General Catalog

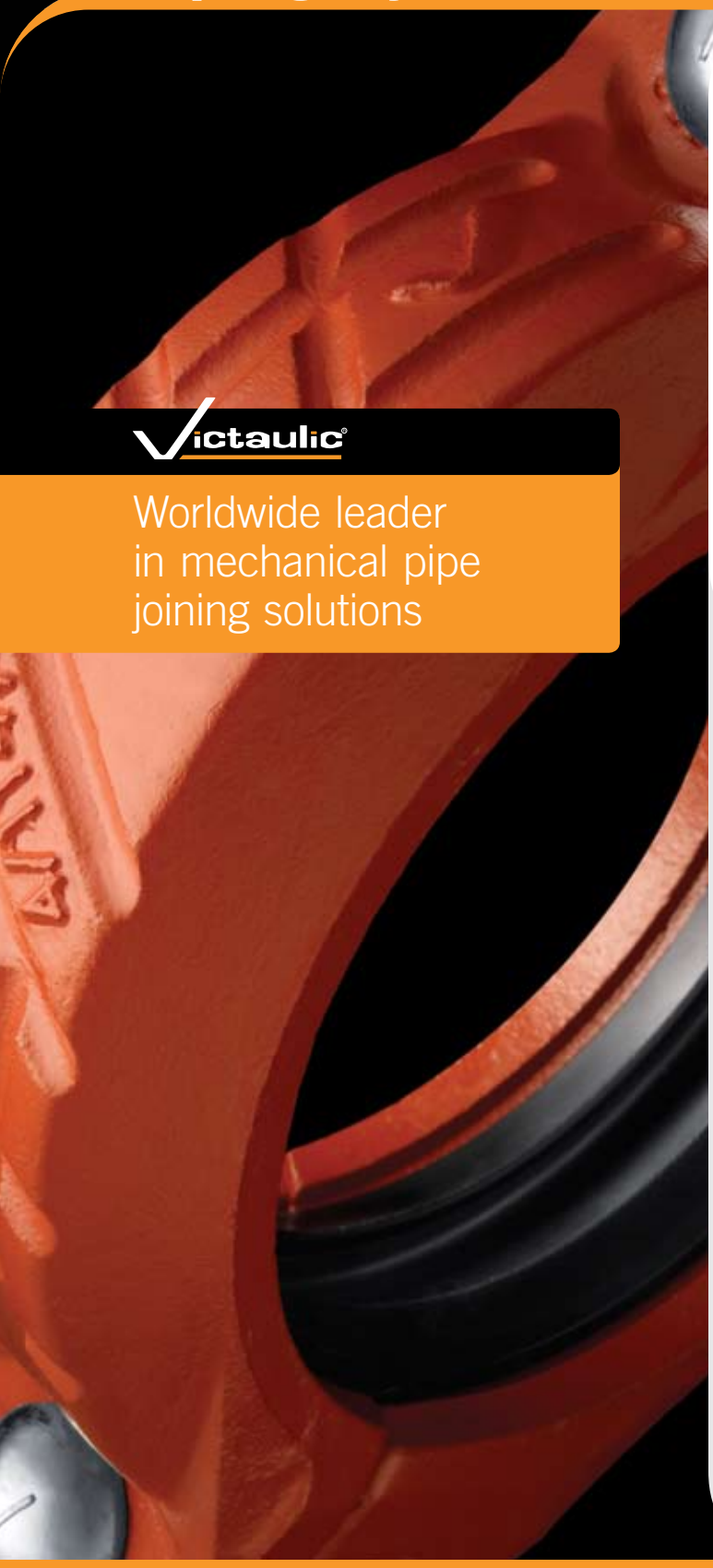
G-103

UPDATED 10/2005

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, 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

Multiple markets served

Victaulic piping systems solutions span many markets. Our piping systems are found around the world in thousands of applications – from 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 systems 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 **Piping Solutions › Project Brief Database** from the home page of our website.

UNITED STATES
Hoover Dam

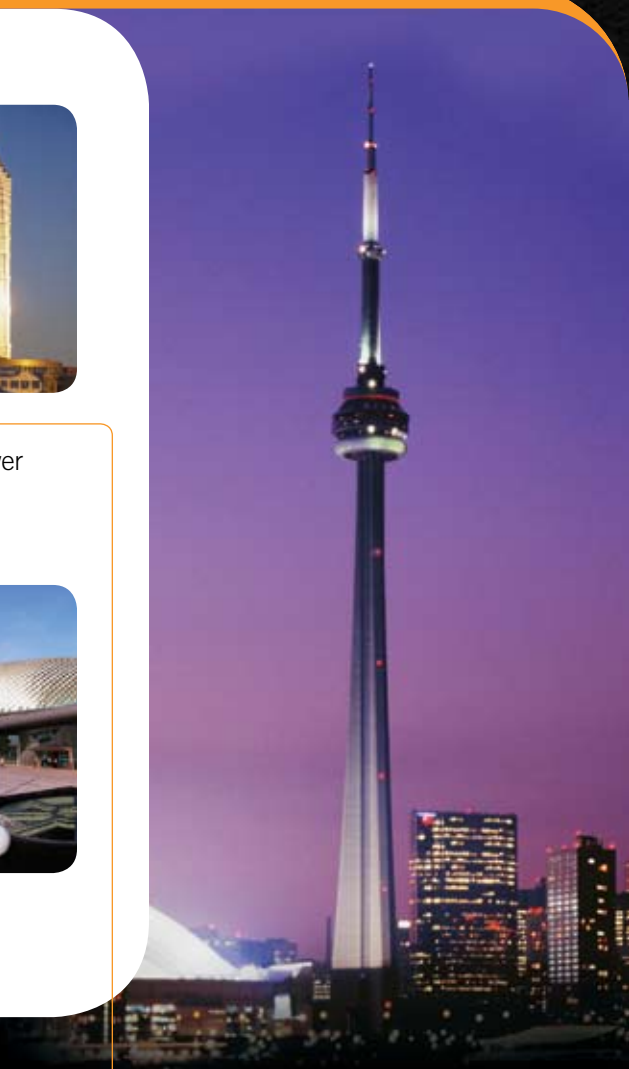
UNITED ARAB EMIRATES
Jumeirah Burj Al Arab and Beach Hotels

CHINA
Jin Mao Tower

FRANCE
La Grande Arche de la Défense

CANADA
La Chateau Frontenac

SINGAPORE
Esplanade Theater



UNITED STATES

CANADA

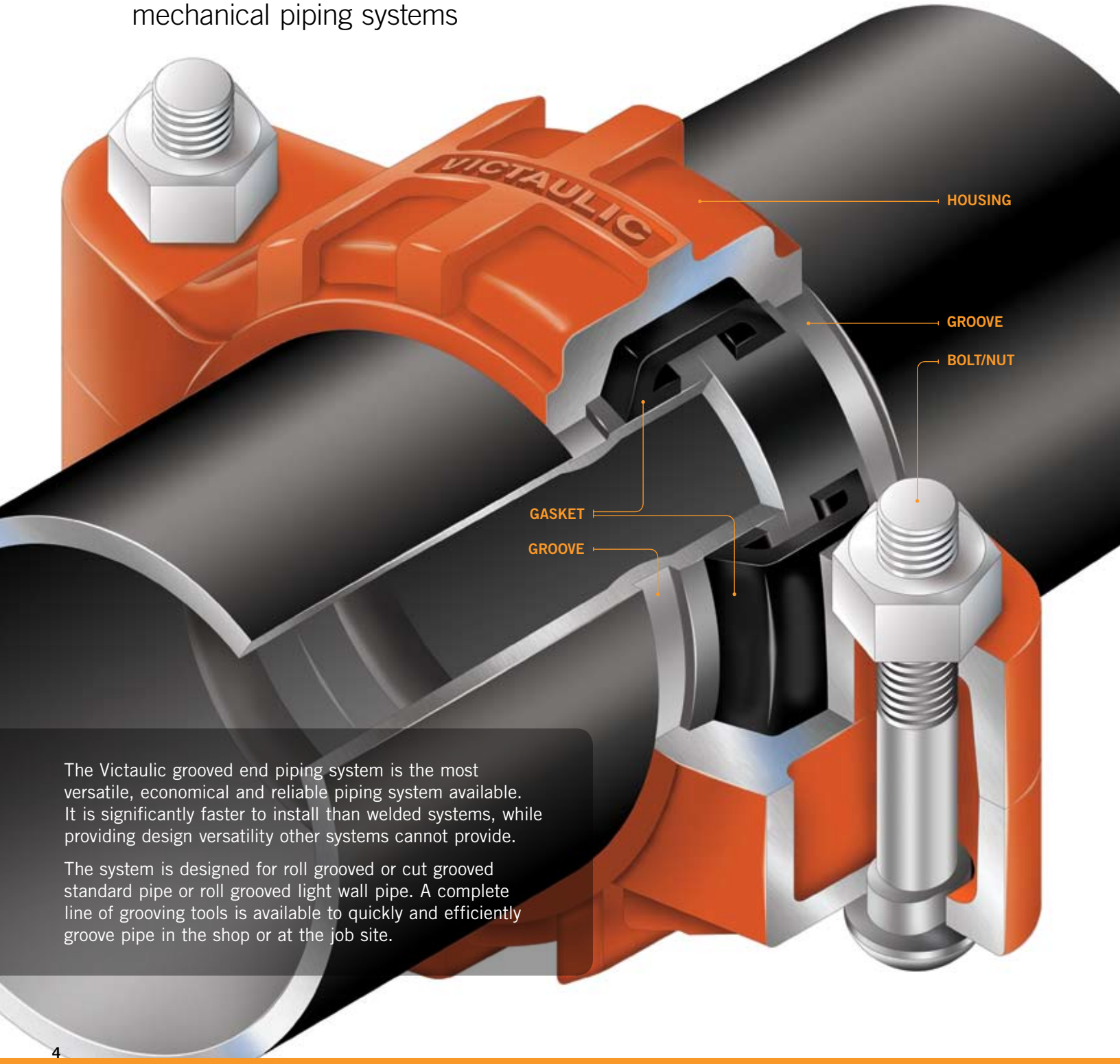
EUROPE

CENTRAL & SOUTH AMERICA

AUSTRALASIA

Grooved End Technology

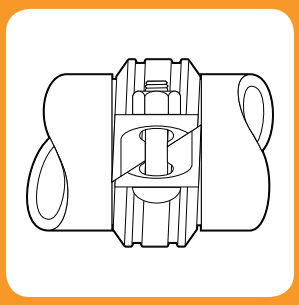
The worldwide standard in mechanical piping systems



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.

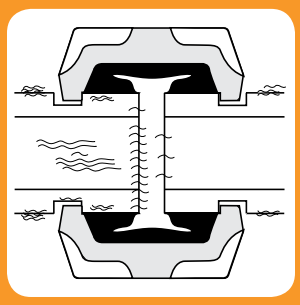
The system is designed for roll grooved or cut grooved standard pipe or roll grooved light wall pipe. A complete line of grooving tools is available to quickly and efficiently groove pipe in the shop or at the job site.

Features



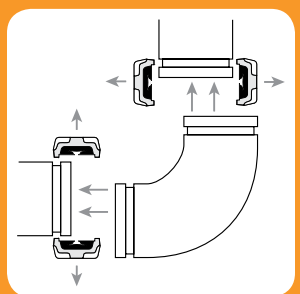
RIGIDITY

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.



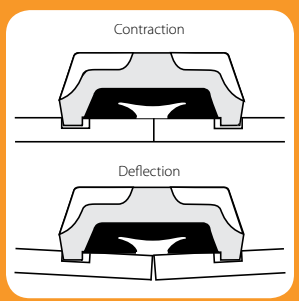
NOISE AND VIBRATION ATTENUATION

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



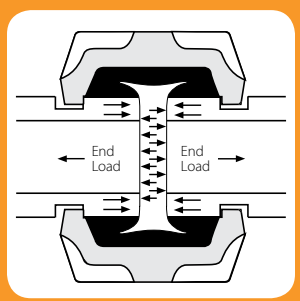
SYSTEM MAINTENANCE AND EXPANSION

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



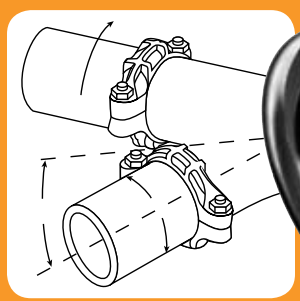
FLEXIBILITY

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, Pressfit® 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

BOCA
Building Officials and Code Administrators

BV
Bureau Veritas

0026
CE
Certification to the European Directive for Pressure Equipment

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

DNV
Det Norske Veritas

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

APPROVED
FM
Factory Mutual Research Corp. – Approved for fire protection services

HDB
Singapore Housing Development Board

Hong Kong Fire Services Board

IAPMO
International Association of Plumbing & Mechanical Officials

Korean Registry of Shipping

LLOYD'S
Lloyd's Register of Shipping

LPC Loss Prevention Council (formerly F.O.C.)

New Zealand Insurance Council

New Zealand Building Act (1991)

NFPA
National Fire Protection Association

NK
Nippon Kaiji Kyokai

NSF/ANSI 61
NSF/ANSI 61
Standard 61 for potable water service

NY-MEA
New York Materials and Equipment Acceptance

PED
CE 97/23

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

SSL
Scientific Services Laboratory

Standards Australia

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

W
Standards Australia Watermark Certification

WRC Water Research Council – U.K.

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

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. 1, for a fully detailed index, see pg. 196. For more detailed information, consult Design Data, Section 26.01.

Important Information

Victaulic has developed, in over 80 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 threaded pipe and/or fittings. Nor are they intended for use with Advanced Groove System (AGS) components used on 14 – 24"/350 – 600 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-600	Copper Products Handbook
I-800	CPVC 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.

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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.

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

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

IPS 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.

Advanced Groove System AGS

For 14 – 24"/350 – 600 mm piping systems Victaulic offers Advanced Groove System (AGS) couplings, see pg. 76.

Zero-Flex® Rigid Coupling

STYLE 07, PG. 16
AGS STYLE W07, PG. 78

Standard Flexible Coupling

STYLE 77, PG. 17
AGS STYLE W77, PG. 79

Flexible Coupling

STYLE 75, PG. 18

Large Diameter Pipe Coupling

STYLE 770, PG. 19

Vic-Flange® Adapter ANSI Class 150

STYLE 741, PG. 20

Vic-Flange Adapter ANSI Class 300

STYLE 743, PG. 21

Reducing Coupling

STYLE 750, PG. 22

Snap-Joint® Coupling

STYLE 78, PG. 23

IPS Couplings

Gasket Types

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

† Separate gasket specifically designed for outlet couplings.

Outlet Coupling

STYLE 72, PG. 24

Available with female threaded outlets (shown) and grooved outlets

Vic-Boltless® Coupling

STYLE 791 AND STYLE 792 ASSEMBLY TOOL, PG. 25

Rigid Coupling

STYLE HP-70, PG. 26

Endseal® Coupling for Plastic Coated Pipe

STYLE HP-70ES, PG. 26

EndSeal Fittings for Plastic Coated Pipe

PG. 27

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.

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

IPS Couplings

Rigid Coupling Systems and Performance §

Zero-Flex Style 07, Style 606 Copper, and transition Style 307 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 (Styles 07, W07, 606, 89, 489, 307, HP-70, 741 and others) create a rigid joint, useful for risers, mechanical rooms and other areas where flexibility is not desired. 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" sizes: 0.14"/3.6 mm; 6 – 12" sizes: 0.25"/6.4 mm.

HP-70ES:
2 – 4" sizes: 0.19"/4.8 mm; 6 – 8" sizes: 0.27/6.7 mm; 10 – 12" 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 610-559-3502 or email 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.

IPS 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.

IPS Couplings

Zero-Flex Rigid Coupling

STYLE 07

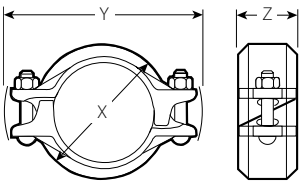
Request Publication 06.02

- 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 Dia. 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
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
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
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
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
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
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
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 – 24 350 – 600	AGS **See Style W07, pg. 78, Request Publication 20.02**							

§ 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. 15.



TYPICAL FOR ALL SIZES

IPS Couplings

Standard Flexible Coupling

STYLE 77

Request Publication 06.04

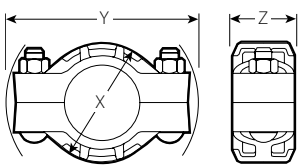
- Cross-ribbed construction design
- Provides flexibility for expansion, contraction, and deflection
- Pressure rated up to 1000 psi/6900 kPa
- Sizes from ¾ – 24"/20 – 600 mm
- For 14 – 24"/350 – 600 mm AGS roll groove systems, see pg. 76

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. 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	1000 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	1000 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	1000 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	1000 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	1000 6900	4,430 19715	0 – 0.06 0 – 1.6	3.63 92	5.88 149	1.88 48	2.6 1.2
2 ½ 65	2.875 73.0	1000 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	1000 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	1000 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	1000 6900	12,565 55915	0 – 0.06 0 – 1.6	5.63 143	8.25 210	1.88 48	5.6 2.5
108.0 mm	4.250 108.0	1000 6900	14,180 63100	0 – 0.13 0 – 3.2	6.00 152	8.63 219	2.13 54	11.0 5.0
4 100	4.500 114.3	1000 6900	15,900 70755	0 – 0.13 0 – 3.2	6.13 156	8.88 226	2.13 54	6.7 3.0
133.0 mm	5.250 133.0	1000 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	1000 6900	23,745 105665	0 – 0.13 0 – 3.2	8.63 219	10.65 270	2.13 54	10.0 4.5
5 125	5.563 141.3	1000 6900	24,300 108135	0 – 0.13 0 – 3.2	7.75 197	10.65 270	2.13 54	10.6 4.8
159.0 mm	6.250 159.0	1000 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	1000 6900	33,185 147660	0 – 0.13 0 – 3.2	8.88 226	11.63 295	2.13 54	13.2 6.0
6 150	6.625 168.3	1000 6900	34,470 153390	0 – 0.13 0 – 3.2	8.63 219	11.88 302	2.13 54	12.0 5.4
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	16.63 422	19.88 505	2.88 73	35.6 16.1
15 375	15.000 381.0	300 2065	53,000 235850	0 – 0.13 0 – 3.2	17.88 454	21.63 549	3.00 76	48.8 22.1
16# 400	16.000 406.4	300 2065	60,320 268425	0 – 0.13 0 – 3.2	19.00 482	22.13 562	3.00 76	51.1 23.2
18# 450	18.000 457.2	300 2065	76,340 339710	0 – 0.13 0 – 3.2	21.38 543	24.50 622	3.13 80	64.4 29.2
20# 500	20.000 508.0	300 2065	94,000 418300	0 – 0.13 0 – 3.2	23.63 600	27.25 692	3.13 80	91.2 41.4
22 550	22.000 559.0	300 2065	114,000 507300	0 – 0.13 0 – 3.2	25.75 654	29.50 749	3.13 80	92.0 41.7
24# 600	24.000 609.6	250 1725	113,000 502850	0 – 0.13 0 – 3.2	27.75 704	31.25 794	3.13 80	94.0 42.6
14 – 24 350 – 600	AGS	**See Style W77, pg. 79, Request Publication 20.03**						

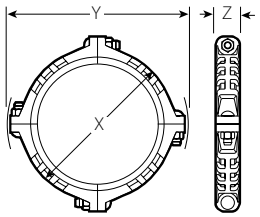
§ Couplings 8"/200 mm, 10"/250 mm, 12"/300 mm sizes are available to JIS standards. Refer to Publication 06.17 for details.

For use on cut groove systems only. For roll grooved systems Victaulic offers the Advanced Groove System (AGS), see pg. 76. For cut groove fittings in this size contact our Engineered Products Group at 610-559-3300.

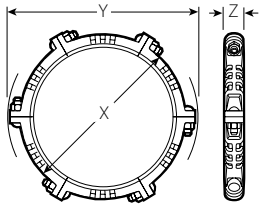
* Refer to General Notes on pg. 15.



TYPICAL ¾ – 12"/20 – 300 mm SIZES



TYPICAL 14 – 22"/350 – 550 mm SIZES



TYPICAL 24"/600 mm SIZES

IPS Couplings

Flexible Coupling

STYLE 75

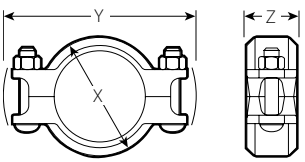
Request Publication 06.05

- 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 Dia. 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
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
4 100	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
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
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
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
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
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
165.1 mm	6.500 165.1	450 3100	14,940 66483	0 – 0.13 0 – 3.2	7.84 199	10.66 271	2.06 52	7.2 3.3
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
203.2 mm#	8.000 203.2	450 3100	22,635 100725	0 – 0.13 0 – 3.2	9.72 247	13.33 339	2.31 54	12.6 5.7
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
254.0 mm#	10.000 254.0	350 2400	27,500 122375	0 – 0.13 0 – 3.2	12.16 309	15.81 402	2.53 64	20.8 9.4
304.8 mm#	12.000 304.8	350 2400	39,500 175775	0 – 0.13 0 – 3.2	14.16 360	17.69 449	2.53 64	23.6 10.7

Style 74 Couplings.

* Refer to General Notes on pg. 15.



TYPICAL FOR ALL SIZES

IPS Couplings

Large Diameter Pipe Coupling

STYLE 770

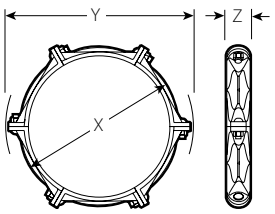
Request Publication 06.03

- Ideal for carbon steel, galvanized or stainless steel pipe
- Pressure rated up to 375 psi/2580 kPa
- Sizes from 26 – 42"/650 – 1050 mm

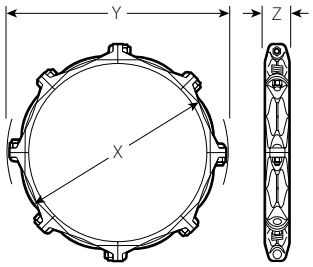
Size		Max. Work Pressure *	Max. End Load *	Coupling Dimensions			Nominal Range of Linear Movement ‡		Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	X Inches mm	Y Inches mm	Z Inches mm	Minimum Inches mm	Maximum Inches mm	Lbs. kg
26 650	26.000 660.4	375 2580	199,099 885990	29.75 756	34.25 870	5.00 127	0 0	0.38 9.7	150.0 68.0
28 700	28.000 711.0	330 2270	203,199 904236	31.75 807	36.33 923	5.00 127	0 0	0.38 9.7	175.0 78.0
30 750	30.000 762.0	300 2065	212,058 943658	33.75 857	38.32 973	5.00 127	0 0	0.38 9.7	200.0 90.7
32 800	32.000 813.0	260 1790	209,105 930517	35.75 908	40.43 1027	5.00 127	0 0	0.38 9.7	225.0 102.1
36 900	36.000 914.0	200 1380	203,575 905909	39.75 1010	44.33 1126	5.00 127	0 0	0.38 9.7	250.0 113.4
42 1050	42.000 1067.0	145 1000	200,890 893961	45.75 1162	51.56 1310	5.76 146	0.31 7.9	0.69 17.5	400.0 181.4

* Refer to General Notes on pg. 15.

‡ Nominal linear movement and deflection are dependent upon pipe properly roll or cut grooved to Victaulic specifications. Maximum allowable linear movement is the difference between minimum and maximum pipe end separation subject to tolerances (Request Publication 26.01).



TYPICAL 26 – 36"/ 650 – 900 mm SIZES



TYPICAL 42"/1050 mm SIZES

IPS Couplings

Vic-Flange Adapter ANSI Class 150

STYLE 741

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 Dia. 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	7.88 200	0.88 22	4.8 2.1
3 80	3.500 88.9	300 2065	2,885 12840	3.50 89	4.53 115	8.44 214	0.94 24	5.3 2.4
4 100	4.500 114.3	300 2065	4,770 21225	4.50 114	5.53 141	9.94 252	0.94 24	7.4 3.4
5 125	5.563 141.3	300 2065	7,290 32440	5.56 141	6.71 171	11.00 279	1.00 25	8.6 3.9
165.1 mm	6.500 165.1	300 2065	9,960 44320	6.50 165	7.66 195	+	1.00 25	10.0 4.5
6 150	6.625 168.3	300 2065	10,350 46060	6.63 168	7.78 198	12.00 305	1.00 25	9.9 4.5
8 200	8.625 219.1	300 2065	17,500 77875	8.63 219	9.94 252	14.63 372	1.13 29	16.6 7.5
10 250	10.750 273.0	300 2065	27,215 121110	10.75 273	12.31 313	17.19 437	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

* Refer to Publication 06.06 for more details.

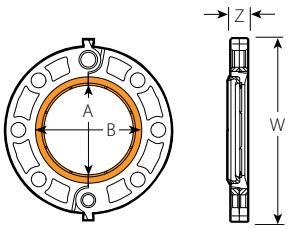
\+ "W" dimension does not apply.

\# Vic-Flange adapters in this size are **not** compatible with AGS products, and must not be used on AGS roll groove piping.

IMPORTANT NOTES:

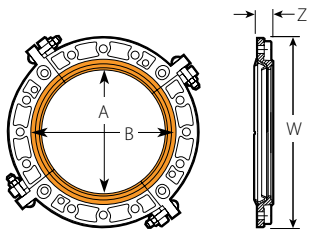
Style 741 Vic-Flange adapters provide rigid joints when used on pipe with standard cut or roll groove dimensions and consequently allow no linear or angular movement at the joint. When used with Victaulic Series 700 butterfly valves, plastic pipe or lightwall metallic pipe, small teeth in I.D. of key 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.

IPS Couplings

Vic-Flange Adapter ANSI Class 300

STYLE 743

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

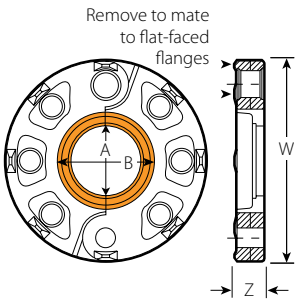
Size		Max. Work Pressure *	Max. End Load *	Sealing Surface		Dimensions		Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	A Max. Inches mm	B Min. Inches mm	W Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	720 4960	3,190 14200	2.38 60	3.41 87	6.50 165	0.94 24	4.8 2.2
2½ 65	2.875 73.0	720 4960	4,670 20780	2.88 73	3.91 99	7.50 191	1.06 27	7.4 3.4
3 80	3.500 88.9	720 4960	6,925 30815	3.50 89	4.53 115	8.25 210	1.19 30	9.1 4.1
4 100	4.500 114.3	720 4960	11,445 50930	4.50 114	5.53 141	10.00 254	1.31 33	15.3 6.9
5 125	5.563 141.3	720 4960	17,500 77875	5.56 141	6.71 171	11.00 279	1.44 37	17.7 8.0
6 150	6.625 168.3	720 4960	24,805 110380	6.63 168	7.78 198	12.50 318	1.50 38	23.4 10.6
8 200	8.625 219.1	720 4960	42,045 187100	8.63 219	9.94 252	15.00 381	1.69 43	34.3 15.6
10 250	10.750 273.0	720 4960	65,315 290650	10.75 273	12.31 313	17.50 445	1.94 49	48.3 21.9
12 300	12.750 323.9	720 4960	91,880 408870	12.75 324	14.31 364	20.50 521	2.00 51	70.5 32.0

* Refer to Publication 06.06 for more details.

IMPORTANT NOTES:

Style 743 Vic-Flange 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.

IPS Couplings

Reducing Coupling

STYLE 750

Request Publication 06.08

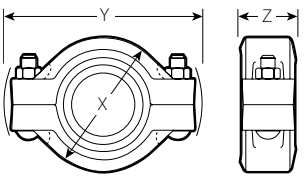
- Direct reduction on the piping run
- Designed to replace two couplings and a reducing fitting
- Special reducing gasket for pressure responsive sealing
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 2 × 1"/ 50 × 25 mm through 8 × 6"/200 × 150 mm

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	5.25 133	1.88 48	2.0 0.9
		1 ½ 40	350 2400	1,000 4450	0 – 0.07 0 – 1.8	3.38 85	5.25 133	1.88 48	2.0 0.9
2½ 65	×	2 50	500 3450	2,215 9850	0 – 0.07 0 – 1.8	4.06 103	6.00 152	1.88 48	2.3 1.0
76.1	×	2 50	350 2400	1,550 6900	0 – 0.07 0 – 1.8	4.13 105	6.00 152	1.88 48	4.6 2.1
3 80	×	2 50	350 2400	1,550 6900	0 – 0.07 0 – 1.8	4.75 121	7.13 181	1.88 48	4.6 2.1
		2½ 65	500 3450	3,250 14460	0 – 0.07 0 – 1.8	4.75 121	7.13 181	1.88 48	3.8 1.7
		76.1	350 2400	2,275 10125	0 – 0.07 0 – 1.8	4.75 121	7.13 181	1.88 48	3.8 1.7
4 100	×	2 50	350 2400	1,550 6900	0 – 0.13 0 – 3.2	6.25 159	8.88 225	2.25 57	8.8 4.0
		2½ 65	350 2400	2,275 10125	0 – 0.13 0 – 3.2	6.25 159	8.88 225	2.25 57	8.3 3.8
		3 80	500 3450	4,810 21400	0 – 0.13 0 – 3.2	6.00 152	8.88 225	2.25 57	6.3 2.9
4½ 120	×	76.1	350 2400	2,275 10125	0 – 0.13 0 – 3.2	6.25 159	8.88 225	2.25 57	6.4 2.9
5 125	×	4 100	350 2400	5,565 24765	0 – 0.13 0 – 3.2	7.13 181	10.63 270	2.13 54	10.8 4.9
6 150	×	4 100	350 2400	5,565 24765	0 – 0.13 0 – 3.2	8.63 219	11.88 302	2.25 57	16.1 7.3
		5 125	350 2400	8,500 37825	0 – 0.13 0 – 3.2	8.50 216	11.88 302	2.25 57	12.6 5.7
165.1	×	4 100	350 2400	5,565 24765	0 – 0.13 0 – 3.2	8.50 216	11.38 289	2.25 57	15.2 6.9
8 200	×	6 150	350 2400	12,000 53400	0 – 0.13 0 – 3.2	10.75 273	14.75 375	2.50 64	22.3 10.1

* Refer to General Notes on pg. 15.

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

IPS Couplings

Snap-Joint Coupling

STYLE 78

Request Publication 06.09

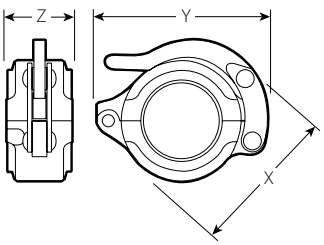
- Designed for quick disconnect service
- Mated housings are hinged with an attached locking handle for assembly
- Pressure rated up to 300 psi/2065 kPa
- Sizes from 1 – 8"/25 – 200 mm

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. 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. 15.

IMPORTANT NOTES:

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



TYPICAL FOR ALL SIZES

IPS Couplings

Outlet Coupling

STYLE 72

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
- Outlet can be prepared for grooved, female threaded or male threaded connections
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 1½ × ½"/ 40 × 15 mm through 6 × 2"/150 × 50 mm

Size				Max. Work Pressure *	Allow. Pipe End Sep. *	Dimensions					Approx. Wgt. Each
Run × Reducing Outlet Nominal Size Inches mm		FPT	Gr/MPT	psi kPa	Inches mm	T † Inches mm	V § Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
1 ½ 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	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
		1 ¼ 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
		—	1 ½ 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	0.50 – 0.63 13 – 16	—	3.31 84	4.50 114	7.00 178	2.38 60	7.0 3.2
		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
		—	1 ½ 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
		1 ½ 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
		1 ½ 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

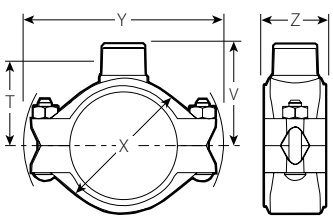
* Refer to General Notes on pg. 15.

§ Center of run to end of fittings.

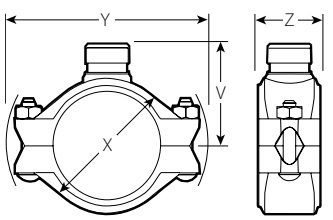
† Center of run to the engaged pipe end. Female threaded outlet only (dimensions approximate).

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 1½ × ½" – 6 × 1½"/ 40 × 25 mm – 150 × 40 mm SIZES WITH FEMALE THREADED OUTLET



TYPICAL 2 × 1" – 6 × 2"/ 50 × 25 mm – 150 × 50 mm SIZES WITH GROOVED OUTLET

IPS Couplings

Vic-Boltless Coupling

STYLE 791 AND STYLE 792 ASSEMBLY TOOL

Request Publication 06.11

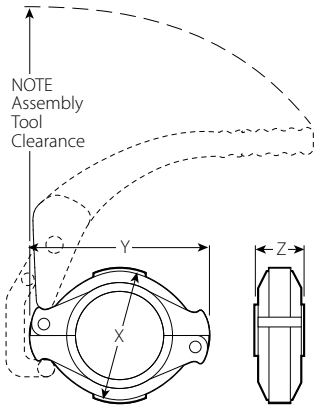
- One-piece hinged coupling
- Features locking pin installation with a separate tool (Style 792) designed for assembly and disassembly
- Provides secure, tamper resistant, low profile joint
- Pressure rated up to 700 psi/4825 kPa
- Sizes from 2 – 8"/50 – 200 mm

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Locking Pin Size	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	Inches mm	Dia. × Length Inches	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	3.43 87	4.75 121	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	3.97 101	5.53 140	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	4.59 117	6.20 157	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	5.94 151	7.67 195	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	8.06 205	10.17 258	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	10.34 263	12.48 317	2.31 59	12.0 5.4

* Refer to General Notes on pg. 15.

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).



TYPICAL FOR ALL SIZES

IPS Couplings

Rigid Coupling

STYLE HP-70

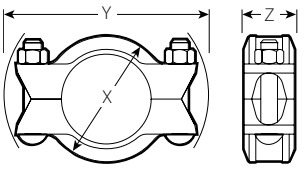
Request Publication 06.12

- 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

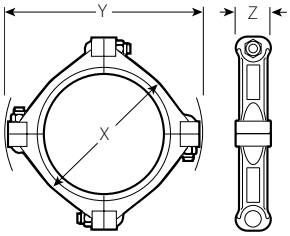
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	1000 6900	4,430 19715	0.14 3.6	3.50 89	6.68 168	2.00 51	3.2 1.5
2½ 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 AGS roll groove pipe.

* Refer to General Notes on pg. 15.



TYPICAL 2 – 12"/50 – 300 mm SIZES



TYPICAL 14 – 16"/350 – 400 mm SIZES

Endseal Coupling for Plastic Coated Pipe

STYLE HP-70ES

Request Publication 06.13

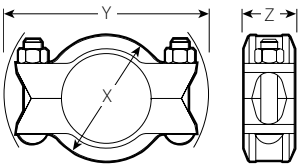
- Specially formulated and compounded oil-resistant nitrile gasket
- ES gasket design has integral central leg that positions between the pipe ends for use with plastic-coated or cement-lined pipe
- Designed for higher pressure systems rated up to 2500 psi/17250 kPa
- Sizes from 2 – 12"/50 – 300 mm

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. 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	13.43 682	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. 15.

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.



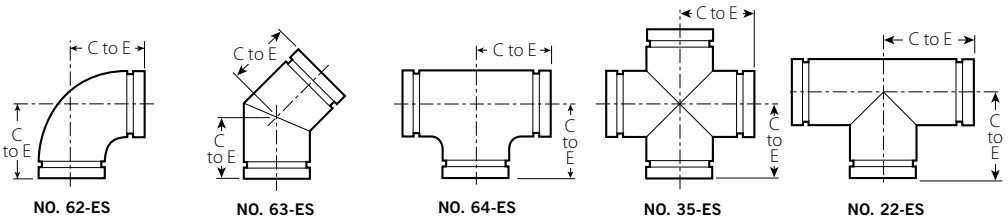
TYPICAL FOR ALL SIZES

IPS Couplings – EndSeal Fittings

EndSeal Fittings for Pipe 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

Request Publication 07.03



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"/300 mm consult Victaulic.

IMPORTANT NOTES:

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

- 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"/50 mm and bottom production line is 3"/80 mm or 4"/100 mm
- Sizes from 2 – 6"/50 – 150 mm

IPS Fittings

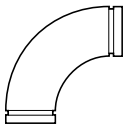
- Fittings available in sizes through 48"/1200 mm
- Standard fitting pressure ratings conform to ratings of Style 77 coupling
- All fittings supplied with grooves or shoulders for fast installation
- Groove design permits flexibility for easy alignment (these fittings are not intended for use with Victaulic 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 741 or 743 Vic-Flange adapters, check disk clearance dimensions with I.D. dimension of fitting
- Request Publication 07.01

Advanced Groove System AGS

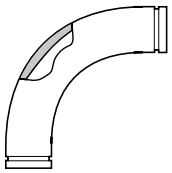
For 14 – 24"/350 – 600 mm piping systems Victaulic offers Advanced Groove System (AGS) fittings, see pg. 76.

Elbows

90° Elbow
NO. 10, PG. 30
AGS NO. W10, PG. 80



90° 1½ D Long Radius Elbow
NO. 100, PG. 30
AGS NO. W100, PG. 80

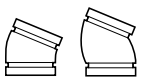


90° 3 D Long Radius Elbow
NO. 100-3D, PG. 31

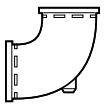
45° Elbow
NO. 11, PG. 30
AGS NO. W11, PG. 80

45° 1½ D Long Radius Elbow
NO. 110, PG. 30
AGS NO. W110, PG. 80

45° 3 D Long Radius Elbow
NO. 110-3D, PG. 31



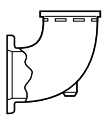
22½° Elbow
NO. 12, PG. 30
AGS NO. W12, PG. 80



Reducing Base Support Elbow Grv. × Grv.
NO. R-10G, PG. 31

90° Adapter Elbow
NO.18, PG. 32

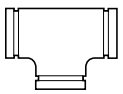
11¼° Elbow
NO. 13, PG. 30
AGS NO. W13, PG. 80



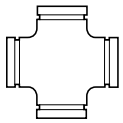
Reducing Base Support Elbow Grv. × Flange
NO. R-10F, PG. 31

45° Adapter Elbow
NO. 19, PG. 32

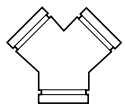
Tees, Crosses, Wyes, and Laterals



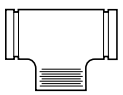
Tee
NO. 20, PG. 33
AGS NO. W20, P



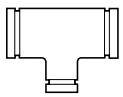
Cross
NO. 35, PG. 33
AGS NO. W35, PG. 80



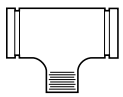
True Wye
NO. 33, PG. 33
AGS NO. W33, PG. 80



Tees with Threaded Branch
NO. 29M, PG. 33

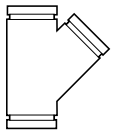


Reducing Tee
NO. 25, PGS. 34-35
AGS NO. W25, PG. 81

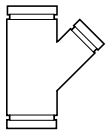


Reducing Tee with Threaded Branch
NO. 29, PGS. 34-35

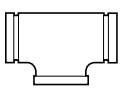
Standpipe Tee
NO. 27, PG. 35



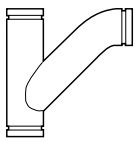
45° Lateral
NO. 30, PG. 36
AGS NO. W30, PG. 82



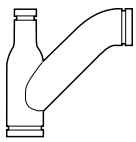
45° Reducing Lateral
NO. 30-R, PG. 36
AGS NO. W30-R, PG. 82



Bullhead Tee
NO. 21, PG. 35



Tee Wye
NO. 32, PG. 37

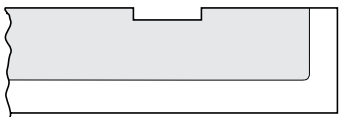


Reducing Tee Wye
NO. 32-R, PG. 37

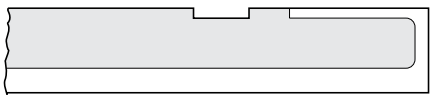
IPS Fittings

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. 38

Adapter Nipple
Grv. × Bev.

NO. 42, PG. 38
AGS NO. W42, PG. 83

Adapter Nipple
Grv. × Grv.

NO. 43, PG. 38
AGS NO. W43, PG. 83
AGS NO. W49, PG. 83

Flat Face Flanged
Adapter Nipple

NO. 41, NO. 45F, NO. 46F, PG. 39

Raised Face Flanged
Adapter Nipple

NO. 45R, NO. 46R, PG. 39
AGS NO. W45R, PG. 83

Female Threaded
Adapter

NO. 80, PG. 41

Swaged Nipple
Grv. × Grv.

NO. 53, PG. 40

Swaged Nipple
Grv. × Thd.

NO. 54, PG. 40

Swaged Nipple
Thd. × Grv.

NO. 55, PG. 40

Bull Plug

NO. 61, PG. 35

Cap

NO. 60, PG. 38
AGS NO. W60, PG. 83

Hose Nipple

NO. 48, PG. 41

Reducers

Concentric
Reducer

NO. 50, PG. 42
AGS NO. W50, PG. 84

Eccentric
Reducer

NO. 51, PG. 42
AGS NO. W51, PG. 84

Small Threaded
Reducer

NO. 52, PG. 43

PRODUCTS

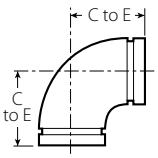
12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

IPS Fittings

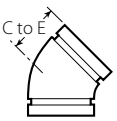
Elbows

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
(Ductile Iron#)

Request Publication 07.01



NO. 10



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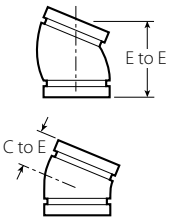
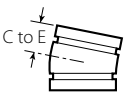
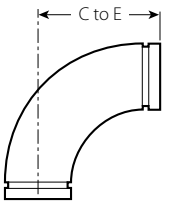


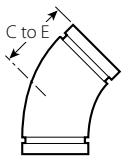
NO. 12



NO. 13



NO. 100



NO. 110

Size		No. 10 90° Elbow		No. 11 45° Elbow		No. 12 22½° Elbow		No. 13 11¼° Elbow		No. 100 (1½ D) 90° Long Radius Elbow		No. 110 (1½ D) 45° Long Radius Elbow	
Nominal Size Inches mm	Actual Outside Dia. 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
¾ 20	1.050 26.9	2.25 57	0.5 0.2	1.50 38	0.5 0.2	1.63 (sw) 41	—	1.38 (sw) 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	1.38 (sw) 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	1.38 (sw) 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	1.38 (sw) 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	5.00 127	4.1 1.9	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	—	—	—	—	—	—	—	—
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	2.50 (sw) 64	4.0 1.8	1.75 (sw) 44	2.7 1.2	—	—	—	—
108.0 mm	4.250 108.0	5.00 127	11.0 5.0	3.00 76	5.6 2.5	—	—	—	—	—	—	—	—
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
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	1.88 (sw) 48	4.2 1.9	—	—	—	—
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	—	—	—	—	—	—	—	—
5 125	5.563 141.3	5.50 140	11.7 5.3	3.25 83	8.3 3.8	2.88 (sw) 73	7.8 3.5	2.00 (sw) 51	5.0 2.2	+	18.2 8.3	+	14.8 6.7
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
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
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 (sw) 111	30.0 13.6	2.13 (sw) 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 (sw) 124	40.0 18.1	2.25 (sw) 57	29.3 13.3	18.00 457	156.0 70.8	7.50 191	90.0 40.8
14 – 24 350 – 600	AGS **See AGS Roll Groove Fittings, pg. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**												

@ Gooseneck design, end-to-end dimension.
\+ Contact Victaulic for details.
\# Ductile iron except those marked (sw) which are segmentally welded steel.

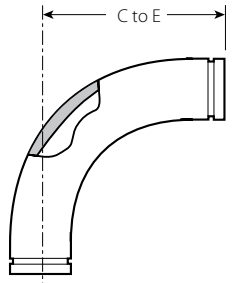
IPS Fittings

Long Radius Elbow 3D

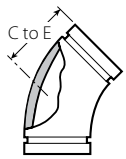
With added wall thickness
at bend for abrasive services.

NO. 100-3D 90° Long Radius Elbow 3D
NO. 110-3D 45° Long Radius Elbow 3D
(Ductile Iron)

Request Publication 07.01



NO. 100-3D



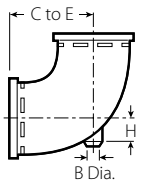
NO. 110-3D

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

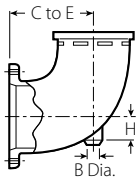
Reducing Base Support Elbow

NO. R-10G Grv. × Grv.
NO. R-10F Grv. × Flange
(Ductile Iron)

Request Publication 07.01



NO. R-10G



NO. R-10F

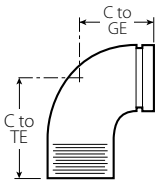
Size		No. R-10 Reducing Base Support Elbow			Approx. Weight Each	
Nominal Size Inches mm		C to E Inches mm	H Inches mm	B Diameter Inches mm	Grv. × Grv. Lbs. kg	Grv. × Flange Lbs. kg
6 150 ×	4 100	9.00 229	1.25 32	1.50 38	19.0 8.6	33.0 15.0
	5 125	9.00 229	1.50 38	1.50 38	23.0 10.4	38.0 17.2
8 200 ×	6 150	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

IPS Fittings

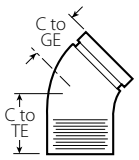
Adapter Elbow

NO. 18 90° Adapter Elbow
NO. 19 45° Adapter Elbow
(Ductile Iron)

Request Publication 07.01



NO. 18



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 38	1.50 38	0.5 0.2
1 25	1.315 33.7	2.25 57	2.25 57	0.5 0.2	1.75 44	1.75 44	0.6 0.3
1 ¼ 32	1.660 42.4	2.75 70	2.75 70	0.9 0.4	1.75 44	1.75 44	0.6 0.3
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	2.00 51	3.00 76	1.9 0.9
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
4 100	4.500 114.3	5.00 127	7.25 184	12.0 5.4	3.00 76	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

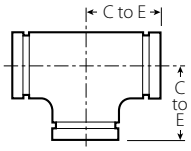
@ Available with British Standard Pipe Threads, specify "BSP" clearly on order.
+ Contact Victaulic for details.

IPS Fittings

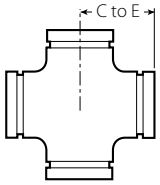
Tees, Crosses and True Wyes

NO. 20 Tee
NO. 35 Cross
NO. 33 True Wye
NO. 29M Tee with Threaded Branch (Ductile Iron#)

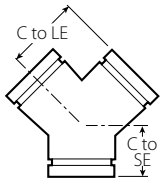
Request Publication 07.01



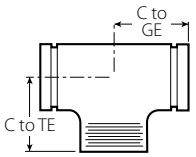
NO. 20



NO. 35



NO. 33



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 Dia. 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	2.25 57	2.25 57	1.0 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	3.75 95	3.75 95	4.3 2.0
76.1	3.000 76.1	3.75 95	5.2 2.4	—	—	—	—	—	3.75 95	3.75 95	5.2 (sw) 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	4.25 108	6.00 152	6.8 3.1
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	4.50 114	4.50 114	7.9 (sw) 3.6
108.0 mm	4.250 108.0	5.00 127	15.5 7.0	—	—	—	—	—	5.00 127	5.00 127	15.5 7.0
4 100	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
4 ½ 120	5.000 127.0	5.25 (sw) 133	15.0 6.8	5.25 133	18.5 8.4	—	—	—	5.25 133	5.25 133	15.0 (sw) 6.8
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
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	5.50 140	5.50 140	17.8 (sw) 8.1
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
6 150	6.625 168.3	6.50 165	25.7 1.7	6.50 165	28.0 12.7	6.50 165	4.50 114	22.3 10.1	6.50 165	6.50 165	25.7 (sw) 11.7
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	7.75 197	7.75 197	47.6 (sw) 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. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**										

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

IMPORTANT NOTE:

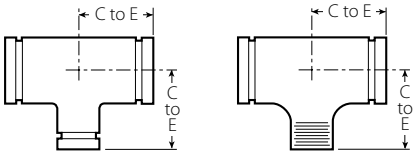
Fittings size 26 – 48"/650 – 1050 mm are available roll grooved for installation with Style 770 large diameter pipe couplings, Contact Victaulic for details.

IPS Fittings

Reducing Tee

NO. 25 Grooved Branch
NO. 29 Threaded Branch
(Ductile Iron#)

Request Publication 07.01



NO. 25 NO. 29

Size							No. 25 Std.	No. 29 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
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

TABLE CONTINUED ON PG. 35

14 – 24 350 – 600	AGS **See AGS Roll Groove Fittings, pg. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**

\+ Contact Victaulic for details.

\# Ductile iron except those that are marked (sw), which are segmentally welded steel.

IMPORTANT NOTE:

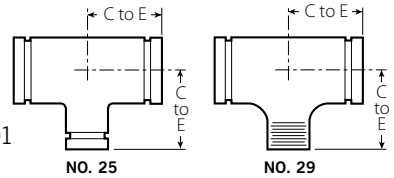
No. 29 Threaded Outlet Reducing Tees are supplied NPT and are available with British Standard threads. For British Standard specify "BSP" clearly on order.

IPS Fittings

Reducing Tee

NO. 25 Grooved Branch
NO. 29 Threaded Branch
(Ductile Iron#)

Request Publication 07.01



NO. 25 NO. 29

Size					No. 25 Std.	No. 29 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. 34							
10 250	×	10 250	×	1 ½ 40	+	+	62.0 28.1
				2 50	9.00 (sw) 229	9.00 (sw) 229	62.0 28.1
				2 ½ 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
				2 ½ 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					AGS See AGS Roll Groove Fittings, pg. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01		

\+ Contact Victaulic for details.

\# Ductile iron except those that are marked (sw), which are segmentally welded steel.

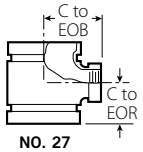
IMPORTANT NOTE:

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

Standpipe Tee

NO. 27
(Ductile iron)

Request Publication 07.01



NO. 27

Size					No. 27 Standpipe Tee		
Nominal Size Inches mm					C to EOR Inches mm	C to EOB Inches mm	Approx. Weight Each Lbs. kg
4 100	×	4 100	×	2 ½ 65	3.25 83	4.00 102	9.1 4.1
6 150	×	6 150	×	2 ½ 65	3.25 83	5.13 130	14.8 6.7

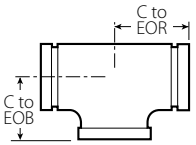
IMPORTANT NOTE:

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

Bullhead Tee

NO. 21
(Ductile Iron)

Request Publication 07.01



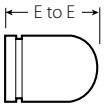
NO. 21

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

Bull Plug

NO. 61
(Steel)

Request Publication 07.01



NO. 61

Size		No. 61 Bull Plug	
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
2 ½ 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

IMPORTANT NOTES:

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

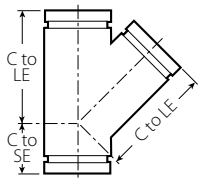
No. 61 Bull Plugs should be used in vacuum service with Style 72 or 750 couplings.

IPS Fittings

45° Lateral

NO. 30
(Segmentally Welded Steel)

Request Publication 07.01



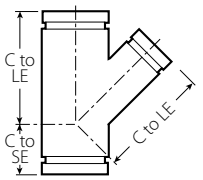
NO. 30

Size		No. 30 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
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. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**			

45° Reducing Lateral

NO. 30-R
(Segmentally Welded Steel)

Request Publication 07.01



NO. 30-R

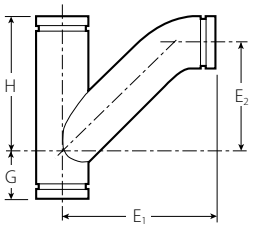
Size							No. 30-R 45° Reducing Lateral		
Nominal Size Inches mm							C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
3 80	×	3 80	×	2 50			8.50 216	3.25 83	9.8 4.4
				2 ½ 65			8.50 216	3.25 83	9.8 4.4
4 100	×	4 100	×	2 50			10.50 267	3.75 95	10.0 4.5
				2 ½ 65			10.50 267	3.75 95	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
14 – 24 350 – 600							AGS **See AGS Roll Groove Fittings, pg. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**		

IPS Fittings

Tee Wye

NO. 32
(Segmentally Welded Steel)

Request Publication 07.01

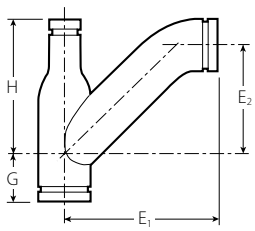


NO. 32

Reducing Tee Wye

NO. 32-R
(Segmentally Welded Steel)

Request Publication 07.01



NO. 32-R

Size					No. 32 Tee Wye				
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	×	3 80	3.75 95	10.50 267	12.88 327	7.88 200	23.0 10.4
				4 100	3.75 95	10.50 267	13.63 346	8.13 207	26.0 11.8
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
				5 125	4.00 102	12.50 318	16.13 410	10.00 254	48.0 21.8
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
				6 150	4.50 114	14.00 356	18.25 464	11.50 292	60.5 27.4
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
				8 200	6.00 152	18.00 457	23.25 591	15.25 387	127.1 57.7
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
				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
				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

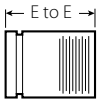
Size					No. 32-R Reducing Tee Wye				
Nominal Size Inches mm					G Inches mm	H Inches mm	E_1 Inches mm	E_2 Inches mm	Approx. Wgt. Each Lbs. kg
4 100	×	3 80	×	3 80	3.50 89	9.50 241	10.75 273	5.75 146	16.0 7.3
				4 100	3.75 95	10.50 267	13.63 346	8.13 206	16.0 7.3
5 125	×	3 80	×	3 80	1.25 32	9.75 248	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
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
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

IPS Fittings

Adapter Nipple

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

Request Publication 07.01



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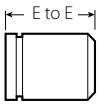

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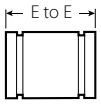


NO. 43

Size		No. 40, 42, 43 Adapter Nipple (sw)	
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. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**		

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

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
(Ductile Iron)

Request Publication 07.01

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
4 ½ 120	5.000 127.0	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 – 24 350 – 600	AGS **See AGS Roll Groove Fittings, pg. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**		

IMPORTANT NOTES:

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

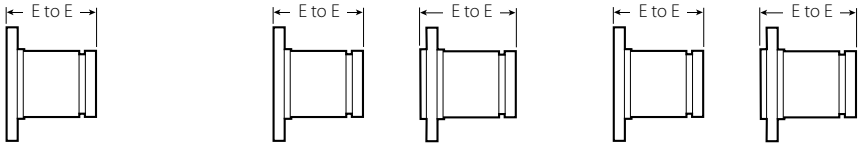
No. 60 cap is not suitable for use in vacuum service with Style 72 or 750 couplings. No. 61 bull plugs should be used, see pg. 35.

IPS Fittings

Flanged Adapter Nipple

NO. 41 ANSI Class 125 (Cast Iron)
NO. 45F ANSI Class 150 Flat Face (Steel)
NO. 45R ANSI Class 150 Raised Face (Steel)
NO. 46F ANSI Class 300 Flat Face (Steel)
NO. 46R ANSI Class 300 Raised Face (Steel)

Request Publication 07.01



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		No. 46F and No. 46R ANSI 300 Flange Adapter Nipple	
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 76	2.3 1.0	3 76	2.3 1.0	3 76	3.3 1.5
1 25	1.315 33.7	3 76	2.5 1.1	3 76	2.7 1.2	3 76	3.9 1.8
1 ¼ 32	1.660 42.4	4 102	3.0 1.4	4 102	3.3 1.5	4 102	4.8 2.2
1 ½ 40	1.900 48.3	4 102	3.5 1.6	4 102	3.9 1.8	4 102	6.9 3.1
2 50	2.375 60.3	4 102	5.5 2.5	4 102	6.2 2.8	4 102	8.2 3.7
2 ½ 65	2.875 73.0	4 102	8.0 3.6	4 102	9.9 4.5	4 102	11.9 5.4
3 80	3.500 88.9	4 102	9.5 4.3	4 102	11.4 5.2	4 102	16.5 7.5
3 ½ 90	4.000 101.6	4 102	12.0 5.4	4 102	15.1 6.8	4 102	20.1 9.1
4 100	4.500 114.3	6 152	16.7 7.6	6 152	18.4 8.3	6 152	27.4 12.4
5 125	5.563 141.3	6 152	21.5 9.8	6 152	21.3 9.7	6 152	35.3 16.0
6 150	6.625 168.3	6 152	26.5 12.0	6 152	27.5 12.5	6 152	47.5 21.5
8 200	8.625 219.1	6 152	39.0 17.7	6 152	41.3 18.8	6 152	70.3 31.9
10 250	10.750 273.0	8 203	57.0 25.9	8 203	59.8 27.1	8 203	100.8 45.7
12 300	12.750 323.9	8 203	41.0 18.6	8 203	88.2 40.0	8 203	146.2 66.3
14 – 24 350 – 600	AGS **See AGS Roll Groove Fittings, pg. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**						

IMPORTANT NOTES:

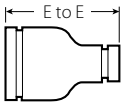
Flanged adapter nipples are supplied with standard rolled grooves. Standard cut grooves or machining for rubber lining are optionally available. Contact Victaulic for details.

IPS Fittings

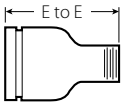
Swaged Nipple

NO. 53 Grv. × Grv.
NO. 54 Grv. × Thd.
NO. 55 Thd. × Grv.
(Steel)

Request Publication 07.01



NO. 53



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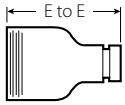


NO. 55

Size			No. 53, 54 and 55 Swaged Nipples	
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
2½ 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
		2½ 65	8.00 203	4.5 2.0
3½ 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	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
4 100	×	2½ 65	9.00 229	7.5 3.4
		3 80	9.00 229	7.5 3.4
		3½ 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
		2½ 65	12.00 305	17.4 7.9
		3 80	12.00 305	17.4 7.9
		3½ 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

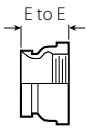
+ Contact Victaulic for details.

IPS Fittings

Female Threaded Adapter

NO. 80
(Ductile Iron#)

Request Publication 07.01



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

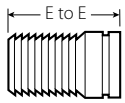
Ductile iron except those marked (sw) which are segmentally welded steel.

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

Hose Nipple

NO. 48
(Segmentally Welded Steel)

Request Publication 07.01



NO. 48

Size		No. 48 Hose Nipple	
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

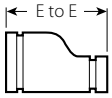
IPS Fittings

Concentric/Eccentric Reducer

NO. 50 Concentric
NO. 51 Eccentric
(Ductile Iron#)

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
1¼ 32	×	¾ 20	+	1.9 0.9	—	—
		1 25	+	1.9 0.9	—	—
1½ 40	×	¾ 20	+	1.4 0.6	—	—
		1 25	2.50* 64	0.8 0.4	8.50 (sw) 216	4.5 2.0
		1¼ 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
		1¼ 32	2.50* 64	1.2 0.5	9.00 (sw) 229	4.6 2.1
		1½ 40	2.50* 64	1.0 0.5	9.00 (sw) 229	4.6 2.1
2½ 65	×	¾ 20	+	1.3 0.6	+	3.3 1.5
		1 25	2.50 (sw) 64	3.6 1.5	9.50 (sw) 241	3.5 1.6
		1¼ 32	2.50* 64	3.3 1.5	9.50 (sw) 241	+
		1½ 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* 64	1.3 0.6	9.50 (sw) 241	4.8 2.2
		1¼ 32	+	3.0 1.4	+	4.8 2.2
		1½ 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
		2½ 65	2.50* 64	1.8 0.8	3.50 89	7.0 3.2
		76.1	2.50 64	2.1 1.0	—	—
3½ 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	10.00 (sw) 254	6.5 2.9
		1¼ 32	+	4.6 2.1	—	—
		1½ 40	10.00 (sw) 254	6.9 3.1	10.00 (sw) 254	8.1 3.7
		2 50	3.00* 76	2.4 1.1	4.00 102	3.3 1.5
		2½ 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
		3½ 90	3.00 76	2.9 1.3	10.00 (sw) 254	8.0 3.6

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
5 125	×	2 50	4.00 (sw) 102	9.0 4.1	11.00 (sw) 279	5.2 2.4
		2½ 65	11.00 (sw) 279	11.0 5.0	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
		1½ 40	+	5.5 2.5	+	+
		2 50	4.00* 102	6.6 3.0	11.50 (sw) 292	14.5 6.6
		2½ 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	×	2½ 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
		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 – 24 350 – 600			AGS **See AGS Roll Groove Fittings, pg. 77; for 14 – 24"/350 – 600 mm Cut Groove Systems Request Publication 07.01**			

\+ Contact Victaulic for details.
* Available with male threaded small end No. 52.
\# Ductile Iron except those marked (sw) which are segmentally welded steel.

IMPORTANT NOTE:

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

IPS Fittings

Small Threaded Reducer

NO. 52
(Ductile Iron#)

Request Publication 07.01

NO. 52

Size			No. 52 Small Threaded Reducer	
Nominal Size Inches mm			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	×	¾ 25	+ (sw)	1.0 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
3 80	×	¾ 20	+ (sw)	1.5 0.7
		1 25	2.50 64	1.3 0.6
		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

Size			No. 52 Small Threaded Reducer	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
4 100	×	1 25	3.00 76	2.3 1.0
		1 ½ 40	+ (sw)	2.5 1.1
		2 50	3.00 76	2.6 1.2
		2 ½ 65	3.00 76	2.6 1.2
		3 80	3.00 76	2.5 1.1
5 125	×	4 100	+ (sw)	4.5 2.0
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)	17.5 7.9
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.

\# Ductile iron except those marked (sw) which are segmentally welded steel.

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, circuit 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. 76.

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 1 ½ – 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.

You will find a variety of styles to choose from, including triple-service and 3-way assemblies. All 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 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 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

The Vic-Ball® valve is a high-pressure, standard-port ball valve with grooved ends. Its 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.

Circuit Balancing Valves

TA (Tour & Andersson) circuit balancing valves 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, or 16 full turns of the handwheel, enabling a precise setting. The result is a high degree of accurate adjustment and precise system balancing.

Tour & Andersson circuit balancing valves are offered in a variety of end configurations and sizes for a variety of heating and cooling applications. A line of automatic flow control valves and accessories is also available.

Valves

Valve Application Guide

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

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).

BUTTERFLY VALVES

46 Vic®-300 MasterSeal™
48 Three-way Automated
49 Series 700
116 Series 763 Stainless Steel
141 Series 608 Copper

CHECK VALVES

50 Series 716
51 Series 779
52 Series 712
52 Series 713
160 Series 317

PLUG VALVES

54 Series 377
156 Series 365
158 Series 366

BALL VALVES

56 Series 722
57 Series 723
58 Series 726

CIRCUIT BALANCING VALVES

60 Series 782
60 Series 783
61 Series 785
61 Series 786
61 Series 787
62 Series 787-U
62 Series 788
62 Series 789
63 Accessories

TRIPLE SERVICE VALVES

55 Butterfly/Check Combo
55 Plug/Check Combo

PRODUCTS

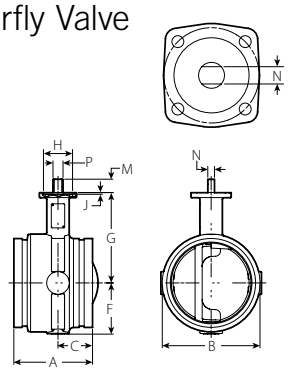
12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

IPS Valves – Butterfly Valves

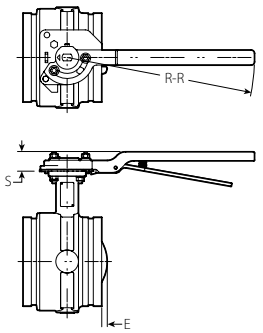
Vic-300 MasterSeal Butterfly Valve

Request Publication 08.20

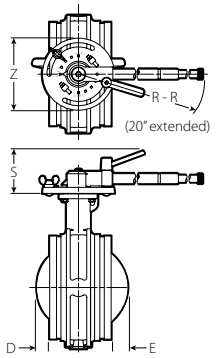
Patent Pending



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



VALVE WITH LEVER LOCK HANDLE
TYPICAL 2 – 8"/50 – 200 mm SIZES



VALVE WITH LEVER LOCK HANDLE
TYPICAL 10 – 12"/250 – 300 mm SIZES

Size		Dimensions																Approx. Weight Each		Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Dia. 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	Z Inches mm		Bare Lbs. kg	Lever Lbs. kg	C_V Values K_V Values
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	8.50 215.9	1.63 41.4	—		3.5 1.6	6.0 2.7	115 99.5
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	8.50 215.9	1.63 41.4	—		5.0 2.3	7.5 3.4	260 224.9
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	8.50 215.9	1.63 41.4	—		5.0 2.3	7.5 3.4	260 224.9
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	8.50 215.9	1.63 41.4	—		6.0 2.7	8.5 3.9	440 380.6
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	8.50 215.9	1.63 41.4	—		9.3 4.2	11.8 5.4	820 709.3
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	14.00 355.6	1.63 41.4	—		16.8 7.6	20.0 9.1	1200 1038.0
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	14.00 355.6	1.63 41.4	—		16.8 7.6	20.0 9.1	1200 1038.0
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	14.00 355.6	1.63 41.4	—		20.0 9.1	23.2 10.5	1800 1557.0
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	14.00 355.6	1.63 41.4	—		20.0 9.1	23.2 10.5	1800 1557.0
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	3400 2941.0
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	5800 5017.0
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	9000 7785.0

- 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
- 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

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

IMPORTANT NOTE:

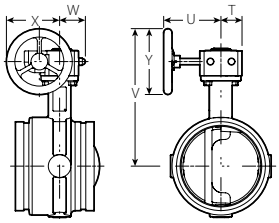
2 – 8"/50 – 200 mm sizes are ISO Flange Designation F07; 10"/250 mm and 12"/300 mm sizes are ISO Flange Designation F10.

IPS Valves – Butterfly Valves

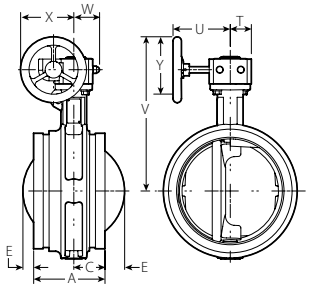
Vic-300 MasterSeal Butterfly Valve

WITH GEAR OPERATOR

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

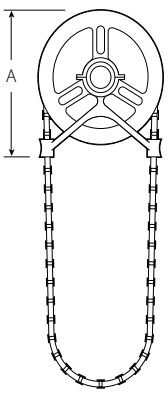
Size		Dimensions									Approx. Weight Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Dia. Inches mm	A Inches mm	C Inches mm	E Inches mm	T Inches mm	U Inches mm	V Inches mm	W Inches mm	X Inches mm	Y Inches mm	Lbs. kg	C_V Values K_V Values
2 50	2.375 60.3	3.21 81.5	1.44 36.6	—	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
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
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
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
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
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

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

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	Actual Outside Diameter Inches mm	Sprocket Size	Chain Wheel Size (Diameter) Inches mm	A Inches mm	Lbs. kg
2 – 4 50 – 100	2.375 – 4.500 60.3 – 114.3	0	4.00 10	4.63 118	2.0 0.9
5 – 8 125 – 200	5.563 – 8.625 141.3 – 219.1	1	5.75 146	6.38 162	4.0 1.8
10 – 12 250 – 300	10.750 – 12.750 273.0 – 323.9	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.

IPS Valves – Butterfly Valves

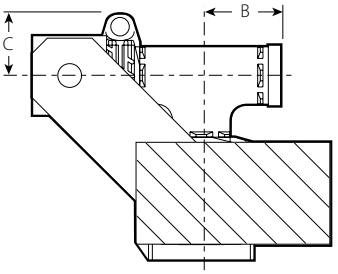
Three-way Automated Butterfly Valves

Request Publication 08.06

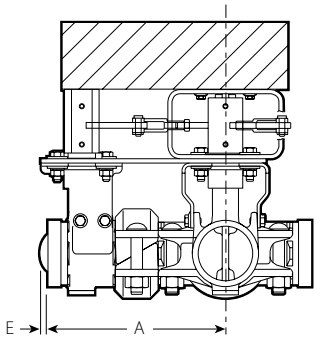
- Available in three-way configuration for mixing and diverting
- Same advantages as standard butterfly valves – positive, bubble-tight shut-off, and low pressure drop performance
- Pressure rated up to 300psi/2065kPa
- Sizes from 2 – 12"/50 – 300mm

Size		Dimensions				Approx. Wgt. Each †
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A Inches mm	B Inches mm	C Inches mm	E Inches mm	Lbs. kg
2 50	2.375 60.3	6.52 166	3.25 83	2.79 71	—	14.8 6.7
2½ 65	2.875 73.0	7.58 193	3.75 95	3.10 79	—	19.2 8.7
3 80	3.500 88.9	8.08 205	4.25 108	3.53 90	—	22.5 10.2
4 100	4.500 114.3	9.76 248	5.00 127	4.10 104	—	43.2 19.6
5 125	5.563 141.3	11.51 292	5.50 140	4.89 124	—	60.0 27.2
6 150	6.625 168.3	12.51 318	6.50 165	5.38 137	—	82.7 37.5
8 200	8.625 219.1	13.27 337	7.75 197	6.80 173	0.80 20.3	159.4 72.3
10 250	10.750 273.0	15.59 396	9.00 229	8.36 212	1.41 35.8	258.0 117.0
12 300	12.750 323.9	16.69 424	10.00 254	9.25 235	2.30 58.7	359.4 163.0

† Without operator or linkage.



TYPICAL FOR ALL SIZES



TYPICAL FOR ALL SIZES

IPS Valves – Butterfly Valves

Butterfly Valve

SERIES 700

Request Publication 08.05

STANDARD PROFILE

- Narrow disc design for low pressure drop performance
- Offered with standard- or low-profile body
- 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)
- Variety of handles or gear operators available (request 08.05 for handle details and performance)
- Designed for bubble-tight shut-off for pressure rated up to 200 psi/1400 kPa
- Sizes from 1½ – 6"/40 – 150 mm

STANDARD PROFILE BUTTERFLY VALVE

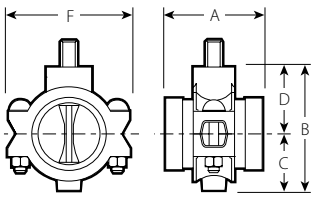
Size		Dimensions					Approx. Wgt. Each †	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Dia. Inches mm	A End to End Inches mm	B Inches mm	C Inches mm	D Inches mm	F Inches mm	Lbs. kg	C_V Values K_V Values
1½ 40	1.900 48.3	3.38 86	4.45 113	1.63 41	2.82 72	3.63 92	2.8 1.3	36 31.1
2 50	2.375 60.3	3.19 81	4.97 126	1.88 48	3.09 78	4.06 105	3.3 1.5	70 60.6
2½ 65	2.875 73.0	3.81 97	6.19 157	2.50 64	3.69 94	4.88 124	6.4 2.9	120 103.8
3 80	3.500 88.9	3.81 97	6.75 171	2.75 70	4.00 102	5.63 143	6.8 3.1	180 155.7
4 100	4.500 114.3	4.56 116	8.19 208	3.50 89	4.69 119	7.00 178	12.1 5.5	520 449.8
5 125	5.563 141.3	5.81 148	9.34 237	4.00 102	5.34 136	8.50 216	26.1 11.8	800 692.0
165.1 mm	6.500 165.1	5.81 148	10.38 264	4.50 114	5.88 149	9.50 241	30.5 13.8	1300 1124.5
6 150	6.625 168.3	5.81 148	10.38 264	4.50 114	5.88 149	9.50 241	32.5 14.7	1300 1124.5

LOW PROFILE BUTTERFLY VALVE

1½ 40	1.900 48.3	3.38 86	3.57 91	1.63 41	1.95 50	3.93 100	2.8 1.3	36 31.1
2 50	2.375 60.3	3.20 81	4.09 104	1.88 48	2.22 56	4.33 110	3.3 1.5	70 60.6
2½ 65	2.875 73.0	3.81 97	5.19 132	2.50 64	2.50 64	5.27 134	6.4 2.9	120 103.8
3 80	3.500 88.9	3.81 97	5.75 146	2.75 70	3.00 76	6.05 154	6.8 3.1	180 155.7
4 100	4.500 114.3	4.56 116	7.38 188	3.50 89	3.88 99	7.11 181	12.1 5.5	520 449.8
5 125	5.563 141.3	5.81 148	8.84 225	4.00 102	4.84 123	9.14 232	26.1 11.8	800 692.0
165.1 mm	6.500 165.1	5.81 148	9.88 251	4.50 114	5.38 137	10.08 256	30.5 13.8	1300 1124.5
6 150	6.625 168.3	5.81 148	9.88 251	4.50 114	5.38 137	10.08 256	32.5 14.7	1300 1124.5

† Without operator or linkage.

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



TYPICAL FOR ALL SIZES

IPS Valves – Check Valves

Vic Check Valve

SERIES 716

Request Publication 08.08

TYPICAL 2½ – 3"/65 – 80 mm SIZES

TYPICAL 4 – 12"/100 – 300 mm SIZES

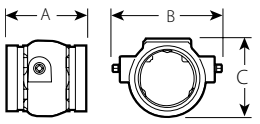
- Utilizes spring-assisted, single-disc design
- Achieves a leak-free seal with as little as 5 ft./1.5 m of head
- Installed in horizontal and vertical positions (upward flow only)
- Vic-Check valves combine high pressure capabilities with low pressure drop performance
- The grooved end design permits 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 2½ – 12"/65 – 300 mm
- AGS Series W715 check valve available for sizes 14 – 24"/350 – 600 mm, see pg. 85

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 Overall Width Inches mm	C Inches mm	D Inches mm	E Inches mm	J Inches mm	K Inches mm	P Inches mm	R Inches mm	Lbs. kg	C_v Values K_v Values
2½ 65	2.875 73.0	3.88 99	4.25 108	3.60 91	—	—	—	—	—	—	3.6 1.6	140 121.1
76.1 mm	3.000 76.1	3.88 99	4.25 108	3.60 91	—	—	—	—	—	—	3.6 1.6	140 121.1
3 80	3.500 88.9	4.25 108	5.06 129	4.19 106	—	—	—	—	—	—	4.5 2.0	250 216.3
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	390 337.4
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	700 605.5
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	700 605.5
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	1000 865.0
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	1000 865.0
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	1800 1157.0
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	3000 2595.0
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	4200 3633.0
14 – 24 350 – 600		AGS See AGS Series W715 Check Valve, pg. 85										

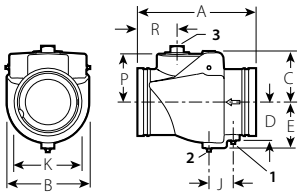
@ C_v/K_v values for flow of water at +60°F/16°C with valve fully open.

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.

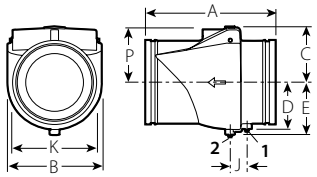


TYPICAL 2½ – 3"/65 – 80 mm SIZES



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)

IPS Valves – Check Valves

Venturi Check Valve

SERIES 779

Request Publication 08.10

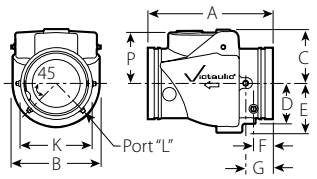
- CAD-designed hydrodynamic inlet profile provides a natural venturi as part of the valve
- Inlet is drilled, tapped, and plugged, ready to receive the flow kit (optional in Canada)
- Venturi provides much greater measurement accuracy, valve turbulence and interference across the valve seat is negligible
- 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
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
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
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

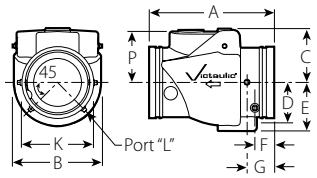
† Port "L" located 45° off center line of valve body.

* Both ports on center line of valve body.

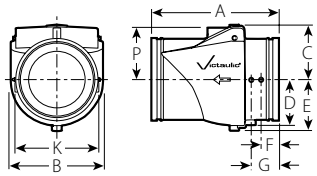
@ C_V/K_V values for flow of water at +60°F/16°C with valve fully open.



TYPICAL 4"/100 mm SIZES



TYPICAL 5 – 6"/125 – 165.1 mm SIZES



TYPICAL 8 – 12"/200 – 300 mm SIZES

IPS Valves – Check Valves

Swinger® Swing Check Valve

SERIES 712
SERIES 713

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

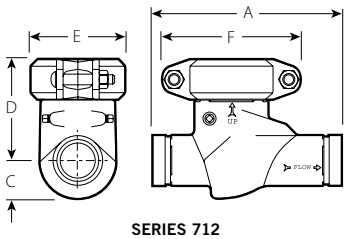
SERIES 712

Size		Max. Work Pressure	Dimensions					Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Dia. 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

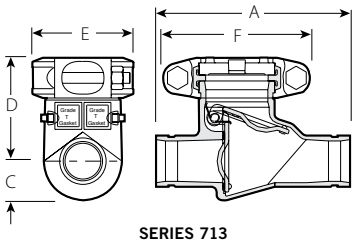
SERIES 713

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

IPS Valves – Plug Valves

Vic-Plug Balancing Valve

SERIES 377

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

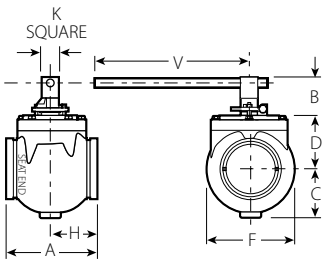
Size		Dimensions							Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
AWWA Nominal Size Inches mm	AWWA Outside Diameter Inches mm	A End to End Inches mm	C Inches mm	D Inches mm	F Inches mm	G Inches mm	H Inches mm	M Inches mm	Lbs. kg	C_V Values K_V Values
3* 80	3.96 100.6	8.00 203	3.75 95	4.25 108	6.56 167	—	4.00 102	4.00 102	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	4.00 102	42.0 19.1	1040 899.6
6* 150	6.90 175.3	10.50 267	5.50 140	7.50 191	10.32 262	—	5.25 133	—	80.0 36.3	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.

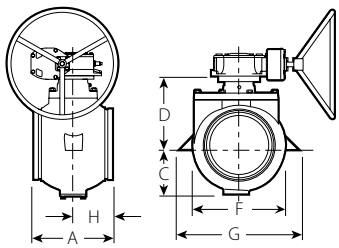
@ C_V/K_V values for flow of water at +60°F/16°C with valve fully open.

IMPORTANT NOTE:

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



TYPICAL 3 – 6"/80 – 150 mm SIZES



TYPICAL 8 – 12"/200 – 300 mm SIZES

Vic-Plug Balancing Valve (cont'd)

SERIES 377

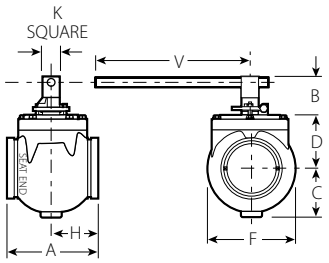
Request Publication 08.12

- 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

MANUAL HANDLE 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	B Inches mm	C Inches mm	D Inches mm	F Inches mm	H Inches mm	K Inches (mm)	V Inches (mm)	Lbs. (kg)	C_v Values K_v Values
3 80	3.96 100.6	8.00 203	4.06 103	3.75 95	4.25 108	6.56 167	4.00 102	2.00 51	18.50 470	32.0 14.5	600 519.0
4 100	4.80 121.9	9.00 229	4.06 103	4.44 113	4.75 121	7.74 197	4.50 114	2.00 51	18.50 470	39.0 17.7	1040 899.6
6 150	6.90 175.3	10.50 267	5.63 143	5.56 141	7.50 190	10.32 262	5.25 133	2.00 51	18.50 470	74.0 33.6	2100 1816.5

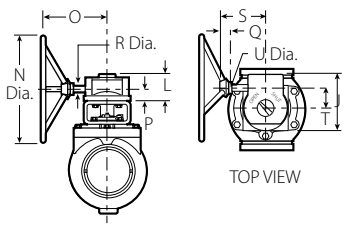
@ C_v/K_v values for flow of water at +60°F/16°C with valve fully open.



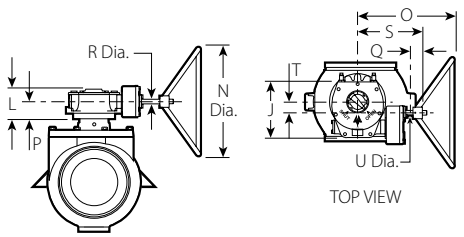
TYPICAL 3 – 6"/80 – 150 mm SIZES

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
MFF-36	13.78 350	5.04 128	30.00 762	9.53 242	2.60 66	1.77 45	1.00 25	15.00 381	5.43 138	0.25 6	45	148.6 67.4



TYPICAL 3 – 6"/80 – 150 mm SIZES



TYPICAL 8 – 12"/200 – 300 mm SIZES

IPS Valves – Triple Service Valves

Triple Service Valve Assembly

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 Vic-300 MasterSeal butterfly valve or the Series 377 Vic-Plug balancing valve
- For 2½ – 3"/65 – 80 mm configurations use a Series 716 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

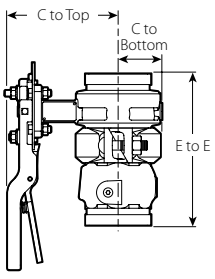
‡ Based on Style 77 couplings. When using Style 07 dimensions are 1.94"/49 mm for 2½"/65 mm size and 2.25"/57 mm for 3"/80 mm size.

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

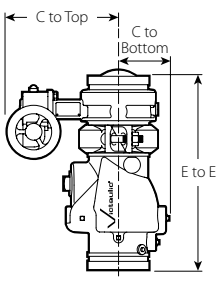
IMPORTANT NOTE:

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



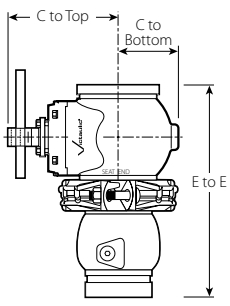
TYPICAL 2½ – 3"/ 65 – 80 mm SIZES

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



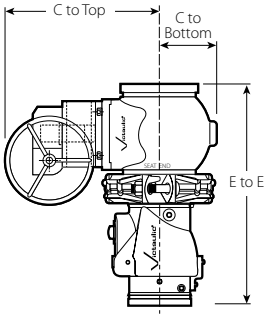
TYPICAL 4 – 12"/ 100 – 300 mm SIZES

Vic-300 MasterSeal gear operator butterfly valve and Series 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

IPS Valves – Ball Valves

Brass Body Ball Valve

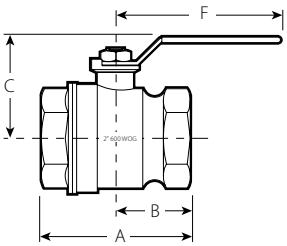
SERIES 722

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 Dia. 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.



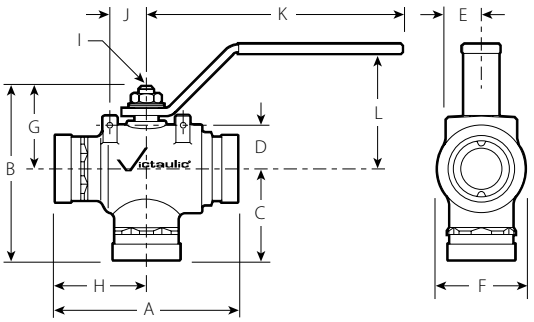
TYPICAL FOR ALL SIZES

IPS Valves – Ball Valves

Three Port Diverter Ball Valve

SERIES 723

Request Publication 08.13



FOR 2"/50 mm SIZE

Size		Dimensions														Approx. Wgt. Each
										I-Stem Drive Hub						
Nominal Size Inches mm	Actual Out. Dia. 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	Dia. Inches mm	Flat Width Inches mm	Flat Height Inches mm	J Inches mm	K Inches mm	L Inches mm	Lbs. kg
2 50	2.375 60.3	6.50 165	6.19 157	3.25 83	1.57 40	1.25 32	3.13 80	2.94 75	3.25 83	0.62 16	0.50 13	0.50 13	1.31 33	9.13 232	4.13 105	7.5 3.4

IMPORTANT NOTE:

Bracket hubs are drilled and tapped (¼ – 20 UNC-2B, 7⁄16 DP) in four places for mounting actuator brackets.

- NACE MR-01-75 compliant
- Three-port ball valve
- Common bottom inlet for diverting flow 90° left or right
- 180° operation is optionally available
- Internal plastic coating available
- Three-port ball and blowout proof stem are Type 316 stainless
- Pressure rated up to 600 psi/4135 kPa
- Size: 2"/50 mm

IPS Valves – Ball Valves

Vic-Ball Valve

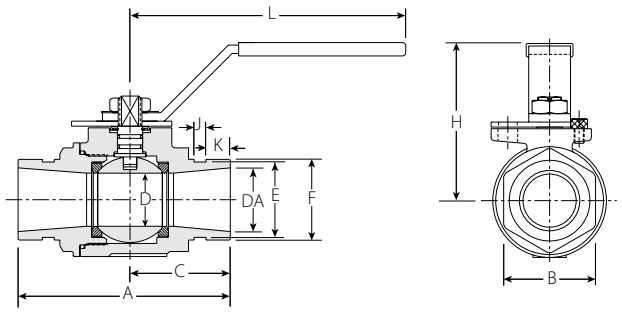
SERIES 726

Request Publication 08.23

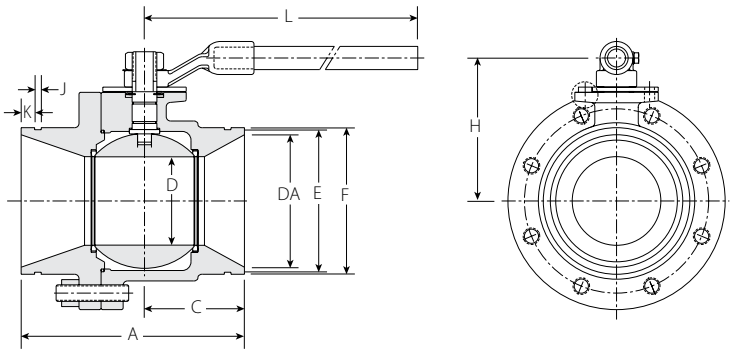
Size		Dimensions											Approx. Wgt Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Out. Dia. Inches mm	A Inches mm	B Inches mm	C Inches mm	D Inches mm	DA Inches mm	E Inches mm	F Inches mm	H Inches mm	J Inches mm	K Inches mm	L Inches mm	Lbs. kg	C_V Values K_V Values
1½ 40	1.900 48.3	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	4.4 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
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	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.

- 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



TYPICAL 1½ – 3"/40 – 80 mm SIZES



TYPICAL 4 – 6"/100 – 150 mm SIZES

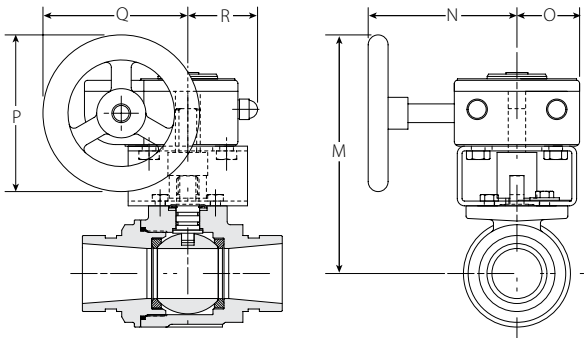
Vic-Ball Valve (cont'd)

SERIES 726 WITH GEAR OPERATOR

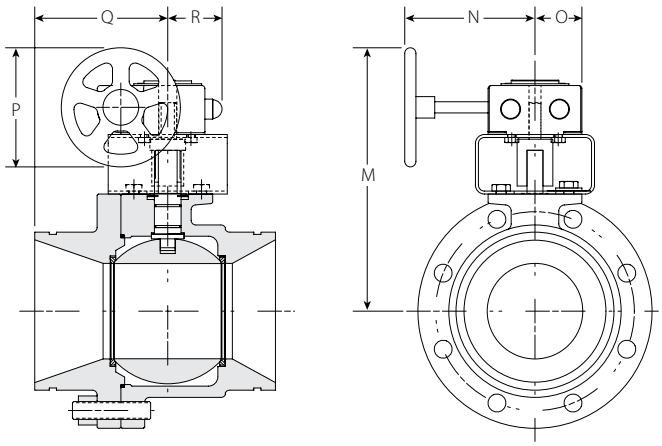
Request Publication 08.23

Size		Dimensions						Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Dia. 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
1½ 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
2½ 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
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

@ 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

IPS Valves – Circuit Balancing Valves

Tour & Andersson Balancing Valves

Request Publication 08.16

- Reliable, simple, and cost effective
- Full throttling range is achieved by 4, 8, 12, or 16 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 of +250°F/+120°C and –22°F/-30°C

Bypass Valve
Straight and Angled

SERIES 782 & 783, PG. 60

Balancing Valve
Solder Style

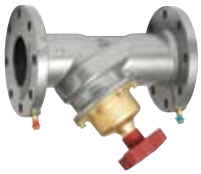
SERIES 785, PG. 61

Balancing Valve
Solder End

SERIES 786, PG. 61

Balancing Valve
Female Threaded End

SERIES 787 & 787-U, PGS. 61-62



Balancing Valve
Flanged End

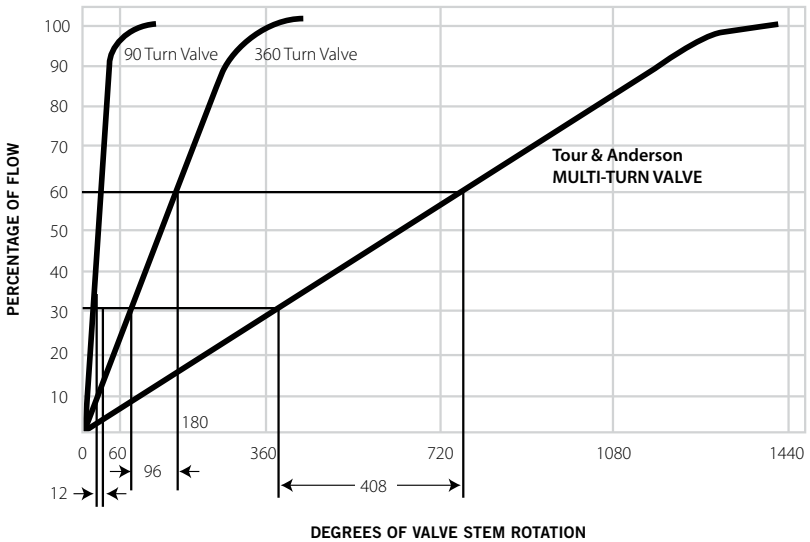
SERIES 788, PG. 62

Balancing Valve
Grooved End

SERIES 789, PG. 62

COMPARISON OF THROTTLING CHARACTERISTICS

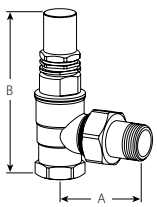
- This curve illustrates the advantage of the four (4) turn adjustment available with TA balancing valves ½ – 2"/15 – 50 mm, valves 2½"/65 mm and larger have 8, 12, or 16 turns
- A 90° fully open to closed valve requires just a 12° change in adjustment to equal 30% change in flow
- A 360° fully open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



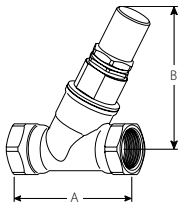
Bypass Valve

SERIES 782 Straight
SERIES 783 Angle

Request Publication 08.16



TYPICAL ½ – ¾"/15 – 20 mm SIZES



TYPICAL ½ – ¾"/15 – 20 mm SIZES

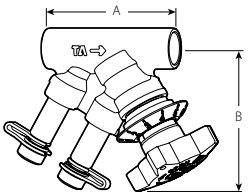
Size		Series 782 Straight Bypass Valve			Series 783 Angle Bypass Valve		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	B Center to Top Inches mm	Approx. Weight Each Lbs. kg	Center to End A Inches mm	Height B Inches mm	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	3.35 85	3.66 93	1.2 0.5	2.76 70	4.80 122	1.3 0.6
¾ 20	1.050 26.7	3.86 98	4.06 103	1.9 0.8	3.27 83	5.40 138	1.5 0.7

IPS Valves – Circuit Balancing Valves

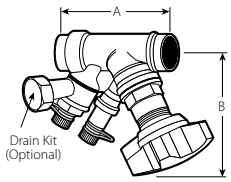
Balancing Valve

SERIES 785 Solder Style
SERIES 786 Solder End
SERIES 787 Female Threaded End

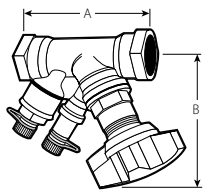
Request Publication 08.16



TYPICAL ½ – ¾"/15 – 20 mm SIZES



TYPICAL ½ – 2"/15 – 50 mm SIZES



TYPICAL ½ – 2"/15 – 50 mm SIZES

Size		Series 785 Solder Style Balancing Valve			Series 786 Solder End (300 psi/2065 kPa) Balancing Valve			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	A End to End Inches mm	B Center to Top Inches mm	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	2.63 67	2.88 73	1.0 0.5	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	3.16 80	2.56 65	1.0 0.5	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		Series 785 Solder Style Balancing Valve			Series 786 Solder End (300 psi/2065 kPa) Balancing Valve			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	Minimum Flow GPM LPM	Nominal Flow GPM LPM	Maximum Flow GPM LPM
½ 15	0.840 21.3	0.27 1.02	3.0 11.4	9.5 36.0	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	0.38 1.44	4.2 15.9	15.0 56.8	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.

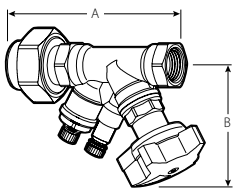
The valve can be installed with opposite flow direction. The specified flow accuracy is also valid for this direction, although tolerances can be greater (maximum 5% more).

IPS Valves – Circuit Balancing Valves

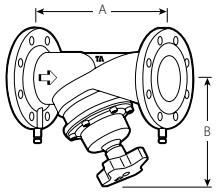
Balancing Valve

SERIES 787-U Union End
SERIES 788 Flanged End
SERIES 789 Grooved End

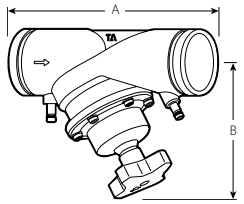
Request Publication 08.16



TYPICAL ½ – 1"/15 – 25 mm SIZES



TYPICAL 2½ – 12"/65 – 300 mm SIZES



TYPICAL 2½ – 12"/65 – 300 mm SIZES

Size		Series 787-U Union End Balancing Valve			Series 788 Flange End (250 psi/1720 kPa) Balancing Valve			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	A End to End Inches mm	B Height Inches mm	Approx. Weight Each Lbs. kg
½ 15	0.840 21.3	4.81 122	4.00 102	1.7 0.8	—	—	—	—	—	—
¾ 20	1.050 26.7	5.13 130	4.00 102	1.8 0.8	—	—	—	—	—	—
1 25	1.315 33.7	6.00 152	4.50 114	2.2 1.0	—	—	—	—	—	—
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		Series 787-U Union End Balancing Valve			Series 788 Flange End (250 psi/1720 kPa) Balancing Valve			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	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	—	—	—	—	—	—
¾ 20	1.050 26.7	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	—	—	—	—	—	—
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: (SEE PG. 61 FOR MEASURING ACCURACY)

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.

IPS Valves – Circuit Balancing Valve Accessories

TA Link Differential Pressure Sensor

SERIES 736

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 Tour & Andersson balancing valves
- Measurement probes provided for direct connection to the measurement points on all Series 786, 787, 788, and 789 circuit balancing valves

Hand-held Circuit Balancing Instrument

SERIES 737

Request Publication 08.16

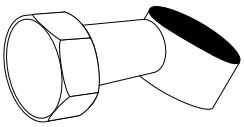
- Series 737 CBI-II meter is a hand-held computer balancing instrument programmed for use with Tour & Andersson balancing valves to obtain direct reading of flow and differential pressures
- This instrument consists of an electronic differential pressure gauge and a microcomputer
- Measured values can be saved in the unit before transferring the information to a PC for printing out a commissioning report of for creating a permanent record

Portable Differential Pressure Meter

SERIES 738 Flanged End (250 psi/1720 kPa)

Request Publication 08.16

- Series 738 portable differential pressure meter is an accurate device for measuring differential pressure in Tour & Andersson circuit balancing valves
- Using the balancing wheel supplied with the meter, the measured pressure differential can be converted to a flow measurement
- Series 738 can be used on systems up to the full rated working pressure of the Tour & Andersson valves (or up to 500 psi/3450 kPa on other devices)
- Units are supplied in a protective case including a balancing wheel, adapter fittings and valve
- When using the portable differential pressure meter on other valves, contact Victaulic



Drain Kit

SERIES 786-DK

Request Publication 08.16

- A separate drain kit with a ¾"/20 mm connection is available for Series 786 and Series 787 valves
- Kit must be field mounted

IPS 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) products, see pg. 76.

Suction Diffuser with ANSI Class 150 Flange

SERIES 731-G, PG. 66
AGS SERIES W731-G, PG. 88

Vic-Strainer® – Tee Type

SERIES 730, PG. 68
AGS SERIES W730, PG. 89

Vic-Strainer – Wye Type

SERIES 732, PG. 69

Mover® Expansion Joint

STYLE 150, PG. 70

Standard Expansion Joint

STYLE 155, PG. 71

IPS Accessories

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.

Venturi Flow Metering Sensor

SERIES 733, PGS. 72-73

Orifice/Indicator Flow Metering Sensor

SERIES 734, PG. 72
SERIES 734S, PG. 72
SERIES 734 XT-M/F, PG. 73
SERIES 734 XT-F/F, PG. 73
SERIES 734 XS-M/F, PG. 73

Portable Test Meter

STYLE 739, PG. 74

Dielectric Waterway Fitting

STYLE 47, PG. 75

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

IPS Accessories

Suction Diffuser with ANSI Class 150 Flange

SERIES 731-G

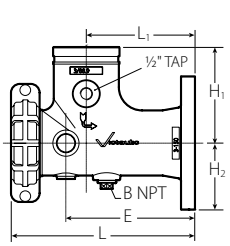
Request Publication 09.14

- Provides optimum flow conditions at the inlet side of the pump
- Equipped with a removable strainer and fine mesh sleeve
- Pipe support bosses provided to aid in proper alignment
- Plug is provided to allow easy draining of the system
- Simple removal of closure coupling speeds cleaning and maintenance
- For JIS and DIN dimensions request publication 09.14
- Pressure rated up to 300 psi/2065 kPa
- Sizes from 3 × 2"/ 80 × 50 mm through 12 × 12"/300 × 300 mm

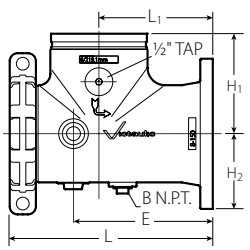
Size			Dimensions						Approx. Wgt. Each
System Side Grooved	×	Pump Side Flgd. ANSI Class 150							
Nominal Size Inches mm			L Inches mm	L_1 Inches mm	H_1 Inches mm	H_2 Inches mm	B N.P.T. Inches mm	E Inches mm	Lbs. kg
3 80	×	2 50	10.63 270	6.30 160	5.51 140	3.00 76.2	1 25	7.48 190	21.7 9.8
		2½ 65	10.63 270	6.30 160	5.51 140	3.50 89	1 25	7.48 190	21.7 9.8
		3 80	10.63 270	6.30 160	5.51 140	3.74 95.1	1 25	7.48 190	21.7 9.8
4 100	×	2† 65	†	†	†	†	†	†	†
		2½ 65	12.48 317	7.36 187	6.50 165	3.50 89.0	1 25	8.74 222	35.4 16.1
		3 80	12.48 317	7.36 187	6.50 165	3.74 95.1	1 25	8.74 222	35.4 16.1
		4 100	12.48 317	7.36 187	6.50 165	4.50 114.5	1 25	8.74 222	35.4 16.1
5 125	×	3 80	14.29 363	8.39 213	7.52 191	4.51 114.5	1 ¼ 32	9.84 250	51.9 23.5
		4 100	14.29 363	8.39 213	7.52 191	4.51 114.5	1 ¼ 32	9.84 250	51.9 23.5
		5 125	14.29 363	8.39 213	7.52 191	4.92 125	1 ¼ 32	9.84 250	51.9 23.5
6 150	×	3 80	15.51 394	9.02 229	7.99 203	4.51 114.5	1 ¼ 32	10.98 279	68.2 30.9
		4 100	15.51 394	9.02 229	7.99 203	4.51 114.5	1 ¼ 32	10.98 279	68.2 30.9
		5 125	15.51 394	9.02 229	7.99 203	4.92 125	1 ¼ 32	10.98 279	68.2 30.9
		6 150	15.51 394	9.02 229	7.99 203	5.49 139.5	1 ¼ 32	10.98 279	68.2 30.9
8 200	×	5 125	18.27 464	10.24 260	9.02 229	5.00 127.0	1 ¼ 32	12.52 318	120.6 54.7
		6 150	18.27 464	10.24 260	9.02 229	5.49 139.5	1 ¼ 32	12.52 318	120.6 54.7
		8 200	18.27 464	10.24 260	9.02 229	6.75 171.5	1 ¼ 32	12.52 318	120.6 54.7
10 250	×	6 150	22.11 561.5	12.40 315	10.98 279	5.50 139.7	1 ¼ 32	15.55 395	192.5 87.3
		8 200	22.11 561.5	12.40 315	10.98 279	6.75 171.5	1 ¼ 32	15.55 395	192.5 87.3
		10 250	22.11 561.5	12.40 315	10.98 279	7.99 203.0	1 ¼ 32	15.55 395	192.5 87.3
12 300	×	8 200	26.30 668	15.43 392	13.19 335	6.75 171.5	1 ¼ 32	18.58 472	290.4 131.7
		10 250	26.30 668	15.43 392	13.19 335	7.99 203.0	1 ¼ 32	18.58 472	290.4 131.7
		12 300	26.30 668	15.43 392	13.19 335	9.70 246.5	1 ¼ 32	18.58 472	290.4 131.7
14 – 24 350 – 600			AGS See AGS Series W731-G, pg. 88						

* See Recommended Minimum Clearance Required to Remove Diffuser Basket on pg. 67.

† Series 731 suction diffuser with two piece body, request Publication 09.14 for more details.



TYPICAL 3 × 2"/80 × 50 mm THROUGH 6 × 6"/150 × 150 mm SIZES



TYPICAL 8 × 5"/200 × 125 mm THROUGH 12 × 12"/300 × 300 mm SIZES

IPS Accessories

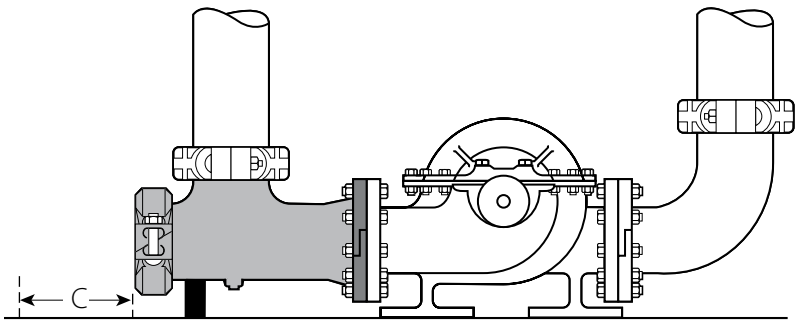
Recommended Minimum Clearance Required to Remove Diffuser Basket

Recommended Minimum Clearance Required to Remove Diffuser Basket			
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C Clearance Inches mm	Recommended Support Leg Pipe Diameter † Inches mm
3 80	3.500 88.9	9.00 230	1 ¼ 32
4 100	4.500 114.3	11.00 279	1 ¼ 32
139.7 mm	5.500 139.7	12.00 305	2 51
5 125	5.563 141.3	12.00 305	2 51
165.1 mm	6.500 165.1	12.00 300	2 51
6 150	6.625 168.3	13.00 330	2 51
216.3 mm	8.515 216.3	15.00 381	2 51
8 200	8.625 219.1	15.00 381	2 51
267.4 mm	10.528 267.4	18.00 457	2 51
10 250	10.750 273.0	18.00 457	2 51
318.5 mm	12.539 318.5	21.00 533	2 51
12 300	12.750 323.9	21.00 533	2 51
14 – 24 350 – 600	AGS See AGS Series W731-G, pg. 88		

† Based on Schedule 40 pipe diameter.

IMPORTANT NOTE:

These recommended clearances are equal to the minimum clearance, plus 2"/51 mm



RECOMMENDED MINIMUM CLEARANCE REQUIRED TO REMOVE DIFFUSER BASKET

IPS Accessories

Vic-Strainer – Tee Type

SERIES 730

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 304 stainless 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

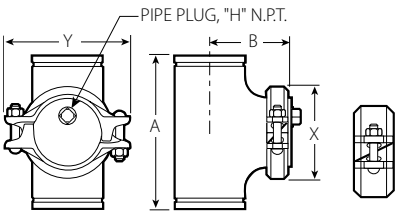
Size		Max. Work Pressure †	Dimensions					Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	A Inches mm	B Inches mm	X Inches mm	Y Inches mm	H Inches mm	Lbs. kg	C_v Values K_v Values
1½ 40	1.900 48.3	750 5175	5.50 140	3.75 95	2.94 75	5.81 148	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. 89							

† 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

IPS Accessories

Vic-Strainer – Wye Type

SERIES 732

Request Publication 09.03

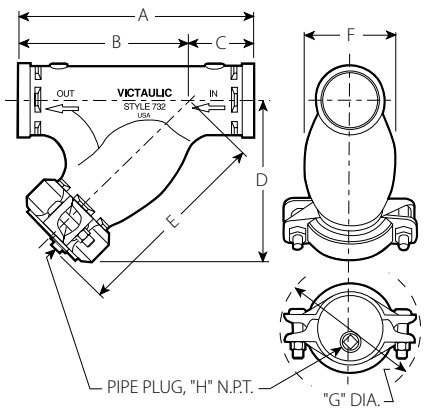
- Provides straight through flow for lower pressure drop
- Installs with two Victaulic couplings
- Durable 304 stainless perforated basket
- Pressure rated up to 300 psi/2065 kPa
- Sizes from 2 – 12"/50 – 300 mm

Size		Max. Work Press.†	Dimensions								Approx. Wgt. Each	Flow Coefficient@
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	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	Lbs. kg	C_V Values K_V Values
2 50	2.375 60.3	300 2065	9.75 248	7.00 178	2.75 70	7.54 192	8.54 217	3.50 89	5.25 133	0.50 13	10.0 4.5	72 62.3
2½ 65	2.875 73.0	300 2065	10.75 273	7.75 197	3.00 76	8.32 211	9.32 237	4.13 105	5.81 148	0.50 13	14.0 6.4	111 96.0
76.1 mm	3.000 76.1	300 2065	10.75 273	7.75 197	3.00 76	8.32 211	9.32 237	4.13 105	5.81 148	0.50 13	14.0 6.4	111 96.0
3 80	3.500 88.9	300 2065	11.75 299	8.50 216	3.25 83	9.08 231	10.14 258	4.75 121	6.63 168	0.75 19	20.0 9.1	164 141.9
4 100	4.500 114.3	300 2065	14.25 362	10.50 267	3.75 95	11.06 281	12.36 314	6.25 159	7.94 202	1.00 25	32.0 14.5	285 246.5
5 125	5.563 141.3	300 2065	16.50 419	12.50 318	4.00 102	13.00 330	14.36 365	7.88 200	9.50 241	1.00 25	50.0 22.7	410 354.7
165.1 mm	6.500 165.1	300 2065	18.50 470	14.00 356	4.50 114	14.44 367	16.06 408	9.25 235	10.50 267	1.25 32	72.0 32.7	597 516.4
6 150	6.625 168.3	300 2065	18.50 470	14.00 356	4.50 114	14.44 367	16.06 408	9.25 235	10.50 267	1.25 32	72.0 32.7	597 516.4
8 200	8.625 219.1	300 2065	24.00 610	18.00 457	6.00 152	18.38 467	20.50 521	12.38 315	13.19 335	1.50 38	125.0 56.7	1000 865.0
10 250	10.750 273.0	300 2065	27.00 686	21.00 533	6.00 152	22.00 559	23.82 605	14.25 362	15.92 404	2.00 51	205.0 93.0	1800 1557.0
12 300	12.750 323.9	300 2065	30.00 762	24.50 622	5.50 140	24.75 629	27.37 695	17.00 432	18.23 463	2.00 51	280.0 127.0	2800 2422.2

† 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.

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



TYPICAL FOR ALL SIZES

IPS Accessories

Mover Expansion Joint

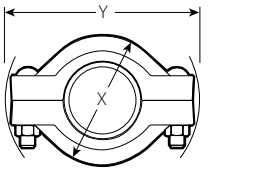
STYLE 150

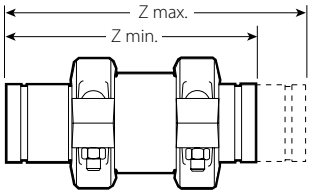
Request Publication 09.04

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 2400	3 76.2	4.75 121	6.75 172	11.88 302	14.88 378	15.9 7.2
3 80	3.500 88.9	350 2400	3 76.2	6.00 152	8.50 216	12.13 308	15.13 384	25.6 11.6
4 100	4.500 114.3	350 2400	3 76.2	7.25 184	9.88 251	14.13 359	17.13 435	39.6 18.0
5 125	5.563 141.3	350 2400	3 76.2	+	+	+	+	55.0 24.9
6 150	6.625 168.3	350 2400	3 76.2	10.75 273	14.00 356	16.00 406	19.00 483	75.0 34.0

+ Contact Victaulic for details.

- 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

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.

IPS Accessories

Standard Expansion Joint

STYLE 155

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

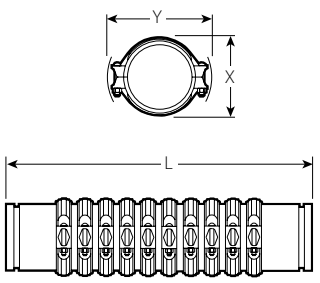
Standard Units †								
Size		Style	Dimensions					Approx. Wgt. Each
			L - Length (ref.) §					
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Coupling Style	Compressed Inches mm	Expanded Inches mm	X Height Inches mm	Y Width Inches mm	Total Movement Capability Inches mm	Lbs. kg
¾ 20	1.050 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

† Contact Victaulic for performance requirements not listed above.

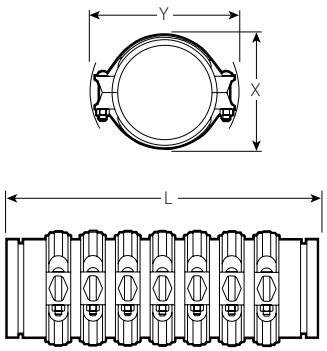
§ Dimensions may vary slightly due to tolerances.

IMPORTANT NOTE:

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



TYPICAL ¾ – 3½"/20 – 90 mm SIZES



TYPICAL 4 – 12"/100 – 300 mm SIZES

IPS Accessories

Venturi Flow Metering Sensor

SERIES 733

Request Publication 09.08

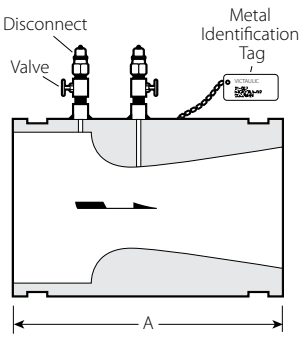
- Accurate and economical way to measure flow
- Grooved end allows fast, easy installation with standard Victaulic couplings
- For proper installation, all sizes have minimum straight pipe requirement of five diameters upstream and two downstream
- Pressure rated up to 250 psi/1725 kPa at +230˚F/+110˚C water
- Sizes from 2½ – 12"/ 65 – 300 mm for measuring flow from smallest coils to largest pumps

Size		Maximum Working Pressure	Dimensions	Approx. Weight Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	A End to End Inches mm	Lbs. kg	C Values (m3/hr)/mm
2½L 65	2.875 73.0	250 1725	4.63 118	2.5 1.1	13 0.12
2½H 65	2.875 73.0	250 1725	4.00 101.6	2.7 1.2	22 0.20
3L 80	3.500 88.9	250 1725	5.25 133	3.5 1.6	19 0.17
3H 80	3.500 88.9	250 1725	4.25 108.0	3.5 1.6	32 0.29
4L 100	4.500 114.3	250 1725	5.88 149	5.5 2.5	35 0.31
4H 100	4.500 114.3	250 1725	5.38 136.5	5.5 2.5	53 0.47
5 125	5.563 141.3	250 1725	5.00 127	6.9 3.1	65 0.58
6 150	6.625 168.3	250 1725	6.00 152	6.0 2.7	95 0.85
8 200	8.625 219.1	250 1725	7.00 178	19.0 8.6	173 1.55
10 250	10.750 273.0	250 1725	8.00 203	19.0 8.6	285 2.55
12 300	12.750 323.9	250 1725	12.00 305	60.0 27.2	380 3.39

@ Flow coefficient (C) equal to GPM with 1 inch of water meter reading.

IMPORTANT NOTE:

For products larger than 12"/300 mm contact our Engineered Product Group for pricing and availability.



TYPICAL FOR ALL SIZES

IPS Accessories

Orifice/Indicator Flow Metering Sensor

SERIES 734 AND SERIES 734S

Request Publication 09.09

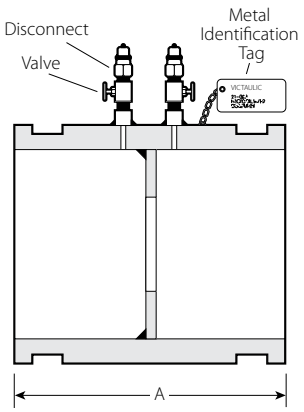
- Accurate and economical way to measure flow
- Grooved ends allow fast, easy installation with two standard Victaulic couplings
- For proper installation, sizes 2½ – 4"/65 – 100 mm have minimum straight pipe requirement of five diameters upstream and two downstream
- For proper installation, 5"/125 mm size has minimum straight pipe requirement of ten diameters upstream and four downstream
- Pressure rated up to 250 psi/1725 kPa at +230˚F/+110˚C water
- Sizes from 2½ – 12"/ 65 – 300 mm

Size		Maximum Working Pressure	Dimensions	Approx. Weight Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	A End to End Inches mm	Lbs. kg	C Values (m3/hr)/mm
2½L 65	2.875 73.0	250 1725	3.50 89	2.0 0.9	12 0.11
2½H 65	2.875 73.0	250 1725	3.50 89	2.0 0.9	19 0.17
3H 80	3.500 88.9	250 1725	3.50 89	3.0 1.2	29 0.26
3L 80	3.500 88.9	250 1725	3.50 89	3.0 1.2	16 0.14
3M 80	3.500 88.9	250 1725	3.50 89	3.0 1.2	22 0.20
4L 100	4.500 114.3	250 1725	3.63 92	4.0 1.8	25 0.22
4M 100	4.500 114.3	250 1725	3.63 92	4.0 1.8	35 0.31
4H 100	4.500 114.3	250 1725	3.63 92	4.0 1.8	52 0.46
5 125	5.563 141.3	250 1725	4.25 108	6.0 2.6	64 0.57
6 150	6.625 168.3	250 1725	4.25 108	7.2 3.3	89 0.80
8 200	8.625 219.1	250 1725	4.75 121	12.0 5.4	177 1.58
10 250	10.750 273.0	250 1725	5.00 127	17.0 8.1	269 2.40
12 300	12.750 323.9	250 1725	5.00 127	21.2 9.6	406 3.63

@ Flow coefficient (C) equal to GPM with 1 inch of water meter reading.

IMPORTANT NOTE:

For products larger than 12"/300 mm contact our Engineered Product Group for pricing and availability.



TYPICAL FOR ALL SIZES

IPS Accessories

Orifice/Indicator and Venturi Flow Metering Sensors

SERIES 733
SERIES 734
Brass Flow Sensors with Threaded or Sweat Ends

Request Publication 09.10

SERIES 733 VENTURI

SERIES 734 ORFICE/INDICATOR

Size		Series 733 Threaded Venturi		Series 734 XT-M/F Threaded Orifice/Indicator		Series 734 XF-F/F Threaded Orifice/Indicator		Series 734 XS-M/F Sweated Orifice/Indicator	
Nominal Size Inches mm	Actual Outside Dia. Inches mm	End to End Inches mm	Approx. Wgt. Each Lbs. kg	End to End Inches mm	Approx. Wgt. Each Lbs. kg	End to End Inches mm	Approx. Wgt. Each Lbs. kg	End to End Inches mm	Approx. Wgt. Each Lbs. kg
½ 15	0.840 21.3	2.75 70	1.5 0.7	1.50 38	0.7 0.3	1.50 38	0.6 0.3	1.50 38	0.5 0.2
¾ 20	1.050 26.7	3.00 76	2.0 0.9	1.50 38	1.3 0.6	1.50 38	0.8 0.4	1.50 38	1.3 0.6
1 25	1.315 33.7	3.75 95	2.5 1.1	1.88 48	2.0 0.9	1.88 48	2.0 0.9	1.88 48	1.3 0.6
1 ¼ 32	1.660 42.4	4.00* 102	3.0 1.4	2.75 70	2.0 0.9	2.75 70	2.0 0.9	—	—
1 ½ 40	1.900 48.3	4.25* 108	3.5 1.6	2.75 70	3.0 1.4	2.75 70	2.0 0.9	—	—
2 50	2.375 60.3	5.00* 127	6.8 3.1	3.25 83	5.7 2.6	3.25 83	3.0 1.4	—	—

* "L" size shown. "H" size 1 ¼ = 3.75"/95 mm; 1 ½" and 2" = 4.25"/108 mm.

- Accurate and economical way to measure flow in HVAC systems
- For proper installation, all sizes have minimum straight pipe requirement of five diameters upstream and two downstream
- Pressure rated up to 250 psi/1725 kPa at 230˚F/+110˚C water
- Sizes from ½ – 2"/ 15 – 50 mm

Portable Test Meter

STYLE 739

Request Publication 09.11

- Connect directly to Style 733 Venturi or Style 734 orifice indicators for accurate and economical flow measurements
- Available as standard in inches of H_2O or millimeters of H_2O

IPS Accessories

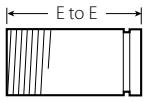
Dielectric Waterway Fitting

STYLE 47

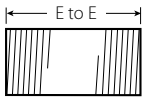
Request Publication 09.07

- 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
- 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 ½ – 8"/ 15 – 200 mm

* ClearFlow is a registered trademark of Perfection Corp.

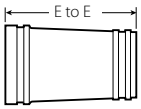


STYLE 47-GT GRV. × THD.



STYLE 47-TT THD. × THD.

Size		Style 47-GT Grooved × Threaded			Style 47-TT Threaded × Threaded		
Nominal Size Inches mm	Actual Outside Dia. 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



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

Size			Maximum Working Pressure	Dimensions	Approx. Weight Each
	Actual Outside Diameter				
Nominal Size Inches mm	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
2 ½ 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

We offer a full range of 14 – 24"/350 – 600 mm Advanced Groove System (AGS) couplings, 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.

Couplings

Rigid Coupling

STYLE W07, PG. 78

Flexible Coupling

STYLE W77, PG. 79

Accessories

Suction Diffuser with ANSI Class 150 Flange

SERIES W731-G, PG. 88

Vic-Strainer – Tee Type

SERIES W730, PG. 89

Valves

Dual Disc Vic Check Valve

SERIES W715, PG. 85

Butterfly Valve 300 psi/2065 kPa

SERIES W706, PG. 86

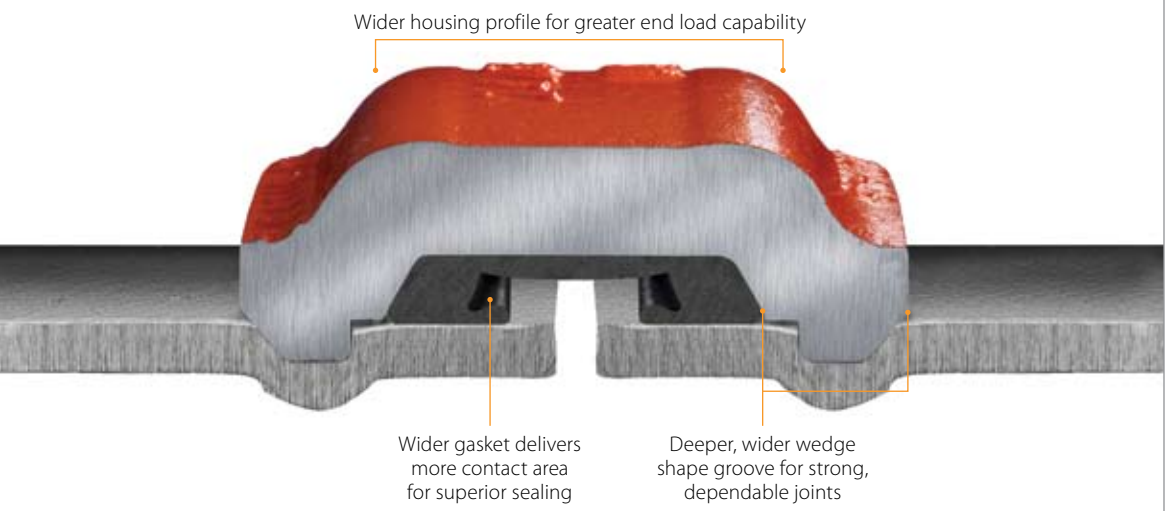
Butterfly Valve 175 psi/1270 kPa

SERIES W709, PG. 87

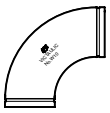
Advanced Groove System

AGS

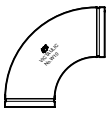
A complete piping system, for sizes 14 – 24"/350 – 600 mm



Fittings



90° Elbow
NO. W10, PG. 80



90° 1½ D Long Radius Elbow
NO. W100, PG. 80

True Wye
NO. W33, PG. 80

Adapter Nipple AGS Grv. × Bev.
NO. W42, PG. 83

45° Elbow
NO. W11, PG. 80

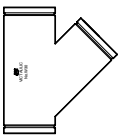
45° 1½ D Long Radius Elbow
NO. W110, PG. 80

Cross
NO. W35, PG. 80

Adapter Nipple AGS Grv. × AGS Grv.
NO. W43, PG. 83

22 ½° Elbow
NO. W12, PG. 80

Tee
NO. W20, PG. 80



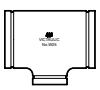
45° Lateral
NO. W30, PG. 82

Adapter Nipple* AGS Grv. × Non-AGS Grv.
NO. W49, PG. 83

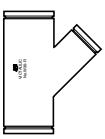
Concentric Reducer
NO. W50, PG. 84

Cap
NO. W60, PG. 83

11 ¼° Elbow
NO. W13, PG. 80



Reducing Tee
NO. W25, PG. 81



45° Reducing Lateral
NO. W30-R, PG. 82

Flanged Adapter Nipple
NO. W45R, PG. 83

Eccentric Reducer
NO. W51, PG. 84

* ANSI/AWWA C606 Grooved and Shouldered Joints

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

AGS

Rigid Coupling

STYLE W07

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 for all sizes

Size		Max. Work Pressure*	Max. End Load*	Allow. Pipe End Sep.†	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
14 350	14.000 355.6	350 2400	53851 239637	0.25 6.4	15.87 403	20.59 523	4.75 121	48.9 22.2
16 400	16.000 406.4	350 2400	70336 312995	0.25 6.4	18.12 460	23.51 597	4.75 121	60.8 27.6
18 450	18.000 457.0	350 2400	89019 396135	0.25 6.4	20.22 514	25.53 648	4.75 121	71.2 32.3
20 500	20.000 508.0	350 2400	109900 489055	0.25 6.4	22.44 570	27.13 389	4.75 121	81.7 37.1
24 600	24.000 610.0	350 2400	158256 704239	0.25 6.4	26.64 677	32.31 821	4.75 121	116.2 52.7

* 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.

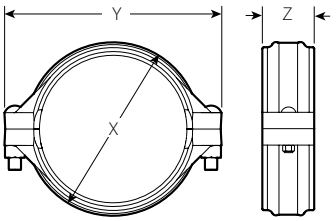
WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

† For field installation only on roll grooved pipe. Style 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 ALL SIZES

Flexible Coupling

STYLE W77

Request Publication 20.03

Size		Max. Work Pressure*	Max. End Load*	Allow. Pipe End Sep.†	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
14 350	14.000 355.6	350 2400	53851 239637	0.125 – 0.375 3.1 – 9.5	16.00 406	20.59 523	4.50 114	47.5 21.5
16 400	16.000 406.4	350 2400	70336 312995	0.125 – 0.375 3.1 – 9.5	18.18 462	23.51 597	4.50 114	57.8 26.2
18 450	18.000 457.2	350 2400	89019 396135	0.125 – 0.375 3.1 – 9.5	20.36 517	25.46 647	4.50 114	65.0 29.5
20 500	20.000 508.0	350 2400	109900 489055	0.125 – 0.375 3.1 – 9.5	22.56 573	27.13 689	4.50 114	82.3 37.3
24 600	24.000 609.6	350 2400	158256 704239	0.125 – 0.375 3.1 – 9.5	26.88 683	32.31 821	4.50 114	106.8 48.4

* 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.

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

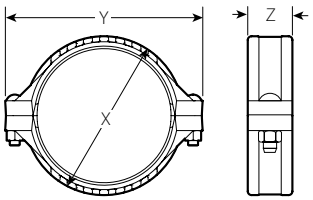
† Allowable Pipe End Separation figures show the maximum nominal range of movement available at each joint for AGS roll grooved pipe. These figures are maximums; for design and installation purposes these figures should be reduced by 25%. Refer to General Notes on pg. 15.

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.

- 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 for all sizes



TYPICAL FOR ALL SIZES

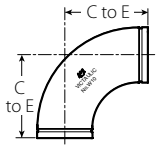
Advanced Groove System – Fittings

AGS

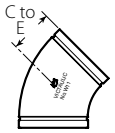
Elbows

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#)

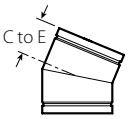
Request Publication 20.05



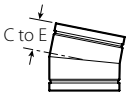
NO. W10



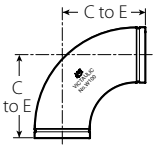
NO. W11



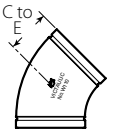
NO. W12



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 Dia. 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	139.6 63.3	5.80 147	70.8 32.1	5.00 127	46.0 20.9	3.50 89	32.0 14.5	21.00 533	154.0 69.9	8.75 222	77.0 35.0
16 400	16.000 406.4	16.00 406.4	182.9 83.0	6.63 168	93.8 42.5	5.00 127	58.0 26.3	4.00 102	42.0 19.1	24.00 610	201.0 91.2	10.00 254	100.0 45.6
18 450	18.000 457.0	18.00 457.2	246.4 111.8	7.46 189	125.5 56.9	5.50 140	65.0 29.5	4.50 114	53.2 24.1	27.00 686	256.0 116.1	11.25 286	128.0 58.0
20 500	20.000 508.0	20.00 508.0	306.1 138.8	8.28 210	156.2 70.9	6.00 152	78.6 36.0	5.00 127	65.0 29.5	30.00 762	317.0 143.8	12.50 318	158.0 71.9
24 600	24.000 610.0	24.00 609.6	486.2 220.5	9.94 252	232.1 105.3	7.00 178	140.0 63.5	6.00 152	60.0 27.2	36.00 914	458.0 207.7	15.00 381	229.0 103.9

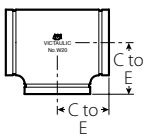
Ductile iron except those marked (sw) which are segmentally welded steel or (S) which are steel.

† 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.

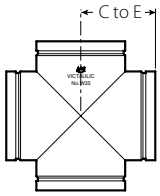
Tees, Crosses and Wyes

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

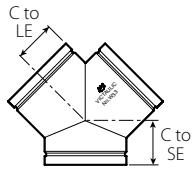
Request Publication 20.05



NO. W20



NO. W35



NO. W33

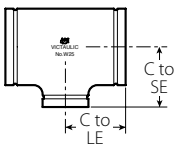
Size		No. W20 Tee		No. W35 Cross (sw)		No. W33 True Wye (sw)		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
14 350	14.000 355.6	11.00 279	170.0 77.1	11.00 279	168.0 76.2	11.00 279	7.50 191	114.0 51.7
16 400	16.000 406.4	12.00 305	200.0 90.7	12.00 305	216.0 98.0	12.00 305	8.00 203	144.0 65.3
18 450	18.000 457.0	13.50 343	318.0 144.2	13.50 343	278.0 126.1	13.50 343	8.50 216	185.0 83.9
20 500	20.000 508.0	15.00 381	369.0 167.4	15.00 381	348.0 157.9	15.00 381	9.00 229	216.0 98.0
24 600	24.000 610.0	17.00 432	560.0 254.0	17.00 432	488.0 221.4	17.00 432	10.00 254	343.0 155.6

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

Reducing Tee

NO. W25
(Segmentally Welded Steel)

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	142.0 64.4
			8 200	11.00 279	9.75 248	143.0 64.9
			10 250	11.00 279	10.12 257	144.0 65.3
			12 300	11.00 279	10.62 270	147.0 66.7
16 400	×	16 400	× 6 150	12.00 305	10.38 264	176.0 79.8
			8 200	12.00 305	10.75 273	185.0 83.9
			10 250	12.00 305	11.12 282	195.0 88.5
			12 300	12.00 305	11.62 295	204.0 92.5
			14 350	12.00 305	12.00 305	210.0 95.3
18 450	×	18 450	× 8 200	13.50 343	11.75 298	231.0 104.8
			10 250	13.50 343	12.12 308	244.0 110.7
			12 300	13.50 343	12.62 321	254.0 115.2
			14 350	13.50 343	13.00 330	262.0 118.8
			16 400	13.50 343	13.00 330	269.0 122.0

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	× 8 200	15.00 381	12.75 324	282.0 127.9
			10 250	15.00 381	13.12 333	295.0 133.8
			12 300	15.00 381	13.62 346	308.0 139.7
			14 350	15.00 381	14.00 356	316.0 143.3
			16 400	15.00 381	14.00 356	329.0 149.2
			18 450	15.00 381	14.50 368	342.0 155.1
24 600	×	24 600	× 8 200	17.00 432	14.75 375	381.0 172.8
			10 250	17.00 432	15.12 384	394.0 178.7
			12 300	17.00 432	15.62 397	409.0 185.5
			14 350	17.00 432	16.00 406	419.0 190.1
			16 400	17.00 432	16.00 406	433.0 196.4
			18 450	17.00 432	16.50 419	453.0 205.5
			20 500	17.00 432	17.00 432	473.0 214.6

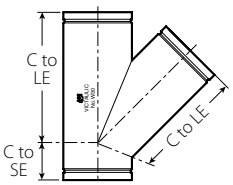
IMPORTANT NOTE:

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)

Request Publication 20.05



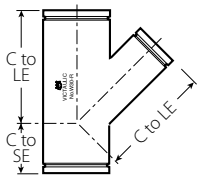
NO. W30

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	276.0 125.2
16 400	16.000 406.4	29.00 737	8.00 203	344.2 156.1
18 450	18.000 457.0	32.00 813	8.50 216	429.0 194.6
20 500	20.000 508.0	35.00 889	9.00 229	500.0 226.8
24 600	24.000 610.0	40.00 1016	10.00 254	715.0 324.3

45° Reducing Lateral

NO. W30-R
(Segmentally Welded Steel)

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	162.4 73.7
				6 150		26.50 673	7.50 191	167.6 76.0
				8 200		26.50 673	7.50 191	173.5 78.7
				10 250		26.50 673	7.50 191	181.0 82.1
				12 300		26.50 673	7.50 191	189.2 85.8
16 400	×	16 400	×	6 150		29.00 737	8.00 203	206.7 93.8
				8 200		29.00 737	8.00 203	213.1 96.7
				10 250		29.00 737	8.00 203	221.1 100.3
				12 300		29.00 737	8.00 203	229.9 104.3
				14 350		29.00 737	8.00 203	230.9 104.7
18 450	×	18 450	×	6 150		32.00 813	8.50 216	253.1 114.8
				8 200		32.00 813	8.50 216	259.9 117.9
				12 300		32.00 813	8.50 216	277.6 125.9
				14 350		32.00 813	8.50 216	278.7 126.4
				16 400		32.00 813	8.50 216	284.3 129.0
20 500	×	20 500	×	12 300		35.00 889	9.00 229	330.0 149.7
				14 350		35.00 889	9.00 229	331.2 150.2
				16 400		35.00 889	9.00 229	337.2 152.9
24 600	×	24 600	×	16 400		40.00 1016	10.00 254	448.5 203.4
				20 600		40.00 1016	10.00 254	461.8 209.5

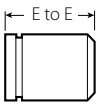
IMPORTANT NOTE:

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.

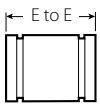
Adapter Nipple

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

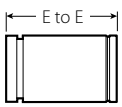
Request Publication 20.05



NO. W42



NO. W43



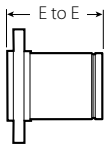
NO. W49

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)

Request Publication 20.05



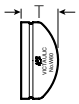
NO. W45R

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)

Request Publication 20.05



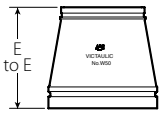
NO. W60

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	35.0 15.9
16 400	16.000 406.4	7.00 178	44.0 20.0
18 450	18.000 457.0	8.00 203	58.0 26.3
20 500	20.000 508.0	9.00 229	79.0 35.8
24 600	24.000 610.0	10.50 267	105.0 47.6

Concentric/Eccentric Reducer

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

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	×	10 2 50	13.00 330	60.4 27.4	13.00 330	60.4 27.4
		12 300	13.00 330	63.4 28.8	13.00 330	63.4 28.8
16 400	×	12 300	14.00 356	75.6 34.3	14.00 356	75.6 34.3
		14 350	14.00 356	77.5 35.2	14.00 356	77.5 35.2
18 450	×	14 350	15.00 381	90.9 41.2	15.00 381	90.9 41.2
		16 400	15.00 381	94.0 42.6	15.00 381	94.0 42.6
20 500	×	16 400	20.00 508	138.0 62.6	20.00 508	138.0 62.6
		18 450	20.00 508	142.0 64.4	20.00 508	142.0 64.4
24 600	×	18 450	20.00 508	163.0 73.9	20.00 508	163.0 73.9
		20 500	20.00 508	167.0 75.8	20.00 508	167.0 75.8

† 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

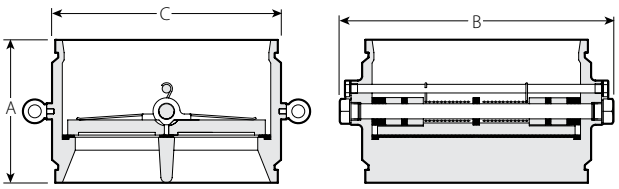
SERIES W715

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	14.00 355.6	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	18.000 457.2	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	24.000 609.6	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

Butterfly Valve 300 psi/2065 kPa

SERIES W706

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 – 600 mm systems for 300 psi/2065 kPa bi-directional services

SERIES W706 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	14.00 355.6	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	18.000 457.2	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	24.000 609.6	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

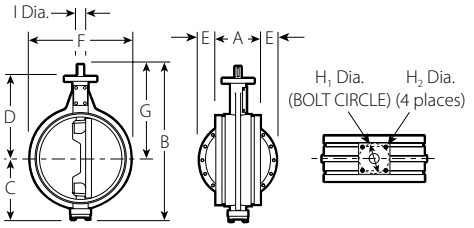
† MOUNTING KEY:

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

IMPORTANT NOTES:

Dimensions provided without operator are for sizing data only. Series W706 AGS should never be installed without operators.

Series W706 AGS valves have longer E to E dimensions and AGS groove dimensions and cannot be used to replace existing Series 706 butterfly valves.

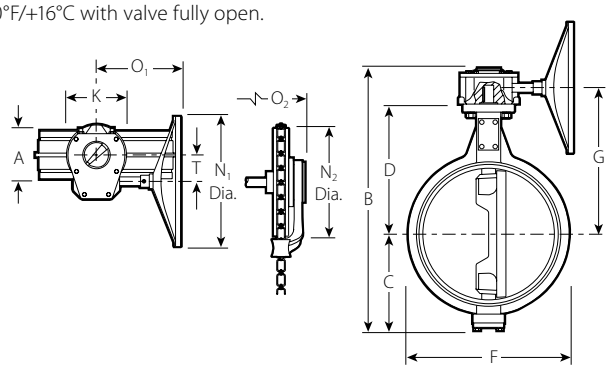


TYPICAL FOR ALL SIZES

SERIES W706 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	14.00 355.6	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 8096.4
16 400	16.000 406.4	10.00 267	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 10726.0
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 13753.5
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 17127.0
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 24998.5

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



TYPICAL FOR ALL SIZES

Butterfly Valve 175 psi/1270 kPa

SERIES W709

Request Publication 20.07

- 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 – 600 mm systems for 175 psi/1270 kPa bi-directional service

SERIES W709 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	14.00 355.6	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	18.000 457.2	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	5.50 140	0.675 17	2.00 51	285.0 129.3
24 600	24.000 609.6	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

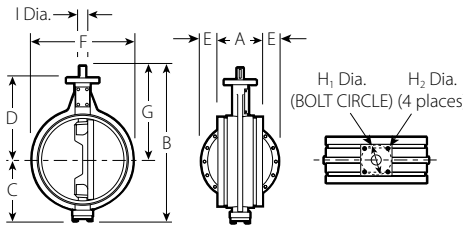
† MOUNTING KEY:

14"/350 mm – 5⁄16 Sq. × 1
16"/400 mm – 3⁄8 Sq. × 1 1⁄4
18"/450 mm – 3⁄8 Sq. × 1 1⁄2
20"/500 mm – 1⁄2 Sq. × 2
24"/600 mm – 5⁄8 Sq. × 2 1⁄4

IMPORTANT NOTES:

Dimensions provided without operator are for sizing data only. Series W709 AGS should never be installed without operators.

Series W709 AGS valves have longer E to E dimensions and AGS groove dimensions and cannot be used to replace existing Series 709 butterfly valves.

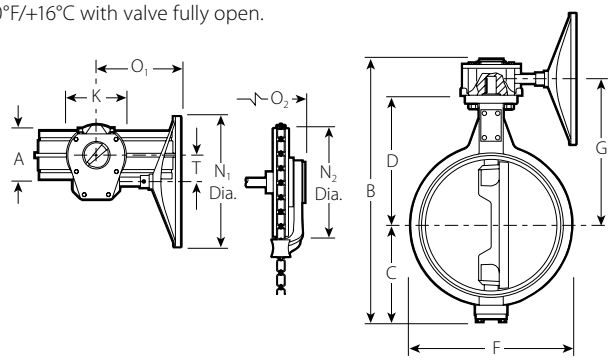


TYPICAL FOR ALL SIZES

SERIES W709 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	14.00 356.6	10.00 254	26.00 6660	9.68 246	12.89 327	16.00 406	14.48 368	5.43 138	19.69 500	11.35 288	21.50 546	14.48 368	2.80 71	8.5	143.7 65.2	9360 8096.4
16 400	16.000 406.4	10.50 267	28.46 723	10.94 278	14.10 358	18.00 457	15.69 399	5.43 138	19.69 500	11.35 288	21.50 546	14.48 368	2.80 71	8.5	171.7 77.9	12400 10726.0
18 450	18.000 457.2	11.00 279	30.76 781	12.31 313	15.00 381	20.00 508	16.59 421	5.43 138	19.69 500	11.35 288	21.50 546	14.48 368	2.80 71	8.5	217.7 98.7	15900 13753.5
20 500	20.000 508.0	11.50 292	34.09 866	14.06 357	16.10 409	23.00 584	18.00 457	8.66 220	19.69 500	14.34 364	21.50 546	17.50 444	4.11 105	13.75	333.0 151.0	19800 17127.0
24 600	24.000 609.6	12.00 305	40.95 1040	16.06 408	20.10 511	26.70 678	22.27 566	11.22 285	27.60 700	16.10 408	30.00 762	19.20 488	5.12 130	21	521.5 236.3	28900 24998.5

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



TYPICAL FOR ALL SIZES

Advanced Groove System – Accessories

AGS

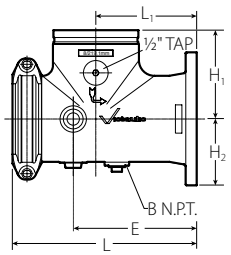
Suction Diffuser with ANSI Class 150 Flange

SERIES W731-G

Request Publication 20.10

- Series W731-G 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						Approx. Wgt. Each
System Side Grooved	×	Pump Side Flange†							
Nominal Size Inches mm			L Inches mm	L_1 Inches mm	H_1 Inches mm	H_2 Inches mm	B N.P.T. Inches mm	E Inches mm	Lbs. kg
14 350	×	10 250	28.62 727	16.14 410	14.37 365	7.99 203	1 ½ 40	21.25 540	332.2 150.7
		12 300	28.62 727	16.14 410	14.37 365	9.50 241	1 ½ 40	21.25 540	332.2 150.7
		14 350	28.62 727	16.14 410	14.37 365	10.50 267	1 ½ 40	21.25 540	332.2 150.7
16 400	×	12 300	34.25 870	19.57 497	15.87 403	9.50 241	1 ½ 40	25.16 639	610.0 277.0
		14 350	34.25 870	19.57 497	15.87 403	10.50 267	1 ½ 40	25.16 639	616.0 280.0
		16 400	34.25 870	19.57 497	15.87 403	11.75 299	1 ½ 40	25.16 639	627.0 285.0
18 450	×	12 300	39.60 1006	18.70 550	17.25 438	9.50 241	1 ½ 40	27.60 700	715.0 325.0
		14 350	39.60 1006	18.70 550	17.25 438	10.50 267	1 ½ 40	27.60 700	800.0 360.0
		16 400	39.60 1006	18.70 550	17.25 438	11.75 299	1 ½ 40	27.60 700	880.0 402.0
		18 450	39.60 1006	18.70 550	17.25 438	12.50 317	1 ½ 40	27.60 700	900.0 409.0
20 500	×	20 500	45.00 1323	21.00 620	16.30 480	11.90 350	2 50	27.90 820	1250.0 570.0
24 600	×	24 600	47.00 1382	26.50 780	18.70 550	13.80 406	2 50	35.00 1030	2100.0 955.0



TYPICAL FOR ALL SIZES

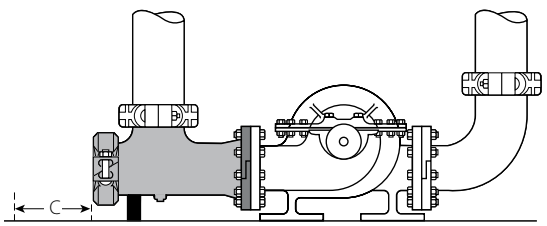
† Pump side flange ANSI Class 150

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

Recommended Minimum Clearance Required to Remove Diffuser Basket

Recommended Minimum Clearance Required to Remove Diffuser Basket			
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C Clearance Inches mm	Recommended Support Leg Pipe Diameter † Inches mm
14 350	14.000 355.6	23.00 584	2 50
16 400	16.000 406.4	27.00 686	2 50
18 450	18.000 457.2	29.00 737	3 80
20 500	20.000 508.0	32.00 813	3 80
24 600	24.000 610.0	39.00 991	3 80

† Based on Standard Wall 40 pipe diameter.



Vic-Strainer – Tee Type

SERIES W730

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

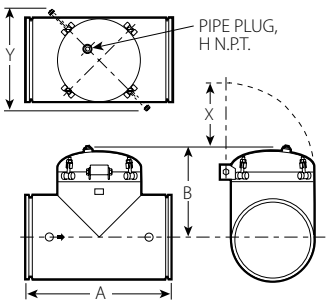
Size		Max. Work Pressure	Dimensions					Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	A Inches mm	B Inches mm	X* Inches mm	Y* Inches mm	H N.P.T. Inches mm	Lbs. kg	C_V Values K_V Values
14 350	14.000 355.6	300 2065	22.00 559	17.75 451	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.

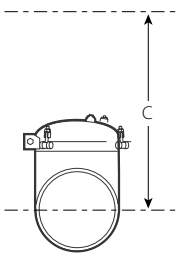
IMPORTANT NOTE:

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



TYPICAL FOR ALL SIZES

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	22.00 559
16 400	16.000 406.4	23.00 584
18 450	18.000 457.2	29.00 737
20 500	20.000 508.0	32.00 813
24 600	24.000 610.0	37.00 940

† 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
- Request publication 11.01
- 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

Hole Cutting Tools

Cut fast, accurate mid-pipe holes up to 4½"/108 mm with Victaulic hole cutting tools, see pg. 182.

Mechanical-T® Bolted Branch Outlet

STYLE 920 AND STYLE 920N GROOVED OUTLET, PGS. 91-92

Mechanical-T Bolted Branch Outlet

STYLE 920 AND STYLE 920N FEMALE THREADED OUTLET, PGS. 91-92

Mechanical-T Bolted Branch Outlet

STYLE 920 CROSS, PGS. 91-92

Vic-Let™ Strapless Outlet

STYLE 923, PG. 94

Vic-O-Well™ Strapless Thermometer Outlet

STYLE 924, PG. 95

PRODUCTS

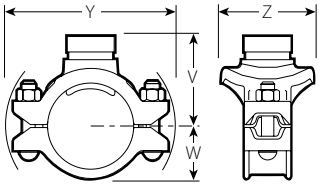
12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

Hole Cut Piping System

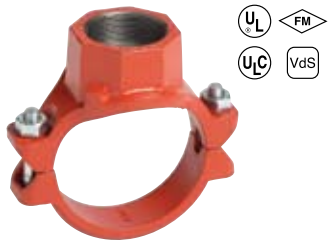
Mechanical-T Bolted Branch Outlet

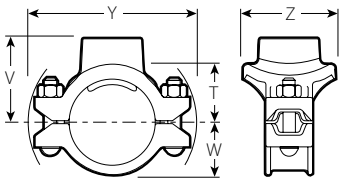
STYLE 920/920N
Grooved Outlet/Female Thd. Outlet

Request Publication 11.02



GROOVED OUTLET





FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- 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	—	1.63 41	4.91 125	2.50 64	3.1 1.5	—
		¾ (a) 20	920N	500 3450	1.50 38.1	1.97 50	2.53 64	—	1.63 41	4.91 125	2.75 70	3.1 1.5	—
		1 (a) 25	920N	500 3450	1.50 38.1	1.81 46	2.53 64	—	1.63 41	4.91 125	2.75 70	3.0 1.4	—
		1 ¼ (a) † 32	920N	500 3450	1.75 44.5	2.04 52	2.75 70	3.00 76	1.63 41	4.91 125	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	1.63 41	4.91 125	3.25 83	3.6 1.7	3.2 1.5
2½ 65	×	½ (a) 15	920N	500 3450	1.50 38.1	2.21 56	2.74 70	—	91.82 46	5.14 131	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	5.14 131	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	5.14 131	2.75 70	2.9 1.4	—
		1 ¼ † (a) 32	920N	500 3450	1.75 44.5	2.29 58	3.00 76	3.25 83	1.82 46	5.14 131	3.00 76	3.5 1.7	3.2 1.5
		1 ½ † (a) 40	920N	500 3450	2.00 50.8	2.27 58	3.00 76	3.25 83	1.82 46	5.14 131	3.25 83	3.6 1.7	3.3 1.6
76.1	×	½ (a) 15	920	300 2065	1.50 38.1	2.22 56	2.75 70	—	2.25 57	6.50 165	3.18 81	3.9 1.8	—
		¾ (a) 20	920	300 2065	1.50 38.1	2.19 56	2.75 70	—	2.25 57	6.50 165	3.18 81	3.9 1.8	—
		1 (a) 25	920	300 2065	1.50 38.1	2.07 53	2.75 70	—	2.25 57	6.50 165	3.18 81	3.8 1.7	—
		1 ¼ (a) 32	920	500 3450	1.75 44.5	2.25 57	3.00 76	3.25 83	1.92 49	5.67 144	3.00 76	3.5 1.6	3.2 1.5
		1 ½ (a) 40	920	500 3450	2.00 50.8	2.25 57	3.00 76	3.25 83	1.92 49	5.67 144	3.25 83	3.5 1.6	3.3 1.5
3 80	×	½ (a) 15	920N	500 3450	1.50 38.1	2.53 64	3.06 78	—	2.29 58	5.75 146	2.75 70	3.4 1.6	—
		¾ (a) 20	920N	500 3450	1.50 38.1	2.50 64	3.06 78	—	2.29 58	5.75 146	2.75 70	3.4 1.6	—
		1 (a) 25	920N	500 3450	1.50 38.1	2.37 60	3.06 78	—	2.29 58	5.75 146	2.75 70	3.3 1.6	—
		1 ¼ (a) † 32 (b)	920N	500 3450	1.75 44.5	2.54 65	3.25 83	3.56 90	2.29 58	5.75 146	3.00 76	3.8 1.8	3.7 1.8
		1 ½ (a) † 40 (b)	920N	500 3450	2.00 50.8	2.77 70	3.50 89	3.56 90	2.29 58	5.75 146	3.25 83	4.1 1.9	3.8 1.8
		2 (a) 50	920N	500 3450	2.50 63.5	2.74 70	3.50 89	3.56 90	2.29 58	5.75 146	3.88 99	4.9 2.3	4.6 2.1
4 100	×	½ (a) 15	920N	500 3450	1.50 38.1	3.03 77	3.56 90	—	2.69 68	6.69 170	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	6.69 170	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	6.69 170	2.75 70	3.6 1.8	—
		1 ¼ (a) † 32	920N	500 3450	1.75 44.5	3.07 78	3.78 96	4.00 102	2.69 68	6.69 170	3.00 76	4.0 1.9	3.6 1.8
		1 ½ (a) † 40	920N	500 3450	2.00 50.8	3.28 83	4.00 102	4.00 102	2.69 68	6.69 170	3.25 83	4.2 2.0	3.9 1.9
		2 (a) † 50	920N	500 3450	2.50 63.5	3.24 82	4.00 102	4.00 102	2.69 68	6.69 170	3.88 99	5.0 2.3	4.6 2.1
		2½ (a) † 65	920	500 3450	2.75 69.9	3.06 78	4.00 102	4.00 102	2.69 68	7.25 184	4.63 118	5.8 2.6	5.0 2.3
		76.1mm	920	500 3450	2.75 69.9	—	—	4.00 102	2.69 68	7.25 184	4.63 1118	—	6.4 2.9
		3 (a)† 80	920	500 3450	3.50 88.9	3.50 89	4.50 114	4.13 105	2.69 68	7.25 184	5.25 133	8.4 3.8	6.4 2.9
108.1	×	1 ¼ (a) 32	920N	500 3450	1.75 44.5	3.06 78	3.78 96	—	2.63 67	7.25 184	3.13 80	5.0 2.3	—
		1 ¼ (a) 40	920N	500 3450	2.00 50.8	3.28 83	4.00 102	—	2.63 67	7.25 184	3.38 86	5.0 2.3	—
		2 (a) 50	920N	500 3450	2.50 63.5	3.24 82	4.00 102	—	2.63 67	7.25 184	4.00 102	5.6 2.5	—
		2½ (a) 65	920	500 3450	2.75 69.9	3.06 78	4.00 102	—	2.63 67	7.25 184	4.41 112	5.6 2.5	—
		3 (a) 80	920	500 3450	3.50 88.9	—	—	4.00 102	2.63 67	7.25 184	5.00 127	—	6.5 3.0

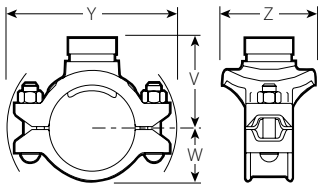
TABLE CONTINUED ON PG. 92

Hole Cut Piping System

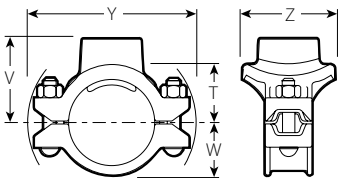
Mechanical-T Bolted Branch Outlet (cont'd)

STYLE 920/920N
Grooved Outlet/Female Thd. Outlet

Request Publication 11.02



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- 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 Dia. +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 PG. 91												
5 125 ×	1½ (a) † 40	920	500 3450	2.00 50.8	4.06 103	4.75 121	4.75 121	3.25 83	8.38 213	3.75 95	7.4 3.4	7.6 3.4
	2 (a) † 50	920	500 3450	2.50 63.5	4.06 103	4.75 121	4.75 121	3.25 83	8.38 213	4.38 111	8.2 3.7	8.0 3.6
	2½ (a) † 65	920	500 3450	2.75 69.9	3.81 97	4.75 121	4.75 121	3.25 83	8.38 213	4.63 118	8.3 3.8	7.9 3.6
	76.1 (a)(b)	920	500 3450	2.75 69.9	3.81 97	4.75 121	—	3.25 83	8.38 213	5.38 137	—	—
	3 (a) † 80	920	500 3450	3.50 88.9	4.00 102	5.00 127	4.63 118	3.25 83	8.38 213	5.38 137	8.4 3.8	8.8 4.0
139.7 ×	1½ † 40	920	500 3450	2.00 50.8	4.06 103	4.75 121	—	3.25 83	8.38 213	3.75 95	7.4 3.4	—
	2 † 50	920	500 3450	2.50 63.5	4.06 103	4.75 121	—	3.25 83	8.38 213	4.38 111	8.3 3.7	—
	76.1 (a)(b)	920	500 3450	3.50 88.9	—	—	4.63 118	3.25 83	8.38 213	5.38 137	—	8.8 4.0
	3 80	920	500 3450	3.50 88.9	—	—	4.63 118	3.25 83	8.38 213	5.38 137	—	8.8 4.0
159.0 ×	1½ (a) 40	920N	500 3450	2.00 50.8	4.41 112	5.13 130	—	3.63 92	9.25 235	3.38 86	7.8 3.5	—
	2 (a) 50	920N	500 3450	2.50 63.5	4.37 111	5.13 130	—	3.63 92	9.25 235	4.00 102	8.0 3.6	—
	2½ (a) † 65	920	500 3450	2.75 69.9	4.56 116	5.50 140	—	3.63 92	9.25 235	4.75 121	8.6 3.9	—
	108.0mm	920	500 3450	4.50 114.3	—	—	5.38 137	3.63 92	9.25 235	6.25 159	—	10.0 4.5
165.1 ×	1½ (a) † 40	920	500 3450	2.00 50.8	4.44 113	5.13 130	5.13 130	3.69 94	9.38 238	3.75 95	7.9 3.6	6.9 3.1
	2 (a) † 50	920	500 3450	2.50 63.5	4.44 113	5.13 130	5.13 130	3.63 92	9.38 238	4.38 111	8.0 3.6	7.0 3.2
	2½ (a) 65	920	500 3450	2.75 69.9	4.19 106	5.13 130	5.13 130	3.69 94	9.38 238	4.63 118	8.6 3.9	7.6 3.4
	76.1 (a)(b)	920	500 3450	2.75 69.9	4.08 104	5.13 130	5.21 132	3.69 94	9.38 238	5.38 137	8.6 3.9	7.6 3.4
	3 (a) † 80	920	500 3450	3.50 88.9	4.50 114	5.50 140	5.13 130	3.69 94	9.38 238	5.38 137	10.2 4.6	8.4 3.8
	4 (a)† 100	920	500 3450	4.50 114.3	4.50 114	5.75 146	5.38 137	3.63 92	9.38 238	6.25 159	10.5 4.8	8.4 3.8
6 150 ×	1¼ 32 (b)	920N	500 3450	1.75 44.5	—	—	5.13 130	3.79 96	9.13 232	3.25 83	—	4.8 2.2
	1½ (a) † 40 (b)	920N	500 3450	2.00 50.8	4.40 112	5.13 130	5.13 130	3.79 96	9.13 232	3.25 83	5.4 2.4	5.1 3.3
	2 (a) † 50	920N	500 3450	2.50 63.5	4.37 111	5.13 130	5.13 130	3.79 96	9.13 232	3.88 99	6.0 2.7	5.6 2.5
	2½ (a) † 65	920	500 3450	2.75 69.9	4.19 106	5.13 130	5.13 130	3.69 94	9.38 238	4.63 118	8.3 3.8	7.6 3.4
	76.1 (a)(b)	920	500 3450	2.75 69.9	—	—	5.21 132	3.69 94	9.38 238	5.38 137	—	8.4 3.8
	3 (a) † 80	920	500 3450	3.50 88.9	4.50 114	5.50 140	5.13 130	3.69 94	9.38 238	5.38 137	9.9 4.5	8.4 3.8
	4 (a) † 100	920	500 3450	4.50 114.3	4.50 114	5.75 146	5.38 137	3.69 94	9.38 238	6.25 159	10.1 4.6	10.1 4.6
8 200 ×	2 (a) 50	920	500 3450	2.75 69.9	5.19 132	6.25 159	—	4.88 124	12.00 305	4.50 114	11.6 5.3	—
	2½ (a) † 65	920	500 3450	2.75 69.9	5.19 132	6.25 159	6.25 159	4.88 124	12.25 311	4.50 114	11.6 5.3	11.6 5.3
	76.1 (a)(b)	920	500 3450	2.75 69.9	5.19 132	6.25 159	—	4.88 124	12.00 305	5.38 137	—	—
	3 (a) † 80	920	500 3450	3.50 88.9	5.50 140	6.50 165	6.25 159	4.88 124	12.00 305	5.38 137	12.6 5.7	11.6 5.3
	4 (a) † 100	920	500 3450	4.50 114.3	5.31 135	6.75 171	6.38 162	4.88 124	12.00 305	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.
(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.

Hole Cut Piping System

Performance

STYLE 920/920N
Grooved Outlet**/**Female Thd. Outlet

Size		Flow Coefficient@ (Fully Open) C_V Values K_V Values
Nominal Size Inches mm	Actual Outside Diameter Inches mm	
½ 15	0.840 21.3	17 14.7
¾ 20	1.050 26.7	21 18.2
1 25	1.315 33.7	25 21.6
1 ¼ 32	1.660 42.4	45 38.9
1 ½ 40	1.900 48.3	60 51.9
2 50	2.375 60.3	100 86.5
2 ½ 65	2.875 73.0	135 116.8
3 80	3.500 88.9	200 173.0
4 100	4.500 114.3	400 346.0

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

Flow Data

STYLE 920/920N
Grooved Outlet**/**Female Thd. Outlet

- The pressure differential can be obtained from the relationship below

FORMULAS FOR C_V VALUES:

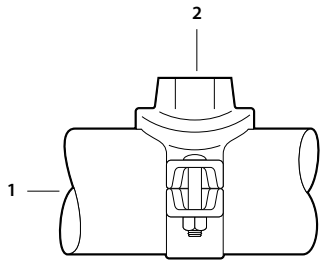
$$\Delta P = \frac{Q^2}{C_V^2}$$

$$Q = C_V \times \sqrt{\Delta P}$$

WHERE:

Q = Flow (GPM)
ΔP = Pressure Drop (psi)
C_V = Flow Coefficient

Size		Equivalent Length of Pipe	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Grooved Feet meter	Female Feet meter
½ 15	0.840 21.3	—	2.0 0.6
¾ 20	1.050 26.7	—	4.0 1.2
1 25	1.315 33.7	—	5.0 1.5
1 ¼ 32	1.660 42.4	5.5 1.7	6.0 1.8
1 ½ 40	1.900 48.3	7.0 2.1	8.0 2.4
2 50	2.375 60.3	9.0 2.7	10.5 3.2
2 ½ 65	2.875 73.0	11.0 3.4	12.5 3.8
3 80	3.500 88.9	13.5 4.1	15.5 4.7
4 100	4.500 114.3	20.0 6.1	22.0 6.7



TYPICAL FOR ALL SIZES

Flow test data has shown that the total head loss between point **1** and **2** for the Style 920 and 920N Mechanical-T fittings can best be expressed in terms of the pressure differential across the inlet and branch (exaggerated for clarity).

Hole Cut Piping System

Vic-Let Strapless Outlet

STYLE 923

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. Pressure rating is 200 psi/1375kPa for standard wall aluminum pipe.

** Inside wall of run to engaged pipe end.

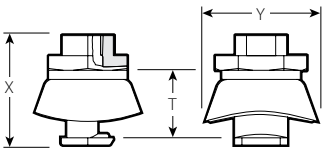
*** Width of collar is as supplied, width assembled changes due to collar deformation at assembly.

IMPORTANT NOTES:

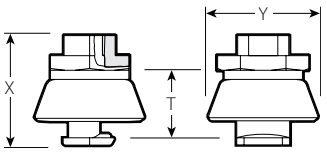
Flow Data: Flow area equivalent to ¾"/20 mm pipe. Accepts 7⁄16"/11 mm diameter probe.

Warning: Always depressurize system and drain before disassembly.

DUE TO DEFORMATION OF THE COLLAR, VIC-LET 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

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" 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

* 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. Pressure rating is 200 psi/1375kPa 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.

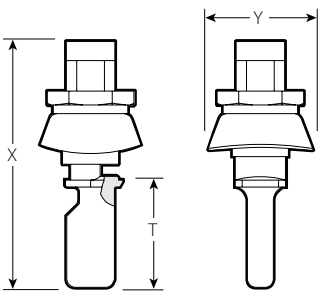
† 1¼" outlet – 1¼ – NEF18 – 2B.

IMPORTANT NOTES:

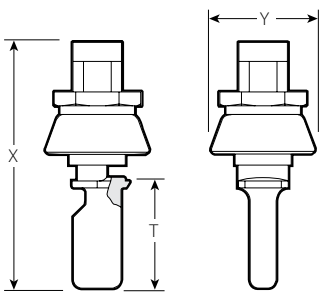
Flow Data: Flow characteristics for Vic-O-Well Style 924 and Vic-Let Style 923 are superior to standard welded or threaded outlets of equivalent branch sizes.

Warning: Always depressurize system and drain before disassembly.

DUE TO DEFORMATION OF THE COLLAR, VIC-O-WELL THERMOMETER AND VIC-LET OUTLET SHOULD NOT BE RE-USED AFTER INITIAL INSTALLATION.



TYPICAL 4 – 8"/100 – 200 mm IPS SIZES



TYPICAL 10"/250 mm AND LARGER SIZES

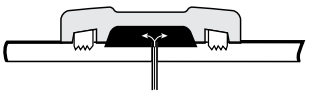
Plain End Piping System

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

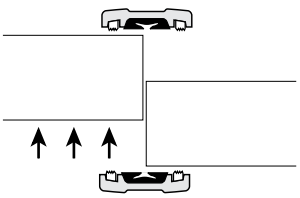
STYLE 99, PG. 98



All illustrations shown are exaggerated for clarity

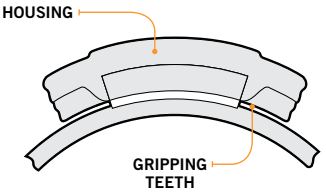
RELIABLE AND LEAK-FREE

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



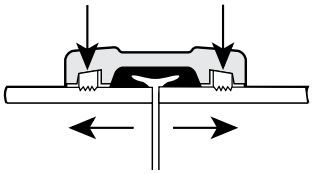
UNION AT EVERY JOINT

- 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



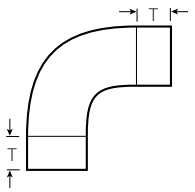
ROUST-A-BOUT JAWS RIGID TO GRIP PIPE

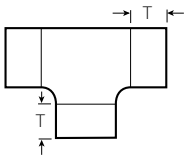
- Set at right angle to the pipe for gripping efficiency

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

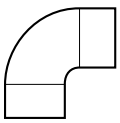




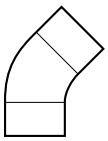
Size		Tangent Length
Nominal Size Inches mm	Actual Outside Dia. Inches mm	T Minimum Inches mm
1 ½ 40	1.900 48.3	1.50 38
2 50	2.375 60.3	1.75 45
2 ½ 65	2.875 73.0	1.75 45
3 80	3.500 88.9	1.75 45
3 ½ 90	4.000 101.6	1.75 45
4 100	4.500 114.3	2.00 51
5 125	5.563 141.3	2.13 54

Size		Tangent Length
Nominal Size Inches mm	Actual Outside Dia. 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

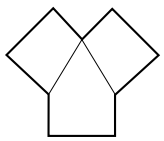
Fittings



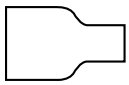
90° Elbow
NO. 10P, PG. 99



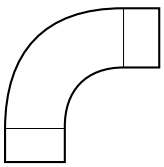
45° Elbow
NO. 11P, PG. 99



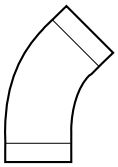
True Wye
NO. 33P, PG. 100



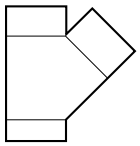
Swaged Nipple
NO. 53P, PG. 102



90° Long Radius Elbow
NO. 100P, PG. 99

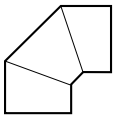


45° Long Radius Elbow
NO. 110P, PG. 99

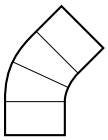


45° Lateral
NO. 30P, PG. 101

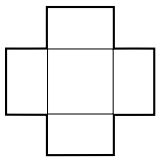
Adapter Nipple Plain End × Thd.
NO. 40P, PG. 103



90° Elbow Seg. Welded Steel
NO. 10P, PG. 99

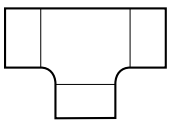


45° Elbow Seg. Welded Steel
NO. 11P, PG. 99

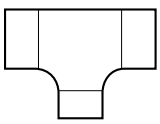


Cross
NO. 35P, PG. 100

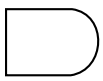
Adapter Nipple Plain End × Bev.
NO. 42P, PG. 103



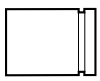
Tee
NO. 20P, PG. 100



Reducing Tee
NO. 25P, PG. 101



Steel Bull Plug
NO. 61P, PG. 100



Adapter Nipple Plain End × Grv.
NO. 43P, PG. 103

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

Plain End Piping System – Couplings

Roust-A-Bout Coupling

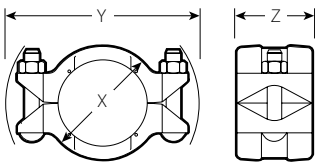
STYLE 99

Request Publication 14.02

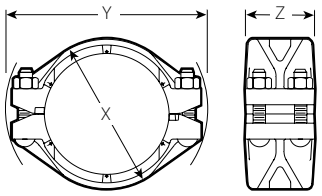
- Specifically designed for plain end steel and stainless steel pipe
- Gripping teeth provide a strong component for joining plain and beveled end (including Schedule 80 steel pipe)
- Not to be used on plastic pipe, pipe with brittle linings, cast or ductile iron pipe nor any pipe with a surface hardness 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 Dia. 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
139.7 mm	5.500 139.7	250 1700	5940 26440	7.80 200	10.75 260	3.19 81	9.0 4.1
5 125	5.563 141.3	350 2400	8500 37825	7.25 184	11.38 289	4.38 111	17.3 7.8
165.1 mm	6.500 165.1	300 2065	9955 44300	8.38 213	13.25 337	4.38 111	22.2 10.1
6 150	6.625 168.3	300 2065	10340 46013	850 216	13.38 340	4.38 111	23.2 10.5
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

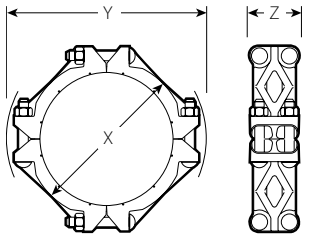
* Working Pressure and End Load are total, from all internal and external loads, based on coupling properly assembled, with bolts fully torqued to listed specifications, on plain end or beveled end standard weight (ANSI) steel pipe and Victaulic plain end fittings. Couplings are designed to be used with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



TYPICAL 1 – 6"/25 – 150 mm SIZES



TYPICAL 8 – 12"/200 – 300 mm SIZES



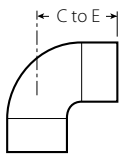
TYPICAL 14 – 18"/350 – 450 mm SIZES

Plain End Piping System – Fittings

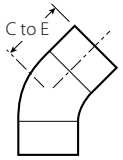
Elbow

NO. 10P 90° Elbow
NO. 11P 45° Elbow
NO. 100P 90° Long Radius
NO. 110P 45° Long Radius
NO. 10P (sw) 90° Elbow
NO. 11P (sw) 45° Elbow
(Ductile Iron#)

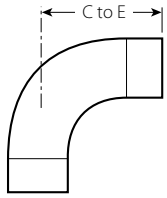
Request Publication 14.04



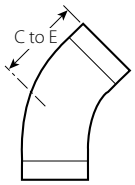
NO. 10P



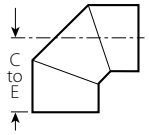
NO. 11P



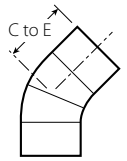
NO. 100P



NO. 110P



NO. 10P (sw)



NO. 11P (sw)

Size		No. 10P 90° Elbow		No. 11P 45° Elbow		No. 100P 90° Long Radius Elbow		No. 110P 45° Long Radius Elbow		No. 10P 90° Elbow (sw)		No. 11P 45° Elbow (sw)	
Nominal Size Inches mm	Actual Outside Dia. 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
1 25	1.315 33.7	2.25 57	0.6 0.3	1.75 44	0.6 0.3	—	—	—	—	3.25 83	0.9 0.4	2.63 67	0.8 0.4
1 ½ 40	1.900 48.3	4.00 (sw) 102	1.4 0.6	2.88 (sw) 73	1.0 0.5	—	—	—	—	4.00 102	1.7 0.8	2.88 73	1.4 0.6
2 50	2.375 60.3	4.75 (sw) 121	2.9 1.3	3.13 (sw) 80	1.4 0.6	4.25 108	2.5 1.1	3.13 80	1.8 0.8	4.75 121	2.7 1.2	3.13 80	2.0 0.9
2 ½ 65	2.875 73.0	5.50 (sw) 140	3.9 1.8	3.50 (sw) 89	2.3 1.0	5.50 140	4.0 1.8	3.50 89	2.5 1.1	5.50 140	4.8 2.2	3.50 89	3.5 1.6
3 80	3.500 88.9	6.25 (sw) 159	6.15 2.8	3.75 (sw) 95	4.3 2.0	6.25 159	6.5 3.0	3.75 95	4.5 2.0	6.25 159	7.2 3.3	3.75 95	4.8 2.2
3 ½ 90	4.000 101.6	7.00 (sw) 178	7.0 3.2	4.00 (sw) 102	5.5 2.5	8.00 203	11.5 5.2	4.50 144	7.5 3.4	7.00 178	9.4 4.3	4.00 102	6.2 2.8
4 100	4.500 114.3	7.75 (sw) 197	9.9 4.5	4.25 (sw) 108	7.0 3.2	11.13 283	28.5 12.9	5.88 149	17.3 7.9	7.75 197	12.3 5.6	4.25 108	8.0 3.6
5 125	5.563 141.3	9.50 241	20.4 9.3	5.13 (sw) 130	18.0 8.2	6.88 (sw) 175	17.1 7.8	6.88 (sw) 175	17.1 7.8	9.50 241	13.4 6.1	5.13 130	9.2 4.2
165.1 mm	6.500 165.1	6.50 165	20.4 9.3	3.50 89	11.9 5.4	6.50 165	29.5 13.3	6.50 165	29.5 13.3	11.00 279	31.0 14.1	5.75 146	18.5 8.4
6 150	6.625 168.3	6.50 165	20.4 9.3	3.50 89	11.9 5.4	6.50 165	29.5 13.3	6.50 165	29.5 13.3	11.00 279	31.0 14.1	5.75 146	18.5 8.4
8 200	8.625 219.1	10.00 (sw) 254	42.0 19.1	6.00 (sw) 152	28.5 12.9	14.13 359	56.7 25.7	7.13 181	24.0 15.4	10.00 254	38.7 17.6	6.00 152	24.9 11.3
10 250	10.750 273.0	11.50 (sw) 292	50.0 22.7	6.50 (sw) 165	41.0 18.6	17.13 435	96.5 43.8	8.38 213	57.0 25.9	11.50 292	52.1 23.6	6.50 159	32.8 14.9
12 300	12.750 323.9	13.50 (sw) 343	156.0 70.8	7.00 (sw) 178	57.8 26.2	20.13 511	145.0 65.8	9.63 245	95.0 43.1	13.50 343	76.7 34.8	7.00 178	47.5 21.6

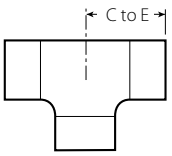
Ductile iron except those marked (sw) which are segmentally welded steel.

Plain End Piping System – Fittings

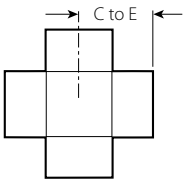
Tee, Cross, True Wye, and Bull Plug

NO. 20P Tee
NO. 35P (sw) Cross
NO. 33P (sw) True Wye
NO. 61P Bull Plug
(Ductile Iron#)

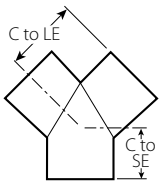
Request Publication 14.04



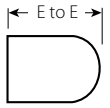
NO. 20P



NO. 35P (sw)



NO. 33P (sw)



NO. 61P

Size		No. 20P Tee		No. 35P (sw) Cross		No. 33P (sw) True Wye			No. 61P Steel Bull Plug	
Nominal Size Inches mm	Actual Outside Dia. 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 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 (sw) 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 (sw) 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 (sw) 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 (sw) 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 (sw) 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	5.00 127	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 (sw) 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	6.50 165	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 (sw) 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 (sw) 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 (sw) 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

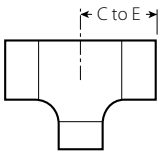
Ductile iron except those marked (sw) which are segmentally welded steel.

Plain End Piping System – Fittings

Reducing Tee

NO. 25P
(Ductile Iron)

Request Publication 14.04



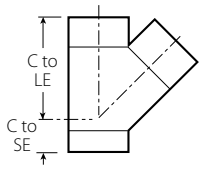
NO. 25P

Size						No. 25P Reducing Tee	
Nominal Size Inches mm						C to E Inches mm	Approx. Weight Each Lbs. kg
1 1/2 40	×	1 1/2 40	×	1	25	4.00 102	2.2 1.0
2 50	×	2 50	×	1	25	4.25 108	2.9 1.3
				1 1/2	40	4.25 108	3.1 1.4
3 80	×	3 80	×	1	25	5.13 130	6.7 3.0
				1 1/2	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 1/2	40	5.88 149	11.1 5.0
				2	50	5.88 149	11.3 5.1
				2 1/2	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 (sw)
(Segmentally Welded Steel)

Request Publication 14.04



NO. 30P (sw)

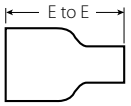
Size		No. 30P (sw) 45° Lateral		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
1 25	1.315 33.7	5.00 127	2.25 57	3.5 1.6
1 1/2 40	1.900 48.3	6.25 159	2.75 70	3.5 1.6
2 50	2.375 60.3	7.25 184	2.75 70	5.1 2.3
2 1/2 65	2.875 73.0	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 1/2 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)

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	8.00 203	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

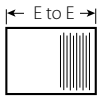
Size			No. 53P Swaged Nipple	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
6 150	×	1 25	12.00 305	16.0 7.3
		1 ½ 40	12.00 305	16.0 7.3
		2 50	12.00 305	17.0 7.7
		2 ½ 65	12.00 305	17.0 7.7
		3 80	12.00 305	17.0 7.7
		3 ½ 90	12.00 305	17.0 7.7
		4 100	12.00 305	17.0 7.7
		5 125	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

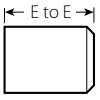
Adapter Nipple

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

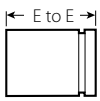
Request Publication 14.04



NO. 40P



NO. 42P



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. 106

Rigid Coupling
STYLE 89, PG. 107

Flexible Coupling
STYLE 77S, PG. 108

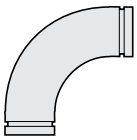
Flexible Coupling
STYLE 475, PG. 109

Vic-Flange Adapter ANSI Class 150
STYLE 441, PG. 110

Grooved System for Stainless Steel Pipe

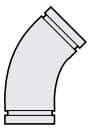
Fittings

Types 304 and 316



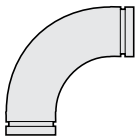
90° Long Radius Elbow

NO. 100SS, PG. 111



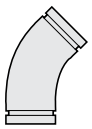
45° Long Radius Elbow

NO. 110SS, PG. 111



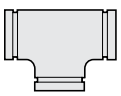
90° Long Radius/ Long Tangent Elbow

NO. 100SSLT, PG. 111



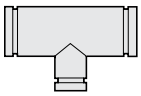
45° Long Radius/ Long Tangent Elbow

NO. 110SSLT, PG. 111



Tee

NO. 20SS, PG. 112



Reducing Tee

NO. 25SS, PG. 113

Concentric Reducer

NO. 50SSLT, PG. 112

Eccentric Reducer

NO. 51SSLT, PG. 112

Cap

NO. 60SS, PG. 112

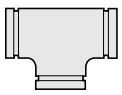
ASTM A-403

90° Elbow

NO. 410SS, PG. 114

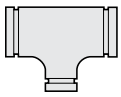
45° Elbow

NO. 411SS, PG. 114



Tee

NO. 420SS, PG. 114

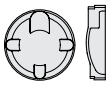


Reducing Tee

NO. 425SS, PG. 115

Concentric Reducer

NO. 450SS, PG. 115



Cap

NO. 460SS, PG. 114

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

Valves

Butterfly Valve

SERIES 763, PG. 116

Swinger Check Valve

SERIES 712S, PG. 118

Three-Port Diverter Ball Valve

SERIES 723S, PG. 118

Vic-Ball Valve

SERIES 726S, PG. 119

Grooved System for Stainless Steel Pipe – Couplings

Rigid Coupling

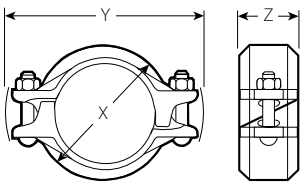
STYLE 489

Request Publication 17.25

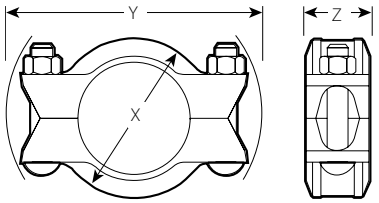
- CF8M stainless steel for corrosion resistance and strength
- Provides an essentially rigid joint
- Pressure rated up to 600 psi/4136 kPa for Schedule 40S, 300 psi/2065 kPa for Schedule 10S, and 200 psi/1379 kPa for Schedule 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.25
- Sizes from 1½ – 12"/40 – 300 mm

Size		Max. End Load *			Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	Lbs. N			Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
		Schedule 40S	Schedule 10S	Schedule 5S					
1½ 40	1.900 48.3	1700 7565	850 3783	570 2537	0.05 1.3	2.86 73	4.42 118	1.84 47	1.6 0.7
2 50	2.375 60.3	2660 11837	1330 5919	890 3961	0.05 1.3	3.34 85	5.19 132	1.86 47	1.6 0.7
2½ 65	2.875 73.0	3900 17355	1950 8678	1300 5785	0.05 1.3	3.92 100	5.62 143	1.86 47	1.9 0.9
76.1 mm	3.000 76.1	4240 18868	2120 9434	1415 6297	0.05 1.3	4.02 102	5.72 145	1.86 47	2.0 0.9
3 80	3.500 88.9	5775 25699	2890 12861	1925 8566	0.05 1.3	4.54 115	6.78 172	1.86 47	2.8 1.3
4 100	4.500 114.3	9540 42453	4775 21249	3180 14151	0.19 4.8	5.77 147	7.90 201	2.07 53	4.0 1.8
139.7 mm	5.500 139.7	14250 63413	7130 31729	4750 21138	0.25 6.4	7.07 180	11.13 283	2.38 60	12.0 5.5
165.1 mm	6.500 165.1	19910 88600	9955 44300	6640 29548	0.25 6.4	8.16 207	12.68 321	2.50 64	15.5 7.0
6 150	6.625 168.3	20680 92026	10340 46015	6895 30685	0.25 6.4	8.16 207	12.68 321	2.50 64	15.5 7.0
216.3 mm	8.515 216.3	34175 152079	17090 76051	11390 50686	0.25 6.4	10.63 270	15.00 381	2.75 70	24.0 10.9
8 200	8.625 219.1	35055 155995	17530 78010	11685 52000	0.25 6.4	10.63 270	15.00 381	2.75 70	24.0 10.9
267.4 mm	10.528 267.4	52230 232424	26115 116212	17410 77475	0.25 6.4	13.09 332	17.25 438	3.00 76	33.0 15.0
10 250	10.750 273.0	54460 242345	27230 121175	18150 80770	0.25 6.4	13.09 332	17.25 438	3.00 76	33.0 15.0
318.5 mm	12.539 318.5	74100 329745	37050 164873	24700 109915	0.25 6.4	15.13 384	19.13 486	3.13 80	40.0 18.1
12 300	12.750 323.9	76605 340890	38300 170435	25535 113630	0.25 6.4	15.13 384	19.13 486	3.13 80	40.0 18.1

* Refer to General Notes on pg. 15.



TYPICAL 1½ – 4"/40 – 100 mm SIZES



TYPICAL 6 – 12"/139.7 – 300 mm SIZES

Grooved System for Stainless Steel Pipe – Couplings

Rigid Coupling

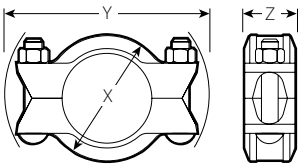
STYLE 89

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 750 psi/ 5175 kPa for Schedule 40S, 300 psi/2065 kPa for Schedule 10S, and 200 psi/ 1379 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		Max. End Load *			Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	Lbs. N							
		Schedule 40S	Schedule 10S	Schedule 5S	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	3320 14774	1330 5919	890 3961	0.14 3.6	3.50 89	6.68 168	2.00 51	3.1 1.4
2½ 65	2.875 73.0	4875 21694	1950 8678	1300 5785	0.14 3.6	4.13 105	7.13 181	2.00 51	4.0 1.8
76.1 mm	3.000 76.1	5300 23585	2120 9434	1415 6297	0.14 3.6	4.13 105	7.25 184	2.00 51	4.1 1.9
3 80	3.500 88.9	7215 32107	2890 12861	1925 8566	0.14 3.6	4.75 121	7.75 197	2.00 51	4.3 2.0
4 100	4.500 114.3	11930 53089	4775 21249	3180 14151	0.25 6.4	6.00 152	9.63 245	2.13 54	7.5 3.4
139.7 mm	5.500 139.7	17820 79299	7130 31729	4750 21138	0.25 6.4	7.13 181	10.63 270	2.38 60	12.5 5.7
165.1 mm	6.500 165.1	24890 110761	9955 44300	6640 29548	0.25 6.4	8.63 219	12.68 321	2.38 60	15.8 7.2
6 150	6.625 168.3	25850 115035	10340 46015	6895 30685	0.25 6.4	8.63 219	12.68 321	2.50 64	16.0 7.3
216.3 mm	8.515 216.3	34175 152079	17090 76051	11390 50686	0.25 6.4	11.00 279	15.00 381	2.63 67	25.2 11.4
8 200	8.625 219.1	35055 155995	17530 78010	11685 52000	0.25 6.4	11.00 279	15.00 381	2.75 70	26.1 11.8
267.4 mm	10.528 267.4	52230 232424	26115 116212	17410 77475	0.25 6.4	13.38 340	17.00 432	2.75 700	32.5 14.7
10 250	10.750 273.0	54460 242345	27230 121175	18150 80770	0.25 6.4	13.50 343	17.25 438	3.00 76	32.8 14.9
318.5 mm	12.539 318.5	74100 329745	37050 164873	24700 109915	0.25 6.4	15.63 397	19.63 499	2.88 73	42.0 19.1
12 300	12.750 323.9	76605 340890	38300 170435	25535 113630	0.25 6.4	15.63 397	19.63 499	2.88 73	46.0 20.9

* Refer to General Notes on pg. 15.



TYPICAL FOR ALL SIZES

Grooved System for Stainless Steel Pipe – Couplings

Flexible Coupling

STYLE 77S

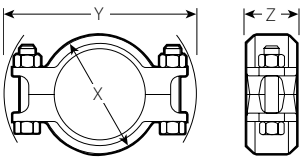
Request Publication 17.03

- CF8M 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 750 psi/ 5175 kPa for Schedule 40S, 500 psi/3445 kPa for Schedule 10S, and 325 psi/ 2241 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

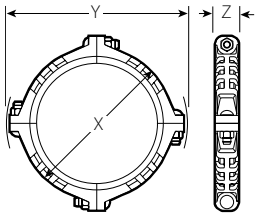
Size		Max. End Load *			Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	Lbs. N							
		Schedule 40S	Schedule 10S	Schedule 5S	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
¾ 20	1.050 26.9	650 2893	430 1915	280 1245	0 – 0.06 0 – 1.6	2.08 53	3.89 99	1.70 43	1.2 0.6
1 25	1.315 33.7	1000 4450	680 3025	440 1960	0 – 0.06 0 – 1.6	2.54 65	4.50 114	1.66 42	1.6 0.7
1 ¼ 32	1.900 42.4	1600 7120	1080 4805	700 3115	0 – 0.06 0 – 1.6	2.87 73	4.79 122	1.76 45	1.9 0.9
1 ½ 40	1.900 48.3	2100 9345	1415 6295	920 4095	0 – 0.06 0 – 1.6	3.24 82	4.80 122	1.76 45	2.1 1.0
2 50	2.375 60.3	330 14685	2215 9855	1440 6408	0 – 0.06 0 – 1.6	3.70 94	5.33 135	1.84 47	2.5 1.1
2 ½ 65	2.875 73.0	4900 21805	3245 14440	2110 9390	0 – 0.06 0 – 1.6	4.20 107	5.79 147	1.84 47	2.9 1.3
3 80	3.500 88.9	7200 32040	3850 17133	2405 10702	0 – 0.06 0 – 1.6	4.83 123	6.99 178	1.84 47	4.1 1.9
4 100	4.500 114.3	6360 28302	5565 24764	3580 15931	0 – 0.13 0 – 3.2	5.93 151	8.20 208	2.06 52	6.7 3.0
6 150	6.625 168.3	10340 46013	6900 30705	4300 19135	0 – 0.13 0 – 3.2	8.30 211	11.06 281	2.06 52	8.5 3.9
8 200	8.625 219.1	17525 77986	7300 32485	4380 19491	0 – 0.13 0 – 3.2	11.38 229	14.74 374	2.44 62	23.5 10.7
10 250	10.750 273.0	27225 121151	6810 30305	4540 20203	0 – 0.13 0 – 3.2	13.50 343	17.33 440	2.63 67	33.0 15.0
12 300	12.750 323.9	38300 170435	15960 71022	9575 42609	0 – 0.13 0 – 3.2	15.50 394	19.15 486	2.56 65	35.0 15.9
14 † 350	14.000 355.6	30800 137060	15400 68530	10000 44500	0 – 0.13 0 – 3.2	16.56 421	20.44 519	2.81 71	37.0 16.8
16 † 400	16.000 406.4	30200 134390	16080 71556	10500 46725	0 – 0.13 0 – 3.2	18.94 481	22.52 572	2.94 75	53.0 24.0
18 † 450	18.000 457.0	31800 141510	15300 68085	10200 45390	0 – 0.13 0 – 3.2	21.25 540	24.62 625	3.06 78	62.0 25.0

* Refer to General Notes on pg. 15.

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



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

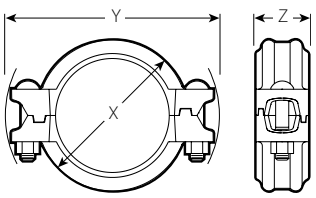
Request Publication 17.14

Size		Max. End Load *			Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	Lbs. N							
		Schedule 40S	Schedule 10S	Schedule 5S	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
1 25	1.315 33.7	1020 4539	680 3026	440 1958	0 – 0.06 0 – 1.6	2.45 62	4.36 111	1.63 41	1.5 0.7
1 ¼ 32	1.660 42.4	1625 7231	1080 4806	700 3115	0 – 0.06 0 – 1.6	2.84 72	4.67 119	1.72 44	1.9 0.9
1 ½ 40	1.900 48.3	2125 9456	1415 6295	920 4094	0 – 0.06 0 – 1.6	3.22 82	4.74 120	1.72 44	2.2 1.0
2 50	2.375 60.3	2215 9857	1550 6898	1000 4450	0 – 0.06 0 – 1.6	3.30 84	5.03 128	1.80 46	1.7 0.8
2 ½ 65	2.875 73.0	3250 14463	2275 10124	1460 6497	0 – 0.06 0 – 1.6	3.88 99	5.59 142	1.80 46	1.9 0.9
76.1 mm	3.000 76.1	3535 15731	2475 11014	1590 7076	0 – 0.06 0 – 1.6	4.00 102	5.73 146	1.80 46	2.0 0.9
3 80	3.500 88.9	4810 21405	33770 14997	2170 9657	0 – 0.06 0 – 1.6	4.50 114	6.67 169	1.80 46	2.9 1.3
4 100	4.500 114.3	5170 23007	4775 21250	3180 14150	0 – 0.13 0 – 3.2	5.75 146	7.96 202	2.00 51	4.2 1.9
139.7 mm	5.500 139.7	4750 21138	4750 21138	2970 13217	0 – 0.13 0 – 3.2	6.81 173	8.97 228	2.00 51	4.9 2.2
165.1 mm ‡	6.500 165.1	6640 29550	6640 29550	4150 18470	0 – 0.13 0 – 3.2	7.87 200	10.53 268	2.00 51	6.8 3.1

* Refer to General Notes on pg. 15.

‡ Denotes JIS pipe size.

- 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/ 2241 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



TYPICAL FOR ALL SIZES

Grooved System for Stainless Steel Pipe – Couplings

Vic-Flange Adapter ANSI Class 150

STYLE 441

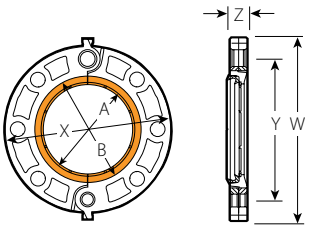
Request Publication 17.27

Size		Max. End Load *	Sealing Surface		Dimensions				Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	Lbs. N	A Min. Inches mm	B Max. Inches mm	W Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
2 50	2.375 60.3	1220 5429	2.40 61	3.40 86	6.84 174	6.00 152	4.75 121	0.82 21	3.0 1.4
2½ 65	2.875 73.0	1785 7943	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	2645 11770	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	4375 19469	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	6895 30683	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.

IMPORTANT NOTES:

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



TYPICAL FOR ALL SIZES

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

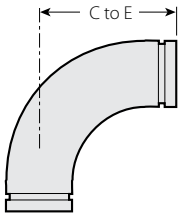
- Designed to directly incorporate stainless flanged components with ANSI Class 150 bolt hole patterns into grooved stainless steel pipe system
- Pressure rated up to 200 psi/1379 kPa for Schedule 40S, and 275 psi/1896 kPa for Schedules 10S and 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.27
- Sizes from 2 – 6"/50 – 150 mm

Grooved System for Stainless Steel Pipe – Fittings

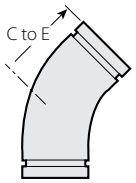
Types 304 and 316 Elbows

NO. 100 SS 90° Long Radius
NO. 110 SS 45° Long Radius
NO. 100 SSLT 90° Long Radius/Long Tangent
NO. 110 SSLT 45° Long Radius/Long Tangent

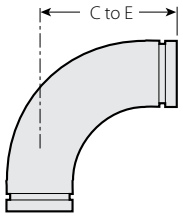
Request Publication 17.04



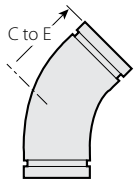
NO. 100 SS



NO. 110 SS



NO. 100 SSLT



NO. 110 SSLT

Size		No. 100 SS 90° Long Radius Elbow		No. 110 SS 45° Long Radius Elbow		No. 100 SSLT 90° Long Radius/Long Tangent Elbow		No. 110 SSLT 45° Long Radius/Long Tangent 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
1 ½ 40	1.900 48.3	—	—	—	—	3.50 89	1.0 0.5	2.19 56	0.8 0.4
2 50	2.375 60.3	—	—	—	—	4.50 114	1.7 0.8	2.75 70	1.2 0.5
2 ½ 65	2.875 73.0	—	—	—	—	5.00 127	2.5 1.1	2.81 71	1.7 0.8
3 80	3.500 88.9	4.50 114.3	2.6 1.2	2.00 51	1.3 0.6	—	—	—	—
4 100	4.500 114.3	6.00 152	4.7 2.1	2.50 64	2.3 1.0	—	—	—	—
6 150	6.625 168.3	9.00 229	10.3 4.7	3.75 95	5.1 2.3	—	—	—	—
8 200	8.625 219.1	12.00 305	27.6 12.5	5.00 127	13.8 6.3	—	—	—	—
10 250	10.750 273.0	15.00 381	49.2 22.3	6.25 159	24.6 11.2	—	—	—	—
12 300	12.750 323.9	18.00 457	78.4 35.6	7.50 191	39.2 17.8	—	—	—	—

IMPORTANT NOTES:

No. 100 SS and No. 110 SS are manufactured from material conforming to ASTM A-403 WPW Schedule 10S 304L/316L.

No. 100 SSLT and No. 110 SSLT are manufactured from material conforming to ASTM A-403 WPW/S9 Schedule 10S 304L/316L.

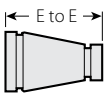
- All stainless fittings are schedule 10S 304L/316L
- Offered in a variety of standard fitting configurations
- Sizes to 12"/300mm

Grooved System for Stainless Steel Pipe – Fittings

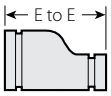
Types 304 and 316 Concentric/Eccentric Reducer

NO. 50 SSLT Concentric
NO. 51 SSLT Eccentric

Request Publication 17.04



NO. 50 SSLT



NO. 51 SSLT

Size			No. 50 SSLT – Concentric Reducer & No. 51 SSLT – Eccentric Reducer	
Nominal Size Inches mm			E to E Inches mm	Approx. Weight Each Lbs. kg
1 ½ 40	×	¾ 20	3.75 95	1.3 0.6
		1 05	3.75 95	1.4 0.6
		1 ¼ 32	3.75 95	1.5 0.7
2 50	×	¾ 20	3.75 95	2.0 0.9
		1 25	3.75 95	2.1 1.0
		1 ¼ 32	3.75 95	2.3 1.0
		1 ½ 40	3.75 95	2.5 1.1
2½ 65	×	1 ‡ 25	5.00 127	2.8 1.3
		1 ½ 40	5.00 127	3.0 1.4
		2 50	5.00 127	3.5 1.6
3 80	×	1 ‡ 25	5.00 127	4.0 1.8
		1 ¼ 32	5.00 127	4.1 1.9
		1 ½ 40	5.00 127	4.2 1.9
		2 50	5.00 127	4.3 2.0
		2½ 65	5.00 127	4.5 2.0
4 100	×	2 50	5.00 127	4.8 2.2
		2½ 65	5.00 127	5.8 2.6
		3 80	5.00 127	5.9 2.7
6 150	×	2½ ‡ 200	9.00 229	6.8 3.1
		3 80	9.00 229	6.9 3.1
		4 100	9.00 229	7.0 3.2

‡ Eccentric available on special order only.

IMPORTANT NOTES:

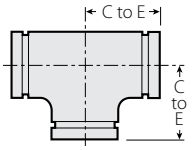
No. 50 SSLT and No. 51 SSLT are manufactured from material conforming to ASTM A-403 WPW/S9 Schedule 10S 304L/316L.

Other sizes available upon request. Contact Victaulic for details.

Types 304 and 316 Tee and Cap

NO. 20 SS Tee
NO. 60 SS Cap

Request Publication 17.04



NO. 20 SS

NO. 60 SS

Size		No. 20 SS Tee		No. 60 SS Cap	
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	T Thickness Actual mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.7	—	—	0.813 21	0.1 0.05
1 25	1.315 33.7	—	—	0.875 22	0.2 0.1
1 ¼ 32	1.660 42.4	—	—	0.875 22	0.4 0.2
1 ½ 40	1.900 48.3	3.38 86	1.6 0.7	0.875 22	0.5 0.2
2 50	2.375 60.3	4.00 102	2.4 1.1	0.875 22	0.7 0.3
2½ 65	2.875 73.0	4.63 118	3.6 1.6	0.875 22	1.0 0.5
3 80	3.500 88.9	3.77 96	3.2 1.5	0.875 22	2.0 0.9
4* 100	4.500 114.3	4.47 114	4.9 2.2	2.50 64	3.3 1.5
6* 150	6.625 168.3	5.91 150	10.6 4.8	3.50 89	8.0 3.6
8* 200	8.625 219.1	7.79 198	20.0 9.1	7.00 178	14.0 6.4
10* 250	10.750 273.0	8.89 226	31.2 14.2	8.00 203	30.5 13.9
12* 300	12.750 323.9	10.39 264	47.0 21.3	9.00 229	40.0 18.2

* Caps 4 – 12"/100 – 300 mm sizes are Schedule 10 dish caps.

IMPORTANT NOTES:

No. 20 SS is manufactured from material conforming to ASTM A-403CR/S9 Schedule 10S 304L/316L.

No. 60 SS is manufactured from material conforming to ASTM A-403.

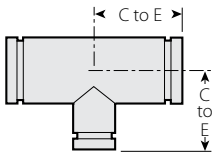
Flat caps are available in 4"/100 mm & 6"/150 mm sizes. Contact Victaulic.

Grooved System for Stainless Steel Pipe – Fittings

Types 304 and 316 Reducing Tee

NO. 25 SS-SW

Request Publication 17.04



NO. 25 SS-SW

Size				No. 25 SS-SW Reducing Tee		
Nominal Size Inches mm				C to E Run Inches mm	C to E Branch Inches mm	Approx. Weight Each Lbs. kg
1 ½ 40	×	1 ½ 40	× ¾ 20	2.75 70.0	2.75 70.0	1.3 0.6
			1 25	2.75 70.0	2.75 70.0	1.4 0.6
			1 ¼ 32	2.75 70.0	2.75 70.0	1.5 0.7
2 50	×	2 50	× ¾ 20	3.25 83	3.25 83	2.0 0.9
			1 25	3.25 83	3.25 83	2.1 1.0
			1 ¼ 32	3.25 83	3.25 83	2.3 1.0
			1 ½ 40	3.25 83	3.25 83	2.5 1.1
2½ 65	×	2½ 65	× ¾ 20	3.75 95	3.75 95	2.8 1.3
			1 25	3.75 95	3.75 95	3.0 1.4
			1 ½ 40	3.75 95	3.75 95	3.5 1.6
			2 50	3.75 95	3.75 95	3.8 1.7
3 80	×	3 80	× ¾ 20	4.25 108	4.25 108	4.0 1.8
			1 25	4.25 108	4.25 108	4.1 1.9
			1 ¼ 32	4.25 108	4.25 108	4.2 1.9
			1 ½ 40	4.25 108	4.25 108	4.3 2.0
			2* 50	3.77 96	3.23 82	2.9 1.3
			2½ 65	3.77 96	3.23 82	3.1 1.4
4 100	×	4 100	× 1 25	5.00 127	5.00 127	5.0 2.3
			1 ¼ 32	5.00 127	5.00 127	5.3 2.4
			1 ½ 40	5.00 127	5.00 127	5.6 2.5
			2* 50	4.47 114	3.82 97	4.4 2.0
			2½ 65	5.00 127	5.00 127	5.9 2.7
			3* 80	4.47 114	3.88 99	4.5 2

Size				No. 25 SS-SW Reducing Tee		
Nominal Size Inches mm				C to E Run Inches mm	C to E Branch Inches mm	Approx. Weight Each Lbs. kg
6 150	×	6 150	× 2 50	6.50 165	6.50 165	11.6 5.3
			2½ 65	6.50 165	6.50 165	12.1 5.5
			3* 80	5.91 150	4.88 124	9.0 4.1
			4* 100	5.91 150	5.12 130	10.0 4.5
8 200	×	8 200	× 2½ 65	7.75 197	7.75 197	17.5 7.9
			3 80	7.75 197	7.75 197	18.0 8.2
			4* 100	7.79 198	6.31 160	17.9 8.1
			6* 150	7.79 198	6.62 168	18.1 8.2
10 250	×	10 250	× 3 80	9.00 229	9.00 229	29.0 13.2
			4 100	9.00 229	9.00 229	30.0 13.6
			6* 150	8.89 229	7.70 196	28.2 12.8
			8* 200	8.89 226	8.59 218	29.3 13.3
12 300	×	12 300	× 6 150	10.00 254	10.00 254	43.0 19.5
			8* 200	10.39 264	9.51 242	40.0 18.1
			10* 250	10.39 264	9.89 251	45.0 20.4

* Made from ASTM A-403CR/S9, Schedule 10S 304L/316L.

IMPORTANT NOTES:

No. 25 SS-SW is manufactured from material conforming to ASTM A-312 segmentally welded pipe unless otherwise noted.

Other sizes available upon request.

Contact Victaulic for details.

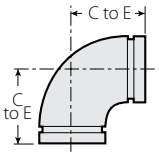
Long Tangent Tees optionally available.

Grooved System for Stainless Steel Pipe – Fittings

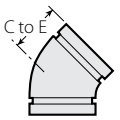
ASTM A-403
Fittings

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

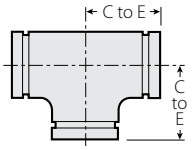
Request Publication 17.16



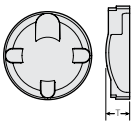
NO. 410 SS



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	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	T Thickness Actual mm	Approx. Weight Each Lbs. kg
2 50	2.375 60.3	4.50 114.3	1.1 0.5	2.75 69.9	0.7 0.3	2.75 70.0	1.3 0.6	—	—
2½ 65	2.875 73.0	5.00 127	1.8 0.8	2.81 71.4	0.9 0.4	3.07 78.0	2.2 1.0	—	—
3 80	3.500 88.9	4.50 114.3	2.6 1.2	2.00 50.8	1.3 0.6	3.77 95.7	3.1 1.4	1.03 26	1.1 0.5
4 100	4.500 114.3	6.00 152.4	4.4 2.0	2.50 63.5	2.2 1.0	4.47 113.6	4.9 2.2	1.22 31	1.6 0.7
6 150	6.625 168.3	9.00 228.6	11.0 5.0	3.75 95.3	5.5 2.5	5.91 150.0	11.7 5.3	1.75 44	3.9 1.8
8 200	8.625 219.1	12.00 304.8	21.2 9.6	5.00 127	11.0 5.0	7.79 197.8	20.3 9.2	2.23 57	6.6 3.0
10 250	10.750 273.0	15.00 381	36.6 16.6	6.25 158.8	18.5 8.4	8.89 225.9	34.4 15.6	—	—
12 300	12.750 323.9	18.00 457.2	56.9 25.8	7.50 190.5	28.4 12.9	10.39 264.0	52.5 23.8	—	—

IMPORTANT NOTES:

No. 410 SS, No. 411 SS, and No. 420 SS are manufactured from material conforming to ASTM A-403 Schedule 10S 304L or 316L.
No. 460 SS is manufactured from material conforming to ASTM A-351, A-743, ND A-744, grade CF8M.

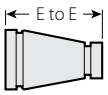
- Offered in a variety of standard fitting configurations
- Roll grooved Schedule 10S Types 304L and 316L stainless steel fittings
- Sizes to 12"/300 mm

Grooved System for Stainless Steel Pipe – Fittings

ASTM A-403
Concentric Reducer

NO. 450 SS

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	1.3 0.6
2½ 65	×	2 50	5.00 127	1.7 0.8
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	4.0 1.8
		4 100	5.50 139.7	4.2 1.9
8 200	×	4 100	6.00 152.4	5.3 2.4
		6 150	6.00 152.4	7.0 3.2
10 250	×	6 150	7.00 177.8	8.8 4.0
		8 200	7.00 177.8	11.5 5.2
12 300	×	8 200	8.00 203.2	13.2 6.0
		10 250	8.00 203.2	17.0 7.7

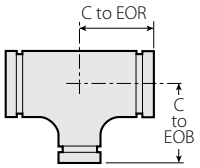
IMPORTANT NOTE:

No. 450 SS is manufactured from material conforming to ASTM A-403 Schedule 10S 304L or 316L.

ASTM A-403
Reducing Tee

NO. 425 SS

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	3.1 1.4
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.

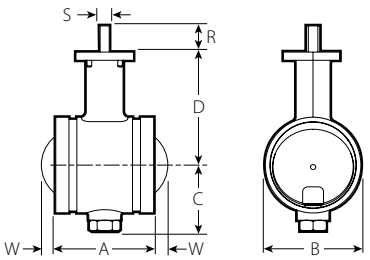
Grooved System for Stainless Steel Pipe – Valves

Butterfly Valve

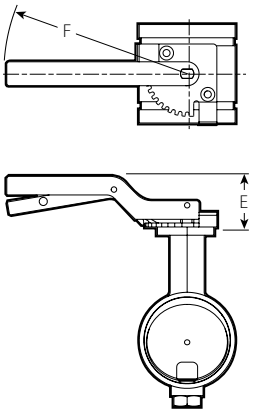
SERIES 763

Request Publication 17.23

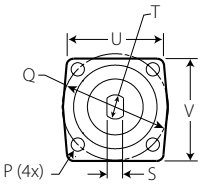
SERIES 763
WITH LEVER HANDLE



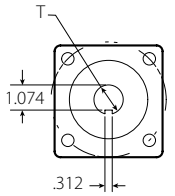
SERIES 763 BUTTERFLY VALVE BARE
TYPICAL FOR ALL SIZES



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 Out. Dia. 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
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
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
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

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

- 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

SERIES 763
WITH POWER ACTUATOR

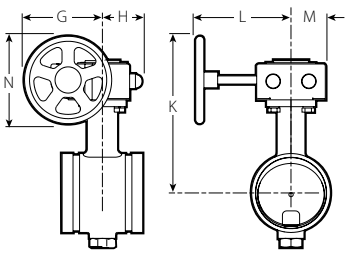
SERIES 763
WITH GEAR OPERATOR

Grooved System for Stainless Steel Pipe – Valves

Butterfly Valve

SERIES 763

Request Publication 17.23



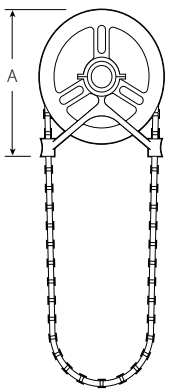
TYPICAL FOR ALL SIZES

ALUMINUM GEAR OPERATOR

Size		Dimensions						Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. 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
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
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
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 Dia. 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
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
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
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



TYPICAL FOR ALL SIZES

CHAIN WHEEL AND GUIDE FOR GEAR OPERATED BUTTERFLY VALVES

Size		Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Sprocket Size	Chain Wheel Size (Diameter) Inches mm	A Inches mm	Lbs. kg
2 – 4 50 – 100	2.375 – 4.500 60.3 – 114.3	0	4.00 10	4.63 118	2.0 0.9
5 – 8 125 – 200	5.563 – 8.625 141.3 – 219.1	1	5.75 146	6.38 162	4.0 1.8
10 – 12 250 – 300	10.750 – 12.750 273.0 – 323.9	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.

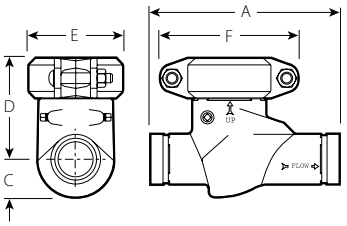
Grooved System for Stainless Steel Pipe – Valves

Swinger Check Valve

SERIES 712S

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"/15mm NPT pipe plug for chemical injection or other auxiliary connections
- Type 316 stainless steel body and trim in 2"/50mm size



TYPICAL FOR 2"/50mm SIZE

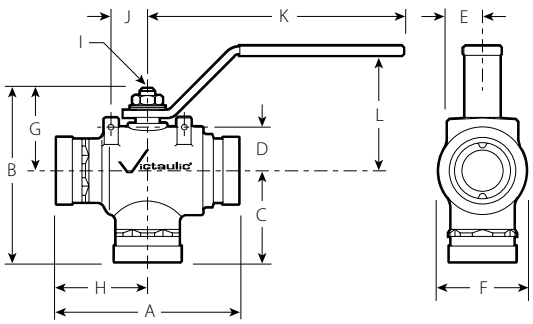
Size		Dimensions					Approx. Weight Each without Operator
Nominal Size Inches mm	Actual Outside Diameter Inches mm	A End to End Inches mm	C Inches mm	D Inches mm	E Inches mm	F Inches mm	Lbs. kg
2 50	2.375 60.3	9.00 229	1.75 45	4.88 124	3.38 86	6.38 162	12.0 5.4

Three-port Diverter Ball Valve

SERIES 723S

Request Publication 17.07

- Type 316 stainless steel body
- Three-port ball and blow-out proof stem are Type 316 stainless steel
- Common inlet for diverting flow 90° left or right
- 180° operation is available
- Pressure rated up to 600psi/4130kPa
- Sizes from 2"/50mm



TYPICAL FOR 2"/50mm SIZE

Size		Dimensions														Approx. Wgt. Each
										I Stem Drive Hub						
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	Diameter Inches mm	Flat Width Inches mm	Flat Height Inches mm	J Inches mm	K Inches mm	L Inches mm	Lbs. kg
2 50	2.375 60.3	6.86 174	6.19 157	3.25 83	1.68 43	1.25 32	3.13 80	2.94 75	3.25 83	0.62 16	0.50 13	0.50 13	1.31 33	9.00 229	4.13 105	7.5 3.4

Grooved System for Stainless Steel Pipe – Valves

Vic-Ball Valve

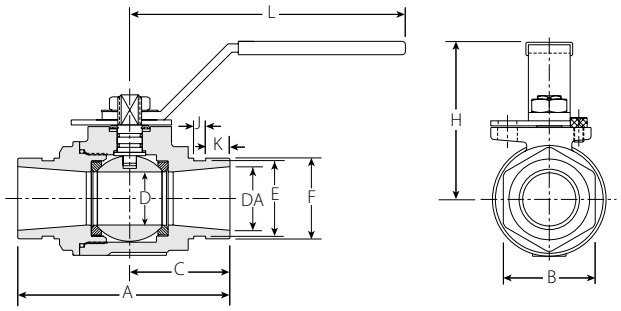
SERIES 726S

Request Publication 17.22

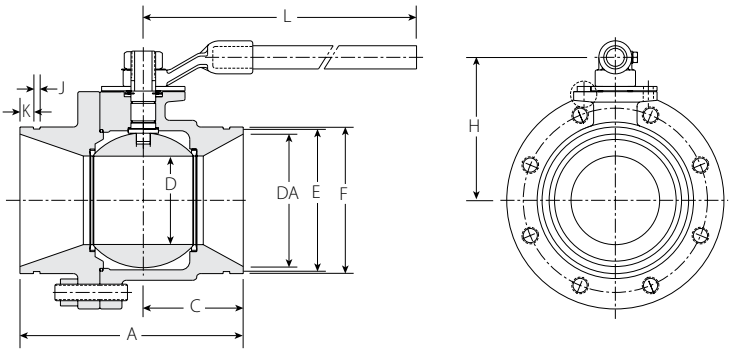
Size		Dimensions											Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Out. Dia. Inches mm	A Inches mm	B Inches mm	C Inches mm	D Inches mm	DA Inches mm	E Inches mm	F Inches mm	H Inches mm	J Inches mm	K Inches mm	L Inches mm	Lbs. kg	C_V Values K_V Values
1½ 40	1.900 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	4.0 2.2	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	11.6 5.3	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	17.2 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	45.0 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

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.

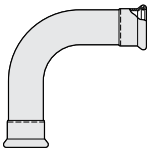
Pressfit delivers real on-the-job pipe joining advantages to fitters and installers – benefits that you won't find in standard threaded, welded or flanged systems.

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.

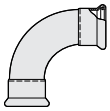
Product Line

Standard Coupling, pg. 123

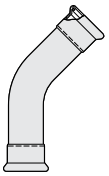
Slip Coupling, pg. 123



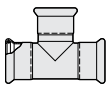
90° Elbow, pg. 124



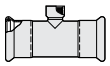
Short Tangent 90° Elbow, pg. 124



45° Elbow, pg. 124

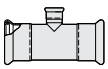


Tee, pg. 125



Tee with Thd. Branch, pg. 125

PRESSFIT	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

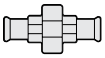


Tee with Reducing Branch, pg. 126

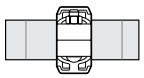
Male Adapter, pg. 126

Female Thd. Adapter, pg. 127

Weld Adapter, pg. 127



Threaded Union, pg. 127



Grooved End Union, pg. 128

Flange Adapter, pg. 128

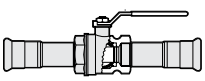
PRESSFIT	304	STYLE 593	STYLE 596	STYLE 599	STYLE 561	STYLE 584	STYLE 547	STYLE 595
	316	STYLE 573	STYLE 576	STYLE 579		STYLE 585	STYLE 548	STYLE 575

Van Stone Flange Adapter, pg. 128

Transition Nipple, pg. 129

Reducer Insert, pg. 129

Concentric Reducer, pg. 129

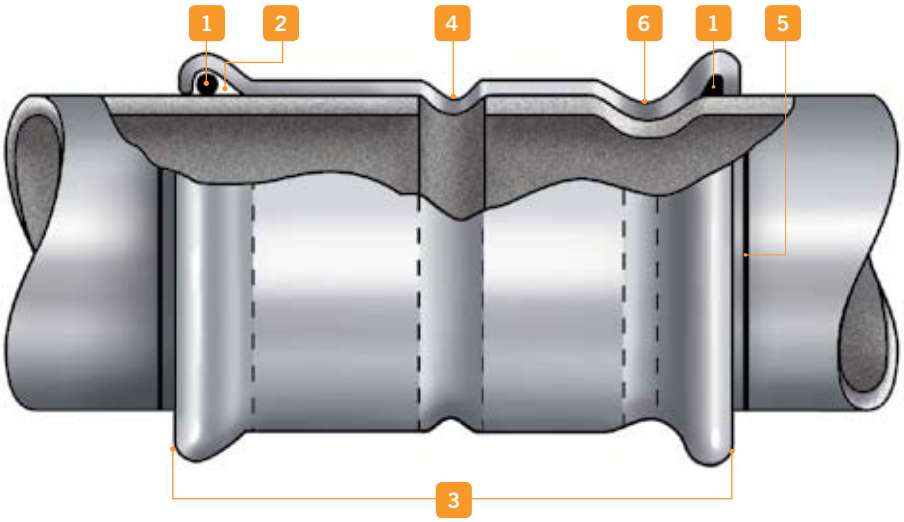


Ball Valve, pgs. 130-131

PRESSFIT	304	STYLE 565	STYLE 587	STYLE 582	STYLE 594	STYLE 589
	316	STYLE 566	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

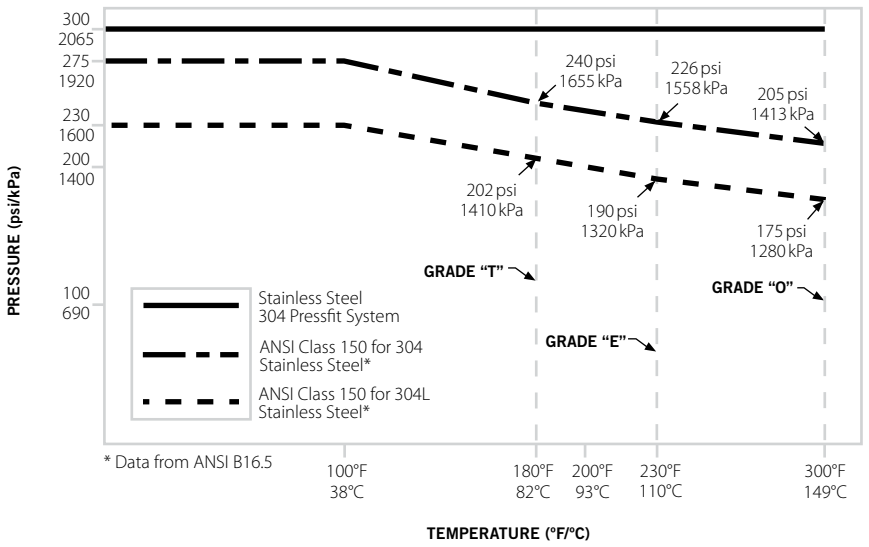
The Pressfit System requires a Pressfit tool designed for securing Pressfit products onto pipe. The Pressfit tool packages include the actual pressing tool and any customer-specified press jaws. Jaws are available separately for rental or purchase. The PFT505 Pressfit tool is designed for industrial and trade use only.
See pg. 182 for more details.

Pressfit System for Stainless Steel Pipe

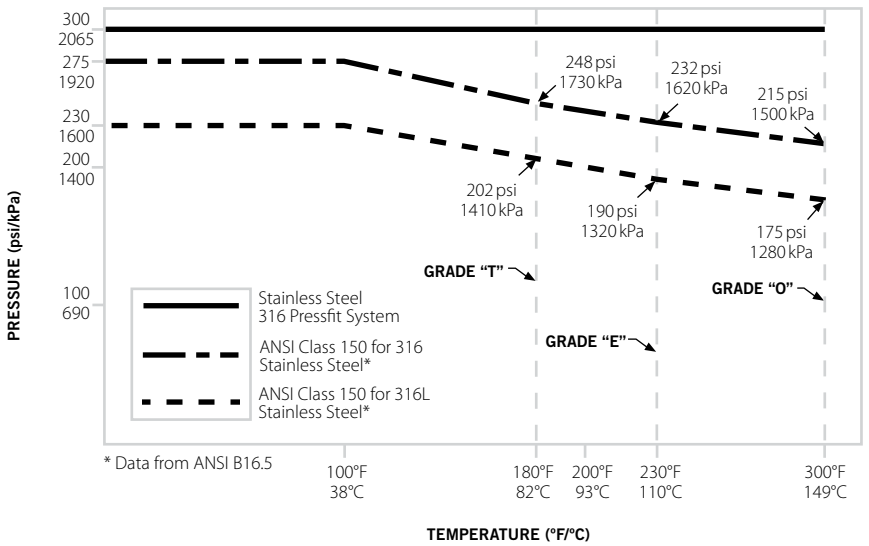
Stainless Steel Pipe System – Performance

- Available for Type 304 or Type 316 stainless steel systems
- Full range of couplings, fittings and valves
- Handheld tool used to join pipe in seconds
- 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

Vic-Press 304



Vic-Press 316



PRODUCTS

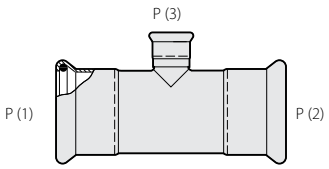
12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

Pressfit System for Stainless Steel Pipe

Dimensional Information

Products in the Vic-Press 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.

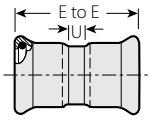


END TYPE CODE

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

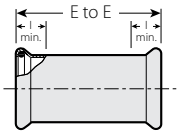
Size		Dimensions		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	U Takeout Inches mm	Lbs. kg
½ 15	0.840 21.3	2.00 51	0.35 9	0.1 0.1
¾ 20	1.050 26.7	2.17 55	0.28 7	0.2 0.1
1 25	1.315 33.7	2.44 62	0.39 10	0.2 0.1
1 ½ 40	1.900 48.3	3.15 80	0.32 8	0.5 0.2
2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

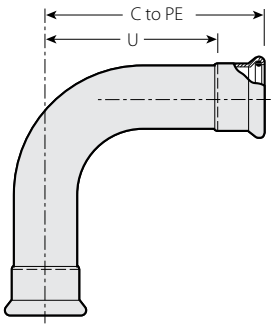
SLIP COUPLING

PRESSFIT			
	316	STYLE 508	Request Publication 18.01

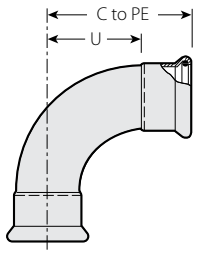
Pressfit System for Stainless Steel Pipe

Elbows

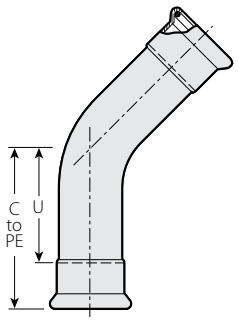
STYLE 590 90° Elbow (P × P)
STYLE 570 90° Elbow (P × P)
STYLE 586 Short Tangent 90° Elbow (P × P)
STYLE 568 Short Tangent 90° Elbow (P × P)
STYLE 591 45° Elbow (P × P)
STYLE 571 45° Elbow (P × P)



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

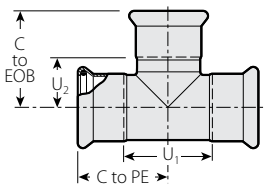
45° ELBOW

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

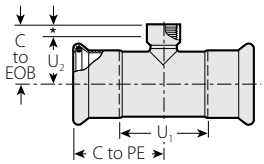
Size		Dimensions				Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to PE Inches mm	U_1 Inches mm	C to EOB Inches mm	U_2 Inches mm	Lbs. kg
½ 15	0.840 21.3	1.40 36	1.04 26	1.60 41	0.72 18	0.2 0.1
¾ 20	1.050 26.7	1.89 48	1.89 48	1.89 48	0.95 24	0.3 0.1
1 25	1.315 33.7	2.11 54	2.17 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

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

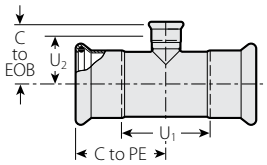
PRESSFIT			
	304	**STYLE 588**	Request Publication 18.02
	316	**STYLE 578**	Request Publication 18.01

* Length of effective thread.

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

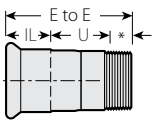
TEE WITH REDUCING BRANCH†

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

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

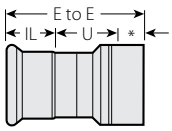
PRESSFIT	304	STYLE 596	Request Publication 18.02
	316	STYLE 576	Request Publication 18.01

* Length of effective thread.

Pressfit System for Stainless Steel Pipe

Female Threaded Adapter

STYLE 599 (P × F)
STYLE 579 (P × F)



STYLE 599 & 579

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

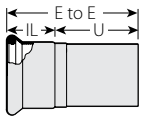
FEMALE THREADED ADAPTER

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

* Length of effective thread.

Weld Adapter

STYLE 561 (P × T)



STYLE 561

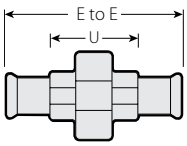
Size			Dimensions			Approx. Weight Each
Nominal Size Inches mm			E to E Inches mm	U Takeout Inches mm	IL Insert. Length Inches mm	Lbs. kg
½ 15	×	½ 15	3.68 93	2.85 72	0.83 21	0.2 0.1
¾ 20	×	¾ 20	3.72 94	2.77 70	0.95 24	0.3 0.1
1 25	×	1 25	4.02 102	3.00 76	1.02 26	0.4 0.2
1 ½ 40	×	1 ½ 40	4.40 112	2.98 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

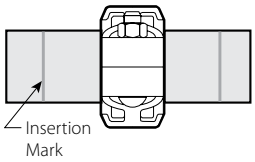
PRESSFIT	304	STYLE 584	Request Publication 18.02
	316	STYLE 585	Request Publication 18.01

Pressfit System for Stainless Steel Pipe

Grooved End Union

STYLE 547
STYLE 548

Request Publication 06.02 for Style 77 Flexible Joint
Request Publication 06.04 for Style 07 Rigid Joint
Request Publication 17.03/17.14 for Style 77S/475 Flexible Joints
Request Publication 17.25 for Style 489 Rigid Joints

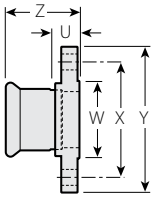


PRESSFIT	304	STYLE 547	Request Publication 18.02
	316	STYLE 548	Request Publication 18.01

- Style 547/548 grooved end union can be formed with two Style 577 transition nipples and a variety of grooved end couplings with varied gaskets to meet service requirements
- Standard ductile iron couplings request Style 77 for flexible joints or Style 07 for rigid joints
- Where external corrosion is a concern request Style 77S/475 for flexible joints or Style 489 for rigid joints

Flange Adapter

STYLE 595 (P × L)
STYLE 575 (P × L)



STYLE 595 & 575

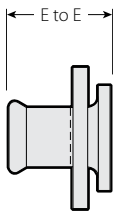
Size		Dimensions					Approx. Weight Each
Nominal Size Inches mm	Actual Out. Dia. Inches mm	U Takeout Inches mm	W Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
½ 15	0.840 21.3	2.34 59	1.38 35	2.38 60	3.50 89	3.22 82	2.3 1.1
¾ 20	1.050 26.7	2.27 58	1.69 43	2.75 70	3.88 99	3.22 82	1.7 0.8
1 25	1.315 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†

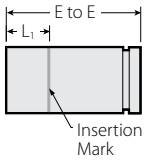
PRESSFIT	304	STYLE 565	Request Publication 18.02
	316	STYLE 566	Request Publication 18.01

† 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

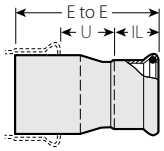
Size		Dimensions		Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	L_1 Minimum Inches mm	Lbs. kg
¾ 20	1.050 26.7	4.00 102	1.00 25	0.2 0.1
1 25	1.315 33.7	4.00 102	1.00 25	0.3 0.1
1 ½ 40	1.900 48.3	4.00 102	1.50 38	0.4 0.2
2 50	2.375 60.3	4.00 102	1.88 48	0.5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

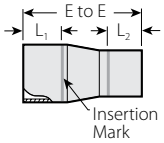
Size			Dimensions			Approx. Weight Each
Nominal Size Inches mm			E to E Inches mm	U Takeout Inches mm	IL Insertion Length Inches mm	Lbs. kg
1 25	×	¾ 20	2.95 75	0.98 25	0.95 24	0.2 0.1
1 ½ 40	×	1 ¼ 32	3.66 93	1.06 27	1.19 30	0.4 0.2
2 50	×	1 ½ 40	4.33 110	1.11 28	1.42 36	0.6 0.3

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
		1 ¼ 32	4.25 108	1.44 37	1.25 32	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 ¼ 32	5.00 127	1.81 46	1.25 32	0.7 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

Vic-Press 304™ Brass Body Ball Valve with Stainless Steel Pressfit Ends

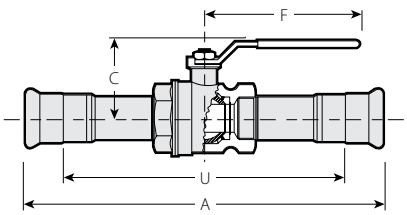
SERIES 589 (P × P)

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
1 ½ 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

Vic-Press 316™ Type 316 Stainless Steel Ball Valve

SERIES 569

Request Publication 18.01

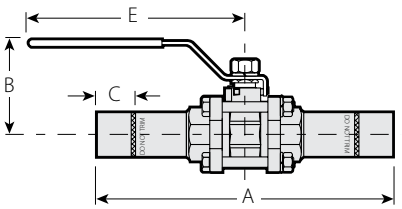
- Body and trim constructed of rugged Type 316 (CF8M) stainless steel with PTFE seats
- Blow-out proof stem self-adjusting floating ball
- Full-port design minimizes pressure drop for flow efficiency
- Three-piece swing-out design permits easy in-line maintenance
- Pressure rated up to 300 psi/2065 kPa 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

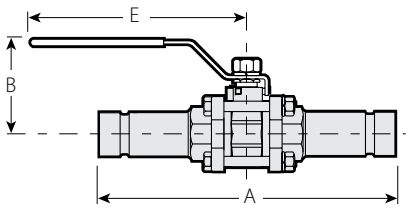
* ½" only available in plain end × plain end.

IMPORTANT NOTE:

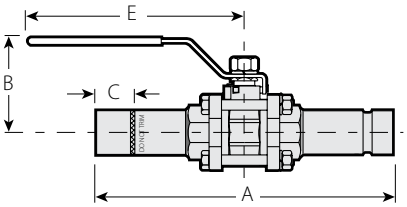
For dimensions and weights with gear operator contact Victaulic.



PLAIN END × PLAIN END



GROOVED × GROOVED



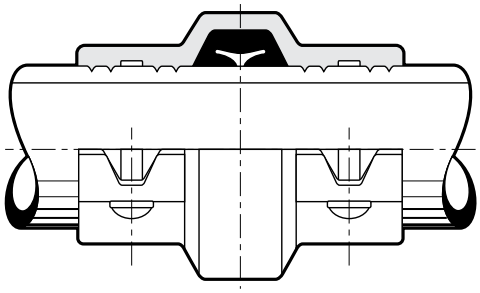
PLAIN END × GROOVED

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

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



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. 133

FM

Transition Coupling – HDPE to Steel

STYLE 997, PG. 134

FM

Vic-Flange Adapter ANSI Class 150

STYLE 994, PG. 135

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.
† Contact Victaulic for special bolt/nut requirements.

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

Plain End Piping System for HDPE Pipe

Coupling

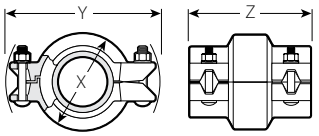
STYLE 995

Request Publication 19.02

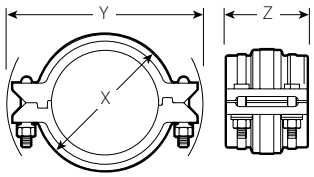
FM

- Sharp gripping teeth on both housing sides grip into outside diameter of HDPE pipe
- Design permits direct joining without fusing equipment
- 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
4 100	4.500 114.3	5.88 149	8.13 207	5.81 148	11.6 5.3
5 125	5.563 141.3	6.94 176	9.88 251	5.88 149	15.0 6.8
6 150	6.625 168.3	8.00 203	10.88 276	5.88 149	16.4 7.4
8 200	8.625 219.1	10.19 259	13.25 377	6.00 152	24.9 11.3
10 250	10.750 273.0	12.38 314	15.88 403	6.50 165	37.4 17.0
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
16 400	16.000 406.4	18.30 465	23.88 607	9.00 229	100.0 45.5
18 450	18.000 457.0	20.30 516	25.63 651	9.50 241	127.0 57.7
20 500	20.000 508.0	22.30 566	27.44 697	10.00 254	142.0 64.5



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

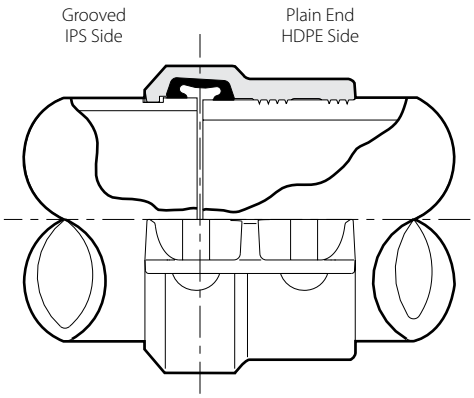
STYLE 997

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
- Sizes from 2 – 12"/50 – 300 mm



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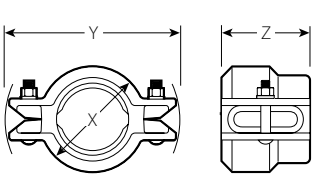
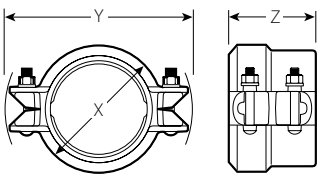


TYPICAL 2"/50 mm SIZE



TYPICAL 3 – 12"/80 – 300 mm SIZES

Plain End Piping System for HDPE Pipe

Vic-Flange Adapter ANSI Class 150

STYLE 994

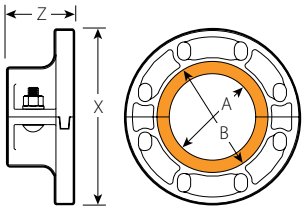
Request Publication 19.04

FM

- Permits direct connection of ANSI Class 125 and 150 flanged components into HDPE systems
- 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 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

Rigid Coupling

STYLE 606, PG. 137

Vic-Flange Adapter

STYLE 641, PG. 138

Valves

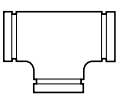
Butterfly Valve

SERIES 608, PG. 141

Fittings

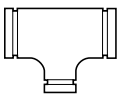
90° Elbow

NO. 610, PG. 139



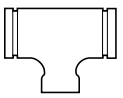
Tee

NO. 620, PG. 139



Reducing Tee
Grv. × Grv. × Grv.

NO. 625, PG. 140



Reducing Tee
Grv. × Grv. × Cup

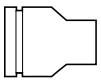
NO. 626, PG. 140

45° Elbow

NO. 611, PG. 139

Concentric Reducer
Grv. × Grv.

NO. 650, PG. 140



Concentric Reducer
Grv. × Cup

NO. 652, PG. 140

Cap

NO. 660, PG. 139

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

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	200 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.

Rigid Coupling

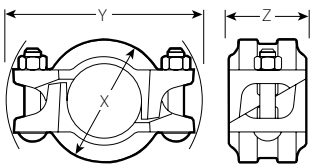
STYLE 606

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

Grooved Copper – Couplings

Vic-Flange Adapter

STYLE 641

Request Publication 22.03

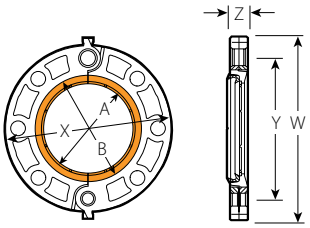
- Direct connection from flanged components to grooved copper tubing
- Integral tabs ease handling
- For 2 – 6"/54.0 – 155.6 mm K, L, M, or DWV tubing

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

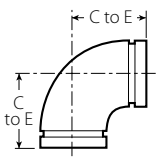
Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Grooved Copper – Fittings

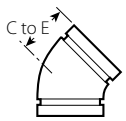
Elbows, Tee and Cap

NO. 610 90° Elbow
NO. 611 45° Elbow
NO. 620 Tee
NO. 660 Cap

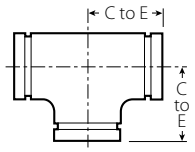
Request
Publication 22.04



NO. 610



NO. 611



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 c 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 c 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	—	—

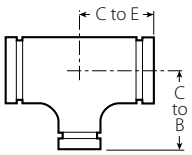
c = Bronze casting; all others, drawn copper.

- 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

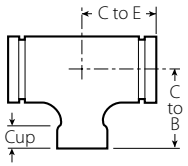
Grooved Copper – Fittings

Reducing Tee

NO. 625 Grv. × Grv. × Grv.
NO. 626 Grv. × Grv. × Cup



NO. 625



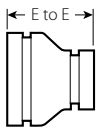
NO. 626

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	× 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	× 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 72	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	× 1 28.6	—	—	—	3.10 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	—	—	—	—

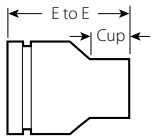
c = Bronze casting; all others, drawn copper.

Concentric Reducer

NO. 650 Grv. × Grv.
NO. 652 Grv. × Cup



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	1.03 c 0.52	—	—	—
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 c 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 – Valves

Butterfly Valve

SERIES 608

Request Publication 22.05

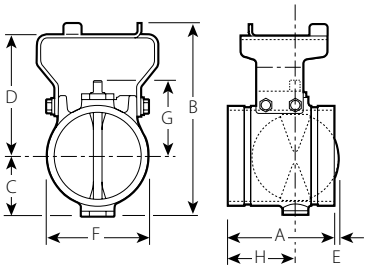
- Dead end service provided to full working pressure in both directions
- Pressure rated up to 300 psi/2065 kPa bubble-tight shut-off
- Sizes from 2½ – 6"/ 66.7 – 155.6 mm CTS

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

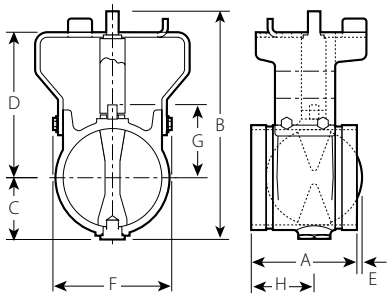
@ C_V/K_V values for flow of water at +60°F/+16°C with a fully open valve.

IMPORTANT NOTE:

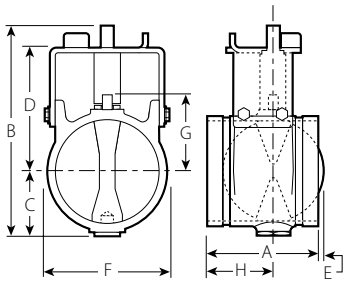
All Series 608 butterfly valves are bronze castings.



TYPICAL 2½ – 3"/66.7 – 79.4 mm SIZES



TYPICAL 4 – 5"/104.8 – 130.2 mm SIZES



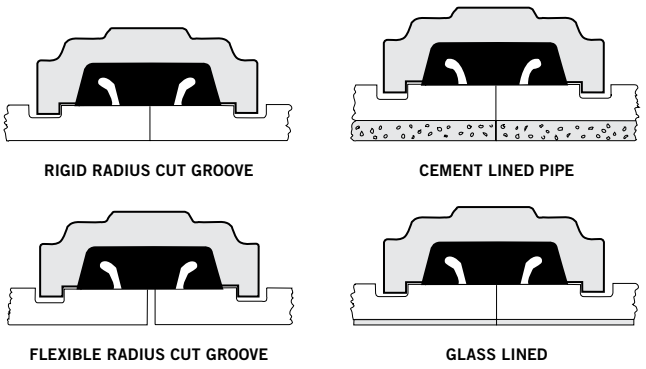
TYPICAL 6"/155.6 mm SIZES

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-only two bolts and nuts versus eight bolts and nuts required for like-size flanges
- 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

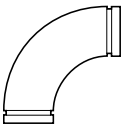
Grooves can be cut into the pipe to provide a rigid or flexible connection as needed.

Pipe and fittings can be coated for abrasive services.



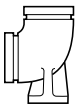
Illustrations exaggerated for clarity

Elbows



90° Long Radius Elbow
NO. 100-C, PG. 148

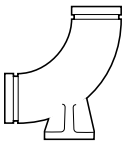
11 ¼° Elbow
NO. 13-C, PG. 148



Base Elbow
NO. 10-CB, PG. 154

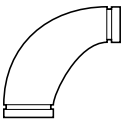
90° Elbow
NO. 10-C, PG. 148

90° Reducing Elbow
NO. 10-CR, PG. 152



Long Radius Base Elbow
NO. 100-CB, PG. 154

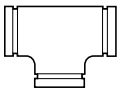
45° Elbow
NO. 11-C, PG. 148



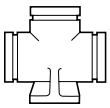
90° Long Radius Reducing Elbow
NO. 100-CR, PG. 152

22 ½° Elbow
NO. 12-C, PG. 148

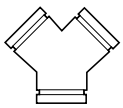
Tees, Crosses, Wyes, and Laterals



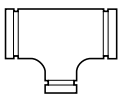
Tee
NO. 20-C, PG. 149



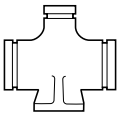
Base Tee
NO. 20-CB, PG. 154



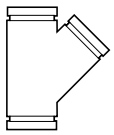
True Wye
NO. 33-C, PG. 149



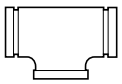
Reducing Tee
NO. 25-C, PG. 150



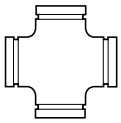
Reducing Base Tee
NO. 25-CB, PG. 154



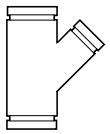
45° Lateral
NO. 30-C, PG. 149



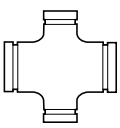
Bullhead Tee
NO. 21-C, PG. 149



Cross
NO. 35-C, PG. 149



45° Reducing Lateral
NO. 30-CR, PG. 150



Reducing Cross
NO. 35-CR, PG. 150

Cap
NO. 60-C, PG. 149

Grooved AWWA Ductile Iron Pipe

Couplings

Coupling
STYLE 31, PG. 144

Vic-Flange Adapter
STYLE 341, PG. 145

Transition Coupling – AWWA to IPS
STYLE 307, PG. 146

Valves

Vic-Plug Valve
SERIES 365, PG. 156
SERIES 366, PG. 158

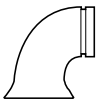
Check Valve
SERIES 317, PG. 160

Reducers

Concentric Reducer
NO. 50-C, PG. 152

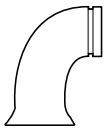
Eccentric Reducer
NO. 51-C, PG. 152

Flared and Outlet Fittings

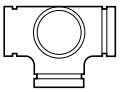


90° Flare
NO. 10-CF, PG. 155

Straight Flare
NO. 43-CF, PG. 155



90° Long Radius Flare
NO. 100-CF, PG. 155



Tee Side Outlet
NO. 20-CS, PG. 155

90° Side Outlet
NO. 10-CS, PG. 155

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.

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

Grooved AWWA Ductile Iron Pipe – Couplings

Coupling

STYLE 31

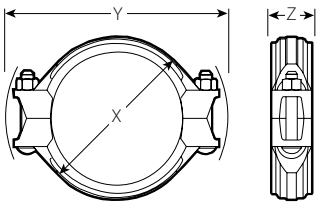
Request Publication 23.02

- Can provide a rigid or flexible joint depending on groove position
- Reduces number of bolts needed to create the joint. Example: systems under 12"/300 mm require just two bolts and nuts versus eight for flanged systems
- Pressure rated up to 500 psi/3450 kPa
- Sizes from 3 – 36"/80 – 900 mm

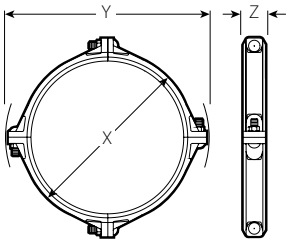
Size		Max. Working Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Weight Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
3 80	3.960 100.6	500 3450	6200 27590	0 – 0.09 0 – 2.4	5.50 140	7.63 194	2.13 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. 15.

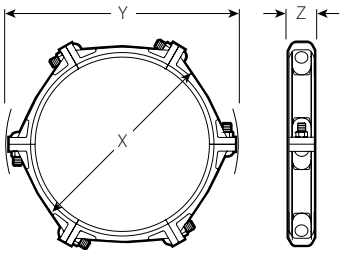
‡ For Class 53 pipe rating is 150 psi/1035 kPa.



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

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

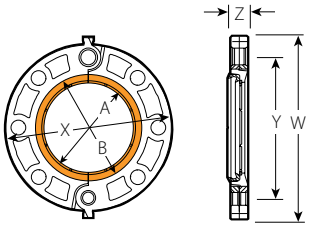
Size		Max. Work Pressure *	Max. End Load *	Sealing Surface		Dimensions				Approx. Weight Each
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	A Maximum Inches mm	B Minimum Inches mm	W Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
3 80	3.9600 100.6	250 1725	3100 13795	3.96 101	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:

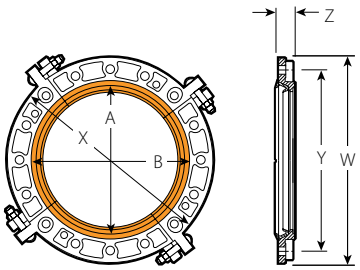
Style 341 requires sufficient clearance behind groove to permit proper assembly.

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.

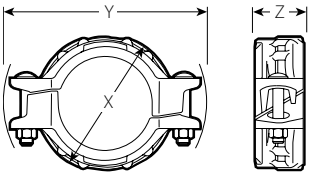
Request Publication 23.03

- 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 Dia. 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. 15.



TYPICAL FOR ALL SIZES

Grooved AWWA Ductile Iron Pipe – Fittings

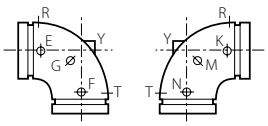
AWWA Fittings

Request Publication 23.05

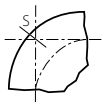
- AWWA size fittings are supplied with rigid radius grooves in accordance with ANSI/AWWA C-606
- Fittings conform to ANSI 21.10/AWWA C-110 for center-to-end dimensions and AWWA C-153 or ANSI 21.10/AWWA C-110 for wall thicknesses
- Available with a wide variety of coatings and linings
- Victaulic can 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

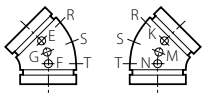
Elbows



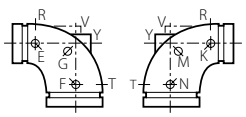
90° ELBOW – STRAIGHT SIZE



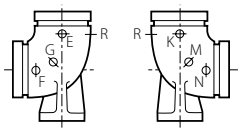
90° ELBOW



45° ELBOW BASE FITTINGS

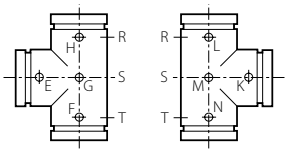


90° ELBOW REDUCING SIZES

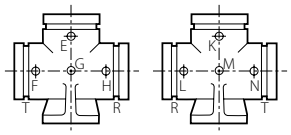


90° BASE ELBOW – STRAIGHT & REDUCING

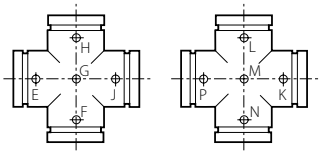
Tees, Crosses, Wyes, and Laterals



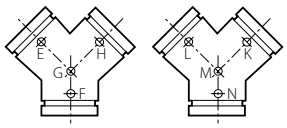
TEE – STRAIGHT SIZES



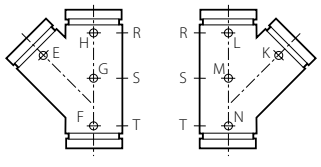
BASE TEE



CROSS – STRAIGHT SIZE

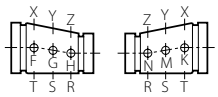


TRUE WYE

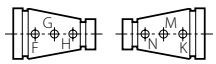


45° LATERAL – STRAIGHT & REDUCING

Reducers



ECCENTRIC REDUCER



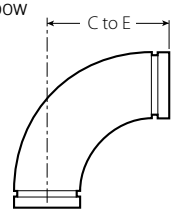
CONCENTRIC REDUCER

Grooved AWWA Ductile Iron Pipe – Fittings

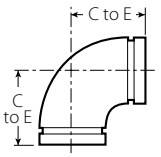
Elbows

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

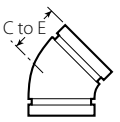
Request Publication 23.05



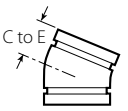
NO. 100-C



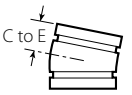
NO. 10-C



NO. 11-C



NO. 12-C



NO. 13-C

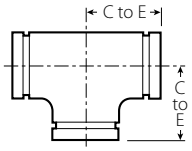
Size		No. 100-C 90° Long Radius Elbow		No. 10-C 90° Elbow		No. 11-C 45° Elbow		No. 12-C 22½° Elbow		No. 13-C 11¼° Elbow	
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Weight Each Lbs kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. 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 32.7	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

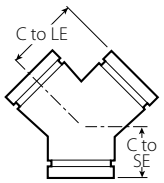
Tee, True Wye, Cross, Lateral, and Cap

NO. 20-C Tee
NO. 33-C True Wye
NO. 35-C Cross
NO. 30-C 45° Lateral
NO. 60-C Cap

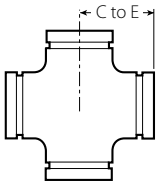
Request Publication 23.05



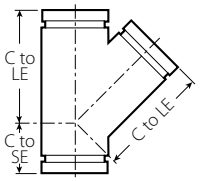
NO. 20-C



NO. 33-C



NO. 35-C



NO. 30-C

NO. 60-C

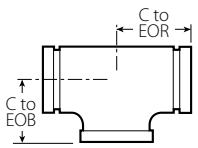
Size		No. 20-C Tee		No. 33-C True Wye			No. 35-C Cross		No. 30-C 45° Lateral			No. 60-C Cap†	
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to LE 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	5.50 140	5.50 140	25.00 635	5.50 140	24.0 10.9	10.00 254	3.00 76	28.0 12.7	1.16 29	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

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

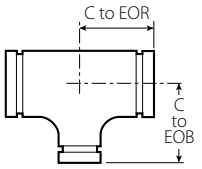
\+ Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

Reducing Fittings

NO. 25-C Reducing Tee
NO. 35-CR Reducing Cross
NO. 30-CR 45° Reducing Lateral

Request Publication 23.05



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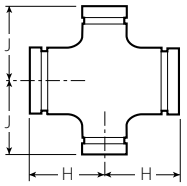
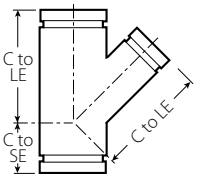


NO. 35-CR



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	53.0 24.0	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. 151

+ Contact Victaulic for details.

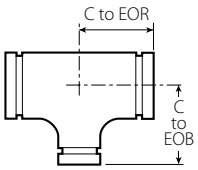
IMPORTANT NOTE: Non-standard reducing cross sizes are available. Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

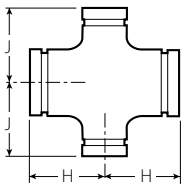
Reducing Fittings (cont'd)

NO. 25-C Reducing Tee
NO. 35-CR Reducing Cross
NO. 30-CR 45° Reducing Lateral

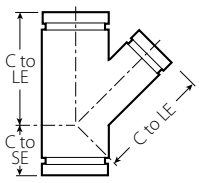
Request Publication 23.05



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. 150											
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	871.0 395.1
		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	54.00 1372	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.

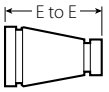
IMPORTANT NOTES: For 30"/750 mm sizes and larger contact Victaulic for details.
Non-standard reducing cross sizes are available. Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

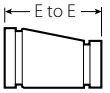
Reducers and Reducing Elbows

NO. 50-C Concentric Reducer
NO. 51-C Eccentric Reducer
NO. 10-CR 90° Reducing Elbow
NO. 100-CR 90° Long Radius Reducing Elbow

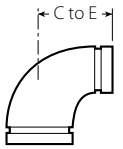
Request Publication 23.05



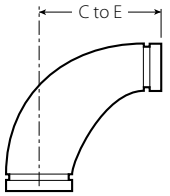
NO. 50-C



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
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. 153

\+ Contact Victaulic for details.

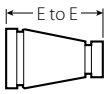
IMPORTANT NOTE:
For 30"/750 mm sizes and larger contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

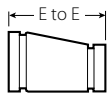
Reducers and Reducing Elbows (cont'd)

NO. 50-C Concentric Reducer
NO. 51-C Eccentric Reducer
NO. 10-CR 90° Reducing Elbow
NO. 100-CR 90° Long Radius Reducing Elbow

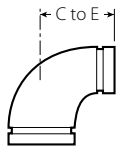
Request Publication 23.05



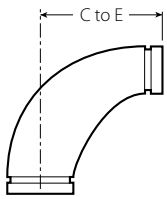
NO. 50-C



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. 152										
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	+	+	+	+	+	+	+	+
		10 250	+	+	+	+	+	+	+	+
		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	+	+	+	+	+	+	—	—
		14 350	+	+	+	+	25.00 635.0	+	—	—
		16 400	+	+	30.00 762	+	25.00 635.0	+	41.50 1054	+
		18 450	+	+	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)	+	+	+	+	+	+	—	—
		16 400	+	+	+	+	+	+	—	—
		18 450	+	+	+	+	+	+	—	—
		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:

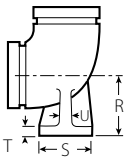
For 30"/750 mm sizes and larger contact Victaulic for details.

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

Request Publication 23.05



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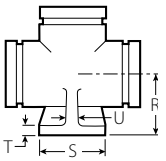
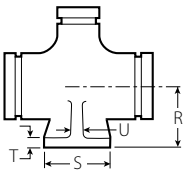
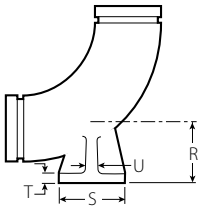


NO. 20-CB



NO. 25-CB



NO. 100-CB

ROUND BASE

Size		Dimensions					Approx. Weight Each			
Nominal Size Inches mm	Actual Outside Dia. 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	25.0 11.3	+
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	40.0 18.1	+
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	76.0 34.5	+
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	141.0 64.0	+
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	206.0 93.4	+
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	310.0 140.6	+
14 350	15.300 388.6	12.50 318	1.00 25	1.00 25	11.00 279	9.50 241	262.0 118.8	293.0 132.9	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	312.0 141.5	338.0 153.3	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	451.0 204.6	489.0 221.8	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	557.0 252.7	632.0 286.7	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	814.0 369.2	895.0 406.0	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.

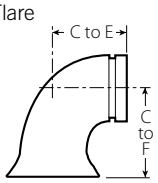
Side base fittings are available. Contact Victaulic for details.

Grooved AWWA Ductile Iron Pipe – Fittings

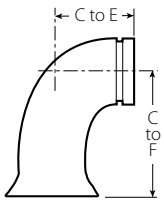
Flared and Outlet Fittings

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

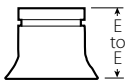
Request Publication 23.05



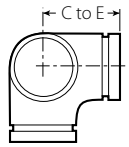
NO. 10-CF



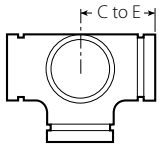
NO. 100-CF



NO. 43-CF



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 Dia. 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	10.00 254	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	+	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	+	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	+	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	+	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	+	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

Vic-Plug Valve with AWWA Standard Ends

SERIES 365

Request Publication 23.06

SERIES 365 WITH 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. 157
- A complete range of automatic operators and accessories are available with the Vic-Plug valve, please contact Victaulic with your requirements
- Eccentric plug assures bubble-tight sealing up to 175 psi/1200 kPa for 3 – 12"/80 – 300 mm
- 150 psi/1034 kPa for 14 – 18"/350 – 450 mm as plug cams into seal
- Bi-directional sealing to 25 psi/172 kPa is standard with full bi-directional sealing optionally available
- Sizes from 3 – 18"/80 – 450 mm

SERIES 365 LEVER OPERATOR

Size		Dimensions								Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Dia. Inches mm	A End to End \Inches mm	B Inches mm	C Inches mm	D Inches mm	F Inches mm	H Inches mm	V Inches mm	K Inches mm	w/o Handle Lbs. kg	C_V Values K_V Values
3 80	3.960 100.6	8.00 203	4.06 103	3.75 95	4.25 108	6.56 167	4.00 102	18.50 470	2.00 51	25.0 11.3	600 519.0
4 100	4.800 121.9	9.00 229	4.06 103	4.44 113	4.75 121	7.74 197	4.50 114	18.50 470	2.00 51	35.0 15.9	1040 899.6
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	2100 1816.5

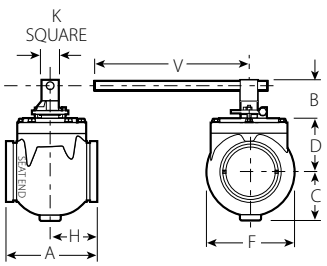
SERIES 365 GEAR OPERATOR †

Size		Dimensions							Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Dia. Inches mm	A End to End Inches mm	C Inches mm	D Inches mm	F Inches mm	G Inches mm	H Inches mm	M Inches mm	Lbs. kg	C_V Values K_V Values
3* 80	3.960 100.6	8.00 203	3.75 95	4.25 108	6.56 167	—	4.00 102	4.00 102	32.0 14.5	600 519.0
4* 100	4.800 121.9	9.00 229	4.44 113	4.75 121	7.74 197	—	4.50 114	4.00 102	42.0 19.1	1040 899.6
6* 150	6.900 175.3	10.50 267	5.50 140	7.50 191	10.32 262	—	5.25 133	—	80.0 36.3	2100 1816.5
8 200	9.050 229.9	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	11.100 281.9	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	13.200 335.3	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
14 350	15.300 388.6	17.00 432	11.25 286	15.56 395	20.44 519	23.94 608	8.50 216	—	375.0 170.0	12000 10380.0
16 400	17.400 442.0	17.75 451	11.95 304	16.71 424	21.94 557	26.00 660	9.06 230	—	450.0 204.0	15000 12975.0
18 450	19.500 495.3	21.50 546	13.97 355	20.05 509	26.06 662	30.58 777	10.94 278	—	670.0 304.0	19000 16435.0

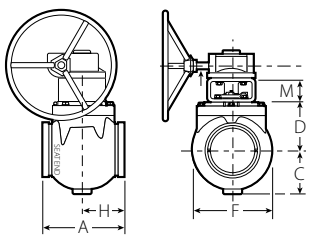
† Gear operators can be installed in various positions. Contact Victaulic for details.

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

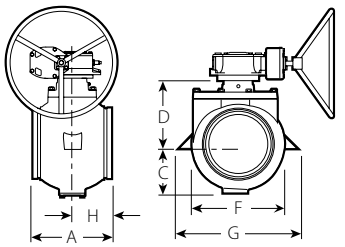
@ C_V/K_V values for flow of water at +60°F/16°C with valve fully open.



TYPICAL 3 - 6"/80 - 150 mm SIZES



TYPICAL 3 – 6"/80 – 150 mm SIZES



TYPICAL 8 – 18"/200 – 450 mm SIZES

Grooved AWWA Ductile Iron Pipe

Vic-Plug Valve with AWWA Standard Ends

SERIES 365

Request Publication 23.06

SERIES 365 WITH GEAR OPERATOR

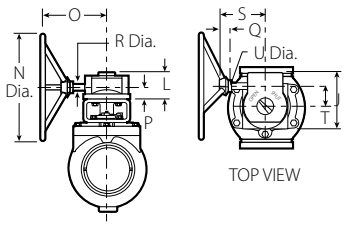
SERIES 365 GEAR OPERATOR DIMENSIONS

Gear Oper.	Dimensions											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. Turns to Close	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
MFF-36	13.78 350	5.04 128	30.00 762	9.53 242	2.60 66	1.77 45	1.00 25	15.00 381	5.43 138	0.25 6	45	148.6 67.4

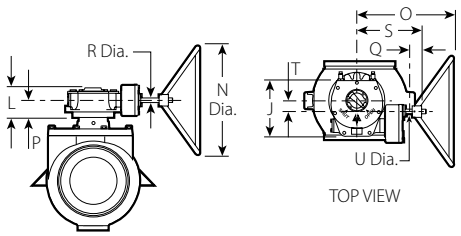
IMPORTANT NOTES:

A 2" square AWWA operating nut is available in place of lever operator (3"/80 mm, 4"/100 mm, 6"/150 mm) and in place of the hand wheel on any gear operator. To get total height from center line to top of operator, add dimensions "D", "M" and "L".

For "Rim-Pull" information on gear operators, contact Victaulic.



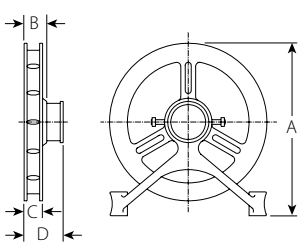
TYPICAL 3 – 6"/80 – 150 mm SIZES



TYPICAL 8 – 18"/200 – 450 mm SIZES

SERIES 365 CHAIN WHEEL DIMENSIONS

Hand Wheel	Dimensions						Approx. Weight Each
Diameter Inches mm	Chain Wheel Required	A Inches mm	B Inches mm	C Inches mm	D Inches mm	Chain Size	Lbs. kg
2 – 4 50.8 – 101.6	0	4.63 118	1.13 29	0.88 22	1.75 45	2	10 4.5
6 – 7¼ 152.4 – 190.5	1½	7.75 197	1.44 37	1.13 29	2.38 61	1/0	17.5 7.9
7½ – 9 184.2 – 228.6	2	10.50 267	1.38 35	1.13 29	2.38 61	1/0	17.5 7.9
9¼ – 12½ 235.0 – 317.5	2½	12.50 318	1.75 45	1.25 32	2.63 67	4/0	30 13.6
15¾ – 19 400.1 – 482.6	3½	18.50 470	1.88 48	1.25 32	3.13 80	4/0	30 13.6
19¼ – 22 489.0 – 558.8	4	21.50 546	1.88 48	1.50 38	3.13 80	5/0	35 15.9
22¼ – 26 565.2 – 660.4	4½	25.75 654	1.88 48	1.50 38	3.13 80	5/0	35 15.9
26¼ – 30 666.8 – 762.0	5	30.25 768	2.00 51	1.50 38	3.13 80	5/0	35 15.9
30 – 36 762.0 – 914.4	5	30.25 768	2.00 51	1.50 38	3.13 80	5/0	35 15.9



TYPICAL FOR ALL SIZES

Grooved AWWA Ductile Iron Pipe

Vic-Plug Valve with IPS Ends

SERIES 366

Request Publication 23.11

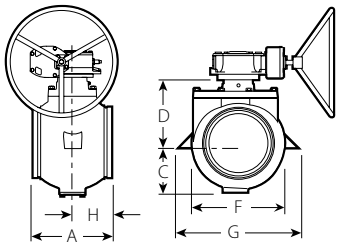
- Grooved eccentric plug valves designed to ANSI/AWWA standards primarily for water and wastewater treatment services
- The torque required to open Vic-Plug valves will vary with pressure differential across the closed valve; using the maximum pressure differential select the correct gear operator from the chart on pg. 159
- A complete range of automatic operators and accessories are available with the Vic-Plug valve, please contact Victaulic with your requirements
- 150 psi/1034 kPa for 14 – 18"/350 – 450 mm as plug cams into seal
- Bi-directional sealing to 25 psi/172 kPa is standard with full bi-directional sealing optionally available
- Sizes from 14 – 18"/350 – 450 mm

SERIES 366 GEAR OPERATOR (IPS ENDS)

Size		Dimensions						Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size Inches mm	Actual Outside Dia. Inches mm	A End to End Inches mm	C Inches mm	D Inches mm	F Inches mm	G Inches mm	H Inches mm	Lbs. kg	C_V Values K_V Values
14 350	15.300 388.6	19.00 483	11.25 286	15.56 395	20.44 519	23.94 608	8.50 216	390.0 176.9	12000 10380.0
16 400	17.400 442.0	19.75 502	11.95 304	16.71 424	21.94 557	26.00 660	9.06 230	470.0 213.2	15000 12975.0
18 450	19.500 495.3	23.50 597	13.97 355	20.05 509	26.06 662	30.58 777	10.94 278	695.0 315.3	19000 16435.0

† Gear operators can be installed in various positions. Contact Victaulic for details.

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



TYPICAL FOR ALL SIZES

Grooved AWWA Ductile Iron Pipe

Vic-Plug Valve with IPS Ends

SERIES 366

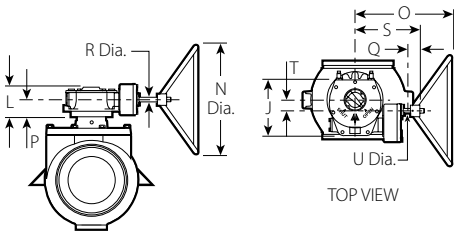
Request Publication 23.11

SERIES 366 GEAR OPERATOR DIMENSIONS

Gear Oper.	Dimensions											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. Turns to Close	Lbs. kg
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
MFF-36	13.78 350	5.04 128	30.00 762	9.53 242	2.60 66	1.77 45	1.00 25	15.00 381	5.43 138	0.25 6	45	148.6 67.4

IMPORTANT NOTES:

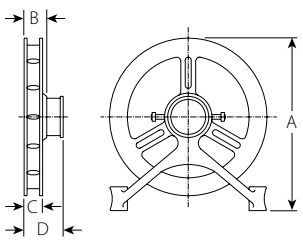
For "Rim-Pull" information on gear operators, contact Victaulic.



TYPICAL FOR ALL SIZES

SERIES 366 CHAIN WHEEL DIMENSIONS

Hand Wheel		Dimensions					Approx. Weight Each
Diameter Inches mm	Chain Wheel Required	A Inches mm	B Inches mm	C Inches mm	D Inches mm	Chain Size	Lbs. kg
22¼ – 26 565.2 – 660.4	4½	25.75 654	1.88 48	1.50 38	3.13 80	5/0	35 15.9
26¼ – 30 666.8 – 762.0	5	30.25 768	2.00 51	1.50 38	3.13 80	5/0	35 15.9
30 – 36 762.0 – 914.4	5	30.25 768	2.00 51	1.50 38	3.13 80	5/0	35 15.9



TYPICAL FOR ALL SIZES

Grooved AWWA Ductile Iron Pipe

Check Valve

SERIES 317

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

Check Valve

SERIES 317

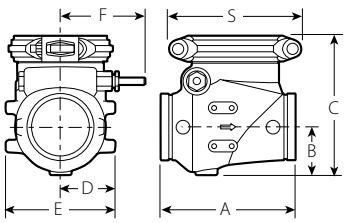
Request Publication 23.09

Size		Dimensions															Approx. Weight Each*	Accessory Kits Approx. Weight		
Nominal Size Inches mm	Actual Outside Dia. 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

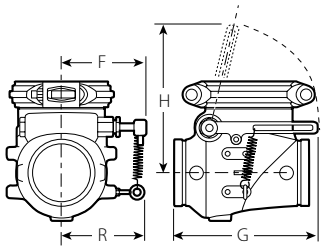
* Weights listed above are for the bare valve. Accessory kit weights are listed separately in right hand columns.

IMPORTANT NOTE:

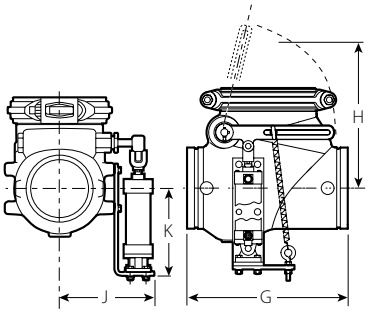
Valve may be installed horizontally or vertically. See table on pg. 160 for approved usage of accessory options.



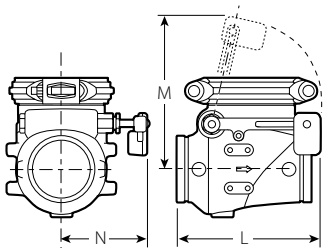
SERIES 317 BARE



SERIES 317 SPRING AND LEVER



SERIES 317 AIR CUSHION WITH ADJUSTABLE SPRING



SERIES 317 WEIGHT AND LEVER

Depend-O-Lok System

The Depend-O-Lok system represents a new generation of technologically advanced couplings. Depend-O-Lok couplings are designed, manufactured and tested to meet or exceed the performance requirements of AWWA C-219.

The design of Depend-O-Lok couplings allows for out-of-round pipe – making it easier to install than competitive joining methods. Couplings can be designed to meet almost any application or service criteria.

Request Publication PB-257

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 bottle-tight joints (E × E)

Request Publication 60.10

Bolted Split-Sleeve Restrained Flexible Coupling
Fully restrained pipe joints without external harnessing (F × F)

Request Publication 60.11

Bolted Split-Sleeve Expansion Couplings
Pipe joints that provide for thermal expansion and contraction (F × E)

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
- Complete line of expansion joints

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

Depend-O-Lok Bolted Split-Sleeve Expansion Couplings
Accommodates expansion/ contraction up to 6½"/165.1 mm

Paragon Expansion Joints
Fabricated Mechanical Expansion Joints

PolyMax
Fabricated steel mechanical slip-type expansion joints per AWWA C-221

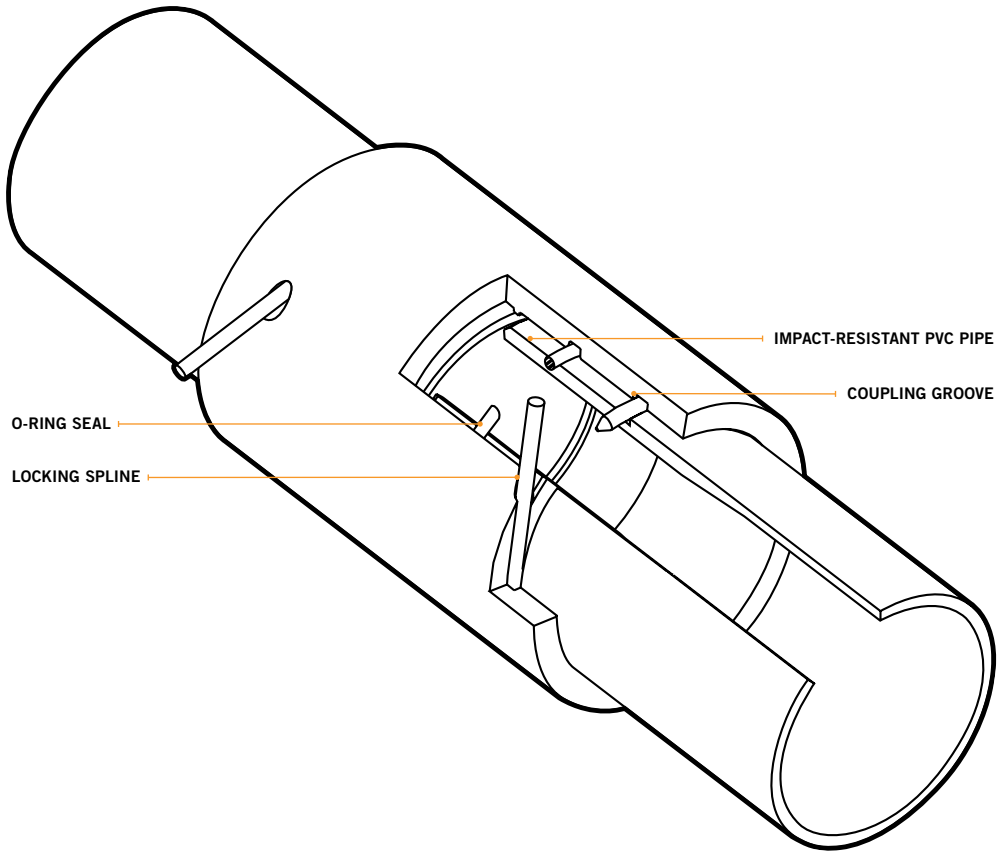
Aquamine Reusable PVC Products

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.

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



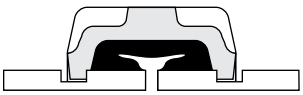
Gaskets

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. 168.

For more information request publication 05.01.

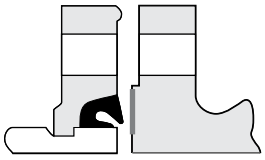
Gasket Styles

ILLUSTRATIONS EXAGGERATED FOR CLARITY

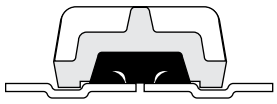


Standard

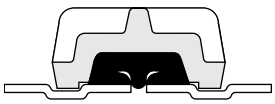
Reducing



Vic-Flange

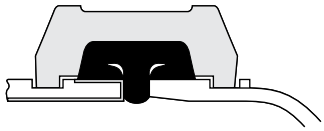


FlushSeal

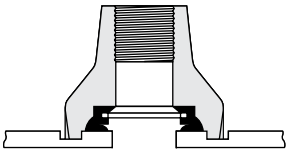


Grooved Copper Tubing with FlushSeal Gasket

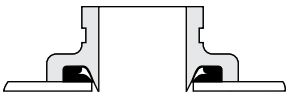
Advanced Groove System (AGS)



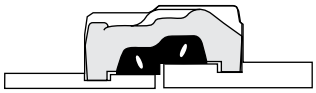
EndSeal



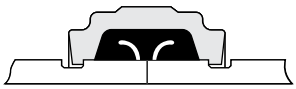
Outlet



Mechanical-T



IPS to AWWA Transition



AWWA FlushSeal

Plain End

Plain End Piping System for HDPE Pipe

Pressfit Piping System for 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

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 (publication 05.01) 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.

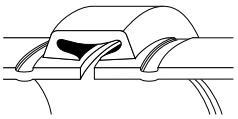
PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

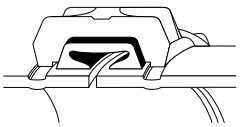
Gaskets

Gasket Performance

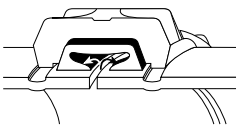
UNIQUE C-SHAPED GASKET FORMS A TRIPLE SEAL



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:

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 Series 706, 709, W706, W709 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.**
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; except hot dry air over +140°F/+60°C and water over +150°F/+66°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**

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 -29°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.
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 -28°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
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.

AWWA AND TRANSITION COUPLING

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.

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.171 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
Acetamide	G	T
Acetic Acid up to 10% 100°F/38°C	G	E
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
Acetone	G	E
Acetonitrile	G	T
Acetophenone	G	E
Acetylene	C	E/T
Acrylic Resin	G	V
Acrylonitrile	NR	—
Adipic Acid	G	T
Alkalis	G	E
Allyl Alcohol to 96%	G	E
Allyl Chloride	NR	—
Alum Sulfuric Acid	C	O
Alums	G	E/T
Aluminum Chloride	G	E/T
Aluminum Fluoride	G	E/T
Aluminum Hydroxide	G	E
Aluminum Nitrate	G	V/E/T
Aluminum Oxychloride	C	T
Aluminum Phosphate	G	E
Aluminum Salts	G	E
Aluminum Sulfate	G	E/T
Ammonia, Anhydrous (Pure Ammonia)	NR	—
Ammonia, Aqueous (40% Max)	G	E
Ammonium Alum	G	V
Ammonium Bifluoride	G	T
Ammonium Carbonate	G	E
Ammonium Chloride	G	T
Ammonium Fluoride	G	E
Ammonium Hydroxide	G	E
Ammonium Metaphosphate	G	E
Ammonium Nitrate	G	T
Ammonium Nitrite	G	E
Ammonium Persulfate, to 10%	G	E
Ammonium Phosphate	G	T
Ammonium Sulfamate	G	T
Ammonium Sulfate	G	E/T
Ammonium Sulfide	G	E
Ammonium Thiocyanate	G	E
Amyl Acetate	G	E
Amyl Acetate	G	E
Amyl Alcohol	G	E
Amyl Borate	G	V
Amyl Chloride	NR	—
Amyl Chloronaphthalene	C	T
Anderol	G	O
Anthraquinone	NR	—
Anthraquinone Sulfonic Acid	NR	—
Aniline	G	E
Aniline Dyes	C	E
Aniline Hydrochloride	C	E
Aniline Oil	G	E
Animal Fats	G	A
Antimony Chloride	G	E
Antimony Trichloride	G	E
Argon Gas	G	E/O
Aroclor(s)	G	O
Arsenic Acid, to 75%	G	T
Arylsulfonic Acid	NR	—
Barium Carbonate	G	E
Barium Chloride	G	E/T
Barium Hydroxide	G	E/T
Barium Nitrate	G	V
Barium Sulfide	G	T
Beer	G	A
Beet Sugar Liquors	G	A
Benzaldehyde	C	E
Benzene	G	O
Benzene Sulfonic (Aromatic Acid)	C	V
Benzine (see Petroleum Ether)	G	O
Benzoic Acid	G	E
Benzol	G	O
Benzyl Alcohol	G	E
Benzyl Benzoate	G	E
Black Sulfate Liquor	G	T
Blast Furnace Gas	C	T
Bleach, 12% Active Cl^2	C	E
Borax	G	E
Bordeaux Mixture	G	E
Boric Acid	G	E/T
Bromine	G	O
Bromine Water	G	V
Butadiene	C	V
Butane Gas	C	T
Butanol (see Butyl Alcohol)	G	E/T
Butter	G	A
Butyl Acetate	C	E
Butyl Acetyl Ricinoleate	G	E
Butyl Alcohol	G	E/T
Butyl "Cellosolve Adipate"	G	E/T
Butyl Phenol	C	E
Butyl Stearate	G	T
Butylene	G	T
Butylene Glycol	G	E
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
Calcium Fluophosphate	C	V
Calcium Hydroxide (Lime)	G	E/T
Calcium Hypochlorite	G	E
Calcium Hypochloride	G	E
Calcium Nitrate	G	V/E/T
Calcium Sulfate	G	E/T
Calcium Sulfide	G	E
Caliche Liquors	G	T
Cane Sugar Liquors	G	A
Carbitol	G	E/T
Carbonic Acid, Phenol	G	O
Carbon Bisulphide	C	O
Carbon Dioxide, Dry	G	E/T
Carbon Dioxide, Wet	G	E/T
Carbon Disulphide	G	O
Carbon Monoxide	G	E
Carbon Tetrachloride	G	O
Castor Oil	G	A
Caustic Potash	G	E
Cellosolve Acetate	G	E
Cellosolve (Alcohol Ether)	G	E
Cellulose Acetate	G	E
Cellulube 220 (Tri-Aryl-Phosphate)	G	E
Cellulube Hydraulic Fluids	G	E
China Wood Oil, Tung Oil	G	T
Chloralhydrate	NR	—
Chloric Acid to 20%	C	E
Chlorine, Dry	C	O
Chlorine, Water 4000 PPM (max.)	C	E
Chlorinated Parafine (Chlorocosane)	G	T
Chloroacetic Acid	G	E
Chloroacetone	G	E
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
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
Copper Nitrate	G	E/T
Copper Sulfate	G	E/T
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
Deionized Water	G	E
Dextrim	G	T
Diacetone Alcohol	G	V
Dibutyl Phthalate	G	E
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
Digester Gas	G	T/S
Dimethylamine	G	T
Dioctyl Phthalate	G	E
Dioxane	G	E
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
Ethyl Acetoacetate	G	E
Ethyl Acrylate	G	L
Ethyl Alcohol	G	E/T
Ethyl Cellulose	C	E
Ethyl "Cellusolve"	G	E
Ethyl Chloride	G	E
Ethyl Ether	C	T
Ethyl Formate	C	V
Ethyl Oxalate	G	E
Ethyl Silicate	G	T
Ethylene Chlorohydrin	G	E
Ethylene Diamine	G	T
Ethylene Dichloride (Dichloroethane)	G	O
Ethylene Glycol	G	E/T
Ethylene Oxide	NR	—
Fatty Acids	G	A
Ferric Chloride, to 35%	G	E/T
Ferric Chloride, Saturated	G	E
Ferric Hydroxide	C	E
Ferric Nitrate	G	V
Ferric Sulfate	G	T
Ferrus Ammonium Sulfate to 30%	G	V
Fish Oils	G	A
Fluboric Acid	G	E
Fluorine Gas, Wet	NR	—
Fluorosilicic Acid	G	V
Fly Ash	G	E
Foam	G	E
Fog Oil	G	T
Formaldehyde	G	E/T
Formanide	G	T
Formic Acid	G	E
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°/80°C	G	E/T
Fructose	G	T
Fuel Oil	G	T
Fumaric Acid	G	E
Furan	NR	—
Furfuryl Alcohol	G	E
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
Glycerol	G	E/T
Glycol	G	E/T
Glycolic Acid	C	E
Grease	G	T
Green Sulfate Liquor	G	T
Halon 1301	G	E
Heptane	G	T
Hexaldehyde	G	E
Hexane	G	T
Hexanol Tertiary	G	T
Hexyl Alcohol	G	V/T
Hexylene Glycol	G	T
Hydrobromic Acid, to 40%	G	E
Hydrochloric Acid, to 36%, 75°F/24°C	G	E
Hydrochloric Acid, to 36%, 158°F/70°C	C	O
Hydrocyanic Acid	G	E
Hydrofluoric Acid, to 75%, 75°F/24°C	G	O
Hydrofluosilicic Acid	G	T
Hydrogen Gas, Cold	C	E/T
Hydrogen Gas, Hot	C	E
Hydrogen Peroxide, to 50%	C	L
Hydrogen Peroxide, to 90%	C	O
Hydrogen Phosphide	NR	—
Hydrogen Sulfide	G	E
Hydroquinone	G	T
Hydroxylamine Sulfate	C	E
Hypochlorous Acid, Dilute	G	E
Iso Octane, 100°F/38°C	G	T
Isododecane	G	V
Isobutyl Alcohol	G	E
Isopropyl Acetate	G	E
Isopropyl Alcohol	G	E
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
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
Lead Sulfamate	G	V
Lead Sulfate	G	T
Lime and H_2O	G	E/T
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
Magnesium Hydroxide	G	E/T
Magnesium Nitrate	G	V
Magnesium Oxide	C	V
Magnesium Sulfate	G	E/T
Maleic Acid	G	T
Malic Acid	G	T
Mercuric Chloride	G	E/T
Mercuric Cyanide	G	T
Mercurous Nitrate	G	E/T
Mercury	G	T
Methane	C	T
Methyl Acetate	C	V
Methyl Alcohol, Methanol	G	E/T
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
Methyl Isobutyl Carbinol	G	E
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
Nickel Acetate to 10%, 100°F/38°C	G	V
Nickel Ammonium Sulfate	G	V
Nickel Chloride	G	E/T
Nickel Nitrate	G	V
Nickel Plating Solution 125°F/52°C	G	E
Nickel Sulfate	G	E/T
Nicotine	C	V
Nicotine Acid	C	V
Nitric Acid to 10%, 75°F/24°C	G	E
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
Nitromethane	G	E
Nitrous Oxide	G	E
Octyl Alcohol	G	V
Ogisogiric Acid, to 75%, 150°F/66°C	G	O
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
Oxygen, Cold †	C	E
Ozone (100 ppm)	G	E
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
Phenylhydrazine Hydrochloride	C	E
Phosphate Ester	G	E
Phosphoric Acid, to 50% and 70°F	G	E
Phosphoric Acid, to 85% and 200°F	G	O
Photographic Solutions	G	T
Phthalic Anhydride	G	E
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
Potassium Alum	G	E/T
Potassium Bicarbonate	G	E/T
Potassium Bichromate	G	T/E
Potassium Borate	G	E
Potassium Bromate	G	E
Potassium Bromide	G	E/T
Potassium Carbonate	G	E/T
Potassium Chlorate	G	E
Potassium Chloride	G	T
Potassium Chromate	G	T
Potassium Cyanide	G	E/T
Potassium Dichromate	G	E
Potassium Ferricyanide	G	E

Chemical Composition	Rating Code	Gasket Grade
Potassium Ferrocyanide	G	E
Potassium Fluoride	G	E
Potassium Hydroxide	G	T
Potassium Iodide	G	V
Potassium Nitrate	G	T
Potassium Perborate	G	E
Potassium Perchlorate	G	T
Potassium Permanganate, Saturated to 10%	G	E
Potassium Permaganate, Saturate 10-25%	G	E
Potassium Persulfate	G	T
Potassium Phosphate	G	V
Potassium Silicate	G	V/E/T
Potassium Sulfate	G	T
Potassium Thiosulfate	G	V
Prestone	G	T
Propane Gas	C	T
Propanol	G	E
Propargyl Alcohol	G	E
Propyl Acetate	C	V
Propyl Alcohol	G	T
Propylene Dichloride	C	L
Propylene Glycol	G	E
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
Pyrrole	G	E
Rapeseed Oil	G	A
Ref. Fuel (70 ISO Octane, 30 Toluene)	G	T
Rosin Oil	G	V/T
Salicylic Acid	G	E
Secondary Butyl Alcohol	G	T
Sewage	G	E/T
Silver Cyanide	C	V
Silver Nitrate	G	E
Silver Plating Solution	C	V
Silver Sulfate	G	E
Skydrol, 200°F/93°C	G	L
Skydrol 500 Phosphate Ester	C	E
Soap Solutions	G	E/T
Soda Ash, Sodium Carbonate	G	E/T
Sodium Acetate	G	E
Sodium Alum	G	T
Sodium Benzoate	G	E/T
Sodium Bicarbonate	G	E/T
Sodium Bisulfate	G	E/T
Sodium Bisulfite (Black Liquor)	G	E/T
Sodium Bromide	G	E/T
Sodium Carbonate	G	E/T
Sodium Chlorate	G	E
Sodium Chloride	G	E/T
Sodium Cyanide	G	E/T
Sodium Dichromate, to 20%	G	E/T
Sodium Ferricyanide	G	E/T
Sodium Ferrocyanide	G	E/T
Sodium Fluoride	G	E/T
Sodium Hydro Sulfide	G	T
Sodium Hydroxide to 50%	G	E
Sodium Hypochlorite, to 20%	G	E
Sodium Metaphosphate	G	T
Sodium Nitrate	G	E
Sodium Nitrite	G	E/T
Sodium Perborate	G	E
Sodium Peroxide	G	E
Sodium Phosphate, Dibasic	G	T
Sodium Phosphate, Monobasic	G	T
Sodium Phosphate, Tribasic	G	T
Sodium Silicate	G	T
Sodium Sulfate	G	E/T
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
Sulphite Acid Liquor	G	E
Sulfur	G	V/E
Sulfur Chloride	G	O
Sulfur Dioxide, Dry	C	E/T
Sulfur Dioxide, Liquid	G	E
Sulfur Trioxide, Dry	G	O
Sulfuric Acid, to 25%, 150°F/66°C	G	E
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
Terpineol	G	V
Tertiary Butyl Alcohol	G	V/E/T
Tetrabutyl Titanate	G	E
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°	G	O
Tricresyl Phosphate	G	E
Triethanolamine	G	E/T
Trisodium Phosphate	G	E
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
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
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
Whiskey	G	A
White Liquor	G	E
Wood Oil	G	T
Xylene	C	O
Zinc Chloride, to 50%	G	E
Zinc Nitrate	G	E
Zinc Sulfate	G	E/T

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

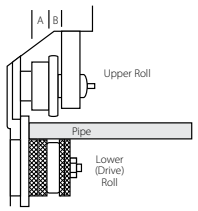
	Rating Code	Gasket Grade
Air, Temp. –20°F to +200°F/ -29°C to +93°C (no oil vapors)	G	E
Air, Temp. –30°F to +230°F/ –34°C to +110°C (no oil vapors)	G	E
Air, Temp. +230°F to +350°F/ +110°C to +177°C (no oil vapors)	G	L
Air, Oil Vapor, Temp. 0°F to +150°F/ –18°C to 66°C	G	T
Air, Oil Vapor, Temp. +150°F 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, 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.

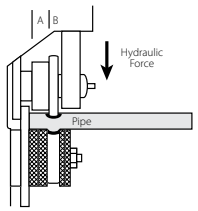
Pipe Preparation

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.



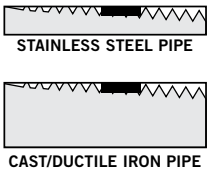
Vic-Easy tools cold form groove into pipe – maintains dimensions



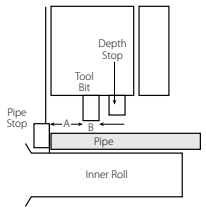
Roll grooving removes no metal from pipe

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. 174
VE26, PG. 174
VE46, PG. 174
VE226, PG. 174

Field Fabrication

VE270FSD, PG. 175
VE272SFS, PG. 175
VE416FSD, PG. 175
VE106, PG. 175

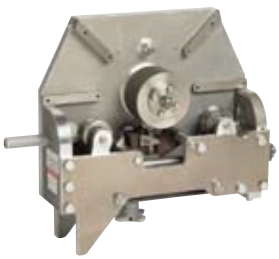
Plant/Shop Fabrication

VE268, PG. 176
VE414MC, PG. 176
VE436MC, PG. 176

Cut Groovers

Field Manual

VG28GD, PG. 179
VG824, PG. 179



Field Motorized

VG412, PG. 180
VIC-GROOVER, PG. 179

Plastic Groovers

VPG26, PG. 180
VPG824, PG. 180

Pressfit Tools

PFT505, PG. 182

See pg. 120 for the complete line of Pressfit products.

- Fast, clean and easy method for joining Schedule 5 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/Vic-Press 316 stainless steel products

Pipe Preparation

Cutting Tools

Hole Cutting

HCT908, PG. 182
VHCT900, PG. 182
VIC-TAP® II, PG. 182

Pipe Cutting

VCT1, PG. 183
VCT2, PG. 183

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. 184
VE226 POWER DRIVE KIT, PG. 174

Power Mule

PG. 184

Adjustable Pipe Stands

VAPS112, PG. 184
VAPS224, PG. 185

Speed Reduction Control (LSCR)

PG. 185

Pipe Diameter Tape

PG. 185

PIPE PREPARATION

PRODUCTS

12 IPS Couplings
28 IPS Fittings
44 IPS Valves
64 IPS Accessories
76 Advanced Groove System
90 Hole Cut Piping System
96 Plain End Piping System
104 Grooved System for Stainless Steel Pipe
120 Pressfit System for Stainless Steel Pipe
132 Plain End Piping System for HDPE Pipe
136 Grooved Copper
142 Grooved AWWA Ductile Iron Pipe
162 Depend-O-Lok System
163 Aquamine Reusable PVC Products
164 Gaskets
172 Pipe Preparation Tools
200 Piping Software

Pipe Preparation – Roll Grooving Tools

Field Portable

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
- 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

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.

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 reduce pipe "walk-off"
- Optional power drive adapter kit available to alternately groove pipe using a Ridgid* 300 power drive or VPD752
- Roll grooves 3½ – 6"/90 – 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

† Refer to Roll Grooving Tool Ratings chart on pgs. 177-178
* Ridgid is a registered trademark of the Ridge Tool Company

Pipe Preparation – Roll Grooving Tools

Field Fabrication

Request Publication 24.01

VE106

VE106 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 reduce pipe "walk-off"
- Completely self- contained unit with an integral motor, safety foot switch and power plug
- Roll grooves 1¼ – 6"/32 – 150 mm pipe †

Power Requirements: 110 volt, 15 amp
Weight: 140 lbs./64 kg
Optional Accessories: Additional rolls/shafts are available for copper, lightwall stainless steel, and EndSeal (ES) grooving.

VE270FSD

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 reduce pipe "walk-off"
- Roll grooves ¾ – 12"/20 – 300 mm pipe †

Drive Requirements: Self-contained
Weight: 340 lbs./154 kg
Optional Rolls: Carbon steel Schedules 5, 10, 20, and 40; copper rolls for type K, L, M and DWV; and stainless steel Rx rolls for Schedules 5S-10-10S.
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 reduce pipe "walk-off"
- Roll grooves ¾ – 12"/20 – 300 mm pipe †

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.

VE416FSD

VE416FSD

- For field roll grooving of 2"/50 mm – 16"/400 mm standard wall pipe, lightwall steel pipe, as well as aluminum, stainless and PVC plastic pipe
- Equipped with a pipe stabilizer for 6"/150 mm – 16"/400 mm pipe sizes to control pipe sway
- Groove depth adjuster provides precise groove dimensions and allows 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 – 16"/50 – 400 mm pipe †

Power Requirements: 110 volt, 15 amp for integral gear motor (220 volt, 8 amp model available)
Weight: 340 lbs./154 kg
Optional Rolls: Optional rolls are available for drawn copper tubing; Schedule 80 PVC pipe; stainless steel Rx Schedules 5S, 10 and 10S; and EndSeal (ES) grooving. Roll sets also available for 14 – 16"/350 – 400 mm std. wall carbon steel pipe for use with the AGS system.

† Refer to Roll Grooving Tool Ratings chart on pgs. 177-178

Pipe Preparation – Roll Grooving Tools

Plant/Shop Fabrication

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 reduce pipe “walk-off”
- Roll grooves ¾ – 12"/20 – 300 mm pipe †

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.

Optional Accessories: An optional pipe stabilizer for 8 – 12"/200 – 300 mm pipe is available.

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 reduce pipe “walk-off”
- The tool comes equipped with pipe stabilizers to provide smooth grooving operation
- Roll grooves 2 – 16"/50 – 400 mm pipe †

Drive Requirements: Self-contained

Weight: 735 lbs./333 kg

Optional Rolls: Optional rolls are available for Schedule 5S and 10S stainless steel pipe, and type K, L, M and DWV copper tubing. Roll sets also available for 14 – 16"/350 – 400 mm std. wall carbon steel pipe for use with the AGS system.

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 (.375 wall maximum) pipe
- The fully-motorized, semi-automatic, electro-hydraulic tool comes complete with safety guards and safety foot switch
- Patented enhanced tracking rolls reduce pipe “walk-off”
- Roll grooves 4 – 36"/100 – 900 mm pipe †

Power Requirements: 220/440 volt, 3 phase, 60 hertz (shipped wired for 220 volt unless otherwise specified)

Weight: 1500 lbs./680 kg

Optional Rolls: Optional roll kits are available for grooving 26 – 36"/50 – 900 mm (.500 wall maximum). Also, a 42"/1050 mm roll kit is available. Contact Victaulic for details. Stainless steel Rx rolls for Schedules 5S, 10 and 10S.

† Refer to Roll Grooving Tool Ratings chart on pgs. 177-178

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. 178

@ Does not apply to 6" Schedule 40 size.
* 2" Schedule 80 with RP rolls.
\# 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.
** Standard Wall (0.375"/9.5 mm)

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.

@ Does not apply to 6" Schedule 40 size.

* 2" Schedule 80 with RP rolls.

\# 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.

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. 177																		
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 ‡												
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 grooving lightwall stainless steel on pipe sizes 18"/450 mm and larger, contact Victaulic for details.

** For standard wall thickness, see pg. 187.

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 ¤+										

* Standard rolls. For 6 – 14"/150 – 350 mm sizes, special tooling is available for grooving "extra-strong" pipe. For 8 – 24"/200 – 600 mm sizes, the maximum wall thickness is limited to standard wall for pipe lengths shorter than 4 ft./1.2 m.

Pipe Preparation – Cut Grooving Tools

Field Manual

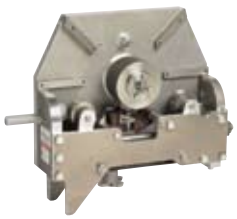
Request Publication 24.01

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 ¾ – 8"/20 – 200 mm pipe †

Drive Requirements: External drive, minimum 1½ hp
Drive Speed: 38 rpm max.
Shipped Set For: Standard groove 4 – 6"/100 – 150 mm steel pipe
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 – 600 mm pipe †

Drive Requirements: External drive, min. 1½ hp
Drive Speed: 38 rpm max.
Shipped Set For: Standard groove, 8 –12"/200 – 300 mm steel pipe
Weight: 82 lbs./37.2 kg
Options: 8" standard tool bit – 0.437"/11 mm; 8 – 24"/200 – 650 mm standard tool bit – cast/ductile pipe; 22 – 24" standard tool bit – 0.563"/14 mm

Field Motorized

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, min. ½ hp./0.37 kw
Drive Speed: 40 rpm max.
Shipped Set For: Standard groove, IPS of size indicated or Ridgid/flexible for ductile/cast pipe
Weight: 28 lbs./13 kg

† Refer to Cut Grooving Tool Ratings chart on pgs. 181

Pipe Preparation – Cut Grooving Tools

Field Motorized

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 †

Drive Requirements: 120 volt/11.5 amp
Shipped Set For: Ridgid Radius Groove, 4 – 12"/100 – 300 mm ductile iron pipe
Weight: 151 lbs./69 kg
Options: 4 – 12"/100 – 300 mm IPS steel kit

Plastic Groovers

Request Publication 24.01

VPG26

VPG824

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
- Grooves 2 – 16"/50 – 400 mm pipe †

VPG26

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

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. 181

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								
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

Pressfit Tool

Request Publication 24.01

PFT505

PFT505

- The Pressfit System requires a Pressfit tool designed for securing Pressfit products onto pipe
- Tool packages include the actual pressing tool and any customer specified press jaws
- Jaws are available separately for rental 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: ½"/15 mm, ¾"/20 mm, 1"/25 mm, 1½"/40 mm and 2"/50 mm jaws

Hole Cutting Tools

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: ½ – 4"/15 – 100 mm pipe, 1 – 4 ½"/25 – 120 mm holes for Mechanical-T and Vic-Let
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 ¼ – 8"/32 – 200 mm pipe, 1 – 3 ½"/25 – 90 mm holes for Mechanical-T, Vic-Let, and Vic-O-Well outlets
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

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./7.3 kg
(C) Style 931/Valve unit, 12 lb./5.4 kg – 15 lb./6.8 kg, depending upon size
Hole Size: 2 ⅜"/60.5 mm

Pipe Preparation – Pipe Cutting Tools

Pipe Cutting Tools

Request Publication 24.01

VCT1

VCT1 MANUAL

- Lightweight and portable pipe cut-off tool handles 4 – 24"/100 – 600 mm pipe, up to 0.500"/12.7 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 – 0.500"/1.65 – 12.7 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 tip design has stainless steel insert which extends tip life, eases cleaning and reduces backfire

Capacity: 6 – 24"/150 – 600 mm
Wall Thickness: 0.065 – 0.500"/1.65 – 12.7 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

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
- 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

Power Mule

Request Publication 24.01

- Ideal drive for Victaulic individual Vic-Groover tools, VG28GD and VG824
- 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, 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

Request Publication 24.01

- Designed for supporting pipe to be roll grooved
- Four legged portable self-standing unit permits free pipe rotation and traversing on ball transfers
- 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

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

Speed Reduction Control (LSCR)

Request Publication 24.01

- Designed for electrical speed reduction on various universal power drives
- Used in conjunction with Victaulic cut grooving tools (individual Vic-Groover tools, VG28GD & VG824)
- LSCR is recommended for universal power drives that operate at speeds in excess of Victaulic cut groover specifications which incorporate “universal” motors

Capacity: Universal motor-type power drives (Example: Ridgid 300 portable pipe threader) rated at 115 volt, 15 amp maximum. Not for use with induction-type motors.
Power Requirements: 115 volts, 15 amp 50/60 cycle
Weight: 3 lbs./1.4 kg

Pipe Diameter Tape

Request Publication 24.01

- Pocket-sized steel tapes are available for taking circumferential measurements, marked in 1/100^{ths} of an inch increments
- Tapes may be used for measuring ¾ – 22"/20 – 550 mm pipe O.D. at the base of the groove (the “C” diameter)
- Tapes are notched on the lead end to allow proper overlap within the groove for more accurate measurement

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	—
108.1 mm	1.5 @≠	0.5	0.4	0.5	0.5	0.2	0.2	1.9	7.0	2.5	—
4 100	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	—
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	—
5 125	1.6 @≠	1.0	0.8	0.8	0.8	0.2	0.3	2.5	9.0	3.5	—
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	—
6 150	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	—	—	—	—	—	—	4.5	—	—	—	—

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.

Pipe Preparation

Standard Pipe Wall Thickness

STANDARD PIPE WALL THICKNESS (ANSI B 36.10 AND B 36.19 FOR STAINLESS STEEL PIPE)

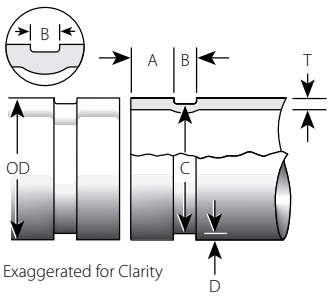
Size		Pipe Wall Thickness								
Nominal Size Inches mm	Actual Outside Dia. Inches mm	Schedule 5S Inches mm	Schedule 5 Inches mm	Schedule 10S Inches mm	Schedule 10 Inches mm	Schedule 20 Inches mm	Schedule 30 Inches mm	Schedule 40 Inches mm	Schedule Std. Inches mm	Schedule 80 Inches mm
¾ 20	1.050 26.9	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
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
4 100	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
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
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
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
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
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
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

Request Publication 25.01



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 O.D.			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
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
4 100	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
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
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
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
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	0.085 2.16	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	0.085 2.16	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
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
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
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
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
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
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
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
14 – 24 350 – 600	AGS See AGS Grooving Chart, pg. 190									

@ 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.

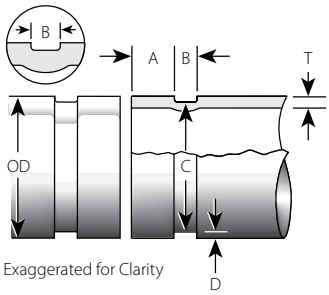
GROOVE DIMENSION NOTES: SEE PG. 189

Pipe Preparation

Groove Dimensions

ROLL GROOVE SPECIFICATIONS NOTES

Request Publication 25.01



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 O.D.			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 +	–		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)

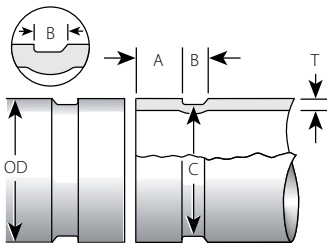
Maximum allowable pipe-end flare diameter is measured at the extreme pipe-end diameter.

Pipe Preparation

Groove Dimensions

ADVANCED GROOVE SYSTEM (AGS) ROLL GROOVE SPECIFICATIONS NOTES

Request Publication 25.09



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 O.D.		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 1/8"/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") 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

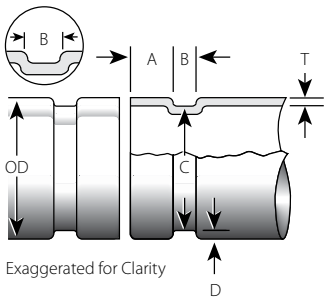
Dimension measured at the most extreme pipe end diameter, square cut or beveled.

Pipe Preparation

Groove Dimensions

COPPER TUBING ROLL GROOVE SPECIFICATIONS NOTES

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	2.209 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

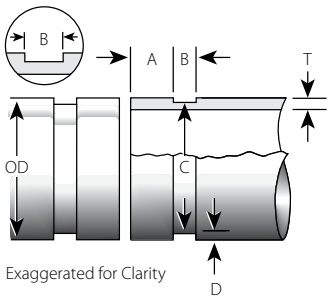
Weasured at the most extreme tubing end diameter.

Pipe Preparation

Groove Dimensions

STANDARD CUT GROOVE SPECIFICATIONS NOTES

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"/3.8 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 O.D.			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
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
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
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
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
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
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
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
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
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
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
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.

Pipe Preparation

Groove Dimensions

"ES" ROLL/CUT GROOVE SPECIFICATIONS NOTES

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

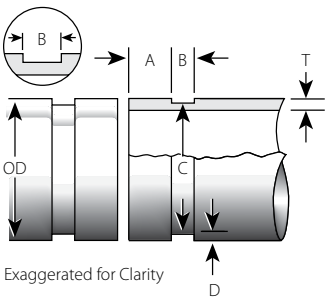
This is the minimum wall thickness which may be grooved.

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 Dia. 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

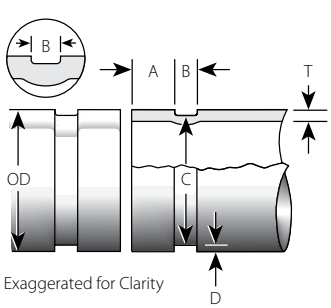
@ Always refer to the I-100 handbook for current grooving specifications.

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 Dia. Inches mm		Dimensions – Inches/mm								
				Gasket Seat A		Grv. Width B		Groove Dia. C				
Nominal Size Inches mm	Actual Out. Dia. 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



Exaggerated for Clarity

@ Always refer to the I-100 handbook for current grooving specifications.

IMPORTANT NOTES:

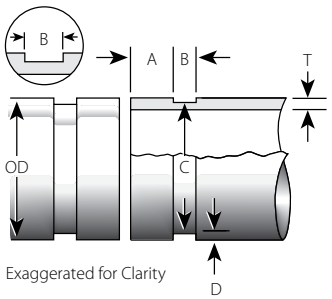
Coatings applied to the interior surfaces, including bolt pad mating surfaces, of our grooved and bolted plain end couplings should not exceed 0.010"/0.25 mm, Also, the coating thickness applied to the gasket seating surface and within the groove on the pipe exterior should not exceed 0.010"/0.25 mm.

Pipe Preparation

Groove Dimensions

FLEXIBLE RADIUS CUT GROOVE SPECIFICATION NOTES

Request Publication 25.05



Exaggerated for Clarity

FLEXIBLE RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE@

1	2			3	4	5		6	7	
	Pipe Outside Diameter O.D. 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. Dia. Basic	C Grv. Dia. 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	0.750 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.

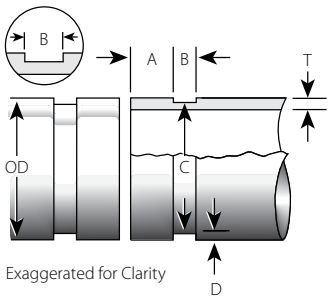
GROOVE DIMENSION NOTES: SEE PG. 195

Pipe Preparation

Groove Dimensions

RIDGID RADIUS CUT GROOVE SPECIFICATION NOTES

Request Publication 25.05



Exaggerated for Clarity

RIGID RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE@

1	2			3	4	5		6	7	
	Dimensions – Inches/mm									
Nominal Size Inches mm	Pipe Outside Diameter O.D. Inches mm			A Gasket Seat +0.000 -0.020	B Groove Width +0.031 -0.016	C Grv. Diameter		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	0.840 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:

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:

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.

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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.

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Effective February 4, 2003

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THIRD PARTY SOFTWARE

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Bentley – PlantSpace
CEA Systems – Plant 4D
Coade – CADWorx Pipe
Hydratec – HydraCAD (Fire Protection)
Intergraph PDS

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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.

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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.

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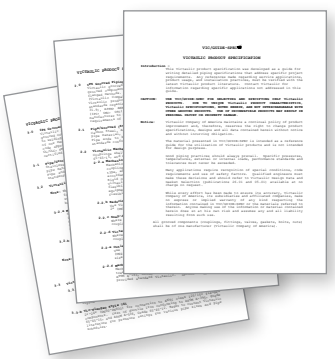
Vic-PDS piping specs are a set of Integraph Plant Design System (PDS) piping specifications, allowing users to access and use Victaulic products in their PDS piping systems design.

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.

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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:

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- Fully searchable product and project databases
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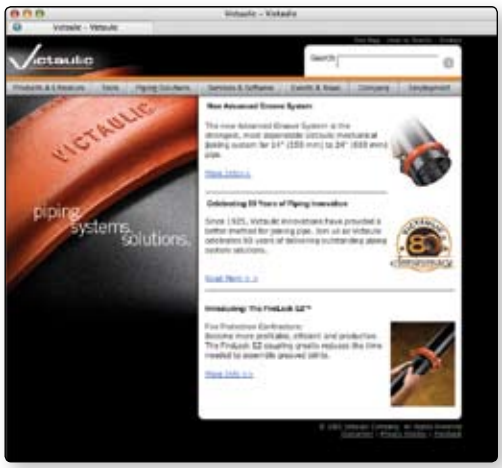

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