

# Couplings

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

QuickVic®  
Rigid Coupling  
STYLE 107H, PG. 1-5



QuickVic®  
Flexible Coupling  
STYLE 177, PG. 1-7



Advanced Groove System **AGS**®



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

Zero-Flex®  
Rigid Coupling  
STYLE 07, PG. 1-6  
AGS STYLE W07, PG. 6-3



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



Flexible  
Coupling  
STYLE 75, PG. 1-9



Reducing  
Coupling  
STYLE 750, PG. 1-12



Vic-Flange® Adapter  
ANSI Class 150/PN10  
STYLE 741, PG. 1-10  
AGS STYLE W741, PG. 6-6



Vic-Flange Adapter  
ANSI Class 300/PN16  
STYLE 743, PG. 1-11



Snap-Joint®  
Coupling  
STYLE 78, PG. 1-13



# Couplings

## Gasket Types

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

† Separate gasket specifically designed for outlet couplings.

### Outlet Coupling

STYLE 72, PG. 1-14



Available with female threaded outlets (shown) and grooved outlets

### Vic-Bottless® Coupling

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



### Rigid Coupling

STYLE HP-70, PG. 1-16



### PRODUCTS

#### 1-1 Couplings

- 2-1 Fittings
- 3-1 Valves
- 4-1 Hydronic Balancing Products
- 5-1 Accessories
- 6-1 Advanced Groove System
- 7-1 Hole Cut Piping System
- 8-1 Plain End Piping System
- 9-1 Grooved System for Stainless Steel Pipe
- 10-1 Pressfit System for Stainless Steel Pipe
- 11-1 Vic-Press™ for Schedule 10S Stainless Steel Pipe
- 12-1 Plain End Piping System for HDPE Pipe
- 13-1 Grooved Copper
- 14-1 PermaLynx System for Copper Tube
- 15-1 Grooved AWWA Ductile Iron Pipe
- 16-1 Vic-Ring® Systems
- 17-1 Victaulic Depend-O-Lok® System
- 18-1 Aquamine® Reusable PVC Products
- 19-1 Gaskets
- 20-1 Pipe Preparation Tools
- 21-1 Product Index
- 22-1 Piping Software

### High Pressure Coupling

STYLE 808, PG. 1-17



### Endseal® Coupling for Plastic Coated Pipe

STYLE HP-70ES, PG. 1-18



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

### EndSeal Fittings for Plastic Coated Pipe

PG. 1-19



# Couplings

## Rigid Coupling Systems and Performance §

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

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

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

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

Size		Allow. Pipe End Sep.
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Inches mm
¾	1.050	0.05
	20	1.2
1	1.315	0.05
	25	1.2
1¼	1.660	0.05
	32	1.2
1½	1.900	0.05
	40	1.2
2	2.375	0.07
	50	1.7
2½	2.875	0.07
	65	1.7
76.1 mm	3.000	0.07
	76.1	1.7
3	3.500	0.07
	80	1.7
108.0 mm	4.250	0.16
	108.0	4.1
4	4.500	0.16
	100	4.1
133.0 mm	5.250	0.16
	133.0	4.1
139.7 mm	5.500	0.16
	139.7	4.1

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

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

HP-70:

2–4"/50–100 mm sizes: 0.14"/3.6 mm

6–12"/150–300 mm sizes: 0.25"/6.4 mm

HP-70ES:

2–4"/50–100 mm sizes: 0.19"/4.8 mm

6–8"/150–200 mm sizes: 0.27"/6.7 mm

10–12"/250–300 mm sizes: 0.28"/7.1 mm

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

### IMPORTANT NOTES:

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

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

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

Should you have any questions regarding the proper use of our products, contact Engineering Services at [engserv@victaulic.com](mailto:engserv@victaulic.com).

### WARNING

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

# Couplings

## Flexible Coupling Systems and Performance §

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

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

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

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

Size		Allow. Pipe End Sep. †	Deflect. Fr. C <sub>L</sub> †	
Nominal Size Inches mm	Actual Outside Diameter Inches mm		Inches mm	Degrees per Coupling
¾ 20	1.050 26.9	0 – 0.06 0 – 1.6	3° 24'	0.72 60
1 25	1.315 33.7	0 – 0.06 0 – 1.6	2° 43'	0.57 48
1¼ 32	1.660 42.4	0 – 0.06 0 – 1.6	2° 10'	0.45 38
1½ 40	1.900 48.3	0 – 0.06 0 – 1.6	1° 56'	0.40 33
2 50	2.375 60.3	0 – 0.06 0 – 1.6	1° 31'	0.32 27
2½ 65	2.875 73.0	0 – 0.06 0 – 1.6	1° 15'	0.26 22
76.1 mm	3.000 76.1	0 – 0.06 0 – 1.6	1° 12'	0.26 22
3 80	3.500 88.9	0 – 0.06 0 – 1.6	1° 2'	0.22 18
3½ 90	4.000 101.6	0 – 0.06 0 – 1.6	0° 54'	0.19 16
108.0 mm	4.250 108.0	0 – 0.13 0 – 3.2	1° 41'	0.35 29
4 100	4.500 114.3	0 – 0.13 0 – 3.2	1° 36'	0.34 28
4½ 120	5.000 127.0	0 – 0.13 0 – 3.2	1° 26'	0.25 21
133.0 mm	5.250 133.0	0 – 0.13 0 – 3.2	1° 21'	0.28 23
139.7 mm	5.500 139.7	0 – 0.13 0 – 3.2	1° 18'	0.28 23
5 125	5.563 141.3	0 – 0.13 0 – 3.2	1° 18'	0.27 22
152.4 mm	6.000 152.4	0 – 0.13 0 – 3.2	1° 12'	0.21 17

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

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

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

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

### \* GENERAL NOTES:

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

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

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

### Important Notes:

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

# Couplings

## Snap-Joint Coupling

### STYLE 78

For Complete Information  
Request Publication **06.09**



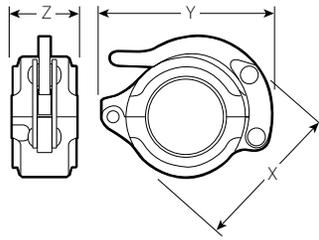
Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. *	Dimensions			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	X Inches mm	Y Inches mm	Z Inches mm	Lbs. kg
1 25	1.315 33.4	300 2065	410 1825	0 - 0.06 0 - 1.6	2.75 70	3.25 83	1.75 44	0.8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

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

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

#### IMPORTANT NOTES:

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



TYPICAL FOR ALL SIZES

# Gaskets

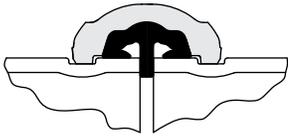
Victaulic gaskets are designed to provide life-of-the-system service in a wide variety of applications. Gasket materials are available to meet most piping applications. For a list of service recommendations by gasket type see pg. 19-5.

For Complete Information request publication **05.01**.

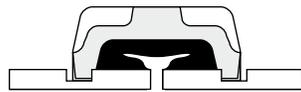


## Gasket Styles

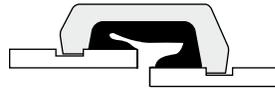
ILLUSTRATIONS EXAGGERATED FOR CLARITY



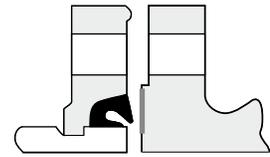
Installation-Ready



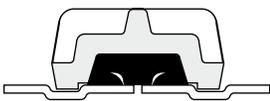
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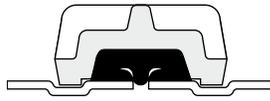
Reducing



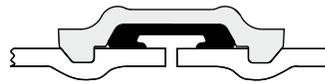
Vic-Flange



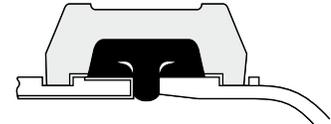
FlushSeal



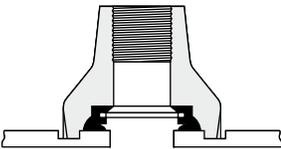
Grooved Copper Tubing with FlushSeal Gasket



Advanced Groove System (AGS)



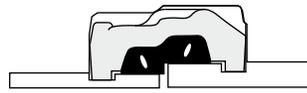
EndSeal



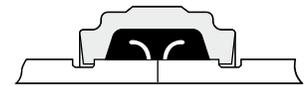
Outlet



Mechanical-T



IPS to AWWA Transition



AWWA FlushSeal



Pressfit Piping System for Stainless Steel



Plain End



Plain End Piping System for HDPE Pipe



Vic-Press™ System for Sch. 10S Stainless Steel

# Gaskets

## Gasket Materials

When Victaulic couplings were first developed, natural rubber compounds were used. As elastomer technology advanced, superior gasket materials became available and were added to the Victaulic line. This allows Victaulic to presently offer a variety of synthetic rubber gaskets to provide the option of selecting Victaulic products for the widest variety of applications. For most water applications the Victaulic Grade “E” EPDM (ethylene propylene diene monomer) gasket compound is recommended. Victaulic Grade “E” material has premium performance properties with respect to aging and resistance to heat and hot water. Heat aging tests at +250°F/+121°C conducted on this material show essentially no change in physical properties. This situation is further enhanced when this rubber is subjected to an essentially non-oxidative environment such as a gasket in a water piping system. For example, aging tests in a nonoxidative atmosphere show essentially no change in physical properties of this material even when tested at temperatures up to +350°F/+177°C.

Since water has no deteriorating effect on the elastomer, temperature is the only limiting factor to be considered in determining the life expectancy of the elastomer in water service. The superior performance of the Grade “E” elastomer permits its use for hot water service up to +230°F/+110°C. The Grade “E” gasket is superior to previous gasket materials by all performance barometers, including high and low temperature limits, tensile strength, chemical resistance and shelf life.

## Gasket/O-ring Data

Victaulic offers a variety of synthetic rubber gaskets/o-rings to provide the option of grooved piping products for the widest range of applications. To assure the maximum life for the service intended, proper gasket selection and specification in ordering is essential.

Many factors must be considered in determining the optimum gasket/o-ring for a specific service. The foremost consideration is temperature, along with concentration of product, duration of service and continuity of service. Temperatures beyond the recommended limits have a degrading effect on the polymer. Therefore, there is a direct relationship between temperature, continuity of service and gasket life.

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

Gasket recommendations apply only to Victaulic gaskets and o-rings. Recommendations for a particular service do not necessarily imply compatibility of the coupling housing, related fittings or other components for the same service.

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

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

### Potable Water

Grade “E” EPDM, Grade “E” Vic-Plus™, Grade “EHP” and Grade “EHP” Vic-Plus gaskets were submitted to Underwriters’ Laboratories Inc. for evaluation in potable water applications. EPDM material was tested to the requirements of ANSI/NSF 61 (Drinking Water System Components - Health Effects). Successful completion of this testing allows us to state that our EPDM gasket material is UL classified in accordance with ANSI/NSF 61 for cold (+86°F/+30°C) and hot (+180°F/+82°C) potable water service.

Similarly our Grade “M” halogenated butyl gasket material (which is typically used with our AWWA sized products) has also been UL classified in accordance with ANSI/NSF 61 for cold (+86°F/+30°C) potable water service.

The data provided is intended for use as an aid to qualified designers when products are installed in accordance with the latest available Victaulic product line.

## PRODUCTS

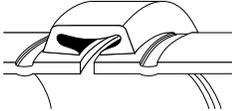
- 1-1 Couplings
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- 11-1 Vic-Press™ for Schedule 10S Stainless Steel Pipe
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- 14-1 PermaLynx System for Copper Tube
- 15-1 Grooved AWWA Ductile Iron Pipe
- 16-1 Vic-Ring® Systems
- 17-1 Victaulic Depend-O-Lok® System
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# Gaskets

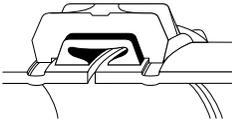
## Gasket Performance



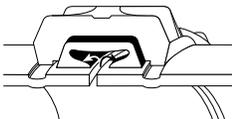
UNIQUE C-SHAPED GASKET FORMS A TRIPLE SEAL



SEALS BETWEEN THE PIPE ENDS AND THE GROOVE



SURROUNDED, REINFORCED AND SLIGHTLY COMPRESSED BY THE HOUSING



SEAL IS ENHANCED BY PRESSURE OR VACUUM IN THE LINE

The sealing efficiency of Victaulic gaskets is such that the gasket forms an initial seal as it is stretched over the pipe ends. Upon placement of the housing around the gasket and into the grooves, the gasket is positioned. As the housing segments are tightened, the resilient elastomeric gasket conforms to the internal cavity of the housing and is further compressed, enhancing the gasket's seal against the pipe. The Victaulic gasket is pressure responsive.

The combination of these characteristics creates a permanent, leak-tight triple seal on a variety of piping materials including carbon steel, ductile iron, stainless steel, aluminum, PVC, cast iron and copper. Line pressure serves to strengthen the seal through the combination of normal gasket resilience, housing reinforcement and the action of pressure downward on the lips.

**Vacuum Service** – The Victaulic gasket design seals equally well under pressure or vacuum. Vacuum creates a pressure differential between the inside and outside of the piping system. The resulting increased force from the external pressure has the same seal enhancement effect as internal pressure. For continuous vacuum service greater than ten inches of mercury, we recommend the use of molded Victaulic FlushSeal gaskets or Victaulic standard gaskets with a metal ring liner, both available from your Victaulic distributor. The FlushSeal feature and the metal liner both prevent distortion of the gasket due to the pulling action of a high vacuum at the center of the gasket. Either molded FlushSeal gaskets or gaskets with metal liners are recommended on strong vacuums and are suitable for applications wherein vacuum conditions are anticipated to a maximum value of 29.9 of mercury.

**ANSI/NSF 61 Standard** – ANSI/NSF 61 is a National Standard that was developed to establish minimum requirements for the control of potential adverse human health effects from products which contact drinking water. Its primary focus is on contaminants or impurities which may be imparted indirectly to drinking water. Materials that do not come in direct contact with the potable water do not require evaluation. The classification categories for pipe and related products and joining and sealing materials, as established by ANSI/NSF 61 are “cold”, which is limited to +86°F/+30°C maximum and “hot” which is limited to +180°F/+82°C maximum. These categories were established by the maximum ambient distribution temperature of unheated water for “cold” and a temperature well in excess of a scalding temperature for “hot” domestic water. The following list represents the current classifications on our products:

**EHP Gaskets:** UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+80°C potable water service.

**EPDM “E” Gaskets:** UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service.

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

**PPS Coating:** The PPS (Polyphenylene Sulfide blend) coating applied to our Vic-300 MasterSeal and Style W761 AGS butterfly valves is UL classified in accordance with ANSI/NSF 61 for cold +180°F/+30°C and hot +180°F/+82°C potable water service.

# Gaskets

## Gasket Performance

### Vic-Press 304 and Vic-Press 316 Couplings and Fittings:

UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service with “E”, “T” or “O” o-rings.

### Vic-Press 304 and Vic-Press 316 Pipe:

UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. In addition to the above, the standard black asphalt coating used on our cement lined AWWA size fittings is NSF 61 Listed. As the coating is the only material that comes in contact with the water, NSF 61 compliant coatings are commercially available and may be applied to our products.

For more details about Victaulic gasket construction and testing, request publication 05.01.

## Gasket Lubricant



Thorough lubrication of the gasket exterior including the lips and/or pipe ends and housing interiors, is essential to prevent pinching the gasket. Lubrication assists proper gasket installation. Use Victaulic Lubricant for installation. Other compatible material, such as silicone and others may be used on Grades “E” or “L” gaskets. Lubricant is available in 4 ½ ounce tubes. Victaulic Lubricant is also available in 32 ounce containers.

**Important Note:** Victaulic Lubricant is **not** recommended for use with high-density polyethylene (HDPE) pipe.

### ALWAYS USE LUBRICANT FOR PROPER COUPLING ASSEMBLY.

Size Nominal Size Inches mm	Number of Gaskets	
	Per Tube	Per Quart
2 50	55	400
3 80	36	270
4 100	26	200
6 150	17	125
8 200	13	100
10 250	11	80
12 300	8	60
14 350	7	50
16 400	6	45
18 450	5	35
20 500	4	30
24 600	3	20

# Gaskets

## Gasket Selection Guide



### WARNING

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

## Standard Gaskets

IPS

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
<b>E</b>	-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. <b>NOT RECOMMENDED FOR PETROLEUM SERVICES.</b>
<b>EHP<sup>@</sup></b>	-30°F to +250°F -34°C to +120°C	EPDM	Red & Green Stripe	Recommended for hot water service within the specified temperature range. UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. <b>NOT RECOMMENDED FOR PETROLEUM SERVICES.</b>
<b>T</b>	-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. <b>NOT RECOMMENDED FOR HOT WATER SERVICES.</b>
<b>E<sup>†</sup></b> (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 <sup>®</sup> gaskets. <b>NOT RECOMMENDED FOR HOT WATER SERVICES.</b>
<b>EW</b>	-30°F to +230°F -34° C to +110° C	EPDM	Green W	Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. WRAS approved material to BS 6920 for cold and hot potable water service up to +149°F/+65°C. <b>NOT RECOMMENDED FOR PETROLEUM SERVICES.</b>

† 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<sup>®</sup> couplings.

# Gaskets

## Special Gaskets

IPS

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
<b>M2</b>	-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.
<b>V</b>	-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.
<b>O</b>	+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. <b>NOT RECOMMENDED FOR HOT WATER SERVICES.</b>
<b>L</b>	-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.
<b>A</b>	+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. <b>NOT RECOMMENDED FOR HOT WATER SERVICES.</b>
<b>T EndSeal</b>	-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. <b>Not recommended for hot water services over +150°F/+66°C or for hot, dry air over +140°F/+60°C.</b> For maximum gasket life under pressure extremes, temperature should be limited to +120°F/+49°C.
<b>EG</b>	-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. <b>NOT RECOMMENDED FOR PETROLEUM SERVICES</b>
<b>EF</b>	-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. <b>NOT RECOMMENDED FOR PETROLEUM SERVICES</b>
<b>HMT Standard or EndSeal</b>	-20°F to +180°F	High-Modulus Nitrile	 No Color Code Identification	Specially compounded with excellent oil resistance and a high modulus for resistance to extrusion. Temperature range is -20°F/-29°C to +180°F/+82°C. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. <b>NOT RECOMMENDED FOR HOT WATER SERVICES OVER +150°F/+66°C OR FOR HOT, DRY AIR OVER +140°F/+60°C.</b> For maximum gasket life under pressure extremes, temperature should be limited to +120°F/+49°C. <b>NOT RECOMMENDED FOR HOT WATER SERVICES.</b>

GASKETS

# Gaskets

## AWWA and Transition Couplings

Grade	Temperature Range	Compound	Color Code	General Service Recommendations *
<b>S</b>	-20°F to +180°F -29°C to +82°F	Nitrile	Red Stripe	Specially compounded to conform to ductile pipe surfaces. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range; except hot dry air over +140°F/+60°C and water over +150°F/+66°C. <b>NOT RECOMMENDED FOR HOT WATER SERVICES.</b>
<b>M</b>	-20°F to +200°F -29°C to +93°C	Halogenated Butyl	Brown Stripe	Recommended for water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. Readily conforms to ductile pipe surfaces. UL classified in accordance with ANSI/NSF 61 for cold +86°F /+30°C potable water service. <b>NOT RECOMMENDED FOR PETROLEUM SERVICES.</b>

**FOR SERVICES NOT LISTED CONTACT VICTAULIC FOR RECOMMENDATIONS.**

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

## Vic-Press™ Seals

Grade	* Temperature Range	Compound	Color Code	General Service Recommendations
<b>H</b>	-20° F to +210°F -29° C to +98° C	HNBR Hydrogenated Nitrile Butadiene Rubber	Two Orange Dots	Hot petroleum/water mixtures, hydrocarbons, air with oil vapors, vegetable and mineral oils, engine oil, transmission oil. ANSI/NSF 61 Certified for potable water up to 180F/82C.
<b>E</b>	-30°F to +250°F -34° C to +121° C	EPDM Ethylene Propylene Diene Monomer	Green Dot	Hot water service, dilute acids, oil-free air, chemical services. ANSI/NSF Certified for potable water up to 180F/82C.
<b>O</b>	+20°F to +300°F -6° C to +149° C	Fluoroelastomer	Blue Dot	Oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids, and air with hydrocarbons.

\* For specific chemical and temperature compatibility, refer to the Gasket Selection and Chemical Services sections. The information shown defines general ranges for all compatible fluids.

# Gaskets

## 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	
<b>G</b>	<b>Good</b>
<b>C</b>	<b>Conditional</b> (Submit analysis of materials to Victaulic for positive recommendations)
<b>NR</b>	<b>Not Recommended</b> (See pg. 16-8 for complete listing)

### FOR SERVICES NOT LISTED CONTACT VICTAULIC FOR RECOMMENDATIONS.

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