

# Victaulic® Coupling for HDPE Pipe

## Style 905



### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 2 – 8"
- 63 – 225 mm

#### Function

- Style 905 coupling is designed for plain end HDPE pipe from SDR 7 to 17
- Installation-Ready™ design eliminates loose parts
- Style 905 meets or exceeds the pressure rating of the pipe. (See Section 5.0 Performance for more details).

### 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 A536, Grade 65-45-12.

**Housing Coating: (specify choice)**

Standard: Orange enamel for ANSI sizes. Black enamel for ISO sizes and 5" IPS.

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

**Retaining Ring:** 300 series stainless steel

**Coupling Gasket: (specify choice<sup>1</sup>)**

**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.

<sup>1</sup> 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.

**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.

**NOTE**

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

**Hardware:**

**Bolts/Nuts: (specify choice<sup>2</sup>)**

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 or without fluoropolymer top coat. Hardened steel washers conforming to ASTM F436 Type 3 (weathering steel).

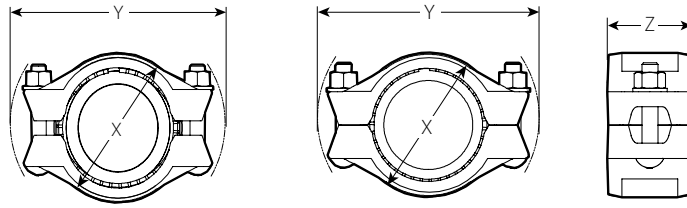
Optional<sup>2</sup>:

2 – 4", 63 – 110 mm: 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", 125 – 225 mm: Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM A193, Class 2 (316 stainless steel), 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).

<sup>2</sup> Optional bolts/nuts available in imperial size only

4.0 DIMENSIONS

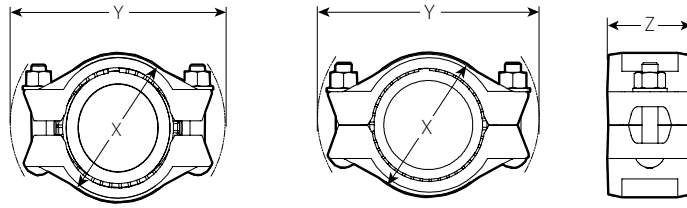


Style 905 Pre-Assembled  
(Installation-Ready Condition)

Style 905 Joint Assembled

IPS Size		Bolt/Nut		Dimensions					Weight
Nominal inches	Actual Outside Diameter inches mm	Qty.	Size inches	Pre-assembled (Installation-Ready™ condition)		Joint Assembled			Approximate (Each) lb kg
				X inches mm	Y inches mm	X inches mm	Y inches mm	Z inches mm	
2	2.375 60.3	2	1/2 x 3 1/4	3.88 99	6.38 162	3.50 89	6.63 168	4.13 105	5.5 2.5
3	3.500 88.9	2	5/8 x 3 1/2	5.13 130	8.13 207	4.63 118	8.13 209	4.13 105	8.5 3.9
4	4.500 114.3	2	5/8 x 4 1/4	6.50 165	9.25 235	6.00 152	9.38 238	4.75 121	13.1 5.9
5	5.563 141.3	2	3/4 x 4 1/4	7.63 194	10.88 276	6.88 175	11.25 286	4.88 124	18.7 8.5
6	6.625 168.3	2	3/4 x 5	8.88 226	12.13 308	8.13 207	12.63 321	4.75 121	19.4 8.8
8	8.625 219.1	4	3/4 x 6 1/4	11.00 279	14.50 368	10.00 254	14.88 378	5.00 127	28.0 12.7

4.0 DIMENSIONS (Continued)



Style 905 Pre-Assembled  
(Installation-Ready Condition)

Style 905 Joint Assembled

ISO Size	Bolt/Nut		Dimensions					Weight
	Nominal	Qty.	Pre-assembled (Installation-Ready™ condition)		Joint Assembled			Approximate (Each)
mm		Size mm inches	X mm inches	Y mm inches	X mm inches	Y mm inches	Z mm inches	kg lb
63	2	M12 x 83 ½ x 3 ¼	99 3.88	152 6.00	89 3.50	168 6.63	105 4.13	2.5 5.5
75	2	M16 x 83 ⅝ x 3 ¼	114 4.50	184 7.25	102 4.00	194 7.63	105 4.13	3.7 8.1
90	2	M16 x 102 ⅝ x 4	130 5.13	195 7.68	118 4.63	210 8.25	105 4.13	3.9 8.5
110	2	M16 x 102 ⅝ x 4	159 6.25	219 8.63	143 5.75	232 9.13	121 4.75	5.9 13.0
125	2	M20 x 108 ¾ x 4 ¼	175 6.88	264 10.38	159 6.25	273 10.75	124 4.88	7.8 17.3
140	2	M20 x 108 ¾ x 4 ¼	194 7.63	276 10.88	175 6.88	286 11.25	124 4.88	8.5 18.7
160	2	M20 x 127 ¾ x 5	210 8.25	292 11.50	194 7.63	305 12.00	121 4.75	8.8 19.3
180	4	M20 x 159 ¾ x 6 ¼	248 9.75	337 13.25	219 8.63	353 13.88	127 5.00	11.5 25.4
200	4	M20 x 159 ¾ x 6 ¼	267 10.50	353 13.88	238 9.38	368 14.50	127 5.00	12.2 26.8
225	4	M20 x 159 ¾ x 6 ¼	295 11.63	373 14.68	267 10.50	387 15.25	127 5.00	13.0 28.7

## 5.0 PERFORMANCE

Pressure Rating: joints made with Style 905 couplings meet the pressure rating of the HDPE pipe.

IPS Size	PE4710 HDPE Pipe <sup>3</sup> DR				
	7	9	11	13.5	17
Nominal Size inches	Pressure Rating				
	psi kPa				
2 - 8	333 2295	250 1725	200 1380	160 1100	125 860

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

**NOTE**

- 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.

ISO Size	PE100 HDPE Pipe <sup>4</sup> SDR				
	7.4	9	11	13.6	17
Nominal Size mm	Pressure Rating				
	Bar kPa psi				
63 – 225	25 2500 363	20 2000 290	16 1600 232	12.5 1250 182	10 1000 145

<sup>4</sup> HDPE pipe conforming to ISO 4427-2 at 68°F/20°C. Reference plastic pipe manufacture data for derating factors at other temperatures

**NOTE**

- 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.

**5.0 PERFORMANCE (Continued)**

Allowable Tensile Load (ATL): joints made with style 905 couplings can sustain tensile loads noted below.

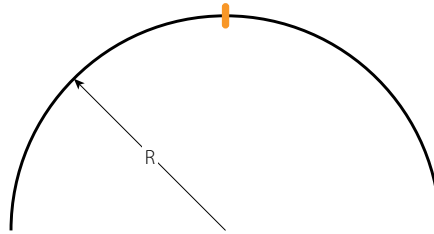
IPS Size	Allowable Tensile Load <sup>5</sup> DR				
	7	9	11	13.5	17
Nominal Size inches	lb N				
2	2369	1911	1599	1327	1071
	10540	8501	7114	5904	4765
3	5146	4151	3473	2882	2327
	22890	18463	15449	12821	10349
4	8507	6861	5741	4765	3846
	37839	30520	25539	21195	17108
5	54678	46208	38664	31872	25902
	12292	10388	8692	7165	5823
6	18437	14871	12444	10327	8336
	82013	66151	55353	45938	37081
8	31200	25200	21100	17500	14100
	138784	112095	93857	77844	62720

ISO Size	Allowable Tensile Load <sup>5</sup> SDR				
	7.4	9	11	13.6	17
Nominal Size mm	N lb				
63	11076	9360	7832	6456	5247
	2490	2104	1761	1451	1179
75	15702	13269	11103	9150	7437
	3530	2983	2496	2057	1672
90	22616	19112	15992	13182	10713
	5084	4297	3595	2864	2408
110	33748	28519	23864	19671	15987
	7587	6411	5365	4422	3594
125	43610	36854	30840	25422	20658
	9804	8285	6933	5715	4644
140	54678	46208	38664	31872	25902
	12292	10388	8692	7165	5823
160	71440	60372	50517	41641	33841
	16061	13572	11357	9361	7608
180	90415	76407	63934	52698	42827
	20326	17177	14373	11847	9628
200	111561	94276	78889	65029	52849
	25080	21194	17735	14619	11881
225	141271	119381	99898	82345	66919
	31759	26838	22458	18512	15044

<sup>5</sup> 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 905 couplings 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				
2	48 1207	48 1207	59 1508	59 1508	64 1629
3	70 1778	70 1778	88 2223	88 2223	95 2400
4	90 2286	90 2286	113 2858	113 2858	122 3086
5	2813 111	2813 111	3516 138	3516 138	3797 149
6	133 3366	133 3366	166 4207	166 4207	179 4543
8	173 4382	173 4382	216 5477	216 5477	233 5915

ISO Size	Minimum Recommended Bend Radius				
	SDR				
Nominal Size mm	7.4	9	11	13.6	17
	mm inches				
63	1266 50	1266 50	1582 62	1582 62	1709 67
75	1507 59	1507 59	1884 74	1884 74	2035 80
90	1809 71	1809 71	2261 89	2261 89	2442 96
110	2210 87	2210 87	2762 109	2762 109	2983 117
125	2512 99	2512 99	3140 124	3140 124	3391 134
140	2813 111	2813 111	3516 138	3516 138	3797 149
160	3215 127	3215 127	4019 158	4019 158	4340 171
180	3617 142	3617 142	4521 178	4521 178	4883 192
200	4018 158	4018 158	5022 198	5022 198	5424 214
225	4521 178	4521 178	5652 223	5652 223	6104 240

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## 6.0 NOTIFICATIONS

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Not applicable. Contact Victaulic for details.

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## 7.0 REFERENCE MATERIALS

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[05.01: Gasket Selection Guide](#)

[IT-905: Style 905 Installation Tag](#)

[19.09: Style 908 Double Grooved Coupling for HDPE Pipe](#)

[19.10: Style 907 Transition Coupling HDPE to Carbon Steel](#)

[19.11: HDPE Plain End Fittings](#)

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### 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.

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### 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](http://www.victaulic.com).

### Warranty

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

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