



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

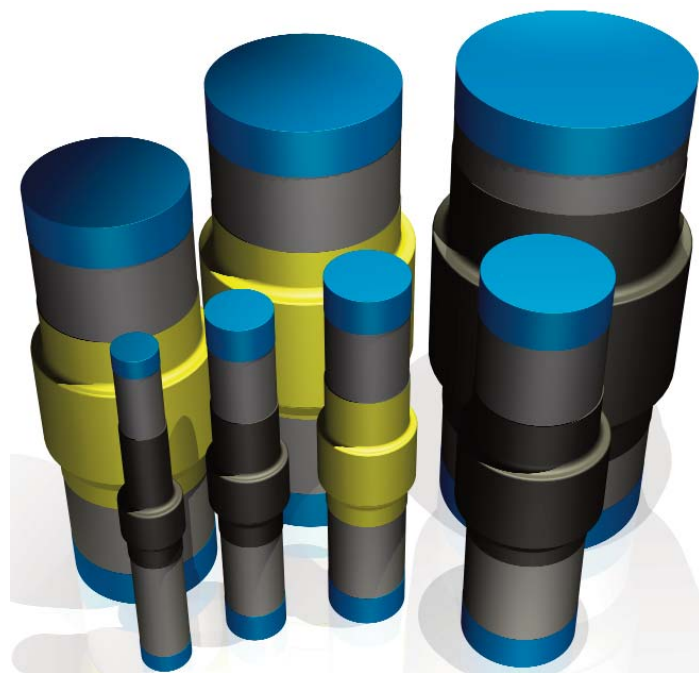
The standard materials of construction are ASME A106 B for the steel portion and PE4710¹ for the plastic portion. Hawkeye transition fittings are designed in consideration of CSA B137.4-05 & Z662-07, ASTM D2513 & F1973, as well as API 15LE & ASME B31.8.

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	32.6	10.8	10.8	16.00	10.75
	16					16.00
18	16	32.8	10.9	10.9	18.00	16.00

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

