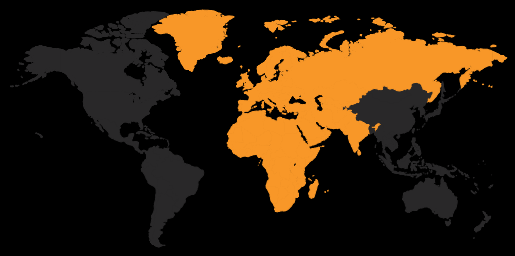


General Catalog

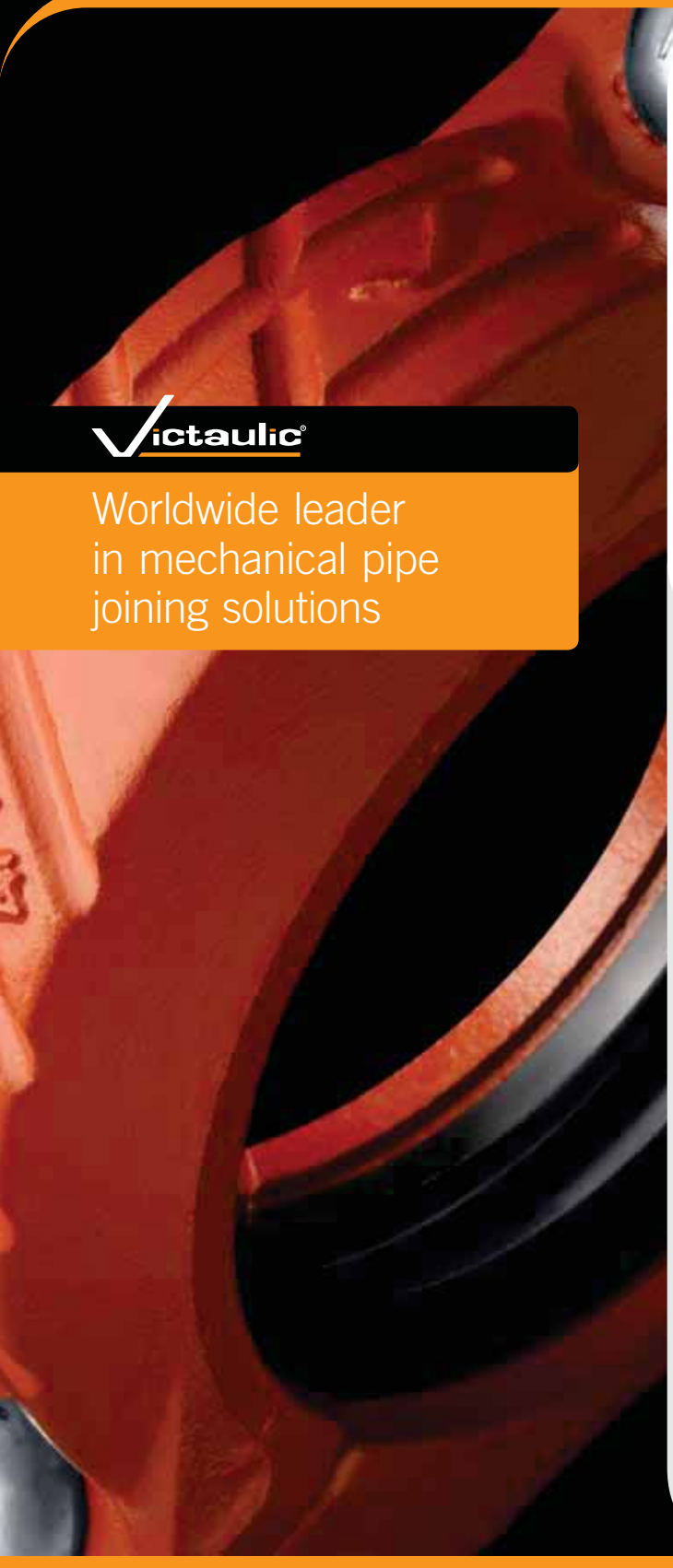
G-103-EUR

UPDATED 8/2009

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

Technology Timeline

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

1925		Victaulic introduces the first grooved end coupling, the “Victory Joint”
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
2005		Advanced Groove System large diameter pipe joining system introduced
2006		Victaulic introduces installation-ready technology

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.

table of contents

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, please visit www.victaulic.com and click on Global Projects.

UNITED STATES

Hoover Dam

UNITED ARAB EMIRATES

Jumeirah Burj Al Arab and Beach Hotels

CHINA

Beijing National Stadium

FRANCE

La Grande Arche de la Défense

CANADA

La Chateau Frontenac

MALAYSIA

Petronas Twin Towers

UNITED STATES

CANADA

EUROPE

MIDDLE EAST

CENTRAL & SOUTH AMERICA

ASIA PACIFIC

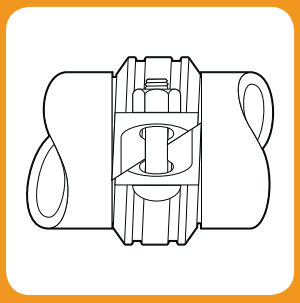
Grooved End Technology

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.

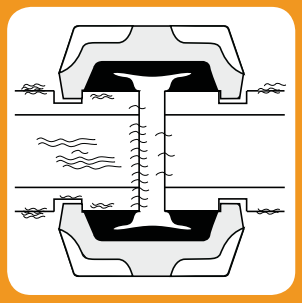
The system is designed for roll grooved or cut grooved standard pipe or roll grooved light wall pipe. A complete line of grooving tools is available to quickly and efficiently groove pipe in the shop or at the job site.

Features



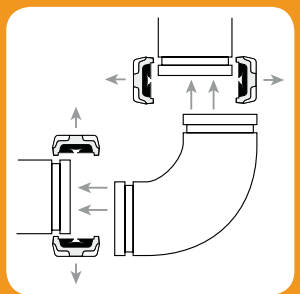
RIGIDITY

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.



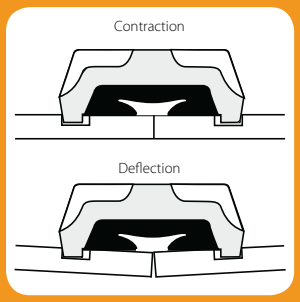
NOISE AND VIBRATION ATTENUATION

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



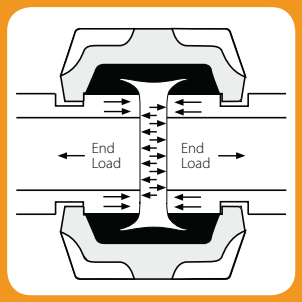
SYSTEM MAINTENANCE AND EXPANSION

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



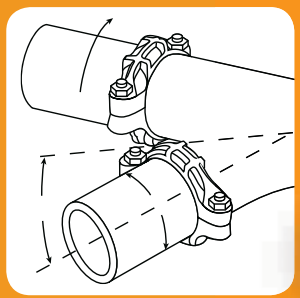
FLEXIBILITY

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 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

ACS
Attestation de Conformité Sanitaire

ANSI
American National Standards Institute

ANSI/AWWA
American Water Works Association – C-606

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

ARPA
Agenzia Regionale per la Protezione dell'Ambiente

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

ATEX
Grade E and T gaskets in compliance with the ATEX directive 94/9/EC

BBA
British Board of Agrément

BOCA
Building Officials and Code Administrators

BV
Bureau Veritas

CCCF
China Certification Center for Fire Products3

CE
0026
CE
Certification to the European Directive for Pressure Equipment (PED)
Certification to the European Directive for Construction Products (CPD)

CNBOP
Centrum Naukowo-Badawcze Ochrony Przeciwpozarowej

CNPP APSAD
Centre National de Prévention et de Protection

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

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

DIN GÖST TÜV
Zertifizerungssystem für Produkte

DNV
Det Norske Veritas

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

EMI
Epitesugyi Minosegellenorzo Innovacious

FM
FM Approvals – Approved for fire protection services

GL
Germanischer Lloyd

GOST R

HDB
Singapore Housing Development Board

Hong Kong Fire Services Board

IAPMO
International Association of Plumbing & Mechanical Officials

Korean Registry of Shipping

Krajska Hygienicka

INSTAL

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

LLOYD'S
Lloyd's Register of Shipping

LPCB
Loss Prevention Certification Board

New Zealand Insurance Council

New Zealand Building Act (1991)

NFPA
National Fire Protection Association

NK
Nippon Kaiji Kyokai

NSF/ANSI 61
Standard 61 for potable water service

NY-MEA
New York Materials and Equipment Acceptance

ÖVGW
Österreichische Vereinigung für das Gas- und Wasserfach

PZH
Panstwowy Zaklad Higieny

RINA
Registro Italiano Navale

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

SBSC
Svensk Brand & Säkerhets Certifiering AB

SRIPS
Service de Recherche et d'Ingéniérie en Protection Sanitaire

SSL
Scientific Services Laboratory

Standards Australia

SVGW
Schweizerischer Verein des Gas- und Wasserfaches

TSU
Technický Skúšobný Ústav Pieštany, š.p.

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

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

VdS
Verband der Schadenverhütung GmbH

VKF
Vereinigung Kantonaler Feuerversicherungen

W
Standards Australia Watermark Certification

WRAS
Water Regulations Advisory Scheme

GOVERNMENT AGENCIES

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

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

Canadian Coast Guard

U.S. Coast Guard – Approves each vessel individually

COE
Corps of Engineers – CEGS 15000

FAA
Federal Aviation Administration – HVAC, Plumbing, Fire Protection

FHA
Federal Housing Administration

GSA
General Services Administration – 15000 Series

MIL
Military Specifications

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

NASA
National Aeronautics and Space Administration – 15000 Series

NAVFAC
Naval Facilities Engineering Command – NFGS 15000 Series

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

TVA
Tennessee Valley Authority – Fire protection, storm drains

VA
Veterans Affairs – 15000 Series

Design Data

Introduction

This Victaulic General Catalog has been written for the piping system installer, designer, specification writer and owner as a basic reference guide for data about Victaulic mechanical piping methods. This catalog is organized to provide information in the context and form most readily usable. For easy identification of major sections of interest, see the condensed table of contents on pg. i, for a fully detailed index, see pg. 16-1. For more detailed information, consult Design Data, Section 26.01.

Important Information

Victaulic has developed, in more than 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 or threaded end pipe and/or fittings. Nor are they intended for use with Advanced Groove System (AGS) components used on 350 – 600 mm/14 – 24" 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-600	Copper Products Handbook
I-900	HDPE Products Handbook

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

Design Data

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.

IMPORTANT NOTES:

Nominal designations are used where the actual OD of the pipe matches the ANSI size. Otherwise both the nominal and actual OD are listed.

* Nominal sizes

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

Design Data

Imperial (U.S.)/Metric Conversion Chart

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

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

Couplings

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

QuickVic® Rigid Coupling

STYLE 107, PG. 1-5

Zero-Flex® Rigid Coupling

STYLE 07, PG. 1-6
AGS STYLE W07, PG. 5-3

Advanced Groove System AGS™

For 350 – 1525 mm/14 – 60" piping systems Victaulic offers Advanced Groove System (AGS) couplings, see pg. 5-1.

Standard Flexible Coupling

STYLE 77, PG. 1-7
AGS STYLE W77, PG. 5-4

Flexible Coupling

STYLE 75, PG. 1-9

Vic-Flange® Adapter PN10 and PN16

STYLE 741, PG. 1-10

Vic-Flange Adapter ANSI Class 150

STYLE 741, PG. 1-11
AGS STYLE W741, PG. 5-5

Vic-Flange Adapter ANSI Class 300

STYLE 743, PG. 1-12

Reducing Coupling

STYLE 750, PG. 1-13

Snap-Joint® Coupling

STYLE 78, PG. 1-14

Couplings

Gasket Types

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

† Separate gasket specifically designed for outlet couplings.

Outlet Coupling

STYLE 72, PG. 1-15

Vic-Boltless® Coupling

STYLE 791 AND STYLE 792 ASSEMBLY TOOL, PG. 1-16

High Pressure Coupling

STYLE 808, PG. 1-17

Rigid Coupling

STYLE HP-70, PG. 1-18

EndSeal® Coupling for Plastic Coated Pipe

STYLE HP-70ES, PG. 1-19

EndSeal Fittings for Plastic Coated Pipe

PG. 1-20

The special groove profile and gasket design of "ES" products contribute to higher pressure ratings and longer life service.

PRODUCTS

Couplings

Rigid Coupling Systems and Performance §

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

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

These rigid couplings provide a rigid joint allowing no expansion/contraction or linear movement.

The couplings will position the pipe ends so that there is a fixed pipe end separation that may be considered during design and installation (see chart below).

Rigid couplings create a rigid joint, useful for risers, mechanical rooms and other areas where flexibility is not desired. QuickVic Style 107, 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 mm Inches	Actual Outside Diameter mm Inches	mm Inches
20 ¾	26.9 1.050	1.2 0.05
25 1	33.7 1.315	1.2 0.05
32 1 ¼	42.4 1.660	1.2 0.05
40 1 ½	48.3 1.900	1.2 0.05
50 2	60.3 2.375	1.7 0.07
65 2 ½	73.0 2.875	1.7 0.07
76.1 mm	76.1 3.000	1.7 0.07
80 3	88.9 3.500	1.7 0.07
108.0 mm	108.0 4.250	4.1 0.16
100 4	114.3 4.500	4.1 0.16
133.0 mm	133.0 5.250	4.1 0.16
139.7 mm	139.7 5.500	4.1 0.16

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

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

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

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

* These figures do NOT apply to 350 – 600 mm/14 – 24" Style W07 AGS rigid couplings. Allowable pipe end separation is 6.4 mm/0.25" 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 engineering@victaulic.be.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

⚠ WARNING

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

Couplings

Flexible Coupling Systems and Performance §

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

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

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

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

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

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

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

† 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 3.1 – 9.5 mm/0.125 – 0.375".

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

*** 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 20 – 90 mm/¾ – 3½"; 25% for 100 mm/4" and larger.

Couplings

QuickVic® Rigid Coupling

STYLE 107

For Complete Information Request Publication **06.19**

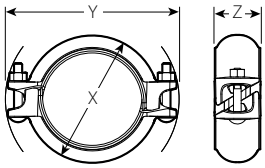
- Installation ready design
- Angled-pad design for rigidity
- Pressure rated up to 4000kPa/580 psi
- Sizes from 50 – 200mm/

Size		Allow. Pipe End Sep. †	@ Bolt/Nut	Dimensions mm/Inches					Approx. Wgt. Each
				Preassembled (Installation-ready condition)		Joint Assembled			
Nominal Size mm Inches	Actual Outside Dia. mm Inches	mm Inches	No. – Size mm Inches	X	Y	X	Y	Z	kg Lbs.
50 2	60.3 2.375	3.1 0.12	2 – M12 x 3 1 ½ x 3	104 4.08	156 6.15	93 3.66	152 5.98	49 1.93	1.2 2.7
65 2½	73.0 2.875	3.1 0.12	2 – M12 x 3 1 ½ x 3	117 4.61	172 6.77	106 4.16	166 6.54	49 1.94	1.4 3.1
76.1 mm	76.1 3.000	3.1 0.12	2 – M12 x 3	120 4.74	178 6.99	111 4.38	173 6.82	49 1.94	1.5 3.3
80 3	88.9 3.500	3.1 0.12	2 – M12 x 3 1 ½ x 3	132 5.18	188 7.42	122 4.82	181 7.13	49 1.94	1.6 3.5
100 4	114.3 4.500	5.3 0.21	2 – M12 x 3 1 ½ x 3	163 6.43	225 8.84	153 6.03	214 8.43	54 2.13	2.3 5.1
139.7 mm	139.7 5.500	6.60 0.26	2 – M16 x 3 ¼	190 7.58	264 10.52	172 7.33	260 10.40	54 2.13	2.7 6.0
125 5	141.3 5.563	5.3 0.21	2 – M16 x 3 ¼ ⅝ x 3 ¼	190 7.48	267 10.50	180 7.06	277 10.91	54 2.13	3.1 6.8
150 6	168.3 6.625	5.3 0.21	2 – ⅝ x 3 ¼	220 8.65	293 11.54	209 8.21	282 11.12	54 2.13	3.7 8.2
165.1 mm	165.1 6.500	5.08 0.2	2 – M16 x 3 ¼	221 8.7	296 11.65	215 8.46	294 11.57	54 2.13	3.6 7.9
200 8	219.1 8.625	5.30 0.21	2 – M16 x 4 ⅝ x 4	268 10.55	349 13.74	258 10.17	346 13.62	68 2.67	4.1 9.1

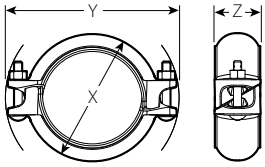
† The allowable pipe separation dimension shown is for system layout purposes only. Style 107 QuickVic rigid couplings are considered rigid connections and will not accommodate expansion or contraction of the piping system.

@ Number of bolts required equals number of housing segments.

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



STYLE 107 PRE-ASSEMBLED (INSTALLATION-READY CONDITION)



STYLE 107 JOINT ASSEMBLED

ANSI STANDARD

Size		Schedule 10			Schedule 40		
Nominal mm Inches	Actual Outside Dia. mm Inches	Wall Thick. mm Inches	Max. * Joint Work. Press. kPa/psi	Max. * Permis. End Load N/Lbs.	Wall Thick. mm Inches	Max. * Joint Work. Press. kPa/psi	Max. * Permis. End Load N/Lbs.
50 2	60.3 2.375	2.77 0.109	3450 500	9857 2215	0.154 3.91	4000 580	11437 2570
65 2½	73.0 2.875	3.05 0.120	2750 400	11570 2600	5.15 0.203	4000 580	16754 3765
80 3	88.9 3.500	3.05 0.120	2750 400	17133 3850	5.49 0.216	4000 580	24831 5580
100 4	114.3 4.500	3.05 0.120	2750 400	28302 6360	6.02 0.237	4000 580	41029 9220
125 5	141.3 5.563	3.40 0.134	2070 300	32428 7290	6.55 0.258	4000 580	62720 14100
150 6	168.3 6.625	3.40 0.134	2480 360	55225 12410	7.11 0.280	4000 580	88956 19990
200 8	219.1 8.625	3.76 0.148	1725 250	64975 14607	8.18 0.322	4000 580	150737 33887

* Working Pressure and End Load are total from all internal and external loads grooved in steel pipe in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe. Refer to notes on pg. 1-4.

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

Couplings

Zero-Flex Rigid Coupling

STYLE 07

For Complete Information Request Publication **06.02**

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

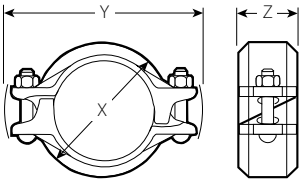
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
25 1	33.7 1.315	5175 750	2890 650	1.2 0.05	60 2.36	107 4.22	47 1.84	0.7 1.6
32 1 ¼	42.4 1.660	5175 750	7210 1,620	1.2 0.05	68 2.69	117 4.62	47 1.84	0.7 1.6
40 1 ½	48.3 1.900	5175 750	9480 2,130	1.2 0.05	75 2.94	148 5.81	47 1.84	0.7 1.6
50 2	60.3 2.375	5175 750	14775 3,320	1.7 0.07	85 3.35	147 5.78	47 1.84	1.0 2.3
65 2 ½	73.0 2.875	5175 750	21695 4,875	1.7 0.07	98 3.88	162 6.38	47 1.84	1.2 2.6
76.1 mm	76.1 3.000	5175 750	23585 5,300	1.7 0.07	107 4.21	168 6.61	47 1.84	1.6 3.6
80 3	88.9 3.500	5175 750	32105 7,215	1.7 0.07	115 4.54	173 6.81	47 1.84	1.4 3.0
108.0 mm	108.0 4.250	5175 750	47325 10,635	4.1 0.16	141 5.56	203 7.98	53 2.07	2.4 5.2
100 4	114.3 4.500	5175 750	53065 11,925	4.1 0.16	148 5.81	209 8.21	53 2.07	2.4 5.3
133.0 mm	133.0 5.250	4825 700	67395 15,145	4.1 0.16	170 6.69	244 9.60	53 2.07	3.4 7.4
139.7 mm	139.7 5.500	4825 700	73980 16,625	4.1 0.16	176 6.94	249 9.82	53 2.07	3.4 7.6
125 5	141.3 5.563	5175 750	81100 18,225	4.1 0.16	179 7.03	251 9.89	53 2.07	3.4 7.4
159.0 mm	159.0 6.250	4825 700	95520 21,465	4.1 0.16	199 7.84	268 10.54	53 2.07	4.2 9.2
165.1 mm	165.1 6.500	4825 700	103305 23,225	4.1 0.16	207 8.13	275 10.84	53 2.07	3.8 8.3
150 6	168.3 6.625	4825 700	107380 24,130	4.1 0.16	210 8.26	275 10.83	53 2.07	3.8 8.3
200 8 §	219.1 8.625	4130 600	155750 35,000	4.8 0.19	268 10.54	349 13.74	64 2.51	6.8 15.1
250 10 §	273.0 10.750	3450 500	202030 45,400	3.3 0.13	327 12.86	431 16.98	65 2.56	10.7 23.5
300 12 §	323.9 12.750	2750 400	226950 51,000	3.3 0.13	377 14.86	480 18.88	65 2.56	12.8 28.2
350 – 1525 14 – 60	AGS™ **See Style W07, pg. 5-3, Request Publication 20.02**							

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

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown. For complete product approval details, please reference publication 10.01.



TYPICAL FOR ALL SIZES

Couplings

Standard Flexible Coupling

STYLE 77

For Complete Information Request Publication **06.04**

- Cross-ribbed construction design
- Provides flexibility for expansion, contraction, and deflection
- Pressure rated up to 6900 kPa/1000 psi
- Sizes from 20–600mm/¾–24" for roll or cut grooved systems. Sizes from 350–600mm/14–24" for cut grooved systems only.
- For 350–1525 mm/14–60" AGS roll groove systems, see pg. 5-1

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
20 ¾	26.7 1.050	6900 1000	3850 865	0 – 1.6 0 – 0.06	54 2.13	102 4.00	44 1.75	0.5 1.1
25 1	33.4 1.315	6900 1000	6050 1,360	0 – 1.6 0 – 0.06	61 2.38	105 4.12	44 1.75	0.5 1.2
32 1 ¼	42.2 1.660	6900 1000	9610 2,160	0 – 1.6 0 – 0.06	67 2.65	127 5.00	48 1.88	0.9 2.0
40 1 ½	48.3 1.900	6900 1000	12615 2,835	0 – 1.6 0 – 0.06	79 3.13	137 5.38	48 1.88	1.0 2.1
50 2	60.3 2.375	6900 1000	19715 4,430	0 – 1.6 0 – 0.06	92 3.63	149 5.88	48 1.88	1.2 2.6
65 2 ½	73.0 2.875	6900 1000	28880 6,490	0 – 1.6 0 – 0.06	108 4.25	165 6.50	48 1.88	1.4 3.1
76.1 mm	76.1 3.000	6900 1000	31460 7,070	0 – 1.6 0 – 0.06	111 4.38	168 6.63	48 1.88	1.5 3.2
80 3	88.9 3.500	6900 1000	46810 9,620	0 – 1.6 0 – 0.06	127 5.00	181 7.13	48 1.88	1.7 3.7
90 3 ½	101.6 4.000	6900 1000	55915 12,565	0 – 1.6 0 – 0.06	143 5.63	210 8.25	48 1.88	2.5 5.6
108.0 mm	108.0 4.250	6900 1000	63100 14,180	0 – 3.2 0 – 0.13	152 6.00	219 8.63	54 2.13	5.0 11.0
100 4	114.3 4.500	6900 1000	70755 15,900	0 – 3.2 0 – 0.13	156 6.13	226 8.88	54 2.13	3.0 6.7
133.0 mm	133.0 5.250	6900 1000	96275 21,635	0 – 3.2 0 – 0.13	194 7.63	264 10.38	54 2.13	4.5 10.0
139.7 mm	139.7 5.500	6900 1000	105665 23,745	0 – 3.2 0 – 0.13	219 8.63	270 10.65	54 2.13	4.5 10.0
125 5	141.3 5.563	6900 1000	108135 24,300	0 – 3.2 0 – 0.13	197 7.75	270 10.65	54 2.13	4.8 10.6
159.0 mm	159.0 6.250	6900 1000	136460 30,665	0 – 3.2 0 – 0.13	219 8.63	292 11.50	54 2.13	6.0 13.2
165.1 mm	165.1 6.500	6900 1000	147660 33,185	0 – 3.2 0 – 0.13	226 8.88	295 11.63	54 2.13	6.0 13.2
150 6	168.3 6.625	6900 1000	153390 34,470	0 – 3.2 0 – 0.13	219 8.63	302 11.88	54 2.13	5.4 12.0
200 8 §	219.1 8.625	5500 800	207995 46,740	0 – 3.2 0 – 0.13	279 11.00	375 14.75	63 2.50	9.4 20.8
250 10 §	273.0 10.750	5500 800	326100 73,280	0 – 3.2 0 – 0.13	346 13.63	435 17.13	67 2.63	14.1 31.1
300 12 §	323.9 12.750	5500 800	453900 102,000	0 – 3.2 0 – 0.13	397 15.63	489 19.25	67 2.63	12.6 27.8

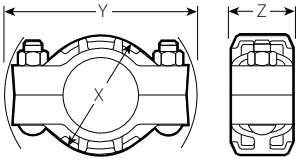
TABLE CONTINUED ON PG. 1-8

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

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 20–300 mm/¾–12" SIZES

Couplings

Standard Flexible Coupling

STYLE 77

For Complete Information Request Publication **06.04**

- Cross-ribbed construction design
- Provides flexibility for expansion, contraction, and deflection
- Pressure rated up to 6900 kPa/1000 psi
- Sizes from 20-600mm/ ¾-24" for roll or cut grooved systems. Sizes 350-600mm/ 14-24" for cut grooved systems only.
- For 350 – 1525 mm/14 – 60" AGS roll groove systems, see pg. 5-1

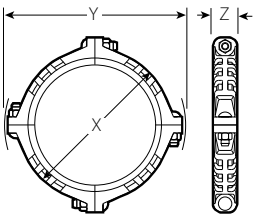
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
TABLE CONTINUED FROM PG. 1-7								
350 14#	355.6 14.000	2065 300	205500 46,180	0 – 3.2 0 – 0.13	422 16.63	505 19.88	73 2.88	16.1 35.6
377.0 mm	377.0 14.842	2065 300	230845 51,875	0 – 3.2 0 – 0.13	442 17.39	531 20.96	71 2.80	22.1 48.8
400 16#	406.4 16.000	2065 300	268425 60,320	0 – 3.2 0 – 0.13	482 19.00	562 22.13	76 3.00	23.2 51.1
426.0 mm	426.0 16.772	2065 300	294795 66,245	0 – 3.2 0 – 0.13	500 19.69	581 22.92	74 2.92	25.7 56.7
450 18#	457.2 18.000	2065 300	339710 76,340	0 – 3.2 0 – 0.13	543 21.38	622 24.50	80 3.13	29.2 64.4
480.0 mm	480.0 18.898	2065 300	374265 84,105	0 – 3.2 0 – 0.13	569 22.38	655 25.86	77 3.04	35.0 77.2
500 20#	508.0 20.000	2065 300	418300 94,000	0 – 3.2 0 – 0.13	600 23.63	692 27.25	80 3.13	41.4 91.2
530.0 mm	530.0 20.866	2065 300	456280 102,535	0 – 3.2 0 – 0.13	617 24.29	704 27.80	77 3.07	41.6 91.7
550 22	559.0 22.000	2065 300	507300 114,000	0 – 3.2 0 – 0.13	654 25.75	749 29.50	80 3.13	41.7 92.0
580.0 mm	580.0 22.835	1725 250	455591 102,380	0 – 3.2 0 – 0.13	680 26.76	762 30.01	79 3.12	42.2 92.8
600 24#	609.6 24.000	1725 250	502850 113,000	0 – 3.2 0 – 0.13	704 27.75	794 31.25	80 3.13	42.6 94.0
630.0 mm	630.0 24.803	1725 250	457416 102,790	0 – 3.2 0 – 0.13	722 28.42	817 32.16	79 3.12	44.0 96.8
350 – 1525 14 – 60	**For 14–60"/350–1525 mm sizes Victaulic offers the Advanced Groove System (AGS) line of products. Request publication 20.03 for information on the rigid W77 AGS coupling.**							

\# For use on cut groove systems only. For roll grooved systems Victaulic offers the Advanced Groove System (AGS), see pg. 5-1. For cut groove fittings in this size contact our Engineered Products Group at engrprod@victaulic.com.

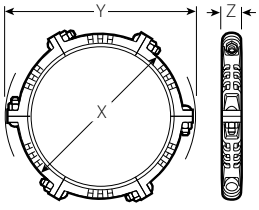
* Refer to General Notes on pg. 1-4.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 350–550 mm/14–22" SIZES



TYPICAL 600 mm/24" SIZES

Couplings

Flexible Coupling

STYLE 75

For Complete Information Request Publication **06.05**

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

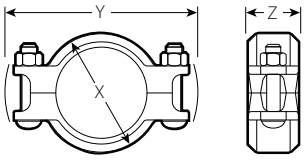
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
25 1	33.4 1.315	3450 500	3025 680	0 – 1.6 0 – 0.06	61 2.38	108 4.27	45 1.77	0.6 1.3
32 1 ¼	42.2 1.660	3450 500	4805 1,080	0 – 1.6 0 – 0.06	68 2.68	117 4.61	45 1.77	0.6 1.4
40 1 ½	48.3 1.900	3450 500	6320 1,420	0 – 1.6 0 – 0.06	74 2.91	122 4.82	45 1.77	0.6 1.5
50 2	60.3 2.375	3450 500	9860 2,215	0 – 1.6 0 – 0.06	87 3.43	133 5.22	48 1.88	0.8 1.7
65 2 ½	73.0 2.875	3450 500	14440 3,245	0 – 1.6 0 – 0.06	98 3.88	144 5.68	48 1.88	0.9 1.9
76.1 mm	76.1 3.000	3450 500	15730 3,535	0 – 1.6 0 – 0.06	102 4.00	150 5.90	48 1.88	0.9 1.9
80 3	88.9 3.500	3450 500	21360 4,800	0 – 1.6 0 – 0.06	114 4.50	178 7.00	48 1.88	1.3 2.9
90 3 ½	101.6 4.000	3450 500	28035 6,300	0 – 1.6 0 – 0.06	127 5.00	191 7.50	48 1.88	1.3 2.9
108.0 mm	108.0 4.250	3100 450	28395 6,380	0 – 3.2 0 – 0.13	141 5.55	198 7.79	54 2.13	1.7 3.7
100 4	114.3 4.500	3450 500	35380 7,950	0 – 3.2 0 – 0.13	147 5.80	204 8.03	54 2.13	1.9 4.1
120 4 ½	127.0 5.000	3100 450	39250 8,820	0 – 3.2 0 – 0.13	156 6.13	240 9.43	54 2.13	2.5 5.5
133.0 mm	133.0 5.250	3100 450	43325 9,735	0 – 3.2 0 – 0.13	166 6.55	238 9.37	54 2.13	2.7 6.0
139.7 mm	139.7 5.500	3100 450	47460 10,665	0 – 3.2 0 – 0.13	173 6.80	244 9.59	54 2.13	2.9 6.3
125 5	141.3 5.563	3100 450	48660 10,935	0 – 3.2 0 – 0.13	175 6.88	256 10.07	54 2.13	2.6 5.8
152.4 mm	152.4 6.000	3100 450	56670 12,735	0 – 3.2 0 – 0.13	187 7.38	266 10.48	48 1.88	2.8 6.2
159.0 mm	159.0 6.250	3100 450	61405 13,800	0 – 3.2 0 – 0.13	194 7.63	266 10.49	54 2.13	3.1 6.8
165.1 mm	165.1 6.500	3100 450	66483 14,940	0 – 3.2 0 – 0.13	199 7.84	271 10.66	52 2.06	3.3 7.2
150 6	168.3 6.625	3100 450	69085 15,525	0 – 3.2 0 – 0.13	203 8.00	281 11.07	58 2.13	3.2 7.0
203.2 mm#	203.2 8.000	3100 450	100725 22,635	0 – 3.2 0 – 0.13	247 9.72	339 13.33	54 2.31	5.7 12.6
200 8	219.1 8.625	3100 450	116945 26,280	0 – 3.2 0 – 0.13	263 10.34	355 13.97	59 2.32	5.6 12.4
254.0 mm#	254.0 10.000	2400 350	122375 27,500	0 – 3.2 0 – 0.13	309 12.16	402 15.81	64 2.53	9.4 20.8
304.8 mm#	304.8 12.000	2400 350	175775 39,500	0 – 3.2 0 – 0.13	360 14.16	449 17.69	64 2.53	10.7 23.6

Style 74 Couplings.

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Vic-Flange Adapter PN10 and PN16

STYLE 741

For Complete Information Request Publication **06.06**

- Directly incorporates PN10 and PN16 flanged components into a grooved system
- Pressure rated for PN10/PN16 Bar
- Sizes from 50–300mm/2–12" are hinged

Size		PN10 Flanges		PN16 Flanges		Sealing Surface		Dimensions		Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	Max. Work Pressure * Bars * psi	Max. End Load * N Lbs.	Max. Work Pressure * Bars * psi	Max. End Load * N Lbs.	A Max. mm Inches	B Min. mm Inches	W mm Inches	Z mm Inches	kg Lbs.
50 2	60.3 2.375	10 145	2850 640	16 230	4561 1025	60 2.38	87 3.41	177 6.97	20 0.79	1.4 3.1
76.1 mm	76.1 3.000	10 145	4540 1020	16 230	7275 1635	76 3.00	103 4.05	208 8.19	20 0.79	2.1 4.7
80 3	88.9 3.500	10 145	6210 1395	16 230	9925 2230	89 3.50	115 4.53	218 8.58	22 0.87	2.4 5.4
100 4	114.3 4.500	10 145	10260 2305	16 230	16420 3690	114 4.50	141 5.55	251 9.88	24 0.94	3.5 7.7
133.0 mm	133.0 5.250	10 145	13893 3123	16 230	22229 4997	133 5.24	160 6.30	274 10.78	25 1.00	4.5 10.0
139.7 mm	139.7 5.500	10 145	15174 3411	16 230	24279 5478	140 5.51	168 6.61	274 10.78	25 1.00	4.2 9.2
159.0 mm	159.0 6.250	10 145	19800 4450	16 230	31400 7056	159 6.25	187 7.36	307 12.09	26 1.02	4.5 10.0
165.1 mm	165.1 6.500	10 145	21400 4811	16 230	34236 7632	165 6.50	195 7.68	303 11.93	25 1.00	4.5 10.0
150 6	168.3 6.625	10 145	22250 5000	16 230	35600 8000	168 6.63	198 7.78	302 11.89	25 1.00	4.5 10.0
200 8	219.1 8.625	10 145	37690 8470	16 230	60320 13555	219 8.63	252 9.94	368 # 14.49	29 # 1.14	7.5 16.6
250 10	273.0 10.750	10 145	58560 13160	16 230	93695 21055	273 10.75	313 12.31	437 § 17.20	27 § 1.06	11.0 24.2
300 12	323.9 12.750	10 145	82370 18510	16 230	131810 29620	324 12.75	365 14.31	478 ‡ 18.82	32 ‡ 1.26	17.4 38.4

* Refer to Publication 06.06 for more details.

\# PN16 dimensions (mm/inches): W = 360/14.17; Z = 30/1.18.

§ PN16 dimensions (mm/inches): W = 438/17.24; Z = 30/1.18.

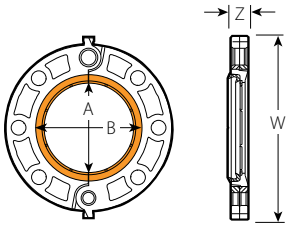
‡ PN16 dimensions (mm/inches): W = 478/18.82; Z = 32/1.26.

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 light wall metallic pipe, small teeth in I.D. of key section should be removed and may only 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.

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 50–300mm/2–12" SIZES

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

Couplings

Vic-Flange Adapter ANSI Class 150

STYLE 741

For Complete Information Request Publication **06.06**

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

Size		Max. Work Pressure *	Max. End Load *	Sealing Surface		Dimensions		Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	A Max. mm Inches	B Min. mm Inches	W mm Inches	Z mm Inches	kg Lbs.
50 2	60.3 2.375	2065 300	5920 1,330	60 2.38	87 3.41	172 6.75	19 0.75	1.4 3.1
65 2½	73.0 2.875	2065 300	8680 1,950	73 2.88	99 3.91	200 7.87	22 0.88	2.1 4.8
80 3	88.9 3.500	2065 300	12840 2,885	89 3.50	115 4.53	211 8.29	24 0.94	2.4 5.3
100 4	114.3 4.500	2065 300	21225 4,770	114 4.50	141 5.53	251 9.87	24 0.94	3.4 7.4
125 5	141.3 5.563	2065 300	32440 7,290	141 5.56	171 6.71	277 10.90	25 1.00	3.9 8.6
165.1 mm	165.1 6.500	2065 300	44320 9,960	165 6.50	195 7.66	303 11.92	25 1.00	4.5 10.0
150 6	168.3 6.625	2065 300	46060 10,350	168 6.63	198 7.78	302 11.90	25 1.00	4.5 9.9
200 8	219.1 8.625	2065 300	77875 17,500	219 8.63	252 9.94	368 14.50	29 1.13	7.5 16.6
250 10	273.0 10.750	2065 300	121110 27,215	273 10.75	313 12.31	438 17.24	30 1.19	11.0 24.2
300 12	323.9 12.750	2065 300	170270 38,285	324 12.75	364 14.31	514 20.25	32 1.25	21.2 46.8
350 14#	355.6 14.000	2065 300	205500 46,180	356 14.00	416 16.39	622 24.50	37 1.44	28.1 62.0
400 16#	406.4 16.000	2065 300	268335 60,300	406 16.00	467 18.39	689 27.12	37 1.44	35.8 79.0
450 18#	457.0 18.000	2065 300	339700 76,340	457 18.00	508 20.00	737 29.00	40 1.56	37.3 82.3
500 20#	508.0 20.000	2065 300	419400 94,250	508 20.00	572 22.50	800 31.50	43 1.69	46.9 103.3
600 24#	610.0 24.000	2065 300	603865 135,700	610 24.00	705 27.75	914 36.00	49 1.94	64.4 142.0
350 – 600 14 – 24	AGS™ **See Style W741, pg. 5-4, Request Publication 20.04**							

* Refer to Publication 06.06 for more details.

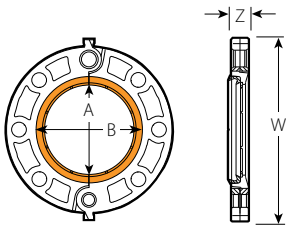
\# For cut groove systems only. For 350–600 mm/14–24" roll groove systems, AGS (Advanced Groove System) products are used. Style 741 is not compatible with the AGS system.

IMPORTANT NOTES:

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

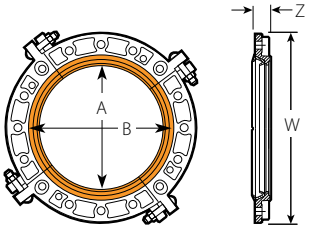
For restrictions on where and how Vic-Flange adapters and flange washers can be used, refer to Publication 06.06.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 50–300 mm/2–12" SIZES

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



TYPICAL 350–600 mm/14–24" SIZES

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

Vic-Flange Adapter ANSI Class 300

STYLE 743

For Complete Information Request Publication **06.06**

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

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

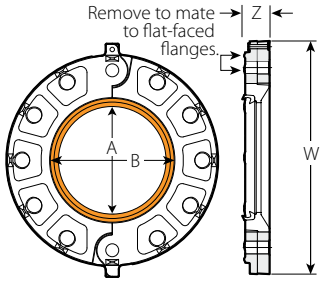
* Refer to Publication 06.06 for more details.

IMPORTANT NOTES:

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

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

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

Couplings

Reducing Coupling

STYLE 750

For Complete Information Request Publication **06.08**

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

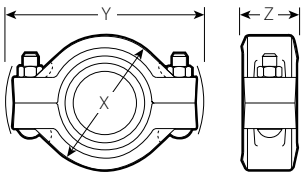
Size			Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches			kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
50 2	×	25 1	2400 350	4450 1,000	0 – 1.8 0 – 0.07	85 3.38	134 5.28	48 1.88	1.2 22.7
		40 1½	2400 350	4450 1,000	0 – 1.8 0 – 0.07	85 3.38	134 5.28	48 1.88	1.0 2.0
65 2½	×	50 2	3450 500	9850 2,215	0 – 1.8 0 – 0.07	102 4.00	151 5.93	48 1.88	1.4 3.1
76.1	×	50 2	2410 350	6900 1,550	0 – 1.8 0 – 0.07	111 4.38	168 6.63	48 1.88	2.1 4.6
80 3	×	50 2	2410 350	6900 1,550	0 – 1.8 0 – 0.07	121 4.75	181 7.13	48 1.88	2.2 4.9
		65 2½	3450 500	14460 3,250	0 – 1.8 0 – 0.07	121 4.75	181 7.13	48 1.88	2.0 4.3
88.9	×	76.1	2410 350	10125 2,275	0 – 1.8 0 – 0.07	121 4.75	181 7.13	48 1.88	1.9 4.2
100 4	×	50 2	2410 350	6900 1,550	0 – 3.2 0 – 0.13	159 6.25	226 8.90	57 2.25	3.7 8.1
		65 2½	2410 350	10125 2,275	0 – 3.2 0 – 0.13	159 6.25	226 8.90	57 2.25	3.9 8.6
		80 3	3450 500	21400 4,810	0 – 3.2 0 – 0.13	152 6.00	226 8.90	57 2.25	3.0 6.7
114.3	×	76.1	2410 350	10125 2,275	0 – 3.2 0 – 0.13	159 6.25	226 8.90	57 2.25	3.1 6.9
125 5	×	100 4	2410 350	24765 5,565	0 – 3.2 0 – 0.13	182 7.18	272 10.70	54 2.13	5.1 11.2
150 6	×	100 4	2410 350	24765 5,565	0 – 3.2 0 – 0.13	219 8.63	302 11.90	57 2.25	7.6 16.7
		125 5	2410 350	37825 8,500	0 – 3.2 0 – 0.13	211 8.31	302 11.90	57 2.25	5.9 12.9
165.1	×	100 4	2410 350	24765 5,565	0 – 3.2 0 – 0.13	219 8.63	302 11.90	57 2.25	6.9 15.2
200 8	×	150 6	2410 350	53400 12,000	0 – 3.2 0 – 0.13	275 10.81	378 14.88	64 2.50	10.2 22.4

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

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Couplings

Snap-Joint Coupling

STYLE 78

For Complete Information Request Publication **06.09**

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

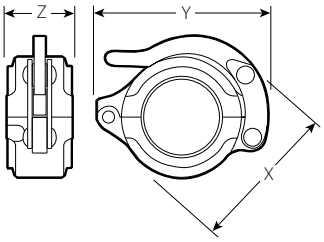
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
25 1	33.4 1.315	2065 300	1825 410	0 – 1.6 0 – 0.06	70 2.75	83 3.25	44 1.75	0.4 0.8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

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

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Couplings

Outlet Coupling

STYLE 72

For Complete Information Request Publication **06.10**

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

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

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

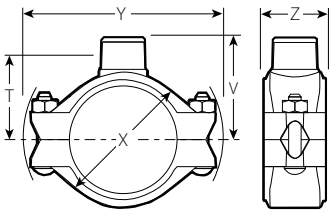
§ Center of run to end of fittings.

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

IMPORTANT NOTES:

No. 60 Cap is not for use in vacuum services with Style 72 or 750 couplings.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Couplings

Vic-Boltless Coupling

STYLE 791 AND STYLE 792 ASSEMBLY TOOL

For Complete Information Request Publication **06.11**

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

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

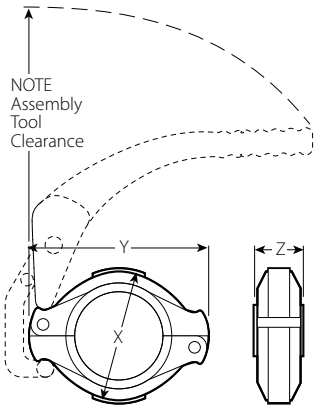
* Refer to General Notes on pg. 1-4.

IMPORTANT NOTES:

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

Please see Publication 06.11 for tool clearance dimensions.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



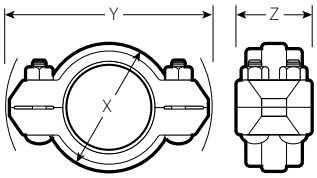
TYPICAL FOR ALL SIZES

Couplings

High Pressure Coupling

STYLE 808

For Complete Information Request Publication **15.01.**



Typical for all sizes

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

DIMENSIONS

Pipe Size		Dimensions – mm/Inches			Bolt/Nut		Min. Bolt Torque @	Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Diameter mm Inches	X	Y	Z	No.	Diameter X Length	N•m Lb. Ft.	kg Lbs.
150 6	168.3 6.625	222 8.75	351 13.81	127 5.00	4	1 x 5	610 450	16.3 36.0
200 8	219.1 8.625	284 11.18	408 16.08	146 5.75	4	1 ⅛ x 6	678 500	31.8 70.0
250 10	273.0 10.750	341 13.44	473 18.68	162 6.38	4	1 ⅛ x 6	678 500	38.6 85.0
300 12*	323.9 12.750	—	—	—	—	—	—	—

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

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

PERFORMANCE DATA

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

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

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

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

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

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

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

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

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

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

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

Couplings

Rigid Coupling

STYLE HP-70

For Complete Information Request Publication **06.12**

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

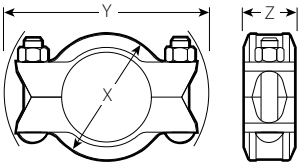
Size		Max. Work Pressure *	Max. End Load *	Fixed Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
50 2	60.3 2.375	6900 1000	19715 4,430	3.6 0.14	89 3.50	168 6.68	51 2.00	1.5 3.2
65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

These sizes are not intended for use on AGS roll groove pipe.

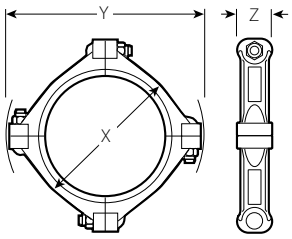
* Refer to General Notes on pg. 1-4.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 50–300 mm/2–12" SIZES



TYPICAL 350–400 mm/14–16" SIZES

Couplings

EndSeal Coupling for Plastic Coated Pipe

STYLE HP-70ES

For Complete Information Request Publication **06.13**

- Specially formulated and compounded oil-resistant nitrile gasket
- ES gasket design has integral central leg that positions between the pipe ends for use with plastic-coated or cement-lined pipe
- Designed for higher pressure systems rated up to 17250kPa/2500psi
- Sizes from 50–300mm/2–12"
- **EndSeal fittings for plastic coated pipe, pg. 1-21**

Size		Max. Work Pressure †	Max. End Load *	Fixed Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
50 2	60.3 2.375	17250 2500	48950 11,000	4.8 0.19	87 3.44	765 6.51	48 1.88	1.5 3.2
65 2½	73.0 2.875	17250 2500	72090 16,200	4.8 0.19	102 4.00	180 7.10	48 1.88	1.8 4.0
80 3	88.9 3.500	17250 2500	113030 25,400	4.8 0.19	119 4.69	197 7.74	48 1.88	2.1 4.6
100 4	114.3 4.500	17250 2500	173550 39,000	4.8 0.19	151 5.94	242 9.54	54 2.13	3.7 8.2
150 6	168.3 6.625	13800 2000	306160 68,800	6.7 0.27	216 8.50	320 12.61	60 2.38	7.4 16.4
200 8	219.1 8.625	10350 1500	389375 87,500	6.7 0.27	278 10.94	380 14.97	70 2.75	11.8 26.0
250 10	273.0 10.750	8600 1250	509525 114,500	7.1 0.28	682 13.43	437 17.22	73 2.88	16.9 37.2
300 12	323.9 12.750	8600 1250	715560 160,800	7.1 0.28	395 15.56	484 19.06	76 3.00	19.1 42.0

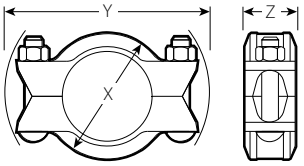
† Warning: For one time field test only, the Maximum Joint Working Pressure may be increased to 1¼ the figure shown.

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

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

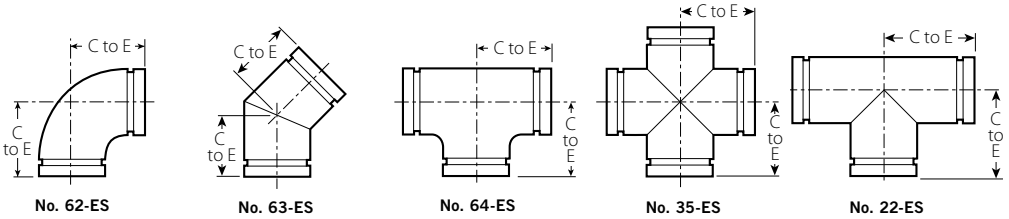
Couplings

EndSeal Fittings for Plastic Coated Pipe

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

For Complete Information Request Publication **07.03**

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



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 mm Inches	Actual Outside Diameter mm Inches	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.
50 2	60.3 2.375	83 3.25	1.1 2.5	51 2.00	0.8 1.8	83 3.25	1.9 4.2	83 3.25	1.8 3.9	—	—
65 2½	73.0 2.875	95 3.75	2.3 5.0	57 2.25	1.3 2.9	95 3.75	3.6 7.9	95 3.75	3.0 6.6	—	—
50 – 90 2 – 3	60.3 – 88.9 2.375 – 3.500	—	—	—	—	—	—	—	—	108 4.25	1.5 3.4
50 – 100 2 – 4	60.3 – 114.3 2.375 – 4.500	—	—	—	—	—	—	—	—	127 5.00	1.9 4.1
80 3	88.9 3.500	108 4.25	2.7 6.0	64 2.50	1.9 4.3	108 4.25	7.3 16.0	108 4.25	6.4 14.2	—	—
100 4	114.3 4.500	127 5.00	4.7 10.3	76 3.00	3.9 8.5	127 5.00	10.7 23.5	127 5.00	7.2 15.8	—	—
150 6 †	168.3 6.625	165 6.50	12.3 27.2	89 3.50	7.5 16.5	165 6.50	12.2 27.0	165 6.50	20.9 46.0	—	—

* Steel Fabricated - Cast Full Flow.

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

IMPORTANT NOTES:

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

Fittings

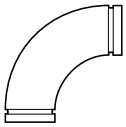
- Fittings available in sizes through 1200 mm/48"
- Standard fitting pressure ratings conform to ratings of installed coupling
- All fittings supplied with grooves or shoulders for fast installation
- Groove design permits flexibility for easy alignment (these fittings are not intended for use with Victaulic couplings for plain end pipe – refer to Publication 14.04 for fittings available for plain end pipe)
- Painted orange enamel with optional galvanized finish
- When connecting wafer or lug-type butterfly valves directly to Victaulic fittings with Style 741 or 743 Vic-Flange adapters, check disk clearance dimensions with I.D. dimension of fitting
- Request Publication 07.01

Advanced Groove System AGS™

For 350–600 mm/14–24" piping systems Victaulic offers Advanced Groove System (AGS) fittings, see pg. 5-1.

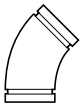
Elbows

90° Elbow
NO. 10, PG. 2-3
AGS NO. W10, PG. 5-6

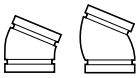


90° 1½ D Long Radius Elbow
NO. 100, PG. 2-3
AGS NO. W100, PG. 5-6

45° Elbow
NO. 11, PG. 2-3
AGS NO. W11, PG. 5-6

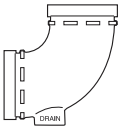


45° 1½ D Long Radius Elbow
NO. 110, PG. 2-3
AGS NO. W110, PG. 5-6

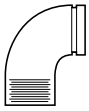


22½° Elbow
NO. 12, PG. 2-3
AGS NO. W12, PG. 5-6

11¼° Elbow
NO. 13, PG. 2-3
AGS NO. W13, PG. 5-6

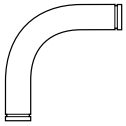


Drain Elbow
NO. 10-DR, PG. 2-4

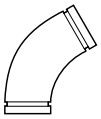


90° Adapter Elbow
NO.18, PG. 2-5

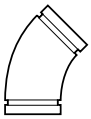
45° Adapter Elbow
NO. 19, PG. 2-5



90° Long Radius Steel Elbow
NO. 10 3D, PG. 2-6
NO. 10 5D, PG. 2-7
NO. 10 6D, PG. 2-8



60° Long Radius Steel Elbow
NO. 14 3D, PG. 2-6
NO. 14 5D, PG. 2-7
NO. 14 6D, PG. 2-8



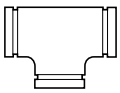
45° Long Radius Steel Elbow
NO. 11 3D, PG. 2-6
NO. 11 5D, PG. 2-7
NO. 11 6D, PG. 2-8

30° Long Radius Steel Elbow
NO. 15 3D, PG. 2-6
NO. 15 5D, PG. 2-7
NO. 15 6D, PG. 2-8

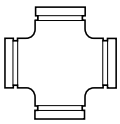
22½° Long Radius Steel Elbow
NO. 12 3D, PG. 2-6
NO. 12 5D, PG. 2-7
NO. 12 6D, PG. 2-8

11¼° Long Radius Steel Elbow
NO. 13 3D, PG. 2-6
NO. 13 5D, PG. 2-7
NO. 13 6D, PG. 2-8

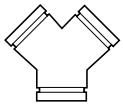
Tees, Crosses, Wyes, and Laterals



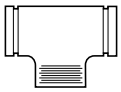
Tee
NO. 20, PG. 2-9
AGS NO. W20, PG. 5-6



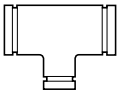
Cross
NO. 35, PG. 2-9
AGS NO. W35, PG. 5-6



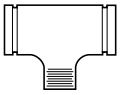
True Wye
NO. 33, PG. 2-9
AGS NO. W33, PG. 5-6



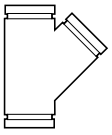
Tees with Threaded Branch
NO. 29M, PG. 2-9



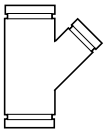
Reducing Tee
NO. 25, PG. 2-10
AGS NO. W25, PG. 5-7



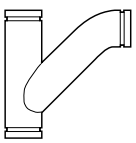
Reducing Tee with Threaded Branch
NO. 29, PG. 2-10



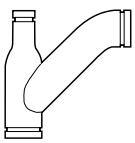
45° Lateral
NO. 30, PG. 2-12
AGS NO. W30, PG. 5-8



45° Reducing Lateral
NO. 30-R, PG. 2-12
AGS NO. W30-R, PG. 5-8



Tee Wye
NO. 32, PG. 2-13

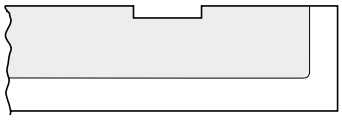


Reducing Tee Wye
NO. 32-R, PG. 2-13

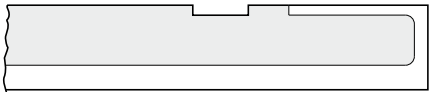
Fittings

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. 2-14

Adapter Nipple
Grv. × Bev.

NO. 42, PG. 2-14
AGS NO. W42, PG. 5-9

Adapter Nipple
Grv. × Grv.

NO. 43, PG. 2-14
AGS NO. W43, PG. 5-9
AGS NO. W49, PG. 5-9

Flat Face Flanged
Adapter Nipple

NO. 41, PG. 2-15
NO. 45F, PG. 2-15
NO. 46F, PG. 2-15
NO. 41-DN, PG. 2-16

Raised Face Flanged
Adapter Nipple

NO. 45R, PG. 2-15
NO. 46R, PG. 2-15
AGS NO. W45R, PG. 5-9

Female Threaded
Adapter

NO. 80, PG. 2-17

Small Threaded
Reducer

NO. 52, PG. 2-20
NO. 52F, PG. 2-20

Cap

NO. 60, PG. 2-14
AGS NO. W60, PG.5-9

Hose Nipple

NO. 48, PG. 2-17

Reducers

Concentric
Reducer

NO. 50, PG. 2-18
AGS NO. W50, PG. 5-10

Eccentric
Reducer

NO. 51, PG. 2-18
AGS NO. W51, PG.5-10

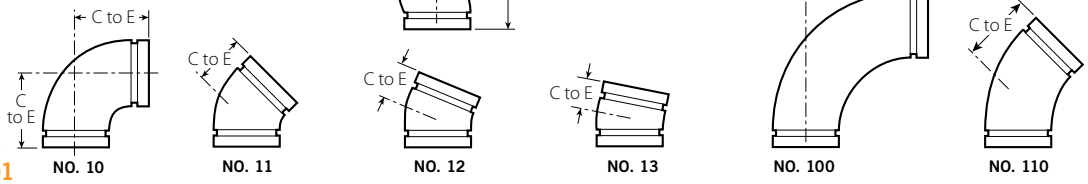
PRODUCTS

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#)

For Complete Information Request Publication **07.01**



NO. 10 NO. 11 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 mm Inches	Actual Outside Dia. mm Inches	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.
20 ¾	26.9 1.050	57 2.25	0.2 0.5	38 1.50	0.2 0.5	41 1.63 (sw)	—	35 1.38 (sw)	—	—	—	—	—
25 1	33.7 1.315	57 2.25	0.3 0.6	44 1.75	0.3 0.6	83 3.25 @	0.3 0.6	35 1.38 (sw)	0.1 0.3	—	—	—	—
32 1¼	42.4 1.660	70 2.75	0.5 1.0	44 1.75	0.4 0.9	44 1.75	0.4 0.8	35 1.38 (sw)	0.2 0.5	—	—	—	—
40 1½	48.3 1.900	70 2.75	0.5 1.2	44 1.75	0.4 0.9	44 1.75	0.4 0.8	35 1.38 (sw)	0.2 0.5	—	—	—	—
50 2	60.3 2.375	83 3.25	0.8 1.8	51 2.00	0.6 1.3	95 3.75 @	0.6 1.4	35 1.38	0.5 1.0	111 4.38	1.1 2.5	70 2.75	0.8 1.8
65 2½	73.0 2.875	95 3.75	1.5 3.2	57 2.25	1.0 2.2	102 4.00 @	1.0 2.3	38 1.50	0.5 1.1	130 5.13	1.9 4.1	76 3.00	1.3 2.8
76.1 mm	76.1 3.000	95 3.75	1.7 3.7	57 2.25	1.5 3.4	57 2.24	—	38 1.50	—	—	—	—	—
80 3	88.9 3.500	108 4.25	2.0 4.5	64 2.50	1.4 3.1	114 4.50 @	1.4 3.1	38 1.50	1.0 2.1	149 5.88	2.7 6.0	86 3.38	2.2 4.9
90 3½	101.6 4.000	114 4.50	2.5 5.6	70 2.75	2.0 4.3	64 2.50 (sw)	1.8 4.0	44 1.75 (sw)	1.2 2.7	—	—	—	—
108.0 mm	108.0 4.250	127 5.00	5.0 11.0	76 3.00	2.5 5.6	—	—	—	—	—	—	—	—
100 4	114.3 4.500	127 5.00	3.2 7.1	76 3.00	2.5 5.6	73 2.88	2.5 5.6	44 1.75	1.6 3.6	191 7.50	5.6 12.3	102 4.00	3.3 7.3
120 4½	127.0 5.000	133 5.25 (sw)	4.5 10.0	79 3.13 (sw)	2.7 6.0	89 3.50	3.0 6.6	48 1.88 (sw)	1.9 4.2	—	—	—	—
133.0 mm	133.0 5.250	140 5.50	5.3 11.7	83 3.25	3.8 8.3	—	—	—	—	—	—	—	—
139.7 mm	139.7 5.500	140 5.50	5.3 11.7	83 3.25	3.8 8.3	72 2.87	—	51 2.00	—	—	—	—	—
125 5	141.3 5.563	140 5.50	5.3 11.7	83 3.25	3.8 8.3	73 2.88 (sw)	3.5 7.8	51 2.00 (sw)	2.2 5.0	+	8.3 18.2	+	6.7 14.8
159.0 mm	159.0 6.250	165 6.50	8.4 18.6	89 3.50	4.9 10.8	—	—	—	—	—	—	—	—
165.1 mm	165.1 6.500	165 6.50	7.0 15.5	89 3.50	4.4 9.8	79 3.13	5.2 11.4	51 2.00	3.4 7.4	273 10.75	13.2 29.0	140 5.50	8.6 19.0
150 6	168.3 6.625	165 6.50	7.8 17.2	89 3.50	4.9 10.8	159 6.25 @	5.5 12.2	51 2.00	3.2 7.0	273 10.75	13.8 30.4	140 5.50	7.9 17.4
200 8	219.1 8.625	197 7.75	13.6 29.9	108 4.25	9.3 20.4	197 7.75 @	9.1 20.0	51 2.00	4.6 10.1	362 14.25	30.0 66.0	184 7.25	16.3 36.0
250 10	273.0 10.750	229 9.00	28.7 63.3	121 4.75	17.0 37.5	111 4.38 (sw)	13.6 30.0	54 2.13 (sw)	5.3 11.8	381 15.00	48.5 107.0	159 6.25	25.9 57.0
300 12	323.9 12.750	254 10.00	33.6 74.0	133 5.25	30.3 66.7	124 4.88 (sw)	18.1 40.0	57 2.25 (sw)	13.3 29.3	457 18.00	70.8 156.0	191 7.50	40.8 90.0
350 – 600 14 – 24	AGS™ **See AGS Roll Groove Fittings, pg. 5-2; for 350–600 mm/14–24" 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.

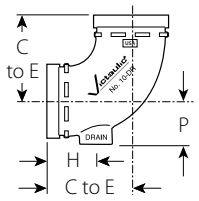
IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

No. 10-DR Drain Elbow

No. 10-DR Drain Elbow
(Ductile Iron)

For Complete Information
Request Publication **10.05**



No. 10-DR

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

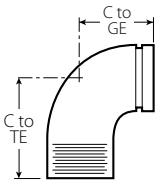
NOTE: The drain is drilled and tapped for a 25-mm/1-inch NPT outlet.

Fittings

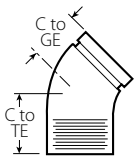
Adapter Elbow

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

For Complete Information
Request Publication **07.01**



NO. 18



NO. 19

Size		No. 18 90° Adapter Elbow @			No. 19 45° Adapter Elbow @		
Nominal Size mm Inches	Actual Outside Diameter mm Inches	C to GE mm Inches	C to TE mm Inches	Approx. Weight Each kg Lbs.	C to GE mm Inches	C to TE mm Inches	Approx. Weight Each kg Lbs.
20 ¾	26.9 1.050	57 2.25	57 2.25	0.2 0.5	38 1.50	38 1.50	0.2 0.5
25 1	33.7 1.315	57 2.25	57 2.25	0.2 0.5	–	–	–
32 1 ¼	42.4 1.660	70 2.75	70 2.75	0.4 0.9	–	–	–
40 1 ½	48.3 1.900	70 2.75	70 2.75	0.5 1.1	44 1.75	44 1.75	0.4 0.9
50 2	60.3 2.375	83 3.25	108 4.25	1.1 2.5	–	–	–
65 2 ½	73.0 2.875	95 3.75	95 3.75	1.4 3.0	57 2.25	57 2.25	1.0 2.3
80 3	88.9 3.500	108 4.25	152 6.00	2.6 5.8	64 2.50	108 4.25	2.3 5.0
90 3 ½	101.6 4.000	114 4.50	159 6.25	3.6 8.0	133 5.25	133 5.25	4.0 8.8
150 6	168.3 6.625	165 6.50	165 6.50	8.0 17.6	89 3.50	89 3.50	5.8 12.7

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

IMPORTANT NOTES:

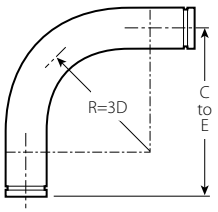
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Fittings

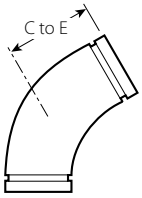
Long Radius Steel Elbows – 3D

NO. 10 – 3D 90° Elbow
NO. 14 – 3D 60° Elbow
NO. 11 – 3D 45° Elbow
NO. 15 – 3D 30° Elbow
NO. 12 – 3D 22½° Elbow
NO. 13 – 3D 11¼° Elbow

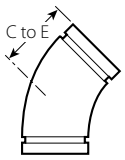
For Complete Information Request Publication **07.02**



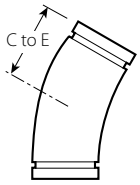
NO. 10 – 3D 90°



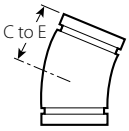
NO. 14 – 3D 60°



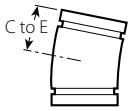
NO. 11 – 3D 45°



NO. 15 – 3D 30°



NO. 12 – 3D 22½°



NO. 13 – 3D 11¼°

Fitting Size		No. 10 - 3D 90°		No. 14 - 3D 60°		No. 11 - 3D 45°		No. 15 - 3D 30°		No. 12 - 3D 22½°		No. 13 - 3D 11¼°	
Nominal Outside Dia. mm Inches	Actual Outside Dia. mm Inches	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.
50 2	60.3 2.375	254 10.00	2.4 5.6	191 7.50	2.0 4.3	165 6.50	1.8 3.9	146 5.75	1.5 3.4	133 5.25	1.5 3.2	114 4.50	1.3 2.8
65 2½	73.0 2.785	292 11.50	4.3 9.5	210 8.25	3.5 7.7	184 7.25	3.0 6.7	152 6.00	2.6 5.8	140 5.50	2.4 5.3	121 4.75	2.1 4.6
80 3	88.9 3.500	330 13.00	6.4 14.0	235 9.25	5.0 11.0	197 7.75	4.3 9.5	165 6.50	3.6 8.0	146 5.75	3.3 7.3	127 5.00	2.8 6.2
90 3½	101.6 4.000	368 14.50	8.4 18.6	254 10.00	6.5 14.4	216 8.50	5.6 12.3	172 6.75	4.6 10.2	152 6.00	4.2 9.2	127 5.00	3.4 7.6
100 4	114.3 4.500	407 16.00	10.9 24.1	279 11.00	8.4 18.5	229 9.00	7.1 15.7	184 7.25	5.8 12.8	165 6.50	5.2 11.4	133 5.25	4.2 9.3
120 4½	127.0 5.000	457 18.00	14.3 31.6	311 12.25	11.0 24.2	254 10.00	9.3 20.5	210 8.25	7.6 16.8	184 7.25	6.8 14.9	146 5.75	5.5 12.2
125 5	141.3 5.563	508 20.00	18.6 40.9	349 13.75	14.2 31.1	286 11.25	12.0 26.5	229 9.00	9.9 21.8	203 8.00	8.8 19.4	165 6.50	7.2 15.8
150 6	168.3 6.625	610 24.00	28.9 63.7	419 16.50	22.1 48.8	343 13.50	18.7 41.3	273 10.75	15.4 33.9	241 9.50	13.7 30.1	197 7.75	11.2 24.6
200 8	219.1 8.625	813 32.00	58.0 127.8	559 22.00	44.4 97.9	457 18.00	37.6 82.9	368 14.50	30.87 68.0	324 12.75	27.4 60.5	267 10.50	22.4 49.3
250 10	273.0 10.750	1016 40.00	102.7 226.4	692 27.25	78.7 173.4	572 22.50	66.6 146.9	457 18.00	54.7 120.5	406 16.00	48.6 107.2	330 13.00	39.6 87.3
300 12	323.9 12.750	1219 48.00	150.9 332.7	832 32.75	115.6 254.8	686 27.00	97.9 215.9	553 21.75	80.3 177.0	489 19.25	71.4 157.4	394 15.50	58.2 128.3
350 14	355.6 14.000	1422 56.00	193.8 427.3	972 38.25	148.5 327.3	800 31.50	125.8 277.3	641 25.25	103.1 227.3	572 22.50	91.8 202.3	464 18.25	74.8 164.8
375 15	381.0 15.000	1524 60.00	218.1 480.8	1041 41.00	167.1 368.3	857 33.75	141.5 312.0	686 27.00	116.0 255.8	610 24.00	103.2 227.6	495 19.50	84.1 185.4
400 16	406.4 16.000	1626 64.00	254.1 560.1	1111 43.75	194.6 429.0	914 36.00	164.9 363.5	737 29.00	135.1 297.9	648 25.50	120.3 265.2	527 20.75	98.0 216.0
450 18	457.2 18.000	1829 72.00	322.4 710.7	1251 49.25	246.9 544.4	1029 40.50	209.2 461.3	826 32.50	171.5 378.0	730 28.75	152.6 336.5	591 23.25	124.3 274.1
500 20	508.0 20.000	2032 80.00	398.9 879.3	1391 54.75	305.5 673.5	1143 45.00	245.3 540.7	914 36.00	212.2 467.8	813 32.00	188.8 416.3	660 26.00	153.9 339.2
550 22	559.0 22.000	2235 88.00	484.3 1067.7	1530 60.25	371.0 817.9	1251 48.25	314.3 692.9	1010 39.75	257.6 568.0	895 35.25	229.2 505.2	724 28.50	186.8 411.8
600 24	609.6 24.000	2438 96.00	576.2 1270.3	1664 65.50	441.4 973.0	1365 53.75	373.9 824.4	1099 43.25	306.5 675.7	972 38.25	272.8 601.4	787 31.00	222.3 490.0

IMPORTANT NOTES:

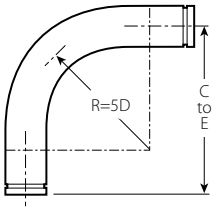
1. Long radius elbows (3D, 5D and 6D) in sizes up to and including 100mm/4" are provided with 100mm/4" integral tangent; remaining sizes provided with integral tangents equal to nominal pipe size.
2. Grooved or plain end available. Specify choice in order.
3. Material: standard wall steel pipe to ASTM A-53 grade B (other materials available upon request)
4. Bends to conform to above radii
5. C to E tolerances: 50-150mm/2-6" ± 3.3mm/.13", 200-400mm/8-16" ± 6.35mm/.25", 450-600mm/18-24" ± 9.9mm/.39"

Fittings

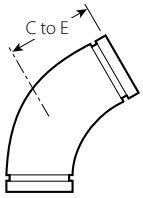
Long Radius Steel Elbows – 5D

NO. 10 – 5D 90° Elbow
NO. 14 – 5D 60° Elbow
NO. 11 – 5D 45° Elbow
NO. 15 – 5D 30° Elbow
NO. 12 – 5D 22½° Elbow
NO. 13 – 5D 11¼° Elbow

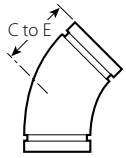
For Complete Information Request Publication **07.02**



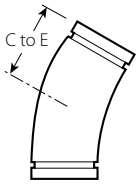
NO. 10 – 5D 90°



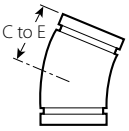
NO. 14 – 5D 60°



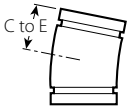
NO. 11 – 5D 45°



NO. 15 – 5D 30°



NO. 12 – 5D 22½°



NO. 13 – 5D 11¼°

Fitting Size		No. 10 - 5D 90°		No. 14 - 5D 60°		No. 11 - 5D 45°		No. 15 - 5D 30°		No. 12 - 5D 22½°		No. 13 - 5D 11¼°	
Nominal Outside Dia. mm Inches	Actual Outside Dia. mm Inches	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.
50 2	60.3 2.375	356 14.00	3.3 7.2	248 9.75	2.5 5.6	210 8.25	2.2 4.8	172 6.75	1.8 4.0	152 6.00	1.6 3.6	127 5.00	1.4 3.0
65 2½	73.0 2.785	419 16.00	6.0 13.3	286 11.25	4.6 10.2	235 9.25	3.9 8.6	191 7.50	3.2 7.0	165 6.50	2.8 6.2	133 5.25	2.3 5.0
80 3	88.9 3.500	488 19.00	9.0 19.9	324 12.75	6.8 15.0	260 12.25	5.7 12.5	230 8.00	4.5 10.0	178 7.00	4.0 8.8	140 5.50	3.1 6.9
90 3½	101.6 4.00	546 21.50	12.2 26.9	362 14.25	9.1 20.0	286 11.25	7.5 16.5	222 8.75	5.1 13.0	191 7.50	5.1 11.3	146 5.75	3.9 8.7
100 4	114.3 4.500	610 24.00	16.1 35.4	394 15.50	11.8 26.0	318 12.50	9.7 21.3	241 9.50	7.5 16.6	203 8.00	6.5 14.3	152 6.00	4.9 10.7
120 4½	127.0 5.000	686 27.00	21.0 46.3	445 17.50	15.4 34.0	349 13.75	12.7 27.9	267 10.50	9.8 21.7	229 9.00	8.4 18.6	172 6.75	6.4 14.0
125 5	141.3 5.563	762 30.00	27.2 60.0	495 19.50	20.0 44.1	394 15.50	16.4 36.1	299 11.75	12.7 28.1	254 10.00	10.9 24.0	191 7.50	8.3 18.2
150 6	168.3 6.625	914 36.00	42.4 93.5	591 23.25	31.1 68.6	470 18.50	25.5 56.2	356 14.00	19.9 43.8	305 12.00	17.1 37.6	229 9.00	12.8 28.3
200 8	219.1 8.625	1219 48.00	85.1 187.6	787 31.00	62.5 137.7	622 24.50	51.2 112.8	476 18.75	39.9 87.9	406 16.00	34.2 75.4	305 12.00	25.8 56.8
250 10	273.0 10.750	1524 60.00	150.8 332.4	991 39.00	110.7 244.1	781 30.75	90.7 199.9	597 23.50	70.7 155.8	508 20.00	60.6 133.7	381 15.00	45.6 100.6
300 12	323.9 12.750	1829 72.00	221.5 488.4	1188 46.75	162.7 358.6	940 37.00	133.2 293.7	711 28.00	103.8 228.9	610 24.00	89.1 196.4	457 18.00	67.0 147.8
350 14	355.6 14.000	2134 84.00	284.6 627.4	1384 54.50	209.0 460.7	1092 43.00	171.1 377.3	832 32.75	133.4 294.0	711 28.00	114.4 252.3	533 21.00	86.1 189.8
375 15	381.0 15.000	2286 90.00	320.2 706.8	1498 58.25	235.0 518.3	1168 46.00	192.6 424.6	895 35.25	150.0 330.8	762 30.00	128.8 283.9	572 22.50	96.6 213.6
400 16	406.4 16.000	2438 96.00	372.9 822.2	1581 62.25	273.9 603.8	1251 49.25	224.3 494.5	953 37.50	174.8 385.3	813 32.00	150.0 330.7	610 24.00	112.9 248.8
450 18	457.2 18.000	2743 108.00	473.3 1043.4	1778 70.00	347.5 766.2	1403 55.25	284.7 627.6	1073 42.25	221.8 489.0	914 36.00	190.4 419.7	686 27.00	143.2 315.7
500 20	508.0 20.000	3048 120.00	585.6 1290.9	1975 77.75	430.0 947.9	1562 61.50	352.2 776.4	1188 46.75	274.4 605.0	1016 40.00	235.5 519.2	762 30.00	177.2 390.6
550 22	559.0 22.000	3353 132.00	711.0 1567.4	2172 85.50	522.0 1150.9	1715 67.50	427.6 942.7	1308 51.50	333.2 734.6	1118 44.00	285.0 630.5	832 32.75	215.1 474.3
600 24	609.6 24.000	3658 144.00	845.9 1864.8	2369 95.25	621.41 1369.3	1873 73.75	508.8 1121.6	1429 56.25	396.4 873.9	1219 48.00	340.2 750.1	908 35.75	256.0 564.3

IMPORTANT NOTES:

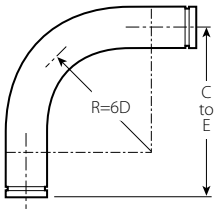
1. Long radius elbows (3D, 5D and 6D) in sizes up to and including 100mm/4" are provided with 100mm/4" integral tangent; remaining sizes provided with integral tangents equal to nominal pipe size.
2. Grooved or plain end available. Specify choice in order.
3. Material: standard wall steel pipe to ASTM A-53 grade B (other materials available upon request)
4. Bends to conform to above radii
5. C to E tolerances: 50-150mm/2-6" ± 3.3mm/.13", 200-400mm/8-16" ± 6.35mm/.25", 450-600mm/18-24" ± 9.9mm/.39"

Fittings

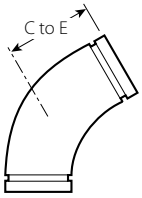
Long Radius Steel Elbows – 6D

NO. 10 – 6D 90° Elbow
NO. 14 – 6D 60° Elbow
NO. 11 – 6D 45° Elbow
NO. 15 – 6D 30° Elbow
NO. 12 – 6D 22½° Elbow
NO. 13 – 6D 11¼° Elbow

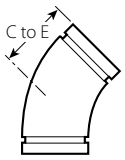
For Complete Information Request Publication **07.02**



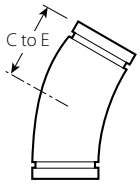
NO. 10 – 6D 90°



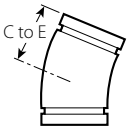
NO. 14 – 6D 60°



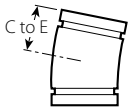
NO. 11 – 6D 45°



NO. 15 – 6D 30°



NO. 12 – 6D 22½°



NO. 13 – 6D 11¼°

Fitting Size		No. 10 - 6D 90°		No. 14 - 6D 60°		No. 11 - 6D 45°		No. 15 - 6D 30°		No. 12 - 6D 22½°		No. 13 - 6D 11¼°	
Nominal Outside Dia. mm Inches	Actual Outside Dia. mm Inches	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.
50 2	60.3 2.375	406 16.00	3.7 8.2	279 11.00	2.9 6.3	229 9.00	2.4 5.3	184 7.25	2.0 4.3	165 6.50	1.8 3.9	133 5.25	1.5 3.2
65 2½	73.0 2.785	483 19.00	6.9 15.2	324 12.75	5.2 11.4	260 10.25	4.3 9.5	203 8.00	3.5 7.7	178 7.00	3.0 6.7	140 5.50	2.4 5.3
80 3	88.9 3.500	559 22.00	10.4 22.9	368 14.50	7.7 17.0	292 11.50	6.4 14.0	222 8.75	5.0 11.0	191 7.50	4.3 9.5	146 5.75	3.3 7.3
90 3½	101.6 4.00	635 25.00	14.1 31.1	413 15.25	13.3 22.8	324 12.75	8.4 18.6	248 9.75	6.5 14.4	210 8.25	5.6 12.3	152 6.00	4.2 9.2
100 4	114.3 4.500	711 28.00	18.6 41.1	457 18.00	13.5 29.8	356 14.00	10.9 24.1	267 10.50	8.4 18.5	222 8.75	7.1 15.7	165 6.50	5.2 11.4
120 4½	127.0 5.000	800 31.50	24.4 53.7	508 20.00	17.7 39.0	400 15.75	14.3 31.6	299 11.75	11.0 24.2	254 10.00	9.3 20.5	184 7.25	6.8 14.9
125 5	141.3 5.563	889 35.00	31.6 69.6	565 22.25	22.9 50.5	445 17.50	18.6 40.9	330 13.00	14.2 31.3	279 11.00	12.0 26.5	203 8.00	8.8 19.4
150 6	168.3 6.625	1067 42.00	49.2 108.4	680 26.75	35.7 78.6	533 21.00	28.9 63.7	400 15.75	22.1 48.8	337 13.25	18.7 41.3	241 9.50	13.7 30.1
200 8	219.1 8.625	1422 56.00	98.7 217.5	908 35.75	71.5 157.7	711 28.00	58.0 127.8	533 21.00	44.4 97.9	445 17.50	37.6 82.9	324 12.75	27.4 60.5
250 10	273.0 10.750	1778 70.00	174.8 385.4	1137 44.75	126.7 279.4	889 35.00	102.7 226.4	660 26.00	78.7 173.4	559 22.00	66.6 146.9	406 16.00	48.6 107.2
300 12	323.9 12.750	2134 74.00	256.8 566.2	1359 53.50	186.2 410.5	1061 41.75	150.9 332.7	794 31.25	115.6 254.8	667 26.25	97.9 215.9	483 19.00	71.4 157.5
350 14	355.6 14.000	2489 98.00	329.9 727.4	1588 62.50	239.2 525.7	1238 48.75	193.8 427.3	927 36.50	148.5 327.3	781 30.75	125.8 277.3	565 22.25	91.8 202.3
375 15	381.0 15.000	2667 105.00	371.2 818.4	1720 67.00	269.1 593.3	1327 52.25	217.8 480.2	997 39.25	167.1 386.3	838 33.00	141.5 312.0	609 24.00	103.2 227.6
400 16	406.4 16.000	2845 112.00	432.4 953.3	1816 72.50	313.5 691.1	1416 55.75	254.1 560.1	1061 41.75	194.6 429.0	895 35.25	164.9 363.5	648 25.50	120.3 265.2
450 18	457.2 18.000	3200 126.00	548.7 1209.7	2045 80.50	397.9 877.1	1594 62.75	322.4 710.7	1194 47.00	246.9 544.4	1003 39.50	209.2 461.3	730 28.75	152.6 336.5
500 20	508.0 20.000	3556 140.00	678.9 1496.6	2267 89.25	492.2 1085.1	1772 69.75	398.9 879.3	1327 52.25	305.5 673.5	1118 44.00	258.9 570.7	807 31.75	188.8 416.3
550 22	559.0 22.000	3912 154.00	824.3 1817.3	2496 98.25	597.6 1317.5	1950 76.75	484.3 1067.7	1461 57.50	371.0 817.9	1256 48.25	314.3 693.0	889 35.00	229.3 505.5
600 24	609.6 24.000	4267 168.00	980.7 2162.0	2724 107.25	711.0 1567.5	2127 83.75	576.2 1270.3	1588 62.50	441.4 973.0	1340 52.75	373.8 824.4	972 38.25	272.8 601.4

IMPORTANT NOTES:

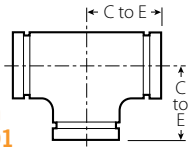
1. Long radius elbows (3D, 5D and 6D) in sizes up to and including 100mm/4" are provided with 100mm/4" integral tangent; remaining sizes provided with integral tangents equal to nominal pipe size.
2. Grooved or plain end available. Specify choice in order.
3. Material: standard wall steel pipe to ASTM A-53 grade B (other materials available upon request)
4. Bends to conform to above radii
5. C to E tolerances: 50-150mm/2-6" ± 3.3mm/.13", 200-400mm/8-16" ± 6.35mm/.25", 450-600mm/18-24" ± 9.9mm/.39"

Fittings

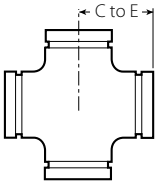
Tees, Crosses and True Wyes

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

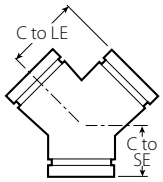
For Complete Information Request Publication **07.01**



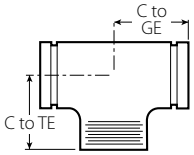
NO. 20



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 mm Inches	Actual Outside Dia. mm Inches	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.	C to LE mm Inches	C to SE mm Inches	Approx. Weight Each kg Lbs.	C to GE mm Inches	C to TE mm Inches	Approx. Weight Each kg Lbs.
20 ¾	26.9 1.050	57 2.25	0.3 0.6	57 2.25	0.4 0.9	—	—	—	57 2.25	57 2.25	0.3 0.6
25 1	33.7 1.315	57 2.25	0.5 1.0	57 2.25	0.6 1.3	57 2.25	57 2.25	0.5 1.1	57 2.25	57 2.25	0.5 1.0
32 1 ¼	42.4 1.660	70 2.75	0.7 1.5	70 2.75	1.0 2.1	70 2.75	64 2.50	0.7 1.5	—	—	—
40 1 ½	48.3 1.900	70 2.75	0.9 2.0	70 2.75	1.1 2.5	70 2.75	70 2.75	0.8 1.8	70 2.75	70 2.75	0.9 2.0
50 2	60.3 2.375	83 3.25	1.4 3.0	83 3.25	1.7 3.8	83 3.25	70 2.75	1.1 2.5	83 3.25	108 4.25	1.4 3.00
65 2 ½	73.0 2.875	95 3.75	2.0 4.3	95 3.75	2.8 6.1	95 3.75	76 3.00	2.0 4.3	—	—	—
76.1 mm	76.1 3.000	95 3.75	2.4 5.2	—	—	—	—	—	95 3.75 (sw)	95 3.75	2.4 5.2
80 3	88.9 3.500	108 4.25	3.0 6.8	108 4.25	4.8 10.5	108 4.25	83 3.25	2.8 6.1	—	—	—
90 3 ½	101.6 4.000	114 4.50 (sw)	3.6 7.9	114 4.50	5.2 11.5	114 4.50	89 3.50	4.4 9.6	114 4.50 (sw)	114 4.50	3.6 7.9
108.0 mm	108.0 4.250	127 5.00	7.0 15.5	—	—	—	—	—	127 5.00	127 5.00	7.0 15.5
100 4	114.3 4.500	127 5.00	5.4 11.9	127 5.00	7.2 15.8	127 5.00	95 3.75	4.5 10.0	127 5.00	184 7.25	5.4 11.9
120 4 ½	127.0 5.000	133 5.25 (sw)	6.8 15.0	133 5.25	8.4 18.5	—	—	—	133 5.25 (sw)	133 5.25	6.8 15.0
133.0 mm	133.0 5.250	140 5.50	8.1 17.8	—	—	—	—	—	140 5.50	140 5.50	8.1 17.8
139.7 mm	139.7 5.500	140 5.50	8.1 17.8	—	—	—	—	—	140 5.50	140 5.50	8.1 17.8
125 5	141.3 5.563	140 5.50	8.1 17.8	140 5.50	9.1 20.0	140 5.50	102 4.00	6.8 15.0	140 5.50 (sw)	140 5.50	8.1 17.8
159.0 mm	159.0 6.250	165 6.50	12.3 27.1	—	—	—	—	—	165 6.50	165 6.50	12.3 27.1
165.1 mm	165.1 6.500	165 6.50	10.0 22.0	165 6.50	12.7 28.0	—	—	—	165 6.50	165 6.50	10.0 22.0
150 6	168.3 6.625	165 6.50	11.7 25.7	165 6.50	12.7 28.0	165 6.50	114 4.50	10.1 22.3	165 6.50 (sw)	165 6.50	11.7 25.7
200 8	219.1 8.625	197 7.75	21.6 47.6	197 7.75	21.8 48.0	197 7.75	152 6.00	16.3 36.0	197 7.75 (sw)	197 7.75	21.6 47.6
250 10	273.0 10.750	229 9.00	44.9 99.0	229 9.00	55.1 121.5	229 9.00	155 6.50	31.7 69.9	229 9.00	229 9.00	33.1 73.0
300 12	323.9 12.750	254 10.00	60.3 133.0	254 10.00	49.9 110.0	254 10.00	178 7.00	36.3 80.0	254 10.00	254 10.00	44.9 99.0
350 – 600 14 – 24	AGS™ **See AGS Roll Groove Fittings, pg. 5-2; for 350–600 mm/14–24" Cut Groove Systems Request Publication 07.01**										

Ductile iron except those marked (sw) which are segmentally welded steel.
@ Available with British Standard Pipe Threads, specify "BSP" clearly on order.

IMPORTANT NOTES:

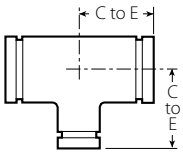
Fittings size 650 – 1050 mm/26 – 48" are available roll grooved for installation with Style 770 large diameter pipe couplings, contact Victaulic for details.
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Fittings

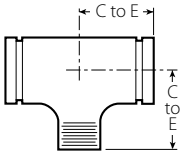
Reducing Tee

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

For Complete Information
Request Publication **07.01**



NO. 25



NO. 29@

Size						No. 25 Std.	No. 29 w/ Thd. Branch	Approx. Weight Each
Nominal Size mm Inches						C to E mm Inches	C to E mm Inches	kg Lbs.
25 1	×	25 1	×	20 ¾		+	+	0.5 1.0
32 1 ¼	×	32 1 ¼	×	25 1		+	+	0.6 1.3
40 1 ½	×	40 1 ½	×	20 ¾		+	+	0.7 1.5
				25 1		+	+	0.7 1.5
				32 1 ¼		+	+	0.8 1.7
50 2	×	50 2	×	20 ¾		83 3.25	83 3.25	1.1 2.5
				25 1		83 3.25	83 3.25	1.2 2.7
				32 1 ¼		+	+	0.8 1.8
				40 1 ½		83 3.25	83 3.25 (sw)	1.4 3.0
65 2 ½	×	65 2 ½	×	20 ¾		+	+	1.8 3.9
				25 1		95 3.75	95 3.75 (sw)	1.7 3.8
				32 1 ¼		+	+	1.7 4.2
				40 1 ½		95 3.75	95 3.75	1.8 3.9
				50 2		95 3.75	95 3.75 (sw)	2.0 4.5
76.1	×	76.1	×	20 ¾		95 3.75	—	1.8 3.9
				25 1		—	95 3.75	1.8 3.9
				32 1 ¼		—	95 3.75	1.8 3.9
				40 1 ½		—	95 3.75	2.0 4.5
				50 2		95 3.75	95 3.75	2.0 4.5
80 3	×	80 3	×	20 ¾		+	+	2.6 5.7
				25 1		108 4.25	108 4.25	2.8 6.1
				32 1 ¼		+	+	3.6 8.0
				40 1 ½		108 4.25	108 4.25 (sw)	2.9 6.5
				50 2		108 4.25	108 4.25 (sw)	2.8 6.2
				65 2 ½		108 4.25	108 4.25 (sw)	2.9 6.4
100 4	×	100 4	×	20 ¾		+	+	3.6 8.0
				25 1		127 5.00	127 5.00	3.5 7.8
				32 1 ¼		+	+	4.4 9.6
				40 1 ½		127 5.00	127 5.00	4.6 10.2
				50 2		127 5.00	127 5.00	5.1 11.2
				65 2 ½		127 5.00	127 5.00	5.2 11.4
				80 3		127 5.00	127 5.00	5.3 11.6
125 5	×	125 5	×	25 1		+	+	6.4 14.0
				40 1 ½		+	+	6.5 14.3
				50 2		140 5.50 (sw)	140 5.50 (sw)	6.6 14.5
				65 2 ½		140 5.50	140 5.50 (sw)	6.9 15.2
				80 3		140 5.50	140 5.50 (sw)	7.5 16.6
				100 4		140 5.50	140 5.50 (sw)	7.6 16.7
139.7	×	139.7	×	20 ¾		140 5.50	140 5.50	6.4 14.0
				32 1 ¼		140 5.50	—	6.4 14.0
				40 1 ½		140 5.50	—	6.5 14.3
				50 2		140 5.50	140 5.50	6.6 14.5
				65 2 ½		140 5.50	—	6.9 15.2
				80 3		140 5.50	—	7.5 16.6
				100 4		140 5.50	—	7.6 16.7

TABLE CONTINUED ON PG. 2-11, SEE FOOTNOTES ON PG. 2-11

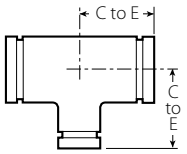
350 – 600 14 – 24	AGS™ **See AGS Roll Groove Fittings, pg. 5-2; for 350–600 mm/14–24" Cut Groove Systems Request Publication 07.01**

Fittings

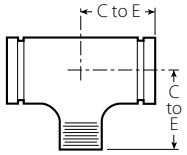
Reducing Tee

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

For Complete Information
Request Publication **07.01**



NO. 25



NO. 29@

Size				No. 25 Std.	No. 29 w/ Thd. Branch	Approx. Weight Each
Nominal Size mm Inches				C to E mm Inches	C to E mm Inches	kg Lbs.
TABLE CONTINUED FROM PG. 2-10						
150 6	×	150 6	× 25 1	+	+	10.4 23.0
			40 1 ½	+	+	10.9 24.0
			50 2	165 6.50	165 6.50	9.8 21.6
			65 2 ½	165 6.50	165 6.50	11.7 21.4
			80 3	165 6.50	165 6.50	12.0 26.5
			100 4	165 6.50	165 6.50	11.3 25.0
			125 5	165 6.50	165 6.50	10.5 23.2
165.1	×	165.1	× 80 3	165 6.50	165 6.50 (sw)	10.9 24.0
			100 4	165 6.50	165 6.50 (sw)	11.3 25.0
200 8	×	200 8	× 40 1 ½	+	+	15.0 33.0
			50 2	197 7.75 (sw)	197 7.75 (sw)	15.2 33.5
			65 2 ½	+	+	17.7 39.0
			80 3	197 7.75 (sw)	197 7.75 (sw)	15.2 33.6
			100 4	197 7.75	197 7.75	19.0 41.8
			125 5	197 7.75 (sw)	197 7.75 (sw)	15.4 34.0
			150 6	197 7.75	197 7.75	19.2 42.3
			165.1	197 7.75 (sw)	197 7.75 (sw)	21.8 48.0

Size				No. 25 Std.	No. 29 w/ Thd. Branch	Approx. Weight Each
Nominal Size mm Inches				C to E mm Inches	C to E mm Inches	kg Lbs.
250 10	×	250 10	× 40 1 ½	+	+	28.1 62.0
			50 2	229 9.00 (sw)	229 9.00 (sw)	28.1 62.0
			65 2 ½	+	+	28.3 62.4
			80 3	+	+	27.2 60.0
			100 4	229 9.00 (sw)	229 9.00 (sw)	27.7 61.0
			125 5	229 9.00 (sw)	229 9.00 (sw)	23.6 52.0
			150 6	229 9.00 (sw)	229 9.00 (sw)	26.8 59.0
			200 8	229 9.00 (sw)	229 9.00 (sw)	29.3 64.7
300 12	×	300 12	× 25 1	+	+	34.9 77.0
			50 2	+	+	36.3 80.0
			65 2 ½	+	+	35.4 78.0
			80 3	254 10.00 (sw)	254 10.00 (sw)	37.2 82.0
			100 4	254 10.00 (sw)	254 10.00 (sw)	36.3 80.0
			125 5	254 10.00 (sw)	254 10.00 (sw)	34.0 75.0
			150 6	254 10.00 (sw)	254 10.00 (sw)	34.0 75.0
			200 8	254 10.00 (sw)	254 10.00 (sw)	36.3 80.0
			250 10	254 10.00 (sw)	254 10.00 (sw)	38.1 84.0
350 – 600 14 – 24				AGS™ **See AGS Roll Groove Fittings, pg. 5-2; for 350–600 mm/14–24" Cut Groove Systems Request Publication 07.01**		

\+ Contact Victaulic for details.

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

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

IMPORTANT NOTES:

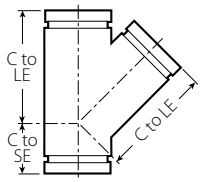
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Fittings

45° Lateral

NO. 30
(Segmentally Welded Steel#)

For Complete Information
Request Publication **07.01**



NO. 30

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

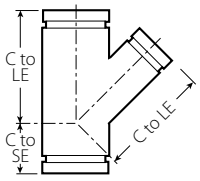
Segmentally welded steel except those marked (d) which are ductile iron.

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

45° Reducing Lateral

NO. 30-R
(Segmentally Welded Steel)

For Complete Information
Request Publication **07.01**



NO. 30-R

Size					No. 30-R 45° Reducing Lateral		
Nominal Size mm Inches					C to LE mm Inches	C to SE mm Inches	Approx. Weight Each kg Lbs.
80 3	×	80 3	×	50 2	216 8.50	83 3.25	4.4 9.8
				65 2 ½	216 8.50	83 3.25	4.4 9.8
100 4	×	100 4	×	50 2	267 10.50	95 3.75	4.5 10.0
				65 2 ½	267 10.50	95 3.75	4.5 10.0
				80 3	267 10.50	95 3.75	8.3 18.3
125 5	×	125 5	×	50 2	318 12.50	102 4.00	10.9 24.0
				80 3	318 12.50	102 4.00	12.2 27.0
				100 4	318 12.50	102 4.00	12.0 26.5
150 6	×	150 6	×	80 3	356 14.00	114 4.50	16.8 37.0
				100 4	356 14.00	114 4.50	16.3 36.0
				125 5	356 14.00	114 4.50	20.3 44.7
200 8	×	200 8	×	100 4	457 18.00	152 6.00	28.1 62.0
				125 5	457 18.00	152 6.00	34.2 75.5
				150 6	457 18.00	152 6.00	37.2 82.0
250 10	×	250 10	×	100 4	521 20.50	165 6.50	47.5 104.8
				125 5	521 20.50	165 6.50	44.9 99.0
				150 6	521 20.50	165 6.50	48.0 105.8
				200 8	521 20.50	165 6.50	53.5 118.0
300 12	×	300 12	×	125 5	584 23.00	178 7.00	55.3 122.0
				150 6	584 23.00	178 7.00	62.1 137.0
				200 8	584 23.00	178 7.00	66.7 147.0
				250 10	584 23.00	178 7.00	75.8 167.0
350 – 600 14 – 24					AGS™ **See AGS Roll Groove Fittings, pg. 5-2; for 350–600 mm/14–24" Cut Groove Systems Request Publication 07.01**		

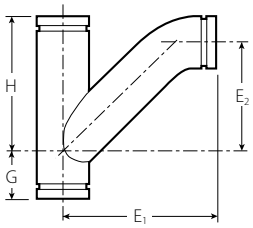
IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Fittings

Tee Wye

NO. 32
(Segmentally Welded Steel)

For Complete Information
Request Publication **07.01**



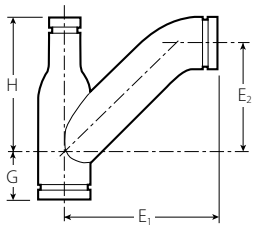
No. 32

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

Reducing Tee Wye

NO. 32-R
(Segmentally Welded Steel)

For Complete Information
Request Publication **07.01**



No. 32-R

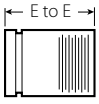
Size				No. 32-R Reducing Tee Wye				
Nominal Size mm Inches				G mm Inches	H mm Inches	E_1 mm Inches	E_2 mm Inches	Approx. Wgt. Each kg Lbs.
100 4	×	80 3	× 80 3	89 3.50	241 9.50	273 10.75	146 5.75	7.3 16.0
			× 80 3	95 3.75	267 10.50	346 13.63	206 8.13	7.3 16.0
100 4	×	100 4	× 80 3	95 3.75	267 10.50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

Fittings

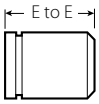
Adapter Nipple

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

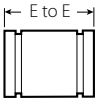
For Complete Information Request Publication **07.01**



NO. 40@



NO. 42



NO. 43

Size		No. 40, 42, 43 Adapter Nipple (sw)	
Nominal Size mm Inches	Actual Outside Diameter mm Inches	E to E mm Inches	Approx. Weight Each kg Lbs.
20 ¾	26.9 1.050	76 3.00	0.1 0.3
25 1	33.7 1.315	76 3.00	0.2 0.4
32 1 ¼	42.4 1.660	102 4.00	0.4 0.8
40 1 ½	48.3 1.900	102 4.00	0.4 0.9
50 2	60.3 2.375	102 4.00	0.5 1.2
65 2 ½	73.0 2.875	102 4.00	0.9 1.9
76.1 mm	76.1 3.000	102 4.00	0..9 1.9
80 3	88.9 3.500	102 4.00	1.1 2.5
90 3 ½	101.6 4.000	102 4.00	0.9 2.1
100 4	114.3 4.500	152 6.00	2.5 5.5
125 5	141.3 5.563	152 6.00	3.4 7.4
139.7 mm	139.7 5.500	152 6.00	3.4 7.4
150 6	168.3 6.625	152 6.00	4.3 9.5
165.1 mm	165.1 6.500	152 6.00	4.3 9.5
200 8	219.1 8.625	152 6.00	6.4 14.2
250 10	273.0 10.750	203 8.00	12.2 27.0
300 12	323.9 12.750	203 8.00	15.0 33.0
350 – 600 14 – 24	AGS™ **See AGS Roll Groove Fittings, pg. 5-2; for 350–600 mm/14–24" 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 40 mm/1 ½" 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: 100 – 300 mm/4 – 12" diameter – 200 mm/8" minimum length required.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Cap

NO. 60
(Ductile Iron)

For Complete Information Request Publication **07.01**

NO. 60

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

IMPORTANT NOTES:

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

No. 60 cap available threaded or tapped. Contact Victaulic for details.

No. 60 cap is not suitable for use in vacuum service with Style 72 or 750 couplings.

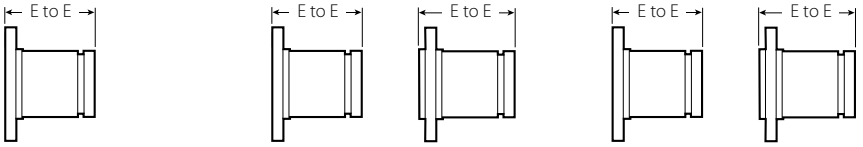
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

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)

For Complete Information
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 mm Inches	Actual Outside Diameter mm Inches	E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
20 ¾	26.9 1.050	76 3.00	1.0 2.3	76 3.00	1.0 2.3	76 3.00	1.5 3.3
25 1	33.7 1.315	76 3.00	1.1 2.5	76 3.00	1.2 2.7	76 3.00	1.8 3.9
32 1 ¼	42.4 1.660	102 4.00	1.4 3.0	102 4.00	1.5 3.3	102 4.00	2.2 4.8
40 1 ½	48.3 1.900	102 4.00	1.6 3.5	102 4.00	1.8 3.9	102 4.00	3.1 6.9
50 2	60.3 2.375	102 4.00	2.5 5.5	102 4.00	2.8 6.2	102 4.00	3.7 8.2
65 2 ½	73.0 2.875	102 4.00	3.6 8.0	102 4.00	4.5 9.9	102 4.00	5.4 11.9
80 3	88.9 3.500	102 4.00	4.3 9.5	102 4.00	5.2 11.4	102 4.00	7.5 16.5
90 3 ½	101.6 4.000	102 4.00	5.4 12.0	102 4.00	6.8 15.1	102 4.00	9.1 20.1
100 4	114.3 4.500	152 6.00	7.6 16.7	152 6.00	8.3 18.4	152 6.00	12.4 27.4
125 5	141.3 5.563	152 6.00	9.8 21.5	152 6.00	9.7 21.3	152 6.00	16.0 35.3
150 6	168.3 6.625	152 6.00	12.0 26.5	152 6.00	12.5 27.5	152 6.00	21.5 47.5
200 8	219.1 8.625	152 6.00	17.7 39.0	152 6.00	18.8 41.3	152 6.00	31.9 70.3
250 10	273.0 10.750	203 8.00	25.9 57.0	203 8.00	27.1 59.8	203 8.00	45.7 100.8
300 12	323.9 12.750	203 8.00	18.6 41.0	203 8.00	40.0 88.2	203 8.00	66.3 146.2
350 – 600 14 – 24	AGS™ **See AGS Roll Groove Fittings, pg. 5-2; for 350–600 mm/14–24" 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.

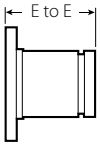
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Fittings

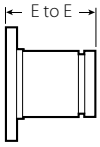
Flanged Adapter Nipple

NO. 41-DN PN10 and PN16 (Cast Iron)

For Complete Information
Contact Victaulic



NO. 41-DN PN10



NO. 41-DN PN16

Size		No. 41-DN PN10 Flange Adapter Nipple		No. 41-DN PN16 Flange Adapter Nipple	
Nominal Size mm Inches	Actual Outside Diameter mm Inches	E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
DN50 2	60.3 2.375	102 4.00	+	102 4.00	+
DN65 2½	73.0 2.875	102 4.00	+	102 4.00	+
DN65	76.1 mm	102 4.00	+	102 4.00	+
DN80 3	88.9 3.500	102 4.00	+	102 4.00	+
DN90 3½	101.6 4.000	102 4.00	+	102 4.00	+
DN100 4	114.3 4.500	152 6.00	+	152 6.00	+
DN125	139.7 mm	152 6.00	+	152 6.00	+
DN125 5	141.3 5.563	152 6.00	+	152 6.00	+
DN150	165.1 mm	152 6.00	+	152 6.00	+
DN150 6	168.3 6.625	152 6.00	+	152 6.00	+
DN200 8	219.1 8.625	152 6.00	+	152 6.00	+
DN250 10	273.0 10.750	203 8.00	+	203 8.00	+
DN300 12	323.9 12.750	203 8.00	+	203 8.00	+

+ Contact Victaulic for details.

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.

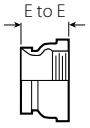
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Fittings

Female Threaded Adapter

NO. 80
(Ductile Iron#)

For Complete Information
Request Publication **07.01**



NO. 80@

Size		No. 80 Female Threaded Adapter	
Nominal Size mm Inches	Actual Outside Diameter mm Inches	E to E mm Inches	Approx. Weight Each kg Lbs.
20 ¾	26.9 1.050	51 2.00	0.5 1.0
25 1	33.7 1.315	52 2.06	0.5 1.0
32 1¼	42.4 1.660	59 2.31 (sw)	0.7 1.5
40 1½	48.3 1.900	59 2.31 (sw)	0.7 1.5
50 2	60.3 2.375	64 2.50	0.6 1.4
65 2½	73.0 2.875	70 2.75	0.7 1.5
80 3	88.9 3.500	70 2.75	1.3 2.9
100 4	114.3 4.500	83 3.25	2.0 4.5

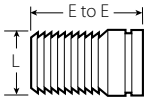
Ductile iron except those marked (sw) which are segmentally welded steel.
@ Available with British Standard Pipe Threads, specify "BSP" clearly on order.

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Hose Nipple

NO. 48
(Segmentally Welded Steel)

For Complete Information
Request Publication **07.01**



NO. 48

Size		No. 48 Hose Nipple		
Nominal Size mm Inches	Actual Outside Dia. mm Inches	E to E mm Inches	L mm Inches	Approx. Weight Each kg Lbs.
20 ¾	26.9 1.050	79 3.12	20 .78	0.1 0.3
25 1	33.7 1.315	86 3.38	26 1.03	0.2 0.4
32 1¼	42.4 1.660	98 3.88	33 1.28	0.3 0.6
40 1½	48.3 1.900	98 3.88	39 1.53	0.4 0.8
50 2	60.3 2.375	114 4.50	52 2.03	0.5 1.1
65 2½	73.0 2.875	137 5.38	64 2.53	0.9 2.0
80 3	88.9 3.500	146 5.75	77 3.03	1.5 3.2
100 4	114.3 4.500	178 7.00	102 4.03	2.2 4.9
125 5	141.3 5.563	222 8.75	128 5.03	3.6 8.0
150 6	168.3 6.625	257 10.12	153 6.03	6.5 14.3
200 8	219.1 8.625	302 11.88	204 8.03	11.2 24.7
250 10	273.0 10.750	318 12.50	255 10.03	18.2 40.1
300 12	323.9 12.750	368 14.50	306 12.03	28.1 62.0

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

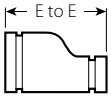
Fittings

Concentric/Eccentric Reducer

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

For Complete Information
Request Publication **07.01**

No. 50



No. 51

Size			No. 50 Concentric Reducer		No. 51 Eccentric Reducer	
Nominal Size mm Inches			E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
32 1 ¼	×	20 ¾	+	0.9 1.9	—	—
		25 1	+	0.9 1.9	—	—
40 1 ½	×	20 ¾	+	0.6 1.4	—	—
		25 1	64* 2.50	0.4 0.8	216(sw) 8.50	2.0 4.5
		32 1 ¼	64* 2.50	0.5 1.0	—	—
50 2	×	20 ¾	64* 2.50	0.3 0.9	229(sw) 9.00	0.9 2.0
		25 1	64* 2.50	0.3 0.7	229(sw) 9.00	1.0 2.3
		32 1 ¼	64* 2.50	0.5 1.2	229(sw) 9.00	2.1 4.6
		40 1 ½	64* 2.50	0.5 1.0	89 3.50	2.1 4.6
65 2 ½†	×	20 ¾	+	0.6 1.3	+	1.5 3.3
		25 1	64 2.50	1.5 3.6	241(sw) 9.50	1.6 3.5
		32 1 ¼	64* (sw) 2.50	1.5 3.3	89 3.50	+
		40 1 ½	64* 2.50	1.6 3.6	241(sw) 9.50	1.7 3.7
		50 2	64 2.50	1.8 3.9	241(sw) 9.50	2.0 4.3
80 3	×	20 ¾	+	0.7 1.5	+	2.0 4.5
		25 1	64* 2.50	0.6 1.3	241(sw) 9.50	2.2 4.8
		32 1 ¼	64 2.50	1.4 3.0	+	2.2 4.8
		40 1 ½	64* 2.50	2.3 5.1	241(sw) 9.50	2.3 5.1
		50 2	64* 2.50	0.7 1.6	89 3.50	2.7 6.0
		65 2 ½	64* 2.50	0.8 1.8	89 3.50	3.2 7.0
		76.1	64 2.50	1.0 2.1	—	—
90 3 ½	×	80 3	64 2.50	0.9 2.0	241(sw) 9.50	3.2 7.0
100 4	×	25 1	76* 3.00	1.4 3.0	330(sw) 13.00	2.9 6.5
		32 1 ¼	+	2.1 4.6	—	—
		40 1 ½	76 3.00	3.1 6.9	254(sw) 10.00	3.7 8.1
		50 2	76* 3.00	1.1 2.4	102 4.00	1.5 3.3
		65 2 ½	76* 3.00	1.2 2.7	102 4.00	1.5 3.4
		80 3	76* 3.00	1.4 3.2	102 4.00	1.6 3.5
		90 3 ½	76 3.00	1.3 2.9	254(sw) 10.00	3.6 8.0

Size			No. 50 Concentric Reducer		No. 51 Eccentric Reducer	
Nominal Size mm Inches			E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
125 5	×	50 2	279(sw) 11.00	4.1 9.0	279(sw) 11.00	2.4 5.2
		65 2 ½	102 4.00	5.0 11.0	279(sw) 11.00	4.9 10.8
		80 3	102 4.00	2.5 5.5	279(sw) 11.00	5.0 11.1
		100 4	89 3.50	1.9 4.3	127 5.00	5.4 12.0
150† 6	×	25 1	102* 4.00	2.3 5.0	292(sw) 11.50	6.6 14.5
		40 1 ½	+	2.5 5.5	+	+
		50 2	102* 4.00	3.0 6.6	292(sw) 11.50	6.6 14.5
		65 2 ½	102* 4.00	2.9 6.4	292(sw) 11.50	14.2 6.4
		80 3	102* 4.00	2.9 6.4	140 5.50	6.8 15.0
		100 4	102 4.00	2.9 6.5	140 5.50	7.7 17.0
		125 5	102 4.00	2.9 6.4	140 5.50	7.7 17.0
165.1	×	50 2	—	2.7 6.0	—	—
		76.1 3	102 4.00	2.9 6.4	292 11.50(sw)	6.4 14.2
		80 3	102 4.00	2.7 6.0	—	3.1 6.8
		100 4	102 4.00	2.7 6.0	—	3.25 7.2
		139.7	102 4.00	2.9 6.4	140 5.50	7.7 17.0
200 8	×	65 2 ½	406 16.00	3.6 7.9	305(sw) 12.00	11.8 26.1
		76.1	406 16.00	3.6 7.9	305 12.00 (sw)	11.8 26.1
		80 3	127 5.00	4.2 9.3	305(sw) 12.00	10.0 22.0
		100 4	127 5.00	4.8 10.4	305(sw) 12.00	10.4 23.0
		125 5	127 5.00	5.2 11.6	305(sw) 12.00	10.4 23.0
		150 6	127 5.00	5.4 11.9	152 6.00	10.9 24.0
		165.1	127 5.00	5.4 11.9	152 6.00	10.9 24.0
250 10	×	100 4	152 6.00	8.9 19.7	330(sw) 13.00	14.5 32.0
		125 5	+	15.6 34.3	+	15.7 34.6
		150 6	152 6.00	9.1 20.0	330(sw) 13.00	16.7 36.9
		200 8	152 6.00	10.0 22.0	178 7.00	9.8 21.6

TABLE CONTINUED ON PG. 2-19, SEE FOOTNOTES ON PG. 2-19

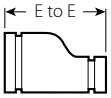
Fittings

Concentric/Eccentric Reducer (cont'd)

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

For Complete Information
Request Publication **07.01**

NO. 50



NO. 51

Size		No. 50 Concentric Reducer		No. 51 Eccentric Reducer	
Nominal Size mm Inches		E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
TABLE CONTINUED FROM PG. 2-18					
300 12	× 100 4	+	20.0 44.0	356(sw) 14.00	21.8 48.0
	150 6	178 7.00	11.2 24.6	356(sw) 14.00	22.7 50.0
	200 8	178 7.00	23.6 52.0	356(sw) 14.00	24.3 53.5
	250 10	178 7.00	17.7 39.0	356(sw) 14.00	25.9 57.0
350 – 600 14 – 24		AGS™ **See AGS Roll Groove Fittings, pg. 5-2; for 350–600 mm/14–24" 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.
† Available in 76.1 mm and 165.1 mm sizes to these dimensions.

IMPORTANT NOTE:
Steel eccentric reducers available through 750 mm/30", contact Victaulic.

Fittings

Small Threaded Reducer

No. 52
No. 52F (BSPT)
(Ductile Iron#)

For Complete Information
Request Publication **07.01**

No. 52

No. 52F

Size			No. 52 Small Threaded Reducer		No. 52F Small Threaded Reducer (BSPT)	
Nominal Size mm Inches			E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
40 1 ½	×	25 1	64 2.50	0.4 0.8	—	—
		32 1 ¼	64 2.50	0.4 0.9	—	—
50 2	×	20 ¾	64 2.50	0.4 0.9	—	—
		25 1	64 2.50	0.3 0.7	—	—
		32 1 ¼	64 2.50	0.5 1.2	—	—
		40 1 ½	64 2.50	0.5 1.0	—	—
65 2 ½	×	25 1	0.5 1.0	0.5 1.0	—	—
		32 1 ¼	64 (sw) 2.50	0.5 1.2	—	—
		40 1 ½	64 (sw) 2.50	0.6 1.3	—	—
		50 2	64 2.50	0.6 1.4	—	—
76.1 †	×	48.3	63.5	0.8	63.5	0.8
		60.0	—	—	63.5	0.9
80 3	×	20 ¾	+ (sw)	0.7 1.5	—	—
		25 1	64 2.50	0.6 1.3	—	—
		32 1 ¼	64 2.50	0.6 1.4	—	—
		40 1 ½	64 (sw) 2.50	0.7 1.5	—	—
		50 2	64 2.50	0.7 1.5	—	—
		65 2 ½	64 2.50	1.1 2.4	—	—
88.9 †	×	42.4	63.5	0.9	63.5	0.8
		48.3	63.5	0.9	63.5	0.9
		60.0	—	—	63.5	0.9
100 4	×	25 1	76 3.00	1.0 2.3	—	—
		40 1 ½	76 3.00	1.1 2.5	—	—
		50 2	76 3.00	1.2 2.6	—	—
		65 2 ½	76 3.00	1.2 2.6	—	—
		80 3	76 3.00	1.1 2.5	—	—

Size			No. 52 Small Threaded Reducer		No. 52F Small Threaded Reducer (BSPT)	
Nominal Size mm Inches			E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
108.0 †	×	42.4	76.2	1.3	76.2	1.3
		48.3	76.2	1.3	76.2	1.4
		60.0	—	—	76.2	1.4
114.3 †	×	42.4	76.2	1.3	76.2	1.3
		48.3	76.2	1.3	76.2	1.3
		60.0	—	—	76.2	1.4
125 5	×	100 4	+ (sw)	2.0 4.5	—	—
133.0 †	×	60.0	—	—	114.3	2.2
139.0 †	×	60.0	—	—	114.3	2.3
150 6	×	25 1	102 4.00	2.5 5.5	—	—
		50 2	102 4.00	2.6 5.7	—	—
		65 2 ½	102 4.00	2.6 5.8	—	—
		80 3	102 4.00	2.6 5.8	—	—
		100 4	+ (sw)	2.9 6.5	—	—
		125 5	+ (sw)	7.9 17.5	—	—
159.0 †	×	42.4	114.3	2.2	114.3	2.5
		48.3	114.3	2.2	114.3	2.5
		60.0	—	—	114.3	2.6
165.1 †	×	42.4	101.6	2.4	101.6	2.9
		48.3	101.6	2.6	101.6	3.0
		60.0	—	—	101.6	3.0
200 8	×	50 2	+ (sw)	0.7 1.5	—	—

\+ Contact Victaulic for details.
\# Ductile iron except those marked (sw) which are segmentally welded steel.
† Available in metric sizes only.

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 and triple service valves in a variety of wear-resistant materials and coatings to satisfy your specific piping application requirements.

Advanced Groove System AGS™

For 350–600 mm/14–24" piping systems Victaulic offers Advanced Groove System (AGS) butterfly and check valves, see pg. 5-1.

Butterfly Valves

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

All butterfly valves 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 for triple service assemblies. Also available are swing check valves 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. Vic-Ball valves are sized 40–150 mm/1½–6" depending on body construction type.

Triple Service Valves

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

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

Valves

Valve Application Guide

Valve Type	Building Services	Industrial	Water and Wastewater	Mining	Oil Field	Plumbing
BUTTERFLY VALVES	●	●	●	●	●	●
CHECK VALVES	●	●	●	●	●	
BALL VALVES	●	●	●	●	●	
TRIPLE SERVICE VALVES	●	●				
FLOW REGULATING VALVES	●	●				

Flow Regulating Valves

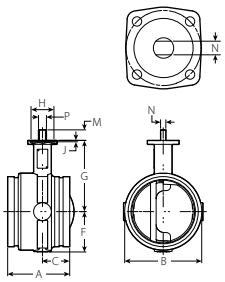
Series 7890 DRV (double regulating and commissioning valves) balance the flow of hot and cold water to provide uniform heating and cooling distribution.

Series 7340 Grooved End Metering Station provides an economical way to obtain flow measurements in HVAC systems.

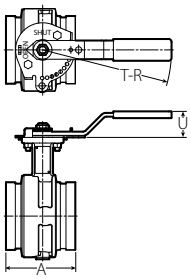
Valves – Butterfly Valves

Vic-300® MasterSeal™ Butterfly Valve

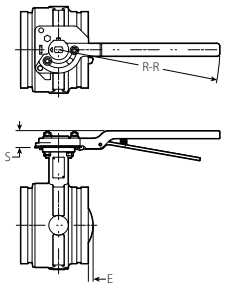
For Complete Information
Request Publication **08.20**



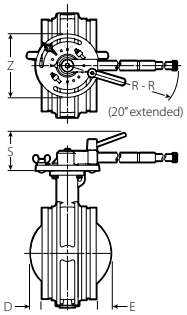
bare valve
Typical 2–
12"/50–300 mm Sizes



Valve with 10-position
handle Typical
2–6"/50–150 mm Sizes



Valve with lever lock
AND MEMORY STOP Typical
FOR 8"/200 mm Sizes ONLY



Valve with lever lock
AND MEMORY STOP Typical
10–12"/250–300 mm Sizes

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

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

@ See pg. 3-4 for flow coefficient.

† Contact Victaulic for availability.

IMPORTANT NOTE:

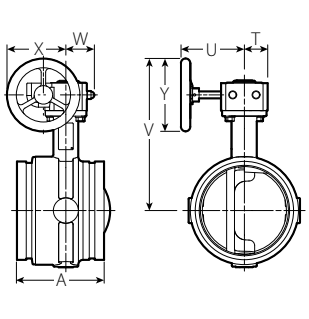
2–8"/50–200 mm sizes are ISO Flange Designation F07; 10"/250 mm and 12"/300 mm sizes are ISO Flange Designation F10.

Valves – Butterfly Valves

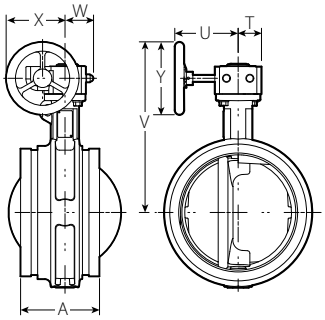
Vic-300 MasterSeal Butterfly Valve

WITH GEAR OPERATOR

For Complete Information
Request Publication **08.20**



VALVE WITH GEAR OPERATOR
TYPICAL 50-150 mm/2-6" SIZES



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

Size		Dimensions							Approx. Weight Each		Flow Coefficient@ (Fully Open)
Nominal Size mm Inches	Actual Outside Dia. mm Inches	A End to End	T mm Inches	U mm Inches	V mm Inches	W mm Inches	X mm Inches	Y mm Inches	Bare kg Lbs.	Valve with Gear Operator kg /Lbs.	K_V Values C_V Values
50 2	60.3 2.375	81.5 3.21	40.1 1.58	112.5 4.43	173.7 6.84	44.5 1.75	92.5 3.64	100.1 3.94	1.6 3.5	2.7 6.0	99.5 115
65 2½	73.0 2.875	95.8 3.77	40.1 1.58	112.5 4.43	184.9 7.28	44.5 1.75	92.5 3.64	100.1 3.94	2.3 5.0	3.4 7.5	224.9 260
76.1 mm	76.1 3.000	95.8 3.77	40.1 1.58	112.5 4.43	184.9 7.28	44.5 1.75	92.5 3.64	100.1 3.94	2.3 5.0	3.4 7.5	224.9 260
80 3	88.9 3.500	95.8 3.77	40.1 1.58	112.5 4.43	191.3 7.53	44.5 1.75	92.5 3.64	100.1 3.94	2.7 6.0	3.9 8.5	380.6 440
108.0 mm †	108.0 4.250	117.6 4.63	40.1 1.58	112.5 4.43	210.3 8.28	44.5 1.75	92.5 3.64	100.1 3.94	4.2 9.3	5.4 11.8	709.3 820
100 4	114.3 4.500	117.6 4.63	40.1 1.58	112.5 4.43	210.3 8.28	44.5 1.75	92.5 3.64	100.1 3.94	4.2 9.3	5.4 11.8	709.3 820
133.0 mm †	133.0 5.250	149.4 5.88	50.0 1.97	122.9 4.84	249.2 9.81	57.9 2.28	112.5 4.43	125.0 4.92	7.6 16.8	9.4 20.8	1038.0 1200
139.7 mm	139.7 5.500	149.4 5.88	50.0 1.97	122.9 4.84	249.2 9.81	57.9 2.28	112.5 4.43	125.0 4.92	7.6 16.8	9.4 20.8	1038.0 1200
125 5	141.3 5.563	149.4 5.88	50.0 1.97	122.9 4.84	249.2 9.81	57.9 2.28	112.5 4.43	125.0 4.92	7.6 16.8	9.4 20.8	1038.0 1200
159.0 mm †	159.0 6.250	149.4 5.88	50.0 1.97	122.9 4.84	261.9 10.31	57.9 2.28	112.5 4.43	125.0 4.92	9.1 20.0	10.9 24.0	1557.0 1800
165.1 mm	165.1 6.500	149.4 5.88	50.0 1.97	122.9 4.84	261.9 10.31	57.9 2.28	112.5 4.43	125.0 4.92	9.1 20.0	10.9 24.0	1557.0 1800
150 6	168.3 6.625	149.4 5.88	50.0 1.97	122.9 4.84	261.9 10.31	57.9 2.28	112.5 4.43	125.0 4.92	9.1 20.0	10.9 24.0	1557.0 1800
200 8	219.1 8.625	135.4 5.33	50.0 1.97	122.9 4.84	293.6 11.56	57.9 2.28	112.5 4.43	125.0 4.92	15.6 34.3	17.4 38.3	2941.0 3400
250 10	273.0 10.750	162.6 6.40	73.2 2.88	197.1 7.76	384.3 15.13	82.6 3.25	160.0 3.60	199.9 7.87	32.7 72.0	39.0 81.5	5017.0 5800
300 12	323.9 12.750	165.1 6.50	73.2 2.88	197.1 7.76	409.7 16.13	82.6 3.25	160.0 6.30	199.9 7.87	39.9 88.0	44.2 97.5	7785.0 900.0
350 – 600 14 – 24	AGS™	See Vic-300 AGS Butterfly Valve, pg. 5-12, Request Publication 20.06									

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

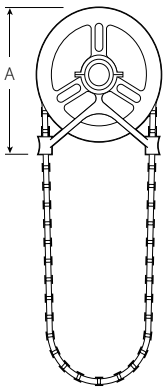
† Contact Victaulic for availability.

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

CHAIN WHEEL AND GUIDE FOR GEAR OPERATED BUTTERFLY VALVES



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

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.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Valves – Butterfly Valves

Butterfly Valve

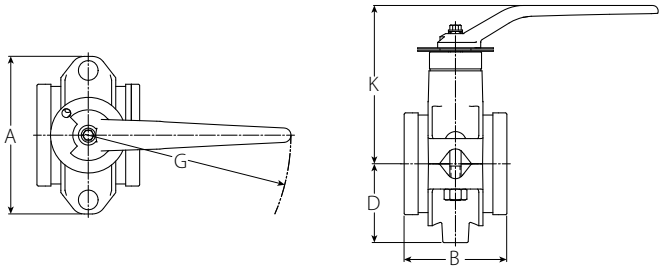
SERIES 700

For Complete Information Request Publication **08.05**

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

STANDARD PROFILE BFV

Size		Dimensions					Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	A	B	D	G	K	kg Lbs.
40 1 ½	48.3 1.900	92.2 3.63	85.9 3.38	41.4 1.63	139.7 5.50	112.8 4.44	1.3 2.8
50 2	60.3 2.375	103.1 4.06	81.0 3.19	47.5 1.87	139.7 5.50	119.6 4.71	1.5 3.3
65 2 ½	73.0 2.875	123.7 4.87	96.8 3.81	63.5 2.50	177.8 7.00	134.9 5.31	2.9 6.4
80 3	88.9 3.500	142.7 5.62	96.8 3.81	69.9 2.75	177.8 7.00	142.7 5.62	3.1 6.8
100 4	114.3 4.500	177.8 7.00	115.8 4.56	88.9 3.50	228.6 9.00	179.9 6.69	5.5 12.1
125 5	141.3 5.563	215.9 8.50	147.6 5.81	101.6 4.00	304.8 12.00	209.6 8.25	11.8 26.1
150 6	168.3 6.625	241.3 9.50	147.6 5.81	114.3 4.50	304.8 12.00	223.0 8.78	14.7 32.5
165.1 mm	165.1 6.500	241.3 9.50	147.6 5.81	114.3 4.50	304.8 12.00	223.0 8.78	13.8 30.5



40 – 150 mm/1½ – 6" sizes (Typical)

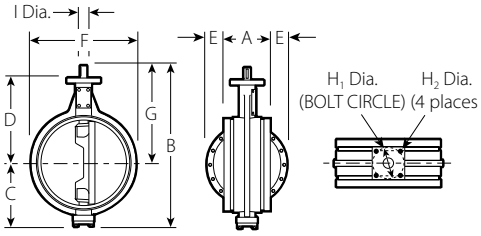
Valves – Butterfly Valves

Butterfly Valve

SERIES 706

For Complete Information Request Publication **08.17**

- Easier to install than cumbersome multi-bolt wafer, lug type or flange valves
- Available with gear operator or electric, pneumatic and hydraulic actuators
- Pressure rated up to 2065 kPa/300 psi
- Sizes from 350–630 mm/14–24"
- Not compatible with Advance Groove System components



TYPICAL FOR ALL SIZES WITHOUT GEAR OPERATOR

SERIES 706 BUTTERFLY VALVE WITHOUT GEAR OPERATOR

Size		Dimensions										Approx. Wgt. Each
									Mounting †			
Nominal Size mm Inches	Actual Outside Diameter mm Inches	A End to End mm Inches	B Overall Height mm Inches	C mm Inches	D mm Inches	E mm Inches	F mm Inches	G mm Inches	H_1 Dia. mm Inches	H_2 Dia. mm Inches	I Dia. mm Inches	w/o Oper. kg Lbs.
350 14	355.6 14.000	178 7.00	621 24.45	246 9.68	327 12.89	68 2.66	406 16.00	375 14.77	127 5.00	14 0.563	35 1.38	56.7 125.0
377.0 mm	377.0 14.843	254 10.00	621 24.45	246 9.68	327 12.89	29 1.16	406 16.00	375 14.77	126 4.96	15 0.578	35 1.38	56.7 125.0
400 16	406.4 16.000	178 7.00	689 27.14	278 10.94	358 14.10	93 3.66	457 18.00	412 16.20	127 5.00	14 0.563	38 1.50	69.4 153.0
426.0 mm	426.0 16.772	267 10.50	689 27.14	278 10.94	358 14.10	48 1.90	457 18.00	412 16.20	126 4.96	15 0.578	38 1.50	69.4 153.0
450 18	457.0 18.000	203 8.00	751 29.56	313 12.31	381 15.00	105 4.15	508 20.00	438 17.25	127 5.00	14 0.563	45 1.75	90.3 199.0
480.0 mm	480.0 18.898	279 11.00	751 29.56	313 12.31	381 15.00	59 2.64	508 20.00	438 17.25	126 4.96	15 0.578	45 1.75	90.3 199.0
500 20	508.0 20.000	216 8.50	829 32.64	357 14.06	409 16.10	125 4.93	584 23.00	472 18.58	152 6.00	14 0.563	51 2.00	129.3 285.0
530.0 mm	530.0 20.866	292 11.50	829 32.64	357 14.06	409 16.10	87 3.42	584 23.00	472 18.58	140 5.51	17 0.672	51 2.00	129.3 285.0
600 24	610.0 24.000	254 10.00	988 38.89	408 16.06	511 20.10	157 6.18	678 26.70	580 22.83	152 6.00	14 0.563	57 2.25	204.6 451.0
630.0 mm	630.0 24.803	305 12.00	988 38.89	408 16.06	511 20.10	131 5.17	678 26.70	580 22.83	165 6.50	21 0.844	57 2.25	204.6 451.0

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

IMPORTANT NOTES:

Dimensions provided without operator are for sizing data only. Series 706 butterfly valves should never be installed without operators.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

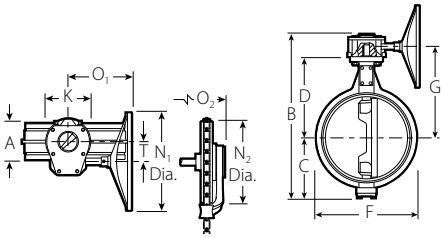
Valves – Butterfly Valves

Butterfly Valve

SERIES 706

For Complete Information
Request Publication **08.17**

- Easier to install than cumbersome multi-bolt wafer, lug type or flange valves
- Available with gear operator or electric, pneumatic and hydraulic actuators
- Pressure rated up to 2065 kPa/300 psi
- Sizes from 350–630 mm/14–24"
- Not compatible with Advance Groove System components



TYPICAL FOR ALL SIZES WITH GEAR OPERATOR

SERIES 706 BUTTERFLY VALVE WITH GEAR OPERATOR

Size		Dimensions										Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
						Handwheel		Chain Wheel					
Nominal Size mm Inches	Actual Outside Diameter mm Inches	A End to End mm Inches	B Overall Height mm Inches	G mm Inches	K mm Inches	N_1 Dia. mm Inches	O_1 mm Inches	N_2 Dia. mm Inches	O_2 mm Inches	T mm Inches	No. Turns to Close	kg Lbs.	K_V Values C_V Values
350 14	355.6 14.000	178 7.00	657 25.86	367 14.44	152 6.00	356 14.00	217 8.56	394 15.50	318 12.50	77 3.02	6.75	68.9 152.0	8096.4 9360
377.0 mm	377.0 14.843	254 10.00	665 26.17	367 14.54	200 7.87	500 19.70	327 12.86	546 21.50	406 16.00	77 3.02	9.5	70.8 156.0	8096.4 9360
400 16	406.4 16.000	178 7.00	723 28.45	403 15.85	178 7.00	457 18.00	259 10.20	394 15.50	318 12.50	86 3.38	7.75	84.8 187.0	10726.0 12400
426.0 mm	426.0 16.772	267 10.50	737 29.00	406 15.99	220 8.66	500 19.70	364 14.34	546 21.50	444 17.47	86 3.38	13.75	91.2 201.0	10726.0 12400
450 18	457.0 18.000	203 8.00	787 31.00	429 16.87	229 9.00	457 18.00	259 10.20	394 15.50	287 11.31	111 4.38	11	116.6 257.0	13753.5 15900
480.0 mm	480.0 18.898	279 11.00	817 32.17	436 17.17	285 11.22	700 27.60	395 15.55	762 30.00	474 18.68	111 4.38	21	122.2 269.5	13753.5 15900
500 20	508.0 20.000	216 8.50	864 34.01	456 17.97	275 10.82	610 24.00	300 11.82	394 15.50	313 12.31	137 5.38	11	161.0 355.0	17127.0 19800
530.0 mm	530.0 20.866	292 11.50	920 36.23	464 18.27	285 11.22	700 27.60	468 18.43	762 30.00	549 21.60	137 5.38	52	174.3 384.2	17127.0 19800
600 24	610.0 24.000	254 10.00	1016 40.01	558 21.97	275 10.82	610 24.00	300 11.82	394 15.50	313 12.31	137 5.38	18	236.8 522.0	24998.5 28900
630.0 mm	630.0 24.803	305 12.00	1017 42.41	569 22.42	370 14.57	700 27.60	521 20.51	762 30.00	599 23.60	137 5.38	79.25	274.4 605.0	24998.5 28900

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

IMPORTANT NOTES:

Dimensions provided without operator are for sizing data only. Series 706 butterfly valves should never be installed without operators.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Valves – Triple Service Valves

Triple Service Valve Assembly

For Complete Information Request Publication **08.09**

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

TRIPLE SERVICE BUTTERFLY/CHECK VALVE ASSEMBLY

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

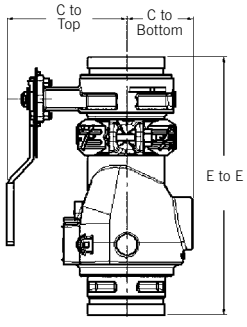
‡ Based on Style 77 couplings. When using Style 07 dimensions are 49 mm/1.94" for 65 mm/2½" size and 57 mm/2.25" for 80 mm/3" size.

TRIPLE SERVICE PLUG/CHECK VALVE ASSEMBLY

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

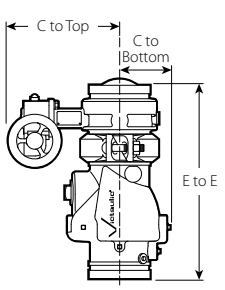
Important Note:

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



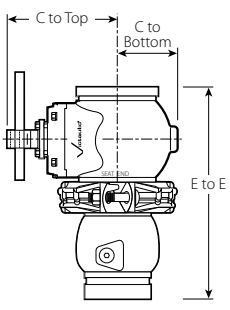
Typical 65–80 mm/ 2½–3" sizes

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



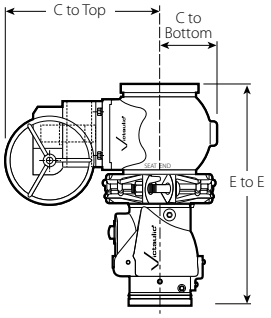
Typical 100–300 mm/ 4–12" sizes

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



Typical 80 mm/3" Size

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



Typical 100–300 mm/ 4–12" Sizes

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

IMPORTANT Note: Assembly required with either Style 07 Zero-Flex rigid couplings or Style 77 standard flexible couplings.

Valves – Check Valves

Vic Check Valve

SERIES 716

For Complete Information
Request Publication **08.08**

TYPICAL 65–80 mm/2½–3" SIZES

TYPICAL 100–300 mm/4–12" SIZES

- Utilizes spring-assisted, single-disc design
- Achieves a leak-free seal with as little as 1.5 m/5 ft. 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 2065 kPa/300 psi
- Sizes from 65–300 mm/2½–12"
- AGS Series W715 check valve available for sizes 350–600 mm/14–24", see pg. 5-10

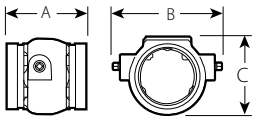
Size		Dimensions									Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size mm Inches	Actual Outside Diameter mm Inches	A End to End mm Inches	B Overall Width mm Inches	C mm Inches	D mm Inches	E mm Inches	J mm Inches	K mm Inches	P mm Inches	R mm Inches	kg Lbs.	K_V Values C_V Values
65 2½	73.0 2.875	99 3.88	108 4.25	91 3.60	—	—	—	—	—	—	1.6 3.6	121.1 140
76.1 mm	76.1 3.000	99 3.88	108 4.25	91 3.60	—	—	—	—	—	—	1.6 3.6	121.1 140
80 3	88.9 3.500	108 4.25	129 5.06	106 4.19	—	—	—	—	—	—	2.0 4.5	216.3 250
100 4	114.3 4.500	245 9.63	152 6.00	99 3.90	70 2.75	89 3.50	51 2.00	114 4.50	89 3.50	85 3.35	7.3 16.0	337.4 390
139.7 mm	139.7 5.500	267 10.50	173 6.80	114 4.50	106 4.17	106 4.17	55 2.15	149 5.88	104 4.08	102 4.02	12.3 27.0	605.5 700
125 5	141.3 5.563	267 10.50	173 6.80	114 4.50	106 4.17	106 4.17	55 2.15	149 5.88	104 4.08	102 4.02	9.1 20.0	605.5 700
165.1 mm	165.1 6.500	292 11.50	203 8.00	127 5.00	114 4.50	114 4.50	61 2.38	169 6.67	120 4.73	99 3.89	12.7 28.0	865.0 1000
150 6	168.3 6.625	292 11.50	203 8.00	127 5.00	114 4.50	114 4.50	61 2.38	169 6.67	120 4.73	99 3.89	12.7 28.0	865.0 1000
200 8	219.1 8.625	356 14.00	251 9.88	155 6.10	128 5.05	144 5.65	55 2.15	222 8.75	145 5.70	146 5.75	18.1 40.0	1157.0 1800
250 10	273.0 10.750	432 17.00	305 12.00	180 7.10	151 5.96	170 6.69	55 2.15	277 10.92	176 6.93	—	45.4 100.0	2595.0 3000
300 12	323.9 12.750	495 19.50	356 14.00	206 8.10	176 6.91	194 7.64	64 2.51	325 12.81	201 7.93	—	63.5 140.0	3633.0 4200
350 – 600 14 – 24	AGS™ See AGS Series W715 Check Valve, pg. 5-11											

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

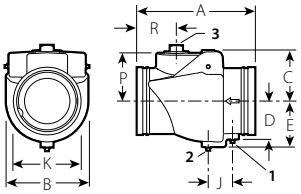
IMPORTANT NOTES:

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.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 65–80 mm/2½–3" SIZES

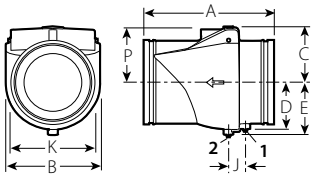


TYPICAL 100–200 mm/4–8" SIZES

1 15 mm NPT* Upstream drain (optional)

2 15 mm NPT* downstream drain (optional)

3 50.8 mm NPT* drain (optional)



TYPICAL 250–300 mm/10–12" SIZES

1 15 mm NPT* Upstream drain (optional)

2 15 mm NPT* downstream drain (optional)

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

Valves – Check Valves

Venturi Check Valve

SERIES 779

For Complete Information Request Publication **08.10**

- CAD-designed hydrodynamic inlet profile provides a natural venturi as part of the valve
- Inlet is drilled, tapped, and plugged, ready to receive the flow kit
- 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 1.5 m/5 ft. of head pressure
- Every valve is factory tested and pressure rated up to 2065 kPa/300 psi
- Sizes from 100–300 mm/4–12"

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

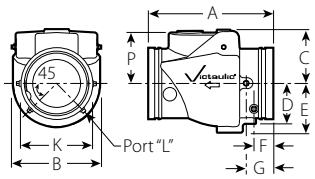
† Port "L" located 45° off center line of valve body.

* Both ports on center line of valve body.

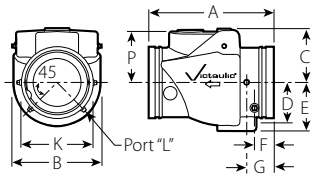
@ K_V/C_V values for flow of water at +16°C/60°F with valve fully open.

IMPORTANT NOTES:

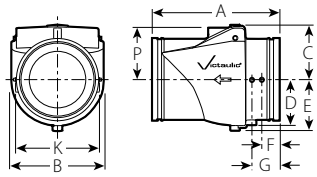
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 100 mm/4" SIZES



TYPICAL 125–165.1 mm/5–6" SIZES



TYPICAL 200–300 mm/8–12" SIZES

Valves – Check Valves

Swinger® Swing Check Valve

SERIES 712
SERIES 713

For Complete Information Request Publication **08.11**

SERIES 712

SERIES 713

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

SERIES 712:

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

SERIES 713:

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

SERIES 712

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

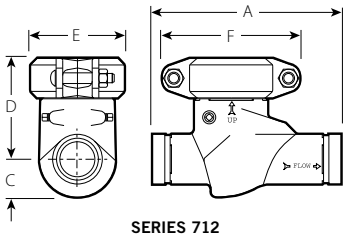
SERIES 713

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

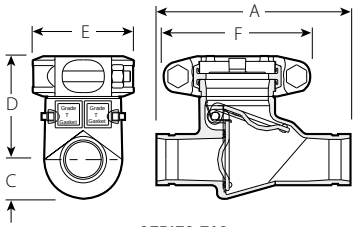
@ K_V/C_V values for flow of water at +16°C/60°F with valve fully open.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



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



SERIES 713
TYPICAL 50 mm/2" SIZE

Valves – Flow Regulating Valves

Oventrop Double Regulating and Commissioning Valve

SERIES 7890

For Complete Information Request Publication **08.70**

- Valve performs presetting, measuring, isolating, filling and draining system functions
- Preset memory position to achieve system balance
- Pressures and temperatures dependant upon coupling selection
- Sizes from 65–300 mm

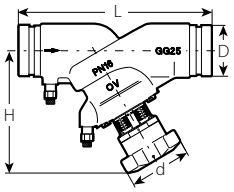
Size		Dimensions			
Nominal Pipe Dia. mm	OD mm	L mm	D mm	H mm	d mm
65	73.0	290	73.0	188	110
65	76.1	290	76.1	188	110
80	88.9	310	88.9	203	110
100	114.3	350	114.3	240	160
125	139.7	400	139.7	283	160
150	165.1	480	165.1	285	160
150	168.3 *	480	168.3	285	160
200	219.1	600	219.1	467	300
250	273.0	730	273.0	480	300
300	323.9	850	323.9	515	300

* Size available with specific request.

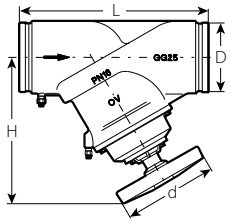
IMPORTANT NOTES:

Lengths according to DIN EN 558-1 (basic series 1).

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



DN65 – DN150 SIZES



DN200 – DN300 SIZES

Valves – Flow Regulating Valves

Grooved End Metering Station – Orifice Type

SERIES 7340

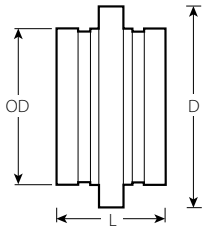
For Complete Information Request Publication **08.71**

- Accurate, economical method for obtaining flow measurements
- Maintenance free design
- Grooved ends for easy installation
- Sizes from 65–300 mm

Size		Dimensions	
Nominal Pipe Dia. mm	OD mm	L mm	D mm
65	76.1	80	108
80	88.9	80	125
100	114.3	80	147
125	139.7	80	175
150	165.1	80	202
200	219.1	100	251
250	273.9	100	300
300	323.9	100	345

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



Valves – Ball Valves

Vic-Ball Valve

SERIES 726

For Complete Information Request Publication **08.23**

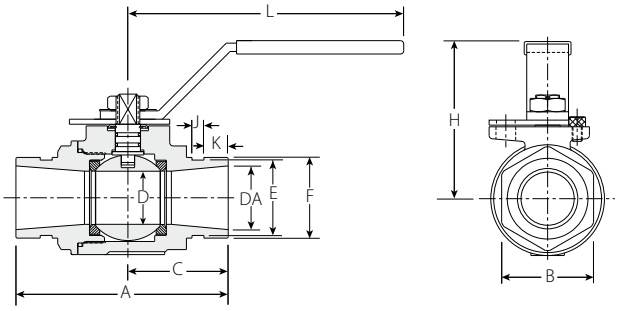
- High-pressure standard port ball valve with grooved ends
- Two-piece, end-entry valve
- Features floating ball for lower torque requirements
- NACE-MR-01-75 compliant
- Pressure rated up to 6900 kPa/1000 psi in sizes 40–80 mm/1½–3"
- Pressure rated up to 5515 kPa/800 psi for sizes 100–150 mm/4–6"
-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

Size		Dimensions											Approx. Wgt Each	Flow Coefficient@ (Fully Open)
Nominal Size mm Inches	Actual Out. Dia. mm Inches	A mm Inches	B mm Inches	C mm Inches	D mm Inches	DA mm Inches	E mm Inches	F mm Inches	H mm Inches	J mm Inches	K mm Inches	L mm Inches	kg Lbs.	K_V Values C_V Values
40 1½	48.3 1.900	130 5.12	51 2.00	60 2.36	32 1.25	38 1.50	45 1.78	48 1.90	76 3.00	7 0.28	14 0.56	177 6.97	2.0 4.4	112.5 130
50 2	60.3 2.375	140 5.50	67 2.64	63 2.48	38 1.50	51 2.00	57 2.25	60 2.38	84 3.31	9 0.34	14 0.56	177 6.97	3.0 6.5	155.7 180
65 2½	73.0 2.875	159 6.25	77 3.03	71 2.80	50 1.97	64 2.50	69 2.72	73 2.88	102 4.00	9 0.34	14 0.56	250 9.84	4.7 10.4	294.1 340
76.1 mm	76.1 3.000	159 6.25	77 3.03	71 2.80	50 1.97	64 2.50	69 2.72	73 2.88	102 4.00	9 0.34	14 0.56	250 9.84	4.7 10.4	294.1 340
80 3	88.9 3.500	167 6.56	89 3.50	80 3.15	64 2.50	76 3.00	85 3.34	89 3.50	115 4.53	9 0.34	14 0.56	250 9.84	6.8 14.9	519.0 600
100 4	114.3 4.500	210 8.25	—	85 3.35	76 2.99	102 4.00	111 4.33	115 4.52	139 5.48	9 0.34	15 0.61	398 15.67	18.9 41.5	562.3 650
165.1 mm	165.1 6.500	257 10.10	—	115 4.53	102 4.00	152 6.00	164 6.46	169 6.64	165 6.48	9 0.34	15 0.61	459 18.07	35.7 78.5	692.0 800
150 6	168.3 6.625	257 10.10	—	115 4.53	102 4.00	152 6.00	164 6.46	169 6.64	165 6.48	9 0.34	15 0.61	459 18.07	35.7 78.5	692.0 800

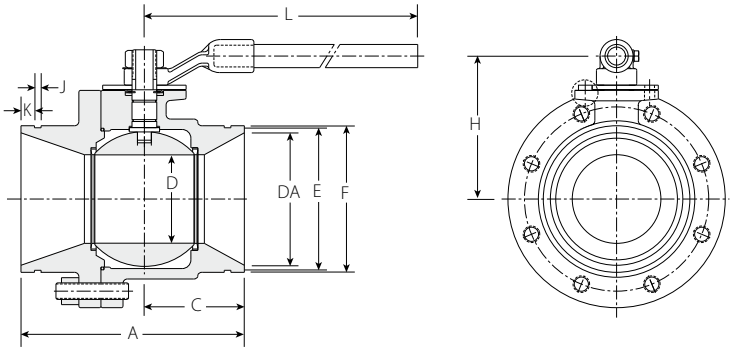
@ K_V/C_V values for flow of water at +16°C/60°F with valve fully open.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 40–80 mm/1½–3" SIZES



TYPICAL 100–150 mm/4–6" SIZES

Vic-Ball Valve (cont'd)

SERIES 726 WITH GEAR OPERATOR

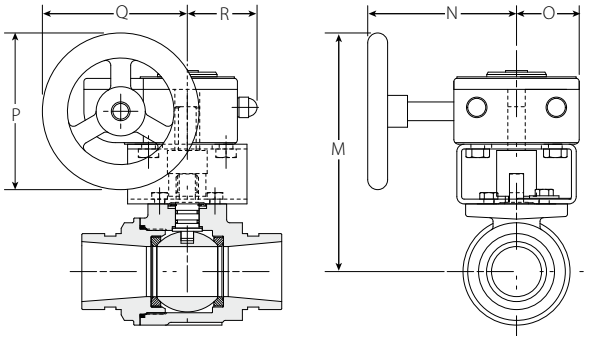
For Complete Information Request Publication **08.23**

Size		Dimensions						Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size mm Inches	Actual Outside Dia. mm Inches	M mm Inches	N mm Inches	O mm Inches	P mm Inches	Q mm Inches	R mm Inches	kg Lbs.	K_v Values C_v Values
40 1½	48.3 1.900	153 6.03	109 4.29	40 1.58	100 3.94	92 2.64	44 1.75	3.2 7.1	112.5 130
50 2	60.3 2.375	160 6.30	109 4.29	40 1.58	100 3.94	92 2.64	44 1.75	4.1 9.1	155.7 180
65 2½	73.0 2.875	189 7.43	118 4.65	50 1.97	125 4.92	112 4.43	58 2.28	5.9 12.9	294.1 340
76.1 mm	76.1 3.000	189 7.43	118 4.65	50 1.97	125 4.92	112 4.43	58 2.28	5.9 12.9	294.1 340
80 3	88.9 3.500	202 7.94	118 4.65	50 1.97	125 4.92	112 4.43	58 2.28	9.1 20.0	519.0 600
100 4	114.3 4.500	253 9.95	118 4.65	50 1.97	125 4.92	112 4.43	58 2.28	20.3 44.7	562.3 650
165.1 mm	165.1 6.500	280 11.02	118 4.65	50 1.97	125 4.92	112 4.43	58 2.28	40.3 89.0	692.0 800
150 6	168.3 6.625	280 11.02	118 4.65	50 1.97	125 4.92	112 4.43	58 2.28	40.3 89.0	692.0 800

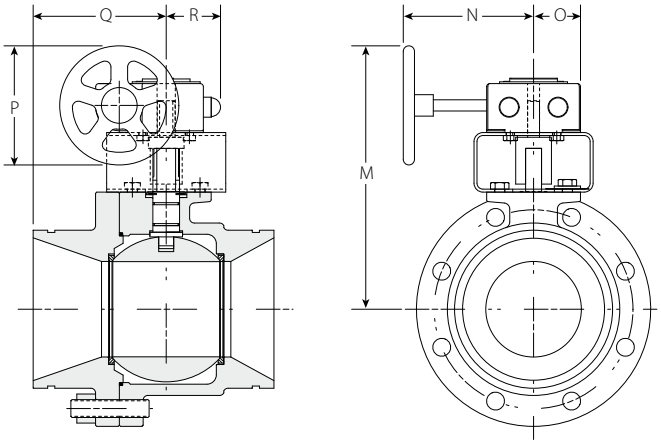
@ K_v/C_v values for flow of water at +16°C/60°F with valve fully open.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 40–80 mm/1½–3" SIZES



TYPICAL 100–150 mm/4–6" SIZES

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 350–600 mm/14–24" piping systems Victaulic offers Advanced Groove System (AGS) products, see pg. 5-1.

Suction Diffuser

SERIES 731-I, PG. 4-3

Vic-Strainer® – Tee Type

SERIES 730, PG. 4-5
AGS SERIES W730, PG.5-14

Vic-Strainer – Wye Type

SERIES 732, PG. 4-6
AGS SERIES W732, PG. 5-15

Mover® Expansion Joint

STYLE 150, PG. 4-7

Mover Expansion Joint with Metal Bellows

STYLE 151, PG. 4-8

Standard Expansion Joint

STYLE 155, PG. 4-9

Dielectric Waterway Fitting

STYLE 47, PG. 4-10

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.

Accessories

Suction Diffuser

SERIES 731-I

For Complete Information Request Publication **09.01**

- Provides optimum flow conditions at the inlet side of the pump
- Equipped with a removable strainer and fine mesh sleeve
- Pressure port provided on cap to measure pressure downstream
- Plug is provided to allow easy draining of the system
- Pressure rated up to 20 Bar
- Sizes from 76.1 mm × 60.3 mm through 355.6 × 355.6 mm

Size			Dimensions								Approx. Wgt. Each
System Side (Inlet)	×	Pump Side (Outlet)									
Nominal Size mm Inches			$C\text{-}E_1$ mm Inches	$C\text{-}E_2$ † mm Inches	CLR mm Inches	C-O mm Inches	D mm Inches	L mm Inches	OAL mm Inches	OAW mm Inches	kg Lbs.
76.1 mm	×	60.3 2	—	173 6.81	305 12.0	173 6.81	26 1.01	84 3.32	311 12.25	171 6.75	13.6 30.0
88.9 3	×	60.3 2	108 4.25	—	305 12.0	173 6.81	26 1.01	84 3.31	311 12.25	171 6.75	9.1 20.0
		76.1 mm	108 4.25	—	305 12.0	173 6.81	26 1.01	84 3.31	311 12.25	208 8.20	9.1 20.0
		88.9 3	—	207 8.13	356 14.0	207 8.13	34 1.34	101 3.97	368 14.50	211 8.29	24.5 54.0
114.3 4	×	60.3 2	—	1.68 7.31	305 12.0	173 6.81	26 1.01	84 3.31	311 12.25	171 6.75	12.2 27.0
		73.1 2½	—	1.68 7.31	305 12.0	173 6.81	26 1.01	84 3.31	311 12.25	200 7.87	12.2 27.0
		76.1 mm	—	1.68 7.31	305 12.0	173 6.81	26 1.01	84 3.31	311 12.25	208 8.20	12.2 27.0
		88.9 3	127 5.00	—	356 14.0	207 8.13	34 1.34	101 3.97	368 14.50	211 8.29	20.4 45.0
		114.3 4	—	232 9.13	406 16.0	232 9.13	48 1.87	121 4.75	406 16.00	251 9.87	34.9 77.0
139.7 mm	×	76.1 mm	—	224 8.81	305 12.0	173 6.81	26 1.01	84 3.31	311 12.25	208 8.20	20.0 44.0
		88.9 3	—	245 9.63	356 14.0	207 8.13	34 1.34	101 3.97	368 14.50	211 8.29	28.1 62.0
		114.3 4	140 5.50	—	406 16.0	232 9.13	48 1.87	121 4.75	406 16.00	251 9.87	24.9 55.0
		139.7 mm	—	270 10.63	457 18.0	257 10.13	60 2.36	133 5.25	457 18.00	274 10.78	27.2 60.0
141.3 5	×	73.1 2½	—	211 8.31	305 12.0	173 6.81	26 1.01	84 3.32	311 12.25	200 7.87	20.0 44.0
		88.9 3	—	219 8.63	356 14.0	207 8.13	34 1.34	101 3.97	368 14.50	211 8.29	28.1 62.0
		114.3 4	140 5.50	—	406 16.0	232 9.13	48 1.87	121 4.75	406 16.00	251 9.87	20.4 45.0
		141.3 5	—	270 10.63	457 18.0	270 10.63	60 2.36	133 5.25	470 18.50	277 10.90	62.1 173.0
165.1 mm	×	88.9 3	—	232 9.13	356 14.0	207 8.13	34 1.34	101 3.97	368 14.50	216 8.5	39.5 87.0
		114.3 4	—	245 9.63	406 16.0	232 9.13	48 1.87	121 4.75	406 16.00	252 9.94	38.6 85.0
		139.7 mm	165 6.5	—	457 18.0	270 10.63	60 2.36	133 5.25	470 18.50	274 10.78	31.8 70.0
		165.1 6	—	327 12.88	559 22.0	327 12.88	83 3.27	168 6.60	565 22.25	303 11.95	61.2 135.0

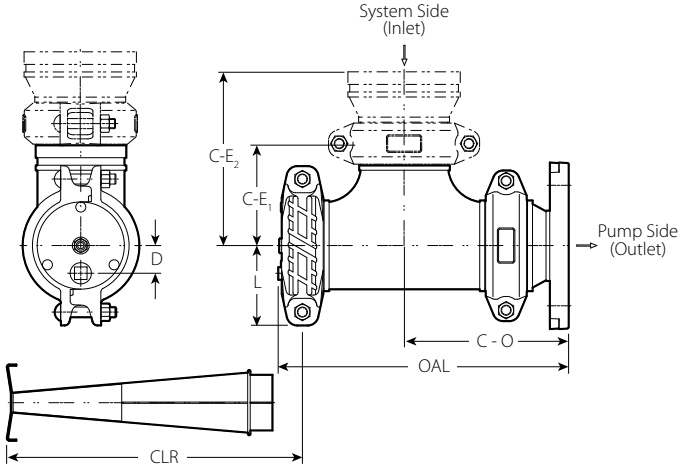
† Dimension only applies when coupling and reducer are used on the system side inlet.

IMPORTANT NOTES:

See Recommended Minimum Clearance Required to Remove Diffuser Basket on pg. 4-3.

Sizes conform to EN1092 and PN10/16 flanges.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Accessories

Suction Diffuser

SERIES 731-I

For Complete Information Request Publication **09.01**

- Provides optimum flow conditions at the inlet side of the pump
- Equipped with a removable strainer and fine mesh sleeve
- Pressure port provided on cap to measure pressure downstream
- Plug is provided to allow easy draining of the system
- Pressure rated up to 20 Bar
- Sizes from 76.1 mm × 60.3 mm through 355.6 × 355.6 mm

Size			Dimensions								Approx. Wgt. Each
System Side (Inlet)	×	Pump Side (Outlet)									
Nominal Size mm Inches			$C\text{-}E_1$ mm Inches	$C\text{-}E_2$ † mm Inches	CLR mm Inches	C-O mm Inches	D mm Inches	L mm Inches	OAL mm Inches	OAW mm Inches	kg Lbs.
168.3 6	×	88.9 3	—	232 9.13	356 14.0	207 8.13	34 1.34	101 3.97	368 14.50	211 8.29	39.5 87.0
		114.3 4	—	245 9.63	406 16.0	232 9.13	48 1.87	121 4.75	406 16.00	251 9.87	38.6 85.0
		139.7 mm	165 6.50	—	475 18.0	270 10.63	60 2.36	133 5.25	470 18.50	274 10.78	31.8 70.0
		141.3 5	165 6.50	—	457 18.0	270 10.63	60 2.36	133 5.25	470 18.50	277 10.90	50.8 112.0
		168.3 6	—	327 12.88	559 22.0	3327 12.88	83 3.27	168 6.60	565 22.25	302 11.90	61.2 135.0
219.1 8	×	114.3 4	—	270 10.63	406 16.0	232 9.13	48 1.87	146 5.75	406 16.00	251 9.87	53.1 117.0
		139.7 mm	—	295 11.63	457 18.0	257 10.13	60 2.36	133 5.25	457 18.00	274 10.78	65.3 144.0
		141.3 5	—	295 11.63	457 18.0	257 10.13	60 2.36	133 5.25	470 18.50	277 10.90	65.3 144.0
		165.1 mm	197 7.75	—	559 22.0	327 12.88	83 3.27	168 6.60	565 22.25	302 11.90	43.1 95.0
		168.3 6	197 7.75	—	559 22.0	327 12.88	83 3.27	168 6.60	565 22.25	302 11.90	43.1 95.0
		219.1 8	—	384 15.13	635 25.0	384 15.13	107 4.23	202 7.96	656 25.81	368 14.50	79.4 175.0
273.0 10	×	165.1 mm	—	353 13.88	559 22.0	327 12.88	83 3.27	168 6.60	565 22.25	302 11.90	59.9 132
		168.3 6	—	353 13.88	559 22.0	327 12.88	83 3.27	168 6.60	565 22.25	302 11.90	59.9 132
		219.1 8	229 9.00	—	635 25.0	384 15.13	107 4.23	202 7.96	656 25.81	368 14.50	59.0 130.0
		273.0 10	—	435 17.13	711 28.0	435 17.13	135 5.32	227 8.93	737 29.00	432 17.00	186.0 410.0
323.9 12	×	219.1 8	—	410 16.13	635 25.0	384 15.13	107 4.23	202 7.96	656 25.81	368 14.50	81.6 180.0
		273.0 10	254 10.00	—	711 28.0	435 17.13	135 5.32	227 8.93	737 29.00	432 17.00	170.1 375.0
		323.9 12	—	765 30.13	889 35.0	613 24.13	152 5.98	248 9.77	946 37.25	508 20.00	226.8 500.0
355.6 14	×	273.0 10	—	740 29.13	711 28.0	435 17.13	135 5.32	227 8.93	737 29.00	432 17.00	213.2 470.0
		323.9 12	279 11.00	—	889 35.0	613 24.13	152 5.98	248 9.77	946 37.25	508 20.00	181.4 400.0
		355.6 14	—	816 32.13	991 39.0	664 26.13	177 6.98	275 10.81	1030 40.56	622 24.50	158.8 350.0

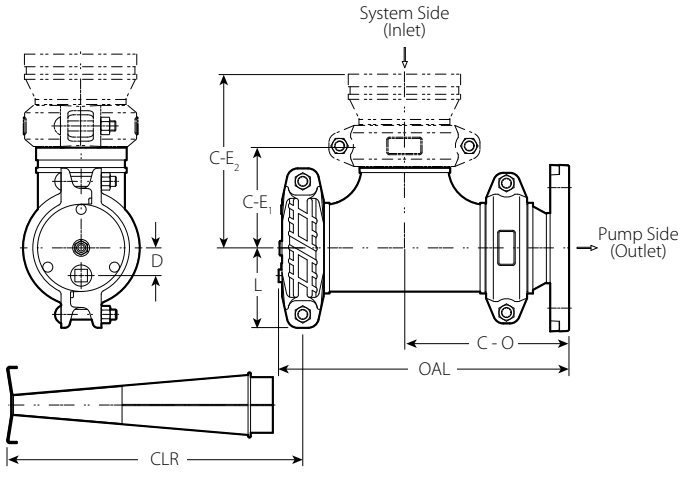
† Dimension only applies when coupling and reducer are used on the system side inlet.

IMPORTANT NOTES:

See Recommended Minimum Clearance Required to Remove Diffuser Basket on pg. 4-3.

Sizes conform to EN1092 and PN10/16 flanges.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Accessories

Vic-Strainer – Tee Type

SERIES 730

For Complete Information Request Publication **09.02**

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

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

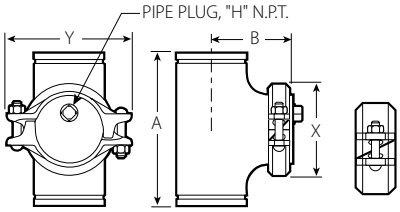
† Working pressure is maximum based on Style 07 access coupling and will be governed by couplings used for installation and related system components. Maximum differential pressure from inlet to outlet must not exceed 69 kPa/10 psi.

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

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Accessories

Vic-Strainer – Wye Type

SERIES 732

For Complete Information 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 2065 kPa/300 psi
- Sizes from 50–300 mm/2–12"

Size		Max. Work Press.†	Dimensions								Approx. Wgt. Each	
Nominal Size mm Inches	Actual Outside Diameter mm Inches	kPa psi	A End to End mm Inches	B mm Inches	C mm Inches	D mm Inches	E mm Inches	F mm Inches	G* mm Inches	H mm Inches	kg Lbs.	Flow Coefficient@ K_V Values C_V Values
50 2	60.3 2.375	2065 300	248 9.75	178 7.00	70 2.75	192 7.54	217 8.54	89 3.50	133 5.25	13 0.50	4.5 10.0	62.3 72
65 2½	73.0 2.875	2065 300	273 10.75	197 7.75	76 3.00	211 8.32	237 9.32	105 4.13	148 5.81	13 0.50	6.4 14.0	96.0 111
76.1 mm	76.1 3.000	2065 300	273 10.75	197 7.75	76 3.00	211 8.32	237 9.32	105 4.13	148 5.81	13 0.50	6.4 14.0	96.0 111
80 3	88.9 3.500	2065 300	299 11.75	216 8.50	83 3.25	231 9.08	258 10.14	121 4.75	168 6.63	19 0.75	9.1 20.0	141.9 164
100 4	114.3 4.500	2065 300	362 14.25	267 10.50	95 3.75	281 11.06	314 12.36	159 6.25	202 7.94	25 1.00	14.5 32.0	246.5 285
139.7 mm	139.7 5.500	2065 300	419 16.50	318 12.50	102 4.00	330 13.00	365 14.36	200 7.88	241 9.50	25 1.00	22.7 50.0	354.7 410
125 5	141.3 5.563	2065 300	419 16.50	318 12.50	102 4.00	330 13.00	365 14.36	200 7.88	241 9.50	25 1.00	22.7 50.0	354.7 410
165.1 mm	165.1 6.500	2065 300	470 18.50	356 14.00	114 4.50	367 14.44	408 16.06	235 9.25	267 10.50	32 1.25	32.7 72.0	516.4 597
150 6	168.3 6.625	2065 300	470 18.50	356 14.00	114 4.50	367 14.44	408 16.06	235 9.25	267 10.50	32 1.25	32.7 72.0	516.4 597
200 8	219.1 8.625	2065 300	610 24.00	457 18.00	152 6.00	467 18.38	521 20.50	315 12.38	335 13.19	38 1.50	56.7 125.0	865.0 1000
250 10	273.0 10.750	2065 300	686 27.00	533 21.00	152 6.00	559 22.00	605 23.82	362 14.25	404 15.92	51 2.00	93.0 205.0	1557.0 1800
300 12	323.9 12.750	2065 300	762 30.00	622 24.50	140 5.50	629 24.75	695 27.37	432 17.00	463 18.23	51 2.00	127.0 280.0	2422.2 2800
350 – 600 14 – 24	AGS™	See AGS Series W732, pg. 5-15										

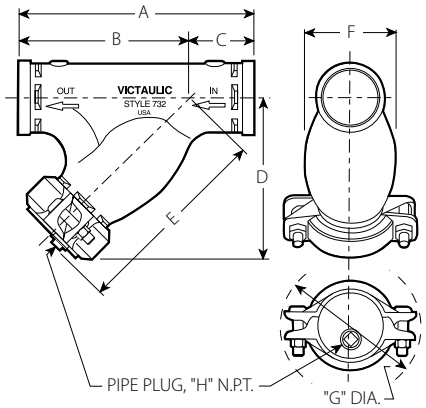
† Working pressure is maximum and will be governed by couplings used for installation and related system components. Maximum differential pressure from inlet to outlet must not exceed 69 kPa/10 psi.

* Dimensions will vary depending upon coupling orientation.

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Accessories

Mover Expansion Joint

STYLE 150

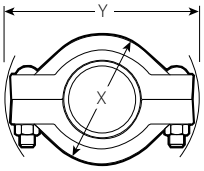
For Complete Information Request Publication **09.04**

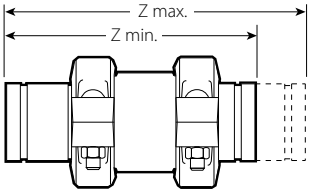
- Slip-type expansion joint
- Up to 76mm/3 axial end movement
- Permits easy adjustments prior to installation to accommodate expansion, contraction or both
- Service up to +110°C/+230°F
- Pressure rated up to 2400kPa/350psi depending on type of coupling installed
- Sizes from 50–150mm/2–6"

Size		Max. Work Pressure	Dimensions					Approx. Wgt. Each
						Length Z		
Nominal Size mm Inches	Actual Outside Diameter mm Inches	kPa psi	Maximum Available Movement mm Inches	X Height mm Inches	Y Width mm Inches	Minimum mm Inches	Maximum mm Inches	kg Lbs.
50 2	60.3 2.375	2400 350	76.2 3.00	86 3.38	139 5.50	302 11.88	378 14.88	7.2 15.9
76.1 mm	76.1 3.000	2400 350	76.2 3.00	111 4.38	171 6.75	308 12.13	384 15.13	17.2 38.0
80 3	88.9 3.500	2400 350	76.2 3.00	121 4.75	184 7.25	308 12.13	384 15.13	11.6 25.6
100 4	114.3 4.500	2400 350	76.2 3.00	159 6.25	229 9.00	359 14.13	435 17.13	18.0 39.6
139.7 mm	139.7 5.500	2400 350	76.2 3.00	159 6.25	229 9.00	359 14.13	435 17.13	25.4 56.0
125 5	141.3 5.563	2400 350	76.2 3.00	181 7.12	273 10.75	359 14.13	435 17.13	24.9 55.0
165.1 mm	165.1 6.500	2400 350	76.2 3.00	219 8.63	305 12.00	406 16.00	483 19.00	34.0 75.0
150 6	168.3 6.625	2400 350	76.2 3.00	219 8.63	305 12.00	406 16.00	483 19.00	34.0 75.0

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.





TYPICAL FOR ALL SIZES

Accessories

Mover Expansion Joint with Metal Bellows

STYLE 151

For Complete Information Contact Victaulic

Size		Dimensions					Approx. Wgt. Each
Nominal Size mm	Actual Outside Diameter mm	L Length mm	Movement mm	Spring Constant mm	W.T./T mm	Bellows/D1 mm	kg
200 DN	219.1	390	+/- 50	171	8.18	255	10.02
250 DN	273.0	435	+/- 50	205	9.27	315	17.58
300 DN	323.9	435	+/- 50	179	9.52	380	22.20

IMPORTANT NOTES:

For Performance Data refer to 06.02 for Style 07.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

- Combination of a stainless steel bellow and carbon steel pipe nipples to provide axial movement of maximum 50mm
- Can accommodate both expansion and contraction
- Service up to 110°C
- Pressure rated up to PN16
- Sizes from 219.1 – 323.9 mm

Expansion Joint Installation

For Complete Information Request Publication **09.06**

For correct expansion joint operation, the piping system must be sectioned into individual straight pipe runs with suitable anchor installations. Within each pipe section, correctly 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 76 mm/3" 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.

Accessories

Standard Expansion Joint

STYLE 155

For Complete Information Request Publication **09.05**

- 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 20–600 mm/¾–24" (for sizes from 350–600 mm/12–24" please contact Victaulic)

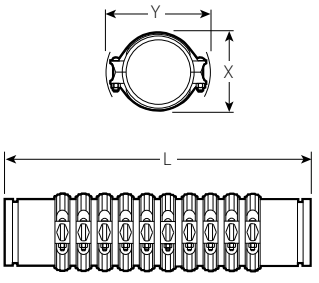
Standard Units †								
Size		Style	Dimensions					Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Diameter mm Inches	Coupling Style	L - Length (ref.) § Compressed mm Inches	L - Length (ref.) § Expanded mm Inches	X Height mm Inches	Y Width mm Inches	Total Movement Capability mm Inches	kg Lbs.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

† Contact Victaulic for performance requirements not listed above.

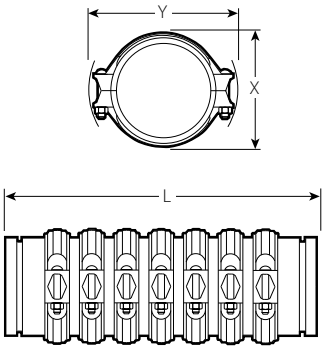
§ Dimensions may vary slightly due to tolerances.

Important Note:

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



TYPICAL 20–90 mm/¾–3½ SIZES



TYPICAL 100–300 mm/4–12" SIZES

Accessories

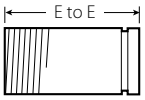
Dielectric Waterway Fitting

STYLE 47

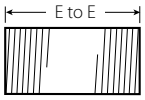
For Complete Information Request Publication **09.07**

- Clearflow* dielectric waterway fittings utilize an inert non-corrosive thermoplastic lining that is NSF/FDA listed and Australia Watermark certified
- 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 +110°C/+230°F
- Style 47-GT (grv. × thd.) and 47-TT (thd. × thd.) NSF Listed and Australia Watermark certified in accordance with ANSI/NSF 61 for up to 82°C/180°F potable water service
- Style 47-GG (grv. × grv.) is UL-Listed and classified and Australia Watermark certified in accordance with ANSI/NSF 61 up to 82°C/180°F for potable water service
- Pressure rated up to 2065 kPa/300 psi
- Sizes from 15–200 mm/½–8"

* ClearFlow is a registered trademark of Perfection Corp.



STYLE 47-GT@ GRV. × THD.



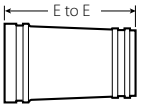
STYLE 47-TT@ THD. × THD.

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

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



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

Size			Maximum Working Pressure	Dimensions	Approx. Weight Each
Nominal Size mm Inches	Actual Outside Diameter Steel mm Inches	Actual Outside Diameter Copper mm Inches	kPa psi	End to End mm Inches	kg Lbs.
50 2	60.3 2.375	54.0 2.125	2065 300	106 4.19	0.6 1.3
65 2 ½	73.0 2.875	66.7 2.625	2065 300	157 6.19	1.5 3.3
80 3	88.9 3.500	79.4 3.125	2065 300	157 6.19	2.0 4.5
100 4	114.3 4.500	104.8 4.125	2065 300	157 6.19	2.6 5.8
125 5	141.3 5.563	130.2 5.125	2065 300	157 6.19	3.5 7.8
150 6	168.3 6.625	155.6 6.125	2065 300	157 6.19	4.6 10.1
200 8	219.1 8.625	206.4 8.125	2065 300	157 6.19	6.8 15.0

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Advanced Groove System

AGS™

Victaulic offers a full range of 350–600 mm/14–24" 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. 5-3

Flexible Coupling
STYLE W77, PG. 5-4

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

Vic-Fange Adapter for AGS
STYLE W741, PG. 5-5

Valves

Dual Disc Vic-Check Valve
SERIES W715, PG. 5-11

Vic-300 AGS Butterfly Valve
VIC-300, PG. 5-12

Accessories

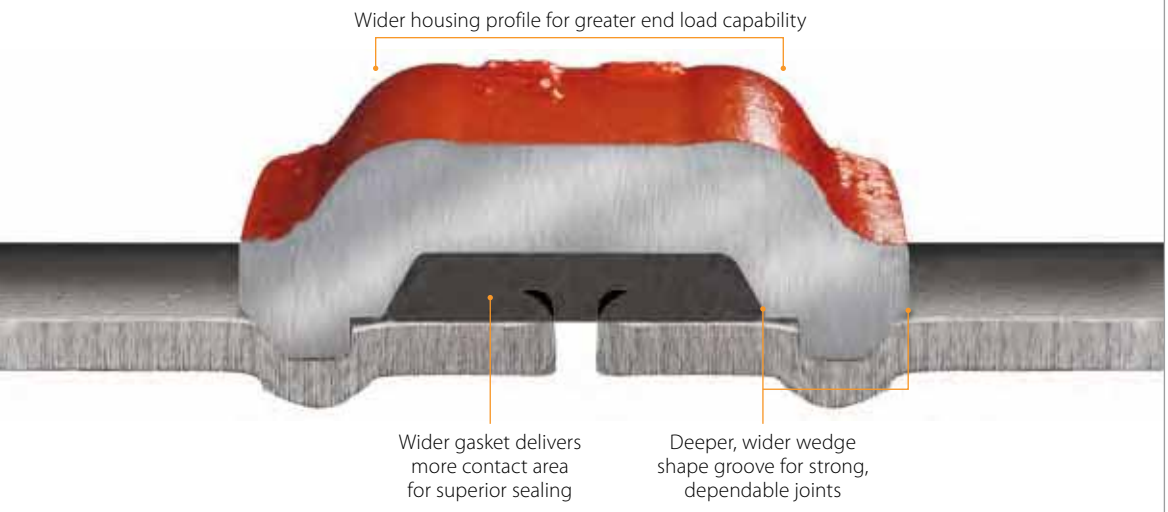
Vic-Strainer – Tee Type
SERIES W730, PG. 5-14

Wye Type Vic-Strainer®
STYLE W732, PG. 5-15

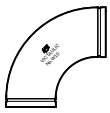
Advanced Groove System

AGS™

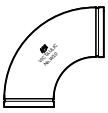
A complete piping system, for sizes 350–600 mm/14–24"



Fittings



90° Elbow
NO. W10, PG. 5-6



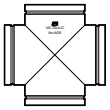
90° 1½ D Long Radius Elbow
NO. W100, PG. 5-6

True Wye
NO. W33, PG. 5-6

Adapter Nipple AGS Grv. × Bev.
NO. W42, PG. 5-9

45° Elbow
NO. W11, PG. 5-6

45° 1½ D Long Radius Elbow
NO. W110, PG. 5-6

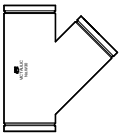


Cross
NO. W35, PG. 5-6

Adapter Nipple AGS Grv. × AGS Grv.
NO. W43, PG. 5-9

22½° Elbow
NO. W12, PG. 5-6

Tee
NO. W20, PG. 5-6



45° Lateral
NO. W30, PG. 5-8

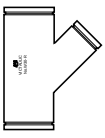
Adapter Nipple AGS Grv. × Original Grv. *
NO. W49, PG. 5-9

Concentric Reducer
NO. W50, PG. 5-10

Cap
NO. W60, PG. 5-9

11¼° Elbow
NO. W13, PG. 5-6

Reducing Tee
NO. W25, PG. 5-7



45° Reducing Lateral
NO. W30-R, PG. 5-8

Flanged Adapter Nipple
NO. W45R, PG. 5-9

Eccentric Reducer
NO. W51, PG. 5-10

* Original Victaulic groove (not compatible with AGS couplings)

Advanced Groove System – Couplings

AGS™

Rigid Coupling

STYLE W07

For Complete Information Request Publication **20.02**

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

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

* 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 **Note:** Actual maximum working pressure is 363 psi/2500 kPa for 14 – 20"/350 – 500 mm on light wall; 232 psi/1600 kPa for 24"/600 mm on light wall; 363 psi/2500 kPa for 14 – 24"/350 – 500 mm on standard wall.

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

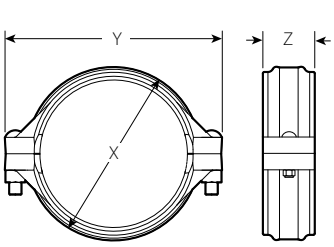
‡ Light Wall for 14"/350 mm = 0.22"/5.6 mm; 16 – 24"/400 – 600 mm = 0.25"/6.35 mm

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

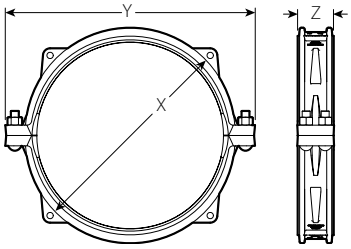
Ø Corresponding line drawings are on page 4.

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

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



TYPICAL FOR ALL SIZES



TYPICAL 26 – 60"/660 – 1525 mm

Flexible Coupling

STYLE W77

For Complete Information Request Publication **20.03**

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

Size		Max. Working Pressure* kPa/psi			Max. End Load* N/Lbs.			Allow. Pipe End Sep.†	Deflect. From CL †		Bolt/Nut No - Size	Dimensions Ø – mm/Inches			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	Std. Wall	Light Wall	Extra Heavy mm ½"/12.7	Std. Wall	Light Wall	Extra Heavy mm ½"/12.7	mm Inches	Per Cplg. Deg.	Pipe mm/m In./Ft.	Inches	X	Y	Z	kg Lbs.
350 14	355.6 14.000	2500 350	2500 350	– –	248310 55800	248310 55800	– –	3.3 – 7.9 0.13 – 0.31	0.73	13 0.15	2 - 1 x 5½	406 1600	523 20.59	114 4.50	21.8 48
400 16	406.4 16.000	2500 350	2500 350	– –	324338 72885	324338 72885	– –	3.3 – 7.9 0.13 – 0.31	0.63	11 0.13	2 - 1 x 5½	462 18.18	597 23.51	114 4.50	26.3 58
450 18	457.0 18.000	2500 350	2500 350	– –	410490 92245	410490 92245	– –	3.3 – 7.9 0.13 – 0.31	0.57	10 0.12	2 - 1 x 5½	517 20.36	647 25.46	114 4.50	29.5 65.0
500 20	508.0 20.000	2500 350	2500 350	– –	506766 113880	506766 113880	– –	3.3 – 7.9 0.13 – 0.31	0.50	9 0.10	2 - 1 ⅛ x 5½	573 22.56	689 27.13	114 4.50	37.2 82
600 24	609.6 24.000	2500 350	2500 350	– –	729756 163990	467050 104955	– –	3.3 – 7.9 0.13 – 0.31	0.42	8 0.09	2 - 1 ⅛ x 5½	683 26.88	821 32.31	114 4.50	48.5 107
660 26	660.4 26.000	2065 300	– –	2065 300	708508 159279	– –	708508 159279	3.81-13.46 0.15-0.53	0.83	15 0.18	4 - 1 ⅛ x 6	764 30.07	895 35.23	144 5.68	93.0 205
710 28	711.2 28.000	2065 300	– –	2065 300	821702 184726	– –	821702 184726	3.81-13.46 0.15-0.53	0.78	14 0.16	4 - 1 ⅛ x 6	819 32.23	945 37.22	144 5.68	99.8 220
760 30	762.0 30.000	2065 300	– –	2065 300	943281 212058	– –	943281 212058	3.81-13.46 0.15-0.53	0.73	13 0.16	4 - 1 ¼ x 7	863 33.90	1007 39.64	144 5.68	103.0 227
810 32	812.8 32.000	2065 300	– –	2065 300	1073240 241274	– –	1073240 241274	3.81-13.46 0.15-0.53	0.68	11 0.14	4 - 1 ¼ x 7	916 36.07	1060 41.74	144 5.68	109.8 242
915 36	914.4 36.000	2065 300	– –	2065 300	1358322 305363	– –	1358322 305363	3.81-13.46 0.15-0.53	0.60	11 0.13	4 - 1 ¼ x 7	1022 40.23	1161 45.72	144 5.68	121.6 268
1015 40	1016.0 40.000	2065 300	– –	2065 300	1676940 376991	– –	1676940 376991	5.33-14.99 0.21-0.59	0.55	10 0.12	4 - 1 ½ x 7	1117 43.98	1283 50.51	165 6.50	154.2 340
1070 42	1066.8 42.000	2065 300	– –	2065 300	1848823 415632	– –	1848823 415632	5.33-14.99 0.21-0.59	0.52	9 0.11	4 - 1 ½ x 7	1168 45.98	1334 52.50	165 6.50	163.3 360
1170 46	1168.4 46.000	– –	– –	1600 232	– –	– –	1715746 385561	5.33-14.99 0.21-0.59	0.47	8 0.10	4 - 1 ½ x 7	1277 50.28	1435 56.48	165 6.50	188.2 415
1220 48	1219.2 48.000	– –	– –	1600 232	– –	– –	1868199 419820	5.33-14.99 0.21-0.59	0.45	8 0.10	4 - 1 ½ x 7	1328 52.28	1485 58.47	165 6.50	192.8 425
1370 54	1371.6 54.000	– –	– –	1200 175	– –	– –	1782803 400790	7.11-16.76 0.28-0.66	0.40	7 0.08	4 - 1 ½ x 7	1655 65.16	1499 59.03	254 10.00	293.9 648
1420 56	1422.2 56.000	– –	– –	1200 175	– –	– –	1917317 431030	7.11-16.76 0.28-0.66	0.38	7 0.08	4 - 1 ½ x 7	1718 67.65	1550 61.03	254 10.00	306.6 676
1525 60	1524.0 60.000	– –	– –	1200 175	– –	– –	2201025 494800	7.11-16.76 0.28-0.66	0.36	7 0.08	4 - 1 ½ x 7	1832 72.13	1652 65.03	254 10.00	326.6 720

* Working Pressure and End Load are total, from all internal and external loads, based on minimum nominal wall thicknesses shown within AGS Roll Groove Specifications 25.09, AGS roll grooved in accordance with Victaulic® specifications. Contact Victaulic for performance on other pipe. **Note:** Actual maximum working pressure is 363 psi/2500 kPa for 14 – 20"/350 – 500 mm on light wall; 232 psi/1600 kPa for 24"/600 mm on light wall; 363 psi/2500 kPa for 14 – 24"/350 – 500 mm on standard wall.

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

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

† Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for AGS roll grooved pipe.

These figures are maximums; for design and installation purposes these figures should be reduced by 25%.

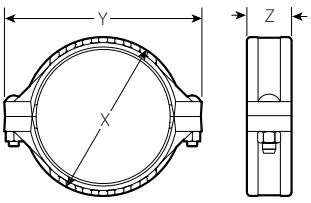
Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

Ø Corresponding line drawings are on page 4.

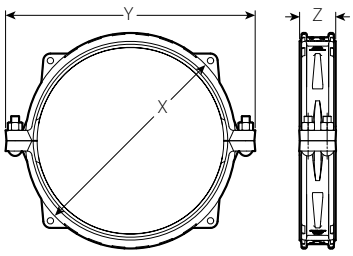
NOTE: Style W77 AGS couplings must not be used to join PVC pipe.

NOTE: The Style W77 coupling in 26-60"/660-1525 mm sizes can not be used anything larger than 0.5"/12.7 mm wall pipe.

NOTE: The outside diameter of roll grooved pipe shall not vary more than the limits of API 5L end tolerance. The maximum allowable tolerance from square cut ends is 0.125"/3.18 mm measured from a true square line.



TYPICAL FOR ALL SIZES



TYPICAL 26 – 60"/660 – 1525 mm

Advanced Groove System – Fittings

AGS™

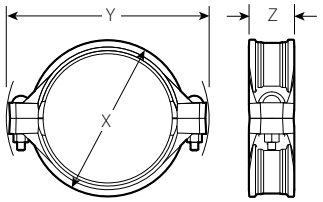
Rigid Coupling for Stainless Steel Pipe

STYLE W89

For Complete Information Request Publication **20.15**

- Designed exclusively for stainless steel systems
- Coupling provides an essentially rigid joint
- Pressure rated up to 2065 kPa/300 psi

Size		Max. Work Pressure*	Max. End Load*	Allow. Pipe End Sep.†	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
350 14	355.6 14.000	2065 300	205590 46200	6.4 0.25	419 16.50	543 21.38	122 4.81	29.5 65.0
400 16	406.4 16.000	2065 300	268424 60320	6.4 0.25	480 18.88	597 23.50	122 4.81	36.4 80.0
450 18	457.0 18.000	2065 300	339758 76350	6.4 0.25	533 21.00	651 25.63	122 4.81	42.3 93.0
500 20	508.0 20.000	2065 300	419413 94250	6.4 0.25	603 23.75	702 27.63	122 4.81	51.8 114.0
600 24	610.0 24.000	2065 300	603865 135700	6.4 0.25	762 30.00	813 32.00	122 4.81	82.6 182.0



TYPICAL FOR ALL SIZES

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

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

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

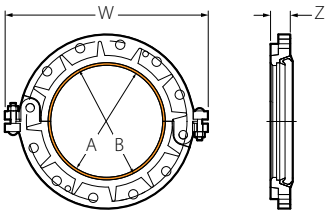
Vic-Flange Adapter for AGS

STYLE W741

For Complete Information Request Publication **20.04**

- Designed for directly incorporating flanged components with ANSI Class 125/150 bolt hole patterns into an AGS grooved pipe system
- Pressure rated up to 2065 kPa/300 psi

Size		Max. Work Pressure*		Max. End Load*		Sealing Surface		Dimensions		Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	Std. Wall kPa psi	Light Wall† kPa psi	Std. Wall N Lbs.	Light Wall† N Lbs.	A Max. mm Inches	B Min. mm Inches	W mm Inches	Z mm Inches	kg Lbs.
350 14	355.6 14.000	2065 300	2065 300	205501 46180	205501 46180	356 14.00	406 16.00	622 24.5	60 2.38	30.0 66.0
400 16	406.4 16.000	2065 300	2065 300	268402 60315	268402 60315	406 16.00	457 18.00	688 27.1	60 2.38	37.0 81.0
450 18	457.2 18.000	2065 300	2065 300	339713 76340	339713 76340	457 18.00	508 20.00	737 29.0	65 2.56	38.0 84.0
500 20	508.0 20.000	2065 300	2065 300	419413 94250	419413 94250	508 20.00	559 22.00	800 31.5	68 2.69	50.0 110.0
600 24	610.0 24.000	2065 300	1600 225#	603932 135715	452943 101785	610 24.00	660 26.00	914 36.0	70 2.74	70.0 155.0



TYPICAL FOR ALL SIZES

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

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

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

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

IMPORTANT NOTES:

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

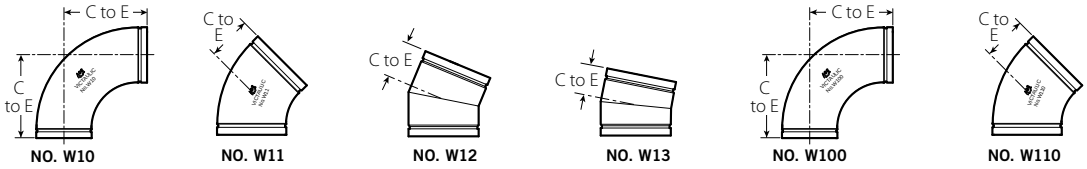
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Advanced Groove System – Fittings

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 mm Inches	Actual Outside Dia. mm Inches	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.
350 14	355.6 14.000	355.6 14.00	68.4 150.8	147 5.80	28.7 63.0	127 5.00	20.9 46.0	89 3.50	14.5 32.0	533 21.00	71.7 158.0	222 8.75	37.6 83.0
400 16	406.4 16.000	406.4 16.00	83.6 184.3	168 6.63	42.5 93.8	127 5.00	23.6 52.1	102 4.00	19.1 42.0	610 24.00	92.7 204.3	254 10.00	45.8 101.1
450 18	457.0 18.000	457.0 18.00	123.5 272.3	189 7.46	58.5 129.0	140 5.50	29.5 65.0	114 4.50	24.1 53.2	686 27.00	118.0 260.0	286 11.25	57.6 127.0
500 20	508.0 20.000	508.0 20.00	141.5 312.0	210 8.28	75.0 165.3	152 6.00	36.0 78.6	127 5.00	29.5 65.0	762 30.00	149.0 328.5	318 12.50	75.7 167.0
600 24	610.0 24.000	610.0 24.00	253.9 559.8	252 9.94	120.0 264.5	178 7.00	50.0 110.3	152 6.00	42.9 94.5	914 36.00	222.3 490.0	381 15.00	110.1 244.8

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

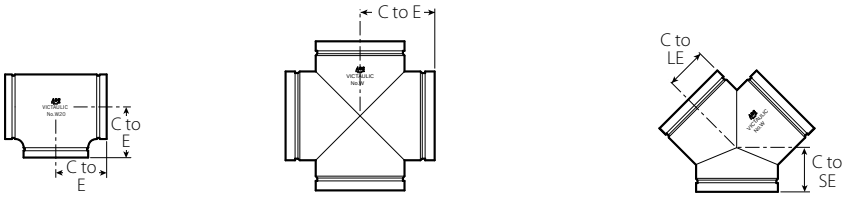
IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Tees, Crosses and Wyes

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

For Complete Information
Request Publication **20.05**



NO. W20 NO. W35 NO. W33

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

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

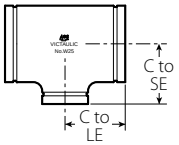
Advanced Groove System – Fittings

AGS™

Reducing Tee

NO. W25
(Segmentally Welded Steel)

For Complete Information
Request Publication **20.05**



NO. W25

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

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

* Cast fitting available. Contact Victaulic for details.

IMPORTANT NOTES:

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

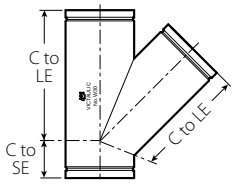
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Advanced Groove System – Fittings

45° Lateral

NO. W30
(Segmentally Welded Steel)

For Complete Information
Request Publication **20.05**



NO. W30

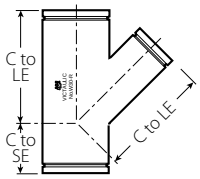
Size		No. W30 45° Lateral		
Nominal Size mm Inches	Actual Outside Diameter mm Inches	C to LE mm Inches	C to SE mm Inches	Approx. Weight Each kg Lbs.
350 14	355.6 14.000	673 26.50	191 7.50	99.4 219.1
400 16	406.4 16.000	737 29.00	203 8.00	122.7 270.5
450 18	457.0 18.000	813 32.00	216 8.50	150.9 332.7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

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

45° Reducing Lateral

NO. W30-R
(Segmentally Welded Steel)

For Complete Information
Request Publication **20.05**



NO. W30-R

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

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

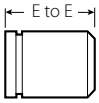
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Advanced Groove System – Fittings

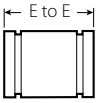
Adapter Nipple

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

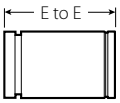
Request Publication **20.05**



NO. W42



NO. W43



NO. W49

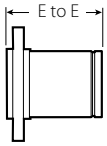
Size		No. W42, W43, W49 Adapter Nipple (sw)	
Nominal Size mm Inches	Actual Outside Diameter mm Inches	E to E mm Inches	Approx. Weight Each kg Lbs.
350 14	355.6 14.000	203 8.00	16.3 36.0
400 16	406.4 16.000	203 8.00	19.1 42.0
450 18	457.0 18.000	203 8.00	21.3 47.0
500 20	508.0 20.000	203 8.00	23.6 52.0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

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Flanged Adapter Nipple

NO. W45R ANSI Class 150 Raised Face
(Steel)

For Complete Information Request Publication **20.05**



NO. W45R

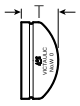
Size		No. W45R Flanged Adapter Nipple	
Nominal Size mm Inches	Actual Outside Diameter mm Inches	E to E mm Inches	Approx. Weight Each kg Lbs.
350 14	355.6 14.000	203 8.00	55.3 122.0
400 16	406.4 16.000	203 8.00	61.7 136.0
450 18	457.0 18.000	203 8.00	76.2 168.0
500 20	508.0 20.000	203 8.00	94.3 208.0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

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Cap

NO. W60
(Steel)

For Complete Information Request Publication **20.05**



NO. W60

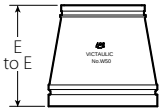
Size		No. W60 Cap	
Nominal Size mm Inches	Actual Outside Diameter mm Inches	T Thickness mm Inches	Approx. Weight Each kg Lbs.
350 14	355.6 14.000	165 6.50	15.1 33.2
400 16	406.4 16.000	178 7.00	18.7 41.2
450 18	457.0 18.000	203 8.00	24.8 54.6
500 20	508.0 20.000	229 9.00	30.6 67.5
600 24	610.0 24.000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

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Concentric/Eccentric Reducer

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

For Complete Information
Request Publication **20.05**



NO. W50

NO. W51

Size			No. W50 Concentric Reducer		No. W51 Eccentric Reducer	
Nominal Size mm Inches			E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
350 14	×	150 6	330 13.00	30.8 68.0	330 13.00	30.8 68.0
		200 8	330 13.00	31.8 70.0	330 13.00	31.8 70.0
		250 10	330 13.00	32.7 72.0	330 13.00	32.7 72.0
		300 12	330 13.00	33.6 74.0	330 13.00	33.6 74.0
400 16	×	200 8	356 14.00	39.9 88.0	356 14.00	39.9 88.0
		250 10	330 13.00	41.3 91.0	330 13.00	41.3 91.0
		300 12	356 14.00	42.2 93.0	356 14.00	42.2 93.0
		350 14	356 14.00	43.1 95.0	356 14.00	43.1 95.0
450 18	×	350 14	381 15.00	50.8 112.0	381 15.00	50.8 112.0
		400 16	381 15.00	52.2 115.0	381 15.00	52.2 115.0
		450 18	381 15.00	53.5 118.0	381 15.00	53.5 118.0
		500 20	381 15.00	54.9 121.1	381 15.00	54.9 121.1

Size			No. W50 Concentric Reducer		No. W51 Eccentric Reducer	
Nominal Size mm Inches			E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
500 20	×	300 12	508 20.00	72.6 160.0	508 20.00	72.6 160.0
		350 14	508 20.00	74.4 164.0	508 20.00	74.4 164.0
		400 16	508 20.00	76.2 168.0	508 20.00	76.2 168.0
		450 18	508 20.00	78.0 172.0	508 20.00	78.0 172.0
600 24	×	400 16	508 20.00	89.9 198.0	508 20.00	89.9 198.0
		450 18	508 20.00	90.7 200.0	508 20.00	90.7 200.0
		500 20	508 20.00	92.5 204.0	508 20.00	92.5 204.0

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

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Dual Disc Vic-Check Valve

SERIES W715

For Complete Information Request Publication **20.08**

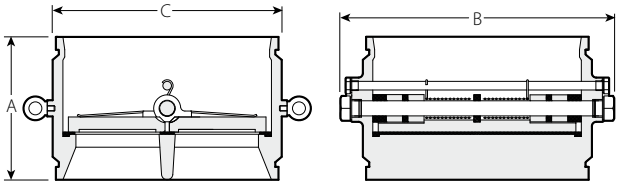
- Can be installed in both horizontal or vertical "flow up" positions
- Constructed of rugged ductile iron, the valve features an EPDM seat bonded to the body and a 304 stainless steel disc and shaft
- Utilizes a spring-assisted, dual disc design that achieves drop tight sealing over the full 16 Bar/230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

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

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

IMPORTANT NOTES:

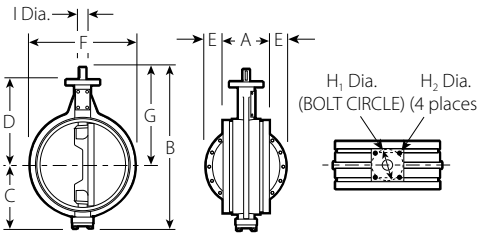
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Vic-300 AGS Butterfly Valve

For Complete Information
Request Publication **20.06**



TYPICAL FOR ALL SIZES

- 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 350–600 mm/14–24" systems for 2065 kPa/300 psi bi-directional services

VIC-300 AGS BUTTERFLY VALVE WITHOUT GEAR OPERATOR

Size		Dimensions										Approx. Wgt. Each
									Mounting †			
Nominal Size mm Inches	Actual Outside Diameter mm Inches	A End to End mm Inches	B Overall Height mm Inches	C mm Inches	D mm Inches	E mm Inches	F mm Inches	G mm Inches	H¹ Dia. mm Inches	H² Dia. mm Inches	I Dia. mm Inches	w/o Oper. kg Lbs.
350 14	355.6 14.000	254 10.00	621 24.45	246 9.68	327 12.89	29 1.16	406 16.00	375 14.77	126 4.96	15 0.578	35 1.38	56.7 125.0
400 16	406.4 16.000	267 10.50	689 27.14	278 10.94	358 14.10	48 1.90	457 18.00	412 16.20	126 4.96	15 0.578	38 1.50	69.4 153.0
450 18	457.0 18.000	279 11.00	751 29.56	313 12.31	381 15.00	59 2.64	508 20.00	438 17.25	126 4.96	15 0.578	45 1.75	90.3 199.0
500 20	508.0 20.000	292 11.50	829 32.64	357 14.06	409 16.10	87 3.42	584 23.00	472 18.58	140 5.51	17 0.672	51 2.00	129.3 285.0
600 24	610.0 24.000	305 12.00	988 38.89	408 16.06	511 20.10	131 5.17	678 26.70	580 22.83	165 6.50	21 0.844	57 2.25	204.6 451.0

† MOUNTING KEY:

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

IMPORTANT NOTES:

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

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

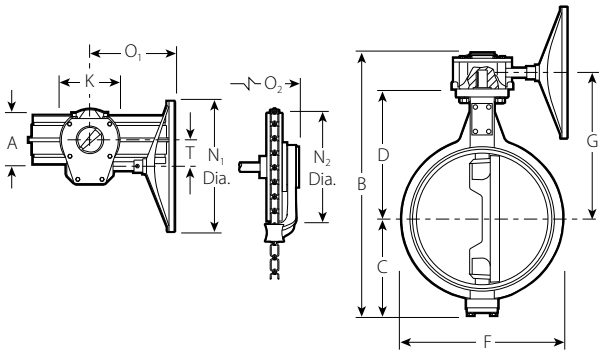
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Advanced Groove System – Accessories

AGS™

Vic-300 AGS
Butterfly Valve

For Complete Information
Request Publication **20.06**



TYPICAL FOR ALL SIZES

VIC-300 AGS BUTTERFLY VALVE WITH GEAR OPERATOR

Size		Dimensions													Approx. Wgt. Each	
									Handwheel		Chain Wheel					
Nominal Size mm Inches	Actual Outside Diameter mm Inches	A End to End mm Inches	B Overall Height mm Inches	C mm Inches	D mm Inches	F mm Inches	G mm Inches	K mm Inches	N1 Dia. mm Inches	O1 mm Inches	N2 Dia. mm Inches	O2 mm Inches	T mm Inches	No. Turns to Close	kg Lbs.	Flow Coefficient@ (Fully Open) Kv Values Cv Values
350 14	355.6 14.000	254 10.00	665 26.17	246 9.68	327 12.89	406 16.00	367 14.54	200 7.87	500 19.70	327 12.86	546 21.50	406 16.00	77 3.02	9.5	70.8 156.0	8096.4 9360
400 16	406.4 16.000	267 10.50	737 29.00	278 10.94	358 14.10	457 18.00	406 15.99	220 8.66	500 19.70	364 14.34	546 21.50	444 17.47	86 3.38	13.75	91.2 201.0	10726.0 12400
450 18	457.0 18.000	279 11.00	817 32.17	313 12.31	381 15.00	508 20.00	436 17.17	285 11.22	700 27.60	395 15.55	762 30.00	474 18.68	111 4.38	21	122.2 269.5	13753.5 15900
500 20	508.0 20.000	292 11.50	920 36.23	357 14.06	409 16.10	584 23.00	464 18.27	285 11.22	700 27.60	468 18.43	762 30.00	549 21.60	137 5.38	52	174.3 384.2	17127.0 19800
600 24	610.0 24.000	305 12.00	1017 42.41	408 16.06	511 20.10	678 26.70	569 22.42	370 14.57	700 27.60	521 20.51	762 30.00	599 23.60	137 5.38	79.25	274.4 605.0	24998.5 28900

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Vic-Strainer – Tee Type

SERIES W730

For Complete Information Request Publication **20.11**

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

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

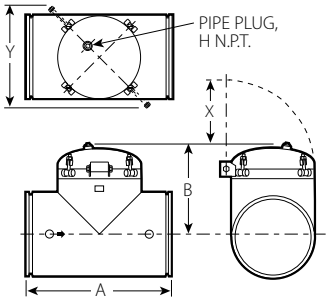
@ K_v/C_v values for flow of water at +16°C/+60°F.

* See minimum clearance requirement table below.

IMPORTANT NOTES:

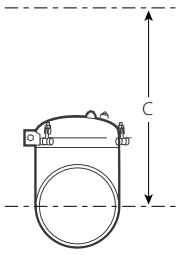
Maximum differential pressure from inlet to outlet must not exceed 69 kPa/10 psi.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Series W730 Recommended Minimum Clearance Required to Remove Diffuser Basket



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

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Advanced Groove System – Accessories

AGS™

Wye Type Vic-Strainer®

STYLE W732

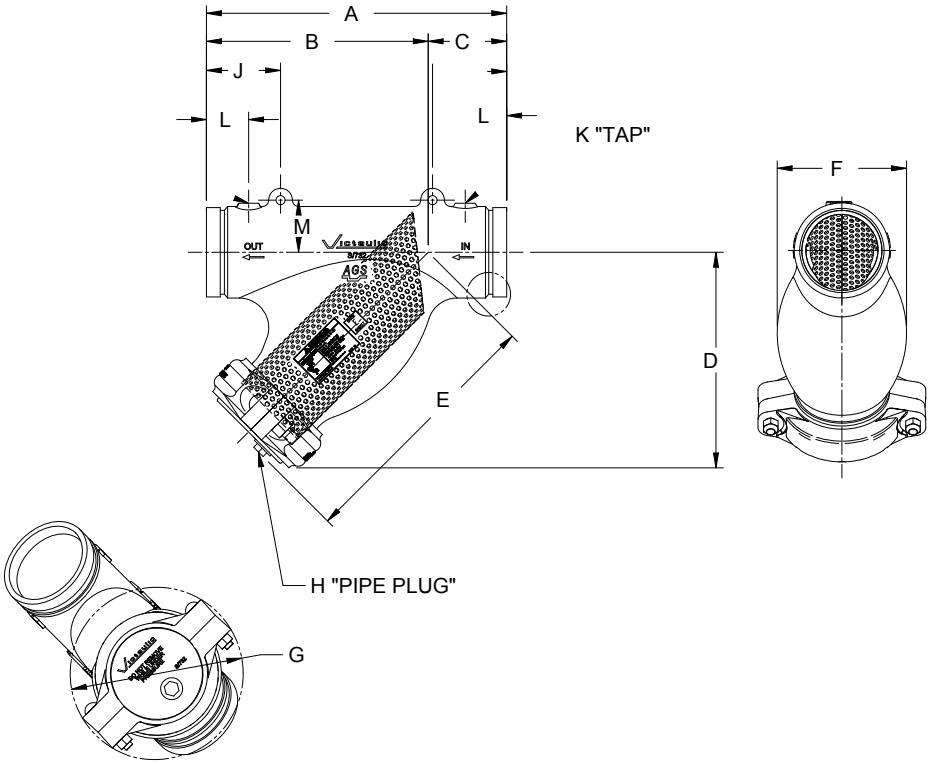
For Complete Information Request Publication **20.19.**

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

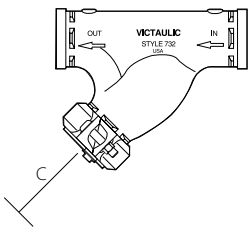
Size		Max. Work Pressure	Dimensions – mm/Inches													Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Diameter mm Inches	kPa psi	End to End A	B	C	D	E	F	G	H	J	"TAP" K	L	M		kg Lbs.
350 14	355.60 14.00	2065 300	863.6 34.00	658.6 25.93	205 8.07	641.8 25.27	739.8 29.13	461 18.15	523.0 20.59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

#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.



MINIMUM CLEARANCE REQUIREMENTS FOR REMOVAL OF SUCTION DIFFUSER BASKETS



Pipe Size		"C" Strainer Basket Minimum Clearance mm/inches
Nominal Diameter mm/inches	Actual Outside Diameter mm/inches	Series W732
14 350	355.6 14.000	762 30.00
16 400	406.4 16.000	813 32.00
18 450	457.0 18.000	889 35.00

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

The Vic-Tap is perfect for applications where systems cannot be shut down to add branch connections. Capable of tapping into steel pipe systems under pressures up to 3450 kPa/500 psi Vic-Tap automatically removes the piping coupon avoiding possible damage to equipment in the pipe line, see pg.15-10.

Mechanical-T® Bolted Branch Outlet

STYLE 920 AND STYLE 920N GROOVED OUTLET, PG. 6-2

Mechanical-T Bolted Branch Outlet

STYLE 920 AND STYLE 920N FEMALE THREADED OUTLET, PG. 6-2

Mechanical-T Bolted Branch Outlet

STYLE 920 AND STYLE 920N CROSS, PG. 6-4

Vic-Let™ Strapless Outlet

STYLE 923, PG. 6-5

Vic-O-Well™ Strapless Thermometer Outlet

STYLE 924, PG. 6-6

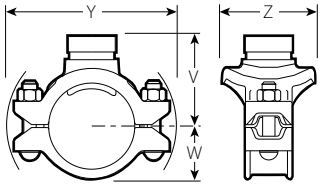
PRODUCTS

Hole Cut Piping System

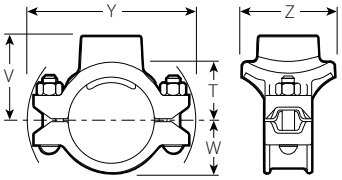
Mechanical-T Bolted Branch Outlet

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

For Complete Information
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
- Pressure rated up to 2750 kPa/400 psi
- Sizes from 50×15 mm/2×½" through 219.1×76.1 mm/8×4"

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Size			Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each	
Run × Branch Nominal Size mm Inches			920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T ** mm Inches	V ‡# Threaded mm Inches	V ‡ Grooved mm Inches	W mm Inches	Y mm Inches	Z mm Inches	Female Threaded kg Lbs.	Grooved kg Lbs.
50 2	×	15 ½ (a) ¤	920N	2750 400	38.1 1.50	51 2.00	64 2.53	—	41 1.61	136 5.35	70 2.75	1.5 3.1	—
		20 ¾ (a) ¤	920N	2750 400	38.1 1.50	50 1.97	64 2.53	—	41 1.61	136 5.35	70 2.75	1.5 3.1	—
		25 1 (a) ¤	920N	2750 400	38.1 1.50	47 1.85	64 2.53	—	41 1.61	136 5.35	70 2.75	1.4 3.0	—
		32 1 ¼ (a) † ¤	920N	2750 400	44.5 1.75	52 2.05	70 2.75	76 3.00	41 1.61	136 5.35	76 3.00	1.7 3.5	1.5 3.2
		40 1 ½ (a) † ¤	920N	2750 400	44.5 1.75	52 2.03	70 2.75	79 3.12	41 1.61	136 5.35	83 3.25	1.7 3.6	1.5 3.2
2 ½ 65	×	15 ½ (a) § ¤	920N	2750 400	38.1 1.50	56 2.21	70 2.74	—	46 91.82	143 5.64	70 2.75	1.4 3.0	—
		20 ¾ (a) § ¤	920N	2750 400	38.1 1.50	55 2.18	70 2.74	—	46 1.82	143 5.64	70 2.75	1.4 3.0	—
		1 (a) § ¤ 25	920N	2750 400	38.1 1.50	52 2.06	70 2.74	—	46 1.82	143 5.64	70 2.75	1.4 2.9	—
		32 1 ¼ † (a) ¤	920N	2750 400	44.5 1.75	58 2.30	76 3.00	83 3.25	46 1.82	160 6.29	76 3.00	1.7 3.5	1.5 3.2
		40 1 ½ † (a) ¤	920N	2750 400	50.8 2.00	58 2.28	76 3.00	83 3.25	46 1.82	159 6.26	83 3.25	1.7 3.6	1.6 3.3
76.1	×	15 ½ (a)	920N	2065 300	38.1 1.50	56 2.22	70 2.75	—	57 2.25	164 6.46	81 3.18	1.8 3.9	—
		20 ¾ (a)	920N	2065 300	38.1 1.50	56 2.19	70 2.75	—	57 2.25	164 6.46	81 3.18	1.8 3.9	—
		25 1 (a)	920N	2065 300	38.1 1.50	53 2.07	70 2.75	—	57 2.25	164 6.46	81 3.18	1.7 3.8	—
		32 1 ¼ (a) ¤	920N	2750 400	44.5 1.75	58 2.30	76 3.00	84 3.31	49 1.92	160 6.29	76 3.00	1.6 3.5	1.5 3.2
		40 1 ½ (a) ¤	920N	2750 400	50.8 2.00	58 2.28	76 3.00	84 3.31	49 1.92	160 6.29	83 3.25	1.6 3.5	1.5 3.3
80 3	×	15 ½ (a) ¤	920N	2750 400	38.1 1.50	64 2.52	78 3.05	—	58 2.28	156 6.15	70 2.75	1.6 3.4	—
		20 ¾ (a) ¤	920N	2750 400	38.1 1.50	63 2.49	78 3.05	—	58 2.28	156 6.15	70 2.75	1.6 3.4	—
		25 1 (a) ¤	920N	2750 400	38.1 1.50	61 2.38	78 3.06	—	58 2.28	156 6.15	70 2.75	1.6 3.3	—
		32 (b) 1 ¼ (a) † ¤	920N	2750 400	44.5 1.75	65 2.55	83 3.25	90 3.56	58 2.28	156 6.15	76 3.00	1.8 3.8	1.8 3.7
		40 (b) 1 ½ (a) † ¤	920N	2750 400	50.8 2.00	71 2.78	89 3.50	90 3.56	58 2.28	156 6.15	83 3.25	1.9 4.1	1.8 3.8
		50 2 (a) ¤	920N	2750 400	63.5 2.50	70 2.75	89 3.50	90 3.56	58 2.28	172 6.75	99 3.88	2.3 4.9	2.1 4.6
90 3 ½	×	50 2	920N	2750 400	63.5 2.50	—	—	95 3.75	62 2.44	171 6.72	99 3.88	—	1.8 3.8
100 4	×	15 ½ (a) ¤	920N	2750 400	38.1 1.50	77 3.03	90 3.56	—	68 2.69	178 7.01	70 2.75	1.8 3.7	—
		20 ¾ (a) ¤	920N	2750 400	38.1 1.50	76 3.00	90 3.56	—	68 2.69	178 7.01	70 2.75	1.8 3.7	—
		25 1 (a) ¤	920N	2750 400	38.1 1.50	73 2.88	90 3.56	—	68 2.69	178 7.01	70 2.75	1.8 3.6	—
		32 (b) 1 ¼ (a) † ¤	920N	2750 400	44.5 1.75	78 3.08	96 3.78	102 4.00	68 2.69	178 7.01	76 3.00	1.9 4.0	1.8 3.6
		40 (b) 1 ½ (a) † ¤	920N	2750 400	50.8 2.00	83 3.28	102 4.00	102 4.00	68 2.69	178 7.01	83 3.25	2.0 4.2	1.9 3.9
		50 2 (a) † ¤	920N	2750 400	63.5 2.50	83 3.25	102 4.00	102 4.00	68 2.69	178 7.01	99 3.88	2.3 5.0	2.1 4.6
		65 2 ½ (a) †	920	2750 400	69.9 2.75	73 2.88	102 4.00 ¤	102 4.00	68 2.69	186 7.34	118 4.63	2.6 5.8	2.3 5.0
		76.1 mm	920	2750 400	69.9 2.75	—	—	102 4.00	68 2.69	186 7.34	118 4.63	—	2.9 6.4
		80 3 (a) †	920	2750 400	88.9 3.50	84 3.31	114 4.50 ¤	105 4.12	68 2.69	196 7.73	130 5.12	3.8 8.4	2.9 6.4

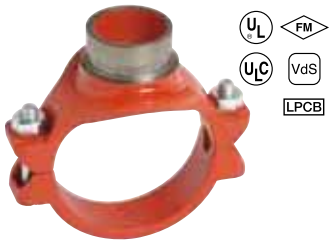
TABLE CONTINUED ON PG. 6-3, SEE FOOTNOTES ON PG. 6-4

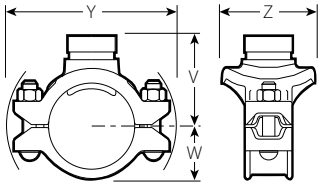
Hole Cut Piping System

Mechanical-T Bolted Branch Outlet (cont'd)

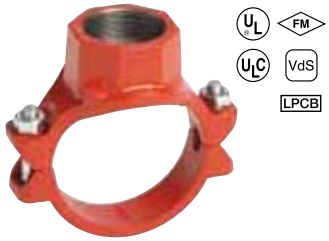
STYLE 920/920N
Grooved Outlet/Female Thd. Outlet

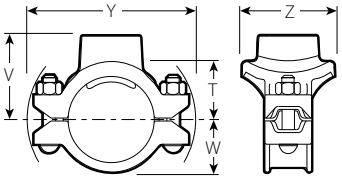
For Complete Information Request Publication **11.02**





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
- Pressure rated up to 2750 kPa/400 psi
- Sizes from 50×15 mm/2×½" through 219.1×76.1 mm/8×4"

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

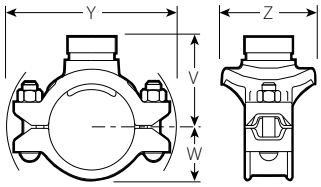
Size		Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each	
Run × Branch Nominal Size mm Inches		920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T ** mm Inches	V ‡# Threaded mm Inches	V ‡ Grooved mm Inches	W mm Inches	Y mm Inches	Z mm Inches	Female Threaded kg Lbs.	Grooved kg Lbs.
TABLE CONTINUED FROM PG. 6-2												
108.0 ×	32 1 ¼ (a) ¤	920N	2750 400	44.5 1.75	78 3.08	96 3.78	—	67 2.63	194 7.64	78 3.05	2.3 5.0	—
	40 1 ½ (a) ¤	920N	2750 400	50.8 2.00	83 3.28	102 4.00	—	67 2.63	194 7.64	83 3.25	2.3 5.0	—
	50 2 (a)	920N	2750 400	63.5 2.50	83 3.25	102 4.00	—	67 2.63	194 7.64	102 4.00	1.9 4.0	—
	76.1 mm	920	2750 400	69.9 2.75	73 2.88	102 4.00	102 4.00	67 2.63	194 7.64	109 4.29	3.6 8.0	—
	80 3 (a)	920	2750 400	88.9 3.50	84 3.31	114 4.50	—	67 2.63	194 7.64	124 4.88	3.1 6.8	3.0 6.5
125 5 ×	40 1 ½ (a) †	920	2750 400	50.8 2.00	102 4.03	121 4.75	121 4.75	80 3.16	246 9.70	94 3.69	3.4 7.4	3.4 7.6
	50 2 (a) †	920	2750 400	63.5 2.50	102 4.00	121 4.75	121 4.75	80 3.16	246 9.70	111 4.38	3.7 8.2	3.6 8.0
	65 2 ½ (a) †	920	2750 400	69.9 2.75	92 3.63	121 4.75	121 4.75	80 3.16	246 9.70	118 4.63	3.8 8.3	3.6 7.9
	76.1 mm ¤	920	2750 400	69.9 2.75	—	—	121 4.75	80 3.16	246 9.70	118 4.63	—	3.6 8.0
	80 3 (a) †	920	2750 400	88.9 3.50	97 3.81	127 5.00	118 4.63	80 3.16	246 9.70	135 5.31	3.8 8.4	4.0 8.8
133.0 ×	50 2	920N	2750 400	63.5 2.50	95 3.75	114 4.50	—	81 3.17	203 8.00	99 3.88	3.6 8.0	—
	80 3	920	2750 400	88.9 3.50	97 3.81	127 5.00	—	76 3.00	240 9.46	135 5.31	3.6 8.0	—
139.7 ×	40 1 ½ †	920N	2750 400	50.8 2.00	96 3.78	114 4.50	—	84 3.30	209 8.23	83 3.25	3.2 7.0	—
	50 2 †	920N	2750 400	63.5 2.50	95 3.75	114 4.50	—	84 3.30	209 8.23	99 3.88	4.1 9.0	—
	76.1 mm	920	2750 400	69.9 2.75	92 3.63	121 4.75	—	80 3.13	250 9.85	118 4.63	4.0 8.8	—
	76.1 mm	920	2750 400	88.9 3.50	—	—	118 4.63	80 3.16	246 9.70	135 5.31	—	5.0 11.0
	88.9 3	920	2750 400	88.9 3.50	96.80 3.81	127 5.00	118 4.63	80 3.16	250 9.85	137 5.38	6.4 14.0	6.4 14.2
150 6 ×	32 (b) 1 ¼ (a)	920N	2750 400	44.5 1.75	112 4.43	—	—	96 3.79	232 9.15	83 3.25	—	2.2 4.8
	40 (b) 1 ½ (a) † ¤	920N	2750 400	50.8 2.00	112 4.40	130 5.13	130 5.13	96 3.79	232 9.15	83 3.25	2.4 5.4	2.3 5.1
	50 2 (a) † ¤	920N	2750 400	63.5 2.50	111 4.38	130 5.13	130 5.13	96 3.79	232 9.15	99 3.88	2.7 6.0	2.5 5.6
	65 2 ½ (a) †	920	2750 400	69.9 2.75	110 4.01	130 5.13	130 5.12	94 3.69	267 10.51	118 4.63	3.8 8.3	3.4 7.6
	76.1 mm ¤	920	2750 400	69.9 2.75	—	—	132 5.12	94 3.69	267 10.51	118 4.63	—	3.8 8.4
	80 3 (a) †	920	2065 300	88.9 3.50	110 4.31	140 5.50 ¤	130 5.13	94 3.69	267 10.51	135 5.31	4.5 9.9	3.8 8.4
	100 4 (a) † ¤	920	2065 300	114.3 4.50	97 3.81	146 5.75	137 5.38	94 3.69	267 10.51	159 6.25	4.6 10.1	4.6 10.1
159.0 ×	32 1 ¼	920N	2750 400	44.5 1.75	113 4.43	130 5.13	—	92 3.63	239 9.40	83 3.25	4.1 9.0	4.0 8.7
	40 1 ½ (a)	920N	2750 400	50.8 2.00	112 4.41	130 5.13	—	92 3.63	239 9.40	83 3.25	3.5 7.8	—
	50 2 (a)	920N	2750 400	63.5 2.50	111 4.38	130 5.13	—	92 3.63	239 9.40	99 3.88	3.6 8.0	—
	76.1 mm	920	2750 400	69.9 2.75	111 4.38	140 5.50	130 5.13	92 3.63	239 9.40	118 4.63	4.3 9.5	4.3 9.5
	80 3	920	2750 400	88.9 3.50	110 4.31	140 5.50	130 5.13	92 3.63	239 9.40	135 5.31	3.7 8.1	6.4 14.0
	108.1 mm	920	2750 400	114.3 4.50	—	—	137 5.38	92 3.63	239 9.40	155 6.12	—	4.5 10.0
	100 4	920	2750 400	114.3 4.50	96.80 3.81	146 5.75	—	92 3.63	239 9.40	159 6.25	8.2 18.0	—
165.1 ×	25 1	920N	2750 400	38.1 1.50	99 3.88	116 4.56	—	96 3.79	237 9.34	70 2.75	3.6 8.0	—
	32 1 ¼ ¤	920N	2750 400	44.5 1.75	113 4.43	130 5.13	—	96 3.79	237 9.34	83 3.25	3.8 8.4	—
	40 1 ½ (a) †	920N	2750 400	50.8 2.00	112 4.41	130 5.13	—	96 3.79	237 9.34	83 3.25	3.8 8.4	—
TABLE CONTINUED ON PG. 6-4, SEE FOOTNOTES ON PG. 6-4												

Hole Cut Piping System

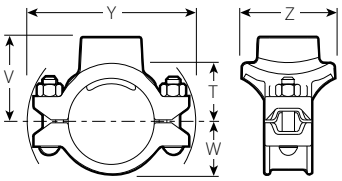
Mechanical-T Bolted Branch Outlet (cont'd)

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

For Complete Information
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
- Pressure rated up to 2750 kPa/400 psi
- Sizes from 50×15 mm/2×½" through 219.1×76.1 mm/8×4"

IMPORTANT NOTES:

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Size			Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each	
Run × Branch Nominal Size mm Inches			920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T ** mm Inches	V ‡# Threaded mm Inches	V ‡ Grooved mm Inches	W mm Inches	Y mm Inches	Z mm Inches	Female Threaded kg Lbs.	Grooved kg Lbs.
TABLE CONTINUED FROM PG. 6-3													
165.1	×	50 2 (a) †	920N	2750 400	63.5 2.50	111 4.38	130 5.13 ¤	—	96 3.79	237 9.34	99 3.88	3.9 8.5	—
		65 2½ † ¤	920	2750 400	69.9 2.75	110 4.01	130 5.13	—	92 3.63	267 10.51	118 4.63	3.9 8.6	3.4 7.6
		76.1 mm	920	2750 400	69.9 2.75	110 4.01	130 5.13	132 5.21 ¤	92 3.63	267 10.51	118 4.63	3.9 8.6	3.4 7.6
		80 3 (a) †*	920	2750 400	88.9 3.50	110 4.31	140 5.50	130 5.13 ¤	92 3.63	267 10.51	135 5.31	4.6 10.2	3.8 8.4
		100 4 (a) † ¤	920	2750 400	114.3 4.50	97 3.81	146 5.75	137 5.38	92 3.63	267 10.51	159 6.25	4.8 10.5	3.8 8.4
200 8	×	50 2 (a) †	920	2750 400	69.9 2.75	138 5.44	157 6.19	159 6.25 ¤	122 4.81	316 12.42	114 4.50	5.3 11.6	5.3 11.6
		65 2½ (a) †	920	2750 400	69.9 2.75	129 5.07	157 6.19	157 6.19	122 4.81	316 12.42	114 4.50	5.3 11.6	5.3 11.6
		76.1 mm ¤	920	2750 400	69.9 2.75	—	—	159 6.25	122 4.81	316 12.42	116 4.56	—	5.3 11.6
		80 3 (a) † ¤	920	2065 300	88.9 3.50	135 5.31	165 6.50	165 6.50	122 4.81	316 12.42	135 5.31	5.7 12.6	5.3 11.6
		100 4 (a) † ¤	920	2065 300	114.3 4.50	122 4.81	171 6.75	162 6.38	122 4.81	316 12.42	159 6.25	6.9 15.3	5.7 12.5

** 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.
@ These pressure ratings are general guidelines. Please consult Publication 10.01 for specific pressure ratings by type of pipe.
(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.
(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.
§ VdS approved for fire protection services.
¤ LPCB approved for fire protection services.
* Approved for use in China by Tianjin Approvals Company.

Mechanical-T Bolted Branch Outlet

STYLE 920 CROSS

For Complete Information
Request Publication **11.03**

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

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

Hole Cut Piping System

Vic-Let Strapless Outlet

STYLE 923

For Complete Information Request Publication **11.05**

TYPICAL 100–200 mm/4–8" SIZES

TYPICAL 250 mm/10" AND LARGER SIZES

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

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

* On schedule 40 pipe 100 – 200 mm/4 – 8" and Schedule 10 – 40 for sizes 250 mm/10" and larger. Minimum 4.2 mm/0.165", maximum 9.5 mm/0.375" 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 1375 kPa/200 psi 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.

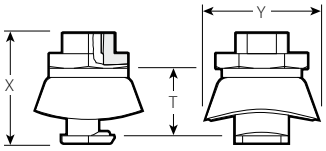
IMPORTANT NOTES:

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

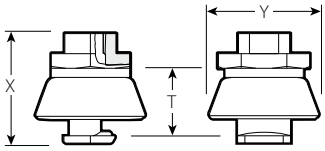
Warning: Always depressurize system and drain before disassembly.

Due to deformation of the collar, Vic-Let outlet should not be re-used after initial installation.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 100–200 mm/4–8" SIZES



TYPICAL 250 mm/10" AND LARGER SIZES

Hole Cut Piping System

Vic-O-Well Strapless Thermometer Outlet

STYLE 924

For Complete Information Request Publication **11.06**

TYPICAL 100–200 mm/4–8" SIZES

TYPICAL 250 mm/10" AND LARGER SIZES

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

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

* On schedule 40 pipe 100–200 mm/4–8" and Schedule 10 – 40 for sizes 250 mm/10" and larger. Minimum 4.2 mm/0.165", maximum 9.5 mm/0.375" wall thickness on large pipe or flat plate. Pressure rating is for Vic-O-Well outlet only, pipe used must also be rated at this pressure or higher. Pressure rating is 1375 kPa/200 psi 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.

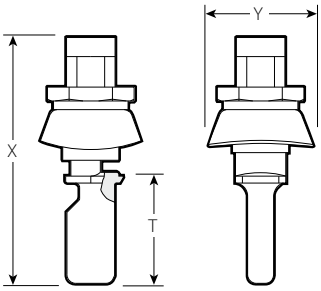
IMPORTANT NOTES:

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.

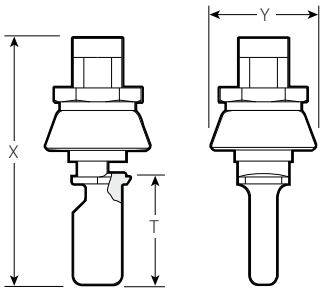
Warning: Always depressurize system and drain before disassembly.

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

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 100–200 mm/4–8" SIZES



TYPICAL 250 mm/10" AND LARGER SIZES

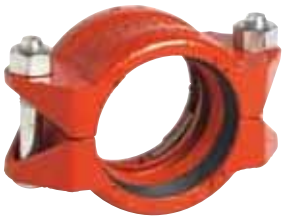
Plain End Piping System

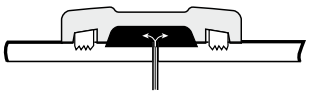
The Victaulic plain end piping method is ideal for maintenance and repairs as well as new systems such as roof drains, slurries, tailings and oil field services. Roust-A-Bout couplings and plain end fittings are UL and ULC Listed for fire protection services.

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. 7-3

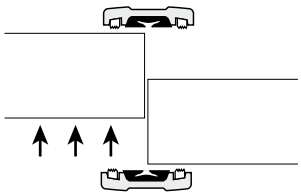




All illustrations shown are exaggerated for clarity

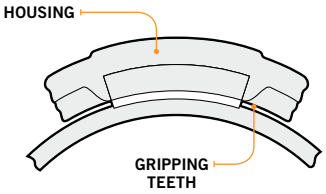
RELIABLE AND LEAK-FREE

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



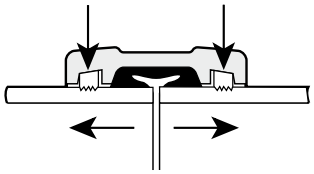
UNION AT EVERY JOINT

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



JAWS CONFORM TO PIPE

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



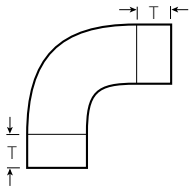
ROUST-A-BOUT JAWS RIGID TO GRIP PIPE

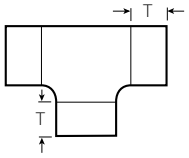
- Set at right angle to the pipe for gripping efficiency

Plain End Piping System

Plain End Fittings
Required Tangent Length

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



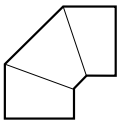


Size		Tangent Length
Nominal Size mm Inches	Actual Outside Dia. mm Inches	T Minimum mm Inches
40 1 ½	48.3 1.900	38 1.50
50 2	60.3 2.375	45 1.75
65 2 ½	73.0 2.875	45 1.75
80 3	88.9 3.500	45 1.75
90 3 ½	101.6 4.000	45 1.75
100 4	114.3 4.500	51 2.00
125 5	141.3 5.563	54 2.13

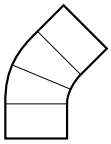
Size		Tangent Length
Nominal Size mm Inches	Actual Outside Dia. mm Inches	T Minimum mm Inches
165.1 mm	165.1 6.500	54 2.13
150 6	168.3 6.625	54 2.13
200 8	219.1 8.625	57 2.25
250 10	273.0 1.750	57 2.25
300 12	323.9 12.750	57 2.25
350 14	355.6 14.000	57 2.25
400 16	406.4 16.000	57 2.25

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

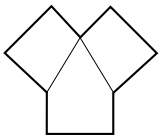
Fittings



90° Elbow
NO. 10P, PG. 7-4

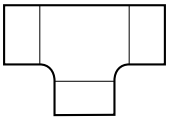


45° Elbow
NO. 11P, PG. 7-4

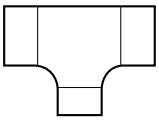


True Wye
NO. 33P, PG. 7-5

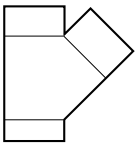
Swaged Nipple
NO. 53P, PG. 7-7



Tee
NO. 20P, PG. 7-5

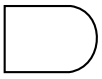


Reducing Tee
NO. 25P, PG. 7-6



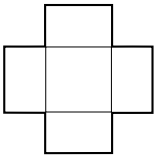
45° Lateral
NO. 30P, PG. 7-6

Adapter Nipple
Plain End × Thd.
NO. 40P, PG. 7-8



Steel Bull Plug
NO. 61P, PG. 7-5

Adapter Nipple
Plain End × Grv.
NO. 43P, PG. 7-8



Cross
NO. 35P, PG. 7-5

Adapter Nipple
Plain End × Bev.
NO. 42P, PG. 7-8

Plain End Piping System – Couplings

Roust-A-Bout Coupling

STYLE 99

For Complete Information Request Publication **14.02**

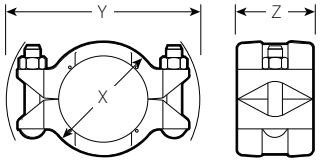
- Specifically designed for plain end steel and stainless steel pipe
- Gripping teeth provide a strong component for joining plain and beveled end (including Schedule 80 steel pipe)
- Not to be used on plastic pipe, pipe with brittle linings, cast or ductile iron pipe nor any pipe with a surface hardness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

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

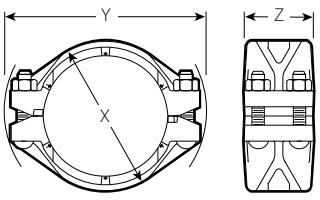
* Working Pressure and End Load are total, from all internal and external loads, based on coupling properly assembled, with bolts fully torqued to listed specifications, on plain end or beveled end standard weight (ANSI) steel pipe and Victaulic plain end fittings. Couplings are designed to be used with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

IMPORTANT NOTES:

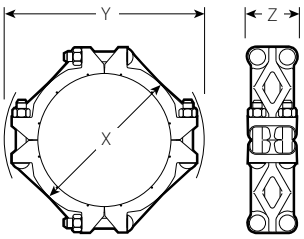
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 25 – 150 mm/1 – 6" SIZES



TYPICAL 200 – 300 mm/8 – 12" SIZES



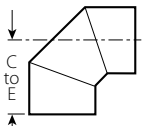
TYPICAL 350 – 450 mm/14 – 18" SIZES

Plain End Piping System – Fittings

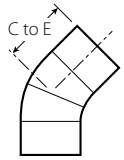
Elbow

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

For Complete Information Request Publication **14.04**



No. 10P (sw)



No. 11P (sw)

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

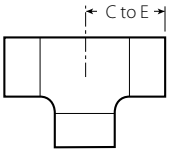
Segmentally welded steel except those marked (d) which are ductile iron.

Plain End Piping System – Fittings

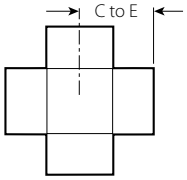
Tee, Cross, True Wye, and Bull Plug

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

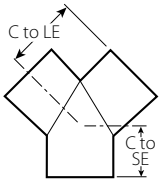
For Complete Information
Request Publication **14.04**



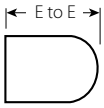
NO. 20P



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 mm Inches	Actual Outside Dia. mm Inches	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to E mm Inches	Approx. Wgt. Each kg Lbs.	C to LE mm Inches	C to SE mm Inches	Approx. Wgt. Each kg Lbs.	E to E mm Inches	Approx. Wgt. Each kg Lbs.
25 1	33.7 1.315	57 2.25	0.5 1.0	83 3.25	0.8 1.7	83 3.25	57 2.25	0.5 1.1	76 3.00	0.3 0.7
40 1 ½	48.3 1.900	70 2.75 (sw)	0.8 1.7	102 4.00	1.6 3.5	102 4.00	70 2.75	0.8 1.8	89 3.50	0.5 1.2
50 2	60.3 2.375	83 3.25 (sw)	1.4 3.0	108 4.25	2.4 5.2	108 4.25	70 2.75	1.3 2.9	102 4.00	0.9 2.0
65 2 ½	73.0 2.875	95 3.75 (sw)	3.1 6.8	121 4.75	2.4 5.4	121 4.75	76 3.00	4.1 9.0	127 5.00	1.4 3.0
80 3	88.9 3.500	108 4.25 (sw)	4.1 9.0	130 5.13	3.9 8.5	130 5.13	83 3.25	3.9 8.5	152 6.00	2.0 4.5
90 3 ½	101.6 4.000	140 5.50 (sw)	5.7 12.5	140 5.50	4.1 9.0	140 5.50	89 3.50	4.5 10.0	165 6.50	2.7 6.0
100 4	114.3 4.500	127 5.00	5.4 11.9	149 5.88	4.9 10.8	149 5.88	95 3.75	6.4 14.0	178 7.00	3.4 7.5
125 5	141.3 5.563	175 6.88 (sw)	7.8 17.1	175 6.88	9.1 20.0	175 6.88	102 4.00	9.8 21.6	216 8.50	5.2 11.5
150 6	168.3 6.625	165 6.50	13.3 29.5	194 7.63	13.6 30.0	194 7.63	114 4.50	14.2 31.2	254 10.00	7.7 17.0
200 8	219.1 8.625	254 10.00 (sw)	32.4 71.5	254 10.00	30.1 66.4	254 10.00	152 6.00	16.3 36.0	279 11.00	13.2 29.0
250 10	273.0 10.750	292 11.50 (sw)	52.6 116.0	292 11.50	46.7 103.0	292 11.50	165 6.50	23.6 52.0	330 13.00	21.8 48.0
300 12	323.9 12.750	343 13.50 (sw)	54.4 120.0	343 13.50	71.7 158.0	343 13.50	178 7.00	36.8 81.2	356 14.00	27.2 60.0

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

IMPORTANT NOTES:

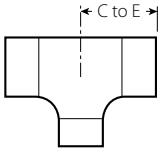
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Plain End Piping System – Fittings

Reducing Tee

NO. 25P
(Ductile Iron)

For Complete Information
Request Publication **14.04**



NO. 25P

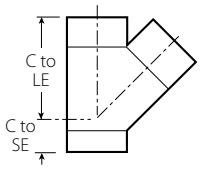
Size				No. 25P Reducing Tee	
Nominal Size mm Inches				C to E mm Inches	Approx. Weight Each kg Lbs.
40 1 ½	×	40 1 ½	× 25 1	102 4.00	1.0 2.2
50 2	×	50 2	× 25 1	108 4.25	1.3 2.9
			40 1 ½	108 4.25	1.4 3.1
80 3	×	80 3	× 25 1	130 5.13	3.0 6.7
			40 1 ½	130 5.13	3.1 6.9
			50 2	130 5.13	3.2 7.1
100 4	×	100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

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

45° Lateral

NO. 30P (SW)
(Segmentally Welded Steel)

For Complete Information
Request Publication **14.04**



NO. 30P (SW)

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

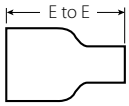
IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Plain End Piping System – Fittings

Swaged Nipple

NO. 53P
(Steel)

For Complete Information
Request Publication **14.04**



NO. 53P

Size			No. 53P Swaged Nipple	
Nominal Size mm Inches			E to E mm Inches	Approx. Weight Each kg Lbs.
40 1½	×	25 1	114 4.50	0.6 1.2
50 2	×	25 1	165 6.50	0.9 2.0
		40 1½	165 6.50	0.9 2.0
65 2½	×	25 1	178 7.00	1.4 3.0
		40 1½	178 7.00	1.4 3.0
		50 2	178 7.00	1.4 3.0
80 3	×	25 1	203 8.0	2.0 4.5
		40 1½	203 8.00	2.0 4.5
		50 2	203 8.00	2.0 4.5
		65 2½	203 8.00	2.0 4.5
90 3½	×	80 3	203 8.00	3.1 6.8
100 4	×	25 1	229 9.00	3.4 7.5
		40 1½	229 9.00	3.4 7.5
		50 2	229 9.00	3.4 7.5
		65 2½	229 9.00	3.4 7.5
		80 3	229 9.00	3.4 7.5
		90 3½	229 9.00	3.4 7.5
125 5	×	50 2	279 11.00	5.2 11.5
		80 3	279 11.00	5.2 11.5
		100 4	279 11.00	5.2 11.5
150 6	×	25 1	305 12.00	7.3 16.0
		40 1½	305 12.00	7.3 16.0
		50 2	305 12.00	7.7 17.0
		65 2½	305 12.00	7.7 17.0
		80 3	305 12.00	7.7 17.0
		90 3½	305 12.00	7.7 17.0
		100 4	305 12.00	7.7 17.0
		125 5	305 12.00	7.7 17.0
200 8	×	80 3	330 13.00	13.2 29.0
		100 4	330 13.00	13.2 29.0
		125 5	330 13.00	13.2 29.0
		150 6	330 13.00	21.8 48.0
250 10	×	80 3	381 15.00	21.8 48.0
		100 4	381 15.00	21.8 48.0
		150 6	381 15.00	21.8 48.0
		200 8	381 15.00	21.8 48.0
300 12	×	150 6	406 16.00	26.8 59.0
		200 8	406 16.00	26.8 59.0
		250 10	406 16.00	26.8 59.0

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Plain End Piping System – Fittings

Adapter Nipple

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

For Complete Information
Request Publication **14.04**

NO. 40P@

NO. 42P

NO. 43P

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

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

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. 8-3

DVGW

Rigid Coupling

STYLE 89, PG. 8-4

AGS STYLE W89, PG. 5-5

DVGW

Flexible Coupling

STYLE 77S, PG. 8-5

Flexible Coupling

STYLE 475, PG. 8-6

DVGW

DN Flange Adapter PN10/PN16

STYLE 441N, PG. 8-7

Grooved System for Stainless Steel Pipe

Fittings

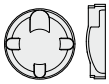
Type 316

90° Elbow

NO. 410SS, PG. 8-8

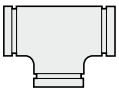
45° Elbow

NO. 411SS, PG. 8-8



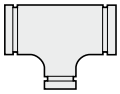
Cap

NO. 460SS, PG. 8-8



Tee

NO. 420SS, PG. 8-8



Reducing Tee

NO. 425SS, PG. 8-9

Concentric Reducer

NO. 450SS, PG. 8-9

Valves

Butterfly Valve

SERIES 763, PG. 8-11

Vic-Ball Valve

SERIES 726S, PG. 8-10

Grooved System for Stainless Steel Pipe – Couplings

Rigid Coupling

STYLE 489

For Complete Information
Request Publication **17.25**

DVGW

- CF8M (316 SS) stainless steel housing for corrosion resistance and strength
- Provides an essentially rigid joint
- Pressure rated up to 1200psi/4136kPa for Schedule 40S duplex or super duplex, 600 psi/4136 kPa for Schedule 40S, 300 psi/2065 kPa for Schedule 10S, and 200 psi/1375 kPa for Schedule 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.25
- Pressure rating for other European wall thicknesses; Contact Victaulic for details
- Sizes from 40–300 mm/1½–12"

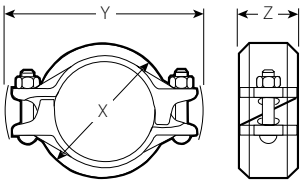
Size		Max. End Load *				Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	N Lbs.				mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
		Schedule 40S	Schedule 40††	Schedule 10S	Schedule 5S					
40 1½	48.3 1.900	7565 1700	– –	3783 850	2537 570	1.3 0.05	73 2.86	118 4.42	47 1.84	0.7 1.6
50 2	60.3 2.375	11837 2660	– –	5919 1330	3961 890	1.3 0.05	85 3.34	132 5.19	47 1.86	0.7 1.6
65 2½	73.0 2.875	17355 3900	– –	8678 1950	5785 1300	1.3 0.05	100 3.92	143 5.62	47 1.86	0.9 1.9
76.1 mm	76.1 3.000	18868 4240	– –	9434 2120	6297 1415	1.3 0.05	102 4.02	145 5.72	47 1.86	0.9 2.0
80 3	88.9 3.500	25699 5775	– –	12861 2890	8566 1925	1.3 0.05	115 4.54	172 6.78	47 1.86	1.3 2.8
100 4	114.3 4.500	42453 9540	– –	21249 4775	14151 3180	4.8 0.19	147 5.77	201 7.90	53 2.07	1.8 4.0
139.7 mm	139.7 5.500	63413 14250	8273 1200††	31729 7130	21138 4750	6.4 0.25	180 7.07	283 11.13	60 2.38	5.5 12.0
150 6	168.3 6.625	92026 20680	184030 41370††	46015 10340	30685 6895	6.4 0.25	207 8.16	321 12.68	64 2.50	7.0 15.5
165.1 mm	165.1 6.500	88600 19910	8273 1200††	44300 9955	29548 6640	6.4 0.25	207 8.16	321 12.68	64 2.50	7.0 15.5
200 8	219.1 8.625	155995 35055	311870 70110††	78010 17530	52000 11685	6.4 0.25	270 10.63	381 15.00	70 2.75	10.9 24.0
216.3 mm	216.3 8.515	152079 34175	– –	76051 17090	50686 11390	6.4 0.25	270 10.63	381 15.00	70 2.75	10.9 24.0
250 10	273.0 10.750	242345 54460	484500 108920††	121175 27230	80770 18150	6.4 0.25	332 13.09	438 17.25	76 3.00	15.0 33.0
267.4 mm	267.4 10.528	232424 52230	– –	116212 26115	77475 17410	6.4 0.25	332 13.09	438 17.25	76 3.00	15.0 33.0
300 12	323.9 12.750	340890 76605	681520 153210††	170435 38300	113630 25535	6.4 0.25	384 15.13	486 19.13	80 3.13	18.1 40.0
318.5 mm	318.5 12.539	329745 74100	– –	164873 37050	109915 24700	6.4 0.25	384 15.13	486 19.13	80 3.13	18.1 40.0

* Refer to General Notes on pg. x.

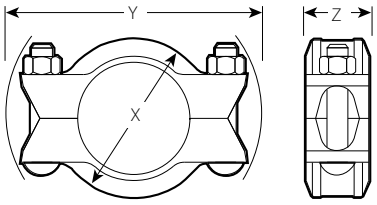
†† Cut grooved, sch. 40S duplex pipe

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 40–100 mm/1½–4" SIZES



TYPICAL 139.7–300 mm/6–12" SIZES

Grooved System for Stainless Steel Pipe – Couplings

Rigid Coupling

STYLE 89

For Complete Information Request Publication **17.24**

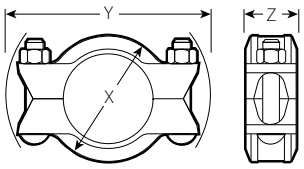
- Rilsan coated ductile iron housing with stainless steel nuts and bolts
- Wider housing key than standard coupling
- Provides an essentially rigid joint
- Pressure rated up to 1200 psi/8273 kPA for Schedule 40S duplex or Standard Wall, 750 psi/5175 kPa for Schedule 40S, 300 psi/2065 kPa for Schedule 10S, and 200 psi/1375 kPa for Schedule 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.24
- Pressure rating for other European wall thicknesses; Contact Victaulic for details
- Sizes from 50–300 mm/2–12"

Size		Max. End Load *				Allow. Pipe End Sep. *	Dimensions			Approx. Wgt.Each
		N Lbs.								
Nominal Size mm Inches	Actual Outside Dia. mm Inches	Schedule 40S	Schedule 40S Duplex †	Schedule 10S	Schedule 5S	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
50 2	60.3 2.375	14774 3320	23676 5320	5919 1330	3961 890	3.6 0.14	89 3.50	168 6.68	51 2.00	1.4 3.1
65 2½	73.0 2.875	21694 4875	34712 7800	8678 1950	5785 1300	3.6 0.14	105 4.13	181 7.13	51 2.00	1.8 4.0
76.1 mm	76.1 3.000	23585 5300	37736 8480	9434 2120	6297 1415	3.6 0.14	105 4.13	184 7.25	51 2.00	1.9 4.1
80 3	88.9 3.500	32107 7215	51444 11560	12861 2890	8566 1925	3.6 0.14	121 4.75	197 7.75	51 2.00	2.0 4.3
100 4	114.3 4.500	53089 11930	84996 19100	21249 4775	14151 3180	6.4 0.25	152 6.00	245 9.63	54 2.13	3.4 7.5
139.7 mm	139.7 5.500	79299 17820	126916 28520	31729 7130	21138 4750	6.4 0.25	181 7.13	270 10.63	60 2.38	5.7 12.5
150 6	168.3 6.625	115035 25850	177200 39820	46015 10340	30685 6895	6.4 0.25	219 8.63	321 12.68	64 2.50	7.3 16.0
165.1 mm	165.1 6.500	110761 24890	184060 41360	44300 9955	29548 6640	6.4 0.25	219 8.63	321 12.68	60 2.38	7.2 15.8
200 8	219.1 8.625	155995 35055	304204 68360	78010 17530	52000 11685	6.4 0.25	279 11.00	381 15.00	70 2.75	11.8 26.1
216.3 mm	216.3 8.515	152079 34175	311940 70100	76051 17090	50686 11390	6.4 0.25	279 11.00	381 15.00	67 2.63	11.4 25.2
250 10	273.0 10.750	242345 54460	464848 104460	121175 27230	80770 18150	6.4 0.25	343 13.50	438 17.25	76 3.00	14.9 32.8
267.4 mm	267.4 10.528	232424 52230	484600 108900	116212 26115	77475 17410	6.4 0.25	340 13.38	432 17.00	700 2.75	14.7 32.5
300 12	323.9 12.750	340890 76605	659492 148200	170435 38300	113630 25535	6.4 0.25	397 15.63	499 19.63	73 2.88	20.9 46.0
318.5 mm	318.5 12.539	329745 74100	681740 153200	164873 37050	109915 24700	6.4 0.25	397 15.63	499 19.63	73 2.88	19.1 42.0
350 – 600 14 – 24	AGS™ See Style W89, pg. 5-4, Request Publication 20.15									

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Grooved System for Stainless Steel Pipe – Couplings

Flexible Coupling

STYLE 77S

For Complete Information Request Publication **17.03**

Size		Max Perm. End Load				Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	N / Lbs.				mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
		Schedule 40S	Schedule 40††	Schedule 10S	Schedule 5S					
20 ¾	26.9 1.050	2893 650	– –	1915 430	1245 280	0 – 1.6 0 – 0.06	53 2.08	99 3.89	43 1.70	0.6 1.2
25 1 ‡	33.7 1.315	4450 1000	7120 1600	3025 680	1960 440	0 – 1.6 0 – 0.06	65 2.54	114 4.50	42 1.66	0.8 1.8
32 1 ¼ ‡	42.4 1.660	7120 1600	11120 2500	4805 1080	3115 700	0 – 1.6 0 – 0.06	73 2.87	122 4.79	45 1.76	0.9 2.0
40 1 ½ ‡	48.3 1.900	9345 2100	15120 3400	6295 1415	4095 920	0 – 1.6 0 – 0.06	82 3.24	122 4.80	45 1.76	1.0 2.2
50 2 ‡	60.3 2.375	14685 3300	23757 5300	9855 2215	6408 1440	0 – 1.6 0 – 0.06	94 3.70	135 5.33	47 1.84	1.2 2.6
65 2 ½ ‡	73.0 2.875	21805 4900	34250 7700	14440 3245	9390 2110	0 – 1.6 0 – 0.06	107 4.20	147 5.79	47 1.84	1.4 3.0
80 3 ‡	88.9 3.500	32040 7200	51150 11500	17133 3850	10702 2405	0 – 1.6 0 – 0.06	123 4.83	178 6.99	47 1.84	1.9 4.1
100 4 ‡	114.3 4.500	28302 6360	84500 19000	24764 5565	15931 3580	0 – 3.2 0 – 0.13	151 5.93	229 9.00	52 2.06	3.1 6.8
150 6	168.3 6.625	46013 10340	– –	30705 6900	19135 4300	0 – 3.2 0 – 0.13	211 8.30	281 11.06	52 2.06	3.9 8.5
200 8	219.1 8.625	77896 17525	– –	32485 7300	19491 4380	0 – 3.2 0 – 0.13	229 11.38	374 14.74	62 2.44	10.7 23.5
250 10	273.0 10.750	121151 27225	– –	30305 6810	20203 4540	0 – 3.2 0 – 0.13	343 13.50	440 17.33	67 2.63	15.0 33.0
300 12	323.9 12.750	170435 38300	– –	71022 15960	42609 9575	0 – 3.2 0 – 0.13	394 15.50	486 19.15	65 2.56	15.9 35.0
350 14 †	355.6 14.000	137060 30800	– –	68530 15400	44500 10000	0 – 3.2 0 – 0.13	421 16.56	519 20.44	71 2.81	16.8 37.0
400 16 †	406.4 16.000	111829 25130	– –	40273 9050	31328 7040	0 – 3.2 0 – 0.13	481 18.94	572 22.52	75 2.94	24.0 53.0
450 18 †	457.0 18.000	113253 25450	– –	45301 10180	33976 7635	0 – 3.2 0 – 0.13	540 21.25	625 24.62	78 3.06	25.0 62.0

* Refer to General Notes on pg. x.

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

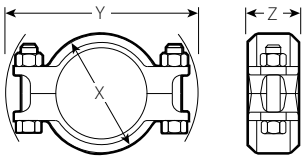
† Not for use with AGS (Advance Groove System) products.

†† Cut grooved, sch. 40S duplex.

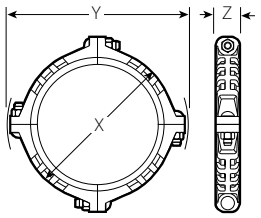
IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

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



TYPICAL 20–350 mm/¾–14" SIZES



TYPICAL 400–450 mm/16–18" SIZES

Grooved System for Stainless Steel Pipe – Couplings

Flexible Coupling

STYLE 475

For Complete Information Request Publication **17.14**

DVGW

- CF8M (316 SS) stainless steel housing for corrosion resistance and strength
- Flexible system accommodates expansion/ contraction/deflection
- Pressure rated up to 750 psi/5175 kPa for Schedule 40S, 500 psi/3447 kPa for Schedule 10S, and 325 psi/2240 kPa for Schedule 5S; For specific pressure ratings by size and schedule, please refer to Publication 17.14
- Pressure rating for other European wall thicknesses; Contact Victaulic for details
- Sizes from 25 – 165.1 mm/1 – 4"

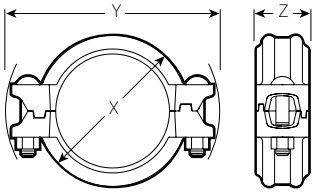
Size		Max. End Load *			Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	N Lbs. Schedule 40S	N Lbs. Schedule 10S	N Lbs. Schedule 5S	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
25 1	33.7 1.315	4539 1020	3026 680	1958 440	0 – 1.6 0 – 0.06	62 2.45	111 4.36	41 1.63	0.7 1.6
32 1 ¼	42.4 1.660	7231 1625	4806 1080	3115 700	0 – 1.6 0 – 0.06	72 2.84	119 4.67	44 1.72	1.1 2.4
40 1 ½	48.3 1.900	9456 2125	6295 1415	4094 920	0 – 1.6 0 – 0.06	82 3.22	120 4.74	44 1.72	1.2 2.6
50 2	60.3 2.375	9857 2215	6898 1550	4450 1000	0 – 1.6 0 – 0.06	84 3.30	128 5.03	46 1.80	0.8 1.7
65 2 ½	73.0 2.875	14463 3250	10124 2275	6497 1460	0 – 1.6 0 – 0.06	99 3.88	142 5.59	46 1.80	0.9 1.9
76.1 mm	76.1 3.000	15731 3535	11014 2475	7076 1590	0 – 1.6 0 – 0.06	102 4.00	146 5.73	46 1.80	0.9 2.0
80 3	88.9 3.500	21405 4810	14997 3370	9657 2170	0 – 1.6 0 – 0.06	114 4.50	169 6.67	46 1.80	1.3 2.9
100 4	114.3 4.500	23007 5170	21250 4775	14150 3180	0 – 3.2 0 – 0.13	146 5.75	202 7.96	51 2.00	1.9 4.2
139.7 mm	139.7 5.500	21138 4750	21138 4750	13217 2970	0 – 3.2 0 – 0.13	173 6.81	228 8.97	51 2.00	2.2 4.9
165.1 mm ‡	165.1 6.500	29550 6640	29550 6640	18470 4150	0 – 3.2 0 – 0.13	200 7.87	268 10.53	51 2.00	3.1 6.8

* Refer to General Notes on pg. x.

‡ Denotes JIS pipe size.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



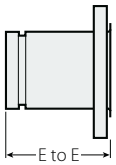
TYPICAL FOR ALL SIZES

Grooved System for Stainless Steel Pipe – Couplings

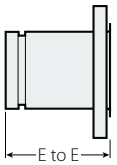
DN Flange Adapter PN10/PN16

STYLE 441N

For Complete Information
Contact Victaulic



STYLE 441N PN10



STYLE 441N PN16

- Pressure rated up to PN10/PN16 Bar
- Sizes from 50–300 mm/2–12"

Size		Style 441N PN10 Flange Adapter		Style 441N PN16 Flange Adapter	
Nominal Size mm Inches	Actual Outside Diameter mm Inches	E to E mm Inches	Approx. Weight Each kg Lbs.	E to E mm Inches	Approx. Weight Each kg Lbs.
DN50 2	60.3 2.375	64 2.52	+	64 2.52	+
DN65	76.1 mm	64 2.52	+	64 2.52	+
DN80 3	88.9 3.500	64 2.52	+	64 2.52	+
DN100 4	114.3 4.500	76 2.99	+	76 2.99	+
DN125	139.7 mm	76 2.99	+	76 2.99	+
DN125 5	141.3 5.563	76 2.99	+	76 2.99	+
DN150 6	168.3 6.625	89 3.50	+	89 3.50	+
DN200 8	219.1 8.625	102 4.02	+	102 4.02	+
DN250 10	273.0 10.750	127 5.00	+	127 5.00	+
DN300 12	323.9 12.750	152 5.98	+	152 5.98	+

+ Contact Victaulic for details.

IMPORTANT NOTES:

All sizes listed except 141.3 mm are supplied with an aluminum flange according to DIN 2642 PN 10/16 type C. Roll grooved nipples are ANSI B16.9 stub end 316L (1.4404) Schedule 10S, except for sizes 76.1 and 139.7 mm, which have a pressed collar NF E 29251 with welded nipple 316L (1.4404).

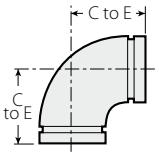
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Grooved System for Stainless Steel Pipe – Fittings

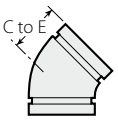
Type 316L Fittings

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

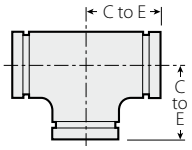
For Complete Information
Request Publication **17.16**



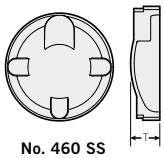
No. 410 SS



No. 411 SS



No. 420 SS



No. 460 SS

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

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

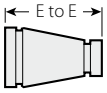
- Offered in a variety of standard fitting configurations
- Sizes to 300 mm/12”

Grooved System for Stainless Steel Pipe – Fittings

Type 316L Concentric Reducer

No. 450 SS

For Complete Information Request Publication **17.16**



No. 450 SS

Size			No. 450 SS Concentric Reducer	
Nominal Size mm Inches			E to E mm Inches	Approx. Weight Each kg Lbs.
50 2	×	40 1 ½	127 5.00	1.1 2.5
65 2 ½	×	50 2	127 5.00	0.49 1.1
80 3	×	65 2 ½	127 5.00	0.7 1.5
100 4	×	80 3	127 5.00	0.9 2.0
150 6	×	80 3	139.7 5.50	3.1 6.9
		100 4	139.7 5.50	3.2 7.0
200 8	×	100 4 (sw)	152.4 6.00	1.9 4.2
		150 6	152.4 6.00	3.2 7.0
250 10	×	150 6 (sw)	177.8 7.00	8.2 18.0
		200 8 (sw)	177.8 7.00	8.9 19.6
300 12	×	200 8 (sw)	203.2 8.00	12.0 26.4
		250 10 (sw)	203.2 8.00	12.9 28.4

Important Note:

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

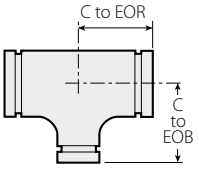
*Schedule 10S, Grade CF8M (Type 316 stainless steel) conforming to ASTM A-351, A743 and A-744.

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

Type 316L Reducing Tee

No. 425 SS

For Complete Information Request Publication **17.16**



No. 425 SS

Size					No. 425 SS Reducing Tee		
Nominal Size mm Inches					C to E Run mm Inches	C to E Branch mm Inches	Approx. Weight Each kg Lbs.
50 2	×	50 2	×	40 1 ½	70.0 2.75	70.0 2.75	0.9 2.0
65 2 ½	×	65 2 ½	×	50 2	77.9 3.07	77.9 3.07	1.1 2.4
80 3	×	80 3	×	65 2 ½	95.7 3.77	82.0 3.23	1.4 3.1
100 4	×	100 4	×	80 3	113.5 4.47	98.5 3.88	2.2 4.9
150 6	×	150 6	×	80 3	150.0 5.91	123.9 4.88	4.0 8.8
				100 4	150.0 5.91	130.0 5.12	4.3 9.5
200 8	×	200 8	×	100 4	197.8 7.79	160.2 6.31	8.2 18.1
				150 6	197.8 7.79	168.1 6.62	8.4 18.5
250 10	×	250 10	×	150 6	225.8 8.89	195.5 7.70	12.8 28.2
				200 8	225.8 8.89	218.1 8.59	14.2 31.3
300 12	×	300 12	×	200 8	263.9 10.39	241.5 9.51	18.2 40.1
				250 10	263.9 10.39	251.2 9.89	21.6 47.6

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 – Fittings

Vic-Ball Valve

SERIES 726S

For Complete Information Request Publication **17.22**

Size		Dimensions											Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Nominal Size mm Inches	Actual Out. Dia. mm Inches	A mm Inches	B mm Inches	C mm Inches	D mm Inches	DA mm Inches	E mm Inches	F mm Inches	H mm Inches	J mm Inches	K mm Inches	L mm Inches	kg Lbs.	K_v Values C_v Values
40 1½	48.3 1.900	130 5.12	51 2.00	60 2.36	32 1.25	38 1.50	45 1.78	48 1.90	76 3.00	7 0.28	14 0.56	177 6.97	2.2 4.0	112.5 130
50 2	60.3 2.375	140 5.50	67 2.64	63 2.48	38 1.50	51 2.00	57 2.25	60 2.38	84 3.31	9 0.34	14 0.56	177 6.97	3.4 7.5	155.7 180
65 2½	73.0 2.875	159 6.25	77 3.03	71 2.80	50 1.97	64 2.50	69 2.72	73 2.88	102 4.00	9 0.34	14 0.56	250 9.84	5.3 11.6	294.1 340
80 3	88.9 3.500	167 6.56	89 3.50	80 3.15	64 2.50	76 3.00	85 3.34	89 3.50	115 4.53	9 0.34	14 0.56	250 9.84	7.8 17.2	519.0 600
100 4	114.3 4.500	210 8.25	—	85 3.35	76 2.99	102 4.00	111 4.33	115 4.52	139 5.48	9 0.34	15 0.61	398 15.67	20.5 45.0	562.3 650
150 6	168.3 6.625	257 10.10	—	115 4.53	102 4.00	152 6.00	164 6.46	169 6.64	165 6.48	9 0.34	15 0.61	459 18.07	37.3 82.0	692.0 800

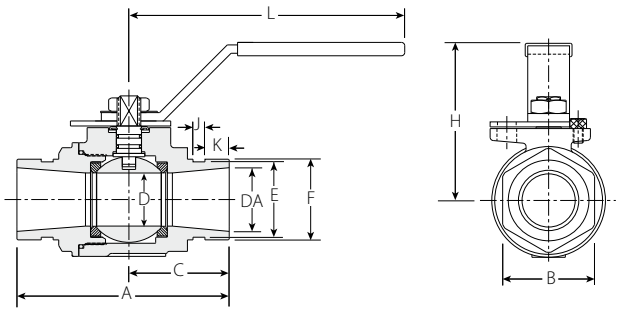
@ K_v/C_v values for flow of water at +16°C/+60°F with valve fully open.

IMPORTANT NOTES:

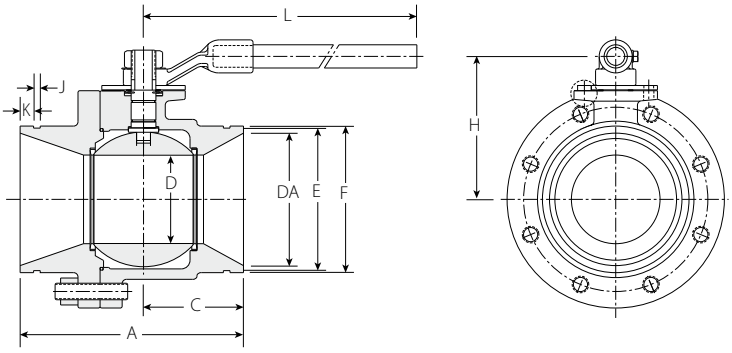
50 – 200 mm/2 – 8" sizes are ISO Flange Designation F07; 250 mm/10" and 300 mm/12" sizes are ISO Flange Designation F10.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

- 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 6900 kPa/1000 psi for sizes 40 – 80 mm/1½ – 3"
- Pressure rated up to 5515 kPa/800 psi for sizes 100 – 150 mm/4 – 6"
- Sizes from 40 – 150 mm/1½ – 6"



TYPICAL 40 – 80 mm/1½ – 3" SIZES



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

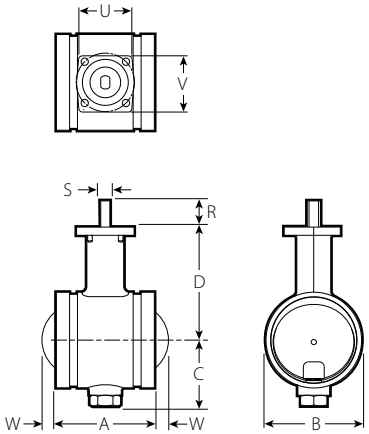
Grooved System for Stainless Steel Pipe – Valves

Butterfly Valve

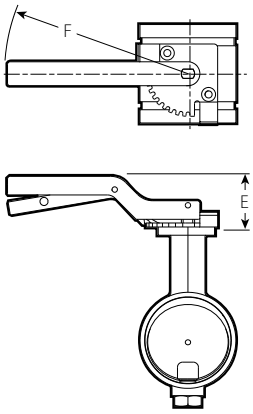
SERIES 763

For Complete Information
Request Publication **17.23**

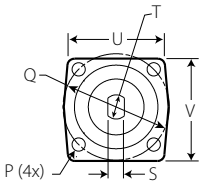
SERIES 763
WITH LEVER HANDLE



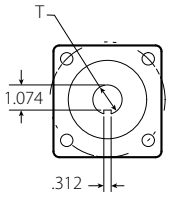
SERIES 763 BUTTERFLY VALVE BARE
TYPICAL FOR ALL SIZES



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



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



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

BARE VALVE AND WITH LEVER LOCK HANDLE

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

- 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 2065 kPa/300 psi bi-directional and dead-end service
- Sizes from 50–250 mm/2–10"

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

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

SERIES 763
WITH POWER ACTUATOR

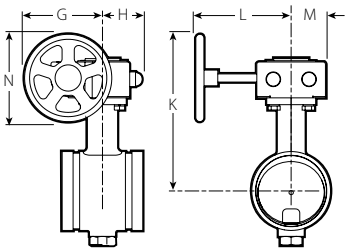
SERIES 763
WITH GEAR OPERATOR

Grooved System for Stainless Steel Pipe – Valves

Butterfly Valve

SERIES 763

For Complete Information
Request Publication **17.23**



TYPICAL FOR ALL SIZES

ALUMINUM GEAR OPERATOR

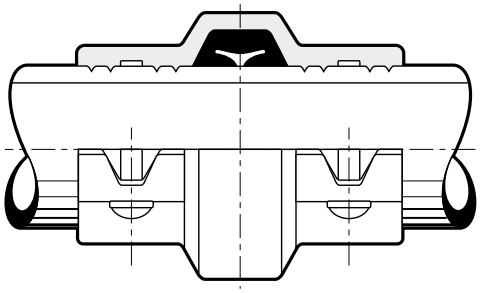
Size		Dimensions						Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	G mm Inches	H mm Inches	K mm Inches	L mm Inches	M mm Inches	N mm Inches	kg Lbs.
50 2	60.3 2.375	92 2.64	44 1.75	178 7.00	109 4.29	40 1.58	100 3.94	3.4 7.4
65 2½	73.0 2.875	92 2.64	44 1.75	182 7.18	109 4.29	40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

STAINLESS STEEL GEAR OPERATOR

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

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 50–500 mm/2–20"



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. 9-2

FM

Transition Coupling – HDPE to Steel

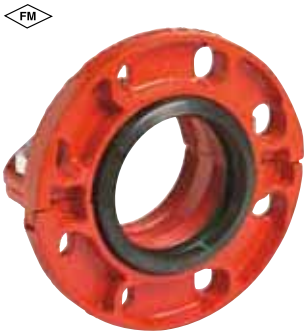
STYLE 997, PG. 9-3

FM

Vic-Flange Adapter ANSI Class 150

STYLE 994, PG. 9-4

FM



HDPE Pipe Dimensions

Size		Dimensions		
		Outside Diameter		
Nominal Size mm Inches	Actual Outside Diameter mm Inches	Size mm Inches	Tol.* mm Inches	Maximum Out of Round Tol.* mm Inches
50 2	60.3 2.375	60.3 2.375	0.406 ± 0.016	1.016 ± 0.040
80 3	88.9 3.500	88.9 3.500	0.406 ± 0.016	1.016 ± 0.040
100 4	114.3 4.500	114.3 4.500	0.508 ± 0.020	1.016 ± 0.040
125 5	141.3 5.563	141.3 5.563	0.635 ± 0.025	1.270 ± 0.050
150 6	168.3 6.625	168.3 6.625	0.762 ± 0.030	1.270 ± 0.050
200 8	219.1 8.625	219.1 8.625	0.990 ± 0.039	1.905 ± 0.075

Size		Dimensions		
		Outside Diameter		
Nominal Size mm Inches	Actual Outside Diameter mm Inches	Size mm Inches	Tol.* mm Inches	Maximum Out of Round Tol.* mm Inches
250 10	273.0 10.750	273.0 10.750	1.219 ± 0.048	1.905 ± 0.075
300 12	323.9 12.750	323.9 12.750	1.448 ± 0.057	1.905 ± 0.075
350 14 †	355.6 14.000	355.6 14.000	1.600 ± 0.063	1.905 ± 0.075
400 16	406.4 16.000	406.4 16.000	1.830 ± 0.072	§
450 18	457.0 18.000	457.0 18.000	2.060 ± 0.081	§
500 20	508.0 20.000	508.0 20.000	2.290 ± 0.090	§

* At ambient temperatures.

§ See pipe manufacturer for maximum out of round tolerance.

† Contact Victaulic for special bolt/nut requirements.

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

PRODUCTS

Plain End Piping System for HDPE Pipe

Coupling

STYLE 995

For Complete Information Request Publication **19.02**

FM

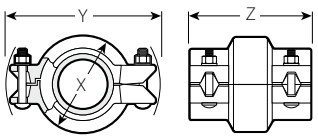
- Sharp gripping teeth on both housing sides grip into outside diameter of HDPE pipe
- Design permits direct joining without fusing equipment
- Sizes from 50–500 mm/2–20"

Size		Dimensions			Approx. Weight Each
Nominal Size mm Inches	Actual Outside Diameter mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
50 2	60.3 2.375	94 3.69	151 5.94	92 3.63	1.6 3.5
80 3	88.9 3.500	118 4.63	178 7.00	116 4.56	3.5 7.7
90†	90.9	116	178	116	3.4
110†	111.0	145	202	146	5.3
100 4	114.3 4.500	149 5.88	207 8.13	148 5.81	5.3 11.6
140†	141.3	176	250	149	6.8
125 5	141.3 5.563	176 6.94	251 9.88	149 5.88	6.8 15.0
160†	161.5	195	268	149	7.3
150 6	168.3 6.625	203 8.00	276 10.88	149 5.88	7.4 16.4
200†	201.8	259	336	152	9.7
200 8	219.1 8.625	259 10.19	377 13.25	152 6.00	11.3 24.9
225†	227.1	265	345	152	10.9
250†	252.3	314	402	165	17.0
250 10	273.0 10.750	314 12.38	403 15.88	165 6.50	17.0 37.4
280†	282.6	321	408	165	17.6
315†	317.9	356	448	178	20.7
300 12	323.9 12.750	365 14.38	457 18.00	178 7.00	22.2 49.0
350 14	355.6 14.000	413 16.25	505 19.88	218 8.58	36.7 81.0
355†	358.2	414	525	218	36.7
400†	403.6	465	605	229	45.5
400 16	406.4 16.000	465 18.30	607 23.88	229 9.00	45.5 100.0
450†	453.8	516	650	241	57.7
450 18	457.0 18.000	516 20.30	651 25.63	241 9.50	57.7 127.0
500†	504.0	566	699	254	64.5
500 20	508.0 20.000	566 22.30	697 27.44	254 10.00	64.5 142.0

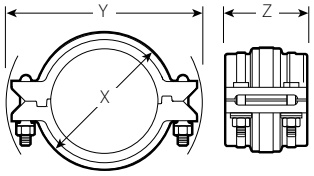
† Available in metric sizes only.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL 80–300 mm/3–12" SIZES (50 mm/2" HAS ONE BOLT PER SIDE)



TYPICAL 350–500 mm/14–20" SIZES

Plain End Piping System for HDPE Pipe

Transition Coupling – HDPE to Steel

STYLE 997

For Complete Information Request Publication **19.03**

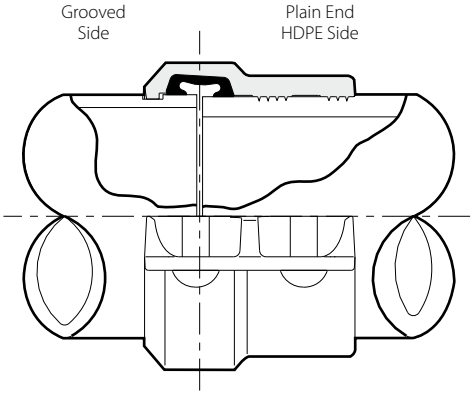
Size		Dimensions			Approx. Weight Each
Nominal Size mm Inches	Actual Outside Diameter mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
50 2	60.3 2.375	84 3.31	133 5.22	71 2.78	1.4 3.0
80 3	88.9 3.500	111 4.38	178 6.99	81 3.20	3.0 6.6
100 4	114.3 4.500	144 5.68	210 8.25	99 3.90	4.0 8.7
125 5	141.3 5.563	172 6.75	248 9.77	101 3.97	5.2 11.5
150 6	168.3 6.625	199 7.84	286 11.25	102 4.00	6.7 14.8
200 8	219.1 8.625	259 10.18	355 13.96	106 4.16	9.8 21.7
250 10	273.0 10.750	321 12.63	427 16.81	116 4.56	15.6 34.3
300 12	323.9 12.750	370 14.58	477 18.76	123 4.85	17.0 37.5

IMPORTANT NOTES:

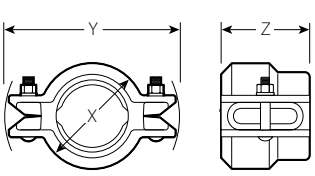
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

FM

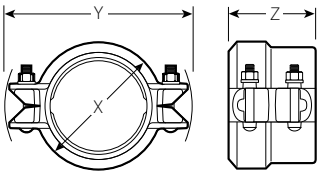
- Fastest and easiest way to join plain end HDPE pipe to grooved steel pipe, valves, and fittings
- Designed for use with HDPE with pipe wall thickness from SDR 32.5 to 7.3
- Grooved side has conventional key section to engage standard roll or cut grooved steel pipe of same size as mating HDPE pipe
- Sizes from 50–300 mm/2–12"



EXAGGERATED FOR CLARITY



TYPICAL 50 mm/2" SIZE



TYPICAL 80–300 mm/3–12" SIZES

Plain End Piping System for HDPE Pipe

Vic-Flange Adapter ANSI Class 150

STYLE 994

For Complete Information Request Publication **19.04**

FM

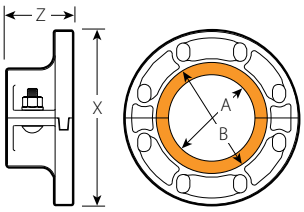
- Permits direct connection of ANSI Class 125 and 150 flanged components into HDPE systems
- Sizes from 100–200 mm/4–8"

Size		Sealing Surface*		Dimensions		Approx. Weight Each
Nominal Size mm Inches	Actual Outside Diameter mm Inches	A Minimum mm Inches	B Maximum mm Inches	X mm Inches	Z mm Inches	kg Lbs.
100 4	114.3 4.500	114 4.50	147 5.78	229 9.00	86 3.38	5.7 12.5
150 6	168.3 6.625	168 6.63	202 7.97	279 11.00	102 4.00	7.8 17.3
200 8	219.1 8.625	220 8.63	254 10.00	343 13.50	114 4.50	14.0 30.8

* 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.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



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 2065 kPa/300 psi
- Line of roll grooving tools available for on-site grooving
- Copper connection system joins 50–150 mm/2–6" copper tubing

Couplings

QuickVic® Rigid Coupling

Style 607, pg. 10-4

Only Available in North America

Rigid Coupling

STYLE 606-EN1057, PG. 10-5

Vic-Flange Adapter

STYLE 641-EN1057, PG. 10-6

Valves

Butterfly Valve

SERIES 608-EN1057, PG. 10-9

Grooved Copper

Style 47 Clearflow Dielectric Waterway Fittings

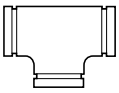
Style 47 Clearflow dielectric waterway fittings provide a simple and effective transition from copper tubing to steel pipe. Available in groove by groove, groove by thread, and thread by thread end configurations, Style 47 dielectric waterways essentially eliminate galvanic cell and stray current problems that lead to corrosion. The inside of the fitting is insulated with a thermoplastic lining that inhibits the internal formation of galvanic cell corrosion that is common when dissimilar metals are in contact.

For details see page 4-10 or request publication 09.07.

Fittings

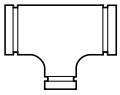
90° Elbow

NO. 610-EN1057, PG. 10-7



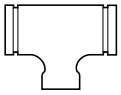
Tee

NO. 620-EN1057, PG. 10-7



Reducing Tee
Grv. × Grv. × Grv.

NO. 625-EN1057, PG. 10-8



Reducing Tee
Grv. × Grv. × Cup

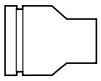
NO. 626-EN1057, PG. 10-8

45° Elbow

NO. 611-EN1057, PG. 10-7

Concentric Reducer
Grv. × Grv.

NO. 650-EN1057, PG.10-8



Concentric Reducer
Grv. × Cup

NO. 652-EN1057, PG. 10-8

Cap

NO. 660-EN1057, PG. 10-7
NO. 660B-EN1057, PG. 10-7

Grooved Copper – Couplings

Performance

The Victaulic copper connection system has been thoroughly tested on 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 with Victaulic Style 606-EN1057 coupling, Style 641-EN1057 Vic-Flange adapter, and roll grooved copper fittings on the indicated types of tubing.

Size	Wall Thickness	Max. Work Pressure*	Max. End Load
mm Inches	mm Inches	kPa psi	N Lbs.
54.0 2.125	1.2 0.05	1600 232	3664 824
54.0 2.125	2.0 0.08	2100 305	4809 1,081
64.0 2.250	2.0 0.08	1600 232	5147 1,157
66.7 2.625	1.2 0.05	1500 220	5241 1,178
66.7 2.625	2.0 0.08	2100 305	7338 1,650
76.1 3.000	1.5 0.06	1600 232	7277 1,636
76.1 3.000	2.0 0.08	1900 275	8642 1,943
88.9 3.500	2.0 0.08	1600 232	9931 2,232
108.0 4.250	1.5 0.06	1600 232	14657 3,295
108.0 4.250	2.5 0.10	1800 260	16490 3,707
133.0 5.236	1.5 0.06	1500 220	20839 4,685
133.0 5.236	3.0 0.12	1600 232	22229 4,997
159.0 6.260	2.0* 0.08	1500 220	29783 6,695
159.0 6.260	3.0 0.12	1500 220	29783 5,803

* When combined with older No. 610 and No. 611 elbows size 159.0 mm/6.260", made of wrought material, the maximum joint working pressure rating for Style 606 couplings is reduced to 1000 kPa/145 psi. Cast elbows size 159.0 mm/6.260" are rated to 1500 kPa/220 psi. Note that these older products may still be in stock with Victaulic and its distributors.

IMPORTANT NOTES:

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.

For one time field test only, the Max. 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.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Grooved Copper

QuickVic® Rigid Coupling

Style 607

For Complete Information Request Publication **22.13**

- Installation-ready design
- Eliminates brazing and soldering
- Angled-pad design creates a rigid joint
- Pressure rated up to 2065kPa/ 300psi
- Sizes from 50-100mm/2-4" to fit copper tubing (CTS)

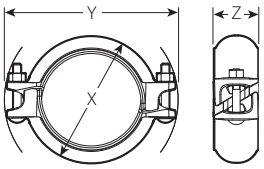
Only Available in North America

Size	Allow. Pipe End Sep.	@ Bolt/Nut No. – Size	Dimensions – mm/Inches					Aprx. Wgt. Ea.
TUBING Actual mm Nominal Inches	mm Inches	mm Inches	Pre-assembled (Installation-ready condition)		Joint Assembled			kg Lbs.
			X	Y	X	Y	Z	
54.0 2	4 0.16	2 – ⅜ x 2½	92 3.63	138 5.50	86 3.38	138 5.50	51 2.00	0.9 1.9
66.7 2.5	4 0.16	2 – ⅜ x 2½	106 4.19	152 6.00	100 3.94	152 6.00	51 2.00	1.0 2.2
79.4 3	4 0.16	2 – ½ x 3	121 4.75	178 7.00	114 4.50	178 7.00	51 2.00	1.4 3.0
104.8 4	4 0.16	2 – ½ x 3	143 5.63	203 8.00	137 5.38	203 8.00	51 2.00	1.6 3.6
130.2 5	4 0.16	2 – ⅝ x 3 ¼	168 6.63	245 9.63	163 6.38	245 9.63	51 2.00	2.4 5.2
155.6 6	4 0.16	2 – ⅝ x 3 ¼	197 7.75	270 10.63	191 7.50	270 10.63	51 2.00	2.6 5.8
206.4 8	4 0.16	2 – ⅝ x 4	251 9.88	324 12.75	245 9.63	324 12.75	51 2.00	3.5 7.7

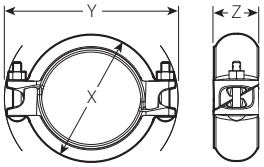
† The allowable pipe separation dimension shown is for system layout purposes only. Style 607 QuickVic rigid couplings for copper are considered rigid connections and will not accommodate expansion or contraction of the piping system.

@ Number of bolts required equals number of housing segments.

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



STYLE 607 PRE-ASSEMBLED (INSTALLATION-READY CONDITION)



STYLE 607 JOINT ASSEMBLED

Grooved Copper – Couplings

Rigid Coupling

STYLE 606-EN1057

For Complete Information Request Publication **22.11**

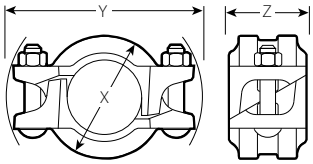
- Eliminates brazing or soldering
- Unique patented angled-pad creates a rigid joint
- Pressure rated up to 2065 kPa/300 psi
- Sizes from 54.0–159.0 mm/ 2–6" to fit copper tubing (EN1057)

Size	Allow Pipe End Sep. #	Dimensions			Approx. Weight Each
Actual Size mm Inches	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
54.0 2.125	0.76 0.03	81 3.17	118 4.63	46 1.80	0.7 1.54
64.0 2.250	0.76 0.03	89 3.50	129 5.08	46 1.80	0.9 1.98
66.7 2.625	0.76 0.03	93 3.67	130 5.13	46 1.80	0.9 1.98
76.1 3.000	0.76 0.03	103 4.05	152 5.97	46 1.80	1.1 2.42
88.9 3.500	0.76 0.03	116 4.57	162 6.38	46 1.80	1.4 3.1
108.0 4.250	4.30 0.17	138 5.44	181 7.14	49 1.94	1.7 3.75
133.0 5.236	4.60 0.18	165 6.50	229 9.01	50 1.97	2.5 5.51
159.0 6.260	4.60 0.18	191 7.53	255 10.02	49 1.94	2.9 6.39

For field installation only. Style 606-EN1057 is essentially rigid and does not permit expansion/contraction.

IMPORTANT NOTES:

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Grooved Copper – Couplings

Vic-Flange Adapter

STYLE 641-EN1057

For Complete Information Request Publication **22.11**

- Direct connection from flanged components to grooved copper tubing
- Integral tabs ease handling
- Sizes from 54.0–159.0 mm/2–6" to fit copper tubing (EN1057)

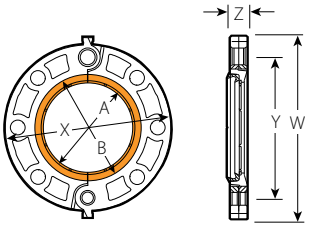
Size	Sealing Surface		Dimensions				Approx. Weight Each
Actual mm Nominal Inches	A Maximum mm Inches	B Minimum mm Inches	W mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
54.0 2.125	54 2.13	78 3.07	175 6.89	152 6.00	125 4.92	20 0.78	1.7 3.75
64.0 2.250	64 2.25	89 3.50	214 8.43	185 7.28	145 5.71	22 0.88	2.1 4.63
66.7 2.625	67 2.64	92 3.62	200 7.87	178 7.00	145 5.71	22 0.88	2.1 4.63
76.1 3.000	76 2.99	101 3.98	208 8.19	185 7.28	145 5.71	20 0.78	2.5 5.51
76.1 3.000	76 2.99	101 3.98	215 8.48	200 7.87	160 6.30	22 0.88	2.5 5.51
88.9 3.500	89 3.50	114 4.49	220 8.66	200 7.87	160 6.30	22 0.88	2.8 6.20
108.0 4.250	108 4.25	133 5.24	243 9.57	220 8.66	180 7.09	24 0.94	3.1 6.84
133.0 5.236	133 5.24	160 6.30	274 10.78	249 9.84	210 8.27	25 1.00	3.9 8.60
159.0 6.260	159 6.26	186 7.32	307 12.09	285 11.22	240 9.45	26 1.02	4.5 9.92

IMPORTANT NOTES:

Style 641-EN1057 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 22.11.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

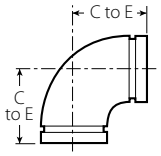
Orange area of mating face must be free from gouges, undulations or deformities of any type for effective sealing.

Grooved Copper – Fittings

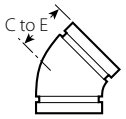
Elbows, Tee and Caps – EN1057 Standard

NO. 610-EN1057 90° Elbow
NO. 611-EN1057 45° Elbow
NO. 620-EN1057 Tee
NO. 660-EN1057 Cap

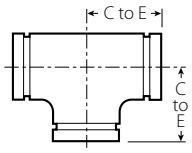
For Complete Information Request Publication **22.11**



NO. 610-EN1057



NO. 611-EN1057



NO. 620-EN1057

NO. 660-EN1057

Size	No. 610-EN1057 90° Elbow		No. 611-EN1057 45° Elbow		No. 620-EN1057 Tee		No. 660-EN1057 Cap	
Actual Size mm Inches	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.	T mm Inches	Approx. Weight Each kg Lbs.
54.0 2.125	74.0 2.91	0.4 0.9	56.0 2.19	0.4 0.9	68.0 2.69	0.5 c 1.1	24 0.96	0.5 c 1.0
64.0 2.250	84.0 3.31	0.6 1.3	59.0 2.31	0.5 1.1	81.0 3.20	0.8 c 1.8	+	+
66.7 2.625	84.0 3.31	0.6 c 1.3	59.0 2.31	0.5 1.1	81.0 3.20	0.8 c 1.8	24 0.96	0.6 c 1.3
76.1 3.000	96.8 3.81	1.0 c 2.1	66.0 2.59	0.7 1.6	89.3 3.52	1.5 c 3.3	+	+
88.9 3.500	109.0 4.29	1.7 c 3.7	+	+	90.0 3.54	1.5 3.3	24 0.96	0.6 c 1.3
108.0 4.250	121.0 4.75	1.8 c 4.0	81.0 3.19	1.5 c 3.4	108.0 4.25	2.8 c 6.1	24.4 0.96	1.1 2.4
133.0 5.236	151.0 5.94	6.4 c 14.0	+	+	151.0 5.94	10.0 c 22.1	+	+
159.0 6.260	176.0 6.94	9.1 c 20.1	92.0 3.63	5.9 c 13.0	176.0 6.94	13.2 c 29.1	+	+

c = Bronze casting; all others, drawn copper.
\+ Contact Victaulic for details.

IMPORTANT NOTES:
Designed for installation into copper systems using either a Style 606-EN1057 coupling or Style 641-EN1057 Vic-Flange adapter.
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Bronze (RG12) Cap with Concentric Threaded Hole

NO. 660B-EN1057 Cap

For Complete Information Request Publication **22.11**

NO. 660B-EN1057

Size			No. 660B-EN1057 Cap
Actual Size mm Inches			Approx. Weight Each kg Lbs.
54.0 2.125	×	25.4 1	0.3 0.7
64.0 2.250	×	25.4 1	0.3 0.7
76.1 3.000	×	25.4 1	0.3 0.7
88.9 3.500	×	25.4 1	0.6 1.3
88.9 3.500	×	50.8 2	+

\+ Contact Victaulic for details.

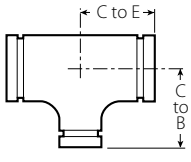
IMPORTANT NOTES:
Designed for installation into copper systems using either a Style 606-EN1057 coupling or Style 641-EN1057 Vic-Flange adapter.
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Grooved Copper – Fittings

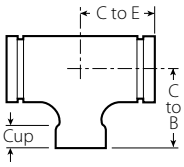
Reducing Tee – EN1057 Standard

NO. 625-EN1057 Grv. × Grv. × Grv.
NO. 626-EN1057 Grv. × Grv. × Cup

For Complete Information Request Publication **22.11**



NO. 625-EN1057



NO. 626-EN1057

Size				No. 625-EN1057 Grv. × Grv. × Grv.			No. 626-EN1057 Grv. × Grv. × Cup			
Actual Outside Dia. mm Inches				C to E mm Inches	C to B mm Inches	Approx. Wgt. kg Lbs.	C to E mm Inches	C to B mm Inches	Cup mm Inches	Approx. Wgt. kg Lbs.
54.0 2.125	×	54.0 2.125	× 35.0 1.378	—	—	—	125 4.92	78 3.07	25 0.98	0.6 1.3
			42.0 1.654	—	—	—	125 4.92	78 3.07	29 1.14	0.4 0.9
67.0 2.626	×	67.0 2.626	× 35.0 1.378	—	—	—	125 4.92	85 3.35	25 0.98	0.8 1.8
			42.0 1.654	—	—	—	125 4.92	85 3.35	29 1.14	0.6 1.3
			54.0 2.125	83 3.27	86 3.39	0.7 c 1.5	—	—	—	—
76.1 3.000	×	76.1 3.000	× 35.0 1.378	—	—	—	125 4.92	89 3.50	25 0.98	0.9 2.0
			42.0 1.654	—	—	—	125 4.92	89 3.50	29 1.14	0.9 2.0
			54.0 2.125	76 2.99	86 3.39	1.0 c 2.2	—	—	—	—
			66.7 2.626	83 3.27	89 3.50	1.1 c 2.4	—	—	—	—
108.0 4.252	×	108.0 4.252	× 35.0 1.378	—	—	—	150 5.91	105 4.13	25 0.98	1.5 3.3
			42.0 1.654	—	—	—	103 4.06	100 3.94	42 1.65	1.6 3.5
			66.7 2.626	100 3.94	103 4.06	2.6 c 5.7	—	—	—	—
			76.1 3.000	106 4.17	106 4.17	4.6 c 10.1	—	—	—	—
133.0 5.236	×	133.0 5.236	× 35.0 1.378	—	—	—	99 3.90	96 3.78	25 0.98	1.9 4.2
			42.0 1.654	—	—	—	103 4.06	100 3.94	42 1.65	2.2 4.9
			54.0 2.125	+	+	+	—	—	—	—
			67.0 2.626	+	+	+	—	—	—	—
			76.1 3.000	+	+	+	—	—	—	—
			108.0 4.252	+	+	+	—	—	—	—
159.0 6.260	×	159.0 6.260	× 35.0 1.378	—	—	—	99 3.90	109 4.29	25 0.98	2.2 4.9
			42.0 1.654	—	—	—	103 4.06	113 4.45	29 1.14	2.3 5.1
			54.0 2.125	+	+	+	—	—	—	—
			66.7 2.626	+	+	+	—	—	—	—
			76.1 3.000	+	+	+	—	—	—	—
			108.0 4.252	106 4.17	130 5.12	4.4 c 9.7	—	—	—	—
			133.0 5.236	119 4.69	132 5.20	5.1 11.2	—	—	—	—

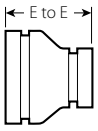
c = Bronze casting; all others, drawn copper.
\+ Contact Victaulic for details.

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

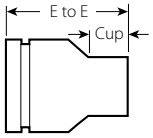
Concentric Reducer – EN1057

NO. 650-EN1057 Grv. × Grv.
NO. 652-EN1057 Grv. × Cup

For Complete Information Request Publication **22.11**



NO. 650-EN1057



NO. 652-EN1057

Size			No. 650-EN1057 & No. 652-EN1057 Grv. × Grv. & Grv. × Cup		
Actual Outside Dia. mm Inches			E to E mm Inches	Cup mm Inches	Approx. Wgt. Each kg Lbs.
54.0 2.125	×	35.0* 137.8	+	+	+
		42.0* 1.654	75 2.95	+	0.2 0.4
64.0 2.250	×	54.0 2.125	+	—	+
66.7 2.626	×	35.0* 1.378	+	+	+
		42.0* 1.654	88 3.46	+	0.3 0.7
		54.0 2.125	83 3.27	86 3.39	0.7 1.5
76.1 3.000	×	54.0 2.125	64 2.52	—	0.4 c 0.9
		64.0 2.250	64 2.52	—	0.5 c 1.0
		66.7 2.626	64 2.52	—	0.5 c 1.0
88.9 3.500	×	54.0 2.125	76 2.99	—	0.9 c 2.0
		64.0 2.250	+	—	+
		76.1 3.000	76 2.99	—	0.9 c 2.0
108.0 4.252	×	54.0 2.125	+	—	+
		64.0 2.250	+	—	+
		66.7 2.626	76 2.99	—	0.9 c 2.0
		76.1 3.000	76 2.99	—	0.9 c 2.0
		88.9 3.500	76 2.99	—	+ c
133.0	×	76.1 3.000	+	—	+
		108.0 4.252	+	—	+
159.0 6.260	×	54.0 2.125	+	—	+
		66.7 2.626	+	—	+
		76.1 3.000	+	—	+
		108.0 4.252	+	—	+
		133.0 5.236	+	—	+

* No. 652-EN1057; Cup connection
c = Bronze casting; all others, drawn copper.
\+ Contact Victaulic for details.

IMPORTANT NOTES:
Sizes shown are nominal DN sizes, except where actual mm sizes are shown.

Grooved Copper – Valves

Butterfly Valve

SERIES 608-EN1057

For Complete Information Request Publication **22.11**

- Dead end service provided to full working pressure in both directions
- Pressure rated up to 2065 kPa/300 psi bubble-tight shut-off
- Sizes from 66.7 – 76.1 mm/ 2½ – 3" EN1057

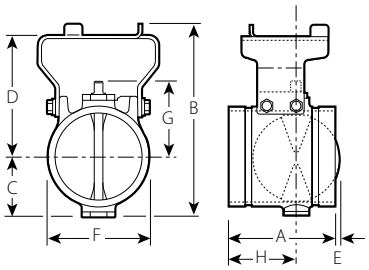
Size	Dimensions								Approx. Wgt. Each	Flow Coefficient@ (Fully Open)
Actual Size mm Inches	A End to End mm Inches	B Height mm Inches	C mm Inches	D mm Inches	E mm Inches	F mm Inches	G mm Inches	H mm Inches	w/o Oper. kg Lbs.	K_V Values C_V Values
66.7 2.625	96 3.77	121 4.77	42.93 1.69	75.18 2.96	—	63.5 2.5	55.1 2.17	59 2.31	1.9 4.1	281.1 325
76.1 3.000	96 3.77	137 5.39	50.80 2.00	83.1 3.27	2 0.08	76.2 3.00	63.0 2.48	59 2.31	2.2 4.8	415.2 480

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

IMPORTANT NOTES:

All Series 608-EN1057 butterfly valves are bronze castings.

Sizes shown are nominal DN sizes, except where actual mm sizes are shown.



TYPICAL FOR ALL SIZES

Grooved System for Aluminium Pipe

- Fast, easy and reliable method for joining aluminium pipe
- Fittings are supplied with grooves, ready to install
- Couplings and fittings cast of an aluminium alloy prepared for strength and durability

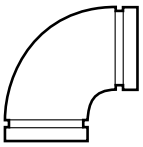
Couplings

Flexible Coupling
STYLE 77-A, PG. 11-2

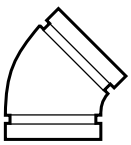
Snap-Joint Coupling
STYLE 78-A, PG. 11-3

Fittings

90° Elbow
NO. 10-A, PG. 11-4



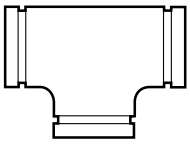
45° Elbow
NO. 11-A, PG. 11-4



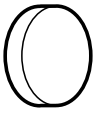
Reducer
NO. 50-A, PG. 11-5

Adaptor Nipple Grv. x Bev.
NO. 42-A, PG. 11-5

Tee
NO. 20-A, PG. 11-4



Cap
NO. 60-A, PG. 11-4



Adaptor Nipple Grv. x Thd.
NO. 40-A, PG. 11-5

Adaptor Nipple Grv. x Grv.
NO. 43-A, PG 11-5

PRODUCTS

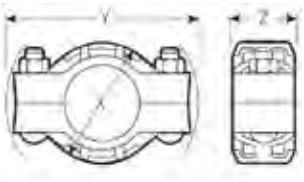
Grooved System for Aluminium Pipe – Couplings

Flexible Coupling

STYLE 77-A

For Complete Information Request Publication **21.01**

- Designed with cross-ribbed construction
- Provides rugged, flexible mechanical joint for aluminium piping systems
- Cast of an aluminum alloy prepared for strength and durability with minimum weight
- Available in sizes 33.7 – 219.1 mm/1 – 8"



Size	Max. Work Pressure*	Max. End Load	Allow. Pipe End Sep. †	Dimensions			Approx. Wgt. Each
Actual mm Nominal Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
33.7 1	3450 500	2890 650	0 – 1.6 0 – 1/16	61 2.38	105 4.12	44 1.75	0.3 0.6
42.4 1 1/4	3450 500	4670 1050	0 – 1.6 0 – 1/16	69 2.70	125 4.91	45 1.77	0.4 0.9
48.3 1 1/2	3450 500	5230 1400	0 – 1.6 0 – 1/16	77 3.03	133 5.23	45 1.77	0.5 1.1
60.3 2	3450 500	9790 2200	0 – 1.6 0 – 1/16	99 3.88	147 5.77	48 1.88	0.6 1.3
73.0 2 1/2	3450 500	14240 3200	0 – 1.6 0 – 1/16	108 4.25	162 6.38	48 1.88	0.7 1.5
88.9 3	3450 500	20025 4500	0 – 1.6 0 – 1/16	127 5.00	179 7.04	48 1.88	0.8 1.8
114.3 4	3450 500	35600 8000	0 – 3.2 0 – 1/8	162 6.38	223 8.78	54 2.13	0.4 3.0
141.3 5	3450 500	53400 12000	0 – 3.2 0 – 1/8	195 7.66	266 10.47	54 2.13	2.3 5.1
168.3 6	3450 500	75650 17000	0 – 3.2 0 – 1/8	229 9.00	299 11.77	54 2.13	2.7 6.0
219.1 8	2700 400	104575 23500	0 – 3.2 0 – 1/8	276 10.88	374 14.73	64 2.50	4.5 10.0
323.9 12	2070 300	170400 38300	0 – 3.2 0 – 1/8	394 15.50	486 19.15	65 2.56	5.9 13.0

* Many pipe manufacturers (extruders) roll groove alloys 6061-T6 and 6063-T6 as the point of manufacture. Roll grooving is done successfully prior to the final T6 tempering of the pipe. Often pipe in the T6 tempered state cracks when roll grooved, depending upon the pipe's mechanical properties, which vary from pipe to pipe. Victaulic has no control over these varying properties and cannot assure that the T6 tempered grades can be successfully roll grooved.

Pressure Ratings and End Loads for cut grooved pipe are based upon tests on pipe prepared in accordance with Victaulic specifications.

Pressure Ratings and End Loads for roll grooved pip are based upon tests on pipe prepared in accordance with Victaulic specifications using Victaulic Vic-Easy Roll Grooving tools. Use of other equipment may adversely affect joint performance.

Aluminum pipe ratings are based on: alloy 6061-T4/6063-T4 – Schedule 80 cut grooved, Schedule 40 toll or cut grooved, Schedule 30 – 8, 10 and 12" toll or cut grooved, schedule 5, 10 and 20 roll grooved ONLY; or alloy 6061-T6/6063-T6 – Schedule 40/80 cut grooved ONLY, schedule 30 – 8, 10 and 12" cut grooved ONLY, Schedule 5, 10 and 20 grooving is NOT RECOMMENDED.

† Allowable Pipe End Separation and Deflection figured show the maximum nominal range of movement available at each joint for standard roll grooved pipe. Figured or standard cut grooved pipe may be doubled. These figured are maximums; for design and installation purposes these figured should be reduced by: 50% for 26.9 – 101.6 mm (¾ - 3 ½"); 25% for 114.3 mm (4") and larger.

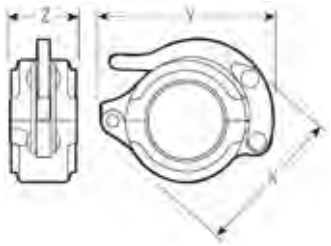
Grooved System for Aluminium Pipe – Couplings

Snap-Joint Coupling

STYLE 78-A

For Complete Information Request Publication **21.02**

- Provides quick disconnect joint
- Provides a rugged, flexible mechanical joint for use on aluminum piping systems
- Cast of an aluminum alloy prepared for strength and durability with minimum weight
- Available in 50 and 250mm (2 and 10") sizes



Nominal Size	Actual Size	Max. Work Pressure*	Max. End Load	Allow. Pipe End Sep. †	Dimensions			Approx. Wgt. Each
mm Inches		kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
50 2	60.3 2.375	2065 300	28170 6330	0 – 1.6 0 – 0.06	102 4.00	124 4.88	47 1.84	0.5 1.2
250 10	273.0 10.750	345 50	20180 4535	0 – 3.2 0 – 0.13	332 13.06	389.5 15.60	64 2.50	4.5 9.9

* Many pipe manufacturers (extruders) roll groove alloys 6061-T6 and 6063-T6 as the point of manufacture. Roll grooving is done successfully prior to the final T6 tempering of the pipe. Often pipe in the T6 tempered state cracks when roll grooved, depending upon the pipe's mechanical properties, which vary from pipe to pipe. Victaulic has no control over these varying properties and cannot assure that the T6 tempered grades can be successfully roll grooved.

Pressure Ratings and End Loads for cut grooved pipe are based upon tests on pipe prepared in accordance with Victaulic specifications.

Pressure Ratings and End Loads for roll grooved pip are based upon tests on pipe prepared in accordance with Victaulic specifications using Victaulic Vic-Easy Roll Grooving tools. Use of other equipment may adversely affect joint performance.

Aluminum pipe ratings are based on: alloy 6061-T4/6063-T4 – Schedule 80 cut grooved, Schedule 40 toll or cut grooved, Schedule 30 – 8, 10 and 12" toll or cut grooved, schedule 5, 10 and 20 roll grooved ONLY; or alloy 6061-T6/6063-T6 – Schedule 40/80 cut grooved ONLY, schedule 30 – 8, 10 and 12" cut grooved ONLY, Schedule 5, 10 and 20 grooving is NOT RECOMMENDED.

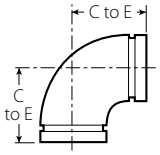
† Allowable Pipe End Separation and Deflection figured show the maximum nominal range of movement available at each joint for standard roll grooved pipe. Figured or standard cut grooved pipe may be doubled. These figured are maximums; for design and installation purposes these figured should be reduced by: 50% for 26.9 – 101.6 mm (¾ - 3 ½"); 25% for 114.3 mm (4") and larger.

Grooved System for Aluminium Pipe – Fittings

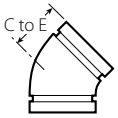
Elbow, Tee and Cap

NO. 10-A 90° Elbow
NO. 11-A 45° Elbow
NO. 20-A Tee
NO. 60-A Cap

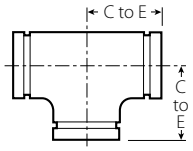
For Complete Information
Request Publication **21.03**



NO. 10-A



NO. 11-A



NO. 20-A

NO. 60-A

Size		No. 10-A 90° Elbow		No. 11-A 45° Elbow		No. 20-A Tee		No. 60-A † Cap	
Nominal Size mm Inches	Pipe Outside Dia. mm Inches	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.	C to E mm Inches	Approx. Weight Each kg Lbs.	Thickness T mm Inches	Approx. Weight Each kg Lbs.
25 1	33 1.315	57 2.25	0.1 0.2	44 1.75	0.1 0.1	57 2.25	0.2 0.4	22 0.88	0.1 0.1
40 1 ½	48 1.900	70 2.75	0.2 0.4	44 1.75	0.1 0.3	70 2.75	0.3 0.7	22 0.88	0.1 0.2
50 2	60 2.375	83 3.25	0.3 0.7	51 2.00	0.2 0.5	83 3.25	0.5 1.0	22 0.88	0.1 0.3
65 2 ½	73 2.875	95 3.75	0.5 1.0	57 2.25	0.3 0.7	95 3.75	0.7 1.5	22 0.88	0.1 0.3
80 3	89 3.500	108 4.25	0.7 1.6	64 2.50	0.6 1.3	108 4.25	1.0 2.3	22 0.88	0.2 0.5
100 4	114 4.500	127 5.00	1.4 3.0	75 3.00	0.9 1.9	127 5.00	1.9 4.1	25 1.00	0.4 1.0
125 5	141 5.563	140 5.50	2.4 5.2	83 3.25	1.5 3.3	140 5.50	3.0 6.7	25 1.00	1.0 2.1
150 6	168 6.625	165 6.50	3.0 6.5	89 3.50	2.4 5.2	165 6.50	4.1 9.1	25 1.00	1.4 3.0
200 8	219 8.625	197 7.75	6.4 14.0	108 4.25	3.7 8.2	197 7.75	8.4 18.4	30 1.19	2.7 6.0

† Cap does not extend beyond coupling when assembled.

Grooved System for Aluminium Pipe

Reducer

NO. 50-A

For Complete Information
Request Publication **21.03**

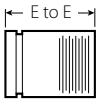
NO. 50-A

Size			E to E†	Approx. Weight Each
mm Inches			mm Inches	kg Lbs.
40 1 ½	×	25 1	64 2.50	0.1 0.2
50 2	×	25 1	64 2.50	0.1 0.2
		40 1 ½	64 2.50	0.1 0.3
80 3	×	25 1	64 2.50	0.3 0.7
		50 2	64 2.50	0.3 0.6
		65 2 ½	64 2.50	0.2 0.5
100 4	×	25 1	76 3.00	0.4 0.9
		50 2	76 3.00	0.5 1.1
		65 2 ½	76 3.00	0.5 1.0
150 6	×	80 3	102 4.00	1.0 2.3
		100 4	102 4.00	1.0 2.3
200 8	×	100 4	127 5.00	2.7 6.0
		160 6	127 5.00	2.7 6.0

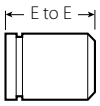
Adaptor Nipples

NO. 40-A Grv. x Thd.
NO. 42-A Grv. x Bev.
NO. 43-A Grv. x Grv.

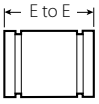
For Complete Information
Request Publication **21.03**



NO. 40-A



NO. 42-A



NO. 43-A

Size	E to E†	Approx. Weight Each
mm Inches	mm Inches	kg Lbs.
25 1	76 3.00	0.1 0.3
40 1 ½	102 4.00	0.2 0.4
50 2	102 4.00	0.2 0.5
65 2 ½	102 4.00	0.3 0.6
80 3	102 4.00	0.4 0.8
100 4	125 6.00	0.7 1.5
125 5	125 6.00	1.1 2.5
150 6	125 6.00	1.5 3.3
200 8	125 6.00	2.3 5.0

* Made of standard weight aluminum
† Other lengths available. Contact Victaulic for details.

Victaulic Depend-O-Lok Joining System

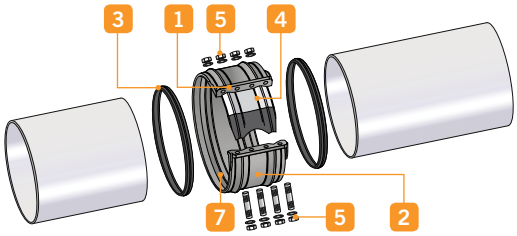
The Victaulic Depend-O-Lok joining system represents a new generation of technologically advanced couplings.

The design of Victaulic 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 and provides a reliable, economical alternative to traditional bolted sleeve-type couplings.

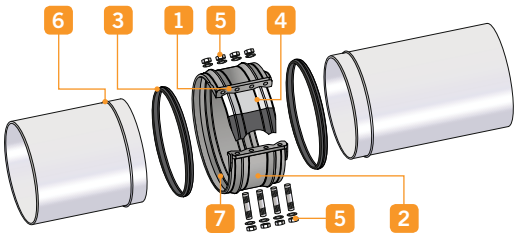
For Complete Information Request Publication **PB-257**

E × E Request Publication 60.10
F × F Request Publication 60.11
F × E Request Publication 60.12

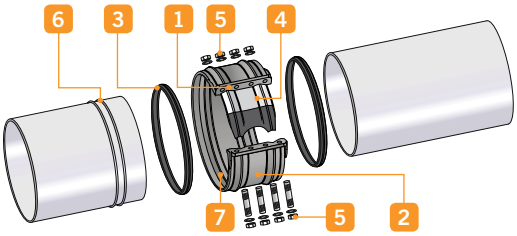
Victaulic Depend-O-Lok Couplings



(E × E) Bolted Split-Sleeve Flexible Coupling
Unrestrained, flexible bottle-tight joints



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



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

Coupling Components and Benefits

1 CLOSURE PLATES

Simplify installation by enabling the coupling to seal with fewer bolts (than ordinary sleeve type couplings), and to pull pipes into alignment. This also allows the coupling to be provided in multiple segments, when needed, for ease of handling or installation on existing pipe.

2 SPLIT-SLEEVE (BODY)

Designed for both high and low pressure applications and maximum pipe protection on “out of round” pipe. The “double arch” shape of the sleeve provides high section modulus and strengthens the pipe joint. Coupling installation is accomplished without the need for jacks, wedges, or sledge hammers. Harness lugs, if required, can be shorter.

3 O-RINGS

Proven effective during more than 80 years of use.

4 SEALING PLATE/PAD

Ensures leak-tight seal on joints.

5 BOLTS AND NUTS

Sized to provide yield strength greater than the hoop strength of the coupling body, and utilize flat washers. Stainless steel or hot dipped galvanized bolts are available.

6 RESTRAINT RINGS (PROVIDED)

Must be welded to pipe ends providing the means by which the D-O-L coupling restrains the pipe within the coupling.

7 SHOULDERS

The shoulders close over the pipe on the outside of the restraint rings to provide end load resistance.

Victaulic Depend-O-Lok Joining System

Victaulic Depend-O-Lok couplings are made to meet the individual needs of piping projects. With this ability to customize the coupling to the project specifications Victaulic Depend-O-Lok products are used on a wide variety of systems.

One of the more unusual applications for the Victaulic Depend-O-Lok couplings was a fish bypass line that was installed to help salmon avoid a river dam in their annual migration. Victaulic Depend-O-Lok couplings allowed for the expansion and contraction needed for this type of system while also reducing installation time and costs.

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
- 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

  Victaulic Depend-O-Lok Bolted Split-Sleeve Expansion Couplings
  Accommodates expansion/ contraction up to 165.1 mm/6 ½"

  Paragon Expansion Joints
  Fabricated mechanical expansion joints

Vic-Ring System

- Designed with cross-ribbed construction to provide a strong component for Vic-Ring adaptor prepared piping systems
- Available in sizes up to 1675mm/66"

Couplings

Vic-Ring Coupling

STYLE 22, PG. 13-2

Vic-Ring Coupling

STYLE 31, PG. 13-3

Vic-Ring Coupling

STYLE 41, PG. 13-4

Vic-Ring Coupling

STYLE 44, PG. 13-5

Vic-Ring – Couplings

Vic-Ring Coupling

STYLE 22

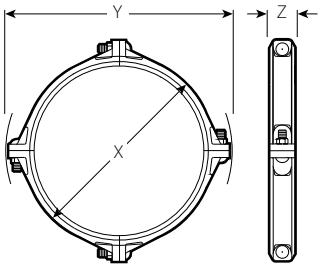
For Complete Information Request Publication **16.02**

- Designed with cross-ribbed construction to provide a strong component for Vic-Ring adaptor prepared piping systems
- Primarily for use with Type “A” Vic-Ring adapters, depending upon sizes and pressures
- Sizes 425-600 mm (17-24") case in four segments; 750-900 mm (30-36") in six segments; and 1500 mm (60") in 10 segments, to assure concentricity and ease of handling
- Available in sizes 425-1500 mm (17-60")

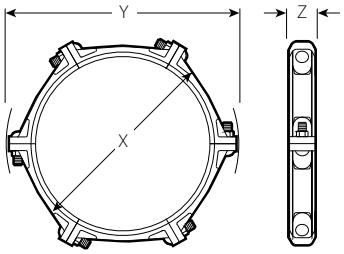
Size		Max. Joint Work Pressure†	Max. Permiss. End Load	Max. Allow. Pipe End Movement‡	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
425 17	432.6 17.031	1379 200	202400 45500	4.8 3/16	510 20.06	595 23.41	78 3.06	28.1 62.0
500 20	532.6 20.969	1379 200	306900 69000	6.4 1/4	616 24.25	718 28.25	94 3.69	38.6 85.0
600 24	628.6 24.750	1379 200	427000 96000	6.4 1/4	721 28.38	812 31.97	87 3.44	56.7 125.0
750 30	787.4 31.000	1034 150	502650 113000	6.4 1/4	921 36.25	1027 40.45	127 5.00	62.6 138.0
832 33	914.4 36.000	620 90	407000 91500	12.7 1/2	998 39.31	1119 44.04	127 5.00	88.5 195.0
900 36	965.2 38.000	620 90	453700 102000	9.7 3/8	1067 42.00	1204 47.39	121 4.75	113.4 250.0
1500 60	1612.9 63.500	345 50	702800 158000	9.7 3/8	1712 67.38	1875 73.82	124 4.88	206.4 455.0

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

‡ Refer to Design Data for information on tolerances and pipe gap settings



SIZES 425-600 MM



SIZES 750-1500 MM

Vic-Ring – Couplings

Vic-Ring Coupling

STYLE 31

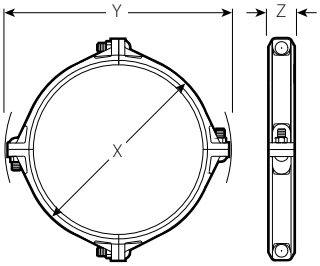
For Complete Information Request Publication **16.03**

- Designed with cross-ribbed construction to provide a strong component for Vic-Ring adaptor prepared piping systems
- Primarily for use with Type "D" or "E" Vic-Ring adapters
- Sizes 350-500 mm (14-20") are case in four segments; 600-900 mm (24-36") in six segments, to assure concentricity and ease of handling.
- Available in sizes 350-900 mm (14-36")

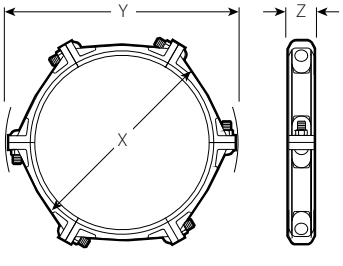
Size		Max. Joint Work Pressure†	Max. Permiss. End Load	Max. Allow. Pipe End Movement‡	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
350 14	355.6 12.000	1725 250	204763 46036	4.0 5/32	437 17.21	558 21.96	70 2.75	18.1 40.0
400 16	106.4 16.000	1725 250	332087 74660	6.4 1/4	506 19.92	622 24.50	89 3.50	27.7 61.0
450 18	457.0 18.000	1200 175	285895 64275	6.4 1/4	560 22.03	669 26.33	89 3.50	33.1 73.0
500 20	508.0 20.000	1200 175	407437 91600	6.4 1/4	613 24.13	729 28.69	89 3.50	39.5 87.0
600 24	610.0 24.000	1035 150	536430 120600	11.9 7/16	719 29.31	840 33.06	89 3.50	42.2 93.0
750 30	762 30.000	1035 150	768615 172800	11.9 7/16	890 35.02	1001 39.39	111 4.38	73.5 162.0
900 36	914.0 36.000	1035 150	769030 172815	11.9 7/16	1056 41.56	1169 46.06	113 4.44	90.7 200.0

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

‡ Refer to Design Data for information on tolerances and pipe gap settings



SIZES 350-500 MM



SIZES 600-900 MM

Vic-Ring – Couplings

Vic-Ring Coupling

STYLE 41

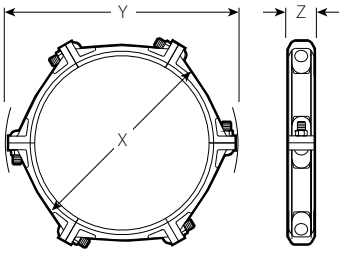
For Complete Information Request Publication **16.04**

- Designed with cross-ribbed construction to provide a strong component for Vic-Ring adaptor prepared piping systems
- Commonly used with Type "E" Vic-Ring adapters
- Sizes 750-950 mm (30-38") are cast in six segments 1050-1375 mm (42-54") sizes in eight segments; 1500 mm (60") in 10 segments; and 1675 mm (66") in 12 segments, to assure concentricity and ease of handling
- Available in sizes 750-1675 mm (30-66")

Size		Max. Joint Work Pressure†	Max. Permiss. End Load	Max. Allow. Pipe End Movement‡	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
750 30	762.0 30.00	620 90	342500 77000	12.7 1/2	921 36.25	1051 41.38	127 5.00	80.7 178.0
900 36	914.0 36.000	620 90	482150 108400	12.7 1/2	1080 42.50	1197 47.13	130 5.13	93.0 205.0
950 38	965.2 38.000	620 90	526650 118400	12.7 1/2	1124 44.50	1251 49.25	130 5.13	99.8 220.0
1050 42	1067.0 42.000	620 90	652550 146700	12.7 1/2	1248 49.13	1409 55.50	130 5.13	122.5 270.0
1150 46	1168.4 46.000	620 90	747300 168000	12.7 1/2	1327 52.25	1502 59.13	137 5.38	149.7 330.0
1200 48	1219.2 48.000	620 90	849600 191000	12.7 1/2	1416 55.75	1594 62.75	133 5.25	176.9 390.0
1375 54	1371.6 54.000	620 90	1076450 242000	12.7 1/2	1581 62.25	1778 70.00	137 5.38	213.2 470.0
1500 60	1524.0 60.000	620 90	1315300 295700	12.7 1/2	1743 68.63	1943 76.50	140 5.50	258.6 570.0
1675 66	1675.4 66.000	620 90	1574200 353900	12.7 1/2	1901 74.83	2061 81.25	143 5.63	340.2 750.0

† FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 1/2 times the figures shown

‡ Refer to Design Data for information on tolerances and pipe gap settings



SIZES 750-950 MM

Vic-Ring – Couplings

Vic-Ring Coupling

STYLE 44

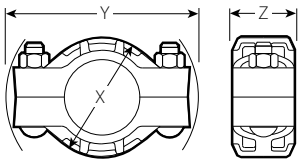
For Complete Information Request Publication **16.05**

- Designed with cross-ribbed construction to provide a strong component for Vic-Ring adaptor prepared piping systems
- Sizes 100-300 mm (4-12") are cast in two segments; 350-500 mm (14-20") sizes in four segments; 600-900 mm (24-36") in six segments; 1050-1375 mm (42-54") in eight segments; and 1500 mm (60") in 10 segments, to assure concentricity and ease of handling
- Available in sizes 100-1500 mm (5-60")

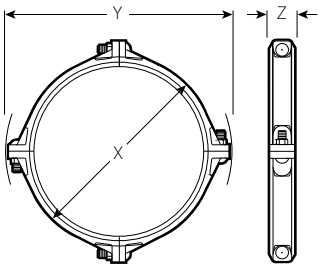
Size		Max. Joint Work Pressure†	Max. Permiss. End Load	Max. Allow. Pipe End Movement‡	Dimensions			Approx. Wgt. Each
Nominal Size mm Inches	Actual Outside Dia. mm Inches	kPa psi	N Lbs.	mm Inches	X mm Inches	Y mm Inches	Z mm Inches	kg Lbs.
100 4	114.3 4.500	1206 175	17170 3860	4.8 3/16	178 7.00	245 9.65	57 2.25	3.6 8.0
150 6	168.3 6.625	1206 175	34250 7700	4.8 3/16	235 9.25	306 12.05	60 2.38	5.0 11.0
200 8	219.1 8.625	1206 175	57800 13000	4.8 3/16	305 12.00	381 15.00	67 2.63	7.7 17.0
250 10	273.0 10.750	1206 175	87600 19700	6.4 1/4	362 14.25	450 17.75	73 2.88	10.4 23.0
300 12	323.9 12.750	1206 175	124100 27900	6.4 1/4	425 16.75	509 20.03	76 3.00	14.1 31.0
350 14	355.6 14.00	1206 175	165000 37100	6.4 1/4	480 18.88	578 22.75	92 3.63	19.5 43.0
400 16	406.4 16.000	1206 175	209050 47000	9.7 3/8	538 21.23	652 25.68	92 3.63	28.6 63.0
450 18	457.0 18.000	1206 175	267750 60200	6.4 1/4	626 24.63	717 28.25	95 3.75	28.6 85.0
500 20	508.0 20.000	1206 175	319800 71900	9.7 3/8	668 26.25	784 30.88	95 3.75	40.8 90.0
600 24	610.0 24.000	1206 175	449700 101100	9.7 3/8	768 30.25	889 35.00	95 3.75	48.5 107.0
750 30	762.0 30.000	1206 175	696600 154400	12.7 1/2	959 37.75	1098 43.21	137 5.38	102.1 225.0
900 36	914.0 36.000	1206 175	987250 221950	12.7 1/2	1127 44.38	1270 50.00	137 5.38	122.5 270.0
1050 42	1067.0 42.000	1206 175	1328900 298750	12.7 1/2	1289 50.75	1461 57.50	137 5.38	172.4 380.0
1200 48	1219.2 48.000	1206 175	1725900 388000	12.7 1/2	1467 57.75	1600 63.00	140 5.50	233.6 515.0
1375 54	1371.6 54.000	1206 175	2177580 489600	12.7 1/2	1642 64.63	1791 70.50	143 5.63	279.3 615.0
1500 60	1524.0 60.000	1206 175	2678250 602100	12.7 1/2	1813 71.38	1956 77.00	146 5.75	312.1 688.0

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

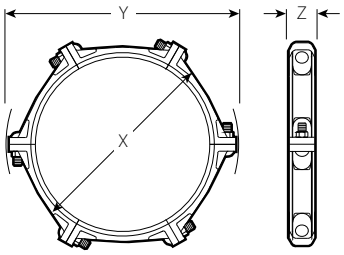
‡ Refer to Design Data for information on tolerances and pipe gap settings



SIZES 100-300 MM



SIZES 350-500 MM



SIZES 600-900 MM

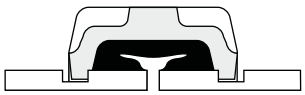
Gaskets

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. 14-5.

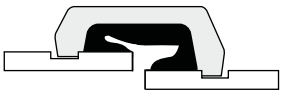
For Complete Information request publication **05.01.**

Gasket Styles

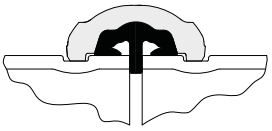
ILLUSTRATIONS EXAGGERATED FOR CLARITY



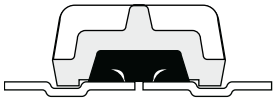
Standard



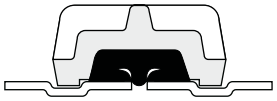
Reducing



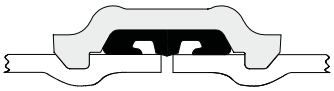
Installation-Ready



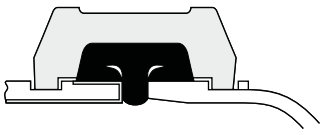
FlushSeal



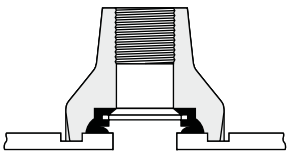
Grooved Copper Tubing with FlushSeal Gasket



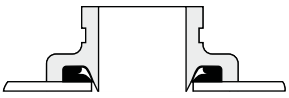
Advanced Groove System (AGS)



EndSeal



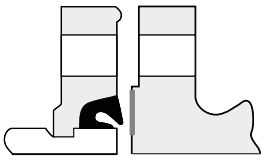
Outlet



Mechanical-T

Plain End

Plain End Piping System for HDPE Pipe



Vic-Flange

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 +121°C/+250°F 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 +177°C/+350°F.

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 +110°C/+230°F. 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.

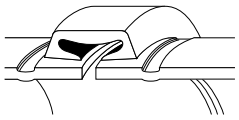
These recommendations do not apply to rubber-lined or rubber seal valves or other rubber-lined products. Refer to Valve Materials Selection in Section 08.02 or contact Victaulic for recommendations.

Victaulic gaskets are clearly marked as part of the mold with the gasket size, style and compound for easy identification.

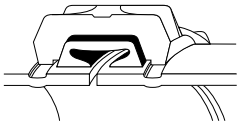
Gaskets

Gasket Performance

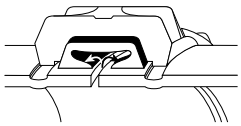
UNIQUE C-SHAPED GASKET FORMS A TRIPLE SEAL



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, stainless steel, aluminum, PVC 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 254 mm/10" 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 760 mm/29.9 of mercury.

ANSI/NSF 61 and Australia Watermark Standards – ANSI/NSF 61 and Australia Watermark are National Standards that were developed to establish minimum requirements for the control of potential adverse human health effects from products which contact drinking water. Their 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/Australia Watermark are "cold", which is limited to +30°C/+86°F maximum and "hot" which is limited to +82°C/+180°F 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/Australia Watermark for cold +30°C/+86°F and hot +82°C/+180°F potable water service.

Halogenated Butyl "M" Gaskets: UL classified in accordance with ANSI/NSF 61/ Australia Watermark for cold +30°C/+86°F potable water service.

PPS Coating: The PPS (Polyphenylene Sulfide blend) coating applied to our Vic-300 AGS butterfly valves is UL classified in accordance with ANSI/NSF 61/Australia Watermark for cold +30°C/+180°F and hot +82°C/+180°F potable water service.

Gaskets

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 125 grams/4.5 oz. tubes. Victaulic Lubricant is also available in 900 grams/32 oz. 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 mm Inches	Per Tube	Per Quart
50 2	55	400
80 3	36	270
100 4	26	200
150 6	17	125
200 8	13	100
250 10	11	80
300 12	8	60
350 14	7	50
400 16	6	45
450 18	5	35
500 20	4	30
600 24	3	20

Gaskets

Gasket Selection Guide

⚠ WARNING

To assure maximum life for the service intended, proper gasket selection and specification in ordering is essential. Failure to select the proper rubber compound may result in personal injury or property damage, improper installation, joint leakage or joint failure.

Standard Gaskets

IPS

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
E	–30˚F to 230˚F –34˚ C to +110˚ C	EPDM	Green Stripe	Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. **NOT RECOMMENDED FOR PETROLEUM SERVICES.**
EHP@	–30°F to +250°F –34°C to +120°C	EPDM	Red Stripe	Recommended for hot water service within the specified temperature range. UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. **NOT RECOMMENDED FOR PETROLEUM SERVICES.**
T	–20˚F to +180˚F –29˚ C to +82˚ C	Nitrile	Orange Stripe	Recommended for petroleum products, hydrocarbons, air with oil vapors, vegetable and mineral oils within the specified temperature range; not recommended for hot dry air over +140°F/+60°C and water over +150°F/+66°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**
E† (Type A)	Ambient	EPDM	Violet Stripe	Applicable for wet and dry (oil-free air) sprinkler services only. For dry services, Victaulic continues to recommend the use of FlushSeal® gaskets. **NOT RECOMMENDED FOR HOT WATER SERVICES.**

† Vic-Plus pre-lubricated gasket.
* For specific chemical and temperature compatibility, refer to the Gasket Selection and Chemical Services sections. The information shown defines general ranges for all compatible fluids.
@ The Grade EHP gasket is only available on QuickVic couplings.

Special Gaskets

IPS

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
M2	-40°F to +160°F -40°C to +71°C	Epichlorohydrin	White Stripe	Specially compounded to provide superior service for common aromatic fuels at low temperatures. Also suitable for certain ambient temperature water services.
V	-30°F to +180°F -34°C to +82°C	Neoprene	Yellow Stripe	Recommended for hot lubricating oils and certain chemicals. Good oxidation resistance. Will not support combustion.
O	+20°F to +300°F -7°C to +149°C	Fluoroelastomer	Blue Stripe	Recommended for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons to +300°F/+149°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**
L	-30°F to +350°F -34°C to +177°C	Silicone	Red Gasket	Recommended for dry heat, air without hydrocarbons to +350°F/+177°C and certain chemical services.
A	+20°F to +180°F -7°C to +82°C	White Nitrile	White Gasket	No carbon black content. May be used for food. Meets FDA requirements. Conforms to CFR Title 21 Part 177.2600. Not recommended for hot water services over +150°F/+66°C or for hot, dry air over +140°F/+60°C. **NOT RECOMMENDED FOR HOT WATER SERVICES.**
T EndSeal	-20°F to +150°F -29°C to +66°C	Nitrile	No External Identification	Specially compounded with excellent oil resistance and a high modulus for resistance to extrusion. Temperature range –20°F/-29°C to +150°F/+66°C. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. **Not recommended for hot water services over +150°F/+66°C or for hot, dry air over +140°F/+60°C.** For maximum gasket life under pressure extremes, temperature should be limited to +120°F/+49°C.
EG	–30°F to +230°F –34°C to +110°C	EPDM	Double Green Stripes	Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. DVGW, KTW, ÖVGW, and SVGW approved for W534, EN681-1 Type WA cold potable water service up to +122°F/+50°C. **NOT RECOMMENDED FOR PETROLEUM SERVICES**

Gaskets

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
EF	-30°F to +104°F -34°C to +40°C	EPDM	Green "X"	Recommended for potable water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. French ACS (Crecep) approved for EN681-1 Type WA cold potable water service. **NOT RECOMMENDED FOR PETROLEUM SERVICES**
EW	-30°F to +203°F -34°C to +110°C	EPDM	Green "W"	Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. WRAS- approved material to BS 6920 for cold and hot potable water service up to +149°F /+65°C **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. 14-8 for complete listing)

FOR SERVICES NOT LISTED CONTACT VICTAULIC FOR RECOMMENDATIONS.

Gasket recommendations apply only to Victaulic gaskets. Recommendation for a particular service does not necessarily imply compatibility of the coupling housing, related fittings or other components for the same service. These recommendations do not apply to rubber lined valves.

Gaskets

Chemical Services

Chemical Composition	Rating Code	Gasket Grade
ASTM #3 Oil	G	T
Acetaldehyde	G	E/EHP
Acetamide	G	T
Acetic Acid up to 10% 100°F/38°C	G	E/EHP
Acetic Acid up to 10-50% 100°F/38°C	G	L
Acetic Acid, Glacial 100°F/38°C	G	L
Acetic Anhydride	G	E/EHP
Acetone	G	E/EHP
Acetonitrile	G	T
Acetophenone	G	E/EHP
Acetylene	C	E/T/EHP
Acrylic Resin	G	V
Acrylonitrile	NR	—
Adipic Acid	G	T
Alkalis	G	E/EHP
Allyl Alcohol to 96%	G	E/EHP
Allyl Chloride	NR	—
Alum Sulfuric Acid	C	O
Alums	G	E/T/EHP
Aluminum Chloride	G	E/T/EHP
Aluminum Fluoride	G	E/T/EHP
Aluminum Hydroxide	G	E/EHP
Aluminum Nitrate	G	V/E/T/EHP
Aluminum Oxychloride	C	T
Aluminum Phosphate	G	E/EHP
Aluminum Salts	G	E/EHP
Aluminum Sulfate	G	E/T/EHP
Ammonia, Anhydrous (Pure Ammonia)	NR	—
Ammonia, Aqueous (40% Max)	G	E/EHP
Ammonium Alum	G	V
Ammonium Bifluoride	G	T
Ammonium Carbonate	G	E/EHP
Ammonium Chloride	G	T
Ammonium Fluoride	G	E/EHP
Ammonium Hydroxide	G	E/EHP
Ammonium Metaphosphate	G	E/EHP
Ammonium Nitrate	G	T
Ammonium Nitrite	G	E/EHP
Ammonium Persulfate, to 10%	G	E/EHP
Ammonium Phosphate	G	T
Ammonium Sulfamate	G	T
Ammonium Sulfate	G	E/T/EHP
Ammonium Sulfide	G	E/EHP
Ammonium Thiocyanate	G	E/EHP
Amyl Acetate	G	E/EHP
Amyl Acetate	G	E/EHP
Amyl Alcohol	G	E/EHP
Amyl Borate	G	V
Amyl Chloride	NR	—
Amyl Chloronaphthalene	C	T
Anderol	G	O
Anthraquinone	NR	—
Anthraquinone Sulfonic Acid	NR	—
Aniline	G	E/EHP
Aniline Dyes	C	E/EHP
Aniline Hydrochloride	C	E/EHP
Aniline Oil	G	E/EHP
Animal Fats	G	A
Antimony Chloride	G	E/EHP
Antimony Trichloride	G	E/EHP
Argon Gas	G	E/O
Aroclor(s)	G	O
Arsenic Acid, to 75%	G	T
Arylsulfonic Acid	NR	—
Barium Carbonate	G	E/EHP
Barium Chloride	G	E/T/EHP
Barium Hydroxide	G	E/T/EHP
Barium Nitrate	G	V
Barium Sulfide	G	T
Beer	G	A
Beet Sugar Liquors	G	A
Benzaldehyde	C	E/EHP
Benzene	G	O
Benzene Sulfonic (Aromatic Acid)	C	V
Benzine (see Petroleum Ether)	G	O
Benzoic Acid	G	E/EHP
Benzol	G	O
Benzyl Alcohol	G	E/EHP
Benzyl Benzoate	G	E/EHP
Black Sulfate Liquor	G	T
Blast Furnace Gas	C	T
Bleach, 12% Active Cl^2	C	E/EHP
Borax	G	E/EHP
Bordeaux Mixture	G	E/EHP
Boric Acid	G	E/T/EHP
Bromine	G	O
Bromine Water	G	V
Butadiene	C	V
Butane Gas	C	T
Butanol (see Butyl Alcohol)	G	E/T/EHP
Butter	G	A
Butyl Acetate	C	E/EHP
Butyl Acetyl Ricinoleate	G	E/EHP
Butyl Alcohol	G	E/T/EHP
Butyl "Cellosolve Adipate"	G	E/T/EHP
Butyl Phenol	C	E/EHP
Butyl Stearate	G	T
Butylene	G	T
Butylene Glycol	G	E/EHP
Butyne Diol	NR	—
Butyraldehyde	C	V
Cadmium Cyanide	C	V
Calcium Acetate	C	T
Calcium Bisulphate	G	T
Calcium Bisulphide	G	T
Calcium Bisulphite	G	T
Calcium Chloride	G	E/T/EHP
Calcium Fluophosphate	C	V
Calcium Hydroxide (Lime)	G	E/T/EHP
Calcium Hypochlorite	G	E/EHP
Calcium Hypochloride	G	E/EHP
Calcium Nitrate	G	V/E/T/EHP
Calcium Sulfate	G	E/T/EHP
Calcium Sulfide	G	E/EHP
Caliche Liquors	G	T
Cane Sugar Liquors	G	A
Carbitol	G	E/T/EHP
Carbonic Acid, Phenol	G	O
Carbon Bisulphide	C	O
Carbon Dioxide, Dry	G	E/T/EHP
Carbon Dioxide, Wet	G	E/T/EHP
Carbon Disulphide	G	O
Carbon Monoxide	G	E/EHP
Carbon Tetrachloride	G	O
Castor Oil	G	A
Caustic Potash	G	E/EHP
Cellosolve Acetate	G	E/EHP
Cellosolve (Alcohol Ether)	G	E/EHP
Cellulose Acetate	G	E/EHP
Cellulube 220 (Tri-Aryl-Phosphate)	G	E/EHP
Cellulube Hydraulic Fluids	G	E/EHP
China Wood Oil, Tung Oil	G	T
Chloralhydrate	NR	—
Chloric Acid to 20%	C	E/EHP
Chlorine, Dry	C	O
Chlorine, Water 4000 PPM (max.)	C	E/EHP
Chlorinated Parafine (Chlorocosane)	G	T
Chloroacetic Acid	G	E/EHP
Chloroacetone	G	E/EHP
Chlorobenzene	C	O
Chlorobromomethane	NR	—
Chloroform	G	O
Chlorosulphonic Acid	NR	—
Chrome Alum	G	T
Chrome Plating Solutions	G	O
Chromic Acid, to 25%	G	O
Citric Acid	G	E/EHP
Cocoanut Oil	G	A
Cod Liver Oil	G	A
Coke Oven Gas	G	T/O
Copper Chloride	G	T
Copper Cyanide	G	T
Copper Fluoride	G	E/EHP
Copper Nitrate	G	E/T/EHP
Copper Sulfate	G	E/T/EHP
Corn Oil	G	A
Cotton Seed Oil	G	A
Creosol, Cresylic Acid	G	O
Creosote, Coal Tar	G	O
Creosote, Wood	G	O
Cupric Fluoride	G	T
Cupric Sulfate	G	T
Cyclohexane (Alicyclic Hydrocarbon)	G	O
Cyclohexanol	G	V
Cyclohexanone	C	E/EHP
Deionized Water	G	E/EHP
Dextrim	G	T
Diacetone Alcohol	G	V
Dibutyl Phthalate	G	E/EHP
Dichloro Difloro Methane	G	T
Dicyclohexylamine	C	T
Diesel Oil	G	T
Diethyl Ether	C	T
Diethyl Sebacate	G	E
Diethylamine	G	T
Diethylene Glycol	G	E/T/EHP
Digester Gas	G	T/S
Dimethylamine	G	T
Dioctyl Phthalate	G	E/EHP
Dioxane	G	E/EHP
Dipentene (Terpene-Hydrocarbon)	C	T
Dipropylene Glycol	G	T
Dowtherm A	G	O
Dowtherm E	G	O
Dowtherm SR-1	G	T/E
Ethanolamine	G	E/EHP
Ethyl Acetoacetate	G	E/EHP
Ethyl Acrylate	G	L
Ethyl Alcohol	G	E/T/EHP
Ethyl Cellulose	C	E/EHP
Ethyl "Cellusolve"	G	E/EHP
Ethyl Chloride	G	E/EHP
Ethyl Ether	C	T
Ethyl Formate	C	V
Ethyl Oxalate	G	E/EHP
Ethyl Silicate	G	T
Ethylene Chlorohydrin	G	E/EHP
Ethylene Diamine	G	T
Ethylene Dichloride (Dichloroethane)	G	O
Ethylene Glycol	G	E/T/EHP
Ethylene Oxide	NR	—
Fatty Acids	G	A
Ferric Chloride, to 35%	G	E/T/EHP
Ferric Chloride, Saturated	G	E/EHP
Ferric Hydroxide	C	E/EHP
Ferric Nitrate	G	V
Ferric Sulfate	G	T
Ferrus Ammonium Sulfate to 30%	G	V
Fish Oils	G	A
Fluboric Acid	G	E/EHP
Fluorine Gas, Wet	NR	—
Fluorosilicic Acid	G	V
Fly Ash	G	E/EHP
Foam	G	E/EHP
Fog Oil	G	T
Formaldehyde	G	E/T/EHP
Formanide	G	T
Formic Acid	G	E/EHP
Freon 11, 130°F/54°C	G	T
Freon 12, 130°F/54°C	G	T
Freon 21	NR	—
Freon 22, 130°F/54°C	G	V
Freon 113 130°F/54°C	G	T
Freon 114,130°F/54°C	G	T
Freon 123	NR	—
Freon 134a,176°F/80°C	G	E/T/EHP
Fructose	G	T
Fuel Oil	G	T
Fumaric Acid	G	E/EHP
Furan	NR	—
Furfuryl Alcohol	G	E/EHP
Gallic Acid	NR	—
Gasoline, Refined	G	T
Gasoline, Refined, Unleaded	C	O
Gelatin	G	A
Glucose	G	A
Glue	G	T/E
Glycerin	G	E/T/EHP
Glycerol	G	E/T/EHP
Glycol	G	E/T/EHP
Glycolic Acid	C	E/EHP
Grease	G	T
Green Sulfate Liquor	G	T
Halon 1301	G	E/EHP
Heptane	G	T
Hexaldehyde	G	E/EHP
Hexane	G	T
Hexanol Tertiary	G	T
Hexyl Alcohol	G	V/T
Hexylene Glycol	G	T
Hydrobromic Acid, to 40%	G	E/EHP
Hydrochloric Acid, to 36%, 75°F/24°C	G	E/EHP
Hydrochloric Acid, to 36%, 158°F/70°C	C	O
Hydrocyanic Acid	G	E/EHP
Hydrofluoric Acid, to 75%, 75°F/24°C	G	O
Hydrofluosilicic Acid	G	T
Hydrogen Gas, Cold	C	E/T/EHP
Hydrogen Gas, Hot	C	E/EHP
Hydrogen Peroxide, to 50%	C	L
Hydrogen Peroxide, to 90%	C	O
Hydrogen Phosphide	NR	—
Hydrogen Sulfide	G	E/EHP
Hydroquinone	G	T
Hydroxylamine Sulfate	C	E/EHP
Hypochlorous Acid, Dilute	G	E/EHP
Iso Octane, 100°F/38°C	G	T
Isododecane	G	V
Isobutyl Alcohol	G	E/EHP
Isopropyl Acetate	G	E/EHP
Isopropyl Alcohol	G	E/EHP
Isopropyl Ether	G	T
JP-3	G	T
JP-4	G	T
JP-5, 6, 7, 8	G	T
Kerosene	G	T
Ketones	G	E/EHP
Lactic Acid	G	A
Lard	G	A
Lard Oil	G	V
Latex (1% Styrene & Butadiene)	G	O
Lauric Acid	G	T
Lauryl Chloride	NR	—
Lavender Oil	G	T
Lead Acetate	G	T
Lead Chloride	C	E/EHP
Lead Sulfamate	G	V
Lead Sulfate	G	T
Lime and H_2O	G	E/T/EHP
Linoleic Acid	G	O
Linseed Oil	G	A
Lithium Bromide	G	T
Lithium Chloride	G	T
Lubricating Oil, Refined	G	T
Lubricating Oil, Sour	G	T
Lubricating Oil, to 150°F/66°C	G	T
Lubricating Oil, 150°F/66°C to 180°F/82°C	G	V
Magnesium Ammonium Sulfate	C	V
Magnesium Chloride	G	E/T/EHP
Magnesium Hydroxide	G	E/T/EHP
Magnesium Nitrate	G	V
Magnesium Oxide	C	V
Magnesium Sulfate	G	E/T/EHP
Maleic Acid	G	T
Malic Acid	G	T
Mercuric Chloride	G	E/T/EHP
Mercuric Cyanide	G	T
Mercurous Nitrate	G	E/T/EHP
Mercury	G	T
Methane	C	T
Methyl Acetate	C	V
Methyl Alcohol, Methanol	G	E/T/EHP
Methyl Cellosolve (Ether)	G	V
Methyl Chloride	C	O

Gaskets

Chemical Composition	Rating Code	Gasket Grade
Methyl Cyclopentane	C	V
Methyl Ethyl Ketone	C	E/EHP
Methyl Isobutyl Carbinol	G	E/EHP
Methyl Isobutyl Ketone	NR	—
Methylene Chloride	C	O
Methylene Dichloride 100°F/38°C	G	O
MIL-L7808	G	O
MIL-05606	G	O
MIL-08515	G	O
Milk	G	A
Mineral Oils	G	T
Naptha, 160°F/71°C	G	O
Napthalene	NR	—
Napthenic Acid	C	T
Natural Gas	C	T
Nevoil	G	E/EHP
Nickel Acetate to 10%, 100°F/38°C	G	V
Nickel Ammonium Sulfate	G	V
Nickel Chloride	G	E/T/EHP
Nickel Nitrate	G	V
Nickel Plating Solution 125°F/52°C	G	E/EHP
Nickel Sulfate	G	E/T/EHP
Nicotine	C	V
Nicotine Acid	C	V
Nitric Acid to 10%, 75°F/24°C	G	E/EHP
Nitric Acid, 10-50%, 75°F/24°C	G	O
Nitric Acid, 50-86%, 75°F/24°C	C	O
Nitric Acid, Red Fuming	C	O
Nitrocellulose	G	V
Nitroethane	C	E/EHP
Nitromethane	G	E/EHP
Nitrous Oxide	G	E/EHP
Octyl Alcohol	G	V
Oil, Crude Sour	G	T
Oil, Motor	G	T
Oleic Acid	G	T
Olive Oil	G	A
Oronite 8200 Silicate Ester Fluid	G	O
Orthodichlorobenzene	G	O
OS-45 Silicate Ester Fluid	G	O
OS-45-1	G	O
Oxalic Acid	G	E/EHP
Oxygen, Cold †	C	E/EHP
Ozone (100 ppm)	G	E/EHP
Palmitic Acid	G	T
Peanut Oil	G	A
Pentane	G	T
Perchloroethylene	G	O
Perchloric Acid	NR	—
Petroleum Ether (see Benzene)	G	O
Petroleum Oils	G	T
Phenol (Carbolic Acid)	G	O
Phenylhydrazine	C	E/EHP
Phenylhydrazine Hydrochloride	C	E/EHP
Phosphate Ester	G	E/EHP
Phosphoric Acid, to 50%, 70°F/21°C	G	E/EHP
Phosphoric Acid, to 85%, 200°F/93°C	G	O
Photographic Solutions	G	T
Phthalic Anhydride	G	E/EHP
Picric Acid, Molten	G	V
Plating Solutions (gold, brass, cadmium, copper, lead, silver, nickel, tin, zinc)	G	V
Polybutene	G	T
Polyvinyl Acetate, Solid (In Liquid State is 50% solution of Methanol or 60% solution of H2O)	G	E/EHP
Potassium Alum	G	E/T/EHP
Potassium Bicarbonate	G	E/T/EHP
Potassium Bichromate	G	T/E
Potassium Borate	G	E/EHP
Potassium Bromate	G	E/EHP
Potassium Bromide	G	E/T/EHP
Potassium Carbonate	G	E/T/EHP
Potassium Chlorate	G	E/EHP
Potassium Chloride	G	T
Potassium Chromate	G	T
Potassium Cyanide	G	E/T/EHP
Potassium Dichromate	G	E/EHP
Potassium Ferricyanide	G	E/EHP

Chemical Composition	Rating Code	Gasket Grade
Potassium Ferrocyanide	G	E/EHP
Potassium Fluoride	G	E/EHP
Potassium Hydroxide	G	T
Potassium Iodide	G	V
Potassium Nitrate	G	T
Potassium Perborate	G	E/EHP
Potassium Perchlorate	G	T
Potassium Permanganate, Saturated to 10%	G	E/EHP
Potassium Permaganate, Saturate 10-25%	G	E/EHP
Potassium Persulfate	G	T
Potassium Phosphate	G	V
Potassium Silicate	G	V/E/T/EHP
Potassium Sulfate	G	T
Potassium Thiosulfate	G	V
Prestone	G	T
Propane Gas	C	T
Propanol	G	E/EHP
Propargyl Alcohol	G	E/EHP
Propyl Acetate	C	V
Propyl Alcohol	G	T
Propylene Dichloride	C	L
Propylene Glycol	G	E/EHP
Pydraul F - 9 and 150	NR	—
Pyranol 1467	G	T
Pyranol 1476	G	T
Pyroguard "C"	G	T
Pyroguard "D"	G	T
Pyroguard 55	G	E/EHP
Pyrrole	G	E/EHP
Rapeseed Oil	G	A
Ref. Fuel (70 ISO Octane, 30 Toluene)	G	T
Rosin Oil	G	V/T
Salicylic Acid	G	E/EHP
Secondary Butyl Alcohol	G	T
Sewage	G	E/T/EHP
Silver Cyanide	C	V
Silver Nitrate	G	E/EHP
Silver Plating Solution	C	V
Silver Sulfate	G	E/EHP
Skydrol, 200°F/93°C	G	L
Skydrol 500 Phosphate Ester	C	E/EHP
Soap Solutions	G	E/T/EHP
Soda Ash, Sodium Carbonate	G	E/T/EHP
Sodium Acetate	G	E/EHP
Sodium Alum	G	T
Sodium Benzoate	G	E/T/EHP
Sodium Bicarbonate	G	E/T/EHP
Sodium Bisulfate	G	E/T/EHP
Sodium Bisulfite (Black Liquor)	G	E/T/EHP
Sodium Bromide	G	E/T/EHP
Sodium Carbonate	G	E/T/EHP
Sodium Chlorate	G	E/EHP
Sodium Chloride	G	E/T/EHP
Sodium Cyanide	G	E/T/EHP
Sodium Dichromate, to 20%	G	E/T/EHP
Sodium Ferricyanide	G	E/T/EHP
Sodium Ferrocyanide	G	E/T/EHP
Sodium Fluoride	G	E/T/EHP
Sodium Hydro Sulfide	G	T
Sodium Hydroxide to 50%	G	E/EHP
Sodium Hypochlorite, to 20%	G	E/EHP
Sodium Metaphosphate	G	T
Sodium Nitrate	G	E/EHP
Sodium Nitrite	G	E/T/EHP
Sodium Perborate	G	E/EHP
Sodium Peroxide	G	E/EHP
Sodium Phosphate, Dibasic	G	T
Sodium Phosphate, Monobasic	G	T
Sodium Phosphate, Tribasic	G	T
Sodium Silicate	G	T
Sodium Sulfate	G	E/T/EHP
Sodium Sulfide	G	T
Sodium Sulfite Solution, to 20%	G	T
Sodium Thiosulfate, "Hypo"	G	T
Sohovis 47	G	T
Sohovis 78	G	T
Solvasol #1	G	T

Chemical Composition	Rating Code	Gasket Grade
Solvasol #2	G	T
Solvasol #3	G	T
Solvasol #73	C	T
Solvasol #74	NR	—
Soybean Oil	G	A
Spindle Oil	G	T
Stannic Chloride	G	T
Stannous Chyoride, to 15%	G	T
Starch	G	T
Steam	NR	—
Stearic Acid	G	T
Stoddard Solvent	G	T
Styrene	G	O
Sucrose Solutions	G	A
Sulfonic Acid	G	E/EHP
Sulphite Acid Liquor	G	E/EHP
Sulfur	G	V/E
Sulfur Chloride	G	O
Sulfur Dioxide, Dry	C	E/T/EHP
Sulfur Dioxide, Liquid	G	E/EHP
Sulfur Trioxide, Dry	G	O
Sulfuric Acid, to 25%, 150°F/66°C	G	E/EHP
Sulfuric Acid, 25-50%, 200°F/93°C	G	O
Sulfuric Acid, 50-95%, 150°F/66°C	G	O
Sulfuric Acid, Fuming	C	O
Sulfuric Acid, Oleum	C	O
Sulfurous Acid	G	O
Tall Oil	C	T
Tannic Acid, All Conc.	G	V
Tanning Liquors (50 g. alum. solution, 50 g. dichromate solution)	G	T
Tartaric Acid	G	E/EHP
Terpineol	G	V
Tertiary Butyl Alcohol	G	V/E/T/EHP
Tetrabutyl Titanate	G	E/EHP
Tetrachloroethylene	G	O
Tetrahydrofuran	NR	—
Tetralin	NR	—
Thionyl Chloride	C	T
Terpineol	C	T
Thiopene	NR	—
Titanium Tetrachloride	G	O
Toluene, 30%	G	T
Transmission Fluid, Type A	G	O
Triacetin	G	T
Trichloroethane	G	O
Trichloroethylene, to 200°F/93°C	G	O
Tricresyl Phosphate	G	E/EHP
Triethanolamine	G	E/T/EHP
Trisodium Phosphate	G	E/EHP
Tung Oil	G	T
Turbo Oil #15 Diester Lubricant	G	O
Turpentine	C	T
Urea	G	T
Vegetable Oils	G	A
Vinegar	G	A
Vinyl Acetate	G	E/EHP
Vi-Pex	G	T
Water, to 150°F/66°C	G	E/T/M/S
Water, to 200°F/93°C	G	E/M
Water, to 230°F/110°C	G	E/EHP
Water, Acid Mine	G	E/T/EHP
Water, Bromine	G	V
Water, Chlorine	C	E/M
Water, Deionized	G	E/M
Water, Seawater	G	E/EHP
Water, Waste	G	E/T/M/S
Whiskey	G	A
White Liquor	G	E/EHP
Wood Oil	G	T
Xylene	C	O
Zinc Chloride, to 50%	G	E/EHP
Zinc Nitrate	G	E/EHP
Zinc Sulfate	G	E/T/EHP

Rating Code	Rating Code Key
G	Good
C	Conditional
NR	Not Recommended

Services Not Recommended

The services listed below have been tested and are NOT RECOMMENDED with any of the presently available gasket materials. Services not shown as recommended or not recommended should be submitted to Victaulic for specific recommendations.

Chemical Composition	Rating Code
Acrylonitrile	NR
Allyl Chloride	NR
Amyl Chloride	NR
Anthraquinone	NR
Anthraquinone Sulfonic Acid	NR
Arylsulfonic Acid	NR
Butyne Diol	NR
Chloralhydrate	NR
Chlorobromomethane	NR
Chlorosulphonic Acid	NR
Ethylene Oxide	NR
Fluorine Gas Wet	NR
Freon 21	NR
Furan	NR
Gallic Acid	NR
Hydrogen Phosphide	NR
Lauryl Chloride	NR
Methyl Isobutyl Ketone	NR
Napthalene	NR
Perchloric Acid	NR
Pydraul F -9 and F - 150	NR
Solvasol #74	NR
Steam	NR
Tetra Hydrofuran	NR
Tetralin	NR
Thiophene	NR

Water and Air Services

	Rating Code	Gasket Grade
Air, Temp. –30°F to +230°F/ –34°C to +110°C (no oil vapors)	G	E
Dry Air, Temp. +230°F to +350°F/ +110°C to +177°C (no oil or water vapors)	G	L
Air, Oil Vapor, Temp. 0°F to +150°F/ –18°C to 66°C	G	T
Air, Oil Vapor, Temp. +150°F to +300°F/+66°C to +149°C	G	O
Water, Temp. to +150°F/+66°C	G	E/T/M/S
Water, Temp. to +200°F/+93°C	G	E/M
Water, Temp. to +230°F/+110°C*	G	E
Water, Temp. to +250°F/+120°C	G	EHP
Water, Acid Mine	G	E/T
Water, Bromine	G	V
Water, Chlorine	C	E/M
Water, Deionized	G	E/M
Water, Seawater	G	E
Water, Waste	G	E/T/M/S

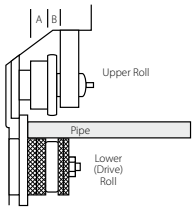
* Recommended for water only. Not recommended for steam service, except where couplings are accessible for frequent gasket replacement.

NOTE: The Grade "EHP" gasket can be used on all chemical, water and air services suitable for Grade "E" gaskets.

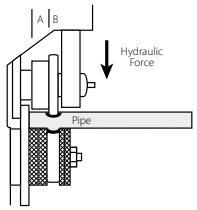
Pipe Preparation

Roll Groove

Roll groove shown on Schedule 40 steel pipe. The small dimple created on interior pipe wall does not significantly hinder pressure or flow.



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

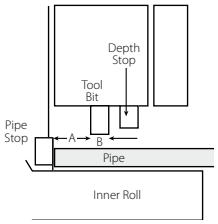


Roll grooving removes no metal from pipe

Cut Groove

Cut groove shown on Schedule 80 carbon pipe. The groove created removes less metal than threading.

Cut groove removes less metal than threading



Vic-Adjustable tools provide proper groove dimensions

Roll Groovers

Field Portable

VE12, PG. 15-3
VE26, PG. 15-3
VE46, PG. 15-3
VE226, PG. 15-3

Field Fabrication

VE270FSD, PG. 15-4
VE271FSD, PG. 15-4
VE272SFS, PG. 15-4
VE416FSD, PG. 15-4
VE417FSD, PG. 15-4
VE108H, PG. 15-4

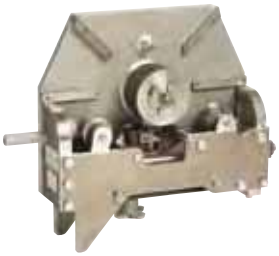
Plant/Shop Fabrication

VE269, PG. 15-5
VE415MC, PG. 15-5
VE460, PG 15-6

Cut Groovers

Field Cut Groover

VG28GD, PG. 15-10
VG824, PG. 15-10



Field Manual Cut Groover

VIC-GROOVER, PG. 15-10

Plastic Groovers

VPG26, PG. 15-11
VPG824, PG. 15-11

Pipe Preparation

Pipe Coatings

Coatings that are applied to the interior surfaces of Victaulic grooved and plain-end pipe couplings must not exceed 0.010 inch/0.25 mm. This includes the bolt pad mating surfaces.

In addition, the coating thickness applied to the gasket-sealing surface and within the groove on the pipe exterior must not exceed 0.010 inch/0.25 mm.

Cutting Tools

Hole Cutting

HCT904, PG. 15-12
VHCT, PG. 15-12
VIC-TAP® II, PG. 15-12

Accessories

Power Drive

VPD752, PG. 15-13
VPD753, PG. 15-13
VE226 POWER DRIVE KIT, PG. 15-3

Power Mule

PG. 15-13

Accessories

Adjustable Pipe Stands

VAPS112, PG. 15-14
VAPS224, PG. 15-14
VEPS270, PG. 15-15
VAPS1672, PG. 15-15

Pipe Diameter Tape

PG. 15-15

Pipe Preparation – Roll Grooving Tools

Field Portable

For Complete Information
Request Publication **24.01**

VE12

VE12 GROOVE IN-PLACE

- For manual grooving of Schedule 5, 10 and 40 steel; stainless steel; aluminum and PVC pipe
- Enhanced tracking rolls allow bi-directional grooving
- Roll grooves DN20–DN50/26.9–60.3 mm/¾–2" pipe †

Power Requirements: None
Weight: 8 kg/17 lbs.

VE26

VE26 GROOVE IN-PLACE

- Patented enhanced tracking rolls allow bi-directional grooving
- Model VE26S repairs and retrofits existing lightwall steel, Schedule 40 steel and stainless steel
- 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
- Model VE26P handles PVC and aluminum systems
- Optional power drive adapter kit available to alternately groove pipe using a Ridgid* 300 power drive or VPD752/VPD753
- Roll grooves DN50–DN150/26.9–168.3 mm/2–6" pipe †

Power Requirements: None
Weight: 10 kg/22 lbs.

VE46

VE46 GROOVE IN-PLACE

- Patented enhanced tracking rolls allow bi-directional grooving and reduce pipe "walk-off"
- VE46D is designed for manually roll grooving lightwall Schedule 40 steel and stainless steel
- Optional power drive adapter kit available to alternately groove pipe using a Ridgid* 300 power drive or VPD752/VPD753
- Roll grooves 101.6–168.3 mm/3½–6" pipe †
- Model VE46P designed for PVC and aluminum systems

Power Requirements: None
Weight: 13 kg/28 lbs.

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 VPD753 or Ridgid* 300 Power Drive.

VE226

VE226 PORTABLE GROOVER

- Mounts to a Victaulic VPD752/VPD753 or Ridgid* 300 power drive
- Optional alternate bases available
- Tool is operated using a standard 9.5 mm/⅜ square ratchet drive (included)
- Available in six models for steel, copper tubing, stainless steel, aluminum and PVC pipe
- Roll grooves DN20–DN150/26.9–168.3 mm/¾–6" pipe †

Drive Requirements: Fits Victaulic VPD752/VPD753 or Ridgid 300 power drives. Optional bases for Ridgid 535, 1224, 1822, and Oster 310 available. Contact Victaulic for others.
Weight: 17 kg/37 lbs.

† Refer to Roll Grooving Tool Ratings chart on pgs. 15-6, 15-7
* Ridgid is a registered trademark of the Ridge Tool Company

VE226 Power Drive Kit

Kit for connecting a VE226 roll grooving tool to a Ridgid* 700 power drive.
Capacity: See appropriate tool.
Weight: 34 kg/75 lbs.

Pipe Preparation – Roll Grooving Tools

Field Fabrication

For Complete Information
Request Publication **24.01**

VE108H

VE108H

- Patented enhanced tracking rolls reduce pipe "walk-off"
- Completely self- contained unit with an integral motor, safety guard, safety foot switch and power cord/plug
- Roll grooves DN25–DN200/33.7–219.1 mm/1–8" pipe †

Drive Requirements: Self-contained
Power Requirements: 230 volt, 8 amp
Weight: 85 kg/187 lbs.
Optional Accessories: Additional rolls are available for lightwall stainless steel grooving.

VE270FSD/VE271FSD

VE270FSD/VE271FSD

- Completely self-contained unit with integral gear motor, safety guards, safety foot switch and power cord/plug – 50-300 mm/ 2-12" standard tolls provided for grooving Schedules 5-40 steel pipe and Schedule 40 RX pipe.
- Equipped with a unique pivot arm design, making roll changing quick and easy, without removing shafts
- Patented enhanced tracking rolls reduce pipe "walk-off"
- Equipped with a pipe stabilizer for DN200–DN300/8–12" pipe size to control pipe sway
- Roll grooves DN20–DN300/26.9–323.9 mm/¾–12" pipe †

Drive Requirements: Self-contained
Power Requirements: VE270FSD: 110 volt, 15 amp power; VE271FSD: 230 volt, 8 amp power.
Weight: 154 kg/340 lbs.
Optional Rolls: Copper rolls for type K, L, M and DWV; stainless steel Rx rolls for Schedules 5S-10-10S; 20-40mm / 3/4 - 1 1/2" steel pipe; endSeal (ES) grooving; Aluminum schedules 5, 10, 20 and 40 RP rolls; and PVC Plastic Schedules 40-80 RP rolls.

VE272SFS

VE272SFS

- Portable roll groover mounts easily to the Victaulic VPD752/VPD753 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"
- Equipped with a pipe stabilizer for DN200–DN300 pipe size to control pipe sway
- Roll grooves DN20–DN300/26.9–323.9 mm/¾–12" pipe †, 50-300 mm/2-12" standard rolls provided for grooving Schedule 5-40 steel and Schedule 40 RX pipe.

Power Requirements: Victaulic VPD752/VPD753 or Ridgid* 300 power drive
Weight: 84 kg/184 lbs.
Optional Rolls: Copper rolls for types K, L, M and DWV; and stainless steel Rx rolls for Schedules 5S-10-10S. Rolls for PVC and Aluminum also available.

VE416FSD/VE417FSD

VE416FSD/VE417FSD

- For field roll grooving of DN50–DN400/60.3–406.4 mm/2–16" (14-16" AGS) pipe standard wall pipe, lightwall steel pipe, as well as aluminum, stainless and PVC plastic pipe
- Equipped with a pipe stabilizer for DN150–DN400/6–16" 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 DN50–DN400/60.3–406.4 mm/2–16" pipe † (60.3 - 323.9mm/2-12" OGS and 355.6-406.4mm/14-16" AGS)

Power Requirements: VE416FSD: 110 volt, 15 amp for integral gear motor; VE417FSD: 230 volt, 8 amp
Weight: 154 kg/340 lbs.
Optional Rolls: Optional rolls are available for Schedule 5S and 10S stainless steel pipe, and types K, L, M and DWV copper tubing. Rolls sets also available for 350-400mm/14-16" carbon steel pipe for use with OGS systems.

† Refer to Roll Grooving Tool Ratings chart on pgs. 15-6, 15-7

Pipe Preparation – Roll Grooving Tools

Plant/Shop Fabrication

For Complete Information Request Publication **24.01**

VE269

VE269

- Designed for fabrication shop roll grooving
- The fully-motorized, semi-automatic, electro-hydraulic 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"
- Equipped with a pipe stabilizer for DN200–DN300 pipe size to control pipe sway
- Roll grooves DN20–DN300/26.9–323.9 mm/¾–12" pipe †

Power Requirement: 230/400 volt, 3 phase, 50 Hz (shipped wired for 400 volt unless otherwise specified)

Drive Requirements: Self-contained

Weight: 333 kg/735 lbs.

Optional Rolls: Carbon steel Schedules 5, 10, 20 and 40; copper rolls for types K, L, M and DWV; and stainless steel Rx rolls for Schedules 5S-10-10S.

VE415MC

VE415MC

- Designed for fabrication shop roll grooving Schedule 5, 10, and standard wall carbon steel pipe, standard wall stainless steel pipe, Schedule 40, 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 DN50–DN400/60.3–406.4mm/2–16" pipe † (60.3 - 323.9mm/2-12" OGS and 355.6-406.4mm/14-16" AGS)

Power Requirement: 230/400 volt, 3 phase, 50 Hz (shipped wired for 400 volt unless otherwise specified)

Drive Requirements: Self-contained

Weight: 333 kg/735 lbs.

Optional Rolls: Standard 350-400mm/14-16" rolls for OGS systems. Optional rolls are available for Schedule 5S and 10S stainless steel pipe, and type K, L, M and DWV copper tubing.

Optional Accessories: The tool can also be supplied in various voltages, contact Victaulic for details.

† Refer to Roll Grooving Tool Ratings chart on pgs. 15-6, 15-7

Pipe Preparation – Roll Grooving

VE460

VE460

- Base Mode: Fully-motorized, semi-automatic, hydraulic shop tool is shipped fully assembled with rolls for standard grooving (100–600 mm/4–24") .500 wall maximum.
- Patented enhanced tracking rolls help to keep the pipe on the tool during the roll grooving process
- Tool ships with 100–300 mm/4–12" Original Groove System Groove Rolls and 350–600 mm/14 – 24" AGS Groove Rolls – Quick change roll design feature

Drive Requirements: Self-contained

Power Requirements: 220/440 volt, 3 phase, 60 Hz standard. The tool can also be supplied in various voltages, contact Victaulic for details. (3800 3-phase option available)

Weight: 680 kg/1500 lbs.

Optional Rolls: Grooving kits available to accommodate grooving 26"/650 mm and above. Optional rolls are available for Schedule 5S and 10S stainless steel pipe, PVC and aluminum pipe.

AGS roll sets for 350–600 mm/14–24" Schedule 10 through 12.7 mm/.375" wall carbon steel pipe are now standard.

NOTE: These tools are rated for 220 volt service. They cannot be used with 208 volt service. For individual amperage power requirements, refer to RP sheet supplied with tool. Each model may require different incoming power requirements. (If your service is 208 volts, a "Boost and Buck Transformer" may be required.

VE436MC Quick Change Slide Conversion Kit

The VE436MC Quick Change Slide Conversion Kit includes an upper shaft and slide held in place by a detent pin for improved efficiency.

The kit also includes:

- 4-12"/100-300mm standard groove upper rolls
- 14-24"/350-600 AGS groove upper rolls
- Pipe size, pipe rotation, guard setting labels and guard setting pads (standard and AGS)

NOTE: Cannot be used with VE424MC model.

† Refer to Roll Grooving Tool Ratings chart on pgs. 15-6, 15-7

Pipe Preparation – Roll Grooving

Vic-Easy® Roll Grooving Tool Ratings

(MAXIMUM CAPACITY)

Victaulic Vic-Easy roll grooving tools are designed to cold form grooves into the specified pipe to meet ANSI/AWWA C-606 and other 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 mm/Inches																
		20 ¾	25 1	32 1¼	40 1½	50 2	65 2½	80 3	90 3½	100 4	120 4½	125 5	150 6	200 8	250 10	300 12	350 14	400 16
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					EN1057 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					EN1057 Copper Rolls ‡												
VE226BSS	Lt. Wall SS	5S, 10S Rx Rolls #																
VE226MSS	Lt. Wall SS					5S, 10S Rx Rolls #												
VE108H	Steel		5 – 40 Standard Rolls §															
	Stainless			40S Standard Rolls §														
	Lt. Wall SS			5S, 10S Rx 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					EN1057 Copper Rolls ‡												
VE270FSD/ VE271FSD	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					EN1057 Copper Rolls ‡												

TABLE CONTINUED ON PG. 15-7

Rx Rolls – "Rx" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving lightwall stainless steel pipe.

† 6061-T4 or 6063-T4 alloy must be used.

‡ Alternate units are available for Australian Standard Copper.

§ Standard Rolls – This is the Victaulic designation for grooving roll sets used primary for steel pipe. Also used for Schedule 40S stainless steel pipe.

◊ RP Rolls – "RP" is the Victaulic part code designator for grooving roll sets specifically designed for roll grooving PVC plastic pipe and aluminum pipe.

Pipe Preparation – Cut Grooving Tools

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 and other 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.

- # 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 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 (6.4 mm/.25") are available.

Tool Model	Pipe Material	Pipe Size/Schedule mm/Inches																
		20 ¾	25 1	32 1¼	40 1½	50 2	65 2½	80 3	90 3½	100 4	120 4½	125 5	150 6	200 8	250 10	300 12	350 14	400 16
TABLE CONTINUED FROM PG. 15-6																		
VE416FSD/ VE417FSD 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					EN1057 Copper Rolls ‡												
VE269	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					EN1057 Copper Rolls ‡												
VE415MC 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					EN1057 Copper Rolls ‡												
VE415MC AGS Groove	Steel																RW Rolls ø	
	Stainless																RW Rolls ø	
	Lt. Wall SS																5S–10 RWx Rolls ¤+	

** Standard Wall (9.5 mm/0.375")

IMPORTANT NOTE:

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

† Refer to Cut Grooving Tool Ratings chart on pgs. 15-9

Pipe Preparation – Cut Grooving Tools

VE460 RATINGS – MAXIMUM CAPACITY †

Pipe Material	Pipe Size/Schedule																							
VE460	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	34 850	36 900	38 950	40 1000	42 1050	48 1200	50 1250	60 1500
Steel	5 – 80				5 – Extra Strong		10 – Extra Strong (.500) ^ AGS						Std. (.375 – .500) ^ AGS											
Stainless	Sch. 40 Only					.375	RW AGS																	
Lt. Wall SS	5S – 10S RX Rolls						5S/10S/10 RWX Rolls																	
Aluminum #	5 – 40																							
PVC Plastic	40 – 80			40																				
Grooving Capabilities for Original Style Groove (OGS) Coupling Styles 07, 77, and 770)																								
Steel													.250 – .500 ^											
Stainless							Std. (.375)																	
Lt. Wall SS							5S/10S/10 RX Rolls																	

† Indicates pipe size capacity. For wall thickness capacity and general tool ratings see separate Vic-Easy Tool Rating Data in publication 24.01.

‡ Use RP Rolls.

* 6061-T4 or 6063-T4 must be used. RP Rolls must be used.

^ Maximum ratings are limited to pipe that does not exceed the yield strength of API-5L Grade "B", ASTM Grade "B", 150 Brinell Hardness Number (BHN) maximum.

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 and other 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.

Pipe Preparation – Pressfit Tool/Hole Cutting Tools

Field Cut Groover

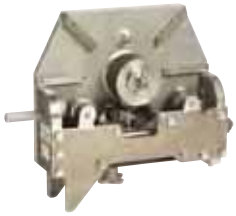
For Complete Information
Request Publication **24.01**

VG28GD

VG28GD VIC-ADJUSTABLE™

- Designed for fast, easy cut grooving of steel and other metallic pipe
- A modified version (MRL) is available to groove and machine for rubber lining
- Cut grooves DN50–DN200/60.3–219.1 mm/2–8" pipe †

Drive Requirements: External drive, minimum 1½ hp
Drive Speed: 38 rpm maximum
Shipped Set For: Standard groove, DN100–DN150/4–6" steel pipe
Weight: 17 kg/37 lbs.
Note: Conversion kit available for 88.9-168.3mm/3-6" AWWA pipe.



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 DN200–DN600/219.1–609.6 mm/8–24" pipe †

Drive Requirements: External drive, minimum 1½ hp
Drive Speed: 38 rpm maximum
Shipped Set For: Standard groove, DN200–DN300/8–12" steel pipe
Weight: 37.2 kg/82 lbs.
Note: Conversion kit available for AWWA pipe.

Field Manual Cut Groover

For Complete Information
Request Publication **24.01**

VG-1

VG-1 VIC-GROOVER

- Designed for manual or power cut grooving of a single size on steel, stainless steel, aluminum and PVC pipe, AWWA
- Tools are supplied with a ratchet handle for manual operation
- Tools 50 mm/2" and larger are supplied with a power yoke
- Cut grooves 20–200 mm/¾–8" pipe †

Drive Requirements: Manual or external drive, minimum ½ hp./0.37 kw
Drive Speed: 40 rpm maximum
Shipped Set For: Standard groove
Weight: 13 kg/28 lbs.

Pipe Preparation – Pipe Cutting Tools

Plastic Groovers

For Complete Information Request Publication **24.01**

VPG26

VPG826

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 50–610.0 mm/2–24" pipe †

VPG26

Power Requirements: 110 volt, 1 phase, 60 Hz, 7 amps
Rotation Drive: Manual (clockwise)
Weight: 19 kg/41 lbs.
Shipped Set For: VPG26 for 50–90 mm/2–3 ½". Grooves 50-200mm/2-8"

VPG824

Power Requirements: 110 volt, 1 phase, 60 Hz, 7 amps
Weight: 21 kg/47 lbs.
Shipped Set For: VPG826 for 200–300 mm/8–12". Grooves 200-600mm/8-24".

† Refer to Cut Grooving Tool Ratings chart below

Vic-Groover® Cut Grooving Tool Ratings

(CAPACITY)

Tool Model	Pipe Material	Pipe Size/Schedule mm/Inches: 20 ¾	25 1	32 1¼	40 1½	50 2	65 2½	80 3	90 3½	100 4	120 4½	125 5	150 6	200 8	250 10	300 12	350 14	400 16	450 18	500 20	550 22	600 24
Vic-Groover Individually Sized 20–200 mm ¾–8"	Steel	40, 80																				
	Stainless	40, 80																				
	Aluminum	40, 80																				
	PVC	40, 80																				
VG28GD Adjustable Groover	Steel					40, 80								40								
	Stainless					40, 80								40								
	Aluminum					40, 80								40								
VG824 Adjustable Groover	Steel													40, 80				Standard Wall 30, 40				
	Stainless													Standard Wall, 30, 40								
	Aluminum													Standard Wall, 30, 40								
VPG26	PVC					40, 80 PVC																
VPG824	PVC													40, 80 PVC								

Pipe Preparation – Accessories

Hole Cutting Tools

For Complete Information
Request Publication **24.01**

HCT904

HCT904

- One-piece hole cutting tool designed to cut holes up to 120 mm/4 ½" in carbon and stainless steel pipe
- Allows for use of Mechanical-T, Vic-Let, and Vic-O-Well outlets

Capacity: DN15 – DN200/21.3 – 219.1 mm/½ – 8" pipe, 30.2 – 64 mm holes for Mechanical-T and Vic-Let

Power Requirements: 230 volt, 1 phase, 50 Hz, 7.0 amp

Weight: 20 kg/44 lbs.

VHCT

VHCT

- Three-piece hole cutting tool designed to cut holes up to 90 mm/3 ½" 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: DN32 – DN200/42.4 – 219.1mm/1¼ – 8" pipe, 30.2-90 mm holes for Mechanical-T, Vic-Let, and Vic-O-Well outlets

Power Requirements: 220 volt, 1 phase, 50 Hz, 5 amp electrical supply. (grounded 120 volt, 1 phase, 60 Hz, 10 amp available on request)

Weight: 16 kg/36 lbs.

Accessories: Extended chain for 250 – 600 mm/10 – 24" pipe

VIC-TAP II

VIC-TAP II

- Hole cutting tool designed for use with Mechanical-T unit for tapping into steel pipe systems under pressures up to 3450 kPa/500 psi – Ground fault interrupting circuit protection

Capacity: Vic-Tap II 100 – 200 mm/4 – 8" Run × 65 mm/2 ½" Outlet

Power Requirements: 115 volt, 1 phase, 60 Hz, 7.5 amp

Weight:
(A) Drill guide base 6.8 kg/15 lbs.
(B) Drill motor and feed assembly, total wgt. 7.3 kg/16 lbs.
(C) Style 931/Valve unit, 5.4 kg/12 lb. – 6.8 kg/15 lb., depending upon size

Hole Size: 60.5 mm/2 ⅜

Pipe Preparation – Accessories

Power Drive

VPD752/VPD753

For Complete Information
Request Publication **24.01**

- Can be used as the power drive unit for the VE226, VE26, VE46, VE417FS and VE272SFS roll grooving tools, provided the tool is equipped with the correct base plate
- Equipped with a forward-off-reset control and integral foot switch

Capacity: See appropriate tool
Power Requirements: VPD752: 115volt, 15amp, 50/60Hz
VPD753: 220volt, 6amp, 50/60Hz
Weight: 634 kg/140 lbs.

Power Mule

For Complete Information
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, and VG824, series tools
Power Requirements: Power Mule II: 115volt, 15amp, 50/60cycle
Power Mule III: 220volt, 8amp, 50/60 cycle
Full Load Speed: 35 rpm
Weight: 86 kg/190 lbs.

Pipe Preparation

Adjustable Pipe Stand

VAPS112

For Complete Information
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: DN20–DN300/26.9–323.9mm/¾–12" pipe
Load Rating: 490 kg/1075 lbs.
Vertical Stroke: 368 mm/14½" for adjusting rod, 216 mm/8½" leg adjustment, 584 mm/23"
Minimum Pipe Height from Floor:
584 mm/23" on 300 mm/12" pipe
533 mm/21" on 25 mm/1" pipe
Weight: 86 kg/190 lbs.
Handle Effort Required to Raise 490 kg/1075 lbs. Load: 23 kg/50 lbs. maximum

Adjustable Pipe Stand

VAPS224

For Complete Information
Request Publication **24.01**

- Designed specifically for supporting pipe to be roll grooved
- Self-standing heavy-duty unit permits free pipe rotation and traversing on ball transfers
- Ball transfers are mounted in a manner permitting use of pipe slings
- Turnstile design allows pipe to be spun around for grooving of both pipe ends without dismounting pipe from stand

Capacity: DN50–DN600/60.3–609.6 mm/2–24" pipe
Load Rating: 816 kg/1800 lbs.
Vertical Stroke: 584 mm/23"
Minimum Pipe Height from Floor: 325 mm/13" on 600 mm/24" pipe
Maximum Pipe Height from Floor: 965 mm/38" on 50 mm/2" pipe
Weight: 118 kg/260 lbs.
Handle Effort Required to Raise 817 kg/1800 lbs. Load: 23 kg/50 lbs. maximum

* Ridgid is a registered trademark of the Ridge Tool Company

Pipe Preparation

Adjustable Pipe Stand

VEPS270

For Complete Information
Contact Victaulic

- Designed specifically to support 20–300 mm/¾–12" pipe to be roll grooved
- Sturdy portable stand permits free rotation and traversing on ball transfers
- Turnstile design allows grooving of both pipe ends without dismounting pipe from stand
- Use in combination with the VE108H, VE270FSD, VE271FSD and VE272SFS grooving tools

Capacity: DN20–DN300/21.3–323.9mm/¾–12" pipe
Load Rating: 300 kg/660 lbs.
Minimum Pipe Height from Floor: 930 mm/37"
Maximum Pipe Height from Floor: 630 mm/25"
Weight: 20 kg/44 lbs.

Adjustable Pipe Stand

VAPS1672

For Complete Information
Request Publication **24.01**

Vic-Easy Adjustable Pipe Stands are portable and self-standing units that permit free pipe rotation and traversing on ball transfers. They are designed for direct use with Vic-Easy roll grooving tools: VE436MC and VE460.

Capacity: 16–72" pipe †
Load Rating: 10000 lbs
Vertical Stroke: 17"
Min. Pipe Height from Floor: 16" on 72" pipe
Max. Pipe Height from Floor: 28" on 16" pipe

† Indicates pipe size capacity. For wall thickness capacity and general tool ratings see separate Vic-Easy Tool Rating Data in publication 24.01.

Pipe Diameter Tape

For Complete Information
Request Publication **24.01**

- Pocket-sized steel tapes are available for taking circumferential measurements, marked in millimeter increments
- Tapes may be used for measuring 20–630 mm/¾–24" 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 mm Inches	226	272SFS	270FSD 271FSD	268	416FSD 417FSD	414MC	460‡	Power	Hand	VG28GD Power	VG824 Power
20 ¾	0.5 #	—	0.2	0.2	—	—	—	0.5	1.5	—	—
25 1	0.6 #	—	0.2	0.2	—	—	—	0.5	1.5	—	—
32 1¼	0.7 #@	—	0.2	0.2	—	—	—	0.7	2.0	—	—
40 1½	0.8 #@	—	0.2	0.2	—	—	—	0.7	2.5	—	—
50 2	1.0 @≠	0.3	0.3	0.3	0.3	0.2	—	1.0	0.3	1.0	—
65 2½	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	—
80 3	1.4 @≠	0.4	0.4	0.4	0.4	0.2	—	1.4	4.5	1.5	—
90 3½	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	—	1.9	7.0	2.5	—
100 4	1.5 @≠	0.5	0.4	0.5	0.5	0.2	< 1	1.9	7.0	2.5	—
115 4½	1.5 @≠	0.8	0.6	0.6	0.6	0.2	< 1	2.3	8.0	2.8	—
133.0 mm	1.6 @≠	1.0	0.8	0.8	0.8	0.2	—	2.5	9.0	3.5	—
139.7 mm	1.6 @≠	1.0	0.8	0.8	0.8	0.2	—	2.5	9.0	3.5	—
125 5	1.6 @≠	1.0	0.8	0.8	0.8	0.2	< 1	2.5	9.0	3.5	—
159.0 mm	1.8 @≠	1.5	1.2	0.8	1.0	0.3	—	3.0	10.0	4.5	—
165.1 mm	1.8 @≠	1.5	1.2	0.8	1.0	0.3	—	3.0	10.0	4.5	—
150 6	1.8 @≠	1.5	1.2	0.8	1.0	0.3	< 1	3.0	10.0	4.5	—
200 8	—	1.7	1.5	0.9	1.7	0.4	< 1	4.0	15.0	5.0	5.0
250 10	—	2.0	1.8	1.5	2.5	0.6	1.1	—	—	—	8.0
300 12	—	2.5	2.3	1.8	3.5	0.7	1.4	—	—	—	10.0
350 14	—	—	—	—	7.4+	3.6+	2.7	—	—	—	12.0
400 16	—	—	—	—	8.0+	4.0+	3.0	—	—	—	16.0
450 18	—	—	—	—	—	—	3.5	—	—	—	20.0
500 20	—	—	—	—	—	—	3.8	—	—	—	23.0
550 22	—	—	—	—	—	—	4.0	—	—	—	—
600 24	—	—	—	—	—	—	4.2	—	—	—	30.0
750 30†	—	—	—	—	—	—	4.4	—	—	—	—
900 36†	—	—	—	—	—	—	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 650 mm/26", 700 mm/28", 800 mm/32" and 1050 mm/42" grooving times contact Victaulic.

‡ 100-300mm / 4-12" - OGS Grooves; 350-900mm/14-36" - AGS Grooves. For pipe sizes up to 1500mm/60", contact Victaulic for details. Grooving times are estimates only.

Pipe Preparation

Standard Pipe Wall Thickness

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

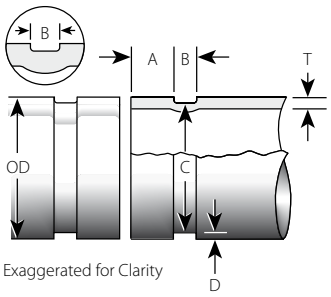
Size		Pipe Wall Thickness								
Nominal Size mm Inches	Actual Outside Dia. mm Inches	Schedule 5S mm Inches	Schedule 5 mm Inches	Schedule 10S mm Inches	Schedule 10 mm Inches	Schedule 20 mm Inches	Schedule 30 mm Inches	Schedule 40 mm Inches	Schedule Std. mm Inches	Schedule 80 mm Inches
20 ¾	26.9 1.050	1.65 0.065	1.65 0.065	2.11 0.083	—	—	—	2.87 0.113	2.87 0.113	3.91 0.154
25 1	33.7 1.315	1.65 0.065	1.65 0.065	2.77 0.109	—	—	—	3.38 0.133	3.38 0.133	4.55 0.179
32 1 ¼	42.4 1.660	1.65 0.065	1.65 0.065	2.77 0.109	—	—	—	3.56 0.140	3.56 0.140	4.85 0.191
40 1 ½	48.3 1.900	1.65 0.065	1.65 0.065	2.77 0.109	—	—	—	3.68 0.145	3.68 0.145	5.08 0.200
50 2	60.3 2.375	1.65 0.065	1.65 0.065	2.77 0.109	—	—	—	3.91 0.154	3.91 0.154	5.54 0.218
65 2 ½	73.0 2.875	2.11 0.083	2.11 0.083	3.05 0.120	—	—	—	5.16 0.203	5.16 0.203	7.01 0.276
76.1 mm	76.1 3.000	2.11 0.083	2.11 0.083	3.05 0.120	—	—	—	5.49 0.216	5.49 0.216	7.62 0.300
80 3	88.9 3.500	2.11 0.083	2.11 0.083	3.05 0.120	—	—	—	5.49 0.216	5.49 0.216	7.62 0.300
90 3 ½	101.6 4.000	2.11 0.083	2.11 0.083	3.05 0.120	—	—	—	5.74 0.226	5.74 0.226	8.08 0.318
108.1 mm	108.1 4.250	2.11 0.083	2.11 0.083	3.05 0.120	—	—	—	6.02 0.237	6.02 0.237	8.56 0.337
100 4	114.3 4.500	2.11 0.083	2.11 0.083	3.05 0.120	—	—	—	6.02 0.237	6.02 0.237	8.56 0.337
4 ½	127.0 5.000	2.11 0.083	2.11 0.083	3.05 0.120	—	—	—	6.02 0.237	6.02 0.237	8.56 0.337
133.0 mm	133.0 5.250	2.11 0.083	2.11 0.083	3.05 0.120	—	—	—	6.02 0.237	6.02 0.237	8.56 0.337
139.7 mm	139.7 5.500	2.77 0.109	2.77 0.109	3.40 0.134	—	—	—	6.55 0.258	6.55 0.258	9.53 0.375
125 5	141.3 5.563	2.77 0.109	2.77 0.109	3.40 0.134	—	—	—	6.55 0.258	6.55 0.258	9.53 0.375
159.0 mm	159.0 6.250	2.77 0.109	2.77 0.109	3.40 0.134	—	—	—	7.11 0.280	7.11 0.280	10.97 0.432
165.1 mm	165.1 6.500	2.77 0.109	2.77 0.109	3.40 0.134	—	—	—	7.11 0.280	7.11 0.280	10.97 0.432
150 6	168.3 6.625	2.77 0.109	2.77 0.109	3.40 0.134	—	—	—	7.11 0.280	7.11 0.280	10.97 0.432
200 8	219.1 8.625	2.77 0.109	2.77 0.109	3.76 0.148	—	6.35 0.250	7.04 0.277	8.18 0.322	8.18 0.322	12.70 0.500
250 10	273.0 10.750	3.40 0.134	3.40 0.134	4.19 0.165	—	6.35 0.250	7.80 0.307	9.27 0.365	9.27 0.365	15.09 0.594
300 12	323.8 12.750	3.96 0.156	3.96 0.156	4.57 0.180	—	6.35 0.250	8.38 0.330	10.31 0.406	9.53 0.375	17.48 0.688
350 14	355.6 14.000	3.96 0.156	—	4.78 0.188	6.35 0.250	7.92 0.312	9.53 0.375	11.13 0.438	9.53 0.375	19.05 0.750
400 16	406.4 16.000	4.19 0.165	—	4.78 0.188	6.35 0.250	7.92 0.312	9.53 0.375	12.70 0.500	9.53 0.375	21.44 0.844
450 18	457.0 18.000	4.19 0.165	—	4.78 0.188	6.35 0.250	7.92 0.312	11.13 0.438	14.27 0.562	9.53 0.375	23.83 0.938
500 20	508.0 20.000	4.78 0.188	—	5.54 0.218	6.35 0.250	9.53 0.375	12.70 0.500	15.09 0.594	9.53 0.375	26.19 1.031
600 24	610.0 24.000	5.54 0.218	—	6.35 0.250	6.35 0.250	9.53 0.375	14.27 0.562	17.48 0.688	9.53 0.375	30.96 1.219
650 26	660.4 26.000	—	—	—	7.92 0.312	12.70 0.500	—	—	9.53 0.375	—
700 28	711.0 28.000	—	—	—	7.92 0.312	12.70 0.500	15.88 0.625	—	9.53 0.375	—
750 30	262.0 30.000	6.35 0.250	—	7.92 0.312	7.92 0.312	12.70 0.500	15.88 0.625	—	9.53 0.375	—
800 32	813.0 32.000	—	—	—	7.92 0.312	12.70 0.500	15.88 0.625	17.48 0.688	9.53 0.375	—
900 36	914.0 36.000	—	—	—	7.92 0.312	12.70 0.500	15.88 0.625	19.05 0.750	9.53 0.375	—
42 1050	42.000 1067.0	—	—	—	—	—	—	—	0.375 9.53	—

Pipe Preparation

Groove Dimensions

ROLL GROOVE SPECIFICATIONS NOTES

For Complete Information Request Publication **25.01**



@ 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 600 – 1200 mm/24 – 48" contact Victaulic.

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

GROOVE DIMENSION NOTES: SEE PG. 15-17

STANDARD ROLL GROOVE SPECIFICATIONS – STEEL AND OTHER METALLIC PIPE@†

1	2			3	4	5		6	7	8
	Dimensions – mm/Inches									
Nominal Size mm Inches	Pipe Outside Diameter O.D.			A Gasket Seat ± 0.76 ± 0.03	B Grv. Width ± 0.76 ± 0.03	C Groove Diameter		D Groove Depth ref.	T Minimum Allow. Wall Thk.	Maximum Allow. Flare Diameter
	Basic	Maximum	Minimum			Maximum	Minimum			
20 ¾	26.9 1.050	26.9 1.060	26.4 1.040	15.88 0.625	7.14 0.281	23.8 0.938	23.4 0.923	1.42 0.056	1.24 0.049	29.2 1.15
25 1	33.7 1.315	33.7 1.328	33.1 1.302	15.88 0.625	7.14 0.281	30.2 1.190	29.9 1.175	1.60 0.063	1.24 0.049	36.3 1.43
32 1 ¼	42.4 1.660	42.6 1.676	41.8 1.644	15.88 0.625	7.14 0.281	39.0 1.535	38.6 1.520	1.60 0.063	1.24 0.049	45.0 1.77
40 1 ½	48.3 1.900	48.7 1.919	47.8 1.881	15.88 0.625	7.14 0.281	45.1 1.775	44.7 1.760	1.60 0.063	1.24 0.049	51.1 2.01
50 2	60.3 2.375	60.9 2.399	59.7 2.351	15.88 0.625	8.74 0.344	57.2 2.250	56.8 2.235	1.60 0.063	1.24 0.049	63.0 2.48
65 2 ½	73.0 2.875	73.8 2.904	72.3 2.846	15.88 0.625	8.74 0.344	69.1 2.720	68.6 2.702	1.98 0.078	1.98 0.078	75.7 2.98
76.1 mm	76.1 3.000	77.0 3.030	75.4 2.970	15.88 0.625	8.74 0.344	72.3 2.845	71.8 2.827	1.98 0.078	1.98 0.078	78.7 3.10
80 3	88.9 3.500	89.8 3.535	88.1 3.469	15.88 0.625	8.74 0.344	84.9 3.344	84.5 3.326	1.98 0.078	1.98 0.078	91.4 3.60
90 3 ½	101.6 4.000	102.6 4.040	100.8 3.969	15.88 0.625	8.74 0.344	97.4 3.834	96.9 3.814	2.11 0.083	1.98 0.078	104.1 4.10
108.0 mm	108.0 4.250	109.0 4.293	107.2 4.219	15.88 0.625	8.74 0.344	103.7 4.084	103.2 4.064	2.11 0.083	1.98 0.078	110.5 4.35
100 4	114.3 4.500	115.4 4.545	113.5 4.469	15.88 0.625	8.74 0.344	110.1 4.334	109.6 4.314	2.11 0.083	1.98 0.078	116.8 4.60
120 4 ½	127.0 5.000	128.3 5.050	126.2 4.969	15.88 0.625	8.74 0.344	122.8 4.834	122.3 4.814	2.11 0.083	1.98 0.078	129.5 5.10
133.0 mm	133.0 5.250	134.7 5.303	132.6 5.219	15.88 0.625	8.74 0.344	129.1 5.084	128.6 5.064	2.11 0.083	1.98 0.078	135.9 5.35
139.7 mm	139.7 5.500	141.1 5.556	138.9 5.469	15.88 0.625	8.74 0.344	135.5 5.334	135.0 5.314	2.11 0.083	1.98 0.078	142.2 5.60
125 5	141.3 5.563	142.7 5.619	140.5 5.532	15.88 0.625	8.74 0.344	137.0 5.395	136.5 5.373	2.13 0.084	1.98 0.078	143.8 5.66
152.4 mm	152.4 6.000	153.8 6.056	151.6 5.969	15.88 0.625	8.74 0.344	148.1 5.830	147.5 5.808	2.16 0.085	1.98 0.078	154.9 6.10
159.0 mm	159.0 6.250	160.4 6.313	158.0 6.219	15.88 0.625	8.74 0.344	153.2 6.032	152.5 6.002	2.16 0.085	2.77 0.109	161.3 6.35
165.1 mm	165.1 6.500	166.7 6.563	164.3 6.469	15.88 0.625	8.74 0.344	160.8 6.330	160.2 6.308	2.16 0.085	2.77 0.109	167.6 6.60
150 6	168.3 6.625	169.9 6.688	167.5 6.594	15.88 0.625	8.74 0.344	164.0 6.455	163.4 6.433	2.16 0.085	2.77 0.109	170.9 6.73
200 8	219.1 8.625	220.7 8.688	218.3 8.594	19.05 0.750	11.91 0.469	214.4 8.441	213.8 8.416	2.34 0.092	2.77 0.109	223.5 8.80
250 10	273.0 10.750	274.7 10.813	272.3 10.719	19.05 0.750	11.91 0.469	268.3 10.562	267.6 10.535	2.39 0.094	3.40 0.134	277.4 10.92
300 12	323.9 12.750	325.5 12.813	323.1 12.719	19.05 0.750	11.91 0.469	318.3 12.531	317.5 12.501	2.77 0.109	3.96 0.156	328.2 12.92
14 – 24 350 – 600	AGS See AGS Grooving Chart, pg. 13-18									

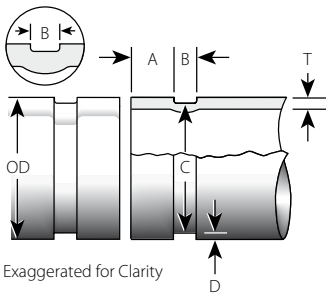
TABLE CONTINUED ON PG. 15-17

Pipe Preparation

Groove Dimensions

ROLL GROOVE SPECIFICATIONS NOTES

For Complete Information Request Publication **25.01**



Exaggerated for Clarity

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

Gasket Seat tolerances for sizes 650 – 1050 mm/26 – 42" are +0.8 mm and -1.5 mm/+0.03" and -0.06".

IMPORTANT NOTES:

For roll grooving pipe from 600 – 1200 mm/24 – 48" contact Victaulic.

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

STANDARD ROLL GROOVE SPECIFICATIONS – STEEL AND OTHER METALLIC PIPE@†

1	2			3	4	5		6	7	8
	Dimensions – mm/Inches									
Nominal Size mm Inches	Pipe Outside Diameter O.D.			A Gasket Seat ± 0.76 ± 0.03	B Grv. Width ± 0.76 ± 0.03	C Groove Diameter		Groove Depth D ref.	T Min. Allow. Wall Thickness	Max. Allow. Flare Dia.
	Basic	Maximum	Minimum			Maximum	Minimum			
TABLE CONTINUED FROM PG. 15-16										
355.6 14	355.6 14.000	357.2 14.063	354.8 13.969	23.83 0.938	11.91 0.469	350.0 13.781	349.3 13.751	2.77 0.109	3.96 0.156	359.7 14.16
377.0 mm	377.0 14.843	379.4 14.937	376.2 14.811	23.83 0.938	11.91 0.469	371.1 14.611	370.4 14.581	2.94 0.116	4.50 0.177	381.0 15.00
15"	381.0 15.000	382.6 15.063	380.2 14.969	23.83 0.938	11.91 0.469	375.4 14.781	374.7 14.751	2.77 0.109	4.19 0.165	385.1 15.16
406.4 16	406.4 16.000	408.0 16.063	405.6 15.969	23.83 0.938	11.91 0.469	400.8 15.781	400.1 15.751	2.77 0.109	4.19 0.165	410.5 16.16
426.0 mm	426.0 16.772	428.4 16.866	425.2 16.740	23.83 0.938	11.91 0.469	419.5 16.514	418.6 16.479	3.28 0.129	4.50 0.177	430.0 16.93
457.0 18	457.0 18.000	458.8 18.063	456.4 17.969	25.40 1.000	11.91 0.469	451.6 17.781	450.9 17.751	2.77 0.109	4.78 0.188	461.3 18.16
480.0 mm	480.0 18.898	482.4 18.992	479.2 18.867	25.40 1.000	11.91 0.469	473.1 18.626	472.2 18.591	3.45 0.136	5.99 0.236	484.1 19.06
508.0 20	508.0 20.000	509.6 20.063	507.2 19.969	25.40 1.000	11.91 0.469	502.4 19.781	501.7 19.751	2.77 0.109	4.78 0.188	512.1 20.16
530.0 mm	530.0 20.866	532.4 20.960	529.2 20.835	25.40 1.000	11.91 0.469	522.5 20.572	521.6 20.537	3.73 0.147	5.99 0.236	534.2 21.03
559.0 22	559.0 22.000	560.4 22.063	558.0 21.969	25.40 1.000	12.70 0.500	550.1 21.656	549.3 21.626	4.37 0.172	4.78 0.188	563.9 22.20
610.0 24	610.0 24.000	611.2 24.063	608.8 23.969	25.40 1.000	12.70 0.500	600.9 23.656	600.1 23.626	4.37 0.172	5.54 0.218	614.7 24.20
630.0 mm	630.0 24.803	632.4 24.897	629.2 24.772	25.40 1.000	12.70 0.500	621.3 24.459	620.4 24.424	4.37 0.172	7.01 0.276	635.0 25.00
650 26 #	660.4 26.000	662.8 26.093	659.6 25.969	45.45 1.75	15.88 0.625	647.7 25.500	646.1 25.437	6.35 0.250	6.35 0.250	665.5 26.20
700 28 #	711.0 28.000	713.6 28.093	710.4 27.969	45.45 1.75	15.88 0.625	698.5 27.500	696.9 27.437	6.35 0.250	6.35 0.250	716.3 28.20
750 30 #	762.0 30.000	764.4 30.093	761.2 29.969	45.45 1.75	15.88 0.625	749.3 29.500	747.7 29.437	6.35 0.250	6.35 0.250	767.1 30.20
800 32 #	813.0 32.000	815.2 32.093	812.0 31.969	45.45 1.75	15.88 0.625	800.1 31.500	798.5 31.437	6.35 0.250	6.35 0.250	817.9 32.20
900 36 #	914.0 36.000	916.8 36.093	913.6 35.969	45.45 1.75	15.88 0.625	901.7 35.500	900.1 35.437	6.35 0.250	6.35 0.250	919.5 36.20
1050 42 #	1067.0 42.000	1069.2 42.093	1066.0 41.969	50.80 2.00	15.88 0.625	1054.1 41.500	1052.5 41.437	6.35 0.250	6.35 0.250	1071.8 42.20

GROOVE DIMENSION NOTES:

Column 1: Nominal Pipe Size

Column 2: 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 carbon steel pipe, the maximum allowable tolerance from square-cut pipe ends is 0.8 mm/0.030" for 20 – 90 mm/¾ – 3½" sizes; 1.1 mm/0.045" for 100 – 150 mm/4 – 6" sizes; and 1.5 mm/0.060" for 200 mm/8" 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

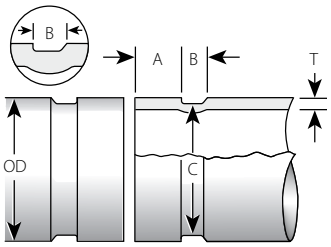
Column 8: Maximum Allowable Pipe-End Flare Diameter Dimension (Standard Roll Groove Only)
Maximum allowable pipe-end flare diameter is measured at the extreme pipe-end diameter.

Pipe Preparation

Groove Dimensions

ADVANCED GROOVE SYSTEM (AGS) ROLL GROOVE SPECIFICATIONS NOTES

For Complete Information Request Publication **25.09**



Exaggerated for Clarity

⚠ WARNING

- **Victaulic AGS products MUST NOT be used on pipe that is prepared to original 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 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 – mm/Inches							
Nominal Size mm Inches	Pipe Outside Diameter O.D.		T Minimum Allow. Wall Thk.	A Gasket Seat + 0.79/-1.60 + 0.031/-0.063	B Grv. Width ref. *	C Groove Diameter		Maximum Allow. Flare Diameter
	Maximum	Minimum				Maximum	Minimum	
355.6 14	358.0 14.094	354.8 13.969	9.5 0.375	38.1 1.500	11.6 0.455	342.9 13.500	341.8 13.455	361.4 14.23
406.4 16	408.8 16.084	405.6 15.969	9.5 0.375	38.1 1.500	11.6 0.455	393.7 15.500	392.6 15.455	412.2 16.23
457.0 18	459.6 18.094	456.4 17.969	9.5 0.375	38.1 1.500	11.6 0.455	444.5 17.500	443.4 17.455	463.0 18.23
508.0 20	510.4 20.094	507.2 19.969	9.5 0.375	38.1 1.500	11.6 0.455	495.3 19.500	494.2 19.455	513.8 20.23
610.0 24	612.0 24.094	608.8 23.969	9.5 0.375	38.1 1.500	11.6 0.455	596.9 23.500	595.8 23.455	615.4 24.23
660.0 26	662.8 26.094	659.6 25.969	9.5 0.375	44.5 1.750	13.6 0.535	645.9 25.430	644.4 25.370	4668.0 26.30
711.0 28	713.6 28.094	710.4 27.969	9.5 0.375	44.5 1.750	13.6 0.535	696.7 27.430	695.2 27.370	718.8 28.30
762.0 30	764.4 30.094	761.2 29.969	9.5 0.375	44.5 1.750	13.6 0.535	747.5 29.430	746.0 29.370	769.6 30.30
813.0 32	815.2 32.094	812.0 31.969	9.5 0.375	44.5 1.750	13.6 0.535	798.3 31.430	796.8 31.370	820.4 32.30
914.0 36	916.8 36.094	913.6 35.969	9.5 0.375	44.5 1.750	13.6 0.535	899.9 36.430	898.4 35.370	922.0 36.30
1016.0 40	1018.4 40.094	1015.2 39.969	9.5 0.375	50.8 2.000	14.3 0.562	1000.1 39.375	998.6 39.315	1023.6 40.30
1067.0 42	1069.2 42.094	1066.0 41969	9.5 0.375	50.8 2.000	14.3 0.562	1050.9 41.375	1049.4 41.315	1074.4 42.30
1168.0 46	1170.8 46.094	1167.6 45.969	9.5 0.375	50.8 2.000	14.3 0.562	1152.5 45.375	1154.0 45.315	1176.0 46.30
1219.0 48	1221.6 48.094	1218.4 47.969	9.5 0.375	50.8 2.000	14.3 0.562	1203.3 47.375	1201.8 47.315	1226.8 48.30
1372.0 54	1374.0 54.094	1370.8 53.969	9.5 0.375	63.5 2.500	14.3 0.562	1355.7 53.375	1354.2 53.315	1379.2 54.30
1422.0 56	1424.87 56.094	1421.6 55.969	9.5 0.375	63.5 2.500	14.3 0.562	1406.5 55.375	1405.0 55.315	1430.0 56.30
1524.0 60	1526.4 60.094	1523.2 59.969	9.5 0.375	63.5 2.500	14.3 0.562	1508.1 59.375	1506.6 59.315	1531.6 60.30

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 3.2 mm/⅛" for each groove. For a pipe length with an AGS roll groove at each end, the pipe length will grow approximately 6.4 mm/¼" total. Therefore, the cut length should be adjusted to accommodate this growth.
EXAMPLE: If you need a 610 mm/24" length of pipe that will contain an AGS roll groove at each end, cut the pipe to a length of 603 mm/23¾" to allow for this growth.

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

* The Groove Width "B" dimension is listed for information only. The Groove Width "B" dimensions will be achieved with properly maintained Victaulic tools that are equipped with special Victaulic AGS (RW) roll sets made specifically for use with carbon steel pipe.

GROOVE DIMENSION NOTES:

Column 1: Nominal 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 1.5 mm/0.063" 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 (9.5 mm/.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

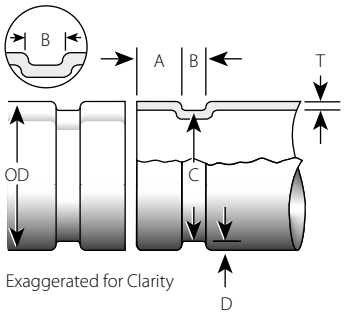
Dimension measured at the most extreme pipe end diameter, square cut or beveled.

Pipe Preparation

Groove Dimensions

COPPER TUBING ROLL GROOVE SPECIFICATIONS NOTES FOR EUROPEAN STANDARD

For Complete Information
Request Publication **22.11**



Exaggerated for Clarity

COPPER TUBING ROLL GROOVE SPECIFICATIONS FOR EUROPEAN STANDARD–EN1057@

1	2		3			4		5		6	7
	Actual Outer Dia.		Gasket Seat			Groove Width		Groove Dia.		Grv. Depth	Flare Dia.
Nominal Size mm	Max. mm Inches	Min. mm Inches	A Basic mm Inches	A Max. mm Inches	A Min. mm Inches	B Max. mm Inches	B Min. mm Inches	C Max. mm Inches	C Min. mm Inches	D (Ref. only) mm Inches	Max. mm Inches
54.0	54.07 2.129	53.93 2.123	15.87 0.625	16.64 0.655	15.11 0.595	8.38 0.330	7.62 0.300	51.51 2.028	51.00 2.008	1.25 0.049	56.39 2.220
64.0	64.07 2.522	63.93 2.517	15.87 0.625	16.64 0.655	15.11 0.595	8.38 0.330	7.62 0.300	61.47 2.420	60.96 2.400	1.27 0.050	66.41 2.615
66.7	66.77 2.629	66.63 2.623	15.87 0.625	16.64 0.655	15.11 0.595	8.38 0.330	7.62 0.300	64.14 2.525	63.63 2.505	1.27 0.050	69.09 2.720
76.1	76.17 2.999	76.03 2.993	15.87 0.625	16.64 0.655	15.11 0.595	8.38 0.330	7.62 0.300	73.41 2.890	72.90 2.870	1.35 0.053	78.61 3.095
88.9	88.79 3.496	88.83 3.497	15.87 0.625	16.64 0.655	15.11 0.595	8.38 0.330	7.62 0.300	85.70 3.374	85.19 3.354	1.60 0.063	91.63 3.607
108.0	108.07 4.255	107.93 4.249	15.87 0.625	16.64 0.655	15.11 0.595	8.38 0.330	7.62 0.300	104.80 4.126	104.29 4.106	1.60 0.063	110.54 4.352
133.0	133.20 5.244	132.80 5.228	15.87 0.625	16.64 0.655	15.11 0.595	8.38 0.330	7.62 0.300	129.29 5.090	128.78 5.070	1.85 0.073	135.79 5.346
159.0	159.20 6.280	158.80 6.252	15.87 0.625	16.64 0.655	15.11 0.595	8.38 0.330	7.62 0.300	155.30 6.114	154.79 6.094	1.85 0.073	161.80 6.370

@ Always refer to the I-600 handbook for current grooving specifications.

GROOVE DIMENSION NOTES:

Column 1: Nominal EN1057 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 0.8 mm/0.030" for 54.0 – 88.9 mm; 1.1 mm/0.045" for 108.0 – 159.0 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: Maximum Allowable End Flare Diameter

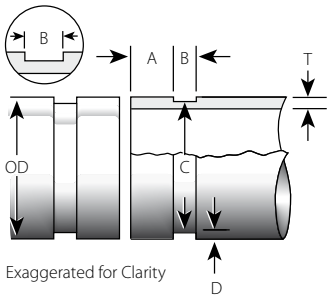
Measured at the most extreme tubing end diameter.

Pipe Preparation

Groove Dimensions

STANDARD CUT GROOVE SPECIFICATIONS NOTES

For Complete Information Request Publication **25.01**



Exaggerated for Clarity

GROOVE DIMENSION NOTES:

Column 1: Nominal Pipe Size

Column 2: Outside Diameter

The outside diameter of cut grooved pipe shall not vary more than the tolerance listed. For carbon steel pipe the maximum allowable tolerance from square cut ends to 0.76 mm/0.030" for 20 – 90 mm/¾ – 3½"; 1.14 mm/0.045" for 100 – 150 mm/4 – 6"; and 1.5 mm/0.060" for sizes 200 mm/8" 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 3.8 mm/.015".

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 METALLIC PIPE@

1	2			3	4	5		6	7
	Dimensions – mm/Inches								
Nominal Size mm Inches	Pipe Outside Diameter O.D.			A Gasket Seat ± 0.76 ± 0.03	B Grv. Width ± 0.76 ± 0.03	C Groove Diameter		D Groove Depth ref.	T Minimum Allow. Wall Thk.
	Basic	Maximum	Minimum			Maximum	Minimum		
20 ¾	26.9 1.050	26.9 1.060	26.4 1.040	15.88 0.625	7.95 0.313	23.8 0.938	23.4 0.923	1.42 0.056	2.87 0.113
25 1	33.7 1.315	33.7 1.328	33.1 1.302	15.88 0.625	7.95 0.313	30.2 1.190	29.9 1.175	1.60 0.063	3.38 0.133
32 1 ¼	42.4 1.660	42.6 1.676	41.8 1.644	15.88 0.625	7.95 0.313	39.0 1.535	38.6 1.520	1.60 0.063	3.56 0.140
40 1 ½	48.3 1.900	48.7 1.919	47.8 1.881	15.88 0.625	7.95 0.313	45.1 1.775	44.7 1.760	1.60 0.063	3.68 0.145
50 2	60.3 2.375	60.9 2.399	59.7 2.351	15.88 0.625	7.95 0.313	57.2 2.250	56.8 2.235	1.60 0.063	3.91 0.154
65 2 ½	73.0 2.875	73.8 2.904	72.3 2.846	15.88 0.625	7.95 0.313	69.1 2.720	68.6 2.702	1.98 0.078	4.78 0.188
76.1 mm	76.1 3.000	77.0 3.030	75.4 2.970	15.88 0.625	7.95 0.313	72.3 2.845	71.8 2.827	1.98 0.078	4.78 0.188
80 3	88.9 3.500	89.8 3.535	88.1 3.469	15.88 0.625	7.95 0.313	84.9 3.344	84.5 3.326	1.98 0.078	4.78 0.188
90 3 ½	101.6 4.000	102.6 4.040	100.8 3.969	15.88 0.625	7.95 0.313	97.4 3.834	96.9 3.814	2.11 0.083	4.78 0.188
108.0 mm	108.0 4.250	109.0 4.293	107.2 4.219	15.88 0.625	9.53 0.375	103.7 4.084	103.2 4.064	2.11 0.083	5.17 0.203
100 4	114.3 4.500	115.4 4.545	113.5 4.469	15.88 0.625	9.53 0.375	110.1 4.334	109.6 4.314	2.11 0.083	5.17 0.203
120 4 ½	127.0 5.000	128.3 5.050	126.2 4.969	15.88 0.625	9.53 0.375	122.8 4.834	122.3 4.814	2.11 0.083	5.17 0.203
133.0 mm	133.0 5.250	134.7 5.303	132.6 5.219	15.88 0.625	9.53 0.375	129.1 5.084	128.6 5.064	2.11 0.083	5.17 0.203
139.7 mm	139.7 5.500	141.1 5.556	138.9 5.469	15.88 0.625	9.53 0.375	135.5 5.334	135.0 5.314	2.11 0.083	5.17 0.203
125 5	141.3 5.563	142.7 5.619	140.5 5.532	15.88 0.625	9.53 0.375	137.0 5.395	136.5 5.373	2.13 0.084	5.17 0.203
152.4 mm	152.4 6.000	153.8 6.056	151.6 5.969	15.88 0.625	9.53 0.375	148.1 5.830	147.5 5.808	2.16 0.085	5.56 0.219
159.0 mm	159.0 6.250	160.4 6.313	158.0 6.219	15.88 0.625	9.53 0.375	153.2 6.032	152.5 6.002	2.16 0.085	6.32 0.249
165.1 mm	165.1 6.500	166.7 6.563	164.3 6.469	15.88 0.625	9.53 0.375	160.8 6.330	160.2 6.308	2.16 0.085	5.56 0.219
150 6	168.3 6.625	169.9 6.688	167.5 6.594	15.88 0.625	9.53 0.375	164.0 6.455	163.4 6.433	2.16 0.085	5.56 0.219
200 8	219.1 8.625	220.7 8.688	218.3 8.594	19.05 0.750	11.13 0.438	214.4 8.441	213.8 8.416	2.34 0.092	6.05 0.238
250 10	273.0 10.750	274.7 10.813	272.3 10.719	19.05 0.750	12.70 0.500	268.3 10.562	267.6 10.535	2.39 0.094	6.35 0.250
300 12	323.9 12.750	325.5 12.813	323.1 12.719	19.05 0.750	12.70 0.500	318.3 12.531	317.5 12.501	2.77 0.109	7.09 0.279

TABLE CONTINUED ON PG. 13-21

* 14 mm/$^{9}/_{16}$"(0.562") width groove is required in sizes 550 – 600 mm/22 – 24" in order to obtain the maximum allowable pipe end movement listed in Performance Data Charts. 12 mm/½" width groove will give ½ the maximum allowable shown for 550 – 600 mm/22 – 24". For double groove tool bit information, contact Victaulic.

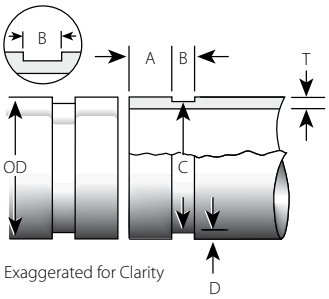
@ Always refer to the I-100 handbook for current grooving specifications.

Pipe Preparation

Groove Dimensions

STANDARD CUT GROOVE SPECIFICATIONS NOTES

For Complete Information Request Publication **25.01**



GROOVE DIMENSION NOTES:

Column 1: Nominal Pipe Size

Column 2: Outside Diameter

The outside diameter of cut grooved pipe shall not vary more than the tolerance listed. For carbon steel pipe the maximum allowable tolerance from square cut ends to 0.76 mm/0.030" for 20 – 90 mm/¾ – 3½"; 1.14 mm/0.045" for 100 – 150 mm/4 – 6"; and 1.5 mm/0.060" for sizes 200 mm/8" 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 3.8 mm/.015".

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 METALLIC PIPE@

1	2			3	4	5		6	7
	Dimensions – mm/Inches								
Nominal Size mm Inches	Pipe Outside Diameter O.D.			A Gasket Seat ± 0.76 ± 0.03	B Grv. Width ± 0.76 ± 0.03	C Groove Diameter		Groove Depth D ref.	T Min. Allow. Wall Thickness
	Basic	Maximum	Minimum			Maximum	Minimum		
TABLE CONTINUED FROM PG. 13-20									
355.6 14	355.6 14.000	357.2 14.063	354.8 13.969	23.83 0.938	12.70 0.500	350.0 13.781	349.3 13.751	2.77 0.109	7.14 0.281
377.0 mm	377.0 14.843	379.4 14.937	376.2 14.811	23.83 0.938	12.70 0.500	371.1 14.611	370.4 14.581	2.94 0.116	8.00 0.315
15"	381.0 15.000	382.6 15.063	380.2 14.969	23.83 0.938	12.70 0.500	375.4 14.781	374.7 14.751	2.77 0.109	7.92 0.312
406.4 16	406.4 16.000	408.0 16.063	405.6 15.969	23.83 0.938	12.70 0.500	400.8 15.781	400.1 15.751	2.77 0.109	7.92 0.312
426.0 mm	426.0 16.772	428.4 16.866	425.2 16.740	23.83 0.938	12.70 0.500	419.5 16.514	418.6 16.479	3.28 0.129	8.51 0.335
457.0 18	457.0 18.000	458.8 18.063	456.4 17.969	25.40 1.000	12.70 0.500	451.6 17.781	450.9 17.751	2.77 0.109	7.92 0.312
480.0 mm	480.0 18.898	482.4 18.992	479.1 18.863	25.40 1.000	12.70 0.500	473.1 18.626	472.2 18.591	3.45 0.136	8.99 0.354
508.0 20	508.0 20.000	509.6 20.063	507.2 19.969	25.40 1.000	12.70 0.500	502.4 19.781	501.7 19.751	2.77 0.109	7.92 0.312
530.0 mm	530.0 20.866	532.4 20.960	529.2 20.835	25.40 1.000	12.70 0.500	522.5 20.572	521.6 20.537	3.73 0.147	8.99 0.354
559.0 22	559.0 22.000	560.4 22.063	558.0 21.969	25.40 1.000	14.30 0.563	550.1 21.656	549.3 21.626	4.37 0.172	9.53 0.375
610.0 24	610.0 24.000	611.2 24.063	608.8 23.969	25.40 1.000	14.30 0.563	600.9 23.656	600.1 23.626	4.37 0.172	9.53 0375
630.0 mm	630.0 24.803	632.4 24.897	629.2 24.772	25.40 1.000	14.30 0.563	621.3 24.459	620.4 24.424	4.37 0.172	10.00 0.394
650 26	660.4 26.000	662.8 26.093	659.6 25.969	45.45 1.75	15.88 0.625	647.7 25.500	646.1 25.437	6.35 0.250	15.88 0.625
700 28	711.0 28.000	713.6 28.093	710.4 27.969	45.45 1.75	15.88 0.625	698.5 27.500	696.9 27.437	6.35 0.250	15.88 0.625
28"	733.4 28.875	735.0 28.938	732.6 28.844	25.40 1.00	15.88 0.625	724.7 28.531	723.9 28.501	4.37 0.172	11.10 0.437
750 30	762.0 30.000	764.4 30.093	761.2 29.969	45.45 1.75	15.88 0.625	749.3 29.500	747.7 29.437	6.35 0.250	15.88 0.625
30"	787.4 31.000	789.0 31.063	786.6 30.969	25.4 1.00	15.88 0.625	777.1 30.594	776.3 30.564	5.16 0.203	12.70 0.500
800 32	813.0 32.000	815.2 32.093	812.0 31.969	45.45 1.75	15.88 0.625	800.1 31.500	798.5 31.437	6.35 0.250	15.88 0.625
900 36	914.0 36.000	916.8 36.093	913.6 35.969	45.45 1.75	15.88 0.625	901.7 35.500	900.1 35.437	6.35 0.250	15.88 0.625
1050 42	1067.0 42.000	1069.2 42.093	1066.0 41.969	50.80 2.00	15.88 0.625	1054.1 41.500	1052.5 41.437	6.35 0.250	15.88 0.625

* 14 mm/$^{9}/_{16}$"(0.562") width groove is required in sizes 550 – 600 mm/22 – 24" in order to obtain the maximum allowable pipe end movement listed in Performance Data Charts. 12 mm/½" width groove will give ½ the maximum allowable shown for 550 – 600 mm/22 – 24". 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

For Complete Information Request Publication **25.02**

GROOVE DIMENSION NOTES:

Column 1: Nominal Pipe Size

Nominal metric (ISO) pipe size.

Column 2: Outside Diameter

Metric (ISO) outside diameter. The outside diameter of roll grooved pipe shall not vary more than the tolerance listed. For carbon steel pipe, the maximum allowable tolerance from square cut ends is 0.030" for 20 – 90 mm/¾ – 3½"; 0.045" for 100 – 150 mm/4 – 6"; 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

The 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 carbon steel pipe, 0.04R on 40 – 300 mm/1½ – 12". 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

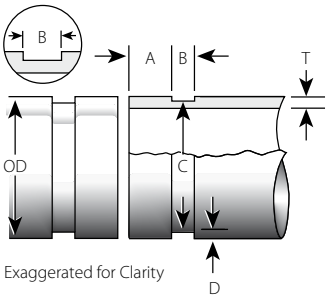
This is the minimum wall thickness which may be grooved.

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. mm Inches		Dimensions – mm/Inches							
				Gasket Seat A		Grv. Width B		Groove Diameter C			
Nominal Size mm Inches	Actual Outside Diameter mm Inches	Tolerance +	Tolerance –	Basic	Tol.	Basic	Tol. +0.25 +0.010	Basic	Tol. +0.00 +0.000	D Groove Depth ref.	T Minimum Allow. Wall Thick.
50 2	60.3 2.375	+0.61 +0.024	-0.61 -0.024	14.27 0.562	±0.25 ±0.010	6.48 0.255	-0.13 -0.005	57.15 2.250	-0.38 -0.015	1.60 0.063	3.91 0.154
65 2½	73.0 2.875	+0.74 +0.029	-0.74 -0.029	14.27 0.562	±0.25 ±0.010	6.48 0.255	-0.13 -0.005	69.09 2.720	-0.46 -0.018	1.98 0.078	4.78 0.188
80 3	88.9 3.500	+0.89 +0.035	-0.79 -0.031	14.27 0.562	±0.25 ±0.010	6.48 0.255	-0.13 -0.005	84.94 3.344	-0.46 -0.018	1.98 0.078	4.78 0.188
100 4	114.3 4.500	+1.14 +0.045	-0.79 -0.031	15.37 0.605	±0.38 ±0.015	7.75 0.305	-0.13 -0.005	110.08 4.334	-0.51 -0.020	2.11 0.083	5.16 0.203
150 6	168.3 6.625	+1.60 +0.063	-0.79 -0.031	15.37 0.605	±0.38 ±0.015	7.75 0.305	-0.13 -0.005	163.96 6.455	0.56 -0.022	2.16 0.085	5.56 0.219
200 8	219.1 8.625	+1.60 +0.063	-0.79 -0.031	18.14 0.714	±0.38 ±0.015	10.16 0.400	-0.25 -0.010	214.40 8.441	-0.64 -0.025	2.34 0.092	6.05 0.238
250 10	273.0 10.750	+1.60 +0.063	-0.79 -0.031	18.14 0.714	±0.38 ±0.015	10.16 0.400	-0.25 -0.010	268.28 10.562	-0.69 -0.027	2.39 0.094	6.35 0.250
300 12	323.9 12.750	+1.60 +0.063	-0.79 -0.031	18.14 0.714	±0.38 ±0.015	10.16 0.400	-0.25 -0.010	318.29 12.531	-0.76 -0.030	2.77 0.109	7.09 0.279



Exaggerated for Clarity

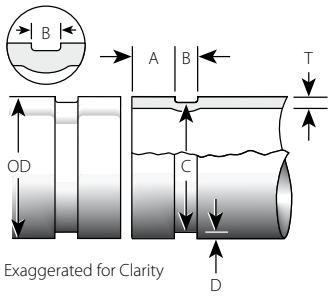
@ Always refer to the I-100 handbook for current grooving specifications.

IMPORTANT NOTES:

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

"ES" ROLL GROOVE SPECIFICATIONS@

1		2		3		4		5		6	7	8
Size		Pipe Outside Dia. mm Inches		Dimensions – mm/Inches								
				Gasket Seat A		Grv. Width B		Groove Dia. C				
Nominal Size mm Inches	Actual Out. Dia. mm Inches	Tolerance +	Tolerance –	Basic	Tol.	Basic	Tol. +0.00 +0.000	Basic	Tol. +0.00 +0.000	D Groove Depth ref.	T Minimum Allow. Wall Thick.	Maximum Allow. Flare Diameter
50 2	60.3 2.375	+0.61 +0.024	-0.61 -0.024	14.43 0.572	±0.51 -0.020	6.35 0.250	+0.38 +0.015	57.15 2.250	-0.38 -0.015	1.60 0.063	1.65 0.065	63.0 2.48
65 2½	73.0 2.875	+0.74 +0.029	-0.74 -0.029	14.53 0.572	±0.51 -0.020	6.35 0.250	+0.38 +0.015	69.09 2.720	-0.46 -0.018	1.98 0.078	2.11 0.083	75.7 2.98
80 3	88.9 3.500	+0.89 +0.035	-0.79 -0.031	14.53 0.572	±0.51 -0.020	6.35 0.250	+0.38 +0.015	84.94 3.344	-0.46 -0.018	2.11 0.083	2.11 0.083	91.4 3.60
100 4	114.3 4.500	+1.14 +0.045	-0.79 -0.031	15.49 0.610	±0.51 -0.020	7.62 0.300	+0.51 +0.020	110.08 4.334	-0.51 -0.020	2.11 0.083	2.11 0.083	116.8 4.60
150 6	168.3 6.625	+1.60 +0.063	-0.79 -0.031	15.49 0.610	±0.51 -0.020	7.62 0.300	+0.51 +0.020	163.96 6.455	0.56 -0.022	2.16 0.085	2.77 0.109	170.9 6.73
200 8	219.1 8.625	+1.60 +0.063	-0.79 -0.031	18.26 0.719	±0.51 -0.020	9.91 0.390	+0.51 +0.020	214.40 8.441	-0.64 -0.025	2.34 0.092	2.77 0.109	223.5 8.80
250 10	273.0 10.750	+1.60 +0.063	-0.79 -0.031	18.26 0.719	±0.51 -0.020	9.91 0.390	+0.51 +0.020	268.28 10.562	-0.69 -0.027	2.39 0.094	3.40 0.134	277.4 10.92
300 12	323.9 12.750	+1.60 +0.063	-0.79 -0.031	18.26 0.719	±0.51 -0.020	9.91 0.390	+0.51 +0.020	318.29 12.531	-0.76 -0.030	2.77 0.109	3.96 0.156	328.2 12.92



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 0.25 mm/0.010", Also, the coating thickness applied to the gasket seating surface and within the groove on the pipe exterior should not exceed 0.25 mm/0.010".

Product Index

Product Index

We warrant all products to be free from defects in materials and workmanship under normal conditions of use and service. Our obligation under this warranty is limited to repairing or replacing at our option at our factory any product which shall within one year after delivery to original buyer be returned with transportation charges prepaid, and which our examination shall show to our satisfaction to have been defective.

THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE BUYER'S SOLE AND EXCLUSIVE REMEDY SHALL BE FOR THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS PROVIDED HEREIN. THE BUYER AGREES THAT NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO HIM.

Victaulic neither assumes nor authorizes any person to assume for it any other liability in connection with the sale of such products.

This warranty shall not apply to any product which has been subject to misuse, negligence or accident, which has been repaired or altered in any manner outside of Victaulic's factory or which has been used in a manner contrary to Victaulic's instructions or recommendations. Victaulic shall not be responsible for design errors due to inaccurate or incomplete information supplied by Buyer or its representatives. Items purchased by Victaulic and resold will have the original equipment manufacturer's warranty extended to Victaulic customers.

Effective August 4, 2008

All products shall be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Piping Software

The Victaulic software solutions group helps to increase piping project productivity by offering free software packages to aid you in developing and drawing Victaulic piping systems. In addition, Victaulic components can now be found in many of the major third party software drawing packages listed below:

THIRD PARTY SOFTWARE

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

Find software online at www.victaulic.com/software

Demos of our software packages can be downloaded from our website or the complete software package can be ordered online in CD-ROM format. Visit our website to begin accessing our electronic services.

Vic-Blocks – designed specifically for AutoCAD users, Vic-Blocks 3D is a dimensionally accurate, three-dimensional block library that was developed to assist with Victaulic piping system layouts. It includes block symbols representing the main product line, drawn at full size.

Vic-Blocks

Both Vic-Blocks 2D and Vic-Blocks 3D are compatible with the AutoCad two- and three-dimensional library system. AutoCad is available free, to assist in drawing Victaulic couplings, fittings and valves. Demonstration modules are available for viewing on our website.

Vic-Cells

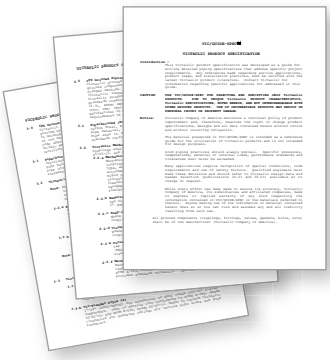
Designed specifically for MicroStation users, Vic-Cells is a dimensionally accurate 2D compilation of cell libraries developed to assist with Victaulic piping system layouts.

Vic-PDS Piping Specs

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

Vic-PDMS Piping Catalog

Vic-PDMS Piping Catalogs is a set of Aveva (Cadcentre) plant design management system (PDMS) catalogs that allows users to access and use Victaulic products in their PDMS piping systems designs.



Vic-Guide Spec

Vic-Guide Spec provides typical specifications for most Victaulic products. The data can be directly cut and pasted into your specifications. Vic-Guide Spec is available in PDF or Word format.

*AutoCad is a registered trademark of Autodesk

World Class Service and Support

Piping. Systems. Solutions.

Value-added services

Construction Piping Services (CPS)

Our Construction Piping Services group can help you make effective and efficient use of Victaulic piping systems through its estimating, project management and drawing package expertise and services. CPS can be reached by email at cps@victaulic.com. CPS offers the following:

VALUE ANALYSIS

Analyzing contract drawings provided by you, CPS will develop cost/pricing and cost comparison summaries of Victaulic systems versus welded, flanged, threaded and other mechanical pipe joining systems using current street prices for materials and recent labor times calculated from trade association standards.

PROJECT MANAGEMENT

CPS can provide quotes for preparation of detailed piping drawings for fabrication and erection, including pipe routing layout; sectional views and isometric drawings; and cut sheets and bills of material. A CPS project coordinator is assigned to begin tracking all the necessary documentation, including organizing the delivery of material according to your construction schedule.

FIELD SERVICE

Victaulic is the only mechanical piping systems manufacturer with 200+ factory-trained piping specialists worldwide to service your needs.

ENGINEERED PRODUCTS

Through our engineered products services, special attention is paid to projects that require special alloys, non-ferrous materials, special coatings or non-standard or special code applications. Contact engrprod@victaulic.com for an evaluation.

Standing alongside every Victaulic product and mechanical piping system solution is a service and support team ready to assist you with your next project.

Our staff of experienced sales representatives, on-site training personnel and engineering professionals are a phone call away for help in facilitating the evaluation, planning and fulfillment of your piping system needs.

www.victaulic.com

For additional information about our products and services including a library of global projects to view, visit us on the web. From there you can easily access the most up-to-date product information organized by market and by product type.

Piping. Systems. Solutions.

www.victaulic.com

The Victaulic website is an information resource that can help you with your piping projects. Among the many resources available at the site:

- Fully searchable product and project databases
- Free product submittals
- Free product literature
- Free product animation files
- Piping software demos and modules
- Information on new product innovations
- Support services, and more...

VICTAULIC

BELGIUM (EUROPE HEADQUARTERS)

Prijkelstraat 36
B9810 Nazareth (Belgium)
tel. +32 93 81 1500
fax +32 93 80 4438

UNITED ARAB EMIRATES

P.O. Box 17683
Jebel Ali
Dubai (United Arab Emirates)
tel. +971 48 838 870
fax +971 48 838 860

UNITED KINGDOM

Units B1 & B2, SG1 Industrial Park
Cockerell Close
Gunnels Wood Road, Stevenage
Hertfordshire SG1 2NB (UK)
tel. +44 (0) 143 831 0690
fax +44 (0) 143 831 0699
0124-60219 (direct to Ireland within the UK)

SPAIN

Autovia Madrid-Barcelona KM 45,000
Avda. De Milan 18
19200 Azuqueca De Henares (Spain)
tel. +34 949 348 490
fax +34 949 266 848

ITALY

Via M. Biagi 23/25/27
27022 Casorate Primo (Italy)
tel. +39 02 900 58 256
fax +39 02 900 58 292

GERMANY

LOGICPARK
Gutenbergstraße 19
D-64331 Weiterstadt (Germany)
tel. +49 (0) 6151 9573 - 0
fax +49 (0) 6151 9573 - 150

UNITED STATES (WORLD HEADQUARTERS)

PO Box 31
4901 Kesslersville Road
Easton, PA 18044-0031 (USA)
tel. +1 610 559 3300
fax +1 610 250 8817

CANADA

123 Newkirk Road
Richmond Hill, ON L4C 3G5 (Canada)
tel. +1 905 884 7444
fax +1 905 884 9774

ASIA

Unit 06-10, Floor 3A
A Mansion 291 Fumin Road
Shanghai, China 200031
tel. +86 21 6170 1222
fax +86 21 6170 1221

www.victaulic.com

UPDATED 8/2009
G-103-EUR 4769 REV N