

Tested beyond the standard

Product Range 2016
FM approved

Polyethylene piping systems
for underground fire protection



Factory mutual (FM) approved piping systems – used for water supply in fire protection systems

The Factory Mutual Research Corporation (FMRC) is the testing laboratory that is internationally recognized for its work testing components for fire protection systems. Components for fire protection systems are tested to ensure that the products can pass an aggressive level of performance, safety and quality standards. Any GF product that is labelled with the Factory Mutual <FM> symbol indicates that the product has met and even exceeded the rigorous requirements for fire protection systems. The manufacturing processes and the in-house testing facilities at GF have been inspected and approved by FMRC, and are audited frequently to ensure compliance and to promote continuing improvement.



+ Benefits & features

FM – Factory mutual

... is the world's biggest industrial property insurance and risk management organisation.

FM – Approval

... assures your customer's optimal risk management and protection from property loss.

FM – Critical elements

... piping system used for water supply in fire protection systems. Moving the water from its source to its final point of use is often considered the most critical component of the underground system.

FM – Performance

... fire protection systems must be extremely reliable and capable of safely withstanding both internal and external stresses over long periods of time. More rigorous testing and auditing by FM Approvals personnel ensure enhanced reliability, confidence and quality.

Many companies with international operations build on and insure their properties according to the FM-standards.

Essential parts are the selection, construction and installation of the buried fire-extinguishing pipe system. The material of choice is PE100, which is used for underground FM approved pipes and fittings from G.

The range

- Pipe
- Fittings
 - Elbows
 - Tees
 - Reducers
 - Caps
 - Adapters
 - Couplings
 - Branch saddles
 - Transition fitting

Overview of GF Piping Systems products with FM-approval

+ Now the details



Product	FM class 10 bar	Class 150 (11 bar)	FM class 12 bar	Class 200 13.8 bar	Class 267 18.4 bar
Pipe	110 - 400 mm	2 - 24"	90 - 500 mm	2 - 24"	4 - 24"
Spigot fittings for electro fusion ** (ISO/DIN)					
Bend / Elbow 45°	355 - 500 mm		90 - 315 mm		
Bend / Elbow 90°	355 - 500 mm		90 - 315 mm		
Tee 90° equal	355 - 500 mm		90 - 315 mm		
End cap	355 - 500 mm		90 - 315 mm		
Flange adapter	355 - 500 mm		90 - 315 mm		
Backing ring					
Reducer	400 - 355 mm		90 - 355 mm		
ELGEF fittings (ISO/DIN)					
Coupler			90 - 500 mm		
Branch saddle			110 - 630 mm (branch 90 - 125 mm)		
Spigot fittings for butt fusion (ASTM)					
45° Elbows		2 - 24"		2 - 24"	4 - 24"
90° Elbows		2 - 24"		2 - 24"	4 - 24"
22.5° Elbows		2 - 24"		2 - 24"	4 - 24"
Tee equal		4 - 24"		4 - 24"	4 - 24"
Tee reduced branch		2 - 24"		2 - 24"	4 - 24"
Flange adaptor		2 - 36"		2 - 36"	4 - 24"
Backing ring		2 - 36"		2 - 36"	4 - 24"
Reducer		2 - 24"		2 - 24"	4 - 24"
Branch saddle		main* 2 - 12 " outlet		main* 2 - 12 " outlet	
Anchor ring		2 - 24"		2 - 24"	4 - 24"
Mechanical joint adaptor		2 - 24"		2 - 24"	

* Available in Butt Fusion and Electrofusion , size depending

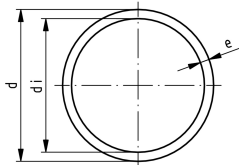
** Spigot fittings (ISO/DIN) can only be installed using electrofusion
Note Inch sizes are Iron Pipe sizes (IPS) and Ductile Pipe Sizes (DPS) equivalent

For more details please contact your local sales Office

Metric Product Range



FM Products

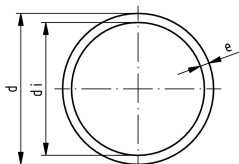


ecoFIT pipe SDR11 5m/12m

Model:

- Material: PE100
- Colour: RAL 9011 graphite black
- Dimension: DIN 8074
- Pipe length: 5m, with plain ends
- Pipe length: 12m, with plain ends
- Material: PE 100, Polyethylene

d (mm)	Code	Weight (kg/m)	e (mm)	di (mm)	FM PN (bar)	Length (m)
110	316 110 022	3.180	10.0	90.0	10	5
125	316 125 029	4.120	11.4	102.8	10	5
140	316 140 018	5.130	12.7	114.6	10	5
160	316 160 020	6.730	14.6	130.8	10	5
180	316 180 019	8.510	16.4	147.2	10	5
200	316 200 012	10.500	18.2	163.6	10	5
225	316 225 009	13.300	20.5	184.0	10	5
250	316 250 005	16.300	22.7	204.6	10	5
280	316 280 019	20.500	25.4	229.2	10	5
315	316 315 008	25.900	28.6	257.8	10	5
355	316 355 017	32.900	32.2	290.6	10	5
400	316 400 008	41.700	36.3	327.4	10	5
110	316 110 039	3.180	10.0	90.0	10	12
125	316 125 031	4.120	11.4	102.8	10	12
140	316 140 027	5.130	12.7	114.6	10	12
160	316 160 019	6.740	14.6	130.8	10	12
180	316 180 020	8.510	16.4	147.2	10	12
200	316 200 014	10.500	18.2	163.6	10	12
225	316 225 010	13.300	20.5	184.0	10	12
250	316 250 009	16.300	22.7	204.6	10	12
280	316 280 024	20.500	25.4	229.2	10	12
315	316 315 009	25.900	28.6	257.8	10	12
355	316 355 020	32.900	32.2	290.6	10	12
400	316 400 010	41.700	36.3	327.4	10	12

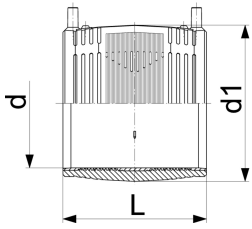


ecoFIT pipe SDR9

Model:

- Material: PE100

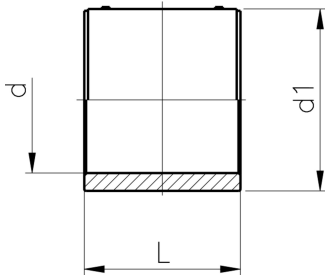
d (mm)	Code	e (mm)	di (mm)	FM PN (bar)
90	on request	10.0	90.0	12
110	on request	10.0	90.0	12
125	on request	11.4	102.8	12
140	on request	12.7	114.6	12
160	on request	14.6	130.8	12
180	on request	16.4	147.2	12
200	on request	18.2	163.6	12
225	on request	20.5	184.0	12
250	on request	22.7	204.6	12
280	on request	25.4	229.2	12
315	on request	28.6	257.8	12
355	on request	32.2	290.6	12
400	on request	36.3	327.4	12
450	on request	40.9	368.2	12
500	on request	40.9	368.2	12



Coupler

- PE 100 SDR 11 (ISO S5)
- 4 mm pin connectors
- Limited path fusion indicators
- Removable centre stop up to d160

d (mm)	Code	Weight (kg)	d1 (mm)	L (mm)	FM PN (bar)
90	753 911 613	0.406	113	125	12
110	753 911 614	0.692	138	145	12
125	753 911 615	0.718	154	156	12
140	753 911 616	0.945	172	166	12
160	753 911 617	1.362	196	180	12
180	753 911 618	1.747	219	192	12
200	753 911 619	1.866	244	208	12
225	753 911 620	3.329	273	225	12
250	753 911 621	4.678	304	248	12
280	753 911 622	7.500	340	252	12
315	753 911 623	8.142	382	267	12

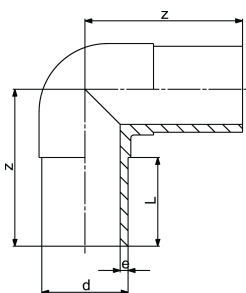


Coupler

- PE 100 SDR 11 (ISO S5)
- 4 mm pin connectors
- Limited path fusion indicators
- With active reinforcement

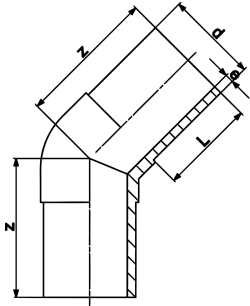
d (mm)	Code	Weight (kg)	d1 (mm)	L (mm)	FM PN (bar)
355	753 911 704	13.098	438	291	12
400	753 911 705	18.320	493	295	12
450	753 911 706	24.700	554	327	12
500	753 911 707	33.700	616	358	12

Elbow 90° PE 100 SDR11



- Long spigot version
- FM approved in combination with electro fusion

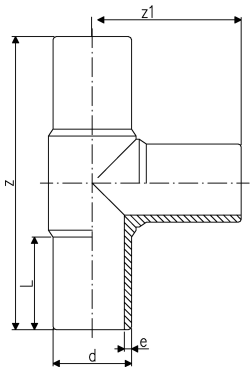
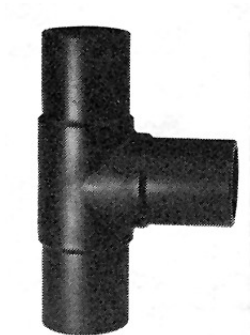
d (mm)	Code	Weight (kg)	z (mm)	L (mm)	e (mm)	FM PN (bar)
90	753 101 013	0.704	150	81	8.2	12
110	753 101 014	1.158	165	86	10.0	12
125	753 101 015	1.609	180	92	11.4	12
140	753 101 016	2.222	194	92	12.7	12
160	753 101 017	3.100	210	102	14.6	12
180	753 101 018	4.328	232	107	16.4	12
200	753 101 019	5.739	253	117	18.2	12
225	753 101 020	7.775	270	122	20.5	12
250	753 101 001	10.506	292	130	22.7	12
280	753 100 922	15.059	320	140	25.4	12
315	753 100 923	21.960	370	150	28.6	12



Elbow 45° PE100 SDR11

- Long spigot version
- FM approved in combination with electro fusion

d (mm)	Code	Weight (kg)	z (mm)	L (mm)	e (mm)	FM PN (bar)
90	753 151 013	0.565	120	81	8.2	12
110	753 151 014	0.921	130	86	10.0	12
125	753 151 015	1.290	140	92	11.4	12
140	753 151 016	1.796	164	120	12.7	12
160	753 151 017	2.454	162	102	14.6	12
180	753 151 018	3.274	170	107	16.4	12
200	753 151 019	4.362	186	116	18.2	12
225	753 151 020	5.981	200	123	20.5	12
250	753 151 021	8.283	220	130	22.7	12
280	753 150 922	10.285	230	140	25.4	12
315	753 150 923	14.124	250	150	28.6	12

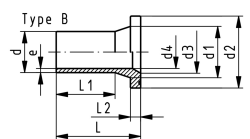
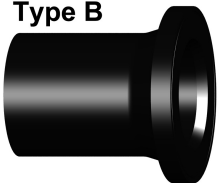


Tee 90° PE 100 SDR11

- Long spigot version
- FM approved in combination with electro fusion
- 10 bar Gas / 16 bar Water

d (mm)	Code	Weight (kg)	z (mm)	L (mm)	e (mm)	FM PN (bar)	z1 (mm)
90	753 201 013	1.021	300	81	8.2	12	150
110	753 201 014	1.612	330	86	10.0	12	165
125	753 201 015	2.420	366	92	11.4	12	183
140	753 201 016	3.090	393	92	12.7	12	193
160	753 201 017	4.403	420	102	14.6	12	210
180	753 201 018	6.014	460	107	16.4	12	230
200	753 201 019	8.480	500	117	18.2	12	250
225	753 201 020	11.507	540	122	20.5	12	270
250	753 201 001	14.099	575	130	22.7	12	288
280	753 200 902	18.670	615	139	25.4	12	308
315	753 200 903	26.150	695	150	28.6	12	346

Type B



Flange adaptor LS PE100 SDR11 Combined jointing face: Flat and serrated

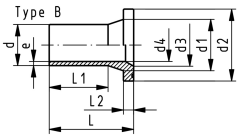
Model:

- Suitable for flange connections to metric (from d110 also to ANSI/ASME B16.5)
- Up to d315, suitable for butterfly valve type 567/578 and 038/039
- Gasket d20-d630: Profile flange gasket NBR No. 45 44 07, EPDM No. 48 44 07
- FM approved in combination with electro fusion

* Type B with chamfer

d (mm)	DN (mm)	Code	Weight (kg)	d1 (mm)	d2 (mm)	d3 (mm)	d4 (mm)	L (mm)	L1 (mm)	L2 (mm)	e (mm)	Type	FM PN (bar)
90	80	753 800 013	0.471	105	138	78	73	140	103	17	8	B	12
110	100	753 800 014	0.706	125	158	100	90	160	114	18	10	B	12
125	100	753 800 015	0.883	132	158	114	102	170	125	25	11	B	12
140	125	753 800 016	1.348	155	188	127	114	200	147	25	13	B	12

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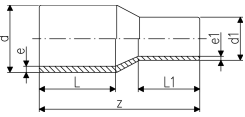


d (mm)	DN (mm)	Code	Weight (kg)	d1 (mm)	d2 (mm)	d3 (mm)	d4 (mm)	L (mm)	L1 (mm)	L2 (mm)	e (mm)	Type	FM PN (bar)
160	150	753 800 017	1.718	175	212	151	130	200	147	25	15	B	12
180	150	753 800 018	2.035	180	212	158	147	200	170	30	16	B	12
200	200	753 800 019	2.899	232	268	203	163	200	128	32	18	B	12
225	200	753 800 020	3.208	235	268	210	184	200	138	32	21	B	12
250	250	753 800 021	4.878	285	320	245	204	219	138	35	23	B	12
280	250	753 800 022	4.925	291	320	265	229	231	144	35	25	B	12
315	300	753 800 023	7.135	335	370	300	257	239	158	35	29	B	12
355	350	753 800 024	10.400	373	430	340	290	260	176	40	32	B	10
400	400	753 800 025	14.600	427	482	385	327	290	186	46	36	B	10
450	500	753 800 026	24.800	514	585	400	368	333	195	60	41	B	10
500	500	753 800 027	27.400	530	585	440	409	350	212	60	46	B	10



Reducer PE100 SDR11

- Long spigot version
- FM approved in combination with electro fusion



d (mm)	d1 (mm)	Code	Weight (kg)	z (mm)	L (mm)	L1 (mm)	e (mm)	e1 (mm)	FM PN (bar)
110	90	753 901 076	0.549	205	86	81	10.0	8,2	12
125	90	753 901 081	0.683	212	92	81	11.4	8,2	12
125	110	753 901 080	0.775	212	92	86	11.4	10,0	12
140	90	753 901 087	0.954	230	110	79	12.7	8,2	12
140	110	753 901 084	0.977	234	110	88	12.7	10,0	12
140	125	753 901 085	1.078	235	110	90	12.7	11,4	12
160	90	753 901 088	1.164	244	120	79	14.6	8,2	12
160	110	753 901 090	1.239	244	102	86	14.6	10,0	12
160	125	753 901 089	1.333	245	102	92	14.6	11,4	12
160	140	753 901 032	1.522	260	120	110	14.6	12,7	12
180	90	753 901 073	1.507	245	105	79	16.4	8,2	12
180	110	753 901 074	1.833	270	105	82	16.4	10,0	12
180	125	753 901 091	1.723	258	107	92	16.4	11,4	12
180	140	753 901 075	1.976	270	120	110	16.4	12,7	12
180	160	753 901 033	1.968	255	107	102	16.4	14,6	12
200	140	753 901 066	2.326	275	120	110	18.2	12,7	12
200	160	753 901 092	2.391	265	117	102	18.2	14,6	12
200	180	753 901 034	2.724	265	117	107	18.2	16,4	12
225	140	753 901 067	2.900	295	130	110	20.5	12,7	12
225	160	753 901 096	2.891	178	120	98	20.5	14,6	12
225	180	753 901 095	3.244	280	122	107	20.5	16,4	12
225	200	753 901 094	3.538	280	122	117	20.5	18,2	12
250	160	753 901 000	2.385	300	130	100	22.7	14,6	12
250	180	753 901 068	4.299	295	130	105	22.7	16,4	12
250	200	753 901 001	4.766	315	130	112	22.7	18,2	12
250	225	753 901 002	2.385	332	130	120	22.7	20,5	12
280	200	753 901 098	6.850	333	140	112	25.4	18,2	12
280	225	753 901 099	6.112	335	140	120	25.4	20,5	12
280	250	753 901 003	2.385	340	140	130	25.4	22,7	12
315	200	753 901 004	7.522	380	180	134	28.6	18,2	12
315	225	753 901 097	7.790	365	150	120	28.6	20,5	12
315	250	753 901 005	8.360	365	150	130	28.6	22,7	12
315	280	753 901 012	8.800	365	150	139	28.6	25,4	12
355	250	753 901 013	9.100	390	165	130	32.3	22,7	12
355	280	753 901 014	9.500	390	165	139	32.3	25,4	12
355	315	753 901 015	9.900	390	165	150	32.3	28,6	12
400	355	753 901 018	11.600	420	180	165	36.4	32,3	10

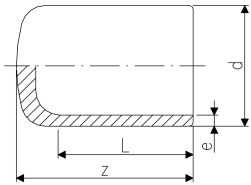


Cap PE100 SDR11

- Long spigot version
- FM approved in combination with electro fusion

Note:

* Fabricated fitting made from pipe

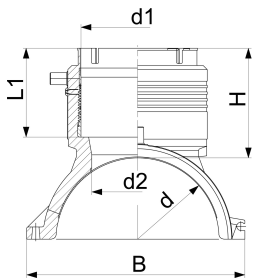


d (mm)	Code	Weight (kg)	z (mm)	L (mm)	e (mm)	FM PN (bar)
90	753 961 013	0.240	90	81	8.2	12
110	753 961 014	0.373	98	86	10.0	12
125	753 961 015	0.546	105	92	11.4	12
140	753 961 016	0.727	136	92	12.7	12
160	753 961 017	1.034	120	102	14.6	12
180	753 961 018	1.351	128	107	16.4	12
200	753 961 019	1.845	138	115	18.2	12
225	753 961 020	2.514	148	122	20.5	12
250	753 961 021	3.927	205	130	22.7	12
280	753 960 922	8.045	235	139	25.4	12
315	753 960 923	6.861	255	150	28.6	12
355	753 960 924	9.780	280	165	32.3	10
400	753 960 925	13.370	310	180	36.4	10
450	753 960 926	20.800	275	195	40.9	10
500	753 960 927	28.400	297	212	45.5	10



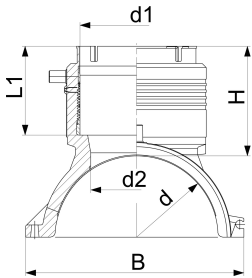
Branch saddle outlet 90 - 125 mm

- PE 100 SDR 11 (ISO S5)
- Branch Saddle complete, incl. lower part and 3 screws
- Additional fixing with snatch hinge
- Electrofusion outlet with integrated pipe fixation
- Protected wire without medium contact
- 4 mm pin connectors
- Limited path fusion indicators
- * Delivered without lower part. Pipe fixation with multiple use assembly toolno. 193.281.027



d (mm)	d1 (mm)	Code	Weight (kg)	H (mm)	L (mm)	L1 (mm)	B (mm)	d2 (mm)	FM PN (bar)	
110	90	193 135 009	1.124	101	220	82	164	65	12	
110	110	193 135 010	1.224	107	220	88	164	65	12	
125	90	193 135 019	1.134	101	220	82	179	65	12	
125	110	193 135 020	1.290	107	220	88	179	65	12	
*	140	90	193 135 029	0.982	101	220	81	195	65	12
*	140	110	193 135 030	1.087	107	220	87	195	65	12
	160	90	193 135 039	1.449	102	240	82	215	65	12
	160	110	193 135 040	1.582	108	240	88	215	86	12
	160	125	193 135 041	1.782	129	240	99	215	86	12
	180	90	193 135 049	1.672	102	260	82	237	65	12
	180	110	193 135 050	1.765	108	260	88	237	86	12
	180	125	193 135 051	2.015	129	260	99	237	86	12
	200	90	193 135 059	1.803	102	260	82	253	65	12
	200	110	193 135 060	1.963	108	260	88	253	86	12
	200	125	193 135 061	2.128	129	260	99	253	86	12
	225	90	193 135 069	2.006	102	260	82	287	65	12
	225	110	193 135 070	2.400	108	260	88	287	86	12
	225	125	193 135 071	2.312	129	260	99	287	86	12
	250	90	193 135 079	2.145	102	260	82	312	65	12
	250	110	193 135 080	2.258	108	260	88	312	86	12
	250	125	193 135 081	2.500	129	260	99	312	86	12

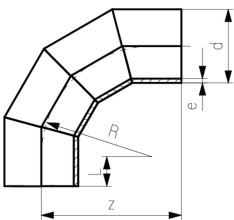
Branch saddle topload outlet 90 - 125 mm



- PE 100 SDR 11 (ISO S5)
- Branch Saddle for assembling as Topload with tool 799.350.477; angle adaptors (799.350.340) for fusion cable required
- Electrofusion outlet with integrated pipe fixation
- Protected wire without medium contact
- 4 mm pin connectors
- Limited path fusion indicators

d (mm)	d1 (mm)	Code	Weight (kg)	H (mm)	L (mm)	L1 (mm)	B (mm)	d2 (mm)	FM PN (bar)
280	90	193 135 289	1.242	102	260	82	243	65	12
280	110	193 135 290	1.295	108	260	88	243	86	12
280	125	193 135 291	1.530	129	260	99	243	86	12
315 - 355	90	193 135 309	1.214	102	260	82	249	65	12
315 - 355	110	193 135 310	1.297	108	260	88	249	86	12
315 - 355	125	193 135 311	1.530	129	260	99	249	86	12
400	90	193 135 329	1.022	102	260	82	256	65	12
400	110	193 135 330	1.116	108	260	88	256	86	12
400	125	193 135 331	1.369	129	260	99	256	86	12
450	90	193 135 339	1.022	102	260	82	256	65	
450	110	193 135 340	1.116	108	260	88	256	86	
450	125	193 135 341	1.369	129	260	99	256	86	
500 - 630	90	193 135 159	1.086	102	260	82	263	65	12
500 - 630	110	193 135 160	1.159	108	260	88	263	86	12
500 - 630	125	193 135 161	1.388	129	260	99	263	86	12

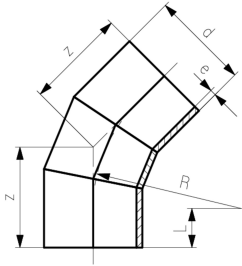
Bend 90°



Model:

- Material: PE100

d (mm)	Code	z (mm)	L (mm)	R (mm)	e (mm)	FM PN (bar)
355	on request	1415	350	1065	42.1	10
400	on request	1550	350	1200	47.4	10
450	on request	1700	350	1350	53.3	10
500	on request	1900	400	1500	59.3	10

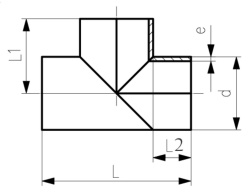


Bend 45°

Model:

- Material: PE100

d (mm)	Code	z (mm)	L (mm)	R (mm)	e (mm)	FM PN (bar)
355	on request	792	350	1065	42.1	10
400	on request	847	350	1200	47.4	10
450	on request	960	350	1350	53.3	10
500	on request	1022	400	1500	59.3	10



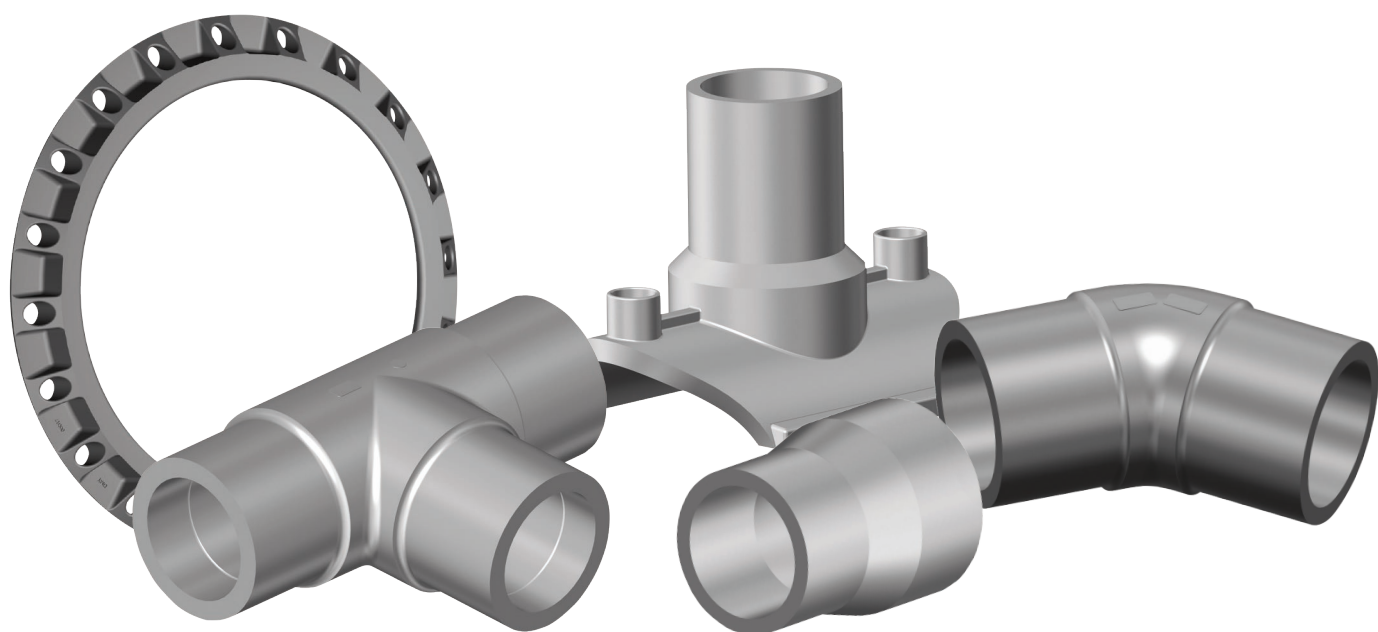
Tee 90° equal

Model:

- Material: PE100

d (mm)	Code	L (mm)	L1 (mm)	L2 (mm)	e (mm)	FM PN (bar)
355	on request	1410	705	350	42.1	10
400	on request	1500	750	350	47.4	10
450	on request	1700	850	400	53.3	10
500	on request	2040	1020	520	59.3	10

ASTM Product Range



Factory Mutual (FM) Approved Products: Overview

FM Approvals (www.fmaprovals.com) is an international leader in third-party testing and certification services. It tests property loss prevention products and services—for use in commercial and industrial facilities—to verify they meet rigorous loss prevention standards of quality, technical integrity and performance. FM Approvals' worldwide certification process is backed by scientific research and testing, and more than a century of experience. Those products and services that meet FM Approvals' high testing standards, earn the FM APPROVED mark, a certification that is recognized and respected worldwide.

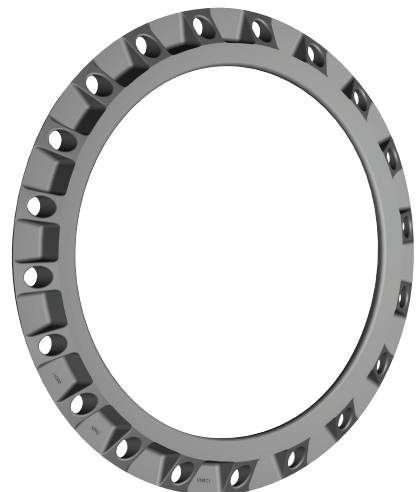
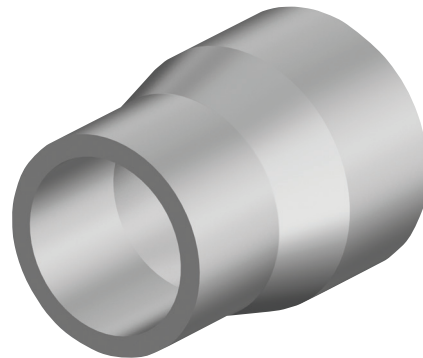
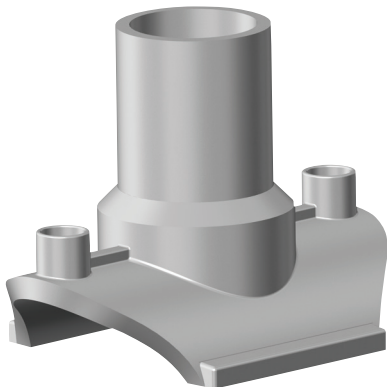
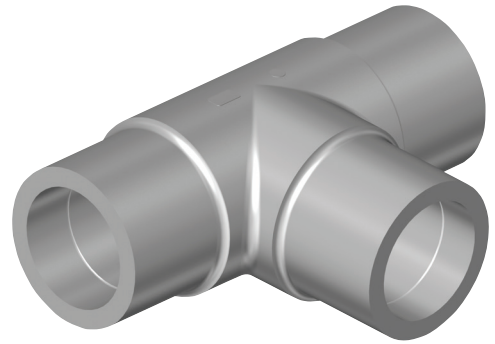
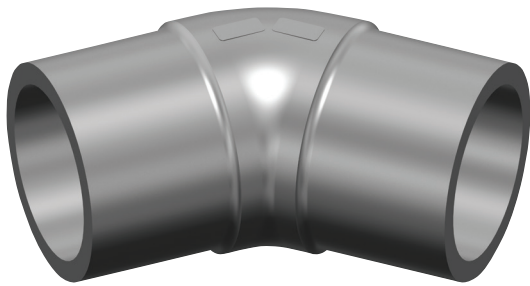


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Caps



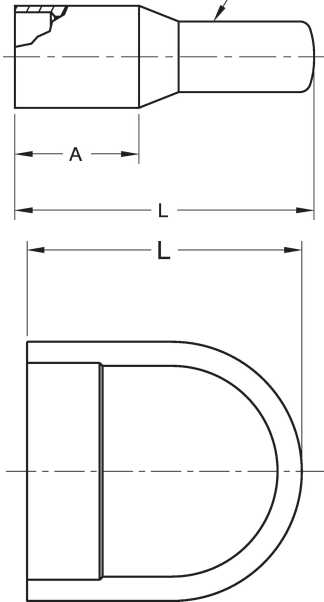
FM FITTINGS: Butt Cap
PE3408/PE4710
IPS, DR9, Class 200

- Approval: ASTM D2513/D3261
- Approval: AWWA C906
- Approval: FM 1613
- Approval: FM CL200
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF weight Part No.	weight (lb)	A (inch)	L (inch)	Box Qty
4	10004174	360 000 350	2.491	3.13	10.70	5
6	10004180	360 000 360	4.343	4.22	10.25	5
8	10004185	360 000 370	9.458	5.14	12.41	6

Note: This end not machined to a nominal pipe diameter unless requested.

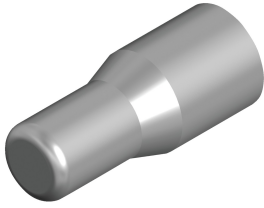




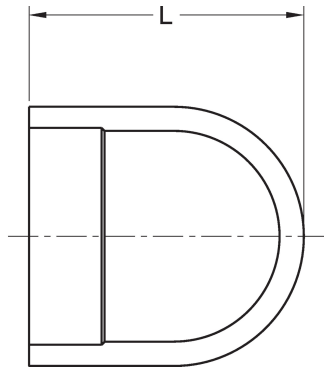
FM FITTINGS: Butt Cap
PE3408/PE4710
IPS, DR11, Class 150

- Approval: ASTM D2513/D3261
- Approval: AWWA C906
- Approval: FM 1613
- Approval: FM CL150
- Approval: NSF-61

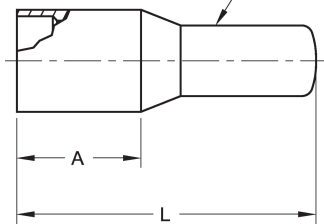
Please call for more information on availability, pricing, other sizes and dimensions.



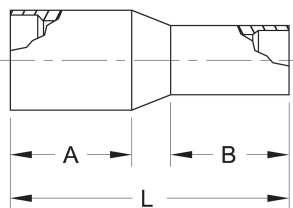
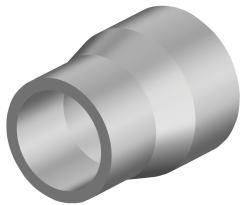
Size (inch)	GFCP Part No.	GF weight Part No.	weight (lb)	A (inch)	L (inch)	Box Qty
4	10004169	360 000 342	1.653	3.00	7.75	10
6	10004176	360 000 353	2.690	4.22	10.25	5
8	10004181	360 000 362	8.091	5.14	12.41	6
10	10004160	360 000 324	13.272		11.38	1
12	10004162	360 000 327	21.208		13.88	1



Note: This end not machined to a nominal pipe diameter unless requested.



Reducers

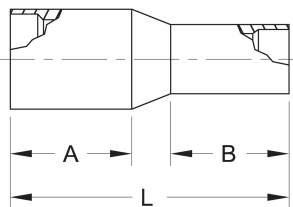
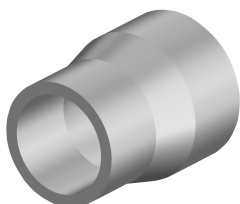


FM FITTINGS: Butt Reducer
PE3408/PE4710
DIPS, DR9, Class 200

- Approval: ASTM D2513/D3261
- Approval: AWWA C906
- Approval: FM 1613
- Approval: FM CL200
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
6 x 4	RED0604FM2	360 018 260	3.020	
8 x 6	RED0806FM2	360 018 267	0.002	
10 x 8	RED1008FM2	360 018 274	15.961	
12 x 10	RED1210FM2	360 018 284	0.002	
14 x 12	RED1412FM2	360 018 290	0.002	



FM FITTINGS: Butt Reducer
PE3408/PE4710
IPS, DR7, Class 267

- Approval: ASTM D2513/D3261
- Approval: AWWA C906
- Approval: FM 1613
- Approval: FM CL267
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.

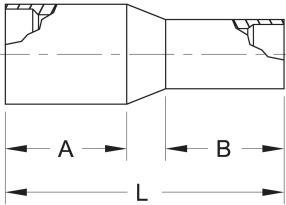
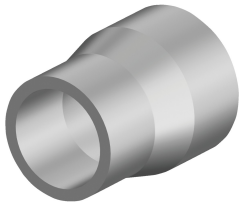
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
6 x 4	REI0604FM3	360 018 379	3.946	
8 x 6		360 004 493	4.101	
10 x 6	REI1006FM3	360 029 022	26.610	
10 x 8	REI1008FM3	360 004 492	3.300	
12 x 10	REI1210FM3	360 018 415	0.002	
14 x 12	REI1412FM3	360 018 425	40.058	
16 x 10	REI1610FM3	360 028 947	0.022	
16 x 14	REI1614FM3	360 018 441	0.002	
18 x 6		360 031 886	0.022	
18 x 12	REI1812FM3	360 029 028	0.022	
18 x 16	REI1816FM3	360 018 453	0.002	
20 x 16	REI2016FM3	360 028 948	0.022	
24 x 8	REI2408FM3	360 028 755	0.022	
24 x 10	REI2410FM3	360 028 740	0.022	
24 x 16	REI2416FM3	360 028 949	0.022	
24 x 20	REI2420FM3	360 028 749	0.022	



FM FITTINGS: Butt Reducer
PE3408/PE4710
IPS, DR9, Class 200

- Approval: ASTM D2513/D3261
- Approval: AWWA C906
- Approval: FM 1613
- Approval: FM CL200
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.



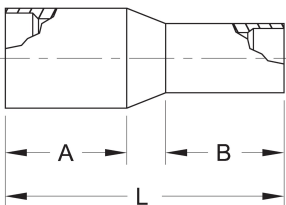
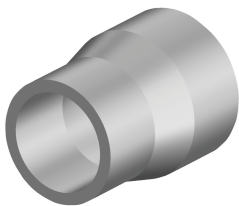
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	L (inch)	Box Qty
3 x 2	REI0302FM2	360 018 355	0.002				
4 x 2	REI0402FM2	360 018 360	0.002				
4 x 3	REI0403FM2	360 018 366	0.002				
6 x 3		360 032 209	5.997				
6 x 4	10004222	360 000 457	3.616	4.22	3.75	9.13	5
8 x 6	10004227	360 000 472	7.694	5.00	4.64	10.70	6
10 x 6		360 032 210	22.994				
10 x 8	10000627	360 000 405	19.268	6.00	6.00	16.00	1
12 x 10	10000628	360 000 412	27.315	6.63	6.25	14.88	1
14 x 10		360 032 280					
14 x 12	REI1412FM2	360 018 424	0.002				
16 x 10		360 032 006	94.997				
16 x 12		360 032 211	76.985				
16 x 14	REI1614FM2	360 018 440	38.867				
18 x 16	REI1816FM2	360 018 452	55.997				
20 x 18	REI2018FM2	360 018 464	0.002				
22 x 20	REI2220FM2	360 018 475	0.002				
24 x 22	REI2422FM2	360 018 493	0.002				



FM FITTINGS: Butt Reducer
PE3408/PE4710
IPS, DR11, Class 150

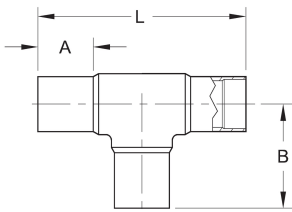
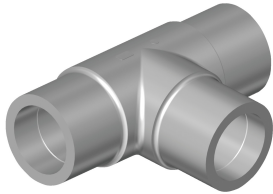
- Approval: ASTM D2513/D3261
- Approval: AWWA C906
- Approval: FM 1613
- Approval: FM CL150
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.



Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	L (inch)	Box Qty
6 x 4	10007784	360 000 066	3.042	6.00	6.00	9.50	5
8 x 6	10007483	360 000 068	7.011	6.00	6.00	11.81	6
10 x 6	REI1006FM1	360 029 021	0.022				
10 x 8	10009509	360 003 453	13.977	6.00	6.00	14.86	1
10 x 8	REI1008FM1	360 018 400	0.002				
12 x 8	REI1208FM1	360 028 555	0.022				
12 x 10	10009511	360 003 455	20.194	6.00	6.00	15.00	1
14 x 12	REI1412FM1	360 018 423	0.002				
16 x 6	REI1606FM1	360 028 622	0.022				
16 x 8	REI1608FM1	360 028 626	0.022				
16 x 14	REI1614FM1	360 018 439	37.787				
18 x 8	REI1808FM1	360 028 664	0.022				
18 x 16	REI1816FM1	360 018 451	47.951				
20 x 18	REI2018FM1	360 018 463	0.002				
24 x 18	REI2418FM1	360 028 747	0.022				
24 x 16	REI2416FM1	360 028 744	0.022				

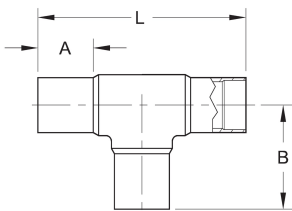
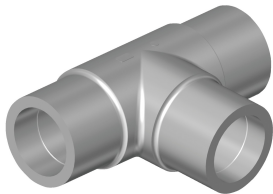
Tees



FM FITTINGS: Butt Tee
PE3408/PE4710
IPS, DR9, Class 200

- Approval: ASTM D2513/D3261
 - Approval: AWWA C906
 - Approval: FM 1613
 - Approval: FM CL200
 - Approval: NSF-61
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	L (inch)	Box Qty
4	10002074	360 000 533	3.902	3.00	5.60	11.20	10
6	10004263	360 000 547	15.102	4.38	9.00	18.00	1
8	10004273	360 000 560	34.106	6.00	12.00	24.00	1
10	10004239	360 000 500	55.094	6.00	13.25	26.50	1
12	10004247	360 000 513	91.007	7.50	15.88	31.75	1



FM FITTINGS: Butt Tee
PE3408/PE4710
IPS, DR11, Class 150

- Approval: ASTM D2513/D3261
 - Approval: AWWA C906
 - Approval: FM 1613
 - Approval: FM CL150
 - Approval: NSF-61
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	L (inch)	Box Qty
4	10004255	360 000 525	4.542	2.90	6.87	13.73	10
6	10007787	360 000 538	10.560	4.89	9.00	18.00	1
8	10007789	360 000 551	29.895	6.00	12.00	24.00	1
10	10004233	360 000 053	50.001	6.00	13.25	26.50	1
12	10004242	360 000 504	77.007	7.50	15.88	31.75	1

Fabricated Tees



FM FITTINGS: Fabricated Butt Fusion Tee
PE3408/PE4710
IPS, DR9, Class 200

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL200
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
8	LTI0800FM2	360 017 234	34.591
10	LTI1000FM2	360 017 244	0.002
12	LTI1200FM2	360 017 250	0.002
14	LTI1400FM2	360 017 257	0.002
16	LTI1600FM2	360 017 265	167.992
18	LTI1800FM2	360 017 271	0.002



FM FITTINGS: Fabricated Butt Fusion Tee
PE3408/PE4710
IPS, DR7, Class 267

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL267
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
4	LTI0400FM3	360 017 213	0.002
6	LTI0600FM3	360 017 225	0.002
8	LTI0800FM3	360 017 235	0.002
10	LTI1000FM3	360 004 476	153.993
12	LTI1200FM3	360 017 251	0.002
14	LTI1400FM3	360 017 258	286.006
16	LTI1600FM3	360 028 590	0.022
18	LTI1800FM3	360 017 272	0.002
20	LTI2000FM3	360 017 279	0.002
24	LTI2400FM3	360 028 717	0.022



FM FITTINGS: Fabricated Butt Fusion Tee
PE3408/PE4710
IPS, DR11, Class 150

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL150
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
8	LTI0800FM1	360 017 233	0.002
10	LTI1000FM1	360 017 243	0.002
12	LTI1200FM1	360 017 249	0.002
14	LTI1400FM1	360 017 256	0.002
18	LTI1800FM1	360 017 270	0.002
20	LTI2000FM1	360 017 277	0.002
24	LTI2400FM1	360 017 290	0.002



FM FITTINGS: Fabricated Butt Fusion Reducing Tee
PE3408/PE4710
DIPS, DR7, Class 200

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL200
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
8 x 4	RTD0804FM2	360 018 686	26.411	
12 x 6	RTD1206FM2	360 018 715	0.002	
18 x 12	RTD1812FM2			



FM FITTINGS: Fabricated Butt Fusion Reducing Tee
PE3408/PE4710
IPS, DR9, Class 200

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL200
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
4 x 2	RTI0402FM2	360 018 856	6.967
6 x 2	RTI0602FM2	360 018 867	12.346
6 x 4	RTI0604FM2	360 018 880	17.174
8 x 3	RTI0803FM2	360 018 891	0.002
8 x 6	RTI0806FM2	360 018 902	0.002
10 x 4	RTI1004FM2	360 018 918	36.685
10 x 8	RTI1008FM2	360 018 928	0.002
12 x 4	RTI1204FM2	360 018 944	56.218
12 x 6	RTI1206FM2	360 018 950	64.000
12 x 8	RTI1208FM2	360 018 957	86.002
12 x 10	RTI1210FM2	360 018 963	98.657
14 x 2	RTI1402FM2	360 018 968	0.002
14 x 6	RTI1406FM2	360 018 983	67.131
14 x 8	RTI1408FM2	360 018 988	100.002
14 x 10	RTI1410FM2	360 018 994	116.007
16 x 2	RTI1602FM2	360 019 005	0.002
16 x 4	RTI1604FM2	360 019 016	98.436
16 x 6	RTI1606FM2	360 019 021	0.002
16 x 8	RTI1608FM2	360 019 026	112.502
16 x 10	RTI1610FM2	360 019 032	158.005
16 x 12	RTI1612FM2	360 019 038	174.386
16 x 14		360 032 007	206.000
18 x 12	RTI1812FM2	360 019 076	0.002
20 x 8	RTI2008FM2	360 019 109	0.002
20 x 12	RTI2012FM2	360 019 121	283.999
24 x 6	RTI2406FM2	360 019 191	207.653



FM FITTINGS: Fabricated Butt Fusion Reducing Tee
PE3408/PE4710
IPS, DR7, Class 267

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL267
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
8 x 6	RTI0806FM3	360 004 491	2.701
10 x 4	RTI1004FM3	360 004 473	31.548
10 x 6	RTI1006FM3	360 004 474	45.999
10 x 8	RTI1008FM3	360 004 475	66.000
12 x 6	RTI1206FM3	360 018 951	82.012
12 x 8	RTI1208FM3	360 018 958	0.002
12 x 10	RTI1210FM3	360 018 964	122.004
14 x 6	RTI1406FM3	360 018 984	88.009
14 x 8	RTI1408FM3	360 018 989	114.001
16 x 6	RTI1606FM3	360 019 022	0.002
16 x 10	RTI1610FM3	360 019 033	0.002
16 x 12	RTI1612FM3	360 019 039	0.002
16 x 14	RTI1614FM3	360 028 618	0.022
18 x 6	RTI1806FM3	360 019 061	0.002
18 x 8	RTI1808FM3	360 019 066	0.002
18 x 10	RTI1810FM3	360 019 071	210.145
18 x 12	RTI1812FM3	360 019 077	0.002
20 x 6	RTI2006FM3	360 019 104	0.002
20 x 10	RTI2010FM3	360 019 116	0.002
20 x 12	RTI2012FM3	360 019 122	0.002
20 x 14	RTI2014FM3	360 028 999	0.022
20 x 16	RTI2016FM3	360 028 695	0.022
24 x 6	RTI2406FM3	360 019 192	0.002
24 x 8	RTI2408FM3	360 019 198	0.002
24 x 10	RTI2410FM3	360 019 205	0.002
24 x 12	RTI2412FM3	360 019 212	0.002



FM FITTINGS: Fabricated Butt Fusion Reducing Tee
PE3408/PE4710
IPS, DR11, Class 150

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL150
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	Description	GFCP Part No.	GF Part No.	weight (lb)
8	8 IPS - 3 IPS	RTI0803FM1	360 018 890	0.002
8	8 IPS - 6 IPS	RTI0806FM1	360 018 901	0.002
10	10 IPS - 4 IPS	RTI1004FM1	360 018 917	0.002
10	10 IPS - 6 IPS	RTI1006FM1	360 018 921	0.002
10	10 IPS - 8 IPS	RTI1008FM1	360 018 927	0.002
12	12 IPS - 6 IPS	RTI1206FM1	360 018 949	0.002
12	12 IPS - 8 IPS	RTI1208FM1	360 018 956	0.002
16	16 IPS - 6 IPS	RTI1606FM1	360 019 020	0.002
16	16 IPS - 8 IPS	RTI1608FM1	360 019 025	0.002
18	18 IPS - 8 IPS	RTI1808FM1	360 019 064	0.002
18	18 IPS - 10 IPS	RTI1810FM1	360 019 069	0.002
18	18 IPS - 12 IPS	RTI1812FM1	360 019 075	0.002

table continued on the next page

Size (inch)	Description	GFCP Part No.	GF Part No.	weight (lb)
20	20 IPS - 8 IPS	RTI2008FM1	360 019 108	0.002
24	24 IPS - 6 IPS	RTI2406FM1	360 019 190	0.002
24	24 IPS - 8 IPS	RTI2408FM1	360 019 196	0.002
24	24 IPS - 12 IPS	RTI2412FM1	360 019 210	0.002

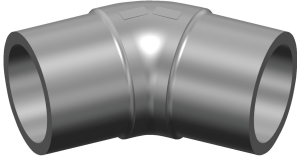
Elbows



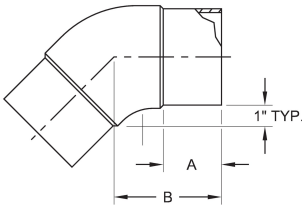
FM ELBOWS: 45° Butt Elbow
PE3408/PE4710
IPS, DR11, Class 150

- Approval: ASTM D2513
- Approval: ASTM D3261
- Approval: AWWA C906
- Approval: NSF-61
- Approval: FM 1613

Please call for more information on availability, pricing, other sizes and dimensions.



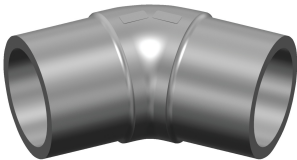
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	Box Qty
4	10009504	360 029 039	3.020	3.88	5.00	10
6	10009505	360 028 266	8.620	4.96	7.00	2
8	10009506	360 019 868	18.629	6.56	11.00	2
10	10004071	360 000 167	40.763	6.00	13.25	1
12	10004079	360 000 177	64.000	7.50	15.75	1



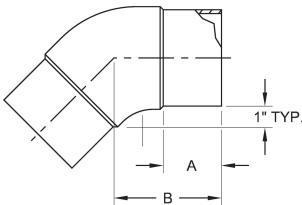
FM ELBOWS: 45° Butt Elbow
PE3408/PE4710
IPS, DR9, Class 200

- Approval: ASTM D2513
- Approval: ASTM D3261
- Approval: AWWA C906
- Approval: NSF-61
- Approval: FM 1613

Please call for more information on availability, pricing, other sizes and dimensions.



Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	Box Qty
4	10004093	360 000 202	3.153	3.000	5.000	10
6	10004102	360 000 215	7.055	4.380	7.000	2
8	10004108	360 000 226	20.194	6.000	11.000	2
10	10004075	360 000 174	47.311	6.000	13.250	1
12	10004084	360 000 185	68.498	7.500	15.750	1



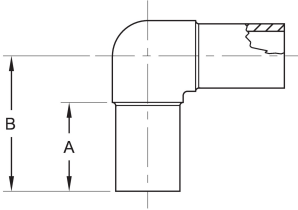


FM ELBOWS: 90° Butt Elbow
PE3408/PE4710
IPS, DR9, Class 200

- Approval: ASTM D2513
 - Approval: ASTM D3261
 - Approval: AWWA C906
 - Approval: FM 1613
 - Approval: NSF-61
- Please call for more information on availability, pricing, other sizes and dimensions.



Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	Box Qty
4	10004138	360 000 280	3.594	3.000	5.750	10
6	10004147	360 000 294	9.370	4.380	9.000	2
8	10004156	360 000 308	20.393	6.000	12.000	2
10	10004122	360 000 254	40.168	6.000	13.250	1
12	10004129	360 000 265	64.000	7.500	15.880	1

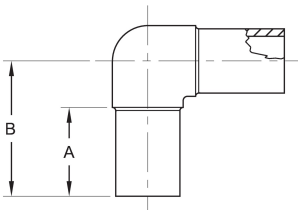


FM ELBOWS: 90° Butt Elbow
PE3408/PE4710
IPS, DR11, Class 150

- Approval: ASTM D2513
 - Approval: ASTM D3261
 - Approval: AWWA C906
 - Approval: FM 1613
 - Approval: NSF-61
- Please call for more information on availability, pricing, other sizes and dimensions.



Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	Box Qty
4	10004135	360 000 274	3.616	3.00	6.86	10
6	10007785	360 000 043	7.848	4.64	9.18	2
8	10007788	360 000 044	17.240	6.33	11.95	2
10	10004117	360 000 246	37.501	6.00	13.25	1
12	10004125	360 000 257	53.991	7.50	15.88	1



Fabricated Elbows



FM FITTINGS: Fabricated 45° Elbow
PE3408/PE4710
IPS, DR9, Class 150, 2 Segment

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL150
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
8	ELI08452F1	360 015 998	0.002
10	ELI10452F1	360 016 037	0.002
16	ELI16452F1	360 016 147	0.002
18	ELI18452F1	360 016 181	0.002
20	ELI20452F1	360 016 217	114.662



FM FITTINGS: Fabricated 45° Elbow
PE3408/PE4710
IPS, DR9, Class 150, 3 Segment

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL150
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
10	ELI10453F1	360 016 039	0.002
14	ELI14453F1	360 016 114	0.002
18	ELI18453F1	360 016 184	118.410
24	ELI24453F1	360 016 288	0.002



FM FITTINGS: Fabricated 45° Elbow
PE3408/PE4710
IPS, DR7, Class 200, 2 Segment

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL200
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
6	ELI06452F2	360 015 954	9.656
8	ELI08452F2	360 015 999	18.298
10	ELI10452F2	360 016 038	29.321
12	ELI12452F2	360 016 076	50.927
14	ELI14452F2		
16		360 032 012	164.002
18		360 032 013	199.011
20	ELI20452F2	360 016 218	141.801
24	ELI24452F2		



**FM FITTINGS: Fabricated 45° Elbow
PE3408/PE4710
IPS, DR7, Class 200, 3 Segment**

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL200
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
6	ELI06453F2	360 015 957	0.002
8	ELI08453F2	360 016 002	0.002
10	ELI10453F2	360 016 040	39.066
12	ELI12453F2	360 016 079	56.218
14	ELI14453F2	360 016 115	80.998
16	ELI16452F2	360 016 148	90.191
18	ELI18452F2	360 016 182	0.002
20	ELI20453F2	360 016 221	202.010



**FM FITTINGS: Fabricated 45° Elbow
PE3408/PE4710
DIPS, DR7, Class 200, 2 Segment**

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL200
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
8	ELD08452F2	360 015 582	20.371
12	ELD12452F2	360 015 646	56.196
14	ELD14452F2		0.000



**FM FITTINGS: Fabricated 45° Elbow
PE3408/PE4710
IPS, DR7, Class 267, 2 Segment**

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL267
- Externally Reinforced
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
6	ELI06452F3	360 015 955	32.761
8	ELI08452F3	360 016 000	0.002
10	ELI10452F3	360 004 472	74.999
12	ELI12452F3	360 016 077	114.596
14	ELI14452F3	360 016 113	153.993
18	ELI18452F3	360 016 183	0.002



FM FITTINGS: Fabricated 45° Elbow
PE3408/PE4710
IPS, DR7, Class 200, 3 Segment

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL267
- Externally Reinforced

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
6	ELI06453F3	360 015 958	0.002
8	ELI08453F3	360 016 003	0.002
10	ELI10453F3	360 016 041	0.002
12	ELI12453F3	360 016 080	0.002
14	ELI14453F3	360 016 116	0.002
16	ELI16453F3	360 016 152	0.002
20	ELI20453F3	360 016 222	0.002
24	ELI24453F3	360 016 290	0.002



FM FITTINGS: Fabricated 90° Elbow
PE3408/PE4710
IPS, DR9, Class 150, 2 Segment

- Approval: AWWA C906
- Approval: NSF-61
- Approval: FM CL150

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
6	ELI06903F1	360 015 973	0.002
8	ELI08903F1	360 016 016	0.002
10	ELI10903F1	360 016 053	0.002
16	ELI16903F1	360 016 161	0.002
18	ELI18903F1	360 016 195	0.002
20	ELI20903F1	360 016 231	0.002



FM FITTINGS: Fabricated 90° Elbow
PE3408/PE4710
IPS, DR9, Class 150, 5 Segment

- Approval: AWWA C906
- Approval: NSF-61
- Approval: FM CL150

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
8	ELI08905F1	360 016 018	31.857
10	ELI10905F1	360 016 055	0.002
12	ELI12905F1	360 016 093	83.467
14	ELI14905F1	360 016 129	102.008
18	ELI18905F1	360 016 198	204.699
24	ELI24905F1	360 016 302	0.002



FM FITTINGS: Fabricated 90° Elbow
PE3408/PE4710
IPS, DR7, Class 200, 3 Segment

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL200
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
8	ELI08903F2	360 016 017	27.866
10	ELI10903F2	360 016 054	49.847
12	ELI12903F2	360 016 091	82.409
14	ELI14903F2	360 016 127	100.002
16	ELI16903F2	360 016 162	144.601
18	ELI18903F2	360 016 196	0.002
20	ELI20903F2	360 016 232	243.258



FM FITTINGS: Fabricated 90° Elbow
PE3408/PE4710
IPS, DR7, Class 200, 5 Segment

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL200
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
6	ELI06905F2	360 015 976	21.297
8	ELI08905F2	360 016 019	39.375
10	ELI10905F2	360 016 056	63.890
12	ELI12905F2	360 016 094	0.002
20	ELI20905F2	360 016 235	346.016
24	ELI24905F2	360 016 303	545.798



FM FITTINGS: Fabricated 90° Elbow
PE3408/PE4710
IPS, DR7, Class 267, 3 Segment

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL267
- Externally Reinforced
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
4	ELI04903F3	360 004 467	37.000
6	ELI06903F3	360 004 468	47.995
8	ELI08903F3	360 004 469	81.593
10	ELI10903F3	360 004 470	130.800
12	ELI12903F3	360 016 092	247.403
14	ELI14903F3	360 016 128	224.012
18	ELI18903F3	360 016 197	0.002



FM FITTINGS: Fabricated 90° Elbow
PE3408/PE4710
IPS, DR7, Class 267, 5 Segment

- Approval: AWWA C906
 - Approval: NSF-61
 - Approval: FM CL267
- Externally Reinforced

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
6	ELI06905F3	360 015 977	0.002
8	ELI08905F3	360 016 020	0.002
10	ELI10905F3	360 028 483	0.022
12	ELI12905F3	360 016 095	0.002
14	ELI14905F3	360 016 131	0.002
16	ELI16905F3	360 016 166	0.002
20	ELI20905F3	360 028 680	0.022
24	ELI24905F3	360 016 304	0.002

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MJ Adapters



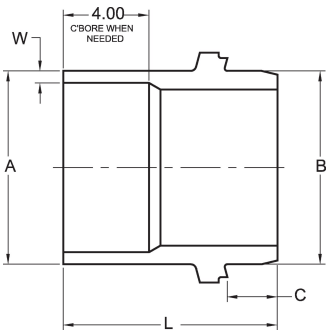
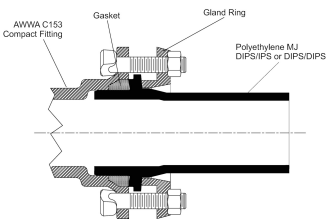
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FM ADAPTERS: MJ Adapter
PE3408/PE4710
IPS, DR7, Class 267

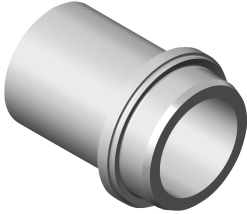
Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GF Part No.	weight (lb)	A (inch)	B (inch)	C (inch)	L (inch)	W	Box Qty
6	360 032 213		6.625	6.900	2.34	11.31	DR9 - DR17	1
8	360 032 215		8.625	9.050	2.34	11.94	DR9 - DR17	1
10	360 032 214	21.130	10.750	11.100	2.34	13.56	DR9 - DR17	1
12	360 032 059		12.750	13.200	2.00	13.00	DR9 - DR17	1
14	360 032 216		14.000	15.300	1.34	13.00	DR9 - DR17	1





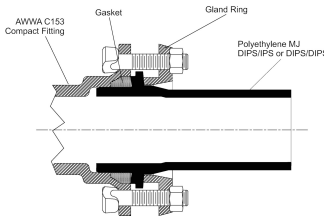
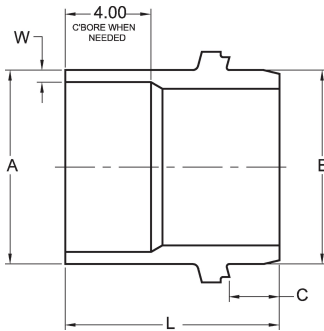
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FM ADAPTERS: MJ Adapter
PE3408/PE4710
IPS, DR9, Class 200

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	GF weight (lb)	A (inch)	B (inch)	C (inch)	L (inch)	W
4	MJI0400FM2	360 001 941	3.020	4.500	4.800	2.34	10.25	DR9 - DR17
6	MJI0600FM2	360 001 961	7.606	6.625	6.900	2.34	11.31	DR9 - DR17
8	MJI0800FM2	360 017 752	12.170	8.625	9.050	2.34	11.94	DR9 - DR17
10	MJI1000FM2	360 001 795	16.006	10.750	11.100	2.34	13.56	DR9 - DR17
12	MJI1200FM2	360 001 815	28.991	12.750	13.200	2.00	13.00	DR9 - DR17
16	MJI1600FM2	360 017 794	54.101	16.000	17.400	1.34	13.00	DR9 - DR17





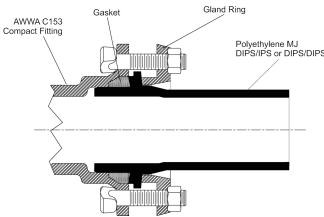
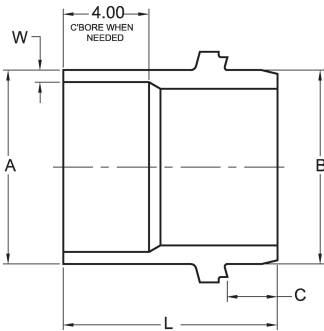
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FM ADAPTERS: MJ Adapter
PE3408/PE4710
IPS, DR11, Class 150

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	C (inch)	L (inch)	W
4	10009623	360 003 464	2.822	4.500	4.800	2.34	10.25	DR9 - DR17
6	10009625	360 022 242	5.710	6.625	6.900	2.31	11.31	DR9 - DR17
8	10009627	360 003 467	10.031	8.625	9.050	2.34	11.94	DR9 - DR17
10	10009629		15.650	10.750	11.100	2.34	13.56	DR9 - DR17
12	10009747		28.000	12.750	13.200	2.00	13.00	DR9 - DR17





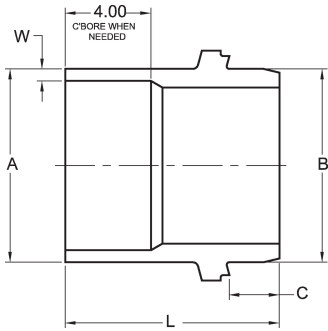
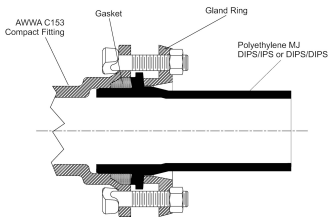
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FM ADAPTERS: MJ Adapter
PE3408/PE4710
DIPS, DR9, Class 200

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	C (inch)	L (inch)	W	Box Qty
6	MJD0600FM2	360 017 611	7.628	6.90	6.90	2.34	11.31	DR9 - DR17	4
8	MJD0800FM2	360 017 623	12.588	9.05	9.05	2.75	14.00	DR9 - DR17	3
12	MJD1200FM2	360 017 647	29.454	13.20	13.20	2.00	13.00	DR9 - DR17	1
14	MJD1400FM2	360 017 657	42.130	15.30	15.30	1.34	13.00	DR9 - DR17	1





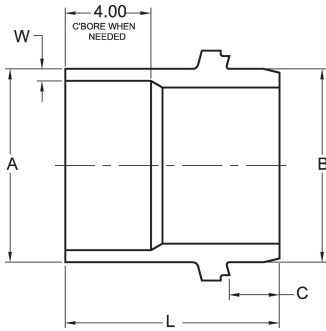
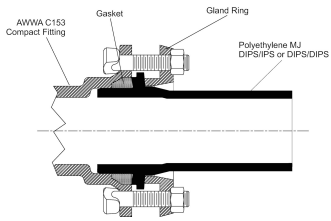
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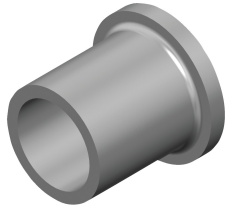
FM ADAPTERS: MJ Adapter
PE3408/PE4710
DIPS, DR11, Class 150

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
14	MJD1400FM1	360 017 656	37.170
18	MJD1800FM1	360 017 675	68.101



Flange Adapters

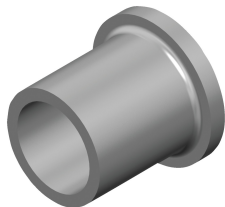


FM ADAPTERS: Flange Adapter PE3408/PE4710 IPS, DR7, Class 267

- Approval: ASTM D3261
- Approval: AWWA C906
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	L (inch)	Box Qty
4	FAI0400FM3	360 004 462	3.000	6.00	7.50	5.80	2
6	FAI0600FM3	360 004 463	7.000	8.50	1.00	8.00	3
8	FAI0800FM3	360 004 464	10.000	10.56	1.57	9.00	4
10	FAI1000FM3	360 004 465	21.495	12.75	1.28	12.00	2
12	FAI1200FM3	360 016 752	30.666	15.00	1.54	12.00	1
14	FAI1400FM3	360 016 761	40.455	17.50	1.50	12.00	1
16	FAI1600FM3	360 016 771	58.092	20.00	1.75	12.00	1
18	FAI1800FM3	360 016 779	69.049	21.38	1.88	12.00	1
20	FAI2000FM3	360 016 789	96.717	23.47	2.27	12.00	1
24	FAI2400FM3	360 016 808	160.673	27.85	2.82	12.00	1

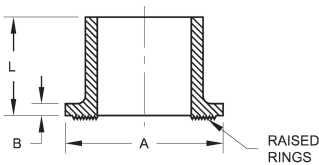


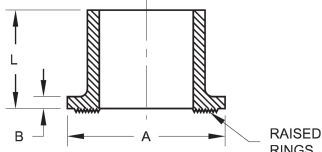
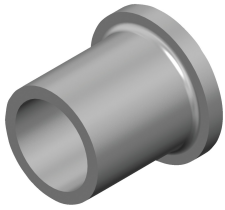
FM ADAPTERS: Flange Adapter PE3408/PE4710 IPS, DR9, Class 200

- Approval: ASTM D2513
- Approval: ASTM D3261
- Approval: AWWA C906
- Approval: FM 1613

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	L (inch)	Box Qty
2	FAI0200FM2	360 016 699	0.463				
3	FAI0300FM2	360 016 706	1.049				
4		360 001 561	1.808	6.00	0.54	6.00	8
6	6912377	360 001 583	4.960	8.50	0.78	8.00	2
8	6912378	360 001 600	10.185	10.63	1.00	11.00	2
10	10004336	360 001 431	14.903	12.75	1.28	12.00	2
12	10003129	360 001 449	26.191	15.00	1.54	12.00	1
14	FAI1400FM2	360 001 463	35.296	17.50	1.50	12.00	1
16	FAI1600FM2	360 001 481	0.002	20.00	1.75	12.00	1
18	FAI1800FM2	360 001 493	55.997	21.38	1.88	12.00	1
20	FAI2000FM2	360 001 516	0.002	23.47	2.77	12.00	1
24	FAI2400FM2	360 016 807	122.002	27.85	2.82	12.00	1





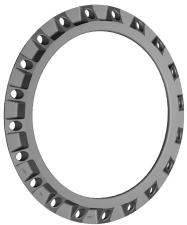
FM ADAPTERS: Flange Adapter
PE3408/PE4710
IPS, DR11, Class 150

- Approval: ASTM D2513
- Approval: ASTM D3261
- Approval: AWWA C906
- Approval: NSF-61
- Approval: FM 1613

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	A (inch)	B (inch)	L (inch)	Box Qty
2	FAI0200FM1	360 016 698	0.463				
3	FAI0300FM1	360 016 705	0.926				
4	6912104	360 001 551	1.653	6.00	0.54	6.00	8
6	6912105	360 001 570	4.299	8.50	0.78	8.00	2
8	6912124	360 001 588	8.818	10.63	1.00	11.00	2
10	10004326		16.100	12.75	1.28	12.00	2
12	6912126	360 001 438	22.311	15.00	1.54	12.00	1
14	10004354	360 001 453	29.696	17.50	1.50	12.00	1
16	10004370	360 001 470	39.397	12.00	1.75	12.00	1
18	10004381	360 001 483	41.998	21.38	1.88	12.00	1
20	FAI2000FM1	360 001 507	0.002	23.47	2.27	12.00	1
24	FAI2400FM1	360 016 806	98.002	27.85	2.82	12.00	1

Flange Adapter Bolt Rings

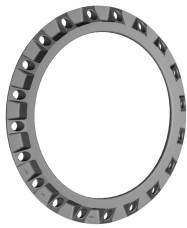


FM FLANGE ADAPTERS: Bolt Ring
IPS Ductile, Class 150

- Approval: ASTM A536
- Approval: GR 65/45/12
- Approval: FM 1613

Please call for more information on availability, pricing, other sizes and dimensions.

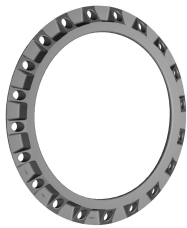
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
12	BRID120160	360 014 846	24.690	1
14	BRID140160	360 014 851	28.440	1
16	BRID160160	360 014 856	38.801	1
18	BRID180160	360 014 861	41.672	1
20	BRID200160	360 014 869	56.441	1
24	BRID240160	360 014 878	79.812	1
30	BRID300160	360 014 890	138.232	1
32	BRID320160	360 014 893	164.463	1
34	BRID340160	360 014 895	190.704	1
36	BRID360160	360 014 898	213.844	1



FM FLANGE ADAPTERS: Bolt Ring
IPS Ductile, Class 200

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

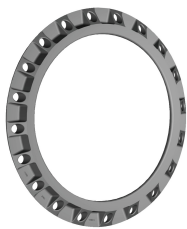
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
26	BRID260200	360 014 883	108.022	1
28	BRID280200	360 014 886	129.632	1



FM FLANGE ADAPTERS: Bolt Ring
IPS Ductile, Class 267

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

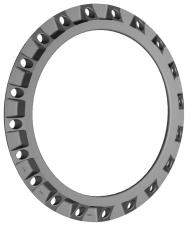
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
2	BRID020275	360 014 825	2.650	1
3	BRID030275	360 014 829	4.191	1
4	BRID040275	360 014 833	5.291	1
6	BRID060275	360 014 837	7.275	1
8	BRID080275	360 014 840	11.905	1
10	BRID100275	360 014 843	15.320	1
12	BRID120275	360 014 847	25.020	1
14	BRID140275	360 014 852	34.280	1
16	BRID160275	360 014 857	47.181	1
18	BRID180275	360 014 862	52.031	1
20	BRID200275	360 014 870	69.441	1
22	BRID220275	360 014 874	79.812	1
24	BRID240275	360 014 879	102.513	1



FM FLANGE ADAPTERS: Bolt Ring
DIPS Ductile, Class 267

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

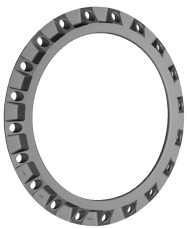
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
4	BRDD040275	360 014 654	4.850	1
6	BRDD060275	360 014 658	7.280	1
8	BRDD080275	360 014 662	10.360	1
10	BRDD100275	360 014 666	15.432	1
12	BRDD120275	360 014 670	25.130	1
14	BRDD140275	360 014 674	30.422	1
16	BRDD160275	360 014 678	41.890	1
18	BRDD180275	360 014 682	50.261	1
20	BRDD200275	360 014 686	60.852	1
24	BRDD240275	360 014 690	93.031	1



FM FLANGE ADAPTERS: Bolt Ring
IPS Epoxy, Class 150

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

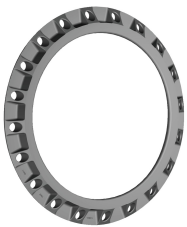
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
12	BRIE120160	360 014 933	24.690	1
14	BRIE140160	360 014 938	28.440	1
16	BRIE160160	360 014 943	38.801	1
18	BRIE180160	360 014 948	41.672	1
20	BRIE200160	360 014 953	56.441	1
24	BRIE240160	360 014 962	79.812	1
30	BRIE300160	360 014 974	138.232	1
32	BRIE320160	360 014 977	164.465	1
34	BRIE340160	360 014 979	190.704	1
36	BRIE360160	360 014 982	213.844	1



FM FLANGE ADAPTERS: Bolt Ring
IPS Epoxy, Class 200

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

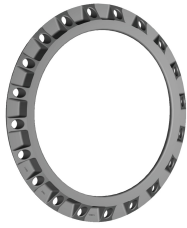
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
26	BRIE260200	360 014 967	102.513	1
28	BRIE280200	360 014 970	129.632	1



FM FLANGE ADAPTERS: Bolt Ring
IPS Epoxy, Class 267

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

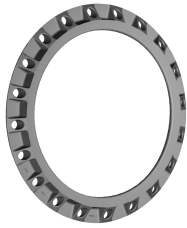
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
2	BRIE020275	360 014 908	2.650	1
3	BRIE030275	360 014 912	4.191	1
4	BRIE040275	360 014 916	5.291	1
6	BRIE060275	360 014 921	7.280	1
8	BRIE080275	360 014 925	11.901	1
10	BRIE100275	360 014 929	15.320	1
12	BRIE120275	360 014 934	25.020	1
14	BRIE140275	360 014 939	34.280	1
16	BRIE160275	360 014 944	47.181	1
18	BRIE180275	360 014 949	52.031	1
20	BRIE200275	360 014 954	69.441	1
22	BRIE220275	360 014 958	79.812	1
24	BRIE240275	360 014 963	102.513	1



FM FLANGE ADAPTERS: Bolt Ring
DIPS Epoxy, Class 267

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

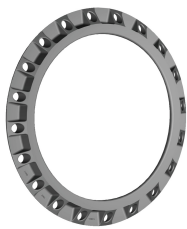
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
4	BRDE040275	360 014 696	4.850	1
6	BRDE060275	360 014 700	7.280	1
8	BRDE080275	360 014 704	10.360	1
10	BRDE100275	360 014 708	15.432	1
12	BRDE120275	360 014 712	25.130	1
14	BRDE140275	360 014 716	30.422	1
16	BRDE160275	360 014 720	41.890	1
18	BRDE180275	360 014 724	50.261	1
20	BRDE200275	360 014 728	60.852	1
24	BRDE240275	360 014 732	93.031	1



FM FLANGE ADAPTERS: Bolt Ring
IPS Galvanized, Class 150

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

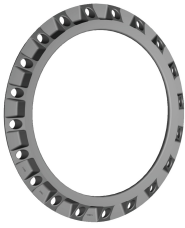
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
12	BRIG120160	360 015 016	24.690	1
14	BRIG140160	360 015 021	28.440	1
16	BRIG160160	360 015 026	38.801	1
18	BRIG180160	360 015 031	41.672	1
20	BRIG200160	360 015 036	56.441	1
24	BRIG240160	360 015 045	79.812	1
30	BRIG300160	360 015 057	138.232	1
32	BRIG320160	360 015 060	164.463	1
34	BRIG340160	360 015 062	190.704	1
36	BRIG360160	360 015 065	213.844	1



FM FLANGE ADAPTERS: Bolt Ring
IPS Galvanized, Class 200

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

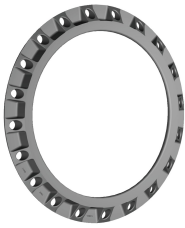
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
26	BRIG260200	360 015 050	108.022	1
28	BRIG280200	360 015 053	129.632	1



**FM FLANGE ADAPTERS: Bolt Ring
IPS Galvanized, Class 267**

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

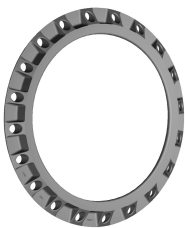
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
2	BRIG020275	360 014 991	2.650	1
3	BRIG030275	360 014 995	4.191	1
4	BRIG040275	360 014 999	5.291	1
6	BRIG060275	360 015 004	7.280	1
8	BRIG080275	360 015 008	11.901	1
10	BRIG100275	360 015 012	15.320	1
12	BRIG120275	360 015 017	25.020	1
14	BRIG140275	360 015 022	34.280	1
16	BRIG160275	360 015 027	47.181	1
18	BRIG180275	360 015 032	52.031	1
20	BRIG200275	360 015 037	69.441	1
22	BRIG220275	360 015 041	79.812	1
24	BRIG240275	360 015 046	102.513	1



**FM FLANGE ADAPTERS: Bolt Ring
DIPS Galvanized, Class 267**

- Approval: ASTM A536
 - Approval: GR 65/45/12
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
4	BRDG040275	360 014 737	4.850	1
6	BRDG060275	360 014 741	7.280	1
8	BRDG080275	360 014 745	10.360	1
10	BRDG100275	360 014 749	15.432	1
12	BRDG120275	360 014 753	25.130	1
14	BRDG140275	360 014 757	30.422	1
16	BRDG160275	360 014 761	41.890	1
18	BRDG180275	360 014 765	50.261	1
20	BRDG200275	360 014 769	60.852	1
24	BRDG240275	360 014 773	93.031	1



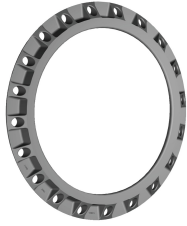
**FM FLANGE ADAPTERS: Bolt Ring
DIPS Stainless, Class 267**

- Approval: ASTM A351-CF8M
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
4	BRDS040275	360 014 779	0.002	1
6	BRDS060275	360 014 783	0.002	1
8	BRDS080275	360 014 787	0.002	1
12	BRDS120275	360 014 795	0.002	1



APPROVED

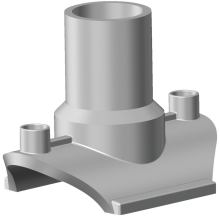


**FM FLANGE ADAPTERS: Bolt Ring
IPS Stainless, Class 267**

- Approval: ASTM A351-CF8M
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
2	BRIS020275	360 015 074	2.291	1
3	BRIS030275	360 015 078	4.081	1
4	BRIS040275	360 015 082	5.291	1
6	BRIS060275	360 015 087	7.628	1
8	BRIS080275	360 015 091	13.095	1
10	BRIS100275	360 015 095	15.939	1
12	BRIS120275	360 015 099	37.479	1

Electrofusion



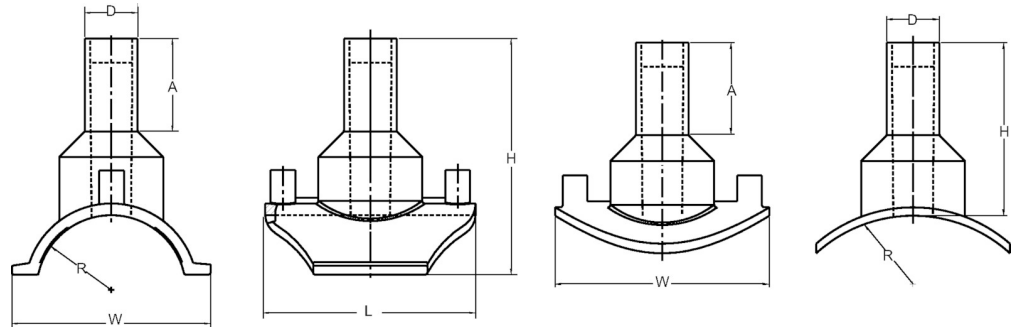
FM ELECTROFUSION: Branch Saddle
PE3408/PE4710
DR11, Class 150

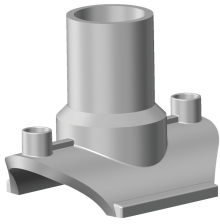
- Approval: ASTM D2513
- Approval: ASTM F1055
- Approval: ASTM D3261
- Approval: AWWA C906
- Approval: FM 1613
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF Part No.	weight (lb)
4" IPS/DIPS x 2" IPS	10004533	360 000 771	0.002
6" IPS/DIPS x 2" IPS	10004544	360 000 779	1.323
8" IPS x 2" IPS	10007712	360 000 784	2.006
4" IPS x 4" IPS	10004528	360 000 767	0.002
6" IPS x 4" IPS	10004538	360 000 775	0.002

R	A	D	H	W	L	Box Qty
(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	
2.25	3.28	2.38	7.27	6.26	6.62	30
3.31	3.28	2.38	8.43	8.68	6.62	30
2.00	3.28	2.38	5.29	5.90	5.90	30
2.29	3.19	4.50	6.00	7.00	8.38	8
3.31	3.19	4.50	7.20			8





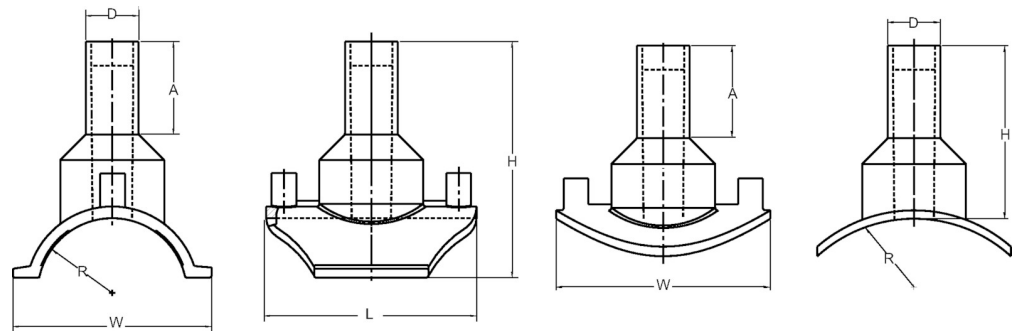
FM ELECTROFUSION: Branch Saddle
PE3408/PE4710
Class 200

- Approval: ASTM D2513
- Approval: ASTM F1055
- Approval: ASTM D3261
- Approval: FM 1613
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.

Size (inch)	GFCP Part No.	GF weight Part No.	GF weight (lb)
6" IPS x 4" IPS	10004540	360 000 777	0.002

R (inch)	A (inch)	D (inch)	H (inch)	W (inch)	L (inch)	Box Qty
3.312	3.000	4.500			9.510	8

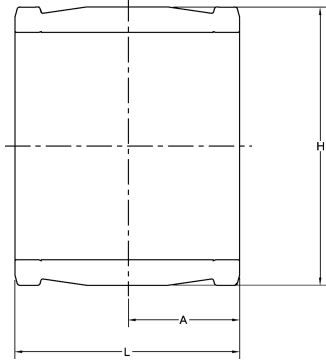
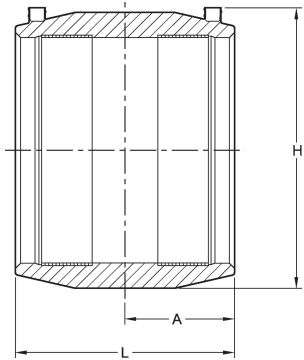




FM ELECTROFUSION: Coupling
PE3408/PE4710
IPS, Class 200

- Approval: ASTM D2513
- Approval: ASTM F1055
- Approval: AWWA C906
- Approval: FM 1613
- Approval: NSF-61

Please call for more information on availability, pricing, other sizes and dimensions.



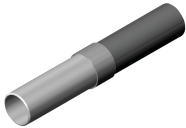
Size (inch)	GFCP Part No.	GF Part No.	weight (lb)	H (inch)	L (inch)	A (inch)	Box Qty
4	10000360	360 000 936	1.676	6.51	6.14	3.00	10
6	10000359	360 000 939	4.497	8.70	8.35	4.10	8
8	10000361	360 000 944	8.444	12.99	11.59	5.80	4
10	10000362	360 000 903	15.234	13.04	10.40	5.20	1
12	10000363	360 000 906	23.898	15.84	11.40	5.70	1
14	10000202	360 000 909	35.186	17.24	12.13	6.06	1
16	10000204	360 000 913	47.091	19.65	13.54	6.77	1
18	10000207	360 000 917	65.610	22.13	14.96	7.48	1
20	10000210	360 000 924	91.007	24.57	16.46	8.23	1
24	10000216	360 000 930	177.009	30.59	19.50	9.75	1

Transition Fittings



FM WELD END: Transition Fitting
PE3408/PE4710
DR9, Class 200

- Approval: ASTM D2513
 - Approval: FM 1613
- Please call for more information on availability, pricing, other sizes and dimensions.



Size	GFCP Part No.	GF Part No.	weight (lb)	Box Qty
4" IPS x 4" IPS	10011832	360 013 968	0.002	2
6" IPS x 6" IPS	10006085	360 002 528	0.002	1
8" IPS x 8" IPS	10006090	360 002 529	0.000	1
10" IPS x 10" IPS	10006094	360 002 522	0.000	3
12" IPS x 12" IPS	10011833	360 013 907	0.000	3

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DIPS - 40' Long	48

IPS - 50' Long



**HDPE PIPE: Fire Protection (FM)
IPS, DR7, Class 267
Black Pipe, Red Stripe, 50' Long**

- Black pipe, red stripe, red print line.
 - Red stripe optional.
 - Other lengths available.
 - Call for availability of other sizes and dimensions.
 - Approval: FM 1613
 - Approval: AWWA C906
 - Approval: ASTM F714
- **PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
8	8.625	360 031 629	10.000
10	10.750	360 031 641	15.536
12	12.750	360 031 653	21.848
14	14.000	360 031 665	26.344
16	16.000	360 031 677	34.408
18	18.000	360 031 689	43.544
20	20.000	360 031 701	53.760
22	22.000	360 031 713	65.056
24	24.000	360 031 725	77.416



**HDPE PIPE: Fire Protection (FM)
IPS, DR7, Class 267
Black Pipe, 50' Long**

- Black pipe, no stripe, red print line.
 - Red stripe optional.
 - Other lengths available.
 - Call for availability of other sizes and dimensions.
 - Approval: FM 1613
 - Approval: AWWA C906
 - Approval: ASTM F714
- **PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
6	6.625	360 031 619	7.370
8	8.625	360 031 631	12.500
10	10.750	360 031 643	19.420
12	12.750	360 031 655	27.310
14	14.000	360 031 667	32.930
16	16.000	360 031 679	43.010
18	18.000	360 031 691	54.430
20	20.000	360 031 703	67.200
22	22.000	360 031 715	81.320
24	24.000	360 031 727	96.770



**HDPE PIPE: Fire Protection (FM)
IPS, DR9, Class 200
Black Pipe, Red Stripe, 50' Long**

- Black pipe, red stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
6	6.625	360 031 621	5.960
8	8.625	360 031 633	10.110
10	10.750	360 031 645	15.700
12	12.750	360 031 657	22.080
14	14.000	360 031 669	26.630
16	16.000	360 031 681	34.780
18	18.000	360 031 693	44.020
20	20.000	360 031 705	54.340
22	22.000	360 031 717	65.750
24	24.000	360 031 729	78.250



**HDPE PIPE: Fire Protection (FM)
IPS, DR9, Class 200
Black Pipe, 50' Long**

- Black pipe, no stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
6	6.625	360 031 623	4.768
8	8.625	360 031 635	8.088
10	10.750	360 031 647	12.560
12	12.750	360 031 659	17.664
14	14.000	360 031 671	21.304
16	16.000	360 031 683	27.824
18	18.000	360 031 695	35.216
20	20.000	360 031 707	43.472
22	22.000	360 031 719	52.600
24	24.000	360 031 731	62.600



HDPE PIPE: Fire Protection (FM)
IPS, DR11, Class 150
Black Pipe, Red Stripe, 50' Long

- Black pipe, red stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
6	6.625	360 031 625	250.000
8	8.625	360 031 637	423.500
10	10.750	360 031 649	658.000
12	12.750	360 031 661	925.500
14	14.000	360 031 673	1116.000
16	16.000	360 031 685	1457.500
18	18.000	360 031 697	1844.500
20	20.000	360 031 709	2277.000
22	22.000	360 031 721	2755.000
24	24.000	360 031 733	3279.000



HDPE PIPE: Fire Protection (FM)
IPS, DR11, Class 150
Black Pipe, 50' Long

- Black pipe, no stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
6	6.625	360 031 627	4.000
8	8.625	360 031 639	6.776
10	10.750	360 031 651	10.528
12	12.750	360 031 663	14.808
14	14.000	360 031 675	17.856
16	16.000	360 031 687	23.320
18	18.000	360 031 699	29.512
20	20.000	360 031 711	36.432
22	22.000	360 031 723	44.080
24	24.000	360 031 735	52.464

DIPS - 50' Long



HDPE PIPE: Fire Protection (FM)
DIPS, DR9, Class 200
Black Pipe, Red Stripe, 50' Long

- Black pipe, red stripe, red print line.
 - Red stripe optional.
 - Other lengths available.
 - Call for availability of other sizes and dimensions.
 - Approval: FM 1613
 - Approval: AWWA C906
 - Approval: ASTM F714
- **PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
20	21.600	360 031 583	63.380
24	25.800	360 031 591	90.430



HDPE PIPE: Fire Protection (FM)
DIPS, DR9, Class 200
Black Pipe, 50' Long

- Black pipe, no stripe, red print line.
 - Red stripe optional.
 - Other lengths available.
 - Call for availability of other sizes and dimensions.
 - Approval: FM 1613
 - Approval: AWWA C906
 - Approval: ASTM F714
- **PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
6	6.900	360 031 529	6.470
8	9.050	360 031 537	11.130
10	11.100	360 031 545	16.740
12	13.200	360 031 553	23.670
14	15.300	360 031 561	31.800
16	17.400	360 031 569	41.130
18	19.500	360 031 577	51.660
20	21.600	360 031 585	63.380
24	25.800	360 031 593	90.430



**HDPE PIPE: Fire Protection (FM)
DIPS, DR11, Class 200
Black Pipe, Red Stripe, 50' Long**

- Black pipe, red stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
6	6.900	360 031 531	5.420
8	9.050	360 031 539	9.320
10	11.100	360 031 547	14.030
12	13.200	360 031 555	19.840
14	15.300	360 031 563	26.650
16	17.400	360 031 571	34.470
18	19.500	360 031 579	43.290
20	21.600	360 031 587	53.120
24	25.800	360 031 595	75.780



**HDPE PIPE: Fire Protection (FM)
DIPS, DR11, Class 200
Black Pipe, 50' Long**

- Black pipe, no stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
6	6.900	360 031 533	5.420
8	9.050	360 031 541	9.320
10	11.100	360 031 549	14.030
12	13.200	360 031 557	19.840
14	15.300	360 031 565	26.650
16	17.400	360 031 573	34.470
18	19.500	360 031 581	43.290
20	21.600	360 031 589	53.120
24	25.800	360 031 597	75.780

IPS - 40' Long



HDPE PIPE: Fire Protection (FM)
IPS, DR7, Class 267
Black Pipe, Red Stripe, 40' Long

- Black pipe, red stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
2	2.375	360 031 598	0.950
3	3.500	360 031 604	2.060
4	4.500	360 031 610	3.400
6	6.625	360 031 616	7.370
8	8.625	360 031 628	12.500
10	10.750	360 031 640	19.420
12	12.750	360 031 652	27.310
14	14.000	360 031 664	32.930
16	16.000	360 031 676	43.010
18	18.000	360 031 688	54.430
20	20.000	360 031 700	67.200
22	22.000	360 031 712	81.320
24	24.000	360 031 724	96.770



HDPE Pipe: Fire Protection (FM)
IPS, DR7, Class 267
Black Pipe, 40' Long

- Black pipe, no stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
2	2.375	360 031 599	0.950
3	3.500	360 031 605	2.060
4	4.500	360 031 611	3.400
6	6.625	360 031 618	7.370
8	8.625	360 031 630	12.500
10	10.750	360 031 642	19.420
12	12.750	360 031 654	27.310
14	14.000	360 031 666	32.930
16	16.000	360 031 678	43.010
18	18.000	360 031 690	54.430
20	20.000	360 031 702	67.200
22	22.000	360 031 714	81.320
24	24.000	360 031 726	96.770



HDPE PIPE: Fire Protection (FM)
IPS, DR9, Class 200
Black Pipe, Red Stripe, 40' Long

- Black pipe, red stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
2	2.375	360 031 600	0.770
3	3.500	360 031 606	1.660
4	4.500	360 031 612	2.750
6	6.625	360 031 620	5.960
8	8.625	360 031 632	10.110
10	10.750	360 031 644	15.700
12	12.750	360 031 656	22.080
14	14.000	360 031 668	26.630
16	16.000	360 031 680	34.780
18	18.000	360 031 692	44.020
20	20.000	360 031 704	54.340
22	22.000	360 031 716	65.750
24	24.000	360 031 728	78.250



HDPE PIPE: Fire Protection (FM)
IPS, DR9, Class 200
Black Pipe, 40' Long

- Black pipe, no stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
2	2.375	360 031 601	0.770
3	3.500	360 031 607	1.660
4	4.500	360 031 613	2.750
6	6.625	360 031 622	5.960
8	8.625	360 031 634	10.110
10	10.750	360 031 646	15.700
12	12.750	360 031 658	22.080
14	14.000	360 031 670	26.630
16	16.000	360 031 682	34.780
18	18.000	360 031 694	44.020
20	20.000	360 031 706	54.340
22	22.000	360 031 718	65.750
24	24.000	360 031 730	78.250



HDPE PIPE: Fire Protection (FM)
IPS, DR11, Class 150
Black Pipe, Red Stripe, 40' Long

- Black pipe, red stripe, red print line.
- Red stripe optional.
- Call for availability of other sizes and dimensions.
- Other lengths available.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
2	2.375	360 031 602	0.640
3	3.500	360 031 608	1.390
4	4.500	360 031 614	2.310
6	6.625	360 031 624	5.000
8	8.625	360 031 636	8.470
10	10.750	360 031 648	13.160
12	12.750	360 031 660	18.510
14	14.000	360 031 672	22.320
16	16.000	360 031 684	29.150
18	18.000	360 031 696	36.890
20	20.000	360 031 708	45.540
22	22.000	360 031 720	55.100
24	24.000	360 031 732	65.580



HDPE PIPE: Fire Protection (FM)
IPS, DR11, Class 150
Black Pipe, 40' Long

- Black pipe, no stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
2	2.375	360 031 603	0.640
3	3.500	360 031 609	1.390
4	4.500	360 031 615	2.310
6	6.625	360 031 626	5.000
8	8.625	360 031 638	8.470
10	10.750	360 031 650	13.160
12	12.750	360 031 662	18.510
14	14.000	360 031 674	22.320
16	16.000	360 031 686	29.150
18	18.000	360 031 698	36.890
20	20.000	360 031 710	45.540
22	22.000	360 031 722	55.100
24	24.000	360 031 735	65.580

DIPS - 40' Long



**HDPE PIPE: Fire Protection (FM)
DIPS, DR9, Class 200
Black Pipe, Red Stripe, 40' Long**

- Black pipe, red stripe, red print line.
 - Red stripe optional.
 - Other lengths available.
 - Call for availability of other sizes and dimensions.
 - Approval: FM 1613
 - Approval: AWWA C906
 - Approval: ASTM F714
- **PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
4	4.800	360 031 522	3.130
6	6.900	360 031 526	6.470
8	9.050	360 031 534	11.130
10	11.100	360 031 542	16.740
12	13.200	360 031 550	23.670
14	15.300	360 031 558	31.800
16	17.400	360 031 566	41.130
18	19.500	360 031 574	51.660
24	25.800	360 031 590	90.430



**HDPE PIPE: Fire Protection (FM)
DIPS, DR9, Class 200
Black Pipe, 40' Long**

- Black pipe, no stripe, red print line.
 - Red stripe optional.
 - Other lengths available.
 - Call for availability of other sizes and dimensions.
 - Approval: FM 1613
 - Approval: AWWA C906
 - Approval: ASTM F714
- **PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
4	4.800	360 031 523	3.130
6	6.900	360 031 528	6.470
8	9.050	360 031 536	11.130
10	11.100	360 031 544	16.740
14	15.300	360 031 560	31.800
16	17.400	360 031 568	41.130
18	19.500	360 031 576	51.660
20	21.600	360 031 584	63.380



**HDPE PIPE: Fire Protection (FM)
DIPS, DR11, Class 150
Black Pipe, Red Stripe, 40' Long**

- Black pipe, red stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.	weight (lb)
4	4.800	360 031 524	2.620
6	6.900	360 031 530	5.420
8	9.050	360 031 538	9.320
10	11.100	360 031 546	14.030
12	13.200	360 031 554	19.840
14	15.300	360 031 562	26.650
16	17.400	360 031 570	34.470
18	19.500	360 031 578	43.290
20	21.600	360 031 586	53.120
24	25.800	360 031 594	75.780



**HDPE PIPE: Fire Protection (FM)
DIPS, DR11, Class 150
Black Pipe, 40' Long**

- Black pipe, no stripe, red print line.
- Red stripe optional.
- Other lengths available.
- Call for availability of other sizes and dimensions.
- Approval: FM 1613
- Approval: AWWA C906
- Approval: ASTM F714

****PIPE WEIGHT SHOWN PER FOOT****

Nominal Pipe Size (inch)	OD (inch)	GF Part No.
4	4.800	360 031 525
6	6.900	360 031 532
8	9.050	360 031 540
10	11.100	360 031 548
12	13.200	360 031 556
14	15.300	360 031 564
16	17.400	360 031 572
18	19.500	360 031 580
20	21.600	360 031 588
24	25.800	360 031 596

Value added services

From planning support to implementation – our specialists are always close by

As a leading provider of piping systems in plastic and metal, we offer our customers not only reliable products, but also a large package of services. Our support ranges from a comprehensive technical manual or the extensive CAD library to an international team of experts, who work closely together with local sales companies. And when it comes to implementing a project, our customers additionally benefit from a wide range of training courses, either on site or in our modern training centres worldwide.

Generating a genuinely individual added value for our customers is our ultimate goal when implementing our tailor-made solutions. With our application knowledge and product expertise, we support our customers during the planning process, the sustainable realization of the projects and the provision of services. Our expertise in developing and producing piping systems, combined with our profound industry and market knowledge, based on longstanding experience, makes us a qualified and professional partner for our customers.

1 Chemical resistance

Our specialist teams have decades of experience in the area of chemical resistance. They can offer individual support and advice in selecting the right material for the corresponding system solution. On request, a team will examine and select the appropriate material for special applications.

2 CAD library

The extensive CAD library is the most frequently used planning tool at GF Piping Systems. The database comprises over 30 000 drawings and technical data regarding pipes, fittings, measurement and control technology as well as manual and actuated valves. The big advantage of the CAD library is that the data can be integrated directly in CAD models.

3 Technical support

Technical support and material selection are key factors for a successful installation. A team of specialists headquartered in Switzerland is available to support the GF Piping Systems sales companies around the world. For technical advice or for general information, our customers are supported individually by the specialist team in the corresponding sales company.

4 Online and mobile calculation tools

Our numerous, multilingual online calculation tools are very useful for configuring and calculating. By means of pressure/temperature diagrams, the pressure of liquid media recommended for pipes and fittings at various temperatures can be easily defined. FlowCalc App, the mobile application of GF Piping Systems, is an on-site planning tool for pipe diameter and flow velocity calculation to select the right dimension of piping systems when no expert is near by.

5 On-site training

Our experts are available to support our customers locally and conduct training in diverse fusion and jointing techniques on location. The duration and structure of the training depends on the project and the system being installed.

6 Customizing

The customizing teams at GF Piping Systems work closely together around the globe. The focus of these teams is to manufacture custom parts for special systems. In addition, a variety of special solutions can be produced in small series. Standardized processes warrant the highest level of quality for the individual solutions of our customers.



7 Technical manual

For our customers, we have documented the extensive know-how of GF Piping Systems in planning and installing plastic piping systems in our technical manual. This detailed documentation is available in both printed and digital version. The established reference book is helpful in planning large and small projects.

8 Training courses

GF Piping Systems offers a wide range of training courses that allow participants to gain confidence in working with our products and proven jointing technologies. The practical training is clearly defined, structured and adapted to the various levels of participants' experience.

Disclaimer

Information in the catalog

GF Central Plastics is as diligent as possible in compiling and updating the information in its catalog. However, GF Central Plastics does not guarantee the correctness and completeness of the information provided in its catalog. Equally, GF Central Plastics does not guarantee that this information is up to date. Drawings dimensions and weights, unless otherwise noted by tolerances, should be considered for reference only and may not reflect the exact physical measurements of the parts. For questions concerning our products, their specifications and their utilization please contact your local Regional Sales Manager or Customer Service Representative of GF Central Plastics. For comments concerning the product catalog, please email gfccentralmarketing@georgfischer.com.

General Condition of Supply of Georg Fischer Piping Systems Limited, Schaffhausen

1 General

- 1.1 These General Conditions shall apply to all Products supplied by Georg Fischer Piping Systems Limited («Georg Fischer») to the Purchaser.
They shall also apply to all future business even when no express reference is made to them.
- 1.2 Any deviating or supplementary conditions especially Purchaser's general conditions of purchase and verbal agreements shall only be applicable if accepted in writing by Georg Fischer.
- 1.3 The written form shall be deemed to be fulfilled by all forms of transmission, evidenced in the form of text, such as telefax, e-mail, etc.

2 Tenders

- Tenders shall only be binding if they contain a specifically stated period for acceptance.

3 Scope of Delivery

- 3.1 Georg Fischer's product range is subject to change.
- 3.2 The confirmation of order shall govern the scope and execution of the contract.

4 Data and Documents

- 4.1 Technical documents such as drawings, descriptions, illustrations and data on dimensions, performance and weight as well as the reference to standards are for information purposes only. They are not warranted characteristics and are subject to change.
- 4.2 All technical documents shall remain the exclusive property of Georg Fischer and may only be used for the agreed purposes or as Georg Fischer may consent.

5 Confidentiality, Protection of Personal Data

- 5.1 Each party shall keep in strict confidence all commercial or technical information relating to the business of the other party, of which it has gained knowledge in the course of its dealing with the other party. Such information shall neither be disclosed to third parties nor used for other purposes than those for which the information has been supplied.
- 5.2 In the context of the contractual relation with the Purchaser personal data may be processed. The Purchaser agrees to the disclosure of said data to third parties such as foreign subcontractors and suppliers etc.

6 Local Laws and Regulations, Export Controls

- 6.1 The Purchaser shall bring to the attention of Georg Fischer all local laws and regulations at the place of destination which bear connection with the execution of the contract and the adherence to relevant safety regulations and approval procedures.
- 6.2 In case of re-exports, Purchaser shall be responsible for compliance with pertinent export control regulations.

7 Price

- 7.1 Unless agreed otherwise, the prices shall be deemed quoted net ex works (according to Incoterms 2010 of the ICC, or latest version) including standard packing. All supplementary costs such as the cost of carriage, insurance, export-, transit- and import- licences etc. shall be borne by the Purchaser. The Purchaser shall also bear the costs of all taxes, fees, duties etc. connected with the contract.
- 7.2 If the costs of packing, carriage, insurance, fees and other supplementary costs are included in the tender price or contract price or are referred to specifically in the tender or confirmation of order, Georg Fischer reserve the right to revise their prices accordingly should any change occur in the relevant tariffs.

8 Terms of Payment

- 8.1 The Purchaser shall make payment in the manner agreed by the parties without any deductions such as discounts, costs, taxes or dues.
- 8.2 The Purchaser may only withhold or off-set payments due against counter claims which are either expressly acknowledged by Georg Fischer or finally awarded to the Purchaser.
In particular, payment shall still be made when unessential items are still outstanding provided that the Products already delivered are not rendered unusable as a result.

9 Retention of Title

- 9.1 The Products shall remain the property of Georg Fischer until the Purchaser shall have settled all claims, present and future, which Georg Fischer may have against him.
- 9.2 Should the Purchaser resell Products to which title is reserved, in the ordinary course of business, he shall hereby be deemed to have tacitly assigned to Georg Fischer the proceeds deriving from their sale together with all collateral rights, securities and reservations of title until all claims held by Georg Fischer shall have been settled. Until revoked by Georg Fischer, this assignment shall not preclude Purchaser's right to collect the assigned receivables.
- 9.3 To the extent the value of the Products to which title is reserved together with collateral securities exceeds Georg Fischer's claims against the Purchaser by more than 20%, Georg Fischer shall re-assign the above proceeds to Purchaser at his request.

10 Delivery

- 10.1 The term of delivery shall commence as soon as the contract has been entered into, all official formalities such as import and payment permits have been obtained and all essential technical issues have been settled. The term of delivery shall be deemed duly observed when, upon its expiry, the Products are ready for despatch.
- 10.2 Delivery is subject to the following conditions, i.e. the term of delivery shall be reasonably extended:
 - a) if Georg Fischer are not supplied in time with the information necessary for the execution of the contract or if subsequent changes causing delays are made by the Purchaser.
 - b) if Georg Fischer are prevented from performing the contract by force majeure. Force majeure shall equally be deemed to be any unforeseeable event beyond Georg Fischer's control which renders Georg Fischer's performance commercially impractical or impossible, such as delayed or defective supplies from sub contractors labour disputes, governmental orders or regulations, shortages in materials or energy, serious disturbances in Georg Fischer's works, such as the total or partial destruction of plant and equipment or the breakdown of essential facilities, serious disruptions in transport facilities, e.g. impassable roads.
Should the effect of force majeure exceed a period of six (6) months, either party may cancel the contract forthwith.
Georg Fischer shall not be liable for any damage or loss of any kind whatsoever resulting from the reform, any suspension or cancellation being without prejudice to Georg Fischer's right to recover all sums due in respect of consignments delivered and costs incurred to date.
 - c) if the Purchaser is in delay with the fulfilment of his obligations under the contract, in particular, if he does not adhere to the agreed conditions of payment or if he has failed to timely provide the agreed securities.
- 10.3 If for reasons attributable to Georg Fischer the agreed term of delivery or a reasonable extension thereof is exceeded, Georg Fischer shall not be deemed in default until the Purchaser has granted to Georg Fischer in writing a reasonable extension thereof of not less than one (1) month which equally is not met.
The Purchaser shall then be entitled to the remedies provided at law, it being however understood that, subject to limitations of Art. 16, damage claims shall be limited to max. 10% of the price of the delayed delivery.
- 10.4 Part shipments shall be allowed and Georg Fischer shall be entitled to invoice for such partial deliveries.
- 10.5 If the Purchaser fails to take delivery within a reasonable time of Products notified as ready for despatch, Georg Fischer shall be entitled to store the Products at the Purchaser's expense and risk and to invoice them as delivered. If Purchaser fails to effect payment, Georg Fischer shall be entitled to dispose of the Products.
- 10.6 Should Purchaser cancel an order without justification and should Georg Fischer not insist on the performance of the contract, Georg Fischer shall be entitled to a penalty amounting to 10% of the contract price, Georg Fischer's right to prove and claim higher damages remaining reserved.

Purchaser shall be entitled to prove, that Georg Fischer has suffered no or a considerably lower damage than the penalty forfeited.

11 Packing

If the Products are provided with additional packing over and above the standard packing, such packing shall be charged additionally.

12 Passing of Risk

- 12.1 The risk in the Products shall pass to the Purchaser as soon as they have left Georg Fischer's works (EX WORKS, Incoterms 2010 ICC, or latest version), even if delivery is made carriage-paid, under similar clauses or including installation or when carriage is organized and managed by Georg Fischer.
- 12.2 If delivery is delayed for reasons beyond Georg Fischer's control, the risk shall pass to the Purchaser when he is notified that the Products are ready for despatch.

13 Carriage and Insurance

- 13.1 Unless agreed otherwise, the Purchaser shall bear the cost of carriage.
 - 13.2 The Purchaser shall be responsible for transport insurance against damage of whatever kind. Even when such insurance is arranged by Georg Fischer it shall be deemed taken out by the order of and for the account of the Purchaser and at his risk.
 - 13.3 Special requests regarding carriage and insurance shall be communicated to Georg Fischer in due time. Otherwise carriage shall be arranged by Georg Fischer at their discretion, but without responsibility, by the quickest and cheapest method possible.
In case of carriage-paid delivery transport arrangements shall be made by Georg Fischer. If the Purchaser specifies particular requirements, any extra costs involved shall be borne by him.
 - 13.4 In the event of damage or loss of the Products during carriage the Purchaser shall mark the delivery documents accordingly and immediately have the damage ascertained by the carrier. Not readily ascertainable damages sustained during carriage shall be notified to the carrier within six (6) days after receipt of the Products.
- ## 14 Inspection, Notification of Defects and Damages
- 14.1 The Products will be subject to normal inspection by Georg Fischer during manufacture. Additional tests required by the Purchaser shall be agreed upon in writing and shall be charged to the Purchaser.
 - 14.2 It shall be a condition of Georg Fischer's obligation under the warranties stated hereinafter that Georg Fischer be notified in writing by the Purchaser of any purported defect immediately upon discovery. Notice concerning weight, numbers or apparent defects is to be given latest within 30 days from receipt of the Products, notice of other defects immediately latest within seven (7) working days after discovery, in any event within the agreed warranty period.
 - 14.3 Purchaser shall not dispose of allegedly defective Products until all warranty and/or damage claims are finally settled. At its request, defective Products are to be placed at Georg Fischer's disposal.
 - 14.4 At its request, Georg Fischer shall be given the opportunity to inspect the defect and/or damage, prior to commencement of remedial work, either itself or by third party experts.

15 Warranty

- 15.1 At the written request of the Purchaser, Georg Fischer undertakes to repair or replace at its discretion, as quickly as possible and free of charge, all Products supplied which demonstrably suffer from faulty design, materials or workmanship, from faulty operating or installation instructions or which become defective or unusable due to faulty advice.
In order to protect employees from toxic or radioactive substances which may have been transported through defective parts returned to Georg Fischer's sales organisation, said parts must be accompanied by a Material Safety Disclosure Form. The form may be obtained from Georg Fischer's local sales company or via www.piping.georgfischer.com.
Replaced parts shall become property of Georg Fischer, unless Georg Fischer waives such claim.
- 15.2 For Products which are manufactured to specifications, drawings or patterns supplied by the Purchaser, Georg Fischer's warranty shall be restricted to proper materials and workmanship.
- 15.3 The Purchaser shall be entitled to rescind the contract or to demand a reduction of the contract price if
 - the repair or replacement of the defective Product is impossible
 - the defective Product is not repaired or replaced within a reasonable period
 - Georg Fischer refuses the repair or replacement or if for reasons attributable to Georg Fischer the repair or replacement is delayed.
- 15.4 For Products or essential components manufactured by a third party and supplied by Georg Fischer under this contract, Georg Fischer's warranty is limited to the warranty provided by said third party.
- 15.5 This warranty shall not apply to damage resulting from normal wear and tear, improper storage and maintenance, failure to observe the operating instructions, overstressing or overloading, unsuitable operating media, unsuitable construction work or unsuitable building ground, improper repairs or alterations by the Purchaser or third parties, the use of other than original spare parts and other reasons beyond Georg Fischer's control.
- 15.6 No action or claim may be brought by the Purchaser on account of any alleged breach of warranty or any other obligation of Georg Fischer after the expiration of twelve (12) months from receipt of the Products by the end user or at the latest within eighteen (18) months of the Products being despatched by Georg Fischer.
- 15.7 In case of Products for use in domestic installations or in utilities
 - Georg Fischer will assume the costs of dismantling the defective Product and restoring the damaged object up to CHF 1'000'000 per occurrence.
 - warranty or damage claims - contrary to Section 15.6 - are time-barred five (5) years from the date of installation or seven (7) years from the production date, whichever is earlier.

16 Limitation of Liability

The rights and remedies of the customer shall be exclusively governed by these General Conditions of Supply and shall be in lieu of any remedies at law. All further claims for damages, reduction of the purchase price, termination of or rescission of the contract are excluded. In no case whatsoever shall the customer be entitled to claim damages other than compensation for costs of remedying defects in the supplies. This in particular refers, but shall not be limited, to loss of production, loss of use, loss of orders, loss of profit, third party recovery claims and other direct or indirect or consequential damages.
This limitation of liability equally applies to the extent Georg Fischer is liable for acts or omissions of its employees or third parties engaged for the performance of its obligations. It does not apply in case of unlawful intent or gross negligence on the part of Georg Fischer's management and in case of Georg Fischer's statutory liability, in particular under applicable product liability laws.

17 Severability

Should any term or clause of these General Conditions in whole or in part be found to be unenforceable or void, all other provisions shall remain in full force and effect and the unenforceable or void provision shall be replaced by a valid provision, which comes closest to the original intention of the unenforceable or invalid provision.

18 Place of Performance and Jurisdiction

- 18.1 Place of performance for the Products shall be the Georg Fischer works from which the Products are despatched.
- 18.2 The contract shall be governed by Swiss law without regard to conflict of law provisions that would require the application of another law.
- 18.3 Any civil action based upon any alleged breach of this contract shall be filed and prosecuted exclusively in the courts of Schaffhausen, Switzerland.
Georg Fischer however reserves the right to file actions in any court having jurisdiction over controversies arising out of or in connection with the present contract.

Worldwide at home

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