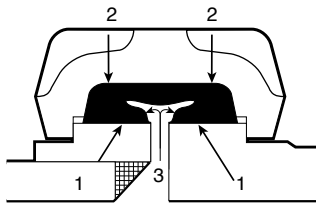


Vic-Ring® System

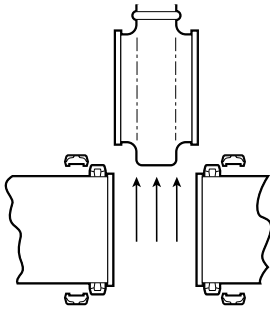
Victaulic offers the Vic-Ring® Piping Method for joining large diameter pipe which does not lend itself to direct grooving. The adaptation of pipe with Vic-Ring adapters and the selection of a suitable Victaulic coupling can present individual considerations which are best handled by Victaulic engineers, who are experienced in these applications. However, the following guidelines can be used to aid in the selection process.

The Vic-Ring Piping Method has been in use for more than 85 years, incorporating the proven grooved piping concept.



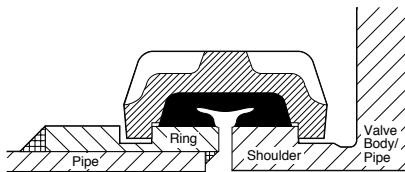
PROVEN, PRESSURE RESPONSIVE TRIPLE SEAL GASKET

- Reliable, leak-free service
- Unique design seals under pressure or vacuum
- Compounded to last the life of the system



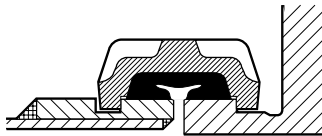
EASES VALVE MAINTENANCE AND REPAIRS

- Disassembly of two couplings (on depressurized system) permits removal of pipe, valves or fitting
- Unique design seals under pressure or vacuum
- Compounded to last the life of the system



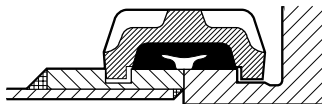
PROVEN JOINT RELIABILITY

- Full circumferential engagement of housing into groove or onto shoulder provides high end pull strength
- Couplings suitable for vacuum service and working pressures up to 750 psi/5175 kPa (depending on size and style) with a nominal safety factor of 3



EXPANSION AND CONTRACTION ALLOWANCE

- Up to 1/2"/2.7 mm linear movement at each joint
- Compensates for thermal changes and pipe shunting
- Provides a stress-free system



JOB/OWNER

System No. _____
 Location _____

CONTRACTOR

Submitted By _____
 Date _____

ENGINEER

Spec Sect _____ Para _____
 Approved _____
 Date _____

Vic-Ring® System

MATERIAL SPECIFICATIONS

Vic-Ring Adapter System and Coupling Material Specifications.

The Vic-Ring adapter system for joining large diameter pipe, valve settings, manifolds, pumps and other components saves time, dollars and space. The Victaulic system provides a bolted, self-restraining joint which eases valve installation and removal for maintenance compared with flanges, compression-type joints or mechanical joints.

The Victaulic system requires no special restraints, no tie-bars or rodding. Each coupling takes less than 7"/175 mm of space for setting a 60"/1500 mm valve. Victaulic couplings require far fewer bolts – only 10 for a 60"/1500 mm Style 41, compared with 52 for a 60"/1500 mm flange, and 28 for a compression type fitting. Victaulic couplings are cast in segments – from two (for 12"/300 mm) up to 12 (for 66"/1675 mm) – to ease handling, assembly and assure concentricity. Total Victaulic coupling weight is as low as ½ that for compression type couplings (depending on size), a pair of flanges or mechanical joints. Mechanical joints are typically three times wider than a Victaulic coupling and require restraint for pressure service. The required restraint adds to necessary space which can add substantially to the size and cost of valve chambers.

The major valve manufacturers offer valves with grooved or shouldered ends to meet Victaulic coupling requirements or as specified in AWWA C-606. Steel pipe and tubing, certain types of aluminum and copper tubing – and fabricated steel plate pipe in diameters 30"/750 mm and up – may be adapted for Victaulic couplings by means of applied rings or collars.

Vic-Ring[®] System

MATERIAL SPECIFICATIONS

Housing: Ductile iron conforming to ASTM A-536.

Housing Coating: Orange enamel

- Optional: Hot dipped galvanized and others.

Gasket (specify choice on order)

- **Grade "E" EPDM**

EPDM (Green color code). Temperature range -30°F to +230°F/-34°C to +110°C.

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 potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

- **Grade "T" nitrile**

Nitrile (Orange color code). Temperature range -20°F to +180°F/-29°C to +82°C.

Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services.

- **Grade "M" Halogenated Butyl**

(Brown color code). Temperature range -20°F to +200°F/-29°C to +93°C. Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. Readily conforms to ductile pipe surfaces. UL classified in accordance with ANSI/NSF 61 for potable water service. Not recommended for hot water services.

- **Grade "S" nitrile**

(Orange color code). Temperature range -20°F to +180°F/-29°C to +82°C. Specially compounded to conform to ductile pipe surfaces. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

- **Grade "L" silicone**

(Red gasket). Temperature range -30°F to +350°F/-34°C to +177°C. Recommended for systems operating below 0°F/-18°C plus dry heat, air without hydrocarbons, certain chemical services and water to +350°F/+177°C.

* Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

Bolts/Nuts: Heat treated plated carbon steel, track-head conforming to physical properties of ASTM A-183 minimum tensile 110,000 psi/758340 kPa.

Performance Data and Dimensions for Victaulic Styles 22,31, 41 and 44 couplings.

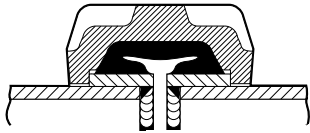
(See Sections 16.02 - 16.05.)

Vic-Ring Adapter Dimensions.

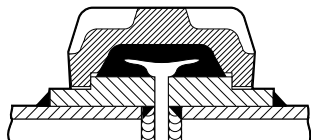
(See Section 16.06.)

Vic-Ring® System

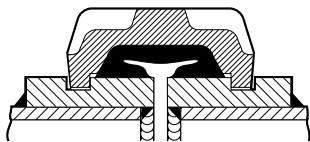
COUPLING STYLES



**Type "A" Vic-Ring Adapters
on steel pipe**



**Type "E" Vic-Ring Adapters
on steel pipe**



**Type "D" Vic-Ring Adapters
on steel pipe**

Large Diameter Coupling Styles

Style 22 couplings are designed with cross-ribbed construction to provide a strong component for Vic-Ring adapter prepared piping systems. Style 22 couplings are designed primarily for use with Type "A" Vic-Ring adapters, depending upon sizes and pressures.

Sizes 17" through 24"/425 - 600 mm) are cast in four segments; 30" through 36"/750 - 900 mm in six segments and 60"/1500 mm in 10 segments, to assure concentricity and ease of handling.

All sizes are supplied painted and with plated nuts and bolts.

Style 31 and Style 41 couplings are commonly used with Type "D" or "E" Vic-Ring adapters and are designed to provide a strong component for use on steel pipe with applied Vic-Ring adapters. Many sizes may be used on pipe with cast shoulders. Style 31 sizes 14" through 20"/350 - 500 mm are cast in four segments and the 24"/600 mm) size is cast in six segments. Style 41 sizes 30" through 38" /750 - 950 mm are cast in six segments; 42" through 54"/1050 - 1375 mm sizes in eight segments; 60"/1500 mm in 10 segments and 66"/1675 mm in 12 segments, to assure concentricity and ease of handling.

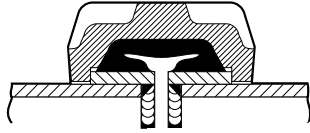
All sizes are supplied painted and with plated nuts and bolts.

Style 44 couplings are designed with cross-ribbed construction to provide a strong component for use in steel pipe with applied Vic-Ring adapters. Style 44 couplings are generally used with Type "D" or "E" applied Vic-Ring adapters and provide higher pressure ratings than the similar Style 41 coupling. Many sizes may be used on pipe with cast shoulders. Sizes 4 - 12"/100 - 300 mm are cast in two segments; 14" through 20"/350 - 500 mm in four segments; 24" and 36"/600 - 900 mm in six segments; 42" through 54"/1050 - 1375 mm in eight segments; and 60"/1500 mm in 10 segments, to assure concentricity and ease of handling.

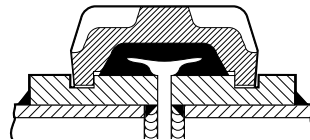
All sizes are supplied painted and with plated nuts and bolts.

Vic-Ring® System

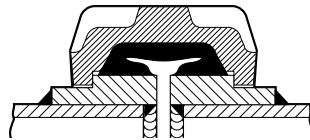
ADAPTER TYPES



**Type "A" Vic-Ring Adapters
on steel pipe**



**Type "D" Vic-Ring Adapters
on steel pipe**



**Type "E" Vic-Ring Adapters
on steel pipe**

Vic-Ring Adapter Types

Type A Vic-Ring Adapter Ends.

This method is widely used for adapting common sizes of light wall pipe and tubing for general applications such as contractors' portable pipe lines, irrigation lines, ventilating and duct piping, tank truck tubing and other applications where weight is a factor. The Vic-Ring adapters are slipped over the pipe ends and are welded in place with a single fillet end weld. The Victaulic coupling seats over the Vic-Ring adapter and functions in normal fashion.

Type D Heavy Duty Grooved Vic-Ring Adapter Ends – Double Fillets.

This heavy duty type end applies principally to large diameter pipe – 30"/750 mm and up. Style 44 couplings are most commonly used with Type "D" Vic-Ring adapters; however, others may be used depending on the Vic-Ring adapter O.D.

Type E Vic-Ring Adapter Ends - Double Fillets.

Type E is similar in application to "D" Vic-Ring adapter ends, allowing easier attachment while providing secure coupling engagement. Style 31, Style 41 and Style 44 couplings are commonly used with Type "E" Vic-Ring adapters.

Vic-Ring® System

SELECTION

Before proceeding with the Vic-Ring adapter selection, the following information is required:

- Pipe O.D.
- Pipe wall thickness
- Service; water, air, etc. (For abrasive services or services requiring pipe linings, contact Victaulic for special ring preparations.)
- Maximum working pressure
- Shock loads, if any
- Operating temperature; maximum, minimum
- Victaulic coupling and ring type, if currently being used

Fill in the details on the check sheet on page 7. This will help to identify the most economical Victaulic coupling and Vic-Ring adapter combination.

Size	Max. Work Pressure*	Coupling Selection		Vic Ring
		Size	Style	
Nominal Size Inches m	psi kPa	Inches mm		Type
14	175	14	31	D, E
350	1207	355.6		
16	200	16	22	A
400	1380	406.4		
16	175	16	44	D, E
400	1207	406.4		
18	175	18	31	D, E
450	1207	457.2		
20	200	20	22	A
500	1380	508.0		
20	175	20	31	D, E
500	1207	508.0		
24	200	24	22	A
600	1380	609.6		
24	175	24	31	D, E
600	1207	609.6		
30	175	30	44	D, E
750	1207	762.0		
30	150	30	22	A
750	1035	762.0		
30	90	30	41	D, E
750	620	762.0		
36	175	36	44	D, E
900	1207	914.4		
38	90	38	41	D, E
950	620	950.0		
42	175	42	44	D, E
1050	1207	1066.8		
42	90	42	41	D, E
1050	620	1066.8		
46	90	46	41	D, E
1150	620	1175.0		
48	175	48	44	D, E
1200	1207	1219.0		
48	920	48	41	D, E
1200	620	1219.2		
54	175	54	44	D, E
1375	1207	1371.6		
54	60	54	41	D, E
1375	620	1371.6		
60	175	60	44	D, E
1500	1207	1524.0		
60	90	60	41	D, E
1500	620	1524.0		
66	90	66	41	D, E
1675	620	1676.4		

For complete Vic-Ring adapter dimensions for the above selections, as well as Victaulic couplings data, refer to Sections 16.02 through 16.06. For coupling/ring combinations not shown, or for other applications, contact Victaulic for details.

* Working Pressures are total, from all internal and external loads, based on ANSI standard weight steel pipe, with Vic-Rings applied in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

Vic-Ring[®] Shouldered Joint Check Sheet

Please provide this completed check sheet to your local Victaulic sales representative or fax it to your local Victaulic branch customer service.

The joining of pipe with a suitable Victaulic Vic-Ring coupling presents individual considerations that require review by a Victaulic Piping System expert who is experienced in special pipe joining applications. For more information please contact Victaulic, or refer to Victaulic Company's Vic Ring submittals 16.01 and 16.02 available at www.victaulic.com.

TO OBTAIN A QUOTE, PLEASE PROVIDE THE INFORMATION REQUESTED BELOW.

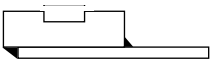





CUSTOMER INFORMATION:

PROJECT NAME:	PROJECT LOCATION:
VICTAULIC SALES:	BID DATE:
CONTRACTOR:	CONTRACT NAME:
PHONE/FAX:	EMAIL:
DISTRIBUTOR/FABRICATOR:	CONTACT NAME:
PHONE/FAX:	EMAIL:

APPLICATION DATA:

JOINT TYPE: <input type="checkbox"/> Pipe to Pipe (two Rings required) <input type="checkbox"/> Pipe to Shoulder (one Ring req.) <input type="checkbox"/> Pipe to Shoulder Valve (one Ring req.)			
NOMINAL PIPE SIZE:	ACTUAL PIPE OD:	SCHEDULE:	WALL THICKNESS:
PIPE MATERIAL: <input type="checkbox"/> Carbon Steel <input type="checkbox"/> Ductile Iron - Requires special pipe preparation as well as welding processes. <input type="checkbox"/> Stainless Steel - Type: _____			
COUPLING BOLTS / NUTS MATERIAL: <input type="checkbox"/> Zinc Plated Carbon Steel (Std.) <input type="checkbox"/> 316 Stainless Steel <input type="checkbox"/> Galvanized Carbon Steel		COUPLING PROTECTIVE COATING: <input type="checkbox"/> Other (please describe) <input type="checkbox"/> T37H-77 (Standard) <input type="checkbox"/> Liquid Epoxy (T140) _____	
MEDIA FLUID:		WORKING PRESSURE:	TEST PRESSURE:
GASKET GRADE:	TYPE: <input type="checkbox"/> Standard <input type="checkbox"/> EndSeal [®] <input type="checkbox"/> FlushSeal [®]	TEMPERATURE RANGE: MIN: _____ MAX: _____	

CONFIGURATION INFORMATION:

COUPLING: STYLE: _____ SIZE: _____ QTY: _____ (# of Joints)			
RINGS: STYLE: _____ SIZE: _____ QTY: _____ (# of Joints)			
RING TYPE: <input type="checkbox"/>  TYPE D <input type="checkbox"/>  TYPE E <input type="checkbox"/>  TYPE B <input type="checkbox"/>  TYPE C		WELD DETAIL (if applicable): <input type="checkbox"/>  ABRASIVE SERVICE <input type="checkbox"/>  NON ABRASIVE SERVICE	
PIPE LINING: (if applicable): Lining Material: _____ Thickness: _____ <input type="checkbox"/> Corrosion and Abrasion: <input type="checkbox"/> Abrasion Only:			

Vic-Ring[®] System

INSTALLATION

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. 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.

WARRANTY

Refer to the Warranty section of the current Price List or contact Victaulic for details.

NOTE

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to 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.

For complete contact information, visit www.victaulic.com

16.01 1591 REV B UPDATED 04/2009

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16.01

