

Victaulic® Flange Adapter for HDPE-to-Flanged Pipe

Style 904



1.0 PRODUCT DESCRIPTION

Available Sizes

- 3 – 8" IPS HDPE to 3 – 8" IPS ANSI Class 150 Flange

Function

- Designed to provide a single transition from plain end HDPE pipe (SDR 7-17) to flanged piping system components
- Designed with Installation-Ready™ technology to eliminate loose parts
- Style 904 meets or exceeds the pressure rating of the HDPE pipe. (See Section 5.0 Performance)

2.0 CERTIFICATION/LISTINGS

Product designed and manufactured under Victaulic's Quality Management System, as certified by LPCB in accordance with ISO -9001:2008.

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

3.0 SPECIFICATIONS – MATERIAL

Housing: Ductile iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating: (specify choice)

Standard: Orange enamel.

Optional: Fusion bonded epoxy, galvanized and other coatings are available for buried and corrosive service conditions. Contact Victaulic for details.

Retaining Ring: Type 316 stainless steel.

HDPE Insert: Plastic Pipe Institute (PPI) listed High Density Polyethylene (HDPE) PE100/PE4710.

Coupling Gasket: (specify choice¹)

Grade “T” Nitrile

Nitrile (Orange stripe color code). Temperature range -20°F to +180°F/-29°C to +82°C. May be specified for petroleum products, hydrocarbons, air with oil vapors, vegetable and mineral oils within the specified temperature range, not compatible for hot dry air over +140°F/+60°C and water over +150°F/+66°C. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.

Grade “E” EPDM

EPDM (Green stripe color code). Temperature range -30°F to +230°F/-34°C to +110°C. May be specified for cold and 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 +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372. NOT COMPATIBLE FOR PETROLEUM SERVICES OR STEAM SERVICES.

Grade “EF” EPDM

EPDM (Green “X” color code). Temperature range -30°F to +230°F/-34°C to +110°C. May be specified for hot and cold water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. Also meets hot and cold potable water requirements per DVGW, KTW, ÖVGW, SVGW, and French ACS (Crecep), approved for W534, approved for EN681-1 Type WA cold potable, and Type WB hot potable water service. NOT COMPATIBLE FOR USE WITH PETROLEUM SERVICES OR STEAM SERVICES.

¹ Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest [Victaulic Gasket Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

NOTE

- The maximum temperature ratings shown exceed the temperature ratings for HDPE pipe. Consult individual pipe manufacturers for specific temperature limits.

Hardware:

Draw Bolts/Nuts: (specify choice²)

Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric - hex nuts). Track bolts and hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric), with fluoropolymer top coat. Hardened steel washers conforming to ASTM F436 Type 3 (weathering steel).

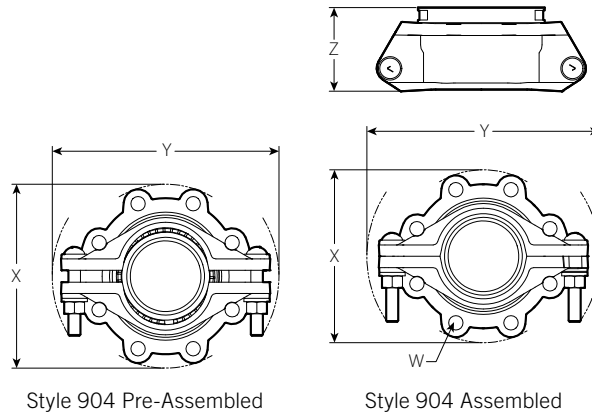
Optional²:

3 – 4": Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Stainless steel heavy hex nuts meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel), condition CW, with galling reducing coating. Hardened steel washers conforming to ASTM F436 Type 3 (weathering steel).

6 – 8": Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM A193 Class 2, Grade B8M. Stainless steel heavy hex nuts meeting the mechanical property requirements of ASTM A194 Grade 8M Heavy Hex, with galling reducing coating. Hardened steel washers conforming to ASTM F436 Type 3 (weathering steel).

² Optional bolts/nuts available in imperial size only

4.0 DIMENSIONS



IPS Size		Draw Bolt/Nut		Flange Bolt/Nut		Dimensions						Weight
Nominal inches	Actual Outside Diameter inches mm	Qty.	Size inches mm	Qty.	Size inches mm	Pre-Assembled		Assembled				Approximate (Each) lb kg
						X inches mm	Y inches mm	W inches mm	X inches mm	Y inches mm	Z inches mm	
3	3.500	2	$\frac{5}{8} \times 3 \frac{1}{2}$	4	$\frac{5}{8}$	8.13	8.88	6.00	7.63	8.88	3.88	10.2
	88.9		M16 x 89		M16	207	226	152	194	226	99	4.6
4	4.500	2	$\frac{5}{8} \times 4 \frac{1}{4}$	8	$\frac{5}{8}$	9.75	11.38	7.50	9.13	11.25	4.50	16.1
	114.3		M16 x 108		M16	248	289	191	232	286	114	7.3
6	6.625	2	$\frac{3}{4} \times 4 \frac{1}{4}$	8	$\frac{3}{4}$	11.88	14.25	9.50	11.13	14.13	4.88	23.6
	168.3		M20 x 108		M20	302	362	241	283	359	124	10.7
8	8.625	2	$\frac{3}{4} \times 6 \frac{1}{4}$	8	$\frac{3}{4}$	14.50	16.75	11.75	13.63	17.25	5.38	31.9
	219.1		M20 x 159		M20	368	425	298	346	438	137	14.5

5.0 PERFORMANCE

Pressure Rating: joints made with Style 904 flange adapter meet the pressure rating of the HDPE pipe.

IPS Size	PE4710 HDPE Pipe ³ DR				
	7	9	11	13.5	17
Nominal Size inches	Pressure Rating				
	psi kPa				
3 - 8	285 1965	250 1725	200 1380	160 1100	125 860

³ HDPE pipe conforming to ASTM D3035 and F714 at 73°F/23°C. Reference plastic pipe manufacture data for derating factors at other temperatures

NOTES

- Maximum allowable pressure for ANSI Class 150lb flange. Elevated temperature derate estimates can assume 333 psi maximum working pressure for DR7 pipe at 73°F/23°C. Under no circumstances shall working pressure exceed 285 psi at any temperature.
- Victaulic coupling gaskets have been demonstrated to seal under full (29" of Hg/3.4 kPa [absolute]) vacuum requirements. Consult the specific HDPE pipe manufacturer for their recommended limitations regarding maximum vacuum as well as the effects of temperature and pipe ovality.

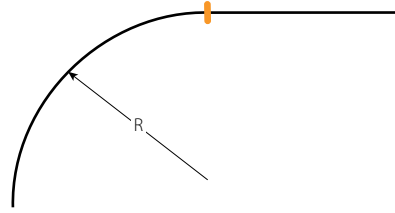
Allowable Tensile Load (ATL): joints made with Style 904 flange adapter can sustain tensile loads noted below.

IPS Size	Allowable Tensile Load ⁴ DR				
	7	9	11	13.5	17
Nominal Size inches	lb N				
	5146 22890	4151 18463	3473 15449	2882 12821	2327 10349
4	8507 37839	6861 30520	5741 25539	4765 21195	3846 17108
6	18437 82013	14871 66151	12444 55353	10327 45938	8336 37081
8	31200 138784	25200 112095	21100 93857	17500 77844	14100 62720

⁴ Allowable tensile loads shown are for straight pulling for a maximum period of one half hour at ambient temperature (68°F/20°C).

5.0 PERFORMANCE (Continued)

Bend Radius: joints made with Style 904 flange adapter can sustain a bending radius as recommended by the Plastic Pipe Institute (PPI) in the Handbook of PE Pipe (2nd ed, Chapter 7, Table 4).



IPS Size	Minimum Recommended Bend Radius				
	DR				
Nominal Size inches	7	9	11	13.5	17
	inches mm				
3	70 1778	70 1778	88 2223	88 2223	95 2400
4	90 2286	90 2286	113 2858	113 2858	122 3086
6	133 3366	133 3366	166 4207	166 4207	179 4543
8	173 4382	173 4382	216 5477	216 5477	233 5915

6.0 NOTIFICATIONS

Not applicable. Contact Victaulic for details.

7.0 REFERENCE MATERIALS

- [05.01: Gasket Selection Guide](#)
- [19.07: Style 905 HDPE Coupling](#)
- [19.09: Style 908 Double Grooved Coupling for HDPE Pipe](#)
- [19.10: Style 907 Coupling HDPE-to-Steel pipe](#)
- [19.11: Plain End Fittings](#)
- [IT-904: Style 904 Installation Tag](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, and the applicable building codes and related regulations as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

Intellectual Property Rights

No statement contained herein concerning a possible or suggested use of any material, product, service, or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Victaulic or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product, service, or design in the infringement of any patent or other intellectual property right. The terms "Patented" or "Patent Pending" refer to design or utility patents or patent applications for articles and/or methods of use in the United States and/or other countries.

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.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing 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.

Trademarks

Victaulic and all other Victaulic marks are the trademarks or registered trademarks of Victaulic Company, and/or its affiliated entities, in the U.S. and/or other countries.