0.16 14	4- 1 ¼ x 7	33.90 863	39.64 1007	5.68 144	227 103.0
30 750	32.000 812.8	300 2065	- -	300 2065	241274 1073240	- -	241274 1073240	0.15-0.53 3.81-13.46	0.68	0.14 11	4- 1 ¼ x 7	36.07 916	41.74 1060	5.68 144	242 109.8
32 800	34.000 865.0	300 2065	- -	300 2065	272375 1212070	- -	- -	0.15 - 0.53 3.81 - 13.46	0.69	0.13 11	4-1 1/4 x 7	38.25 972	43.75 1111	5.68 144	255.0 115.7
34 850	36.000 914.4	300 2065	- -	300 2065	305363 1358322	- -	305363 1358322	0.15-0.53 3.81-13.46	0.60	0.13 11	4- 1 ¼ x 7	40.23 1022	45.72 1161	5.68 144	268 121.6
36 900	38.000 965.2	300 2065	- -	300 2065	305363 1358322	- -	305363 1358322	0.15-0.53 3.81-13.46	0.60	0.13 11	4- 1 ¼ x 7	40.23 1022	45.72 1161	5.68 144	268 121.6
38 950	40.000 1016.0	300 2065	- -	300 2065	376991 1676940	- -	376991 1676940	0.21-0.59 5.33-14.99	0.55	0.12 10	4- 1 ½ x 7	43.98 1117	50.51 1283	6.50 165	340 154.2
40 1000	42.000 1066.8	300 2065	- -	300 2065	415632 1848823	- -	415632 1848823	0.21-0.59 5.33-14.99	0.52	0.11 9	4- 1 ½ x 7	45.98 1168	52.50 1334	6.50 165	360 163.3
42 1050	44.000 1150.0	- -	- -	232 1600	- -	- -	352763 1569795	0.21 - 0.59 5.33 - 14.99	0.5	0.10 8	4- 1 1/2 x 7	48.00 1219	54.50 1384	6.50 165	390.0 176.9
44 1100	46.000 1168.4	- -	- -	232 1600	- -	- -	385561 1715746	0.21-0.59 5.33-14.99	0.47	0.10 8	4- 1 ½ x 7	50.28 1277	56.48 1435	6.50 165	415 188.2
46 1150	48.000 1219.2	- -	- -	232 1600	- -	- -	419820 1868199	0.21-0.59 5.33-14.99	0.45	0.10 8	4- 1 ½ x 7	52.28 1328	58.47 1485	6.50 165	425 192.8
52 1300	54.000 1371.6	- -	- -	175 1200	- -	- -	400790 1782803	0.28-0.66 7.11-16.76	0.40	0.08 7	4- 1 ½ x 7	59.03 1499	65.16 1655	10.00 254	648 293.9
54 1350	56.000 1422.2	- -	- -	175 1200	- -	- -	431030 1917317	0.28-0.66 7.11-16.76	0.38	0.08 7	4- 1 ½ x 7	61.03 1550	67.65 1718	10.00 254	676 306.6
58 1450	60.000 1524.0	- -	- -	175 1200	- -	- -	494800 2201025	0.28-0.66 7.11-16.76	0.36	0.08 7	4- 1 ½ x 7	65.03 1652	72.13 1832	10.00 254	720 326.6

* **Working Pressure** and **End Load** are total, from all internal and external loads, based on carbon steel, AGS rings installed in accordance with Victaulic specifications. Contact Victaulic for performance on other ring materials.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

NOTE: The Style W77 coupling in 26-60"/660 – 1525 mm sizes cannot be used on wall thicknesses greater than 0.5"/12.7mm.

‡ Light Wall for 14"/350 mm = 0.22/5.6mm; 16 - 24"/400 - 600 mm = 0.24/6.4 mm

† Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for AGS roll grooved pipe. These figures are maximums; for design and installation purposes these figures should be reduced by 25%.

Victaulic Depend-O-Lok® System

The Victaulic Depend-O-Lok® joining system represents a new generation of technologically advanced couplings. Victaulic Depend-O-Lok couplings are designed, manufactured and tested to meet or exceed the performance requirements of your system.

The design of Victaulic Depend-O-Lok couplings allows for out-of-round pipe – making it easier to install than competitive AWWA systems utilizing C227/C221 specifications.

Victaulic Depend-O-Lok Couplings

- Provides a reliable, economical alternative to traditional bolted sleeve-type couplings
- Available in a variety of styles to meet specific application requirements, including:

Bolted Split-Sleeve Flexible Coupling
Unrestrained, flexible bubble-tight joints Style 230

Request Publication **60.10**

Bolted Split-Sleeve Restrained Flexible Coupling
Fully restrained pipe joints without external harnessing Style 232

Request Publication **60.11**

Bolted Split-Sleeve Expansion Couplings
Pipe joints that provide for thermal expansion and contraction for up to 4"/ 01.6mm of movement Style 231

Request Publication **60.12**

FluidMaster/ AirMaster

- Designed to provide fully restrained joints for air and fluid-conveying pipelines
- Shouldered couplings that are designed to operate at design pressures of the system
- Meet or exceed the performance standards set forth in AWWA C-606

Request publication **60.15**

Expansion Joint

- Offers solutions for accommodating thermal expansion and contraction of pipelines
- Products include:

OmniFlex Stainless Steel Bellows-Type Expansion Joints
Can also accommodate lateral movement

PRODUCTS

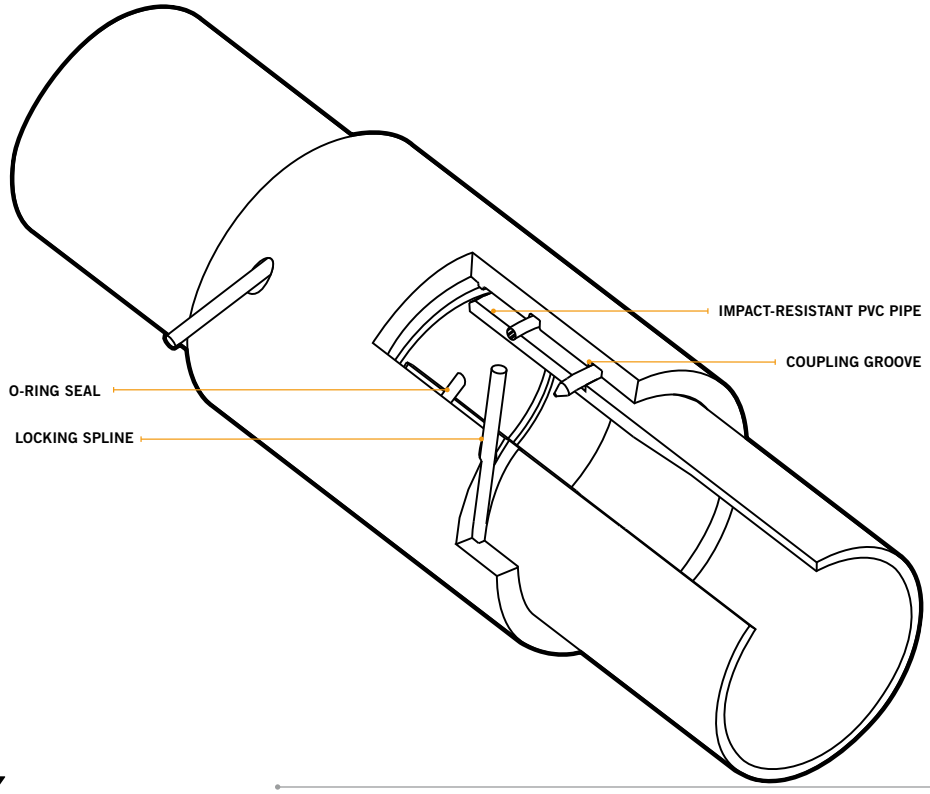
Aquamine® Reusable PVC Products

Introducing the Aquamine® system. Aquamine is a complete line of high impact resistant, reusable PVC pipe, fittings, valves and specialty items. Because of its superior strength and flexibility as well as other critically important features, Aquamine has become one of the leading products in its field, consistently providing the competitive edge in efficiency and productivity.

For Complete Information
Request Publication **50.01**

Aquamine Reusable PVC Products

- Synthetic rubber o-ring provides chemical resistance for a wide range of services
- High impact resistant PVC pipe and coupling provide strong piping components
- Spline assembly combines maximum strength by engaging into grooves in both the coupling and the pipe
- Thickened pipe end provides joint reinforcement and security
- Lightweight, reusable design makes Aquamine ideal for a wide variety of water services



PRODUCTS

Aquamine® Reusable PVC Products

Aquamine Pipe with Coupling

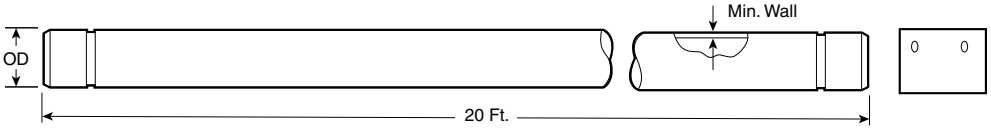
STYLE 2900

For Complete Information, Request Publication **50.01.**

- Aquamine pipe sold in 20ft. lengths with one coupling included
- Rated up to 350psi/2400 kPa
- Available in sizes 2-12"/50-300mm

Size		Dimensions Inches/mm			Weight
Nominal Size Inches/mm	SDR	Press. Rating psi/kPa	Pipe Outside Diameter Inches/mm	Minimum Wall Inches/mm	Per Ft. Lbs.kg
2 50	17	250 1724	2.375 60.3	0.140 3.56	0.69 0.3
	21	200 1379	2.375 60.3	0.113 2.88	0.57 0.3
3 80	17	250 1724	3.500 88.9	0.206 5.21	1.46 0.7
	21	200 1379	3.500 88.9	0.167 4.24	1.19 0.5
4 100	12.4	350 2413	4.500 114.3	0.383 9.22	2.96 1.3
	17	250 1724	4.500 114.3	0.285 6.73	2.40 1.1
	21	200 1379	4.500 114.3	0.173 4.39	1.60 0.7
	28	160 1103	4.500 114.3	0.173 4.39	1.60 0.7
6 150	12.4	350 2413	6.625 168.3	0.534 13.56	6.42 2.9
	17	250 1724	6.625 168.3	0.390 9.91	5.20 2.4
	21	200 1379	6.625 168.3	0.316 8.03	4.26 1.9
	28	160 1103	6.625 168.3	0.255 6.48	3.46 1.6
8 200	12.4	350 2413	8.625 219.1	0.696 17.88	11.03 5.0
	17	250 1724	8.625 219.1	0.508 12.90	8.81 4.0
	21	200 1379	8.625 219.1	0.410 10.41	7.21 3.3
	28	160 1103	8.625 219.1	0.332 8.43	5.91 2.7
10 250	26	160 1103	10.750 273.1	0.413 10.49	9.20 4.2
12 300	26	160 1103	12.750 323.9	0.490 12.45	12.98 5.9

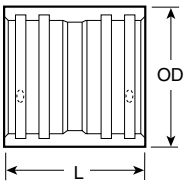
* Pressure rating of these items are limited by the pressure rating of the coupling.



Aqua Link Coupling (ALF x ALF)

NO. 2904

For Complete Information, Request Publication **50.01**.



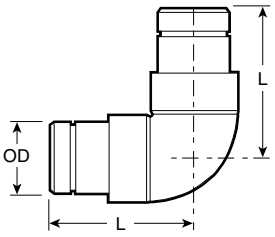
Size		Dimensions Inches/mm		Weight
Nominal Size Inches/mm	Press. Rating psi/kPa	L Inches/mm	Outside Diameter Inches/mm	Lbs. kg
2 50	250 1724	5.25 133.35	3.20 81.28	0.9 0.4
3 80	250 1724	7.25 184.15	4.38 111.25	1.9 0.9
4 100	250 1724	8.25 209.55	5.47 138.94	3.1 1.4
4 HP 100	350 2413	8.25 209.55	6.00 152.40	5.0 2.3
6 150	250 1724	8.25 209.55	7.84 199.14	5.6 2.5
6 HP 150	350 2413	8.25 209.55	8.72 221.49	10.5 4.8
8 200	200 1379	9.50 241.30	10.19 258.83	11.1 5.0
8 200	250 1724	9.50 241.30	10.19 258.83	11.1 5.0
8 HP 200	350 241'3	9.50 241.30	10.75 273.05	15.2 6.9
10 250	160 1103	12.00 304.80	12.44 315.98	18.0 8.2
12 300	160 1103	12.00 304.80	14.65 372.11	24.2 11.0

Aquamine® Reusable PVC Products

Aqua Link 90° Elbow (ALM x ALM)

STYLE 2910

For Complete Information, Request Publication **50.01.**

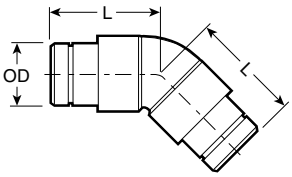


Size	Dimensions Inches/mm			Weight
Nominal Size Inches/mm	Press. Rating psi/kPa	L Inches/mm	Outside Diameter Inches/mm	Lbs. kg
2 50	250 1724	8.00 203.20	2.375 60.33	1.8 0.8
3 80	250 1724	10.88 276.35	3.500 88.90	4.6 2.1
4 100	250 1724	12.38 314.45	4.500 114.30	8.0 3.6
6 150	250 1724	15.63 397.00	6.625 168.28	19.6 8.9
8 200	200 1379	18.00 457.20	8.625 219.08	34.4 15.6
10 250	160 1103	25.10 637.54	10.750 273.05	57.2 25.9
12 300	160 1103	25.70 652.78	12.750 323.85	83.9 38.1

Aqua Link 45° Elbow (ALM x ALM)

NO. 2912

For Complete Information, Request Publication **50.01.**

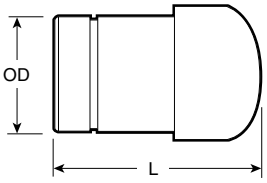


Size	Dimensions Inches/mm			Weight
Nominal Size Inches/mm	Press. Rating psi/kPa	L Inches/mm	Outside Diameter Inches/mm	Lbs. kg
2 50	250 1724	7.75 196.85	2.375 60.33	1.7 0.8
3 80	250 1724	9.75 247.65	3.500 88.90	3.9 1.8
4 100	250 1724	11.75 298.45	4.500 114.30	7.0 3.2
6 150	250 1724	13.00 330.20	6.625 168.28	16.4 7.4
8 200	200 1379	15.00 381.00	8.625 219.08	28.7 13.0
10 250	160 1103	18.30 464.82	10.750 273.05	47.4 21.5
12 300	160 1103	18.75 476.25	12.750 323.85	72.7 33.0

Aqua Groove End Cap (ALM)

NO. 2915

For Complete Information, Request Publication **50.01.**



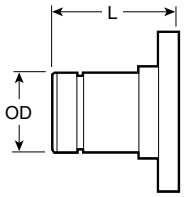
Size	Dimensions Inches/mm			Weight
Nominal Size Inches/mm	Press. Rating psi/kPa	L Inches/mm	Outside Diameter Inches/mm	Lbs. kg
2 50	250 1724	7.50 190.5	2.375 60.33	1.0 0.5
3 80	250 1724	10.00 254.0	3.500 88.90	2.2 1.0
4 100	250 1724	11.00 279.4	4.500 114.30	3.7 1.7
6 150	250 1724	14.00 355.6	6.625 168.28	8.5 3.9
8 200	200 1379	17.50 444.5	8.625 219.08	15.5 7.0
10 250	160 1103	18.50 469.9	10.750 273.05	22.4 10.2
12 300	160 1103	19.50 495.3	12.750 323.85	32.0 14.5

Aquamine® Reusable PVC Products

Aqua Groove x Flange Transition (ALM x FLG)

NO. 2916

For Complete Information, Request Publication **50.01.**

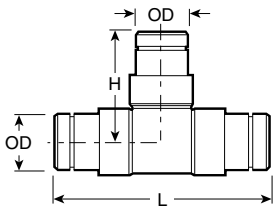


Size	Dimensions Inches/mm			Weight
Nominal Size Inches/mm	Press. Rating psi/kPa	L Inches/mm	Outside Diameter Inches/mm	Lbs. kg
2 50	150 1034	7.25 184.15	2.375 60.33	1.5 0.7
3 80	150 1034	9.25 234.95	3.500 88.90	3.2 1.5
4 100	150 1034	10.25 260.35	4.500 114.30	5.2 2.4
6 150	150 1034	12.25 311.15	6.625 168.28	10.0 4.5
8 200	150 1034	13.88 352.55	8.625 219.08	16.0 7.3
10 250	150 1034	16.50 419.10	10.750 273.05	25.5 11.6
12 300	150 1034	16.50 419.10	12.750 323.85	37.9 17.2

Aqua Link Tee (ALM x ALM x ALM)

NO. 2917

For Complete Information, Request Publication **50.01.**

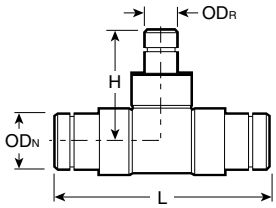


Size	Dimensions Inches/mm			Weight
Nominal Size Inches/mm	Press. Rating psi/Kpa	L Inches/mm	Outside Diameter Inches/mm	Lbs. kg
2 50	250 1724	16.50 419.10	2.375 60.33	2.6 1.2
3 80	250 1724	21.50 546.10	3.500 88.90	6.5 2.9
4 100	250 1724	24.75 628.65	4.500 114.30	10.5 4.8
6 150	250 1724	31.00 787.40	6.625 168.28	27.1 12.3
8 200	200 1379	36.25 920.75	8.625 219.08	27.8 12.6
10 250	160 1103	45.38 1152.65	10.750 273.05	42.6 19.3
12 300	160 1103	45.00 1143.00	12.750 323.85	60.0 27.2

Aqua Link Reducing Tee (ALM x ALM x ALM)

NO. 2918

For Complete Information, Request Publication **50.01**.

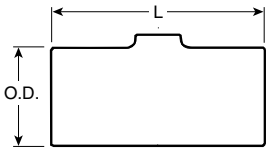


Size						Dimensions Inches/mm			Weight
Nominal Size Inches/mm						Press. Rating psi/kPa	L Inches/mm	Outside Diameter Inches/mm	Lbs. kg
3 80	X	3 80	X	2 50		250 1724	7.50 190.5	2.375 60.33	1.0 0.5
4 100	X	4 100	X	3 80		250 1724	10.00 254.0	3.500 88.90	2.2 1.0
			X	4 100		250 1724	11.00 279.4	4.500 114.30	3.7 1.7
6 150	X	6 150	X	6 150		250 1724	14.00 355.6	6.625 168.28	8.5 3.9
			X	8 200		200 1379	17.50 444.5	8.625 219.08	15.5 7.0
			X	10 250		160 1103	18.50 469.9	10.750 273.05	22.4 10.2
8 200	X	8 200	X	12 300		160 1103	19.50 495.3	12.750 323.85	32.0 14.5
			X	12 300		160 1103	19.50 495.3	12.750 323.85	32.0 14.5

Aquamine Formed Outlet Fitting

NOS. 2937, 2938 AND 2939

For Complete Information, Request Publication **50.01.**



Size			Maximum Working Pressure – PSI/kPa		
Nominal Size Inches/mm	L Inches/mm	Outside Diameter Inches/mm	Style 2937 1" NPT Tap	Style 2938 1 1/2" NPT	Style 2939 2" NPT Tap
2 50	7.25 184.15	2.375 60.33	250 1725	– –	– –
3 80	9.25 234.95	3.500 88.90	250 1725	250 1725	– –
4 100	10.25 260.35	4.500 114.30	250 1725	250 1725	250 1725
12 300	16.50 419.10	12.750 323.85	250 1725	250 1725	250 1725

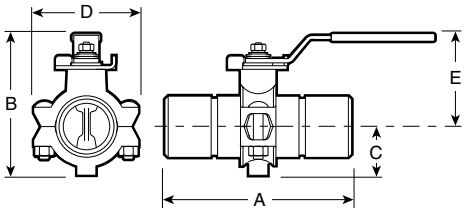
NOTE: The pressure ratings noted above are based upon the capability of the female threaded socket. If a plastic threaded pipe nipple is used, the rating will be based upon values cited in ASTM-D1785 for Schedule 80 threaded pipe nipples.

Aquamine® Butterfly Valve

For Complete Information, Request Publication **50.01.**

Size		Dimensions Inches/mm					Weight
Nominal Size Inches/mm	Actual Size	End to End A	Overall Height B	C	D	E	Lbs. kg
2 50	2.375 60.3	7.20 183	5.47 139	1.88 48	4.06 103	3.59 91	3.3 1.5
3 80	3.500 88.9	10.61 269	7.12 181	2.76 70	5.63 143	4.37 111	6.0 2.7
4 100	4.500 114.3	12.00 305	10.15 258	3.50 89	7.00 178	6.65 169	14.0 6.4
6 150	6.625 168.3	12.50 318	12.65 321	4.50 114	9.50 241	8.65 220	28.0 12.7

- Rated for 250psi/1735 kPa to provide reliable, leak-free, dead-end service
- Available in sizes 2-6"/50-150mm
- Valve consists of PVC body, external ductile iron upper and lower housings, Grade "T" nitrile coated disc, bronze upper and lower bushings and two-position handle.

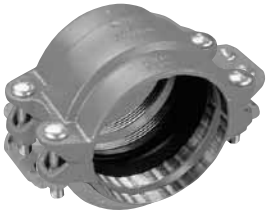


Aquamine® Reusable PVC Products

Aquamine Plain End Pipe Coupling

STYLE 2970

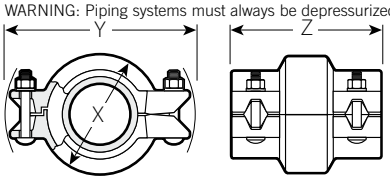
For Complete Information, Request Publication **50.01.**



- Requires no pipe preparation, solvent or cure time
- Rugged ductile iron with patented, specially formed integral gripping teeth which engage into the pipe to secure it as the bolts are tightened metal-to-metal
- Available in sizes 2-8"/50-200mm

Size		Dimensions Inches/mm				Weight
Nominal Size Inches/mm	Press. Rating psi/kPa	X	Y	Z	Bolt/Nut No. – Size Inches	Lbs. kg
2 50	2.375 60.3	3.64 92	5.94 151	3.62 92	2 – 1/2 X 2 1/2	3.5 1.6
3 80	3.500 88.9	4.58 116	6.95 177	4.56 116	4 – 1/2 X 2 3/4	7.7 3.5
4 100	4.500 114.3	5.88 149	8.09 205	5.78 147	4 – 1/2 X 2 3/4	11.6 5.3
6 150	6.625 168.3	8.00 203	10.84 275	5.88 149	4 – 5/8 X 3 1/4	16.4 7.4
8 200	8.625 219.1	10.19 259	13.22 336	6.00 152	4 – 5/8 X 3 1/4	24.9 11.3

*Working pressure and End Load are total, from all internal and external loads, based on proper coupling assembly with bolts pads metal-to-metal, on Aquamine PVC pipe. Couplings are designed to be used with plain end pipe.
Metric thread size bolts (plated) are available (color coded) for all coupling sizes upon request. Contact Aquamine for details.
WARNING: Piping systems must always be depressurized and drained before attempting disassembly and removal of any Aquamine piping products.



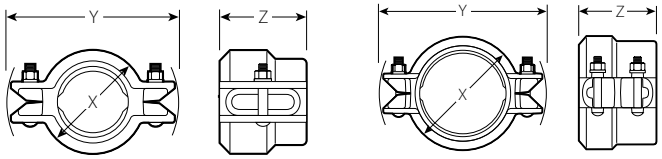
Aquamine Plain-End PVC to Grooved Transition Coupling

STYLE 2972

For Complete Information, Request Publication **50.01.**

- Provides bolted, mechanical assembly for plain-end steel pipes, valves and fittings
- Join shorter sections of PVC pipe without having to use special adaptors
- Available in sizes 2-8"/50-200mm

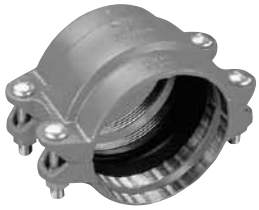
Size		Dimensions Inches/mm			Bolt Data	
Nominal Size Inches/mm	Actual Outside Diameter Inches/mm	X	Y	Z	Quantity	Size Inches
2 50	2.375 60.3	3.31 84	5.22 133	2.78 71	2	3/8 X 2
3 80	3.500 88.9	4.38 111	6.99 178	3.20 81	4	1/2 X 2 3/4
4 100	4.500 114.3	5.68 144	8.25 210	3.90 99	4	1/2 X 2 3/4
6 150	6.625 168.3	7.84 199	11.25 286	4.00 102	4	5/8 X 3 1/2
8 200	8.625 219.1	10.18 259	13.96 355	4.16 106	4	5/8 X 3 1/2



Aquamine Plain-End PVC to HDPE Transition Coupling

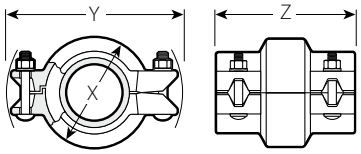
STYLE 2971

For Complete Information, Request Publication **50.01.**



- No solvent or cure times
- Provides bolted, mechanical assembly of plain-end PVC pipe to plain-end HDPE pipe without special adaptors.
- Available in sizes 2-8”/50-200mm

Size		Dimensions Inches/mm				Weight
Nominal Size Inches/mm	Press. Rating psi/kPa	X	Y	Z	Bolt/Nut No. – Size Inches	Lbs. kg
2 50	2.375 60,3	3.64 92	5.94 151	3.62 92	2 – 1/2 X 2 1/2	3.5 1,6
3 80	3.500 88,9	4.58 116	6.95 177	4.56 116	4 – 1/2 X 2 3/4	7.7 3,5
4 100	4.500 114,3	5.88 149	8.09 205	5.78 147	4 – 1/2 X 2 3/4	11.6 5,3
6 150	6.625 168,3	8.00 203	10.84 275	5.88 149	4 – 5/8 X 3 1/4	16.4 7,4
8 200	8.625 219,1	10.19 259	13.22 336	6.00 152	4 – 5/8 X 3 1/4	24.9 11,3



(2”/50 mm size has one bolt per side.)

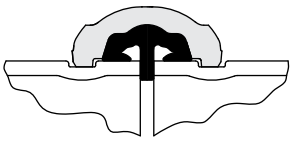
Gaskets

Victaulic gaskets are designed to provide life-of-the-system service in a wide variety of applications. Gasket materials are available to meet most piping applications. For a list of service recommendations by gasket type see pg. 19-5.

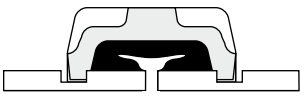
For Complete Information request publication **05.01.**

Gasket Styles

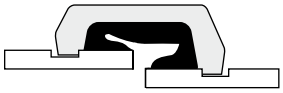
ILLUSTRATIONS EXAGGERATED FOR CLARITY



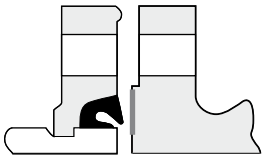
Installation-Ready



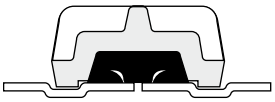
Standard



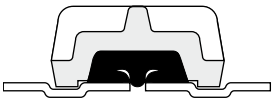
Reducing



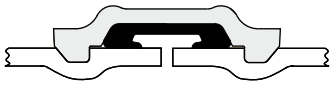
Vic-Flange



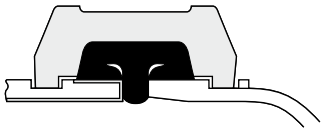
FlushSeal



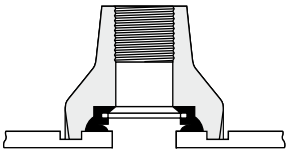
Grooved Copper Tubing with FlushSeal Gasket



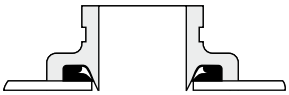
Advanced Groove System (AGS)



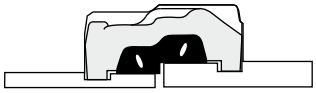
EndSeal



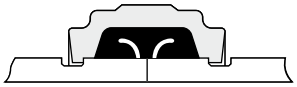
Outlet



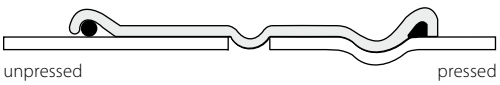
Mechanical-T



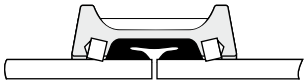
IPS to AWWA Transition



AWWA FlushSeal

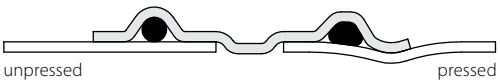


Pressfit Piping System for Stainless Steel



Plain End

Plain End Piping System for HDPE Pipe



Vic-Press™ System for Sch. 10S Stainless Steel

Gaskets

Gasket Materials

When Victaulic couplings were first developed, natural rubber compounds were used. As elastomer technology advanced, superior gasket materials became available and were added to the Victaulic line. This allows Victaulic to presently offer a variety of synthetic rubber gaskets to provide the option of selecting Victaulic products for the widest variety of applications. For most water applications the Victaulic Grade "E" EPDM (ethylene propylene diene monomer) gasket compound is recommended. Victaulic Grade "E" material has premium performance properties with respect to aging and resistance to heat and hot water. Heat aging tests at +250°F/+121°C conducted on this material show essentially no change in physical properties. This situation is further enhanced when this rubber is subjected to an essentially non-oxidative environment such as a gasket in a water piping system. For example, aging tests in a nonoxidative atmosphere show essentially no change in physical properties of this material even when tested at temperatures up to +350°F/+177°C.

Since water has no deteriorating effect on the elastomer, temperature is the only limiting factor to be considered in determining the life expectancy of the elastomer in water service. The superior performance of the Grade "E" elastomer permits its use for hot water service up to +230°F/+110°C. The Grade "E" gasket is superior to previous gasket materials by all performance barometers, including high and low temperature limits, tensile strength, chemical resistance and shelf life.

Gasket/O-ring Data

Victaulic offers a variety of synthetic rubber gaskets/o-rings to provide the option of grooved piping products for the widest range of applications. To assure the maximum life for the service intended, proper gasket selection and specification in ordering is essential.

Many factors must be considered in determining the optimum gasket/o-ring for a specific service. The foremost consideration is temperature, along with concentration of product, duration of service and continuity of service. Temperatures beyond the recommended limits have a degrading effect on the polymer. Therefore, there is a direct relationship between temperature, continuity of service and gasket life.

Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets/o-rings are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific service recommendations and for a listing of services which are not recommended.

Gasket recommendations apply only to Victaulic gaskets and o-rings. Recommendations for a particular service do not necessarily imply compatibility of the coupling housing, related fittings or other components for the same service.

These recommendations do not apply to rubber-lined or rubber seal valves or other rubber-lined products. Refer to Valve Materials Selection in Section 08.02 or contact Victaulic for recommendations.

Victaulic gaskets are clearly marked as part of the mold with the gasket size, style and compound for easy identification.

Potable Water

Grade "E" EPDM, Grade "E" Vic-Plus™, Grade "EHP" and Grade "EHP" Vic-Plus gaskets were submitted to Underwriters' Laboratories Inc. for evaluation in potable water applications. EPDM material was tested to the requirements of ANSI/NSF 61 (Drinking Water System Components - Health Effects). Successful completion of this testing allows us to state that our EPDM gasket material is UL classified in accordance with ANSI/NSF 61 for cold (+86°F/+30°C) and hot (+180°F/+82°C) potable water service.

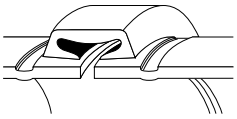
Similarly our Grade "M" halogenated butyl gasket material (which is typically used with our AWWA sized products) has also been UL classified in accordance with ANSI/NSF 61 for cold (+86°F/+30°C) potable water service.

The data provided is intended for use as an aid to qualified designers when products are installed in accordance with the latest available Victaulic product line.

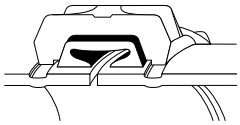
Gaskets

Gasket Performance

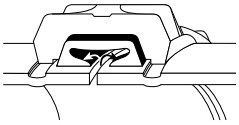
UNIQUE C-SHAPED GASKET FORMS A TRIPLE SEAL



SEALS BETWEEN THE PIPE ENDS AND THE GROOVE



SURROUNDED, REINFORCED AND SLIGHTLY COMPRESSED BY THE HOUSING



SEAL IS ENHANCED BY PRESSURE OR VACUUM IN THE LINE

The sealing efficiency of Victaulic gaskets is such that the gasket forms an initial seal as it is stretched over the pipe ends. Upon placement of the housing around the gasket and into the grooves, the gasket is positioned. As the housing segments are tightened, the resilient elastomeric gasket conforms to the internal cavity of the housing and is further compressed, enhancing the gasket's seal against the pipe. The Victaulic gasket is pressure responsive.

The combination of these characteristics creates a permanent, leak-tight triple seal on a variety of piping materials including carbon steel, ductile iron, stainless steel, aluminum, PVC, cast iron and copper. Line pressure serves to strengthen the seal through the combination of normal gasket resilience, housing reinforcement and the action of pressure downward on the lips.

Vacuum Service – The Victaulic gasket design seals equally well under pressure or vacuum. Vacuum creates a pressure differential between the inside and outside of the piping system. The resulting increased force from the external pressure has the same seal enhancement effect as internal pressure. For continuous vacuum service greater than ten inches of mercury, we recommend the use of molded Victaulic FlushSeal gaskets or Victaulic standard gaskets with a metal ring liner, both available from your Victaulic distributor. The FlushSeal feature and the metal liner both prevent distortion of the gasket due to the pulling action of a high vacuum at the center of the gasket. Either molded FlushSeal gaskets or gaskets with metal liners are recommended on strong vacuums and are suitable for applications wherein vacuum conditions are anticipated to a maximum value of 29.9 of mercury.

ANSI/NSF 61 Standard – ANSI/NSF 61 is a National Standard that was developed to establish minimum requirements for the control of potential adverse human health effects from products which contact drinking water. Its primary focus is on contaminants or impurities which may be imparted indirectly to drinking water. Materials that do not come in direct contact with the potable water do not require evaluation. The classification categories for pipe and related products and joining and sealing materials, as established by ANSI/NSF 61 are "cold", which is limited to +86°F/+30°C maximum and "hot" which is limited to +180°F/+82°C maximum. These categories were established by the maximum ambient distribution temperature of unheated water for "cold" and a temperature well in excess of a scalding temperature for "hot" domestic water. The following list represents the current classifications on our products:

EHP Gaskets: UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+80°C potable water service.

EPDM "E" Gaskets: UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service.

Halogenated Butyl "M" Gaskets: UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C potable water service.

PPS Coating: The PPS (Polyphenylene Sulfide blend) coating applied to our Vic-300 MasterSeal and Style W761 AGS butterfly valves is UL classified in accordance with ANSI/NSF 61 for cold +180°F/+30°C and hot +180°F/+82°C potable water service.

Gaskets

Gasket Performance

Vic-Press 304 and Vic-Press 316 Couplings and Fittings:
UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service with "E", "T" or "O" o-rings.

Vic-Press 304 and Vic-Press 316 Pipe: UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. In addition to the above, the standard black asphalt coating used on our cement lined AWWA size fittings is NSF 61 Listed. As the coating is the only material that comes in contact with the water, NSF 61 compliant coatings are commercially available and may be applied to our products.

For more details about Victaulic gasket construction and testing, request publication 05.01.

Gasket Lubricant

Thorough lubrication of the gasket exterior including the lips and/or pipe ends and housing interiors, is essential to prevent pinching the gasket. Lubrication assists proper gasket installation. Use Victaulic Lubricant for installation. Other compatible material, such as silicone and others may be used on Grades "E" or "L" gaskets. Lubricant is available in 4½ ounce tubes. Victaulic Lubricant is also available in 32 ounce containers.

Important Note: Victaulic Lubricant is **not** recommended for use with high-density polyethylene (HDPE) pipe.

ALWAYS USE LUBRICANT FOR PROPER COUPLING ASSEMBLY.

Size	Number of Gaskets	
Nominal Size Inches mm	Per Tube	Per Quart
2 50	55	400
3 80	36	270
4 100	26	200
6 150	17	125
8 200	13	100
10 250	11	80
12 300	8	60
14 350	7	50
16 400	6	45
18 450	5	35
20 500	4	30
24 600	3	20

Gaskets

Gasket Selection Guide

⚠ WARNING

To assure maximum life for the service intended, proper gasket selection and specification in ordering is essential. Failure to select the proper rubber compound may result in personal injury or property damage, improper installation, joint leakage or joint failure.

Standard Gaskets

IPS

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
E	–30˚F to 230˚F –34˚ C to +110˚ C	EPDM	Green Stripe	Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. **NOT RECOMMENDED FOR PETROLEUM SERVICES.**
EHP@	–30°F to +250°F –34°C to +120°C	EPDM	Red & Green Stripe	Recommended for hot water service within the specified temperature range. UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. **NOT RECOMMENDED FOR PETROLEUM SERVICES.**
T	–20˚F to +180˚F –29˚ C to +82˚ C	Nitrile	Orange Stripe	Recommended for petroleum products, hydrocarbons, air with oil vapors, vegetable and mineral oils within the specified temperature range; not recommended for hot dry air over +140°F/+60°C and water over +150°F/+66°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**
E† **(Type A)**	Ambient	EPDM	Violet Stripe	Applicable for wet and dry (oil-free air) sprinkler services only. For dry services, Victaulic continues to recommend the use of FlushSeal® gaskets. **NOT RECOMMENDED FOR HOT WATER SERVICES.**
EW	–30˚F to +230˚F –34˚ C to +110˚ C	EPDM	Green W	Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. WRASapproved material to BS 6920 for cold and hot potable water service up to +149°F/+65°C. **NOT RECOMMENDED FOR PETROLEUM SERVICES.**

† Vic-Plus pre-lubricated gasket.
* For specific chemical and temperature compatibility, refer to the Gasket Selection and Chemical Services sections. The information shown defines general ranges for all compatible fluids.
@ The Grade EHP gasket is only available on QuickVic® couplings.

Special Gaskets

IPS

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
M2	-40°F to +160°F -40°C to +71°C	Epichlorohydrin	White Stripe	Specially compounded to provide superior service for common aromatic fuels at low temperatures. Also suitable for certain ambient temperature water services.
V	-30°F to +180°F -34°C to +82°C	Neoprene	Yellow Stripe	Recommended for hot lubricating oils and certain chemicals. Good oxidation resistance. Will not support combustion.
O	+20°F to +300°F -7°C to +149°C	Fluoroelastomer	Blue Stripe	Recommended for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons to +300°F/+149°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**
L	-30°F to +350°F -34°C to +177°C	Silicone	Red Gasket	Recommended for dry heat, air without hydrocarbons to +350°F/+177°C and certain chemical services.
A	+20°F to +180°F -7°C to +82°C	White Nitrile	White Gasket	No carbon black content. May be used for food. Meets FDA requirements. Conforms to CFR Title 21 Part 177.2600. Not recommended for hot water services over +150°F/+66°C or for hot, dry air over +140°F/+60°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**
T **EndSeal**	-20°F to +150°F -29°C to +66°C	Nitrile	No External Identification	Specially compounded with excellent oil resistance and a high modulus for resistance to extrusion. Temperature range –20°F/-29°C to +150°F/+66°C. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. **Not recommended for hot water services over +150°F/+66°C or for hot, dry air over +140°F/+60°C.** For maximum gasket life under pressure extremes, temperature should be limited to +120°F/+49°C.
EG	–30°F to +230°F –34°C to +110°C	EPDM	Double Green Stripes	Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. DVGW, KTW, ÖVGW, and SVGW approved for W534, EN681-1 Type WA cold potable water service up to +122°F/+50°C. **NOT RECOMMENDED FOR PETROLEUM SERVICES**
EF	-30°F to +104°F -34°C to +40°C	EPDM	Green "X"	Recommended for potable water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. French ACS (Crecep) approved for EN681-1 Type WA cold potable water service. **NOT RECOMMENDED FOR PETROLEUM SERVICES**
HMT **Standard or EndSeal**	–20°F to +180°F	High-Modulus Nitrile	T2 No Color Code Identification	Specially compounded with excellent oil resistance and a high modulus for resistance to extrusion. Temperature range is –20°F/–29°C to +180°F/+82°C. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. **NOT RECOMMENDED FOR HOT WATER SERVICES OVER +150°F/+66°C OR FOR HOT, DRY AIR OVER +140°F/+60°C.** For maximum gasket life under pressure extremes, temperature should be limited to +120°F/+49°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**

Gaskets

AWWA and Transition Couplings

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
S	-20°F to +180°F -29°C to +82°F	Nitrile	Red Stripe	Specially compounded to conform to ductile pipe surfaces. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range; except hot dry air over +140°F/+60°C and water over +150°F/+66°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**
M	-20°F to +200°F -29°C to +93°C	Halogenated Butyl	Brown Stripe	Recommended for water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. Readily conforms to ductile pipe surfaces. UL classified in accordance with ANSI/NSF 61 for cold +86°F /+30°C potable water service. **NOT RECOMMENDED FOR PETROLEUM SERVICES.**

FOR SERVICES NOT LISTED CONTACT VICTAULIC FOR RECOMMENDATIONS.

* Gasket recommendations apply only to Victaulic gaskets. Recommendation for a particular service does not necessarily imply compatibility of the coupling housing, related fittings or other components for the same service. These recommendations do not apply to rubber lined valves.

Vic-Press™ Seals

Grade	* Temperature Range	Compound	Color Code	General Service Recommendations
H	-20° F to +210°F -29° C to +98° C	HNBR Hydrogenated Nitrile Butadiene Rubber	Two Orange Dots	Hot petroleum/water mixtures, hyrdocarbons, air with oil vapors, vegetable and mineral oils, engine oil, transmission oil. ANSI/NSF 61 Certified for potable water up to 180F/82C.
E	-30°F to +250°F -34° C to +121° C	EPDM Ethylene Propylene Diene Monomer	Green Dot	Hot water service, dilute acids, oil-free air, chemical services. ANSI/NSF Certified for potable water up to 180F/82C.
O	+20°F to +300°F -6° C to +149° C	Fluoroelastemer	Blue Dot	Oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids, and air with hydrocarbons.

* For specific chemical and temperature compatibility, refer to the Gasket Selection and Chemical Services sections. The information shown defines general ranges for all compatible fluids.

Gasket Selection

Chemical compositions are listed in alphabetical order. Unless otherwise noted, temperatures are ambient. For chemicals or combinations not listed contact Victaulic for recommendations. DO NOT ASSUME THAT A SERVICE SIMILAR TO THE ONE LISTED CAN BE ACCOMMODATED WITH THE SAME GASKET.

The data and recommendations presented are based upon the best information available resulting from our field experience and laboratory testing by our own Engineering Department. In addition, we have incorporated the recommendations supplied by prime producers of basic copolymer materials and information furnished by leading molders of rubber products.

The information presented in this guide is general in scope and should be used only with this full knowledge and understanding. In unusual, critical or severe services, full information should be referred to Victaulic.

Where possible, materials should be subjected to simulated service conditions to determine their suitability for the service intended. Furthermore, it should not be concluded that, in instances where a gasket is not affected by several substances used alone, their combination will have no reaction on the gasket. Caution should be exercised with explosive, inflammable or toxic fluids. All gasket recommendations are based on pressure and temperature limitations published by Victaulic. Borderline services always should be verified by Victaulic.

Where two gaskets are shown under Gasket Grade, both are acceptable under normal conditions for the service listed.

Rating Code Key	
G	**Good**
C	**Conditional** (Submit analysis of materials to Victaulic for positive recommendations)
NR	**Not Recommended** (See pg. 16-8 for complete listing)

FOR SERVICES NOT LISTED CONTACT VICTAULIC FOR RECOMMENDATIONS.

Gasket recommendations apply only to Victaulic gaskets. Recommendation for a particular service does not necessarily imply compatibility of the coupling housing, related fittings or other components for the same service. These recommendations do not apply to rubber lined valves.

Gaskets

Chemical Services

Chemical Composition	Rating Code	Gasket Grade
ASTM #3 Oil	G	T
Acetaldehyde	G	E/EHP
Acetamide	G	T
Acetic Acid up to 10% 100°F/38°C	G	E/EHP
Acetic Acid up to 10-50% 100°F/38°C	G	L
Acetic Acid, Glacial 100°F/38°C	G	L
Acetic Anhydride	G	E/EHP
Acetone	G	E/EHP
Acetonitrile	G	T
Acetophenone	G	E/EHP
Acetylene	C	E/T/EHP
Acrylic Resin	G	V
Acrylonitrile	NR	—
Adipic Acid	G	T
Alkalis	G	E/EHP
Allyl Alcohol to 96%	G	E/EHP
Allyl Chloride	NR	—
Alum Sulfuric Acid	C	O
Alums	G	E/T/EHP
Aluminum Chloride	G	E/T/EHP
Aluminum Fluoride	G	E/T/EHP
Aluminum Hydroxide	G	E/EHP
Aluminum Nitrate	G	V/E/T/EHP
Aluminum Oxychloride	C	T
Aluminum Phosphate	G	E/EHP
Aluminum Salts	G	E/EHP
Aluminum Sulfate	G	E/T/EHP
Ammonia, Anhydrous (Pure Ammonia)	NR	—
Ammonia, Aqueous (40% Max)	G	E/EHP
Ammonium Alum	G	V
Ammonium Bifluoride	G	T
Ammonium Carbonate	G	E/EHP
Ammonium Chloride	G	T
Ammonium Fluoride	G	E/EHP
Ammonium Hydroxide	G	E/EHP
Ammonium Metaphosphate	G	E/EHP
Ammonium Nitrate	G	T
Ammonium Nitrite	G	E/EHP
Ammonium Persulfate, to 10%	G	E/EHP
Ammonium Phosphate	G	T
Ammonium Sulfamate	G	T
Ammonium Sulfate	G	E/T/EHP
Ammonium Sulfide	G	E/EHP
Ammonium Thiocyanate	G	E/EHP
Amyl Acetate	G	E/EHP
Amyl Acetate	G	E/EHP
Amyl Alcohol	G	E/EHP
Amyl Borate	G	V
Amyl Chloride	NR	—
Amyl Chloronaphthalene	C	T
Anderol	G	O
Anthraquinone	NR	—
Anthraquinone Sulfonic Acid	NR	—
Aniline	G	E/EHP
Aniline Dyes	C	E/EHP
Aniline Hydrochloride	C	E/EHP
Aniline Oil	G	E/EHP
Animal Fats	G	A
Antimony Chloride	G	E/EHP
Antimony Trichloride	G	E/EHP
Argon Gas	G	E/O
Aroclor(s)	G	O
Arsenic Acid, to 75%	G	T
Arylsulfonic Acid	NR	—
Barium Carbonate	G	E/EHP
Barium Chloride	G	E/T/EHP
Barium Hydroxide	G	E/T/EHP
Barium Nitrate	G	V
Barium Sulfide	G	T
Beer	G	A
Beet Sugar Liquors	G	A
Benzaldehyde	C	E/EHP
Benzene	G	O
Benzene Sulfonic (Aromatic Acid)	C	V
Benzine (see Petroleum Ether)	G	O
Benzoic Acid	G	E/EHP
Benzol	G	O
Benzyl Alcohol	G	E/EHP
Benzyl Benzoate	G	E/EHP
Black Sulfate Liquor	G	T
Blast Furnace Gas	C	T
Bleach, 12% Active Cl^2	C	E/EHP
Borax	G	E/EHP
Bordeaux Mixture	G	E/EHP
Boric Acid	G	E/T/EHP
Bromine	G	O
Bromine Water	G	V
Butadiene	C	V
Butane Gas	C	T
Butanol (see Butyl Alcohol)	G	E/T/EHP
Butter	G	A
Butyl Acetate	C	E/EHP
Butyl Acetyl Ricinoleate	G	E/EHP
Butyl Alcohol	G	E/T/EHP
Butyl "Cellosolve Adipate"	G	E/T/EHP
Butyl Phenol	C	E/EHP
Butyl Stearate	G	T
Butylene	G	T
Butylene Glycol	G	E/EHP
Butyne Diol	NR	—
Butyraldehyde	C	V
Cadmium Cyanide	C	V
Calcium Acetate	C	T
Calcium Bisulphate	G	T
Calcium Bisulphide	G	T
Calcium Bisulphite	G	T
Calcium Chloride	G	E/T/EHP
Calcium Fluophosphate	C	V
Calcium Hydroxide (Lime)	G	E/T/EHP
Calcium Hypochlorite	G	E/EHP
Calcium Hypochloride	G	E/EHP
Calcium Nitrate	G	V/E/T/EHP
Calcium Sulfate	G	E/T/EHP
Calcium Sulfide	G	E/EHP
Caliche Liquors	G	T
Cane Sugar Liquors	G	A
Carbitol	G	E/T/EHP
Carbonic Acid, Phenol	G	O
Carbon Bisulphide	C	O
Carbon Dioxide, Dry	G	E/T/EHP
Carbon Dioxide, Wet	G	E/T/EHP
Carbon Disulphide	G	O
Carbon Monoxide	G	E/EHP
Carbon Tetrachloride	G	O
Castor Oil	G	A
Caustic Potash	G	E/EHP
Cellosolve Acetate	G	E/EHP
Cellosolve (Alcohol Ether)	G	E/EHP
Cellulose Acetate	G	E/EHP
Cellulube 220 (Tri-Aryl-Phosphate)	G	E/EHP
Cellulube Hydraulic Fluids	G	E/EHP
China Wood Oil, Tung Oil	G	T
Chloralhydrate	NR	—
Chloric Acid to 20%	C	E/EHP
Chlorine, Dry	C	O
Chlorine, Water 4000 PPM (max.)	C	E/EHP
Chlorinated Parafine (Chlorocosane)	G	T
Chloroacetic Acid	G	E/EHP
Chloroacetone	G	E/EHP
Chlorobenzene	C	O
Chlorobromomethane	NR	—
Chloroform	G	O
Chlorosulphonic Acid	NR	—
Chrome Alum	G	T
Chrome Plating Solutions	G	O
Chromic Acid, to 25%	G	O
Citric Acid	G	E/EHP
Cocoanut Oil	G	A
Cod Liver Oil	G	A
Coke Oven Gas	G	T/O
Copper Chloride	G	T
Copper Cyanide	G	T
Copper Fluoride	G	E/EHP
Copper Nitrate	G	E/T/EHP
Copper Sulfate	G	E/T/EHP
Corn Oil	G	A
Cotton Seed Oil	G	A
Creosol, Cresylic Acid	G	O
Creosote, Coal Tar	G	O
Creosote, Wood	G	O
Cupric Fluoride	G	T
Cupric Sulfate	G	T
Cyclohexane (Alicyclic Hydrocarbon)	G	O
Cyclohexanol	G	V
Cyclohexanone	C	E/EHP
Deionized Water	G	E/EHP
Dextrim	G	T
Diacetone Alcohol	G	V
Dibutyl Phthalate	G	E/EHP
Dichloro Difloro Methane	G	T
Dicyclohexylamine	C	T
Diesel Oil	G	T
Diethyl Ether	C	T
Diethyl Sebacate	G	E
Diethylamine	G	T
Diethylene Glycol	G	E/T/EHP
Digester Gas	G	T/S
Dimethylamine	G	T
Dioctyl Phthalate	G	E/EHP
Dioxane	G	E/EHP
Dipentene (Terpene-Hydrocarbon)	C	T
Dipropylene Glycol	G	T
Dowtherm A	G	O
Dowtherm E	G	O
Dowtherm SR-1	G	T/E
Ethanolamine	G	E/EHP
Ethyl Acetoacetate	G	E/EHP
Ethyl Acrylate	G	L
Ethyl Alcohol	G	E/T/EHP
Ethyl Cellulose	C	E/EHP
Ethyl "Cellusolve"	G	E/EHP
Ethyl Chloride	G	E/EHP
Ethyl Ether	C	T
Ethyl Formate	C	V
Ethyl Oxalate	G	E/EHP
Ethyl Silicate	G	T
Ethylene Chlorohydrin	G	E/EHP
Ethylene Diamine	G	T
Ethylene Dichloride (Dichloroethane)	G	O
Ethylene Glycol	G	E/T/EHP
Ethylene Oxide	NR	—
Fatty Acids	G	A
Ferric Chloride, to 35%	G	E/T/EHP
Ferric Chloride, Saturated	G	E/EHP
Ferric Hydroxide	C	E/EHP
Ferric Nitrate	G	V
Ferric Sulfate	G	T
Ferrus Ammonium Sulfate to 30%	G	V
Fish Oils	G	A
Fluboric Acid	G	E/EHP
Fluorine Gas, Wet	NR	—
Fluorosilicic Acid	G	V
Fly Ash	G	E/EHP
Foam	G	E/EHP
Fog Oil	G	T
Formaldehyde	G	E/T/EHP
Formanide	G	T
Formic Acid	G	E/EHP
Freon 11, 130°F/54°C	G	T
Freon 12, 130°F/54°C	G	T
Freon 21	NR	—
Freon 22, 130°F/54°C	G	V
Freon 113 130°F/54°C	G	T
Freon 114,130°F/54°C	G	T
Freon 123	NR	—
Freon 134a,176°F/80°C	G	E/T/EHP
Fructose	G	T
Fuel Oil	G	T
Fumaric Acid	G	E/EHP
Furan	NR	—
Furfuryl Alcohol	G	E/EHP
Gallic Acid	NR	—
Gasoline, Refined	G	T
Gasoline, Refined, Unleaded	C	O
Gelatin	G	A
Glucose	G	A
Glue	G	T/E
Glycerin	G	E/T/EHP
Glycerol	G	E/T/EHP
Glycol	G	E/T/EHP
Glycolic Acid	C	E/EHP
Grease	G	T
Green Sulfate Liquor	G	T
Halon 1301	G	E/EHP
Heptane	G	T
Hexaldehyde	G	E/EHP
Hexane	G	T
Hexanol Tertiary	G	T
Hexyl Alcohol	G	V/T
Hexylene Glycol	G	T
Hydrobromic Acid, to 40%	G	E/EHP
Hydrochloric Acid, to 36%, 75°F/24°C	G	E/EHP
Hydrochloric Acid, to 36%, 158°F/70°C	C	O
Hydrocyanic Acid	G	E/EHP
Hydrofluoric Acid, to 75%, 75°F/24°C	G	O
Hydrofluosilicic Acid	G	T
Hydrogen Gas, Cold	C	E/T/EHP
Hydrogen Gas, Hot	C	E/EHP
Hydrogen Peroxide, to 50%	C	L
Hydrogen Peroxide, to 90%	C	O
Hydrogen Phosphide	NR	—
Hydrogen Sulfide	G	E/EHP
Hydroquinone	G	T
Hydroxylamine Sulfate	C	E/EHP
Hypochlorous Acid, Dilute	G	E/EHP
Iso Octane, 100°F/38°C	G	T
Isododecane	G	V
Isobutyl Alcohol	G	E/EHP
Isopropyl Acetate	G	E/EHP
Isopropyl Alcohol	G	E/EHP
Isopropyl Ether	G	T
JP-3	G	T
JP-4	G	T
JP-5, 6, 7, 8	G	T
Kerosene	G	T
Ketones	G	E/EHP
Lactic Acid	G	A
Lard	G	A
Lard Oil	G	V
Latex (1% Styrene & Butadiene)	G	O
Lauric Acid	G	T
Lauryl Chloride	NR	—
Lavender Oil	G	T
Lead Acetate	G	T
Lead Chloride	C	E/EHP
Lead Sulfamate	G	V
Lead Sulfate	G	T
Lime and H_2O	G	E/T/EHP
Linoleic Acid	G	O
Linseed Oil	G	A
Lithium Bromide	G	T
Lithium Chloride	G	T
Lubricating Oil, Refined	G	T
Lubricating Oil, Sour	G	T
Lubricating Oil, to 150°F/66°C	G	T
Lubricating Oil, 150°F/66°C to 180°F/82°C	G	V
Magnesium Ammonium Sulfate	C	V
Magnesium Chloride	G	E/T/EHP
Magnesium Hydroxide	G	E/T/EHP
Magnesium Nitrate	G	V
Magnesium Oxide	C	V
Magnesium Sulfate	G	E/T/EHP
Maleic Acid	G	T
Malic Acid	G	T
Mercuric Chloride	G	E/T/EHP
Mercuric Cyanide	G	T
Mercurous Nitrate	G	E/T/EHP
Mercury	G	T
Methane	C	T
Methyl Acetate	C	V
Methyl Alcohol, Methanol	G	E/T/EHP
Methyl Cellosolve (Ether)	G	V
Methyl Chloride	C	O

Gaskets

Chemical Composition	Rating Code	Gasket Grade
Methyl Cyclopentane	C	V
Methyl Ethyl Ketone	C	E/EHP
Methyl Isobutyl Carbinol	G	E/EHP
Methyl Isobutyl Ketone	NR	—
Methylene Chloride	C	O
Methylene Dichloride 100°F/38°C	G	O
MIL-L7808	G	O
MIL-05606	G	O
MIL-08515	G	O
Milk	G	A
Mineral Oils	G	T
Naptha, 160°F/71°C	G	O
Napthalene	NR	—
Napthenic Acid	C	T
Natural Gas	C	T
Nevoil	G	E/EHP
Nickel Acetate to 10%, 100°F/38°C	G	V
Nickel Ammonium Sulfate	G	V
Nickel Chloride	G	E/T/EHP
Nickel Nitrate	G	V
Nickel Plating Solution 125°F/52°C	G	E/EHP
Nickel Sulfate	G	E/T/EHP
Nicotine	C	V
Nicotine Acid	C	V
Nitric Acid to 10%, 75°F/24°C	G	E/EHP
Nitric Acid, 10-50%, 75°F/24°C	G	O
Nitric Acid, 50-86%, 75°F/24°C	C	O
Nitric Acid, Red Fuming	C	O
Nitrocellulose	G	V
Nitroethane	C	E/EHP
Nitromethane	G	E/EHP
Nitrous Oxide	G	E/EHP
Octyl Alcohol	G	V
Oil, Crude Sour	G	T
Oil, Motor	G	T
Oleic Acid	G	T
Olive Oil	G	A
Oronite 8200 Silicate Ester Fluid	G	O
Orthodichlorobenzene	G	O
OS-45 Silicate Ester Fluid	G	O
OS-45-1	G	O
Oxalic Acid	G	E/EHP
Oxygen, Cold †	C	E/EHP
Ozone (100 ppm)	G	E/EHP
Palmitic Acid	G	T
Peanut Oil	G	A
Pentane	G	T
Perchloroethylene	G	O
Perchloric Acid	NR	—
Petroleum Ether (see Benzene)	G	O
Petroleum Oils	G	T
Phenol (Carbolic Acid)	G	O
Phenylhydrazine	C	E/EHP
Phenylhydrazine Hydrochloride	C	E/EHP
Phosphate Ester	G	E/EHP
Phosphoric Acid, to 50%, 70°F/21°C	G	E/EHP
Phosphoric Acid, to 85%, 200°F/93°C	G	O
Photographic Solutions	G	T
Phthalic Anhydride	G	E/EHP
Picric Acid, Molten	G	V
Plating Solutions (gold, brass, cadmium, copper, lead, silver, nickel, tin, zinc)	G	V
Polybutene	G	T
Polyvinyl Acetate, Solid (In Liquid State is 50% solution of Methanol or 60% solution of H2O)	G	E/EHP
Potassium Alum	G	E/T/EHP
Potassium Bicarbonate	G	E/T/EHP
Potassium Bichromate	G	T/E
Potassium Borate	G	E/EHP
Potassium Bromate	G	E/EHP
Potassium Bromide	G	E/T/EHP
Potassium Carbonate	G	E/T/EHP
Potassium Chlorate	G	E/EHP
Potassium Chloride	G	T
Potassium Chromate	G	T
Potassium Cyanide	G	E/T/EHP
Potassium Dichromate	G	E/EHP
Potassium Ferricyanide	G	E/EHP

Chemical Composition	Rating Code	Gasket Grade
Potassium Ferrocyanide	G	E/EHP
Potassium Fluoride	G	E/EHP
Potassium Hydroxide	G	T
Potassium Iodide	G	V
Potassium Nitrate	G	T
Potassium Perborate	G	E/EHP
Potassium Perchlorate	G	T
Potassium Permanganate, Saturated to 10%	G	E/EHP
Potassium Permaganate, Saturate 10-25%	G	E/EHP
Potassium Persulfate	G	T
Potassium Phosphate	G	V
Potassium Silicate	G	V/E/T/EHP
Potassium Sulfate	G	T
Potassium Thiosulfate	G	V
Prestone	G	T
Propane Gas	C	T
Propanol	G	E/EHP
Propargyl Alcohol	G	E/EHP
Propyl Acetate	C	V
Propyl Alcohol	G	T
Propylene Dichloride	C	L
Propylene Glycol	G	E/EHP
Pydraul F - 9 and 150	NR	—
Pyranol 1467	G	T
Pyranol 1476	G	T
Pyroguard "C"	G	T
Pyroguard "D"	G	T
Pyroguard 55	G	E/EHP
Pyrrole	G	E/EHP
Rapeseed Oil	G	A
Ref. Fuel (70 ISO Octane, 30 Toluene)	G	T
Rosin Oil	G	V/T
Salicylic Acid	G	E/EHP
Secondary Butyl Alcohol	G	T
Sewage	G	E/T/EHP
Silver Cyanide	C	V
Silver Nitrate	G	E/EHP
Silver Plating Solution	C	V
Silver Sulfate	G	E/EHP
Skydrol, 200°F/93°C	G	L
Skydrol 500 Phosphate Ester	C	E/EHP
Soap Solutions	G	E/T/EHP
Soda Ash, Sodium Carbonate	G	E/T/EHP
Sodium Acetate	G	E/EHP
Sodium Alum	G	T
Sodium Benzoate	G	E/T/EHP
Sodium Bicarbonate	G	E/T/EHP
Sodium Bisulfate	G	E/T/EHP
Sodium Bisulfite (Black Liquor)	G	E/T/EHP
Sodium Bromide	G	E/T/EHP
Sodium Carbonate	G	E/T/EHP
Sodium Chlorate	G	E/EHP
Sodium Chloride	G	E/T/EHP
Sodium Cyanide	G	E/T/EHP
Sodium Dichromate, to 20%	G	E/T/EHP
Sodium Ferricyanide	G	E/T/EHP
Sodium Ferrocyanide	G	E/T/EHP
Sodium Fluoride	G	E/T/EHP
Sodium Hydro Sulfide	G	T
Sodium Hydroxide to 50%	G	E/EHP
Sodium Hypochlorite, to 20%	G	E/EHP
Sodium Metaphosphate	G	T
Sodium Nitrate	G	E/EHP
Sodium Nitrite	G	E/T/EHP
Sodium Perborate	G	E/EHP
Sodium Peroxide	G	E/EHP
Sodium Phosphate, Dibasic	G	T
Sodium Phosphate, Monobasic	G	T
Sodium Phosphate, Tribasic	G	T
Sodium Silicate	G	T
Sodium Sulfate	G	E/T/EHP
Sodium Sulfide	G	T
Sodium Sulfite Solution, to 20%	G	T
Sodium Thiosulfate, "Hypo"	G	T
Sohovis 47	G	T
Sohovis 78	G	T
Solvasol #1	G	T

Chemical Composition	Rating Code	Gasket Grade
Solvasol #2	G	T
Solvasol #3	G	T
Solvasol #73	C	T
Solvasol #74	NR	—
Soybean Oil	G	A
Spindle Oil	G	T
Stannic Chloride	G	T
Stannous Chyoride, to 15%	G	T
Starch	G	T
Steam	NR	—
Stearic Acid	G	T
Stoddard Solvent	G	T
Styrene	G	O
Sucrose Solutions	G	A
Sulfonic Acid	G	E/EHP
Sulphite Acid Liquor	G	E/EHP
Sulfur	G	V/E
Sulfur Chloride	G	O
Sulfur Dioxide, Dry	C	E/T/EHP
Sulfur Dioxide, Liquid	G	E/EHP
Sulfur Trioxide, Dry	G	O
Sulfuric Acid, to 25%, 150°F/66°C	G	E/EHP
Sulfuric Acid, 25-50%, 200°F/93°C	G	O
Sulfuric Acid, 50-95%, 150°F/66°C	G	O
Sulfuric Acid, Fuming	C	O
Sulfuric Acid, Oleum	C	O
Sulfurous Acid	G	O
Tall Oil	C	T
Tannic Acid, All Conc.	G	V
Tanning Liquors (50 g. alum. solution, 50 g. dichromate solution)	G	T
Tartaric Acid	G	E/EHP
Terpineol	G	V
Tertiary Butyl Alcohol	G	V/E/T/EHP
Tetrabutyl Titanate	G	E/EHP
Tetrachloroethylene	G	O
Tetrahydrofuran	NR	—
Tetralin	NR	—
Thionyl Chloride	C	T
Terpineol	C	T
Thiopene	NR	—
Titanium Tetrachloride	G	O
Toluene, 30%	G	T
Transmission Fluid, Type A	G	O
Triacetin	G	T
Trichloroethane	G	O
Trichloroethylene, to 200°F/93°C	G	O
Tricresyl Phosphate	G	E/EHP
Triethanolamine	G	E/T/EHP
Trisodium Phosphate	G	E/EHP
Tung Oil	G	T
Turbo Oil #15 Diester Lubricant	G	O
Turpentine	C	T
Urea	G	T
Vegetable Oils	G	A
Vinegar	G	A
Vinyl Acetate	G	E/EHP
Vi-Pex	G	T
Water, to 150°F/66°C	G	E/T/M/S
Water, to 200°F/93°C	G	E/M
Water, to 230°F/110°C	G	E/EHP
Water, Acid Mine	G	E/T/EHP
Water, Bromine	G	V
Water, Chlorine	C	E/M
Water, Deionized	G	E/M
Water, Seawater	G	E/EHP
Water, Waste	G	E/T/M/S
Whiskey	G	A
White Liquor	G	E/EHP
Wood Oil	G	T
Xylene	C	O
Zinc Chloride, to 50%	G	E/EHP
Zinc Nitrate	G	E/EHP
Zinc Sulfate	G	E/T/EHP

Rating Code	Rating Code Key
G	Good
C	Conditional
NR	Not Recommended

Services Not Recommended

The services listed below have been tested and are NOT RECOMMENDED with any of the presently available gasket materials. Services not shown as recommended or not recommended should be submitted to Victaulic for specific recommendations.

Chemical Composition	Rating Code
Acrylonitrile	NR
Allyl Chloride	NR
Amyl Chloride	NR
Anthraquinone	NR
Anthraquinone Sulfonic Acid	NR
Arylsulfonic Acid	NR
Butyne Diol	NR
Chloralhydrate	NR
Chlorobromomethane	NR
Chlorosulphonic Acid	NR
Ethylene Oxide	NR
Fluorine Gas Wet	NR
Freon 21	NR
Furan	NR
Gallic Acid	NR
Hydrogen Phosphide	NR
Lauryl Chloride	NR
Methyl Isobutyl Ketone	NR
Napthalene	NR
Perchloric Acid	NR
Pydraul F -9 and F - 150	NR
Solvasol #74	NR
Steam	NR
Tetra Hydrofuran	NR
Tetralin	NR
Thiophene	NR

Water and Air Services

	Rating Code	Gasket Grade
Air, Temp. –30°F to +230°F/ –34°C to +110°C (no oil vapors)	G	E
Dry Air, Temp. +230°F to +350°F/ +110°C to +177°C (no oil or water vapors)	G	L
Air, Oil Vapor, Temp. 0°F to +150°F/ –18°C to 66°C	G	T
Air, Oil Vapor, Temp. +150°F to +300°F/+66°C to +149°C	G	O
Water, Temp. to +150°F/+66°C	G	E/T/M/S
Water, Temp. to +200°F/+93°C	G	E/M
Water, Temp. to +230°F/+110°C*	G	E
Water, Temp. to +250°F/+120°C	G	EHP
Water, Acid Mine	G	E/T
Water, Bromine	G	V
Water, Chlorine	C	E/M
Water, Deionized	G	E/M
Water, Seawater	G	E
Water, Waste	G	E/T/M/S

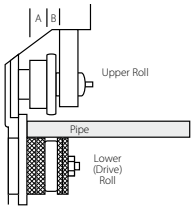
* Recommended for water only. Not recommended for steam service, except where couplings are accessible for frequent gasket replacement.

NOTE: The Grade "EHP" gasket can be used on all chemical, water and air services suitable for Grade "E" gaskets.

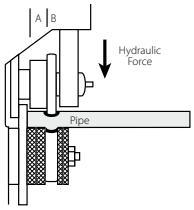
Pipe Preparation

Roll Groove

Roll groove shown on Schedule 40 steel pipe. The small dimple created on interior pipe wall does not significantly hinder pressure or flow.



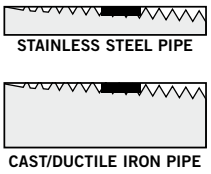
Vic-Easy tools cold form groove into pipe – maintains dimensions



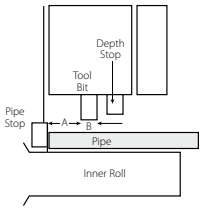
Roll grooving removes no metal from pipe

Cut Groove

Cut groove shown on Schedule 80 carbon pipe. The groove created removes less metal than threading.



Cut groove removes less metal than threading



Vic-Adjustable tools provide proper groove dimensions

Roll Groovers

Field Portable

VE12, PG. 20-3
VE26, PG. 20-3
VE46, PG. 20-3
VE226, PG. 20-3

Field Fabrication

VE270FSD, PG. 20-4
VE272SFS, PG. 20-4
VE416FS/VE416FSD, PG. 20-4
VE106, PG. 20-4

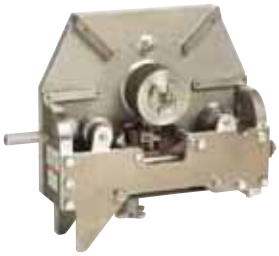
Plant/Shop Fabrication

VE268, PG. 20-5
VE414MC, PG. 20-5
VE436MC, PG. 20-5
VE450FSD, PG. 20-5

Cut Groovers

Field Manual

VG28GD, PG. 20-8
VG824, PG. 20-8
VG828, PG. 20-8



Field Motorized

VG412, PG. 20-9
VIC-GROOVER, PG. 20-9

Plastic Groovers

VPG26, PG. 20-9
VPG824, PG. 20-9

Vic-Press Tools

PFT510, PG. 20-11
See pg. 10-1 for the complete line of Pressfit products.

- Fast, clean and easy method for joining Schedule 10 Type 304/316 stainless steel pipe
- Available for wide variety of services based on o-ring capabilities
- Meets hanging requirements of ASME B31.1, B31.3 and B31.9
- Only approved Vic-Press 304/316 pipe should be used with Vic-Press 304/316 stainless steel products
- Electronically or battery operated hand-held pressing tool

PIPE PREPARATION

Pipe Preparation

Cutting Tools

Hole Cutting

HCT908, PG. 20-11
VHCT900, PG. 20-11
VIC-TAP® II, PG. 20-11

Pipe Cutting

VCT1, PG. 20-12
VCT2, PG. 20-12

Pipe Coatings

To maintain the published performance levels with respect to maximum rated working pressure and end load, the maximum coating thickness on our couplings should not exceed 10 mils/0.010". If additional protection is required, the coating thickness may be increased on the external surfaces of the coupling key, shoulder, gasket pocket or bolt pad mating surfaces. In addition, the coating thickness on the pipe ends should not exceed 10 mils. Specifically, the gasket seating surface and the entire groove should have coating thickness limited to 10 mils.

Exceeding the maximum thickness on either the pipe end or coupling surfaces mentioned above will decrease the performance capabilities of the pipe joints.

Accessories

Power Drive

VPD752, PG. 20-13
VE226 POWER DRIVE KIT, PG. 20-03

Power Mule

PG. 20-13

Adjustable Pipe Stands

VAPS112, PG. 20-13
VAPS224, PG. 20-14

Pipe Diameter Tape

PG. 20-14

PG. 20-14

PRODUCTS

Pipe Preparation – Roll Grooving Tools

Field Portable

For Complete Information Request Publication **24.01**

VE12

VE12 GROOVE IN-PLACE

- For manual grooving of Schedule 5, 10 and 40 steel; stainless steel; aluminum and PVC pipe
- Patented enhanced tracking rolls allow bi-directional grooving
- Roll grooves ¾–2"/20–50 mm pipe †

Power Requirements: None
Weight: 17 lbs./8 kg

VE26

VE26 GROOVE IN-PLACE

- Repair and retrofit existing lightwall steel, Schedule 40 steel, stainless steel, PVC, and aluminum
- Patented enhanced tracking rolls allow bi-directional grooving
- Model VE26C handles copper tubing (CTS) Types K, L, M and DWV plus British, DIN, and Australian Standard copper
- Model VE26SS grooves Schedule 5 and 10 stainless steel
- Optional power drive adapter kit available to alternately groove pipe using a Ridgid* 300 power drive or VPD752
- Roll grooves 2–6"/50–150 mm pipe †

Power Requirements: None
Weight: 22 lbs./10 kg

VE46

VE46 GROOVE IN-PLACE

- Designed for manually roll grooving Schedule 40 steel, aluminum, stainless steel and PVC pipe and Schedule 80 PVC pipe
- Patented enhanced tracking rolls allow bi-directional grooving and helps to hold the tool on the pipe end during the roll grooving process
- Optional power drive adapter kit available to alternately groove pipe using a Ridgid* 300 power drive or VPD752
- Roll grooves 3½–6"/9–150 mm pipe †

Power Requirements: None
Weight: 28 lbs./13 kg

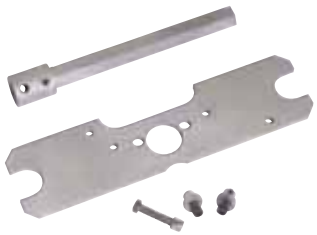
VE226

VE226 PORTABLE GROOVER

- Mounts to a Victaulic VPD752 or Ridgid* 300 power drive
- Optional alternate bases available
- Tool is operated using a standard ⅜"/9.5 mm square ratchet drive (not included)
- Available in six models for steel (and other IPS) pipe, copper tubing and stainless steel
- Roll grooves ¾–6"/20–150 mm pipe †

Drive Requirements: Fits Victaulic VPD752 or Ridgid* 300 power drives.
Optional bases for Ridgid* 535, 1224, 1822, and Oster 310 available. Contact Victaulic for others.
Weight: 37 lbs./17 kg

VE26/46 Power Drive Kit



The VE26/46 power drive kit is available to allow both tools to be directly mounted to either a Victaulic VPD752 or Ridgid* 300 Power Drive.

VE226 Power Drive Kit

The VE226 Power Drive Kit is available to allow the VE226 to be directly mounted to a Ridgid* 700 power drive

† Refer to Roll Grooving Tool Ratings chart on pgs. 17-6, 17-7
* Ridgid is a registered trademark of the Ridge Tool Company

PIPE PREPARATION

Pipe Preparation – Roll Grooving Tools

Field Fabrication

For Complete Information
Request Publication **24.01**

VE106/VE107

VE106/VE107 GROOVE-N-GO

- Mobile light-duty roll grooving tool with an integral motor/drive unit mounted to portable hand truck
- ⅜"/9.5 mm square ratchet drive for operation (standard)
- Patented enhanced tracking rolls help to keep the pipe on the tool during the roll grooving process
- Completely self- contained unit with an integral motor, safety foot switch and power plug
- Roll grooves 1¼–6"/32–150 mm pipe †

Power Requirements: VE106 is provided with 110volt, 15amp power.
VE107 is provided with 220volt, 6amp power.

Weight: 140 lbs./64 kg

Optional Accessories: Additional rolls/shafts are available for copper, lightwall stainless steel, and EndSeal (ES) grooving.

VE270FSD/VE271FSD

VE270FSD

- Completely self-contained unit with integral gear motor, safety guards, safety foot switch and power cord/plug
- Equipped with a unique pivot arm design, making roll changing quick and easy, without removing shafts
- Patented enhanced tracking rolls help to keep the pipe on the tool during the roll grooving process
- Roll grooves ¾–12"/20–300 mm pipe † (Supplied with 2–12"/50–300mm roll sets)

Drive Requirements: Self-contained
Power Requirements: VE270FSD is provided with 110volt, 15amp power. VE271FSD is provided with 220volt, 6amp power.

Weight: 340 lbs./154 kg

Optional Rolls: Carbon steel Schedules 5, 10, 20, and 40; copper rolls for type K, L, M and DWV, stainless steel Rx rolls for Schedules 5S-10-10S, and ¾–1½"/20–40 mm steel pipe, EndSeal (ES) grooving, Aluminum Schedules 5, 10, 20, 40 RP rolls, and PVC Plastic Schedule 40-80 RP rolls.

Optional Accessories: An optional pipe stabilizer for 8–12"/200–300 mm pipe is available.

VE272SFS

VE272SFS

- Portable roll groover mounts easily to the Victaulic VPD752 or Ridgid* 300 power drive
- Hand pump operation with a unique pivot arm design reduces handle effort
- Patented enhanced tracking rolls help you keep the pipe on the tool during the roll grooving process
- Roll grooves ¾–12"/20–300 mm pipe † (Supplied with 2–12"/50–300mm roll sets)

Power Requirements: Victaulic VPD752 or Ridgid* 300 power drive

Weight: 184 lbs./84 kg

Optional Rolls: Optional rolls are available for copper pipe; Schedule 5S, 10S, and 10 stainless steel pipe; and EndSeal (ES) grooving.
Optional Accessories: An optional pipe stabilizer for 8–12"/200–300mm pipe is available.

VE416FSD/VE417FSD

VE416FS/VE416FSD

- For field roll grooving of 2–12"/50–300 mm standard wall pipe, lightwall steel pipe, as well as aluminum, stainless and PVC plastic pipe
- Equipped with a pipe stabilizer for 6–12"/150–300 mm pipe sizes to control pipe sway
- Groove depth adjuster provides for easy adjustment for initial groove diameter
- Completely self-contained units with integral gear motors, safety foot switch and power cord/plug
- Roll grooves 2–12"/50–300 mm pipe †

Power Requirements: VE416 requires Victaulic VPD752 or Rigid* 300 Power Drive. VE416FSD is provided with 110volt, 15amp for integral gear motor. VE417FSD is provided with 220volt, 8amp service.
Weight: 340 lbs./154 kg

Optional Rolls: Optional rolls are available for Schedule 5S and 10S stainless steel pipe, PVC and aluminum pipe, and types K, L, M and DWV copper tubing.

† Refer to Roll Grooving Tool Ratings chart on pgs. 17-6, 17-7

Pipe Preparation – Roll Grooving Tools

Plant/Shop Fabrication

For Complete Information Request Publication **24.01**

VE268

VE268

- Designed for fabrication shop roll grooving
- The fully-motorized, semi-automatic, electrohydraulic tool comes complete with safety guards and safety foot switch
- Equipped with a unique pivot arm design, making roll changes quick and easy, without removing shafts
- Patented enhanced tracking rolls help to keep the pipe on the tool during the roll grooving process
- Roll grooves ¾–12"/20–300 mm pipe† (¾–1½"/20–32mm rolls are optional)

Drive Requirements: Self-contained

Weight: 735 lbs./333 kg

Optional Rolls: Optional rolls are available for carbon steel Schedules 5, 10, and 40; copper rolls for type K, L, M and DWV; and stainless steel Rx rolls for Schedules 5S, 10, and 10S, and ¾–1½"/20–40mm steel pipe.

Optional Accessories: An optional pipe stabilizer for 8–12"/200–300 mm pipe is available and is suggested for grooving 8"/200 mm copper tubing.

VE414MC

VE414MC

- Designed for fabrication shop roll grooving Schedule 5, 10, and standard wall carbon steel pipe, standard wall stainless steel pipe, Schedule 40, 80 PVC pipe, and standard wall aluminum pipe
- Unique roll design, making roll changing quick and easy, without removing main shafts
- Patented enhanced tracking rolls help to keep the pipe on the tool during the roll grooving process
- The tool comes equipped with pipe stabilizers to provide smooth grooving operation
- Roll grooves 2–16"/50–400 mm pipe† (Supplied with 2–12"/50–300mm original rolls and 14–16"/350–400mm AGS rolls)

Drive Requirements: Self-contained

Weight: 735 lbs./333 kg

Optional Rolls: Optional rolls are available for Schedule 10S stainless steel pipe PVC and aluminum pipe and type K, L, M and DWV copper tubing. AGS roll sets for 14–16"/350–400mm Schedule 10 through ½"/13 mm wall carbon steel pipe are now standard.

Optional Accessories: The tool can also be supplied in various voltages, contact Victaulic for details.

VE436MC

VE436MC

- Fully automated shop tool for roll grooving standard wall (⅜"/10 mm wall maximum) pipe
- The fully-motorized, semi-automatic, electro-hydraulic tool comes complete with safety guards and safety foot switch
- Patented enhanced tracking rolls help to keep the pipe on the tool during the roll grooving process
- Roll grooves 4–36"/100–900 mm pipe† (26–36"/650–950mm roll kit optional)

Power Requirements: 220/440 volt, 3 phase, 60 Hz (shipped wired for 220 volt unless otherwise specified). Contact Victaulic for details.

Weight: 1500 lbs./680 kg

Optional Rolls: Optional rolls are available for Schedule 5S and 10S stainless steel pipe, PVC and aluminum pipe, and types K, L, M and DWV copper tubing.
AGS roll sets for 14–16"/350–400 mm Schedule 10 through ½"/13 mm wall carbon steel pipe are now standard.

VE450FSD

VE450FSD

- Designed for field roll grooving of 4–24"/100–600 mm pipe
- Tool is supplied with roll sets for grooving 4–12"/100–300 mm original groove and 14–24"/350–600 mm AGS groove on carbon steel pipe
- Patented enhanced tracking rolls help to keep the pipe on the tool during the roll grooving process, and quick change upper roll design
- Features:
  - Lifting point to move the tool using a crane
  - Frame can accept most fork lifts
  - On board storage for tool accessories

Power Requirements: VE450FSD is a self-contained unit with two 220 volt, single phase 50/60 hz, 20 amp integral gear motors to handle heavier loads, safety foot switch and power cord/plug

Weight: 825 lbs./374 kg

Optional Rolls: Optional rolls are available for 14–24"/350–600 mm carbon steel original groove; 4–12"/100–400 mm lightwall stainless steel original groove; 14–24"/350–600 mm lightwall stainless steel AGS groove; and 4–12"/100–400 mm EndSeal (ES) groove.

† Refer to Roll Grooving Tool Ratings chart on pgs. 17-6, 17-7

Pipe Preparation – Roll Grooving

Vic-Easy® Roll Grooving Tool Ratings

(MAXIMUM CAPACITY)

Victaulic Vic-Easy roll grooving tools are designed to cold form grooves into the specified pipe to meet ANSI/AWWA C-606 standards and the groove dimensions specified in Victaulic Groove Specifications for each type of pipe.

These tools are designed for roll grooving pipe. To accomplish this function requires some dexterity and mechanical skills, as well as sound safety habits. Although this tool is manufactured for safe dependable operation, it is impossible to anticipate those combinations of circumstances which could result in an accident. The operator is cautioned to always practice "Safety First" during each phase of use, including setup and maintenance of these units.

Read and understand the Tool Operating and Maintenance Instruction Manual provided with each tool before operating or performing maintenance on tools. Become familiar with the tool's operations, applications and limitations. Be particularly aware of its specific hazards.

IMPORTANT NOTES:

- **PVC** grades that can be grooved **–** PVC Type I Grade I – PVC 1120; PVC Type I Grade II – PVC 1220; PVC Type II Grade I – PVC 2116.
- **Copper/nickel pipe –** contact Victaulic for details.

Note: Vic-Easy tools and rolls shown on this chart will produce grooves in accordance with Victaulic Roll Groove Dimension charts and to ANSI/AWWA C-606 standards.

Tool Model	Pipe Material	Pipe Size/Schedule Inches/mm																
		¾ 20	1 25	1¼ 32	1½ 40	2 50	2½ 65	3 80	3½ 90	4 100	4½ 120	5 125	6 150	8 200	10 250	12 300	14 350	16 400
VE12	Steel	5, 10	5 – 40															
	Stainless		40S only															
	Aluminum †	5, 10	5 – 40															
	PVC Plastic		40															
VE26S	Steel					5 – 40			5, 10									
	Stainless					40S only												
VE26P	Aluminum †					5 – 40			5, 10									
	PVC Plastic					40												
VE26C	Copper					K, L, M, DWV Copper Rolls ‡												
VE26SS	Lt. Wall SS					5S, 10S Rx Rolls #												
VE46	Steel								5 – 40									
	Stainless								40S only									
VE46P	Aluminum †								5 – 40									
	PVC Plastic								40	40, 80								
VE226S	Steel			5 – 40					5, 10									
	Stainless			40S only														
VE226P	Aluminum †			5 – 40								5, 10						
	PVC Plastic			40, 80					40									
VE226B	Steel		5 – 40															
	Stainless		40S only															
	Aluminum †		5 – 40															
	PVC Plastic	40	40, 80															
VE226M	Steel					5 – 40					5, 10							
	Stainless					40S only												
VE226C	Copper					K, L, M, DWV Copper Rolls ‡												
VE226BSS	Lt. Wall SS	5S, 10S Rx Rolls #																
VE226MSS	Lt. Wall SS					5S, 10S Rx Rolls #												
VE106	Steel			5 – 40 Standard Rolls §														
	Stainless			40S Standard Rolls §														
	Lt. Wall SS			5S, 10S Rx Rolls #														
	Copper					K, L, M, DWV Copper Rolls ‡												
VE272SFS	Steel	5 – 40S Standard Rolls §													5 – 20 Std.			
	Stainless	40S Standard Rolls §																
	Lt. Wall SS	5S, 10S Rx Rolls #																
	Aluminum †	5 – 40 RP Rolls ◊													5 – 20 RP ◊			
	PVC Plastic	40 RP Rolls ◊					40, 80 RP Rolls ◊							40 RP ◊				
	Copper					K, L, M, DWV Copper Rolls ‡												
VE270FSD	Steel	5 – 40S Standard Rolls §													5 – 20 Std.			
	Stainless	40S Standard Rolls §																
	Lt. Wall SS	5S, 10S Rx Rolls #																
	Aluminum †	5 – 40 RP Rolls ◊													5 – 20 RP ◊			
	PVC Plastic	40 RP Rolls ◊					40, 80 RP Rolls ◊							40 RP ◊				
	Copper					K, L, M, DWV Copper Rolls ‡												

TABLE CONTINUED ON PG. 20-7

Rx Rolls – "Rx" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving lightwall stainless steel pipe.

† 6061-T4 or 6063-T4 alloy must be used.

‡ Alternate units are available for European Standard (EN) 1057 and Australian Standard Copper.

§ Standard Rolls – This is the Victaulic designation for grooving roll sets used primary for steel pipe. Also used for Schedule 40S stainless steel pipe.

◊ RP Rolls – "RP" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving PVC plastic pipe and aluminum pipe.

Pipe Preparation – Roll Grooving

Vic-Easy Roll Grooving Tool Ratings

(MAXIMUM CAPACITY)

Victaulic Vic-Easy roll grooving tools are designed to cold form grooves into the specified pipe to meet ANSI/AWWA C-606 standards and the groove dimensions specified in Victaulic Groove Specifications for each type of pipe.

These tools are designed for roll grooving pipe. To accomplish this function requires some dexterity and mechanical skills, as well as sound safety habits. Although this tool is manufactured for safe dependable operation, it is impossible to anticipate those combinations of circumstances which could result in an accident. The operator is cautioned to always practice "Safety First" during each phase of use, including setup and maintenance of these units.

Read and understand the Tool Operating and Maintenance Instruction Manual provided with each tool before operating or performing maintenance on tools. Become familiar with the tool's operations, applications and limitations. Be particularly aware of its specific hazards.

IMPORTANT NOTES:

- **PVC** grades that can be grooved **–** PVC Type I Grade I – PVC 1120; PVC Type I Grade II – PVC 1220; PVC Type II Grade I – PVC 2116.
- **Copper/nickel pipe –** contact Victaulic for details.
- **Light weight stainless steel pipe** (Sch. 10S and Sch. 5S) must be grooved using stainless Rx roll sets.

Note: Vic-Easy tools and rolls shown on this chart will produce grooves in accordance with Victaulic Roll Groove Dimension charts and to ANSI/AWWA C-606 standards.

Tool Model	Pipe Material	Pipe Size/Schedule Inches/mm: ¾ 20	1 25	1¼ 32	1½ 40	2 50	2½ 65	3 80	3½ 90	4 100	4½ 120	5 125	6 150	8 200	10 250	12 300	14 350	16 400
TABLE CONTINUED FROM PG. 20-6																		
VE416FS/ VE416FSD Original Groove	Steel					5 – 40S Standard Rolls §										5 – Std. Wall **		
	Stainless					40S Standard Rolls §										Std. Wall Only **		
	Lt. Wall SS					5S, 10S Rx Rolls #											5S –10 Rx Rolls #	
	Aluminum †					5 – 40 RP Rolls ◊										5– Std.		
	PVC Plastic					40, 80 RP Rolls ◊								40 RP◊				
	Copper					K, L, M, DWV Copper Rolls ‡												
VE416FS/ VE416FSD AGS Groove	Steel																Std. Wall RW Rolls ø	
	Stainless																Std. Wall RW Rolls ø	
	Lt. Wall SS																5S–10 RWx Rolls¤+	
VE268	Steel					5 – 40S Standard Rolls §									5 – 20 Std. Rolls §			
	Stainless					5 – 40S Standard Rolls §												
	Lt. Wall SS					5S, 10S Rx Rolls #												
	Aluminum †					5 – 40 RP Rolls ◊									5 – 20 RP Rolls ◊			
	PVC Plastic					40 RP Rolls ◊			40, 80 RP Rolls ◊					40 RP◊				
	Copper					K, L, M, DWV Copper Rolls ‡												
VE414MC Original Groove	Steel					5 – 40S Standard Rolls §										5 – Std. Wall **		
	Stainless					40S Standard Rolls §										Std. Wall Only**		
	Lt. Wall SS					5S, 10S Rx Rolls #											5S –10 Rx Rolls #	
	Aluminum †					5 – 40 RP Rolls ◊										5– Std.		
	PVC Plastic					40, 80 RP Rolls ◊								40 RP◊				
	Copper					K, L, M, DWV Copper Rolls ‡												
VE414MC AGS Groove	Steel																Std. Wall RW Rolls ø	
	Stainless																Std. Wall RW Rolls ø	
	Lt. Wall SS																5S–10 RWx Rolls¤+	

** For standard wall thickness, see pg. 17-16

@ Special RWX rolls for grooving true sch. 10 (0.250-6.4mm) are available.

RX Rolls - "RX" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving light-wall stainless steel pipe.

† 6061-T4 or 6063-T4 allow must be used.

◊ RP Rolls - "RP" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving PVC plastic pipe and aluminum pipe..

Tool Model	Pipe Material	Pipe Size/Schedule Inches/mm: 4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	22 550	24 600	26 650	28 700	30 750	32 800	36 900
VE436MC Original Groove	Steel	5 – 80 *			5 – 40 *					5 – 0.500"/12.7 mm Wall *								
	Stainless	40S Standard Rolls §								0.375"/9.5 mm Wall Standard Rolls §								
	Lt. Wall SS	5S, 10S Rx Rolls #								5S, 10S, 10 Rx Rolls #								
	Aluminum †	5 – 40 RP Rolls ◊																
	PVC Plastic	40 – 80 RP Rolls ◊			40 RP◊													
VE436MC AGS Groove	Steel							Std. Wall 0.375"/9.5 mm RW Rolls ø										
	Stainless							Std. Wall 0.375"/9.5 mm RW Rolls ø										
	Lt. Wall SS							5S, 10S RWx Rolls¤+										
VE450FSD	Steel	5 – 40				Sch. 5 - Std. Wall Original Groove Only												
								Sch. 10 & Std. Wall RW-AGS										
	Stainless	40S Standard Rolls §				Sch. Wall, Std. Rolls												
								Std. Wall RW-AGS										
	Lt. Wall SS	5S, 10S Rx Rolls @						5S, 10S, 10 Rx Rolls										
	AGS Lt. Wall SS							10S Rx Rolls #										
	Aluminum †	5 – 40 RP Rolls																
	PVC Plastic*	40 – 80			40													

‡ EndSeal (ES) rolls are available. Contact Victaulic for details.

@ These rolls are not interchangeable with rolls sets from other tool models. Contact Victaulic for ordering information.

* Use RP Rolls.

† 6061-T4 or 6063-T4 must be used. RP Rolls must be used.

Special RWX rolls for grooving true sch. 10 (0.250 – 6.4 mm) are available.

- # Rx Rolls – "Rx" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving lightwall stainless steel pipe.
- † 6061-T4 or 6063-T4 alloy must be used.
- ‡ Alternate units are available for European Standard (EN) 1057 and Australian Standard Copper.
- § Standard Rolls – This is the Victaulic designation for grooving roll sets used primary for steel pipe. Also used for Schedule 40S stainless steel pipe.
- ◊ RP Rolls – "RP" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving PVC plastic pipe and aluminum pipe.
- ø RW Rolls – "RW" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving standard well pipe to AGS specifications.
- ¤ RWx Rolls – "RWx" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving lightwall stainless steel pipe to AGS specifications.
- \+ Special rolls for grooving true Sch. 10 (.25"/6.4 mm) are available.

Pipe Preparation – Cut Grooving Tools

Field Manual

For Complete Information

Request Publication **24.01**

VG28GD

VG28GD VIC-ADJUSTABLE™

- Designed for fast, easy cut grooving of steel and other metallic IPS and ductile iron pipe
- A modified version (MRL) is available to groove and machine for rubber lining
- Cut grooves 2–8"/50–200mm pipe†

Drive Requirements: External drive, minimum 1½ hp

Drive Speed: 38 rpm maximum

Shipped Set For: Standard groove 4–6"/100–150 mm steel pipe. Contact Victaulic for ductile iron, MRL, and double groove requirements.

Weight: 37 lbs./17 kg

VG824

VG824 VIC-ADJUSTABLE

- Designed for cut grooving various metallic pipe materials
- The tool must be driven through its own integral gear box by an external power source at a maximum speed of 38 rpm
- Ideal for job site, fab shop or production cut grooving
- Cut grooves 8–24"/200-600mm pipe†

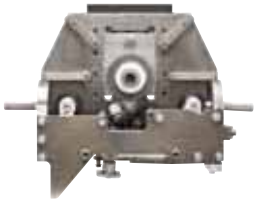
Drive Requirements: External drive, minimum 1½ hp

Drive Speed: 38 rpm maximum

Shipped Set For: Standard groove, 8–12"/200–300 mm steel pipe

Weight: 82 lbs./37.2 kg

Options: 8"/200 mm standard tool bit – ½"/10 mm; 8–24"/200–650 mm standard tool bit – cast/ductile pipe; 22–24"/500–600 mm standard tool bit – ½"/13 mm



VG828

VG828 AGS CUT GROOVING TOOL

- Designed for cut grooving ½"/13 mm or heavier carbon steel pipe from 14–24"/350–600mm
- The tool must be driven through its own integral gear box by an external power source at a maximum speed of 38 rpm
- Ideal for job site cut grooving
- Designed for AGS systems only

Drive Requirements: External drive, minimum 1½ hp

Drive Speed: 38 rpm maximum

Shipped Set For: 14–24"/350–600 mm AGS cut grooves only

Weight: 125 lbs./56.7 kg

Pipe Preparation – Cut Grooving Tools

Field Groover

For Complete Information
Request Publication **24.01**

VG46

VG46 VIC-GROOVER

- Designed for manual or power cut grooving of a single size on steel, stainless steel, aluminum and PVC pipe
- Tools are supplied with a ratchet handle for manual operation
- Tools 2"/50 mm and larger are supplied with a power yoke
- Cut grooves ¾–8"/20–200 mm pipe †

Drive Requirements: Manual or external drive, minimum ½ hp./0.37 kw
Drive Speed: 40 rpm maximum
Shipped Set For: Standard groove, IPS of size indicated or rigid/flexible for ductile/cast pipe
Weight: 28 lbs./13 kg

† Refer to Cut Grooving Tool Ratings chart on pgs. 17-10

Field Motorized

For Complete Information
Request Publication **24.01**

VG412

VG412 ORBITAL MACHINING TOOL

- Complete modular pipe end preparation system providing quick, accurate cutting and grooving of ductile iron pipe to meet AWWA and other industry specifications for mechanical couplings
- External mounting and drive action is particularly suited to cement lined ductile iron pipe grooving
- The hinged frame design allows cutting at any point along the pipeline
- Blade setting and replacement is fast and easy
- Cut grooves 4–12"/100–300 mm pipe †
- Safety foot switch

Drive Requirements: 120 volt/11.5 amp
Shipped Set For: Rigid Radius Groove, 4–12"/100–300 mm ductile iron pipe
Weight: 151 lbs./69 kg
Options: 4–12"/100–300 mm IPS steel kit; flexible groove profile components

Plastic Groovers

For Complete Information
Request Publication **24.01**

VPG26 AND VPG824

- PVC plastic pipe requires a radius groove to reduce any point of stress concentration in this notch sensitive material
- Tools feature a high speed, router-type tool bit which cuts a radiused groove, to full depth, in one manual rotation of the tool around the pipe

VPG26

VPG26

- Grooves 2–6"/50–150mm pipe

Power Requirements: 110 volt, 1 phase, 60 Hz, 7 amps
Rotation Drive: Manual (clockwise)
Weight: 41 lbs./19 kg
Shipped Set For: VPG26 for 2–3 ½"/50–90 mm

VPG824

VPG824

- Grooves 8–16"/200–400mm pipe

Power Requirements: 110 volt, 1 phase, 60 Hz, 7 amps
Weight: 47 lbs./21 kg
Shipped Set For: VPG824 for 8–12"/200–300 mm

† Refer to Cut Grooving Tool Ratings chart on pgs. 17-10

Pipe Preparation – Cut Grooving

Vic-Groover® Cut Grooving Tool Ratings

(CAPACITY)

Tool Model	Pipe Material	Pipe Size/Schedule Inches/mm																						
		¾ 20	1 25	1¼ 32	1½ 40	2 50	2½ 65	3 80	3½ 90	4 100	4½ 120	5 125	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	22 550	24 600
Vic-Groover Individually Sized ¾ – 8"/ 20 – 200 mm	Steel	40, 80																				
	Stainless	40, 80																				
	Aluminum	40, 80																				
	PVC	40, 80																				
Vic-Groover	Ductile Iron							Class 53		Class 53			Class 53									
VG28GD Adjustable Groover	Steel					40, 80								40								
	Stainless					40, 80								40								
	Aluminum					40, 80								40								
	Ductile Iron							Class 53														
VG824 Adjustable Groover	Steel													40, 80				Standard Wall 30, 40				
	Stainless													Standard Wall, 30, 40								
	Aluminum													Standard Wall, 30, 40								
	Ductile Iron													Class 53								
VG828 Cut Grooving Tool	Steel																.500-75"/12.7-19.05mm					
VG412 Adjustable Groover	Steel									40, 80 *												
	Ductile Iron									Class 53												
VPG26	PVC					40, 80 PVC																
VPG824	PVC													40, 80 PVC								

* Recommended for lined steel pipe only.

Pipe Preparation – Pressfit Tool/Hole Cutting Tools

Vic-Press Tool

For Complete Information Request Publication **24.01**

PFT510

PFT510 – ELECTRIC TOOL

- The Vic-Press system requires a Vic-Press tool to secure Vic-Press Schedule 10S products onto IPS Schedule 10S stainless steel pipe
- Jaws are included with tool purchase
- Vic-Press tool is designed for industrial and trade use only

Capacity: ½"/15 mm, ¾"/20 mm, 1½"/40 mm, 2"/50 mm Sch10S stainless steel pipe
Power Requirements: 110 volt, 60 cycle, 6.5 amp
Note: Vic-Press Schedule 10S system is not compatible with PFT505 and/or PFT509 tools/components

Pressfit Tool

For Complete Information Request Publication **24.01**

PFT505

PFT505 – ELECTRIC TOOL

- The Pressfit System requires a Pressfit tool designed for securing Pressfit products onto pipe
- Jaws are available separately for rental (with rental tool) or purchase
- Pressfit tool is designed for industrial and trade use only

Capacity: ½–2"/15–50 mm IPS Schedule 5 steel and stainless steel pipe
Power Requirements: 110 volt, 60 cycle, 6.5 amp
Accessories: Pressing jaws in ½"/15 mm, ¾"/20 mm, 1"/25 mm, 1½"/40 mm and 2"/50 mm
Note: PFT505 and PFT509 components are not interchangeable

PFT509

PFT509 – BATTERY TOOL

- The Pressfit System requires a Pressfit tool designed for securing Pressfit products onto pipe
- Tool packages include the actual pressing tool, two (2) batteries and a charger, carrying case, and ½, ¾, 1, and 1½" press jaws
- Jaws are available separately for purchase
- Pressfit tool is designed for industrial and trade use only
- Pressfit tool is battery powered and requires a 12V battery charger

Capacity: ½–1" and 1½"/15–25 mm and 40 mm IPS Schedule 5 steel and stainless steel pipe
Note: PFT505 and PFT509 components are not interchangeable

Hole Cutting Tools

For Complete Information Request Publication **24.01**

HCT908

HCT908

- One-piece hole cutting tool designed to cut holes up to 4 ½"/120 mm in carbon and stainless steel pipe
- Allows for use of Mechanical-T, Vic-Let, and Vic-O-Well outlets

Capacity: 1–4½"/25–120mm holes for ½–4"/15–100mm Mechanical-T and Vic-Let connections
Power Requirements: 110 volt, 1 phase, 60 Hz, 7.0 amp
Weight: 23 lbs./10 kg

VHCT900

VHCT900

- Three-piece hole cutting tool designed to cut holes up to 3 ½"/90 mm in diameter for Mechanical-T, Vic-Let, and Vic-O-Well outlets
- Base unit clamps quickly onto the pipe in vertical, horizontal or overhead positions
- Heavy-duty drill mounts to the alignment guides and a manual feed assembly provides uniform pressure on the saw for maximum cutting efficiency

Capacity: 1–3½"/25–90mm holes for ½–3"/15–80mm Mechanical-T and Vic-Let connections
Power Requirements: grounded 120 volt, 1 phase, 60 Hz, 10 amp electrical supply. (220 volt, 1 phase, 60 Hz, 5 amp available on request)
Weight: 36 lbs./16 kg
Accessories: Extended chain for 10–24"/250–600 mm pipe

Pipe Preparation – Pipe Cutting Tools

VIC-TAP II

VIC-TAP II

- Hole cutting tool designed for use with Style 931 Vic-Tap II Mechanical-T unit for tapping into steel pipe systems under pressures up to 500 psi/3450 kPa

Capacity: Vic-Tap II 4–8"/100–200 mm Run × 2 ½"/65 mm (IPS) Outlet

Power Requirements: 115 volt, 1 phase, 60 Hz, 7.5 amp

Weight:
(A) Drill guide base 15 lbs./6.8 kg
(B) Drill motor and feed assembly, total wgt. 16 lbs./7 kg
(C) Style 931/Valve unit, 12 lb./5.4 kg–15 lb./6.8 kg, depending upon size (4, 5, 6 and 8"/100, 125, 150 200mm available)

Hole Size: 2 ⅜"/61 mm

Pipe Cutting Tools

For Complete Information Request Publication **24.01**

VCT1

VCT1 MANUAL

- Lightweight and portable pipe cut-off tool handles 4–24"/100–600 mm pipe, up to ½"/13 mm thick
- Worm gear drive crank handle provides smooth, manual travel, easy control and accurate cutting

Capacity: 4–24"/100–600 mm

Wall Thickness: 0.065–½"/1.65–13 mm (with tips supplied)

Tips: Acetylene – 1 ea. #00, #0, #1

Weight: 22 lbs./10 kg

VCT2

VCT2 AUTOMATIC

- Rotation is powered by a small 120 VAC motor with SCR remote control
- Unique distributor design has stainless steel insert which extends tip life, eases cleaning and reduces backfire

Capacity: 6–24"/150–600 mm

Wall Thickness: 0.065–½"/1.65–13 mm (with tips supplied)

Tips: Acetylene – 1 ea. #00, #0, #1

Speed Control: SCR

Power Required: 120 volt, 1 phase, 60 Hz, 15 amp

Motor Rating: 15 W 10,000 rpm

Weight: 33 lbs./15 kg

Accessories: Guide rail is sold separately. Recommended for pipe 12"/300 mm and above. Order Guide Rail D-600 for up to 24"/600 mm pipe (others available).

Pipe Preparation – Accessories

Power Drive

VPD752

For Complete Information Request Publication **24.01**

- Can be used as the power drive unit for the VE226, VE26, VE46, VE416FS and VE272SFS roll grooving tools, provided the tool is equipped with the correct base plate and the VG1, VG28GD, and VG824 cut grooving tools with universal drive shaft
- Operated with a safety foot switch

Capacity: See appropriate tool
Power Requirements: 115 volts, 15 amp, 50/60 Hz (220 volt, 6 amp, 50/60 cycle optional)
Weight: 140 lbs./634 kg
Optional: Universal drive shaft

Power Mule

For Complete Information Request Publication **24.01**

- Ideal drive for Victaulic individual Vic-Groover tools, VG28GD, VG824 and VG828
- Heavy-duty, two-wheeled unit drives Victaulic cut grooving tools at the speed and power necessary for accurate grooving
- Power Mule is equipped with a Forward-Off-Reverse control and integral foot switch

Capacity: Victaulic individual Vic-Groover tools, VG28GD, VG26GD/MRL, VG824, VG824/MRL
Power Requirements: 115 volts, 15 amp, 50/60 cycle
Full Load Speed: 35 rpm
Weight: 190 lbs./86 kg

Adjustable Pipe Stand

VAPS112

For Complete Information Request Publication **24.01**

- Designed for supporting pipe to be roll grooved
- Four adjustable legged portable self-standing unit
- Turnstile design allows pipe to be spun around for grooving of both pipe ends without dismounting pipe from stand

Capacity: ¾ – 12"/20 – 300 mm IPS pipe
Load Rating: 1075 lbs./490 kg
Vertical Stroke: 14½"/368 mm for adjusting rod, 8½"/216 mm leg adjustment, 23"/584 mm
Minimum Pipe Height from Floor:
23"/584 mm on 12"/300 mm pipe
21"/533 mm on 1"/25 mm pipe
Weight: 190 lbs./86 kg
Handle Effort Required to Raise 1075 lbs./490 kg Load: 50 lbs./23 kg maximum

Pipe Preparation – Accessories

Adjustable Pipe Stand

VAPS224

For Complete Information
Request Publication **24.01**

- Designed specifically for supporting pipe to be roll grooved
- Self-standing heavy-duty unit permits free pipe rotation and traversing on ball transfers
- Ball transfers are mounted in a manner permitting use of pipe slings
- Turnstile design allows pipe to be spun around for grooving of both pipe ends without dismounting pipe from stand

Capacity: 2–24"/50–600 mm IPS pipe
Load Rating: 1800 lbs./816 kg
Vertical Stroke: 23"/584 mm
Minimum Pipe Height from Floor: 13"/325 mm on 24"/600 mm IPS pipe
Maximum Pipe Height from Floor: 38"/965 mm on 2"/50 mm IPS pipe
Weight: 260 lbs./118 kg
Handle Effort Required to Raise 1800 lbs./817 kg Load: 50 lbs./23 kg maximum

Pipe Diameter Tape PT100A

For Complete Information
Request Publication **24.01**

- Go/No-Go pocket-sized steel tapes are available for taking circumferential measurements on pipe sizes ¾–24".
- Tape contains Go/No-Go markings on one side for use with ¾–24" pipe in ANSI B36.19 and many ISO-4200 sizes and is marked in 1/100th of an inch increments on the other side.
- The Go/No-Go side can be used to check cut or roll grooved pipe conformance to Victaulic original and Machined for Rubber Lining (MRL) (¾–12") and Advanced Groove System (AGS) (14–24") groove diameter specifications.
- Tapes are notched on the lead end to allow proper overlap within the groove for more accurate measurement.
- The Go/No-Go side of the tape is not intended for use on sizes 76.1; 139.7; 165.1; 165.2; 216.3; 267.4; and 318.5 mm steel or stainless steel pipe sizes. For cast or ductile iron pipe sizes (up to 20"), copper tube sizes, and the steel and stainless steel pipe sizes listed above, use the side of the tape marked in 0.01" increments.
- The Go/No-Go pipe tape is a quick reference guide only. To ensure proper grooving dimensions, always refer to the I-100 Victaulic Field Installation Handbook or to the latest groove specifications publications located on www.victaulic.com.
- Metric version, PT101, is also available for 20–600 mm pipe sizes.

PT102

For Complete Information
Request Publication **24.01**

- Go/No-Go pocket-sized steel tapes are available for taking circumferential measurements on pipe sizes 8–72"/200–1800 mm.
- Tape contains Go/No-Go markings on one side for use with Original Groove System sizes 8–12"/200–300 mm pipe and Advanced Groove System sizes 14–72"/300–1800 mm pipe in ANSI B36.10/B36.19 and many ISO-4200 sizes. In addition, the PT102 contains markings in 0.02"/0.5 mm increments on the opposite side.
- The opposite side of the diameter tape can be used to check Victaulic original groove specifications in 14–42"/200–1050 mm pipe sized, including China pipe sizes and JIS specifications 8–12"/200–300 mm pipe sizes.
- The Go/No-Go pipe tape is a quick reference guide only, it is not a replacement for a calibrated diameter measuring instrument. To ensure proper grooving dimensions, always refer to the I-PT102 Victaulic Go/No-Go Pipe Diameter Tape Instructions Manual or to the latest groove specifications publications located on www.victaulic.com.

* Ridgid is a registered trademark of the Ridge Tool Company

Pipe Preparation

Grooving Times

Time for pipe preparation obviously depends on widely varied factors including productivity, location, type, hardness, and wall thickness of pipe. As a gauge for typical grooving times, the following chart was prepared to include grooving time with pipe in position and tool properly set for the size and depth of groove. Times will be extended when going from one size to another for roll changes, depth stop setting, trial grooving and other minor adjustments incidental to changing pipe sizes or initial set-up time prior to the first production groove.

APPROXIMATE GROOVING TIME IN MINUTES – STEEL PIPE*

Size	Roll Groovers – Powered							Cut Groovers			
								Vic-Groover		Vic-Adjustable	
Nominal Size Inches mm	226	272SFS	270FSD	268	416FSD	414MC	436MC	Power	Hand	VG28GD Power	VG824 Power
¾ 20	0.5 #	—	0.2	0.2	—	—	—	0.5	1.5	—	—
1 25	0.6 #	—	0.2	0.2	—	—	—	0.5	1.5	—	—
1 ¼ 32	0.7 #@	—	0.2	0.2	—	—	—	0.7	2.0	—	—
1 ½ 40	0.8 #@	—	0.2	0.2	—	—	—	0.7	2.5	—	—
2 50	1.0 @≠	0.3	0.3	0.3	0.3	0.2	—	1.0	3.0	1.0	—
2 ½ 65	1.3 @≠	0.3	0.3	0.3	0.3	0.2	—	1.2	3.8	1.3	—
76.1 mm	1.3 @≠	0.3	0.3	0.3	0.3	0.2	—	1.2	3.8	1.3	—
3 80	1.4 @≠	0.4	0.4	0.4	0.4	0.2	—	1.4	4.5	1.5	—
3 ½ 90	1.4 @≠	0.4	0.4	0.4	0.4	0.2	—	1.7	5.5	2.0	—
4 100	1.5 @≠	0.5	0.4	0.5	0.5	0.2	0.2	1.9	7.0	2.5	—
108.1 mm	1.5 @≠	0.5	0.4	0.5	0.5	0.2	0.2	1.9	7.0	2.5	—
4 ½	1.5 @≠	0.8	0.6	0.6	0.6	0.2	0.2	2.3	8.0	2.8	—
5 125	1.6 @≠	1.0	0.8	0.8	0.8	0.2	0.3	2.5	9.0	3.5	—
133.0 mm	1.6 @≠	1.0	0.8	0.8	0.8	0.2	0.3	2.5	9.0	3.5	—
139.7 mm	1.6 @≠	1.0	0.8	0.8	0.8	0.2	0.3	2.5	9.0	3.5	—
6 150	1.8 @≠	1.5	1.2	0.8	1.0	0.3	0.5	3.0	10.0	4.5	—
159.0 mm	1.8 @≠	1.5	1.2	0.8	1.0	0.3	0.5	3.0	10.0	4.5	—
165.1 mm	1.8 @≠	1.5	1.2	0.8	1.0	0.3	0.5	3.0	10.0	4.5	—
8 200	—	1.7	1.5	0.9	1.7	0.4	0.8	4.0	15.0	5.0	5.0
10 250	—	2.0	1.8	1.5	2.5	0.6	1.1	—	—	—	8.0
12 300	—	2.5	2.3	1.8	3.5	0.7	1.4	—	—	—	10.0
14 350	—	—	—	—	7.4+	3.6+	3.6+	—	—	—	12.0
16 400	—	—	—	—	8.0+	4.0+	4.0+	—	—	—	16.0
18 450	—	—	—	—	—	—	4.6+	—	—	—	20.0
20 500	—	—	—	—	—	—	5.0+	—	—	—	23.0
24 600	—	—	—	—	—	—	6.0+	—	—	—	30.0
30† 750	—	—	—	—	—	—	3.8	—	—	—	—
36† 900	—	—	—	—	—	—	—	—	—	—	—

VE226B

@ VE226S

≠ VE226M

* For roll groovers the times apply to the thickest pipe wall for which the tool is rated. See tool capacities. For cut groovers, the times apply to standard wall steel pipe. For other materials and thicknesses contact Victaulic for details.

\+ Times for roll grooving Advanced Groove System (AGS) pipe.

† For 26"/650 mm, 28"/700 mm, 32"/800 mm and 42"/1050 mm grooving times contact Victaulic.

Standard Pipe Wall Thickness

STANDARD PIPE WALL THICKNESS (ANSI B 36.10 AND B 36.19 FOR STAINLESS STEEL PIPE)

Size		Pipe Wall Thickness								
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Schedule 5S Inches mm	Schedule 5 Inches mm	Schedule 10S Inches mm	Schedule 10 Inches mm	Schedule 20 Inches mm	Schedule 30 Inches mm	Schedule 40 Inches mm	Schedule Std. Inches mm	Schedule 80 Inches mm
¾ 20	1.050 26.9	0.065 1.65	0.065 1.65	0.083 2.11	—	—	—	0.113 2.87	0.113 2.87	0.154 3.91
1 25	1.315 33.7	0.065 1.65	0.065 1.65	0.109 2.77	—	—	—	0.133 3.38	0.133 3.38	0.179 4.55
1 ¼ 32	1.660 42.4	0.065 1.65	0.065 1.65	0.109 2.77	—	—	—	0.140 3.56	0.140 3.56	0.191 4.85
1 ½ 40	1.900 48.3	0.065 1.65	0.065 1.65	0.109 2.77	—	—	—	0.145 3.68	0.145 3.68	0.200 5.08
2 50	2.375 60.3	0.065 1.65	0.065 1.65	0.109 2.77	—	—	—	0.154 3.91	0.154 3.91	0.218 5.54
2 ½ 65	2.875 73.0	0.083 2.11	0.083 2.11	0.120 3.05	—	—	—	0.203 5.16	0.203 5.16	0.276 7.01
76.1 mm	3.000 76.1	0.083 2.11	0.083 2.11	0.120 3.05	—	—	—	0.216 5.49	0.216 5.49	0.300 7.62
3 80	3.500 88.9	0.083 2.11	0.083 2.11	0.120 3.05	—	—	—	0.216 5.49	0.216 5.49	0.300 7.62
3 ½ 90	4.000 101.6	0.083 2.11	0.083 2.11	0.120 3.05	—	—	—	0.226 5.74	0.226 5.74	0.318 8.08
4 100	4.500 114.3	0.083 2.11	0.083 2.11	0.120 3.05	—	—	—	0.237 6.02	0.237 6.02	0.337 8.56
108.1 mm	4.250 108.1	0.083 2.11	0.083 2.11	0.120 3.05	—	—	—	0.237 6.02	0.237 6.02	0.337 8.56
4 ½	5.000 127.0	0.083 2.11	0.083 2.11	0.120 3.05	—	—	—	0.237 6.02	0.237 6.02	0.337 8.56
5 125	5.563 141.3	0.109 2.77	0.109 2.77	0.134 3.40	—	—	—	0.258 6.55	0.258 6.55	0.375 9.53
133.0 mm	5.250 133.0	0.083 2.11	0.083 2.11	0.120 3.05	—	—	—	0.237 6.02	0.237 6.02	0.337 8.56
139.7 mm	5.500 139.7	0.109 2.77	0.109 2.77	0.134 3.40	—	—	—	0.258 6.55	0.258 6.55	0.375 9.53
6 150	6.625 168.3	0.109 2.77	0.109 2.77	0.134 3.40	—	—	—	0.280 7.11	0.280 7.11	0.432 10.97
159.0 mm	6.250 159.0	0.109 2.77	0.109 2.77	0.134 3.40	—	—	—	0.280 7.11	0.280 7.11	0.432 10.97
165.1 mm	6.500 165.1	0.109 2.77	0.109 2.77	0.134 3.40	—	—	—	0.280 7.11	0.280 7.11	0.432 10.97
8 200	8.625 219.1	0.109 2.77	0.109 2.77	0.148 3.76	—	0.250 6.35	0.277 7.04	0.322 8.18	0.322 8.18	0.500 12.70
10 250	10.750 273.0	0.134 3.40	0.134 3.40	0.165 4.19	—	0.250 6.35	0.307 7.80	0.365 9.27	0.365 9.27	0.594 15.09
12 300	12.750 323.8	0.156 3.96	0.156 3.96	0.180 4.57	—	0.250 6.35	0.330 8.38	0.406 10.31	0.375 9.53	0.688 17.48
14 350	14.000 355.6	0.156 3.96	—	0.188 4.78	0.250 6.35	0.312 7.92	0.375 9.53	0.438 11.13	0.375 9.53	0.750 19.05
16 400	16.000 406.4	0.165 4.19	—	0.188 4.78	0.250 6.35	0.312 7.92	0.375 9.53	0.500 12.70	0.375 9.53	0.844 21.44
18 450	18.000 457.0	0.165 4.19	—	0.188 4.78	0.250 6.35	0.312 7.92	0.438 11.13	0.562 14.27	0.375 9.53	0.938 23.83
20 500	20.000 508.0	0.188 4.78	—	0.218 5.54	0.250 6.35	0.375 9.53	0.500 12.70	0.594 15.09	0.375 9.53	1.031 26.19
24 600	24.000 610.0	0.218 5.54	—	0.250 6.35	0.250 6.35	0.375 9.53	0.562 14.27	0.688 17.48	0.375 9.53	1.219 30.96
26 650	26.000 660.4	—	—	—	0.312 7.92	0.500 12.70	—	—	0.375 9.53	—
28 700	28.000 711.0	—	—	—	0.312 7.92	0.500 12.70	0.625 15.88	—	0.375 9.53	—
30 750	30.000 262.0	0.250 6.35	—	0.312 7.92	0.312 7.92	0.500 12.70	0.625 15.88	—	0.375 9.53	—
32 800	32.000 813.0	—	—	—	0.312 7.92	0.500 12.70	0.625 15.88	0.688 17.48	0.375 9.53	—
36 900	36.000 914.0	—	—	—	0.312 7.92	0.500 12.70	0.625 15.88	0.750 19.05	0.375 9.53	—
42 1050	42.000 1067.0	—	—	—	—	—	—	—	0.375 9.53	—

Pipe Preparation

Groove Dimensions

ROLL GROOVE SPECIFICATIONS NOTES

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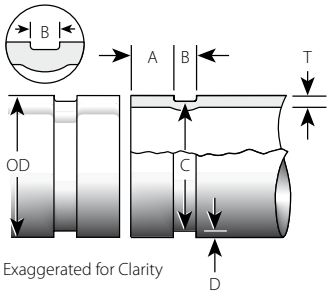

Exaggerated for Clarity

STANDARD ROLL GROOVE SPECIFICATIONS – STEEL AND OTHER IPS PIPE@†

1	2			3	4	5		6	7	8
	Dimensions – Inches/mm									
Nominal Size Inches mm	Pipe Outside Diameter			A Gasket Seat ± 0.03 ± 0.76	B Grv. Width ± 0.03 ± 0.76	Groove Diameter C		D Groove Depth ref.	T Minimum Allow. Wall Thk.	Maximum Allow. Flare Diameter
	Basic	Tolerance +	Tolerance –			Basic	Tol. +0.000 +0.00			
¾ 20	1.050 26.9	+0.010 +0.25	-0.010 -0.25	0.625 15.88	0.281 7.14	0.938 23.83	-0.015 -0.38	0.056 1.42	0.065 1.65	1.15 29.2
1 25	1.315 33.7	+0.013 +0.33	-0.013 -0.33	0.625 15.88	0.281 7.14	1.190 30.23	-0.015 -0.38	0.063 1.60	0.065 1.65	1.43 36.3
1 ¼ 32	1.660 42.4	+0.016 +0.41	-0.016 -0.41	0.625 15.88	0.281 7.14	1.535 38.99	-0.015 -0.38	0.063 1.60	0.065 1.65	1.77 45.0
1 ½ 40	1.900 48.3	+0.019 +0.48	-0.019 -0.48	0.625 15.88	0.281 7.14	1.775 45.09	-0.015 -0.38	0.063 1.60	0.065 1.65	2.01 51.1
2 50	2.375 60.3	+0.024 +0.61	-0.024 -0.61	0.625 15.88	0.344 8.74	2.250 57.15	-0.015 -0.38	0.063 1.60	0.065 1.65	2.48 63.0
2 ½ 65	2.875 73.0	+0.029 +0.74	-0.029 -0.74	0.625 15.88	0.344 8.74	2.720 69.09	-0.018 -0.46	0.078 1.98	0.083 2.11	2.98 75.7
76.1 mm	3.000 76.1	+0.030 +0.76	-0.030 -0.76	0.625 15.88	0.344 8.74	2.845 72.26	-0.018 -0.46	0.078 1.98	0.083 2.11	3.10 78.7
3 80	3.500 88.9	+0.035 +0.89	-0.031 -0.79	0.625 15.88	0.344 8.74	3.344 84.94	-0.018 -0.46	0.078 1.98	0.083 2.11	3.60 91.4
3 ½ 90	4.000 101.6	+0.040 +1.02	-0.031 -0.79	0.625 15.88	0.344 8.74	3.834 97.38	-0.020 -0.51	0.083 2.11	0.083 2.11	4.10 104.1
4 100	4.500 114.3	+0.045 +1.14	-0.031 -0.79	0.625 15.88	0.344 8.74	4.334 110.08	-0.020 -0.51	0.083 2.11	0.083 2.11	4.60 116.8
108.0 mm	4.250 108.0	+0.043 +1.09	-0.031 -0.79	0.625 15.88	0.344 8.74	4.084 103.73	-0.020 -0.51	0.083 2.11	0.083 2.11	4.35 110.5
4 ½ 120	5.000 127.0	+0.050 +1.27	-0.031 -0.79	0.625 15.88	0.344 8.74	4.834 122.78	-0.020 -0.51	0.083 2.11	0.095 2.41	5.10 129.5
5 125	5.563 141.3	+0.056 +1.42	-0.031 -0.79	0.625 15.88	0.344 8.74	5.395 137.03	-0.022 -0.56	0.084 2.13	0.109 2.77	5.66 143.8
133.0 mm	5.250 133.0	+0.053 +1.35	-0.031 -0.79	0.625 15.88	0.344 8.74	5.084 129.13	-0.020 -0.51	0.083 2.11	0.109 2.77	5.35 135.9
139.7 mm	5.500 139.7	+0.056 +1.42	-0.031 -0.79	0.625 15.88	0.344 8.74	5.334 135.48	-0.020 -0.51	0.083 2.11	0.109 2.77	5.60 142.2
6 150	6.625 168.3	+0.063 +1.60	-0.031 -0.79	0.625 15.88	0.344 8.74	6.455 163.96	-0.022 0.56	0.085 2.16	0.109 2.77	6.73 170.9
152.4 mm	6.000 152.4	+0.056 +1.42	-0.031 -0.79	0.625 15.88	0.344 8.74	5.830 148.08	-0.022 -0.56	0.109 2.80	0.109 2.77	6.10 154.9
159.0 mm	6.250 159.0	+0.063 +1.60	-0.031 -0.79	0.625 15.88	0.344 8.74	6.032 153.21	-0.030 -0.46	0.109 2.80	0.109 2.77	6.35 161.3
165.1 mm	6.500 165.1	+0.063 +1.60	-0.031 -0.79	0.625 15.88	0.344 8.74	6.330 160.78	-0.022 -0.56	0.085 2.16	0.109 2.77	6.60 167.6
8 200	8.625 219.1	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.469 11.91	8.441 214.40	-0.025 -0.64	0.092 2.34	0.109 2.77	8.80 223.5
203.2 mm	8.000 203.2	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.469 11.91	7.816 198.53	-0.025 -0.64	0.092 2.34	0.109 2.77	8.17 207.5
10 250	10.750 273.0	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.469 11.91	10.562 268.28	-0.027 -0.69	0.094 2.39	0.134 3.40	10.92 277.4
254.0 mm	10.000 254.0	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.469 11.91	9.812 249.23	-0.027 -0.69	0.094 2.39	0.134 3.40	10.17 258.3
12 300	12.750 323.9	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.469 11.91	12.531 318.29	-0.030 -0.76	0.109 2.77	0.156 3.96	12.92 328.2
304.8 mm	12.000 304.8	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.469 11.91	11.781 299.24	-0.030 -0.76	0.109 2.77	0.156 3.96	12.17 309.1
14 – 24 350 – 600	AGS® See AGS Grooving Chart, pg. 17-19									

@ Always refer to the I-100 handbook for current grooving specifications.

† On roll grooved pipe, Allowable Pipe End Separation and Deflection from center line will be ½ values listed for cut grooved pipe.

For non-AGS grooves in this size refer to the I-100 pocket handbook for current grooving specifications.

IMPORTANT NOTES:

For roll grooving pipe from 24 – 48"/600 – 1200 mm contact Victaulic.

Coatings applied to the interior surfaces, including bolt pad mating surfaces, of our grooved and bolted plain end couplings should not exceed 0.010"/0.25 mm. Also, the coating thickness applied to the gasket seating surface and within the groove on the pipe exterior should not exceed 0.010"/0.25 mm.

GROOVE DIMENSION NOTES: SEE PG. 17-18

Pipe Preparation

Groove Dimensions

ROLL GROOVE SPECIFICATIONS NOTES

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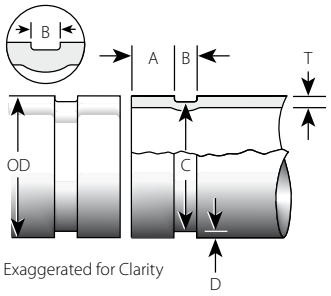

Exaggerated for Clarity

LARGE DIAMETER ROLL GROOVE SPECIFICATIONS@

1	2			3	4		5		6	7		8
	Dimensions – Inches/mm											
Nominal Size Inches mm	Pipe Outside Diameter			A Gasket Seat + 0.03 - 0.06 + 0.8 - 1.5	B Grv. Width ± 0.03 ± 0.76		C Groove Diameter		Groove Depth D ref.	T Min. Allow. Wall Thickness		Max. Allow. Flare Dia.
	Basic	Tolerance +	Tolerance –		Roll Groove	Cut Groove	Basic	Tol. +0.000 +0.00		Roll Groove	Cut Groove	
26 O.D. 650	26.00 660.4	+0.093 +2.36	-0.031 -0.79	1.75 45.45	0.625 15.88	0.625 15.88	25.50 647.7	-0.063 -1.60	0.250 6.35	0.250 6.35	0.625 15.88	26.20 665.5
28 O.D. 700	28.00 711.0	+0.093 +2.36	-0.031 -0.79	1.75 45.45	0.625 15.88	0.625 15.88	27.50 698.50	-0.063 -1.60	0.250 6.35	0.250 6.35	0.625 15.88	28.20 716.3
30 O.D. 750	30.00 762.0	+0.093 +2.36	-0.031 -0.79	1.75 45.45	0.625 15.88	0.625 15.88	29.50 749.30	-0.063 -1.60	0.250 6.35	0.250 6.35	0.625 15.88	30.20 767.1
32 O.D. 800	32.00 813.0	+0.093 +2.36	-0.031 -0.79	1.75 45.45	0.625 15.88	0.625 15.88	31.50 800.10	-0.063 -1.60	0.250 6.35	0.250 6.35	0.625 15.88	32.20 817.9
36 O.D. 900	36.00 914.0	+0.093 +2.36	-0.031 -0.79	1.75 45.45	0.625 15.88	0.625 15.88	35.50 901.70	-0.063 -1.60	0.250 6.35	0.250 6.35	0.625 15.88	36.20 919.5
42 O.D. 1050	42.00 1067.0	+0.093 +2.36	-0.031 -0.79	2.00 50.80	0.625 15.88	0.625 15.88	41.50 1054.10	-0.063 -1.60	0.250 6.35	0.250 6.35	0.625 15.88	42.20 1071.8

@ Always refer to the I-100 handbook for current grooving specifications.

IMPORTANT NOTES:

For roll grooving pipe from 24 – 48"/600 – 1200 mm contact Victaulic.

Coatings applied to the interior surfaces, including bolt pad mating surfaces, of our grooved and bolted plain end couplings should not exceed 0.010"/0.25 mm. Also, the coating thickness applied to the gasket seating surface and within the groove on the pipe exterior should not exceed 0.010"/0.25 mm.

GROOVE DIMENSION NOTES:

Column 1: Nominal IPS Pipe Size

Column 2: IPS Pipe Outside Diameter

The average pipe outside diameter must not vary from the specifications listed in the tables on the following pages. Maximum allowable pipe ovality should not vary by more than 1%. Greater variations between the major and minor diameters will result in difficult coupling assembly. For IPS pipe, the maximum allowable tolerance from square-cut pipe ends is 0.030"/0.8 mm for ¾ – 3 ½"/20 – 90 mm sizes; 0.045"/1.1 mm for 4 – 6"/100 – 150 mm sizes; and 0.060"/1.5 mm for 8"/200 mm and larger sizes. This is measured from the true square line. Any internal and external weld beads or seams must be ground flush to the pipe surface. The inside diameter of the pipe end must be cleaned to remove coarse scale, dirt, and other foreign material that might interfere with or damage grooving rolls.

Column 3: Gasket Seat "A" Dimension

The "A" dimension, or the distance from the pipe end to the groove, identifies the gasket seating area. This area must be free from indentations, projections (including weld seams), and roll marks from the pipe end to the groove to ensure a leak-tight seal for the gasket. All oil, grease, and dirt must be removed.

Column 4: Groove Width "B" Dimension

The "B" dimension, or groove width, controls expansion, contraction, and angular deflection of flexible couplings by the distance it is located from the pipe and its width in relation to the coupling housings' "key" width.

Column 5: Groove Outside Diameter "C" Dimension

The "C" dimension is the proper diameter at the base of the groove. This dimension must be within the diameter's tolerance and concentric with the OD for proper coupling fit. The groove must be of uniform depth for the entire pipe circumference.

Column 6: Groove Depth "D" Dimension

The "D" dimension is the normal depth of the groove and is a reference for a "trial groove" only. Variations in pipe OD affect this dimension and must be altered, if necessary, to keep the "C" dimension within tolerance. This groove must conform to the "C" dimension described above.

Column 7: Minimum Allowable Wall Thickness "T" Dimension

The "T" dimension is the lightest grade (minimum, nominal wall thickness) of pipe that is suitable for cut or roll grooving. Pipe that is less than the minimum, nominal wall thickness for cut grooving may be roll grooved or adapted for Victaulic couplings by using Vic-Ring adapters. Vic-Ring adapters can be used in the following situations (contact Victaulic for details):

- When the pipe is less than the minimum, nominal wall thickness suitable for roll grooving
- When the pipe outside diameter is too large to roll or cut groove
- When the pipe is used in abrasive services

Column 8: Maximum Allowable Pipe-End Flare Diameter "F" Dimension (Standard Roll Groove Only)

Maximum allowable pipe-end flare diameter is measured at the extreme pipe-end diameter.

Pipe Preparation

Groove Dimensions

ADVANCED GROOVE SYSTEM (AGS) ROLL GROOVE SPECIFICATIONS NOTES

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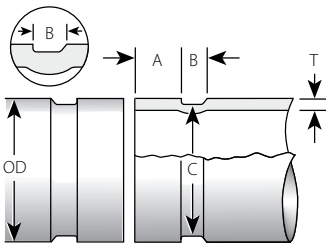


Exaggerated for Clarity

⚠ WARNING

- **Victaulic AGS products MUST NOT be used on pipe that is prepared to standard groove dimensions.**
- **When grooving pipe for use with AGS products, Victaulic roll grooving tools must be equipped with special Victaulic AGS roll sets made specifically for use with standard-weight pipe.**
- **It is critical to measure the Groove Diameter "C" dimension, along with the Gasket Seat "A" dimension and the Flare Diameter "F" dimension. These measurements must be within the specifications listed in this table above for proper joint performance.**

Failure to follow these instructions could cause joint failure, resulting in serious personal injury and/or property damage.

STANDARD ADVANCED GROOVE SYSTEM (AGS) ROLL GROOVE SPECIFICATIONS – CARBON STEEL

1	2		3	4	5	6		7
	Dimensions – Inches/mm							
Nominal Size Inches mm	Pipe Outside Diameter		T Minimum Allow. Wall Thk.	A Gasket Seat + 0.031/-0.063 + 0.79/-1.60	B Grv. Width ref.	C Groove Diameter		Maximum Allow. Flare Diameter
	Maximum	Minimum				Maximum	Minimum	
14 355.6	14.094 358.0	13.969 354.8	0.375 9.5	1.500 38.1	0.455 11.56	13.500 342.9	13.455 341.8	14.23 361.4
16 406.4	16.094 408.8	15.969 405.6	0.375 9.5	1.500 38.1	0.455 11.56	15.500 393.7	15.455 392.6	16.23 412.2
18 457.0	18.094 459.6	17.969 456.4	0.375 9.5	1.500 38.1	0.455 11.56	17.500 444.5	17.455 443.4	18.23 463.0
20 508.0	20.094 510.4	19.969 507.2	0.375 9.5	1.500 38.1	0.455 11.56	19.500 495.3	19.455 494.2	20.23 513.8
24 610.0	24.094 612.0	23.969 608.8	0.375 9.5	1.500 38.1	0.455 11.56	23.500 596.9	23.455 595.8	24.23 615.4

IMPORTANT NOTES:

Roll grooving removes no metal, cold forming a groove by the action of an upper male roll being forced into pipe as it is rotated by a lower female drive roll.

Roll grooving pipe to AGS specifications enlarges the pipe length by approximately ⅛"/3.2 mm for each groove. For a pipe length with an AGS roll groove at each end, the pipe length will grow approximately ¼"/6.4 mm total. Therefore, the cut length should be adjusted to accommodate this growth.
EXAMPLE: If you need a 24"/610 mm length of pipe that will contain an AGS roll groove at each end, cut the pipe to a length of 23¾"/603 mm to allow for this growth.

Coatings applied to the interior surfaces, including bolt pad mating surfaces, of our grooved end couplings should not exceed 0.010"/0.25 mm. Also, the coating thickness applied to the gasket seating surface and within the groove on the pipe exterior should not exceed 0.010"/0.25 mm.

GROOVE DIMENSION NOTES:

Column 1: Nominal IPS Pipe Size (ANSI B36.10); Basic Metric pipe size (ISO 4200)

Column 2: Outside Diameter

The outside diameter of roll grooved pipe shall not vary more than the limits listed (API 5L end tolerance). The maximum allowable tolerance from square cut ends is 0.063"/1.5 mm measured from a true square line.

Column 3: Minimum Nominal Wall Thickness

This is the minimum nominal wall thickness which may be roll grooved.

Column 4: Gasket Seat

The pipe surface shall be free from indentations, roll marks, and projections from the end of the pipe to the groove, to provide a leak-tight seat for the gasket. All loose paint, scale, dirt, chips, grease, and rust must be removed. Beveled carbon steel pipe may be used provided the wall thickness is standard wall (.375"/9.5 mm) and the bevel meets ASTM A53 and/or API 5L (30° +5°/–0°). Gasket seat "A" is measured from the end of the pipe.

Column 5: Groove Width

Bottom of groove must be free of loose dirt, chips, rust and scale that may interfere with proper coupling assembly. Corners at bottom of groove must be radiused R .09 (R 2.3). Only Victaulic roll grooving tools may be used to groove pipe. Groove width and corner radii will be attained with properly maintained Victaulic tools.

Column 6: Groove Diameter

The groove must be of uniform depth for the entire pipe circumference. Groove must be maintained within the "C" diameter limits listed. Standard weight carbon steel pipe shall be prepared with Victaulic "RW" rolls.

Column 7: Maximum Allowable Pipe End Flare Diameter

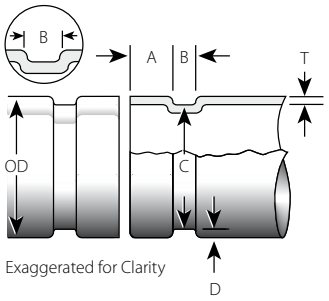
Dimension measured at the most extreme pipe end diameter, square cut or beveled.

Pipe Preparation

Groove Dimensions

COPPER TUBING ROLL GROOVE SPECIFICATIONS NOTES

For Complete Information
Request Publication **25.06**



COPPER TUBING ROLL GROOVE SPECIFICATIONS@

1	2		3	4	5	6	7	8
	Actual Outer Diameter		Dimensions – Inches/mm					
Nominal Size Inches mm	Basic Inches mm	Tolerance Inches mm	A Gasket Seat ± 0.03 ± 0,76	B Grv. Width +0.03/-0.00 -0,76/-0,00	C Grv. Diameter +0/-0.020 +0/-0,5	D Groove Depth ref.	T Minimum Allow. Wall Thick.	Maximum Allow. Flare Diameter
2 50	2.125 54.0	±0.002 ±0.05	0.610 15.5	0.300 7.6	2.029 51.5	0.048 1.2	DWV	2.220 56.4
2½ 65	2.625 66.7	±0.002 ±0.05	0.610 15.5	0.300 7.6	2.525 64.1	0.050 1.2	0.065 (1.7)	2.720 69.1
3 80	3.125 79.4	±0.002 ±0.05	0.610 15.5	0.300 7.6	3.025 76.8	0.050 1.2	DWV	3.220 81.8
4 100	4.125 104.8	±0.002 ±0.05	0.610 15.5	0.300 7.6	4.019 102.1	0.053 1.4	DWV	4.220 107.2
5 125	5.125 130.2	±0.002 ±0.05	0.610 15.5	0.300 7.6	4.999 127.0	0.053 1.4	DWV	5.220 132.6
6 150	6.125 155.6	±0.002 ±0.05	0.610 15.5	0.300 7.6	5.999 152.3	0.063 1.6	DWV	6.220 158.0
8 200	8.125 206.4	±0.002/-0.004 ±0.05/-0.10	0.610 15.5	0.300 7.6	7.959 202.2	0.083 2.1	DWV	8.220 208.8

@ Always refer to the I-600 handbook for current grooving specifications.

GROOVE DIMENSION NOTES:

Column 1: Nominal ASTM B-88 drawn copper tubing size as indicated in the chart heading

Column 2: Outside Diameter

The outside diameter of roll grooved tubing shall not vary more than the tolerance listed. The maximum allowable tolerance from square cut ends is 0.030"/0.8 mm for 2 – 3"/50 – 80 mm; 0.045"/1.1 mm for 4 – 6"/100 – 150 mm, measured from true square line.

Column 3: Gasket Seat

The tubing surface shall be free from indentations, roll marks, and projections from the end of the tubing to the groove, to provide a leak-tight seat for the gasket. All loose scales, dirt, chips and grease must be removed.

Column 4: Groove Width

Bottom of groove to be free of loose dirt, chips and scale that may interfere with proper coupling assembly.

Column 5: Groove Outside Diameter

The groove must be uniform depth for the entire tubing circumference. Groove must be maintained within the "C" diameter tolerance listed.

Column 6: Groove Depth

For reference only. Groove must conform to the groove diameter "C" listed.

Column 7: Minimum Allowable Wall Thickness "T" Dimension

ASTM B-306 drain waste and vent (DWV) is minimum wall thickness copper tubing which may be roll grooved.

Column 8: Maximum Allowable End Flare Diameter

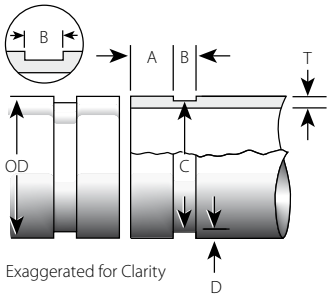
Measured at the most extreme tubing end diameter.

Pipe Preparation

Groove Dimensions

STANDARD CUT GROOVE SPECIFICATIONS NOTES

For Complete Information Request Publication **25.01**



Exaggerated for Clarity

GROOVE DIMENSION NOTES:

Column 1: Nominal IPS Pipe Dize

Column 2: IPS Outside Diameter

The outside diameter of cut grooved pipe shall not vary more than the tolerance listed. For IPS pipe the maximum allowable tolerance from square cut ends to 0.030"/0.76 mm for ¾ – 3½"/20 – 90 mm; 0.045"/1.14 mm for 4 – 6"/100 – 150 mm; and 0.060"/1.5 mm for sizes 8"/200 mm O.D. and above measured from true square line.

Column 3: Gasket Seat

The pipe surface shall be free from indentations, roll marks, and projections from the end of the pipe to the groove, to provide a leak-tight seal for the gasket. All loose paint, scale, dirt, chips, grease and rust must be removed. It continues to be Victaulic's first recommendation that pipe be square cut. When using beveled pipe contact Victaulic for details. Square cut pipe must be used with FlushSeal and EndSeal gaskets. Gasket seat "A" is measured from the end of the pipe.

Column 4: Groove Width

The bottom of groove to be free of loose dirt, chips, rust and scale that may interfere with proper coupling assembly. Maximum permissible radius at bottom of groove is .015"/.38 mm.

Column 5: Groove Outside Diameter

The groove must be of uniform depth for the entire pipe circumference. Groove must be maintained within the "C" diameter tolerance listed.

Column 6: Groove Depth

For reference only. Groove must conform to the groove diameter "C" listed.

Column 7: Minimum Allowable Wall Thickness

This is the minimum wall thickness which may be cut grooved.

STANDARD CUT GROOVE SPECIFICATIONS – STEEL AND OTHER IPS PIPE@

1	2			3	4	5		6	7
	Dimensions – Inches/mm								
Nominal Size Inches mm	Pipe Outside Diameter			A Gasket Seat ± 0.03 ± 0.76	B Grv. Width ± 0.03 ± 0.76	C Groove Diameter		D Groove Depth ref.	T Minimum Allow. Wall Thick.
	Basic	Tolerance +	Tolerance –			Basic	Tol. +0.000 +0.00		
¾ 20	1.050 26.9	+0.010 +0.25	-0.010 -0.25	0.625 15.88	0.313 7.95	0.938 23.83	-0.015 -0.38	0.056 1.42	0.113 2.87
1 25	1.315 33.7	+0.013 +0.33	-0.013 -0.33	0.625 15.88	0.313 7.95	1.190 30.23	-0.015 -0.38	0.063 1.60	0.133 3.38
1 ¼ 32	1.660 42.4	+0.016 +0.41	-0.016 -0.41	0.625 15.88	0.313 7.95	1.535 38.99	-0.015 -0.38	0.063 1.60	0.140 3.56
1 ½ 40	1.900 48.3	+0.019 +0.48	-0.019 -0.48	0.625 15.88	0.313 7.95	1.775 45.09	-0.015 -0.38	0.063 1.60	0.145 3.68
2 50	2.375 60.3	+0.024 +0.61	-0.024 -0.61	0.625 15.88	0.313 7.95	2.250 57.15	-0.015 -0.38	0.063 1.60	0.154 3.91
2 ½ 65	2.875 73.0	+0.029 +0.74	-0.029 -0.74	0.625 15.88	0.313 7.95	2.720 69.09	-0.018 -0.46	0.078 1.98	0.188 4.76
76.1 mm	3.000 76.1	+0.030 +0.76	-0.030 -0.76	0.625 15.88	0.313 7.95	2.845 72.26	-0.018 -0.46	0.078 1.98	0.188 4.78
3 80	3.500 88.9	+0.035 +0.89	-0.031 -0.79	0.625 15.88	0.313 7.95	3.344 84.94	-0.018 -0.46	0.078 1.98	0.188 4.78
3 ½ 90	4.000 101.6	+0.040 +1.02	-0.031 -0.79	0.625 15.88	0.313 7.95	3.834 97.38	-0.020 -0.51	0.083 2.11	0.188 4.78
4 100	4.500 114.3	+0.045 +1.14	-0.031 -0.79	0.625 15.88	0.375 9.53	4.334 110.08	-0.020 -0.51	0.083 2.11	0.203 5.16
4 ½ 120	5.000 127.0	+0.050 +1.27	-0.031 -0.79	0.625 15.88	0.375 9.53	4.834 122.78	-0.020 -0.51	0.083 2.11	0.203 5.16
5 125	5.563 141.3	+0.056 +1.42	-0.031 -0.79	0.625 15.88	0.375 9.53	5.395 137.03	-0.020 -0.51	0.084 2.13	0.203 5.16
139.7 mm	5.500 139.7	+0.056 +1.42	-0.031 -0.79	0.625 15.88	0.375 9.53	5.334 135.48	-0.020 -0.51	0.083 2.11	0.203 5.16
6 150	6.625 168.3	+0.063 +1.60	-0.031 -0.79	0.625 15.88	0.375 9.53	6.455 163.96	-0.022 0.56	0.085 2.16	0.219 5.56
152.4 mm	6.000 152.4	+0.056 +1.42	-0.031 -0.79	0.625 15.88	0.375 9.53	5.830 148.08	-0.022 -0.56	0.085 2.16	0.219 5.56
165.1 mm	6.500 165.1	+0.063 +1.60	-0.031 -0.79	0.625 15.88	0.375 9.53	6.330 160.78	-0.022 -0.56	0.085 2.16	0.219 5.56
8 200	8.625 219.1	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.438 11.13	8.441 214.40	-0.025 -0.64	0.092 2.34	0.238 6.05
203.2 mm	8.000 203.2	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.438 11.13	7.816 198.53	-0.022 -0.56	0.092 2.34	0.238 6.05
10 250	10.750 273.0	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.500 12.70	10.562 268.28	-0.027 -0.69	0.094 2.39	0.250 6.35
254.0 mm	10.000 254.0	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.500 12.70	9.812 249.23	-0.025 -0.64	0.094 2.39	0.250 6.35
12 300	12.750 323.9	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.500 12.70	12.531 318.29	-0.030 -0.76	0.109 2.77	0.279 7.09
304.8 mm	12.000 304.8	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.500 12.70	11.781 299.24	-0.027 -0.69	0.109 2.77	0.279 7.09
14 350	14.000 355.6	+0.063 +1.60	-0.031 -0.79	0.938 23.83	0.500 12.70	13.781 350.04	-0.030 -0.76	0.109 2.77	0.281 7.14
15 375	15.000 381.0	+0.063 +1.60	-0.031 -0.79	0.938 23.83	0.500 12.70	14.781 375.44	-0.030 -0.76	0.109 2.77	0.312 7.92
16 400	16.000 406.4	+0.063 +1.60	-0.031 -0.79	0.938 23.83	0.500 12.70	15.781 400.84	-0.030 -0.76	0.109 2.77	0.312 7.92
18 450	18.000 457.2	+0.063 +1.60	-0.031 -0.79	1.000 25.40	0.500 12.70	17.781 451.64	-0.030 -0.76	0.109 2.77	0.312 7.92
20 500	20.000 508.0	+0.063 +1.60	-0.031 -0.79	1.000 25.40	0.500 12.70	19.781 502.44	-0.030 -0.76	0.109 2.77	0.312 7.92
22 550	22.000 559.0	+0.063 +1.60	-0.031 -0.79	1.000 25.40	0.563* 14.30	21.656 550.06	-0.030 -0.76	0.109 2.77	0.312 7.92
24 600	24.000 610.0	+0.063 +1.60	-0.031 -0.79	1.000 25.40	0.563* 14.30	23.656 600.86	-0.030 -0.76	0.172 4.37	0.375 9.53

* 9/16"(0.562")/14 mm width groove is required in sizes 22 – 24"/550 – 600 mm in order to obtain the maximum allowable pipe end movement listed in Performance Data Charts. ½"/12 mm width groove will give ½ the maximum allowable shown for 22 – 24"/550 – 600 mm. For double groove tool bit information, contact Victaulic.

@ Always refer to the I-100 handbook for current grooving specifications.

Groove Dimensions

"ES" ROLL/CUT GROOVE SPECIFICATIONS NOTES

For Complete Information Request Publication **25.02**

GROOVE DIMENSION NOTES:

Column 1: Nominal IPS Pipe Size

Nominal metric (ISO) pipe size.

Column 2: IPS Outside Diameter

Metric (ISO) outside diameter. The outside diameter of roll grooved pipe shall not vary more than the tolerance listed. For IPS pipe, the maximum allowable tolerance from square cut ends is 0.030" for ¾ – 3½"/20 – 90 mm; 0.045" for 4 – 6"/100 – 150 mm; and 0.060" for sizes 203.2 mm and above measured from true square line. For (ISO) metric pipe, the maximum allowable tolerance from square cut ends is 0.76 mm for sizes 20 – 80 mm; 1.14 mm for sizes 100 – 150 mm; and 1.52 mm for sizes 200 mm and above, measured from the true square line.

Column 3: Gasket Seat

The pipe surface shall be free from indentations, roll marks, and projections from the end of the pipe to the groove, to provide a leak-tight seal for the gasket. All loose paint, scale, dirt, chips, grease and rust must be removed. Square cut pipe must be used with FlushSeal and EndSeal gaskets. Gasket seat "A" is measured from the end of the pipe.

Column 4: Groove Width

bottom of groove to be free of loose dirt, chips, rust and scale that may interfere with proper coupling assembly. Corners at bottom of roll groove must be radiused. For IPS pipe, 0.04R on 1½ – 12"/40 – 300 mm. For (ISO) metric pipe, 1.2R mm on 20 – 300 mm.

Column 5: Groove Outside Diameter

The groove must be uniform depth for the entire pipe circumference. Groove must be maintained within the "C" diameter tolerance listed.

Column 6: Groove Depth

For reference only. Groove must conform to the groove diameter "C" listed.

Column 7: Minimum Allowable Wall Thickness

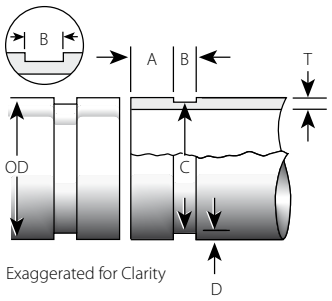
This is the minimum wall thickness which may be grooved.

Column 8: Maximum Allowable End Flare Diameter

Measured at the most extreme pipe end diameter square cut or beveled.

"ES" CUT GROOVE SPECIFICATIONS@

1		2		3		4		5		6	7
Size		Pipe Outside Diameter Inches mm		Dimensions – Inches/mm							
				Gasket Seat A		Grv. Width B		Groove Diameter C			
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Tolerance +	Tolerance –	Basic	Tol.	Basic	Tol. +0.010 +0.25	Basic	Tol. +0.000 +0.00	D Groove Depth ref.	T Minimum Allow. Wall Thick.
2 50	2.375 60.3	+0.024 +0.61	-0.024 -0.61	0.562 14.27	±0.010 ±0.25	0.255 6.48	-0.005 -0.13	2.250 57.15	-0.015 -0.38	0.063 1.60	0.154 3.91
2½ 65	2.875 73.0	+0.029 +0.74	-0.029 -0.74	0.562 14.27	±0.010 ±0.25	0.255 6.48	-0.005 -0.13	2.720 69.09	-0.018 -0.46	0.078 1.98	0.188 4.78
3 80	3.500 88.9	+0.035 +0.89	-0.031 -0.79	0.562 14.27	±0.010 ±0.25	0.255 6.48	-0.005 -0.13	3.344 84.94	-0.018 -0.46	0.078 1.98	0.188 4.78
4 100	4.500 114.3	+0.045 +1.14	-0.031 -0.79	0.605 15.37	±0.015 ±0.38	0.305 7.75	-0.005 -0.13	4.334 110.08	-0.020 -0.51	0.083 2.11	0.203 5.16
6 150	6.625 168.3	+0.063 +1.60	-0.031 -0.79	0.605 15.37	±0.015 ±0.38	0.305 7.75	-0.005 -0.13	6.455 163.96	-0.022 0.56	0.085 2.16	0.219 5.56
8 200	8.625 219.1	+0.063 +1.60	-0.031 -0.79	0.714 18.14	±0.015 ±0.38	0.400 10.16	-0.010 -0.25	8.441 214.40	-0.025 -0.64	0.092 2.34	0.238 6.05
10 250	10.750 273.0	+0.063 +1.60	-0.031 -0.79	0.714 18.14	±0.015 ±0.38	0.400 10.16	-0.010 -0.25	10.562 268.28	-0.027 -0.69	0.094 2.39	0.250 6.35
12 300	12.750 323.9	+0.063 +1.60	-0.031 -0.79	0.714 18.14	±0.015 ±0.38	0.400 10.16	-0.010 -0.25	12.531 318.29	-0.030 -0.76	0.109 2.77	0.279 7.09



Exaggerated for Clarity

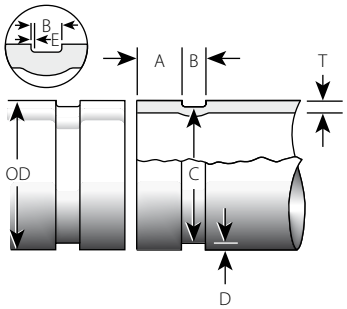
@ Always refer to the I-100 handbook for current grooving specifications.

IMPORTANT NOTES:

Coatings applied to the interior surfaces, including bolt pad mating surfaces, of our grooved and bolted plain end couplings should not exceed 0.010"/0.25 mm, Also, the coating thickness applied to the gasket seating surface and within the groove on the pipe exterior should not exceed 0.010"/0.25 mm.

"ES" ROLL GROOVE SPECIFICATIONS@

1		2		3		4		5		6	7	8
Size		Pipe Outside Diameter Inches mm		Dimensions – Inches/mm								
				Gasket Seat A		Grv. Width B		Groove Dia. C				
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Tolerance +	Tolerance –	Basic	Tol.	Basic	Tol. +0.000 +0.00	Basic	Tol. +0.000 +0.00	D Groove Depth ref.	T Minimum Allow. Wall Thick.	Maximum Allow. Flare Diameter
2 50	2.375 60.3	+0.024 +0.61	-0.024 -0.61	0.572 14.43	-0.020 ±0.51	0.250 6.35	+0.015 +0.38	2.250 57.15	-0.015 -0.38	0.063 1.60	0.065 1.65	2.48 63.0
2½ 65	2.875 73.0	+0.029 +0.74	-0.029 -0.74	0.572 14.53	-0.020 ±0.51	0.250 6.35	+0.015 +0.38	2.720 69.09	-0.018 -0.46	0.078 1.98	0.083 2.11	2.98 75.7
3 80	3.500 88.9	+0.035 +0.89	-0.031 -0.79	0.572 14.53	-0.020 ±0.51	0.250 6.35	+0.015 +0.38	3.344 84.94	-0.018 -0.46	0.083 2.11	0.083 2.11	3.60 91.4
4 100	4.500 114.3	+0.045 +1.14	-0.031 -0.79	0.610 15.49	-0.020 ±0.51	0.300 7.62	+0.020 +0.51	4.334 110.08	-0.020 -0.51	0.083 2.11	0.083 2.11	4.60 116.8
6 150	6.625 168.3	+0.063 +1.60	-0.031 -0.79	0.610 15.49	-0.020 ±0.51	0.300 7.62	+0.020 +0.51	6.455 163.96	-0.022 0.56	0.085 2.16	0.109 2.77	6.73 170.9
8 200	8.625 219.1	+0.063 +1.60	-0.031 -0.79	0.719 18.26	-0.020 ±0.51	0.390 9.91	+0.020 +0.51	8.441 214.40	-0.025 -0.64	0.092 2.34	0.109 2.77	8.80 223.5
10 250	10.750 273.0	+0.063 +1.60	-0.031 -0.79	0.719 18.26	-0.020 ±0.51	0.390 9.91	+0.020 +0.51	10.562 268.28	-0.027 -0.69	0.094 2.39	0.134 3.40	10.92 277.4
12 300	12.750 323.9	+0.063 +1.60	-0.031 -0.79	0.719 18.26	-0.020 ±0.51	0.390 9.91	+0.020 +0.51	12.531 318.29	-0.030 -0.76	0.109 2.77	0.156 3.96	12.92 328.2



@ Always refer to the I-100 handbook for current grooving specifications.

IMPORTANT NOTES:

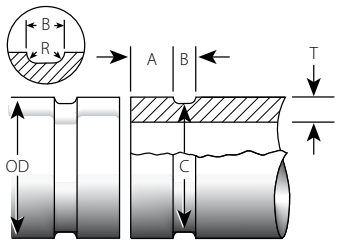
Coatings applied to the interior surfaces, including bolt pad mating surfaces, of our grooved and bolted plain end couplings should not exceed 0.010"/0.25 mm, Also, the coating thickness applied to the gasket seating surface and within the groove on the pipe exterior should not exceed 0.010"/0.25 mm.

Pipe Preparation

Groove Dimensions

FLEXIBLE RADIUS CUT GROOVE SPECIFICATION NOTES

For Complete Information Request Publication **25.05**



FLEXIBLE RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE@

1	2			3	4	5		6	7	
				Dimensions – Inches/mm						
Nominal Size Inches mm	Pipe Outside Diameter Inches mm			A Gasket Seat +0.000 -0.020	B Groove Width +0.031 -0.016	C Grv. Dia.		R Radius	T Min. Allow. Wall Thick.	
	Basic	Tolerance +	Tolerance –			Basic	Tol. +0.000		Cast Iron	Ductile Iron
3 80	3.96 100.6	+0.045 +1.14	-0.045 -1.14	0.750 19.05	0.375 9.53	3.723 94.56	-0.020 -0.51	0.120 3.05	0.32 8.1	0.31 7.9
4 100	4.80 121.9	+0.045 +1.14	-0.045 -1.14	0.750 19.05	0.375 9.53	4.563 115.90	-0.020 -0.51	0.120 3.05	0.35 8.9	0.32 8.1
6 150	6.90 175.3	+0.060 +1.52	-0.060 -1.52	0.750 19.05	0.375 9.53	6.656 169.06	-0.020 -0.51	0.120 3.05	0.38 9.7	0.34 8.6
8 200	9.05 229.9	+0.060 +1.52	-0.060 -1.52	0.875 22.23	0.500 12.70	8.781 223.04	-0.025 -0.64	0.145 3.68	0.41 10.4	0.36 9.1
10 250	11.10 281.9	+0.060 +1.52	-0.060 -1.52	0.938 23.83	0.500 12.70	10.813 274.65	-0.025 -0.64	0.145 3.68	0.44 11.2	0.38 9.7
12 300	13.20 335.3	+0.060 +1.52	-0.060 -1.52	0.938 23.83	0.500 12.70	12.906 327.81	-0.030 -0.76	0.145 3.68	0.48 12.2	0.40 10.2
14 350	15.30 388.6	+0.050 +1.27	-0.080 -2.03	0.938 23.83	0.625 15.88	14.969 380.21	-0.030 -0.76	0.165 4.19	0.55 14.0	0.42 10.7
16 400	17.40 442.0	+0.050 +1.27	-0.080 -2.03	1.188 30.18	0.625 15.88	17.063 433.40	-0.030 -0.76	0.165 4.19	0.58 14.7	0.43 10.9
18 450	19.50 495.3	+0.050 +1.27	-0.080 -2.03	1.188 30.18	0.625 15.88	19.125 485.78	-0.030 -0.76	0.185 4.70	0.63 16.0	0.44 11.2
20 500	21.60 548.6	+0.050 +1.27	-0.080 -2.03	1.188 30.18	0.625 15.88	21.219 538.96	-0.030 -0.76	0.185 4.70	0.67 17.0	0.45 11.4
24 600	25.80 655.3	+0.050 +1.27	-0.080 -2.03	1.188 30.18	0.625 15.88	25.406 645.31	-0.030 -0.76	0.185 4.70	0.73 18.5	0.47 11.9
30 750	32.00 812.8	+0.080 +2.03	-0.060 -1.52	1.375 34.93	0.750 19.05	31.550 801.37	-0.035 -0.89	0.215 5.46	0.92 23.4	0.51 13.0
36 900	38.30 972.8	+0.080 +2.03	-0.060 -1.52	1.375 34.93	0.750 19.05	37.850 961.39	-0.035 -0.89	0.215 5.46	1.02 25.9	0.58 14.7

@ Always refer to the I-300 handbook for current grooving specifications.

IMPORTANT NOTES:

Victaulic groove specifications for cast pipe (gray and ductile) conform to requirements of ANSI/AWWA standard C-606 and CSA B242.

For cast pipe, the groove is cut with a radius ("R" dimension) at the corners of the groove base to reduce stress concentration. Grooving dimensions are the same for any one pipe O.D. regardless of pipe class and pressure.

Standard preparation is with a rigid radius groove. Flexible radius groove dimensions may be used to provide expansion/contraction or angular movement allowance at the joint.

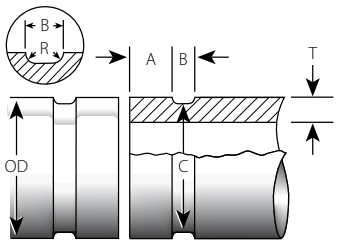
GROOVE DIMENSION NOTES: SEE PG. 17-24

Pipe Preparation

Groove Dimensions

RIGID RADIUS CUT GROOVE SPECIFICATION NOTES

For Complete Information Request Publication **25.05**



RIGID RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE@

1	2			3	4	5		6	7	
	Pipe Outside Diameter Inches mm			Dimensions – Inches/mm						
Nominal Size Inches mm	Basic	Tolerance +	Tolerance –	A Gasket Seat +0.000 -0.020	B Groove Width +0.031 -0.016	C Grv. Diameter Basic	C Grv. Diameter Tol. +0.000	R Radius	T Min. Allow. Wall Thick. Cast Iron	T Min. Allow. Wall Thick. Ductile Iron
3 80	3.96 100.6	+0.045 +1.14	-0.045 -1.14	0.840 21.34	0.375 9.5	3.723 94.56	-0.020 -0.51	0.120 3.05	0.32 8.1	0.31 7.9
4 100	4.80 121.9	+0.045 +1.14	-0.045 -1.14	0.840 21.34	0.375 9.53	4.563 115.90	-0.020 -0.51	0.120 3.05	0.35 8.9	0.32 8.1
6 150	6.90 175.3	+0.060 +1.52	-0.060 -1.52	0.840 21.34	0.375 9.53	6.656 169.06	-0.020 -0.51	0.120 3.05	0.38 9.7	0.34 8.6
8 200	9.05 229.9	+0.060 +1.52	-0.060 -1.52	0.950 24.13	0.500 12.70	8.781 223.04	-0.025 -0.64	0.145 3.68	0.41 10.4	0.36 9.1
10 250	11.10 281.9	+0.060 +1.52	-0.060 -1.52	1.015 25.78	0.500 12.70	10.813 274.65	-0.025 -0.64	0.145 3.68	0.44 11.2	0.38 9.7
12 300	13.20 335.3	+0.060 +1.52	-0.060 -1.52	1.015 25.78	0.500 12.70	12.906 327.81	-0.030 -0.76	0.145 3.68	0.48 12.2	0.40 10.2
14 350	15.30 388.6	+0.050 +1.27	-0.080 -2.03	1.015 25.78	0.625 15.88	14.969 380.21	-0.030 -0.76	0.165 4.19	0.55 14.0	0.42 10.7
16 400	17.40 442.0	+0.050 +1.27	-0.080 -2.03	1.340 34.04	0.625 15.88	17.063 433.40	-0.030 -0.76	0.165 4.19	0.58 14.7	0.43 10.9
18 450	19.50 495.3	+0.050 +1.27	-0.080 -2.03	1.340 34.04	0.625 15.88	19.125 485.78	-0.030 -0.76	0.185 4.70	0.63 16.0	0.44 11.2
20 500	21.60 548.6	+0.050 +1.27	-0.080 -2.03	1.340 34.04	0.625 15.88	21.219 538.96	-0.030 -0.76	0.185 4.70	0.67 17.0	0.45 11.4
24 600	25.80 655.3	+0.050 +1.27	-0.080 -2.03	1.340 34.04	0.625 15.88	25.406 645.31	-0.030 -0.76	0.185 4.70	0.73 18.5	0.47 11.9
30 750	32.00 812.8	+0.080 +2.03	-0.060 -1.52	1.625 41.28	0.750 19.05	31.550 801.37	-0.035 -0.89	0.215 5.46	0.92 23.4	0.51 13.0
36 900	38.30 972.8	+0.080 +2.03	-0.060 -1.52	1.625 41.28	0.750 19.05	37.850 961.39	-0.035 -0.89	0.215 5.46	1.02 25.9	0.58 14.7

@ Always refer to the I-300 handbook for current grooving specifications.

IMPORTANT NOTES:

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For cast pipe, the groove is cut with a radius ("R" dimension) at the corners of the groove base to reduce stress concentration. Grooving dimensions are the same for any one pipe O.D. regardless of pipe class and pressure.

Standard preparation is with a Rigid radius groove. Flexible radius groove dimensions may be used to provide expansion/contraction or angular movement allowance at the joint.

GROOVE DIMENSION NOTES:

Column 1: Nominal AWWA Pipe Size

Column 2 : AWWA Pipe Size Outside Diameter

The average pipe outside diameter must not vary from the specifications listed in the tables on the following pages. Maximum allowable pipe ovality should not vary by more than 1%. Greater variations between the major and minor diameters will result in difficult coupling assembly. For ductile iron pipe, the maximum allowable tolerance from square-cut pipe ends is 0.030"/0.8 mm for 3"/80 mm size; 0.045"/1.1 mm for 4 – 6"/100 – 150 mm sizes; and 0.060"/1.5 mm for sizes 8"/200 mm and larger sizes. This is measured from the true square line.

Column 3 : Gasket Seat "A" Dimension

The "A" dimension, or the distance from the pipe end to the groove, identifies the gasket seating area. This area must be smooth and free from indentations, projections, deep pits, and swells from the pipe end to the groove to provide a leak-tight seal for the gasket. All rust, loose scale, oil, grease, dirt, and cutting particles must be removed. Peened surfaces may require rework to provide a leak-tight seal for the gasket (refer to ANSI/AWWA C-606 or CSA B242).

Column 4: Groove Width "B" Dimension

The "B" dimension, or groove width, controls expansion and angular deflection by the distance it is located from the pipe and its width in relation to the housings' "key" width.

Column 5: Groove Diameter "C" Dimension

The "C" dimension is the proper diameter at the base of the groove. This dimension must be within the diameter's tolerance and concentric with the O.D. for proper coupling fit. The groove must be of uniform depth for the entire pipe circumference.

Column 6: Radius "R" Dimension

The "R" dimension is the radius necessary at the bottom of the groove to eliminate a point of stress concentration for cast pipe (gray and ductile).

Column 7: Minimum Allowable Wall Thickness "T" Dimension

The "T" dimension is the minimum wall thickness that can be cut grooved. The tolerances must conform to Class 53 ANSI/AWWA C151/A21.51. Class 53 ductile iron pipe in sizes 18 – 36"/450 – 900 mm can be cut grooved. Contact Victaulic for details.

Notes

Notes

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Warranty

We warrant all products to be free from defects in materials and workmanship under normal conditions of use and service. Our obligation under this warranty is limited to repairing or replacing at our option at our factory any product which shall within one year after delivery to original buyer be returned with transportation charges prepaid, and which our examination shall show to our satisfaction to have been defective.

THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE BUYER'S SOLE AND EXCLUSIVE REMEDY SHALL BE FOR THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS PROVIDED HEREIN. THE BUYER AGREES THAT NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO HIM.

Victaulic neither assumes nor authorizes any person to assume for it any other liability in connection with the sale of such products.

This warranty shall not apply to any product which has been subject to misuse, negligence or accident, which has been repaired or altered in any manner outside of Victaulic's factory or which has been used in a manner contrary to Victaulic's instructions or recommendations. Victaulic shall not be responsible for design errors due to inaccurate or incomplete information supplied by Buyer or its representatives. Items purchased by Victaulic and resold will have the original equipment manufacturer's warranty extended to Victaulic customers.

Effective August 4, 2008

All products shall be installed in accordance with current Victaulic installation/assembly instructions.
Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Piping Software

The Victaulic software solutions group helps to increase piping project productivity by offering free software packages to aid you in developing and drawing Victaulic piping systems. In addition, Victaulic components can now be found in many of the major third party software drawing packages listed below:

THIRD PARTY SOFTWARE

Aveva (Cadcentre) PDMS
Bentley – AutoPlant
Bentley – PlantSpace
CEA Systems – Plant 4D
Coade – CADWorx Pipe
Hydratec – HydraCAD (Fire Protection)
Intergraph PDS

Find software online at www.victaulic.com/software

Demos of our software packages can be downloaded from our website or the complete software package can be ordered online in CD-ROM format. Visit our website to begin accessing our electronic services, or call 1-800-PICK-VIC.

Vic-Blocks – designed specifically for AutoCAD users, Vic-Blocks 3D is a dimensionally accurate, three-dimensional block library that was developed to assist with Victaulic piping system layouts. It includes block symbols representing the main product line, drawn at full size.

Vic-Blocks

Both Vic-Blocks 2D and Vic-Blocks 3D are compatible with the AutoCad two- and three-dimensional library system. AutoCad is available free, to assist in drawing Victaulic couplings, fittings and valves. Demonstration modules are available for viewing on our website.

Vic-Cells

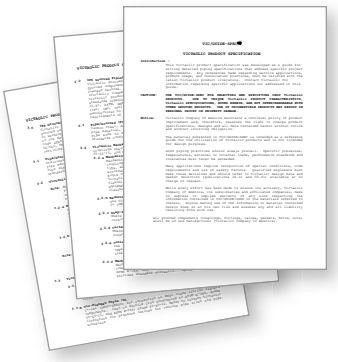
Designed specifically for MicroStation users, Vic-Cells is a dimensionally accurate 2D compilation of cell libraries developed to assist with Victaulic piping system layouts.

Vic-PDS Piping Specs

Vic-PDS piping specs are a set of Integraph Plant Design System (PDS) piping specifications, allowing users to access and use Victaulic products in their PDS piping systems design.

Vic-PDMS Piping Catalog

Vic-PDMS Piping Catalogs is a set of Aveva (Cadcentre) plant design management system (PDMS) catalogs that allows users to access and use Victaulic products in their PDMS piping systems designs.



Vic-Guide Spec

Vic-Guide Spec provides typical specifications for most Victaulic products. The data can be directly cut and pasted into your specifications. Vic-Guide Spec is available in PDF or Word format.

*AutoCad is a registered trademark of Autodesk

World Class Service and Support

Piping. Systems. Solutions.

Value-added services

Construction Piping Services (CPS)

Our Construction Piping Services group can help you make effective and efficient use of Victaulic piping systems through its estimating, project management and drawing package expertise and services. In the US CPS can be reached at 1-610-559-3488 or by email at cps@victaulic.com. CPS offers the following:

VALUE ANALYSIS

Analyzing contract drawings provided by you, CPS will develop cost/pricing and cost comparison summaries of Victaulic systems versus welded, flanged, threaded and other mechanical pipe joining systems using current street prices for materials and recent labor times calculated from trade association standards.

PROJECT MANAGEMENT

CPS can provide quotes for preparation of detailed piping drawings for fabrication and erection, including pipe routing layout; sectional views and isometric drawings; and cut sheets and bills of material. A CPS project coordinator is assigned to begin tracking all the necessary documentation, including organizing the delivery of material according to your construction schedule.

FIELD SERVICE

Victaulic is the only mechanical piping systems manufacturer with 200+ factory-trained piping specialists worldwide to service your needs.

ENGINEERED PRODUCTS

Through our engineered products services, special attention is paid to projects that require special alloys, non-ferrous materials, special coatings or non-standard or special code applications. Call us for an evaluation.

Standing alongside every Victaulic product and mechanical piping system solution is a service and support team ready to assist you with your next project.

Our staff of experienced sales representatives, on-site training personnel and engineering professionals are a phone call away for help in facilitating the evaluation, planning and fulfillment of your piping system needs.

1-800-PICK-VIC

For immediate answers to your engineering or technical questions call 1-800-PICK-VIC (in the US only) or email engrserv@victaulic.com Monday through Thursday from 8:00 am to 7:30 pm EST/EDT and Friday from 8:00 am to 4:30 pm EST/EDT.

www.victaulic.com

For additional information about our products and services including a library of global projects to view, visit us on the web. From there you can easily access the most up-to-date product information organized by market and by product type.

Piping. Systems. Solutions.

www.victaulic.com

The Victaulic website is an information resource that can help you with your piping projects. Among the many resources available at the site:

- Fully searchable product and project databases
- Free product submittals
- Free product literature
- Piping software demos and modules
- Information on new product innovations
- Support services, and more...

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