



This certificate is issued for the following:

Polyethylene (PE) Pipe and Fittings for Underground Fire Protection Service (see attached listing)

Prepared for:

ISCO Industries LLC 100 Witherspoon St 2 West Louisville, KY 40202 USA

Manufactured at:

ISCO Industries 10711 Freeport Court Louisville, KY 40258 USA

ISCO Industries 5610 Almeda-Genoa Rd Houston, TX 77048 USA ISCO Industries 701 Mid Atlantic Pkwy Martinsburg, WV 25404 USA

ISCO Industries 4725 Flightline Dr Kingman, AZ 86401 USA

ISCO Industries LLC 305 N. 7th Street Corsicana, TX 75110

Approval Standard: FM 1613 (October 2022)

Approval Identification: PR468463 Approval Granted: 6 May 2024

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

David B. Fuller

VP, Manager – Fire Protection

FM Approvals

One Technology Way Norwood, MA 02062







Model No	Product	Nominal Dina Siza in	Rated \	Rated Working Pressure		
WOULD NO	Description	Nominal Pipe Size, in	psi	(kPa)	Remarks	
Tees Molded	Class 200	2, 3, 4, 6	200	(1375)	a, c	
Tees Molded	Class 250	2, 3, 4, 6	250	(1720)	a, c	
Tees Molded	Class 335	2, 3, 4, 6	335	(2305)	a, c	
Tees Molded	Class 200	4, 6	200	(1375)	a, d	
Tees Molded	Class 250	4, 6	250	(1720)	a, d	
Tees Molded	Class 335	4, 6	335	(2305)	a, d	
90° Elbows Molded	Class 200	2, 3, 4, 6	200	(1375)	a, c	
90° Elbows Molded	Class 250	2, 3, 4, 6	250	(1720)	a, c	
90° Elbows Molded	Class 335	2, 3, 4, 6	335	(2305)	a, c	
90° Elbows Molded	Class 200	4, 6	200	(1375)	a, d	
90° Elbows Molded	Class 250	4, 6	250	(1720)	a, d	
90° Elbows Molded	Class 335	4, 6	335	(2305)	a, d	
45° Elbows Molded	Class 200	3, 4, 6	200	(1375)	a, c	
45° Elbows Molded	Class 250	3, 4, 6	250	(1720)	a, c	
45° Elbows Molded	Class 335	2, 3, 4, 6	335	(2305)	a, c	
45° Elbows Molded	Class 200	4, 6	200	(1375)	a, d	
45° Elbows Molded	Class 250	4, 6	250	(1720)	a, d	
45° Elbows Molded	Class 335	4, 6	335	(2305)	a, d	
End Caps Molded	Class 200	2, 3, 4, 6, 8	200	(1375)	a, c	
End Caps Molded	Class 250	2, 3, 4, 6, 8	250	(1720)	a, c	
End Caps Molded	Class 335	2, 3, 4, 6	335	(2305)	a, c	
End Caps Fabricated	Class 200	10, 12, 14, 16, 18, 20, 22, 24	200	(1375)	a, c	
End Caps Fabricated	Class 250	10, 12, 14, 16, 18, 20, 22, 24	250	(1720)	a, c	
End Caps Fabricated	Class 335	8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, c	





Model No	Product Description Nominal Pipe Size, in	Naminal Bina Cina in	Rated \	Domesiles	
Model No		Nominai Pipe Size, in	psi	(kPa)	Remarks
End Caps Fabricated	Class 200	10, 12, 14, 16, 18, 20, 24	200	(1375)	a, d
End Caps Fabricated	Class 250	10, 12, 14, 16, 18, 20, 24	250	(1720)	a, d
Sweep Elbows 1-90°	Class 200	4, 6, 8, 10, 12, 14	200	(1375)	a, c
Sweep Elbows 1-90°	Class 250	4, 6, 8, 10, 12, 14	250	(1720)	a, c
Concentric Reducer	Class 200	4 DIPS x 3 IPS	200	(1375)	a, c, d
Concentric Reducer	Class 250	4 DIPS x 3 IPS	250	(1720)	a, c, d
Concentric Reducer	Class 200	3 x 2, 4 x 3, 6 x 4, 8 x 6, 10 x 8, 12 x 10, 14 x 12, 16 x 14, 18 x 16 20 x 18, 22 x 20, 24 x 22	200	(1375)	a, c
Forged Concentric Reducer	Class 200	12 x 8, 12 x 10, 14 x 12, 16 x 12, 16 x 14, 18 x 12, 18 x 14, 18 x 16, 20 x 18, 24 x 18, 24 x 20	200	(1375)	a, c
Concentric Reducer	Class 250	3 x 2, 4 x 3, 6 x 4, 8 x 6, 10 x 8, 12 x 10, 14 x 12, 16 x 14, 18 x 16 20 x 18, 22 x 20, 24 x 22	250	(1720)	a, c
Forged Concentric Reducer	Class 250	12 x 8, 12 x 10, 14 x 12, 16 x 12, 16 x 14, 18 x 12, 18 x 14, 18 x 16, 20 x 18, 24 x 18, 24 x 20	250	(1720)	a, c
Molded Concentric Reducer	Class 335	3 x 2, 4 x 2, 4 x 3, 6 x 4, 8 x 6	335	(2305)	a, c
Fabricated Concentric Reducer	Class 335	10 x 8, 12 x 10, 14 x 12, 16 x 14, 18 x 16, 20 x 18, 22 x 20, 24 x 22	335	(2305)	a, c
Fabricated Concentric Reducer (Shortened Version)	Class 335	10 x 8, 12 x 10, 14 x 12, 16 x 14, 18 x 16, 20 x 18, 22 x 20, 24 x 22	335	(2305)	a, c
Concentric Reducer	Class 200	6 x 4, 8 x 6, 10 x 8, 12 x 10, 14 x 12, 16 x 14 18 x 16, 20 x 18, 24 x 20	200	(1375)	a, d





Model No	Product	Naminal Bina Cina in	Rated	Damaria	
	Description	Nominal Pipe Size, in	psi	(kPa)	Remarks
Concentric Reducer	Class 250	6 x 4, 8 x 6, 10 x 8, 12 x 10, 14 x 12, 16 x 14 18 x 16, 20 x 18, 24 x 20	250	(1720)	a, d
Molded Concentric Reducer	Class 335	6 x 4, 8 x 6	335	(2305)	a, d
Fabricated Concentric Reducer	Class 335	10 x 8, 12 x 10, 14 x 12, 16 x 14, 18 x 16, 20 x 18	335	(2305)	a, d
Compact Concentric Reducer	Class 200	$\begin{array}{c} 6\times2, 6\times3, 6\times4, 8\times4, 8\times4, 8\times6, 10\times6, 10\times8, 12\times6, 12\times8, 12\times10, 14\times6, 14\times8, \\ 14\times10, 14\times12, 16\times6, 16\times8, 16\times10, \\ 16\times12, 16\times14, 18\times6, 18\times8, 18\times10, \\ 18\times12, 18\times14, 18\times16, 20\times6, 20\times8, \\ 20\times10, 20\times12, 20\times14, 20\times16, 20\times18, \\ 22\times6, 22\times8, 22\times10, 22\times12, 22\times14, \\ 22\times16, 22\times18, 22\times20, 24\times6, 24\times8, \\ 24\times10, 24\times12, 24\times14, 24\times16, 24\times18, 24\times20, 24\times22, 26\times24, 28\times20, 28\times22, 26\times24, 28\times20, 28\times22, 28\times24, 28\times26, 30\times22, 30\times24, 30\times26, 30\times28, 32\times24, 32\times26, 32\times28, 32\times30, 34\times30, 34\times32, 36\times28, 36\times30, 36\times32, 36\times34 \end{array}$	200	(1375)	a, c
Compact Concentric Reducer	Class 200	6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12 x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 30 x 24, 36 x 30	200	(1375)	a, d





Model No	Product Description	Naminal Bina Siza in	Rated V	Remarks	
		Nominal Pipe Size, in	psi	(kPa)	Keillaik
Compact Concentric Reducer	Class 250	6 x 2, 6 x 3, 6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12 x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 22 x 6, 22 x 8, 22 x 10, 22 x 12, 22 x 14, 22 x 16, 22 x 18, 22 x 20, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 24 x 22, 26 x 20, 26 x 22, 26 x 24, 28 x 20, 28 x 22, 28 x 24, 28 x 26, 30 x 22, 30 x 24, 30 x 26, 30 x 28, 32 x 30, 34 x 30, 34 x 32, 36 x 28, 36 x 30, 36 x 32, 36 x 34	250	(1720)	a, c
Compact Concentric Reducer	Class 250	6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 30 x 24, 36 x 30	250	(1720)	a, d
Compact Concentric Reducer	Class 335	6 x 2, 6 x 3, 6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12 x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 22 x 6,22 x 8, 22 x 10, 22 x 12, 22 x 14, 22 x 16, 22 x 18, 22 x 20, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 24 x 22	335	(2305)	a, c
Compact Concentric Reducer	Class 335	6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12 x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20	335	(2305)	a, d





Model No	Product Description	Naminal Dina Cira in	Rated Working Pressure		Remarks
		Nominal Pipe Size, in	psi	(kPa)	Remarks
Machined Concentric Reducer	Class 200	6 x 2, 6 x 3, 6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12 x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 22 x 6,22 x 8, 22 x 10, 22 x 12, 22 x 14, 22 x 16, 22 x 18, 22 x 20, 24 x 6, 24 x 8,24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 24 x 22, 26 x 20, 26 x 22, 26 x 24, 28 x 20, 28 x 22, 28 x 24, 28 x 26, 30 x 22, 30 x 24, 30 x 26, 30x 28, 32 x 24, 32 x 26, 32 x 28, 32 x 30, 34 x 30, 34 x 32, 36 x 28, 36 x 31, 36 x 32, 36 x 34	200	(1375)	a, c
Machined Concentric Reducer	Class 200	6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 30 x 24, 36 x 30	200	(1375)	a, d
Machined Concentric Reducer	Class 250	6 x 2, 6 x 3, 6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12 x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 22 x 6, 22 x 8, 22 x 10, 22 x 12, 22 x 14, 22 x 16, 22 x 18, 22 x 20, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 24 x 22, 26 x 20, 26 x 22, 26 x 24, 28 x 20, 28 x 22, 28 x 24, 28 x 26, 30 x 22, 30 x 24, 30 x 26, 30 x 28, 32 x 24, 32 x 26, 32 x 28, 32 x 30, 34 x 30, 34 x 32, 36 x 28, 36 x 30, 36 x 32, 36 x 34	250	(1720)	a, c





Model No	Product	Naminal Bina Siza in	Rated Wo	Remarks	
	Description	Nominal Pipe Size, in	psi	(kPa)	Remarks
Machined Concentric Reducer	Class 250	6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 30 x 24, 36 x 30	250	(1720)	a, d
Machined Concentric Reducer	Class 335	6 x 2, 6 x 3, 6 x 4, 8 x 4, 8 x 6, 10 x6, 10 x 8, 12 x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6,16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 22 x 6,22 x 8, 22 x 10, 22 x 12, 22 x 14, 22 x 16, 22 x 18, 22 x 20, 24 x 6, 24 x 8,24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20, 24 x 22	335	(2305)	a, c
Machined Concentric Reducer	Class 335	6 x 4, 8 x 4, 8 x 6, 10 x 6, 10 x 8, 12x 6, 12 x 8, 12 x 10, 14 x 6, 14 x 8, 14 x 10, 14 x 12, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 16 x 14, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 18 x 14, 18 x 16, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 14, 20 x 16, 20 x 18, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 14, 24 x 16, 24 x 18, 24 x 20	335	(2305)	a, d
Fabricated Concentric Reducer (Shortened Version)	Class 335	10 x 8, 12 x 10, 14 x 12, 16 x 14, 18 x 16, 20 x 18	335	(2305)	a, d
Flange Adapter, Molded	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	200	(1375)	a, b, c
Flange Adapter, Molded	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	250	(1720)	a, b, c
Flange Adapter, Molded	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, b, c
Flange Adapter, Machined	Class 200	26, 28,30, 32, 34, 36	200	(1375)	a, b, c





Model No	Product Naminal Bin	Naminal Dina Cina	Rated \	Domesiles	
Model No	Description	Nominal Pipe Size, in	psi	(kPa)	Remarks
Flange Adapter, Machined	Class 250	26, 28,30, 32, 34, 36	250	(1720)	a, b, c
Fabricated Beveled Flange Adapter	Class 200	2, 3, 4, 6, 8, 10,12, 14, 16, 18, 20,22, 24	200	(1375)	a, b, c
Fabricated Beveled Flange Adapter	Class 250	2, 3, 4, 6, 8, 10,12, 14, 16, 18, 20,22, 24	250	(1720)	a, b, c
Fabricated Beveled Flange Adapter	Class 335	6, 8, 10	335	(2305)	a, b, c, d
Fabricated Beveled Flange Adapter	Class 200	4, 6, 8, 10,12, 14, 16, 18, 20, 24	200	(1375)	a, b, d
Fabricated Beveled Flange Adapter	Class 250	4, 6, 8, 10,12, 14, 16, 18, 20, 24	250	(1720)	a, b, d
Fabricated Beveled Flange Adapter	Class 335	2, 3, 4, 6, 8, 10,12, 14, 16, 18, 20,22, 24	335	(2305)	a, b, c
Flange Adapter, Molded	Class 200	4, 6, 8, 10, 12, 14 16, 18, 20, 24	200	(1375)	a, b, d
Flange Adapter, Molded	Class 250	4, 6, 8, 10, 12, 14 16, 18, 20, 24	250	(1720)	a, b, d
Flange Adapter, Molded	Class 335	4, 6, 8, 10, 12, 14 16, 18, 20, 24	335	(2305)	a, b, d
Flange Adapter, Machined	Class 200	30, 36	200	(1375)	a, b, d
Flange Adapter, Machined	Class 250	30, 36	250	(1720)	a, b, d
Ductile Iron Backup Rings	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	200	(1375)	b, c
Ductile Iron Backup Rings	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	250	(1720)	b, c





Madalbla	Product	Name and Birms Office in	Rated \	_	
Model No	Description	Description Nominal Pipe Size, in	psi	(kPa)	Remarks
Ductile Iron Backup Rings (Domestic)	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	b, c
Ductile Iron Backup Rings (Import)	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	b, c
Convoluted Ductile Iron Backup Rings	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	200	(1375)	b, c
Convoluted Ductile Iron Backup Rings	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28,30, 32, 36	250	(1720)	b, c
Convoluted Ductile Iron Backup Rings	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	b, c
Stainless Steel Backup Rings	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	200	(1375)	b, c
Stainless Steel Backup Rings	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 30	250	(1720)	b, c
Stainless Steel Backup Rings	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	b, c
Carbon Steel Lap Joint Flange	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	200	(1375)	b, c
Carbon Steel Lap Joint Flange	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	250	(1720)	b, c
Carbon Steel Lap Joint Flange	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	b, c
Ductile Iron Backup Rings	Class 200	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	200	(1375)	b, d
Ductile Iron Backup Rings	Class 250	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	250	(1720)	b, d
Ductile Iron Backup Rings (Domestic)	Class 335	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	b, d
Ductile Iron Backup Rings (Import)	Class 335	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	b, d





Model No	Product Description Nominal Pipe Size, in	Naminal Bina Cina in	Rated	Damarka	
		psi	(kPa)	Remarks	
Convoluted Ductile Iron Backup Rings	Class 200	4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 30, 36	200	(1375)	b, d
Convoluted Ductile Iron Backup Rings	Class 250	4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 30, 36	250	(1720)	b, d
Stainless Steel Backup Rings	Class 200	4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 30, 36	200	(1375)	b, d
Stainless Steel Backup Rings	Class 250	4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 30	250	(1720)	b, d
Stainless Steel Backup Rings	Class 335	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	b, d
Carbon Steel Lap Joint Flange	Class 200	4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 30, 36	200	(1375)	b, d
Carbon Steel Lap Joint Flange	Class 250	4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 30, 36	250	(1720)	b, d
Carbon Steel Lap Joint Flange	Class 335	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	b, d
Branch Saddle Reducing Tee	Class 200	3 x 2, 4 x 2, 4 x 3, 6 x 2, 6 x 3, 6 x 4, 8 x 2, 8 x 3, 8 x 4, 8 x 6, 10 x 2, 10 x 3, 10 x 4, 10 x 6, 10 x 8, 12 x 2, 12 x 3, 12 x 4, 12 x 6, 12 x 8, 12 x 10, 14 x 2, 14 x 3, 14 x 4, 14 x 6, 14 x 8, 14 x 10, 16 x 2, 16 x 3, 16 x 4, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 18 x 2, 18 x 3, 18 x 4, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 16, 22 x 6, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 16	200	(1375)	a, c





Model No	Product	Naminal Dina Cira in	Rated	Rated Working Pressure	
	Description	Description Nominal Pipe Size, in	psi	(kPa)	Remarks
Branch Saddle Reducing Tee	Class 250	3 x 2, 4 x 2, 4 x 3, 6 x 2, 6 x 3, 6 x 4, 8 x 2, 8 x 3, 8 x 4, 8 x 6, 10 x 2, 10 x 3, 10 x 4, 10 x 6, 10 x 8, 12 x 2, 12 x 3, 12 x 4, 12 x 6, 12 x 8, 12 x 10, 14 x 2, 14 x 3, 14 x 4, 14 x 6, 14 x 8, 14 x 10, 16 x 2, 16 x 3, 16 x 4, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 18 x 2, 18 x 3, 18 x 4, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 20 x 16, 22 x 6, 24 x 6, 24 x 8, 24 x 10, 24 x 12, 24 x 16	250	(1720)	a, c
Branch Saddle Reducing Tee	Class 335	8 x 6, 10 x 6, 10 x 8, 12 x 6, 12 x 8, 12 x 10,14 x 6, 14 x 8, 14 x 10, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 24 x 6, 24 x 8, 24 x 10, 24 x 12	335	(2305)	a, c, d
Branch Saddle Reducing Tee	Class 200	6 x 4, 8 x 4, 8 x 6, 10 x 4, 10 x 6, 10 x 8, 12 x 4, 12 x 6, 12 x 8, 12 x 10, 14 x 4, 14 x 6, 14 x 8, 14 x 10, 16 x 4, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 18 x 4, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 24 x 6, 24 x 8, 24 x 10, 24 x 12	200	(1375)	a, d





Model No	Product	Naminal Bina Cira in	Rated \		
	Description	Nominal Pipe Size, in	psi	(kPa)	Remarks
Branch Saddle Reducing Tee	Class 250	6 x 4, 8 x 4, 8 x 6, 10 x 4, 10 x 6, 10 x 8, 12 x 4, 12 x 6, 12 x 8, 12 x 10, 14 x 4, 14 x 6, 14 x 8, 14 x 10, 16 x 4, 16 x 6, 16 x 8, 16 x 10, 16 x 12, 18 x 4, 18 x 6, 18 x 8, 18 x 10, 18 x 12, 20 x 6, 20 x 8, 20 x 10, 20 x 12, 24 x 6, 24 x 8, 24 x 10, 24 x 12	250	(1720)	a, d
Molded Outlet Reducing Tee	Class 200	12 x 6, 12 x 8 16 x 6, 16 x 8 18 x 6, 18 x 8, 18 x 12 24 x 6, 24 x 8, 24 x 12	250	(1720)	a, c
Molded Outlet Reducing Tee	Class 250	12 x 6, 12 x 8 16 x 6, 16 x 8 18 x 6, 18 x 8, 18 x 12 24 x 6, 24 x 8, 24 x 12	250	(1720)	a, c
Fabricated Tee	Class 200	8, 10, 12, 14, 16, 18, 20, 22, 24	200	(1375)	а, с
Fabricated Tee	Class 250	8,10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	250	(1720)	a, c
Fabricated Tee	Class 335	8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, c
Fabricated Tee	Class 200	8, 10, 12, 14, 16, 18, 20, 24	200	(1375)	a, d
Fabricated Tee	Class 250	8,10, 12, 14, 16, 18, 20, 24, 30, 36	250	(1720)	a, d
Fabricated Tee	Class 335	8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	a, d
Fabricated ≤90° Elbow (5 segments)	Class 200	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	200	(1375)	a, c
Fabricated ≤90° Elbow (5 segments)	Class 250	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28,30, 32, 34, 36	250	(1720)	a, c





Model No	Product	Naminal Bina Cina in	Rated \	D	
	Description	Description Nominal Pipe Size, in	psi	(kPa)	Remarks
Fabricated ≤90° Elbow (5 segments)	Class 335	8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, c
Fabricated ≤90° Elbow (5 segments)	Class 200	8, 10, 12, 14, 16, 18, 20, 24, 30, 36	200	(1375)	a, d
Fabricated ≤90° Elbow (5 segments)	Class 250	8,10, 12, 14, 16, 18, 20, 24, 30, 36	250	(1720)	a, d
Fabricated ≤90° Elbow (5 segments)	Class 335	8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	a, d
Fabricated ≤90°Elbow (3 segments)	Class 200	8,10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	200	(1375)	a, c
Fabricated ≤90°Elbow (3 segments)	Class 250	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	250	(1720)	a, c
Fabricated ≤90°Elbow (3 segments)	Class 335	8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, c
Fabricated ≤90°Elbow (3 segments)	Class 200	8,10, 12, 14, 16, 18, 20, 24, 30, 36	200	(1375)	a, d
Fabricated ≤90°Elbow (3 segments)	Class 250	8,10, 12, 14, 16, 18, 20, 24, 30, 36	250	(1720)	a, d
Fabricated ≤45° Elbow (3 segments)	Class 200	8,10, 12, 14, 16, 18, 20, 22, 24,26, 28, 30, 32, 34, 36	200	(1375)	a, c
Fabricated ≤45° Elbow (3 segments)	Class 250	8,10, 12, 14, 16, 18, 20, 22, 24,26, 28, 30, 32, 34, 36	250	(1720)	a, c
Fabricated ≤45° Elbow (3 segments)	Class 335	8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, c
Fabricated ≤45° Elbow (3 segments)	Class 200	8, 10, 12, 14, 16, 18, 20, 24, 30, 36	200	(1375)	a, d





Model No	Product Description	Nominal Pipe Size, in	Rated Working Pressure		
			psi	(kPa)	Remarks
Fabricated ≤45° Elbow (3 segments)	Class 250	8, 10, 12, 14, 16, 18, 20, 24, 30, 36	250	(1720)	a, d
Fabricated ≤45° Elbow (3 segments)	Class 335	8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	a, d
Fabricated ≤45° Elbow (2 segments)	Class 200	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	200	(1375)	a, c
Fabricated ≤45° Elbow (2 segments)	Class 250	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	250	(1720)	a, c
Fabricated ≤45° Elbow (2 segments)	Class 335	8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, c
Fabricated ≤45° Elbow (2 segments)	Class 200	8, 10, 12, 14, 16, 18, 20, 24, 30, 36	200	(1375)	a, d
Fabricated ≤45° Elbow (2 segments)	Class 250	8, 10, 12, 14, 16, 18, 20, 24, 30, 36	250	(1720)	a, d
Mechanical Joint Adapter	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18	200	(1375)	a, b, c
Mechanical Joint Adapter	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18	250	(1720)	a, b, c
Mechanical Joint Adapter	Class 200	4, 6, 8, 10, 12, 14, 16, 18	200	(1375)	a, b, d
Mechanical Joint Adapter	Class 250	4, 6, 8, 10, 12, 14, 16, 18	250	(1720)	a, b, d
Fabricated Mechanical Joint Adapter	Class 200	3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 24	200	(1375)	a, c
Fabricated Mechanical Joint Adapter	Class 250	3, 4, 6, 8, 10, 12, 14, 16, 18	250	(1720)	a, c
Fabricated Mechanical Joint Adapter	Class 200	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	200	(1375)	a, d





Model No	Product Description	Nominal Pipe Size, in	Rated Working Pressure		
			psi	(kPa)	Remarks
Fabricated Mechanical Joint Adapter	Class 250	4, 6, 8, 10, 12, 14, 16, 18	250	(1720)	a, d
Wall Anchor	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	200	(1375)	a, c
Wall Anchor	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	250	(1720)	a, c
Wall Anchor	Class335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, c
Wall Anchor	Class 200	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	200	(1375)	a, d
Wall Anchor	Class 250	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	250	(1720)	a, d
Wall Anchor	Class 335	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	a, d
Fabricated Wall Anchor	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	200	(1375)	a, c
Fabricated Wall Anchor	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	250	(1720)	a, c
Fabricated Wall Anchor	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20	335	(2305)	a, c
Fabricated Wall Anchor	Class 200	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	200	(1375)	a, d
Fabricated Wall Anchor	Class 250	4, 6, 8, 10, 12, 14, 16, 18, 20, 24	250	(1720)	a, d
Stub End	Class 335	2, 3, 4, 6, 8, 10, 12, 14	335	(2305)	a, c
Stub End	Class 335	4, 6, 8, 10, 12, 14	335	(2305)	a, d
Reducing Flanges	Class 250	8 x 6, 10 x 8, 12 x 10, 14 x 12, 16 x 14, 18 x 16	250	(1720)	a, b, c, d





Model No	Product Description	Nominal Pipe Size, in	Rated Working Pressure		
			psi	(kPa)	Remarks
Reducing Flanges	Class 335	6 x 4, 8 x 6, 10 x 8, 12 x 10 14 x 12, 16 x 14, 18 x 16, 20 x 18 22 x 20, 24 x 20, 24 x 22, 26 x 24	335	(2305)	a, b, c
Reducing Flanges	Class 335	6 x 4, 8 x 6, 10 x 8, 12 x 10 14 x 12, 16 x 14, 18 x 16, 20 x 18 24 x 20, 26 x 24	335	(2305)	a, b, d
HDPE x Steel Weld End Transition Fitting	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 24	200	(1375)	a, c
HDPE x Steel Weld End Transition Fitting	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 24	250	(1720)	a, c
HDPE x Steel Weld End Transition Fitting	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 24	335	(2305)	a, c
Fabricated HDPE x Steel Weld End Transition Fitting	Class 200	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20	200	(1375)	a, c
Fabricated HDPE x Steel Weld End Transition Fitting	Class 250	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	250	(1720)	a, c
Fabricated HDPE x Steel Weld End Transition Fitting	Class 335	2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24	335	(2305)	a, c
HDPE x Male Threaded Transition (Brass/SS)	Class 200	2, 3, 4	200	(1375)	a, c
HDPE x Male Threaded Transition (Brass/SS)	Class 250	2, 3, 4	250	(1720)	a, c
HDPE x Male Threaded Transition (Brass/SS)	Class 335	2, 3, 4	335	(2305)	a, c
Electrofusion Coupling	Class 200	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	200	(1375)	a, c
Electrofusion Coupling	Class 250	2, 4, 6, 8, 10, 12, 14, 16, 18, 20	250	(1720)	a, c





Remarks:

- a. Pipe and fittings may be directly connected together by the butt fusion process. Manufacturer fusion instructions must be strictly followed for a proper fusion joint. The pipe and fittings may also be joined to other FM Approved steel flanged pipe and fittings by using the listed flange adapters.
- b. Pipe and adapter, with ductile iron gland ring attached, are directly connected by the butt fusion process. Manufacturer fusion instructions must be strictly followed for a proper fusion joint. The polyethylene fitting, gland ring, gasket, and T-Head bolts are provided in a kit for field installation, which allows attachment to a compatible flange with ductile iron pipe.
- c. FM Approved in Iron Pipe Sized Diameter Basis.
- d. FM Approved in Ductile Iron Pipe Size Diameter Basis.

