



Transition Fittings

Polyethylene to steel weld-end non-ID obstructed fittings are a convenient way to connect polyethylene pipe to steel pipe. Hawkeye Industries Inc.'s ID Controlled Transition Fitting are PE 100 standard, and offer a piggable alternative to traditional, non-ID controlled fittings.

Design

The transition fitting joint uses a combination of elastomeric seals and significant interferences to ensure a leak-free design. The joint, designed to be stronger than the polyethylene pipe, exceeds pullout requirements of CSA B137.4-05. ID controlled fittings boast a smooth transition from the polyethylene inside-diameter to the steel inside-diameter. By eliminating the tubular insert stiffener, and instead using the steel pipe itself the insert stiffener, the non-obstructed inside diameter makes these fittings suitable for pigging.

Construction

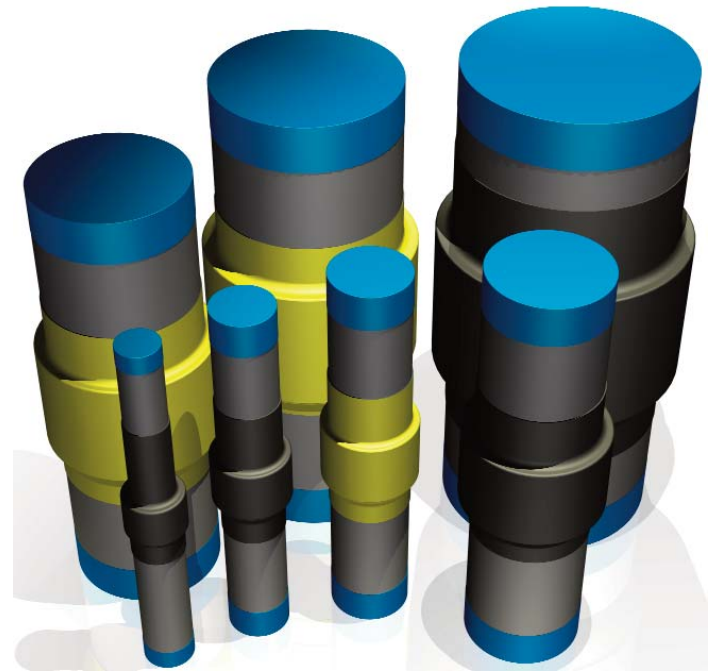
The standard materials of construction are ASME A106 B for the steel portion and PE4710¹ for the plastic portion. Hawkeye transition fittings are designed in consideration of CSA B137.4-05 & Z662-07, ASTM D2513 & F1973, as well as API 15LE & ASME B31.8.

Flexibility

ID-Controlled Transition fittings are available in standard pipe sizes from 2 NPS [60.3 mm] to 16 NPS, and are available in Standard Dimension Ratios (SDR's) of 6.3, 7.3, 9, 11 and 17. Call us for sizes larger than 16 NPS, SDR's not listed and non-standard materials.

Materials

Component	Standard	Optional
Plastic Adapter	PE4710 ¹	PE3408
Steel Nipple	A 106B	A 333-6, CSA Gr. 290&359
Compression Sleeve	Carbon Steel	—
Seals	FKM (Viton)	—
Corrosion Protection	Proprietary	



Above: Transition Fitting Family

Technical References

Transition fitting and other fabricated fitting technical information can be found in the following Hawkeye-Published technical Bulletins

- ▶ TB-0207-TF — Material and Design Specifications
- ▶ TB-0807-TF — Pressure Rating PE Fittings
- ▶ TB-0408-FP — Fabricated Fitting Butt Fusion Procedure

Ordering Information

- 1.) Specify ID-Controlled Transition Fitting
- 2.) Specify Polyethylene Pipe Size (NPS or mm)
- 3.) Specify Polyethylene SDR (5, 6.3, 7.3, 9, 10, 13.5, 17, 21)
- 4.) Specify Polyethylene grade (PE4710¹ Standard)
- 5.) Specify Steel Pipe Size (NPS or mm)
- 6.) Specify Steel Wall thickness (SCH or mm)
- 7.) Specify Steel Grade (A 106B Standard)

¹ PE4710 resin used by Hawkeye Industries is also classified as PE 100 for use in ISO-based pipeline designs.

Components

- A.) Steel Nipple -- welded to steel pipe system
- B.) Plastic Adapter -- fused to PE pipe system
- C.) Compression Sleeve
- D.) Elastomeric Seals
- E.) Corrosion Protection

General Dimensions¹

Size		Total ² L (in)	Length		OD	
PE (NPS)	Steel (NPS)		PE ³ Lpe (in)	Steel ⁴ Ls (in)	PE ØP (in)	Steel ØS (in)
1.5	1.5	22.0	9.8	9.8	1.90	1.90
2	1.5	22.0	9.8	9.8	2.38	1.90
	2					2.38
2.5	2	22.1	9.8	9.8	2.88	2.38
	2.5					2.88
3	2	22.6	9.8	9.8	3.50	2.38
	2.5					2.88
	3					3.50
	4					4.50
4	2.5	23.4	9.8	9.8	4.50	2.88
	3					3.50
5	4	24.3	10.0	10.0	5.56	4.50
	5					5.56
	6					6.63
6	4	25.3	10.1	10.1	6.63	4.50
	5					5.56
	6					6.63
8	6	26.8	10.1	10.1	8.63	6.63
	8					8.63
10	8	28.5	10.2	10.2	10.75	8.63
	10					10.75
12	10	30.0	10.5	10.5	12.75	10.75
	12					12.75
14	14	31.1	10.8	10.8	14.00	14.00
	16					10.75
16	10	32.6	10.8	10.8	16.00	16.00
	16					16.00
18	16	32.8	10.9	10.9	18.00	16.00
	18					18.00

- 1.) This chart is for informational purposes only, and is not for engineering or design use. All information is subject to change without notice. Not all sizes, SDRs shown.
- 2.) Overall length is ± 2.0 depending on material and manufacturing variances.
- 3.) Exposed PE Length is ±1.0 depending on material and manufacturing variances.
- 4.) Exposed Steel Length is ±1.0 depending on material and manufacturing variances.

Related Products

Hawkeye carries additional polyethylene and pipeline equipment to complete your project:

- ▶ Fabricated PE fittings (Laterals, Tees, Elbows, Caps)
- ▶ Tracer Wire
- ▶ RACI Casing Spacers and End Seals

