

Victaulic® EndSeal™ Coupling

Style HP-70ES



1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 – 12"/DN50 – DN300

Pipe Material

- Carbon steel

Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760 mm Hg) up to 2500psi/17235 kPa

Operating Temperature

- Dependent on gasket selection from section 3.0.

Function

- Provides a rigid pipe joint designed to restrict axial or angular movement

Pipe Preparation

- Cut or roll grooved in accordance with [publication 25.02](#): Victaulic EndSeal™ Groove Specifications.

2.0 CERTIFICATION/LISTINGS



NOTE

- See [publication 10.01](#) for Fire Protection Certifications/Listings Reference Guide

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

3.0 SPECIFICATIONS – MATERIAL

Housing: Ductile iron conforming to ASTM A536, Grade 65-45-12.

Housing Coating: (specify choice)

- ☐ Standard: Black enamel.
- ☐ Optional: Hot dipped galvanized conforming to ASTM A153.
- ☐ Optional: Contact Victaulic with your requirements for other coatings.

Gasket: (specify choice¹)

☐ **Victaulic Grade “HMT” High Modulus Nitrile (EndSeal™)**

High Modulus Nitrile (Orange and silver stripe color code). May be specified for oil related services, including air with oil vapor, this gasket may be specified for temperatures rated up to +180°F/+82°C. For water related services, this gasket may be specified for temperatures rated up to +150°F/+66°C. For oil free, dry air services, this gasket may be specified for temperatures rated up to +140°F/+60°C. **NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.**

☐ **Victaulic Grade “T-607” Nitrile (EndSeal™)**

Nitrile (Grey gasket color code). May be specified for oil related services, including air with oil vapor, this gasket may be specified for temperatures rated up to +180°F/+82°C. For water related services, this gasket may be specified for temperatures rated up to +150°F/+66°C. For oil free, dry air services, this gasket may be specified for temperatures rated up to +140°F/+60°C. **NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.**

☐ **Others**

For alternate gasket selection, reference [publication 05.01](#): Victaulic Seal Selection Guide – Elastometric Seal Construction.

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 Seal Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

NOTE

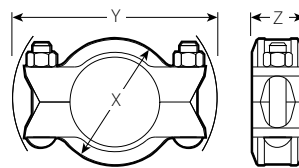
- EndSeal™ Grade “T-607” Nitrile gaskets with HP-70ES couplings may be specified in systems requiring compliance with API607 fire testing and in foam systems requiring compliance with NFPA 11.

Bolts/Nuts:

- ☐ **Standard:** Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 (metric) Class 9.8 (M10-M16) and 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 FE/ZN5, finish Type III (imperial) or Type II (metric).

4.0 DIMENSIONS

Style HP-70 ES



Size		Maximum Allowable Pipe End Sep. ² inches mm	No. Bolts Required ³ Qty.	Imperial Bolt/ Nut Size ⁴ inches	Dimensions			Weight
Nominal inches DN	Actual Outside Diameter inches mm				X inches mm	Y inches mm	Z inches mm	Approximate (Each) lb kg
2 DN50	2.375 60.3	0.19 4.8	2	5/8 x 2 3/4	3.50 89	6.50 165	1.88 48	3.3 1.5
2 1/2	2.875 73.0	0.19 4.8	2	5/8 x 3 1/2	4.00 102	7.13 181	1.88 48	4.0 1.8
3 DN80	3.500 88.9	0.19 4.8	2	5/8 x 3 1/2	4.75 121	7.75 197	1.88 48	4.6 2.1
	4.250 108.0	0.19 4.8	2	3/4 x 4 1/4	5.75 146	9.63 244	2.25 57	7.7 3.5
4 DN100	4.500 114.3	0.19 4.8	2	3/4 x 4 1/4	6.00 152	9.63 244	2.13 54	7.7 3.5
5	5.563 141.3	0.27 6.9	2	7/8 x 5 1/2	7.50 191	11.38 289	2.38 60	14.8 6.7
	6.250 159.0	0.27 6.9	2	7/8 x 5 1/2	8.25 210	12.63 321	2.50 64	15.8 7.2
6 DN150	6.625 168.3	0.27 6.9	2	7/8 x 5 1/2	8.50 216	12.63 321	2.50 64	15.8 7.2
8 DN200	8.625 219.1	0.27 6.9	2	1 x 5 1/2	11.00 279	15.00 381	2.75 70	26.6 12.1
10 DN250	10.750 273.0	0.28 7.1	2	1 x 6 1/2	13.38 340	17.25 438	3.00 76	33.7 15.3
12 DN300	12.750 323.9	0.28 7.1	2	1 x 6 1/2	15.50 394	19.00 483	3.00 76	41.5 18.8

² The Maximum Allowable Pipe End Separation dimension is for system layout purposes only. Style HP-70ES EndSeal couplings are considered rigid connections and will not accommodate expansion/contraction or angular movement of the piping system. Contact Victaulic for torsional resistance information.

³ Number of bolts required equals number of housing segments.

⁴ Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

NOTES

- Pipe shall be grooved to Victaulic® EndSeal™ Pipe Groove Specifications found in Victaulic [publication 25.02](#).
- Victaulic® Original Groove System (OGS) ductile iron fittings may be used with HP-70ES couplings up to the maximum working pressure of the fittings (1000psi 2 – 6"/DN50 – DN150, 800psi 8 – 12"/DN200 – DN300)
- Victaulic EndSeal Extra Strong fittings may be used with HP-70ES couplings up to the maximum working pressure of HP-70ES couplings.
- HP-70ES couplings cannot be used with Victaulic Series 700 Butterfly Valves.

5.0 PERFORMANCE

Size		Performance	
Nominal inches DN	Actual Outside Diameter inches mm	Maximum Working Pressure ⁵ psi kPa	Maximum End Load ⁵ Lbs. N
2 DN50	2.375 60.3	2500 17237	11075 49264
2½	2.875 73.0	2500 17237	16230 72195
3 DN80	3.500 88.9	2500 17237	24053 106993
	4.250 108.0	2500 17237	35465 157756
4 DN100	4.500 114.3	2500 17237	39761 176866
5	5.563 141.3	2000 13790	48611 216233
	6.250 159.0	2000 13790	61359 272938
6 DN150	6.625 168.3	2000 13790	68943 306674
8 DN200	8.625 219.1	1500 10342	87640 389842
10 DN250	10.750 273.0	1250 8618	113453 504664
12 DN300	12.750 323.9	1250 8618	159596 709918

⁵ Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, "ES" cut or roll grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

NOTE

- WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ¼ times the figures shown.

6.0 NOTIFICATIONS

⚠ WARNING








- Style HP-70ES Couplings shall be used **ONLY** with pipe that is prepared to Victaulic EndSeal™ "ES" specifications. **DO NOT** attempt to install Style HP-70ES Couplings on pipe that is prepared to any other groove specification.
- Style HP-70ES Couplings **SHALL NOT** be used for installation of Victaulic Series 700 Butterfly Valves.
- Heavy-wall fittings shall be used for applications with operating pressures over 1000 psi/69 Bar (for 2 – 6-inch/DN50 – DN150 coupling sizes) and 800 psi/ 55 Bar (for 8 – 12-inch/DN200 – DN300 coupling sizes).

Failure to follow these instructions could cause joint failure, resulting in death or serious personal injury and property damage.

NOTICE

- Victaulic does not recommend the use of any furnace butt-welded pipe with sizes NPS 2"/DN50 and smaller Victaulic gasketed joint products. This includes, but is not limited to, ASTM A53 Type F pipe.

7.0 REFERENCE MATERIALS

[05.01: Victaulic Seal Selection Guide](#)

[07.03 Extra Strong EndSeal Fittings](#)

[10.01: Victaulic Products for Fire Protection Piping Systems - Regulatory Approval Reference Guide](#)

[25.02: EndSeal™ Groove Specifications](#)

[26.01 Victaulic Design Data](#)

[29.01: Victaulic Terms and Conditions of Sale](#)

[I-100: Victaulic Field Installation Handbook](#)

[I-ENDCAP: Victaulic End Cap Installation Safety Instructions](#)

[I-IMPACT: Victaulic Impact Tool Usage Guidelines](#)

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, 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.

Warranty

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

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