

+GF+

HW HYGRADE
WATER

Polyethylene Fittings
Product Catalogue



CONTENTS

EF COUPLERS

Coupler SDR11	d20 – 315 mm	6
Coupler SDR11	d355 – 900 mm	7
Coupler SDR17	d160 – 800 mm	8
Coupler SDR17	d900 – 1200 mm	9
Coupler SDR26	d710 – 1200 mm	9

EF SADDLES

Monobloc tapping saddle SDR11	d63 – 160 mm	10
Modular saddle SDR11	d63 – 400 mm	11
Modular tapping tee SDR11	d63 x 20 – 63 mm	12
Modular tapping valve tee SDR11	d63 x 32 – 63 mm	12
Branch saddle SDR11	d110 – 250 mm	13
Branch saddle topload SDR11	d280 – 630 mm	14
Branch saddle topload SDR11	d315 – 1000 mm	15
Branch saddle topload SDR11	d450 – 1000 mm	16
Branch saddle topload SDR17	d710 – 2000 mm	17

TRANSITIONS

Transition adaptor Female 316	d20 x 15 – 63 x 50	18
Transition adaptor Male 316	d20 x 15 – 63 x 50	18
Transition adaptor Female brass	d32 x 25 – 63 x 50	19
Transition adaptor Male brass	d20 x 15 – 63 x 50	19
Transition coupler Female brass	d32 x 25 – 63 x 50	20
Transition coupler Male brass	d20 x 15 – 63 x 50	21

EF ELBOWS

Elbow 45° SDR11	d32 – 180 mm	22
Elbow 45° SDR11	d200 – 250 mm	23
Elbow 90° SDR11	d20 – 63 mm	23
Elbow 90° SDR11	d75 – 250 mm	24

EF TEES

Tee 90° equal SDR11	d20 – 180 mm	25
Tee 90° equal SDR11	d200 – 250 mm	26
Tee 90° reduced SDR11	d110 – 250 mm	26

EF REDUCERS

Reducer SDR11	d25 – 180 mm	27
Reducer SDR11	d200 – 250 mm	28

EF END CAPS

End cap SDR11	d20 – 63 mm	29
End cap (kit) SDR11	d75 – 225 mm	29
End Cap SDR11	d160 – 250 mm	30

EF FLEX RESTRAINTS

Flex restraints	d160 - 1600 mm	31
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PE BALL VALVES

ELGEF plus ball valve "Full Bore"	d110 – 160 mm	32
ELGEF plus ball valve SDR11	d20 – 225 mm	32

BW ELBOWS - PE100

Elbow 45° SDR11	d20 – 315 mm	33
Elbow 45° SDR17	d90 – 315 mm	34
Elbow 90° SDR11	d20 – 315 mm	35
Elbow 90° SDR17	d90 – 315 mm	36

BW TEES - PE100

Tee 90° equal SDR11	d20 – 630 mm	37
Tee 90° equal SDR17	d90 – 630 mm	38
Tee 90° reduced SDR11	d63 – 315 mm	39
Tee 90° reduced SDR17	d90 – 315 mm	40
Tee 45° equal SDR11	d50 – 110 mm	41
Tee 45° equal SDR17	d90 – 110 mm	41

BW REDUCERS - PE100

Reducer long spigot SDR11	d25 – 630 mm	42 - 43
Reducer long spigot SDR17	d90 – 630 mm	44 - 45
Reducer short spigot SDR11	d32 – 630 mm	46 - 47
Reducer short spigot SDR17	d315 – 630 mm	48

BW END CAPS - PE100

End cap SDR11	d20 – 630 mm	49
End cap SDR17	d90 – 630 mm	50

FLANGES - PE100

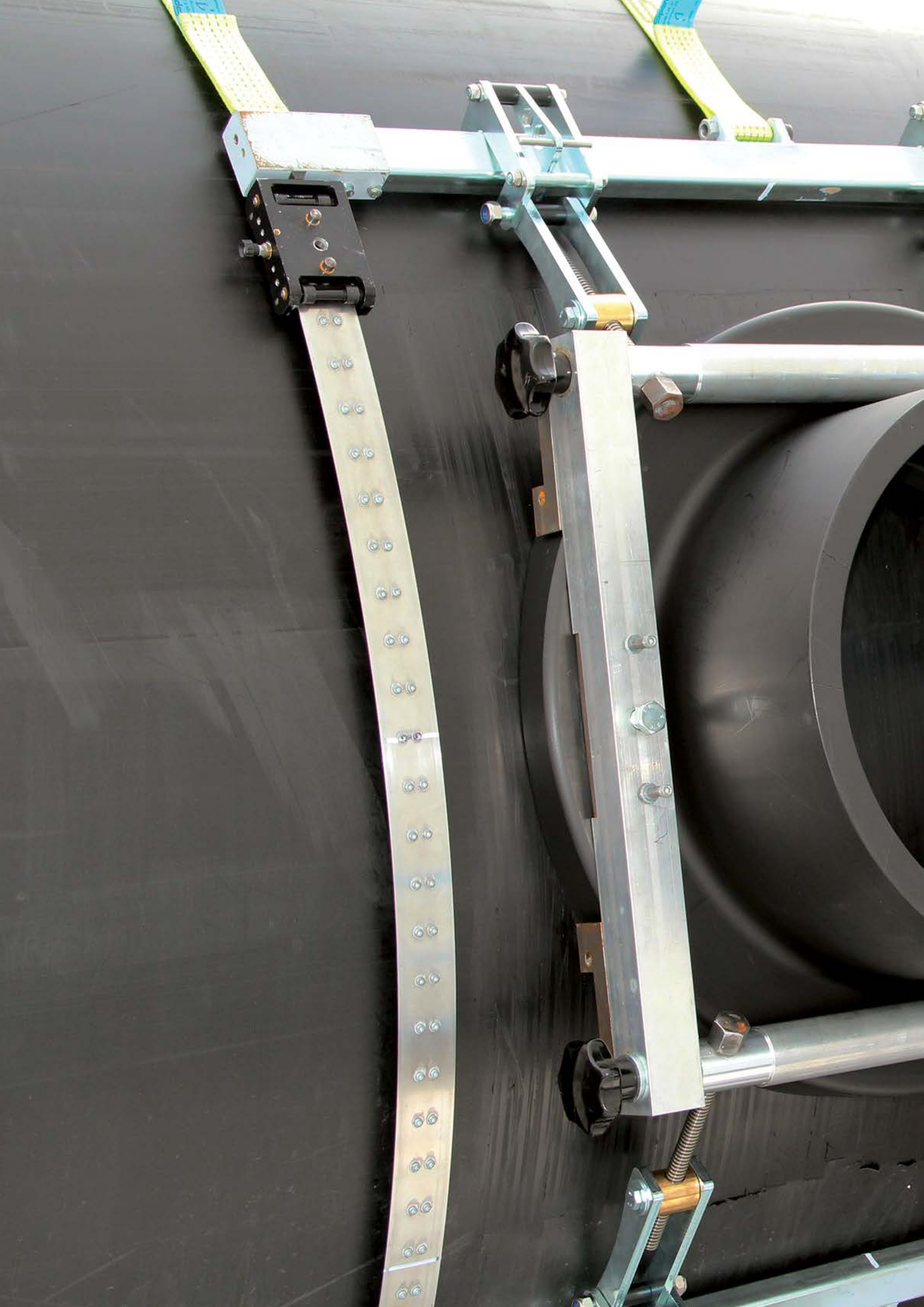
Stub flange long spigot SDR11	d20 – 800 mm	51
Stub flange long spigot SDR17	d90 – 900 mm	52
Stub flange short spigot SDR11	d250 – 800 mm	53
Stub flange short spigot SDR17	d250 – 1000 mm	54

BACKING RINGS

Galvanised AS4087	d63 - 630 mm	55
FBE Coated AS4087	d63 - 630 mm	56
Stainless Steel AS4087	d63 - 630 mm	57

DRESSING SETS

Potable - Galv. Bolts	d80 - 350 mm	58
Potable - Stainless Bolts	d80 - 350 mm	58
Non Potable - Galv. Bolts	d80 - 350 mm	59
Non Potable - Stainless Bolts	d80 - 350 mm	59





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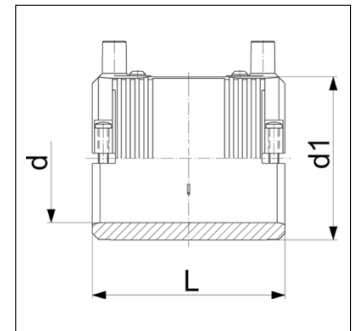
EF COUPLERS

COUPLER WITH INTEGRAL PIPE FIXATION SDR11

d20 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
 - ▶ 10 bar Gas / 16 bar Water
 - ▶ 4mm pin connectors
 - ▶ Limited path fusion indicators
- ▶ Removable centre stop

d (mm)	Hygrade Code	d1 (mm)	L (mm)
20	EFC020GF	31	70
25	EFC025GF	36	70
32	EFC032GF	44	72
40	EFC040GF	54	80
50	EFC050GF	66	88
63	EFC063GF	81	96

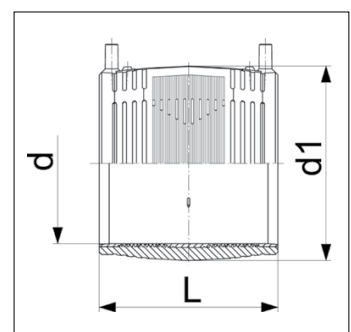


COUPLER SDR11

d75 – 315 mm

- ▶ PPE 100 SDR 11 (ISO S5)
 - ▶ 10 bar Gas / 16 bar Water
 - ▶ 4 mm pin connectors
 - ▶ Limited path fusion indicators
- ▶ Removable centre stop up to d160

d (mm)	Hygrade Code	d1 (mm)	L (mm)
75	EFC075GF	96	110
90	EFC090GF	113	125
110	EFC110GF	138	145
125	EFC125GF	154	156
140	EFC140GF	172	166
160	EFC160GF	196	180
180	EFC180GF	219	192
200	EFC200GF	244	208
225	EFC225GF	273	225
250	EFC250GF	304	248
280	EFC280GF	340	252
315	EFC315GF	382	267

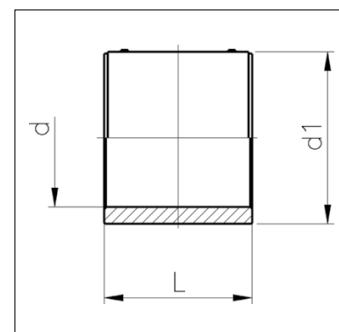


COUPLER SDR11

d355 – 800 mm

- ▶ PE 100 SDR 11 (ISO S5)
 - ▶ 10 bar Gas / 16 bar Water
 - ▶ 4 mm pin connectors
 - ▶ Limited path fusion indicators
- ▶ With active reinforcement

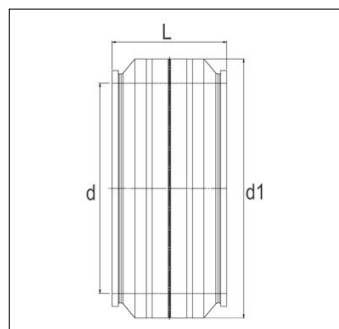
d (mm)	Hygrade Code	d1 (mm)	L (mm)
355	EFC355GF	438	291
400	EFC400GF	493	295
450	EFC450GF	554	327
500	EFC500GF	616	358
560	EFC560GF	689	396
630	EFC630GF	775	440
710	EFC710GF	874	463
800	EFC800GF	982	484

**COUPLER SDR11**

d710 – d900 mm

- ▶ PE 100 SDR 11 (ISO S8)
- ▶ 16 bar water
- ▶ Only for water applications
- ▶ 4 mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)
900	EFC900GF	1110	550

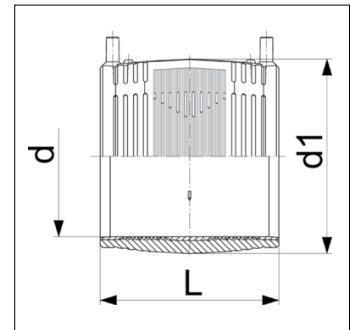


COUPLER SDR17

d160 – 315 mm

- ▶ PE 100 SDR 17 (ISO S8)
 - ▶ 5 bar Gas / 10 bar Water
 - ▶ 4 mm pin connectors
 - ▶ Limited path fusion indicators
- ▶ d160 with removable centre stop

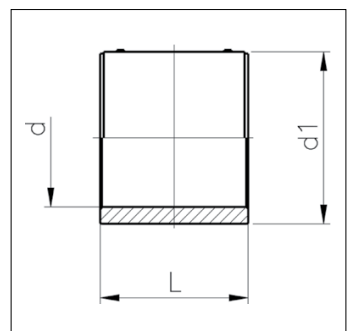
d (mm)	Hygrade Code	d1 (mm)	L (mm)
160	EFC160.17GF	186	180
180	EFC180.17GF	213	192
200	EFC200.17GF	233	206
225	EFC225.17GF	261	225
250	EFC250.17GF	304	248
280	EFC280.17GF	304	252
315	EFC315.17GF	382	267

**COUPLER SDR17**

dN 355 – 800 mm

- ▶ PE 100 SDR 17 (ISO S8)
 - ▶ 5 bar Gas / 10 bar Water
 - ▶ 4 mm pin connectors
 - ▶ Limited path fusion indicators
- ▶ With active reinforcement

d (mm)	Hygrade Code	d1 (mm)	L (mm)
355	EFC335.17GF	416	291
400	EFC400.17GF	467	295
450	EFC450.17GF	526	327
500	EFC500.17GF	584	358
560	EFC560.17GF	647	396
630	EFC630.17GF	727	440
710	EFC710.17GF	820	463
800	EFC800.17GF	922	484

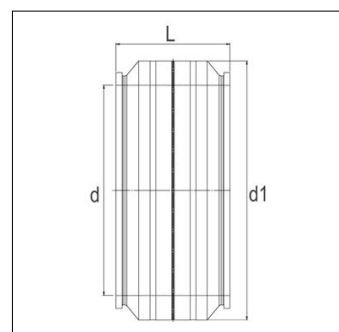


COUPLER SDR17

d900 – 1200 mm

- ▶ PE 100 SDR 17 (ISO S8)
- ▶ 10 bar water
- ▶ Only for water applications
- ▶ 4 mm pin connectors

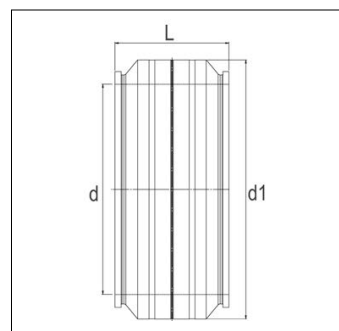
d (mm)	Hygrade Code	d1 (mm)	L (mm)
900	EFC900.17GF	1030	550
1000	EFC1000.17GF	1143	600
1200	EFC1200.17GF	1370	650

**COUPLER SDR26**

d710 – 1200 mm

- ▶ PE 100 SDR 26 (ISO S12.5)
- ▶ 6 bar water
- ▶ Only for water applications
- ▶ 4mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)
710	EFC710.26GF	797	360
800	EFC800.26GF	897	380
900	EFC900.26GF	1009	400
1000	EFC1000.26GF	1121	440
1200	EFC1200.26GF	1345	480



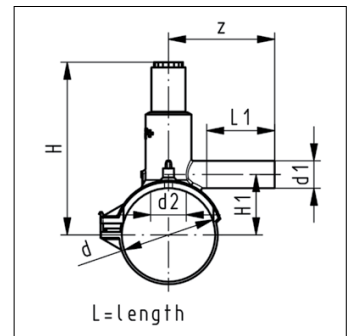
EF SADDLES

MONOBLOC TAPPING SADDLE SDR11

PIPE SIZE d63 – 160 mm. OUTLET 20 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Complete with moulded lower part
- ▶ 4 mm pin connectors
- ▶ Limited path fusion indicators
- ▶ Long fusion outlet
- ▶ 'O' ring sealed screw cap
- ▶ * Compatible with GASSTOP type GS
- ▶ With integrated cutter to tap live mains under pressure

d (mm)	d1 (mm)	Hygrade Code	d2 (mm)	H (mm)	H1 (mm)	L (mm)	L1 (mm)	Z (mm)
63*	20	EFTTM063020GF	25	146	44	144	76	110
63	25	EFTTM063025GF	25	146	44	144	76	110
63*	32	EFTTM063032GF	25	146	44	144	76	110
90*	20	EFTTM090020GF	32	198	61	162	76	115
90	25	EFTTM090025GF	32	198	61	162	76	115
90*	32	EFTTM090032GF	32	198	61	162	76	115
90	63	EFTTM090063GF	32	198	61	162	76	115
110*	20	EFTTM110020GF	32	208	71	162	76	115
110	25	EFTTM110025GF	32	208	71	162	76	115
110*	32	EFTTM110032GF	32	208	71	162	76	125
110	63	EFTTM110063GF	32	208	71	162	100	160
125*	20	EFTTM125020GF	32	216	79	162	76	120
125	25	EFTTM125025GF	32	216	79	162	76	120
125*	32	EFTTM125032GF	32	216	79	162	76	120
125	63	EFTTM125063GF	32	216	79	162	76	120
160*	20	EFTTM160020GF	32	233	96	162	76	120
160	25	EFTTM160025GF	32	233	96	162	76	125
160*	32	EFTTM160032GF	32	233	96	162	76	130
160	63	EFTTM160063GF	32	233	96	162	100	170

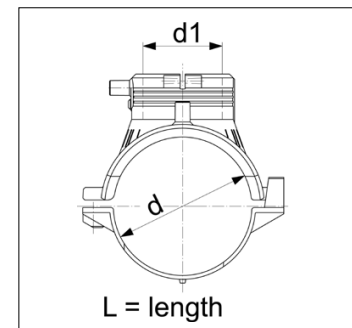


MODULAR SADDLE SDR11

PIPE SIZE d63 – 400 mm. OUTLET 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Complete with lower part
- ▶ 4 mm pin connectors
- ▶ SDR compatibility according to individual parts
- ▶ Not suitable for all tapping tees, tapping valves and spigots with cutter of the modular systems
- ▶ **** INSTALLATION:** Delivery without lower part. Topload 630 Clamping device is required (below)

d (mm)	d1 (mm)	Hygrade Code	L (mm)	SDR Pipe
63	63	EFS063063GF	165	9 - 11
75	63	EFS075063GF	165	9 - 11
90	63	EFS090063GF	165	9 - 17
110	63	EFS110063GF	165	9 - 17
125	63	EFS125063GF	165	9 - 17
140	63	EFS140063GF	165	9 - 17
160	63	EFS160063GF	165	9 - 17
180	63	EFS180063GF	165	9 - 26
200	63	EFS200063GF	165	9 - 26
225	63	EFS225063GF	165	9 - 26
250	63	EFS250063GF	165	9 - 26
280**	63	EFS280063GF	165	9 - 26
315 - 355**	63	EFS315063GF	165	9 - 33
400**	63	EFS400063GF	165	9 - 33

**CLAMPING DEVICE TOPLOAD 630**

- ▶ This clamp and mounting tool is used to install top load saddles on pipes of d280 - 400mm and branch fittings on pipes of d280 - 630mm
- ▶ Set includes: 1 base mounting clamp, 1 clamping attachment, 1 bracket, 2 clamping screws, 2 ratchet straps, 1 transport box

d-d (mm)	Hygrade Code
280-630	Contact for details

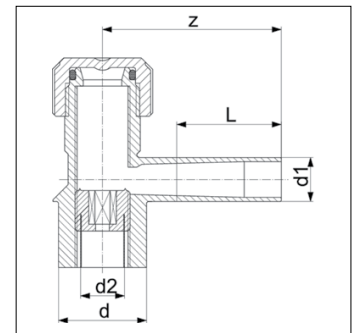


MODULAR TAPPING TEE SDR11

CONNECTION d63 mm. OUTLET 20 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Long fusion outlet
- ▶ 'O' ring sealed screw cap
- ▶ With integrated cutter to tap live mains under pressure
- ▶ Used in conjunction with modular saddle
- ▶ For use on SDR11 pipe: d63 – 225 mm
- ▶ For use on SDR17 pipe: d75 – 315 mm
- ▶ * For use on SDR11 pipe: d250 – 315 mm
For use on SDR17 pipe: d250 – 400 mm
- ▶ ** For use on SDR11 pipe: d110 – 225 mm
For use on SDR17 pipe: d110 – 315 mm
- ▶ Spindle Size (SW) 17

d (mm)	d1 (mm)	Hygrade Code	d2 (mm)	L (mm)	z (mm)	SW (mm)
63	20	EFTT6320GF	32	69	130	17
63	25	EFTT6325GF	32	70	130	17
63	32	EFTT6332GF	32	76	130	17
63	40	EFTT6340GF	32	81	137	17
63	63	EFTT6363GF	32	100	160	17
63*	63	EFTTD6363GF	35	100	160	17
63**	63		41	100	160	17

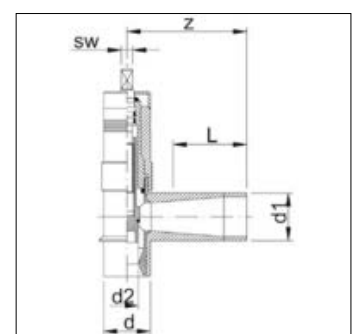


MODULAR TAPPING VALVE TEE SDR11

CONNECTION d63 mm. OUTLET 20 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Long fusion outlet
- ▶ With integrated cutter to tap live mains under pressure
- ▶ Used in conjunction with modular saddle
- ▶ For use on SDR11 pipe: d63 – 250 mm
- ▶ For use on SDR17 pipe: d75 – 315 mm
For use on SDR26 pipe: d250 – 400 mm
- ▶ Spindle Size (SW) 14
- ▶ Number of turns to fully open or close valve is 13 for outlet d32
- ▶ Number of turns to fully open or close valve is 28 for outlet d63

d (mm)	d1 (mm)	Hygrade Code	d2 (mm)	L (mm)	z (mm)	SW (mm)
63	32	EFTTV6332GF	21	70	127	14
63	63	EFTTV6363GF	31	100	160	14

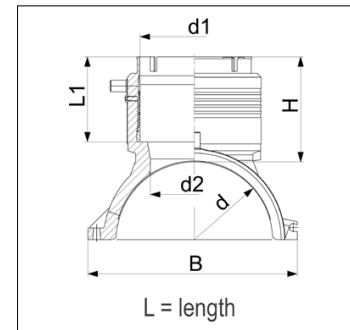


BRANCH SADDLE SDR11

PIPE SIZE d110 – 250 mm. OUTLET 90 – 125 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Branch Saddle complete, incl. lower part and 3 screws
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors
- ▶ Electrofusion outlet with integrated pipe fixation
- ▶ Protected wire without medium contact
- ▶ **** INSTALLATION:** Delivery without lower part. Top Load part no. EFBST140GF is required (below).

d (mm)	d1 (mm)	Hygrade Code	H (mm)	L (mm)	L1 (mm)	B (mm)	d2 (mm)	SDR Pipe
110	90	EFBS110090GF	101	220	82	164	65	9 - 17
110	110	EFBS110110GF	107	220	88	164	65	9 - 17
125	90	EFBS125090GF	101	220	82	179	65	9 - 17
125	110	EFBS125110GF	107	220	88	179	65	9 - 17
140**	90	EFBS140090GF	101	220	81	195	65	9 - 17
140**	110	EFBS140110GF	107	220	87	195	65	9 - 17
160	90	EFBS160090GF	102	240	82	215	65	9 - 17
160	110	EFBS160110GF	108	240	88	215	86	9 - 17
160	125	EFBS160125GF	129	240	99	215	86	9 - 17
180	90	EFBS180090GF	102	260	82	237	65	9 - 17
180	110	EFBS180110GF	108	260	88	237	86	9 - 17
180	125	EFBS180125GF	129	260	99	237	86	9 - 17
200	90	EFBS200090GF	102	260	82	253	65	9 - 17
200	110	EFBS200110GF	108	260	88	253	86	9 - 17
200	125	EFBS200125GF	129	260	99	253	86	9 - 17
225	90	EFBS225090GF	102	260	82	287	65	9 - 17
225	110	EFBS225110GF	108	260	88	287	86	9 - 17
225	125	EFBS225125GF	129	260	99	287	86	9 - 17
250	90	EFBS250090GF	102	260	82	312	65	9 - 17
250	110	EFBS250110GF	108	260	88	312	86	9 - 17
250	125	EFBS250125GF	129	260	99	312	86	9 - 17

**MULTIPLE USE ASSEMBLY TOOL BRANCH SADDLE**

d140 mm.

- ▶ Only to be used with branch saddle d140
- ▶ Delivered as complete kit including screws and belts

d (mm)	Hygrade Code
140	EFBST140GF

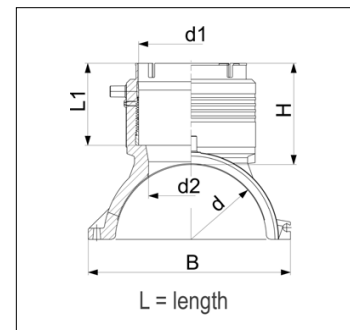


BRANCH SADDLE TOPLOAD SDR11

PIPE SIZE d280 – 630 mm OUTLET 90 – 125 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Electrofusion outlet with integrated pipe fixation
- ▶ Limited path fusion indicators
- ▶ 4mm pin connectors
- ▶ Protected wire without medium contact
- ▶ **INSTALLATION:** Topload 630 Clamping device is required (below). Angle adaptors for fusion cable also required (EFWELDPIN4.0GF).

d (mm)	d1 (mm)	Hygrade Code	H (mm)	L (mm)	L1 (mm)	B (mm)	d2 (mm)	SDR Pipe
280	90	EFBS280090GF	102	260	82	243	65	11 - 26
280	110	EFBS280110GF	108	260	88	243	86	11 - 26
280	125	EFBS280125GF	129	260	99	243	86	11 - 26
315 - 355	90	EFBS315090GF	102	260	82	249	65	11 - 26
315 - 355	110	EFBS315110GF	108	260	88	249	86	11 - 26
315 - 355	125	EFBS315125GF	129	260	99	249	86	11 - 26
400 - 450	90	EFBS400090GF	102	260	82	256	65	11 - 26
400 - 450	110	EFBS400110GF	108	260	88	256	86	11 - 26
400 - 450	125	EFBS400125GF	129	260	99	256	86	11 - 26
500 - 630	90	EFBS500090GF	102	260	82	263	65	11 - 26
500 - 630	110	EFBS500110GF	108	260	88	263	86	11 - 26
500 - 630	125	EFBS500125GF	129	260	99	263	86	11 - 26

**INSTALLATION SET TOPLOAD TL 630**

- ▶ This clamp and mounting tool is used to install top load saddles on pipes of d280 - 400mm and branch fittings on pipes of d280 - 630mm
- ▶ Set includes: 1 base mounting clamp, 1 clamping attachment, 1 bracket, 2 clamping screws, 2 ratchet straps, 1 transport box

d-d (mm)	Hygrade Code
280 - 630	Contact for details

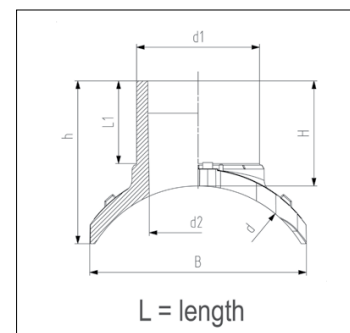


BRANCH SADDLE TOPLOAD SDR11

PIPE SIZE d315 – 1000 mm. OUTLET 160 – 225 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors
- ▶ Spigot outlet for butt and electrofusion
- ▶ Spigot outlet for butt- and electrofusion
- ▶ Integrated pressure testing port
- ▶ Full pressure applicable - no derating factor
- ▶ **INSTALLATION:** Topload 225 Clamping device is required (below). Angle adaptors for fusion cable also required (EFWELDPIN4.0GF).

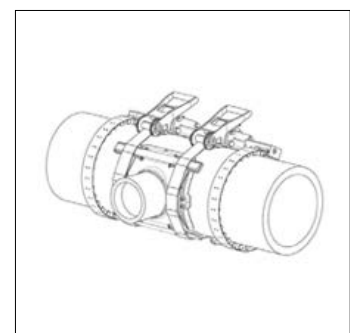
d (mm)	d1 (mm)	Hygrade Code	d2 (mm)	L (mm)	L1 (mm)	h (mm)	H (mm)	B (mm)	SDR Pipe
315	160	EFBS315160GF	131	322	110	212	137	270	11 - 26
315	225	EFBS315225GF	184	366	127	306	160	301	11 - 26
355	160	EFBS355160GF	131	322	110	206	137	270	11 - 26
355	225	EFBS355225GF	184	366	127	319	160	313	11 - 26
400	160	EFBS400160GF	131	322	110	198	137	290	11 - 26
400	225	EFBS400225GF	184	366	127	329	160	303	11 - 26
450	160	EFBS450160GF	131	322	110	194	137	290	11 - 26
450	225	EFBS450225GF	184	366	127	329	160	324	11 - 26
500	160	EFBS500160GF	131	322	110	186	137	303	11 - 26
500	225	EFBS500225GF	184	366	127	344	160	341	11 - 26
560	160	EFBS560160GF	131	322	110	183	137	303	11 - 26
560	225	EFBS560225GF	184	366	127	344	160	341	11 - 26
630	160	EFBS630160GF	131	322	110	177	137	305	11 - 33
630	225	EFBS630225GF	184	366	127	353	160	349	11 - 33
710	160	EFBS710160GF	131	322	110	172	137	305	11 - 33
710	225	EFBS710225GF	184	366	127	352	160	350	11 - 33
800	160	EFBS800160GF	131	322	110	168	137	305	11 - 33
800	225	EFBS800225GF	184	366	127	359	160	357	11 - 33
900	225	EFBS900225GF	184	366	127	359	160	356	11 - 33
1000	225	EFBS1000225GF	184	366	127	359	160	356	11 - 33

**INSTALLATION SET TOPLOAD TL 225**

PIPE SIZE d315 – 1000 mm. OUTLET d160 – 225 mm

- ▶ Suitable for branch saddles d315 - 1000 mm with d160/225 mm spigot outlets
- ▶ Use of set is mandatory for the installation of branch saddles
- ▶ Set includes: frame with tension belts, peeling tool, clamp and transport box

d (mm)	d1 (mm)	Hygrade Code
315 - 1000	160 / 225	contact for details

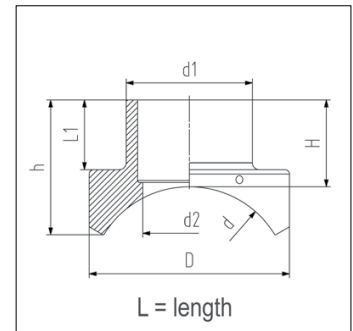


BRANCH SADDLE TOPLOAD SDR11

PIPE SIZE d450 – 1000 mm. OUTLET 315 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors
- ▶ Spigot outlet for butt and electrofusion
- ▶ Full pressure applicable - no derating factor
- ▶ **INSTALLATION:** Topload 500 Clamping device is required (below). Angle adaptors for fusion cable also required (EFWELDPIN4.0GF).

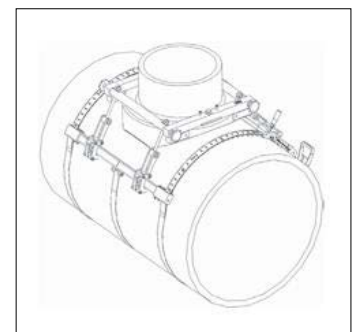
d (mm)	d1 (mm)	Hygrade Code	d2 (mm)	D (mm)	L (mm)	L1 (mm)	h (mm)	H (mm)	SDR Pipe
450	315	EFBS450315GF	184	500	500	174	346	216	11 - 26
500	315	EFBS500315GF	131	500	500	174	337	216	11 - 26
560	315	EFBS560315GF	184	500	500	174	327	216	11 - 26
630	315	EFBS630315GF	184	500	500	174	312	216	11 - 33
710	315	EFBS710315GF	184	500	500	174	297	216	11 - 33
800	315	EFBS800315GF	184	500	500	174	287	216	11 - 33
900	315	EFBS900315GF	184	500	500	174	281	216	11 - 33
1000	315	EFBS1000315GF	184	500	500	174	274	216	11 - 33

**INSTALLATION SET TOPLOAD TL 500**

PIPE SIZE d500 – 2000 mm. OUTLET d315 – 500 mm

- ▶ Suitable for branch saddles d500 - 2000 mm with d315/500 mm spigot outlets
- ▶ Use of set is mandatory for the installation of branch saddles
- ▶ Set includes: frame with tension belts, peeling tool, clamp for outlet d315/500 mm and transport box

d (mm)	d1 (mm)	Hygrade Code
315 - 1000	315 / 500	Contact for details

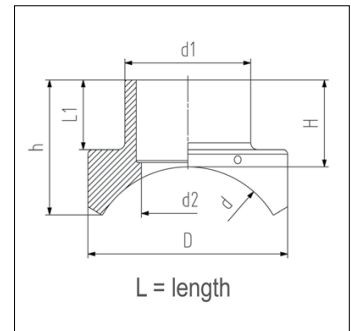


BRANCH SADDLE TOPLOAD SDR17

PIPE SIZE d710 – 2000 mm. OUTLET 315 - 500 mm

- ▶ PE 100 SDR 17 (ISO S8)
 - ▶ 5 bar Gas / 10 bar Water
 - ▶ 4 mm pin connectors
 - ▶ Spigot outlet for butt and electrofusion
- ▶ Full pressure applicable - no derating factor
- ▶ **INSTALLATION:** Topload 500 Clamping device is required (below). Angle adaptors for fusion cable also required (EFWELDPIN4.0GF).

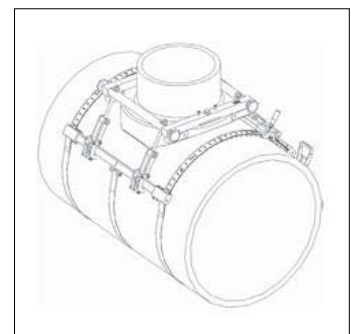
d (mm)	d1 (mm)	Hygrade Code	d2 (mm)	D (mm)	L (mm)	L1 (mm)	h (mm)	H (mm)	SDR Pipe
710	315	EFBS710315GF	250	500	500	157	266	174	11 - 33
800	315	EFBS800315GF	250	500	500	157	261	174	11 - 33
900	315	EFBS900315GF	250	500	500	157	251	174	11 - 33
900	500	EFBS900500GF	397	700	700	219	406	237	11 - 33
1000	315	EFBS1000315GF	250	500	500	157	246	174	11 - 33
1000	500	EFBS1000500GF	397	700	700	219	396	237	11 - 33
1200	315	EFBS1200315GF	250	500	500	157	241	174	11 - 33
1200	500	EFBS1200500GF	397	700	700	219	378	237	11 - 33
1400	315	EFBS1400315GF	250	500	500	157	234	174	11 - 33
1400	500	EFBS1400500GF	397	700	700	219	363	237	11 - 33
1600	315	EFBS1600315GF	250	500	500	157	228	174	11 - 33
1600	500	EFBS1600500GF	397	700	700	219	352	237	11 - 33
2000	315	EFBS2000315GF	250	500	500	157	221	174	11 - 33
2000	500	EFBS2000500GF	397	700	700	219	337	237	11 - 33

**INSTALLATION SET TOPLOAD TL 500**

PIPE SIZE d500 – 2000 mm. OUTLET d315 – 500 mm

- ▶ Suitable for branch saddles d500 - 2000 mm with d315/500 mm spigot outlets
- ▶ Use of set is mandatory for the installation of branch saddles
- ▶ Set includes: frame with tension belts, peeling tool, clamp for outlet d315/500 mm and transport box

d (mm)	d1 (mm)	Hygrade Code
315 - 1000	315 / 500	Contact for details



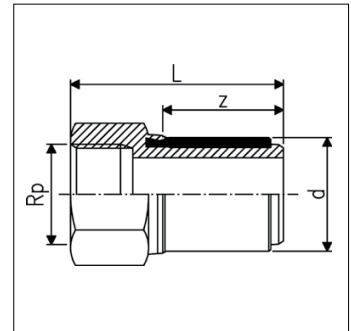
TRANSITIONS

TRANSITION ADAPTOR PE/316 STAINLESS STEEL

SDR11 D20 – 63 MM. FEMALE THREAD 15 – 50 MM BSP

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Only for ELGEF Plus Couplers and Fittings

d (mm)	Rp (mm)	Hygrade Code	L (mm)	z (mm)
20	15	EFAFS02015GF	65	33
25	20	EFAFS02520GF	66	33
32	25	EFAFS03225GF	71	35
40	32	EFAFS04032GF	77	39
50	40	EFAFS05040GF	81	43
63	50	EFAFS06350GF	89	47

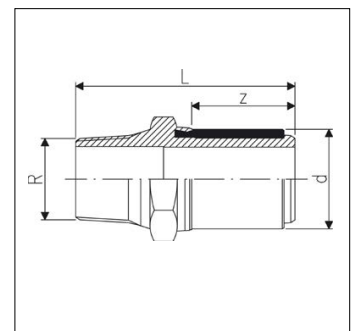


TRANSITION ADAPTOR PE/316 STAINLESS STEEL

SDR11 D20 – 63 MM. MALE THREAD 15 – 50 MM BSP

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Only for ELGEF Plus Couplers and Fittings

d (mm)	R (mm)	Hygrade Code	L (mm)	z (mm)
20	15	EFAMS02015GF	75	33
25	20	EFAMS02520GF	76	33
32	25	EFAMS03225GF	80	35
40	32	EFAMS04032GF	86	39
40	40	EFAMS04040GF	86	39
50	40	EFAMS05040GF	90	43
63	40	EFAMS06340GF	98	47
63	50	EFAMS06350GF	98	47

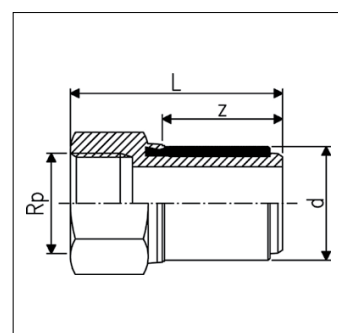


TRANSITION ADAPTOR PE/BRASS (MS 58) SDR 11

d32 – 63 mm. FEMALE THREAD 25 – 50 MM BSP

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Only for ELGEF Plus Couplers and Fittings

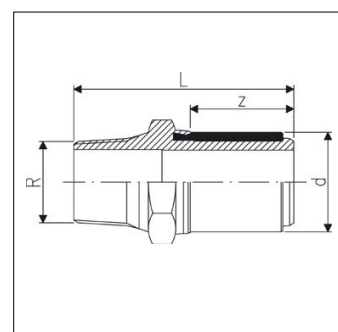
d (mm)	Rp (mm)	Hygrade Code	L (mm)	z (mm)
32	25	EFAFB03225GF	71	35
40	32	EFAFB04032GF	77	39
50	40	EFAFB05040GF	81	43
63	25	EFAFB06325GF	89	47
63	32	EFAFB06332GF	89	47
63	40	EFAFB06340GF	89	47
63	50	EFAFB06350GF	89	47

**TRANSITION ADAPTOR PE/BRASS (MS 58) SDR11**

d20 – 63 mm. MALE THREAD 15 – 50 MM BSP

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Only for ELGEF Plus Couplers and Fittings

d (mm)	R (mm)	Hygrade Code	L (mm)	z (mm)
20	15	EFAMB02015GF	75	33
25	20	EFAMB02520GF	76	33
32	25	EFAMB03225GF	80	35
32	32	EFAMB03232GF	82	35
32	40	EFAMB03240GF	82	35
40	25	EFAMB04025GF	84	39
40	32	EFAMB04032GF	86	39
40	40	EFAMB04040GF	86	39
50	25	EFAMB05025GF	88	43
50	32	EFAMB05032GF	90	43
50	40	EFAMB05040GF	90	43
63	32	EFAMB06332GF	94	47
63	40	EFAMB06340GF	94	47
63	50	EFAMB06350GF	98	47

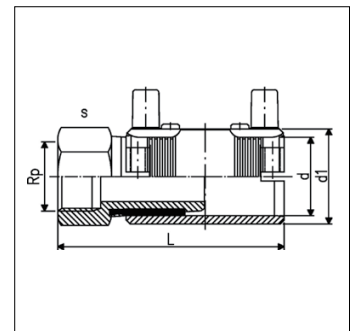


TRANSITION COUPLER KIT PE/BRASS (CW617N) SDR11

d32 – 63 mm. FEMALE THREAD 25 – 50mm BSP

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ With integral pipe fixation
- ▶ 4 mm pin connectors
- ▶ Limited path fusion indicators
- ▶ Supplied as a kit

d (mm)	Rp (mm)	Hygrade Code	d1 (mm)	L (mm)	s (mm)
32	25	EFCF032025GF	44	108	40
40	32	EFCF040032GF	54	118	50
50	40	EFCF050040GF	66	126	60
63	25	EFCF063025GF	81	138	70
63	32	EFCF063032GF	81	138	70
63	40	EFCF063040GF	81	138	70
63	50	EFCF063050GF	81	138	70

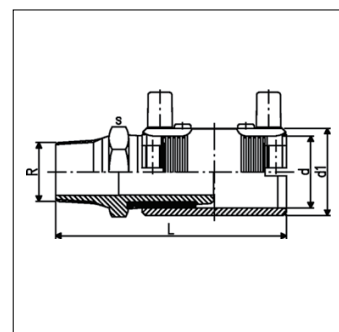


TRANSITION COUPLER KIT PE/BRASS (CW617N) SDR11

d20 – 63 mm. MALE THREAD 15 – 50 mm BSP

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ With integral pipe fixation
- ▶ 4 mm pin connectors
- ▶ Limited path fusion indicators
- ▶ Supplied as a kit

d (mm)	R (mm)	Hygrade Code	d1 (mm)	L (mm)	s (mm)
20	15	EFCM02015GF	31	110	30
20	20	EFCM02020GF	44	124	40
25	20	EFCM02520GF	36	111	35
25	25	EFCM02525GF	44	124	40
32	15	EFCM03215GF	44	121	30
32	20	EFCM03220GF	44	122	35
32	25	EFCM03225GF	44	117	40
32	32	EFCM03232GF	54	135	50
32	40	EFCM03240GF	60	143	60
32	50	EFCM03250GF	81	157	70
40	25	EFCM04025GF	54	133	40
40	32	EFCM04032GF	54	127	50
40	40	EFCM04040GF	66	143	60
40	50	EFCM04050GF	81	157	70
50	25	EFCM05025GF	66	141	40
50	32	EFCM05032GF	66	143	50
50	40	EFCM05040GF	66	135	60
50	50	EFCM05050GF	81	157	70
63	25	EFCM06325GF	81	151	40
63	32	EFCM06332GF	81	153	40
63	40	EFCM06340GF	81	153	60
63	50	EFCM06350GF	81	147	70



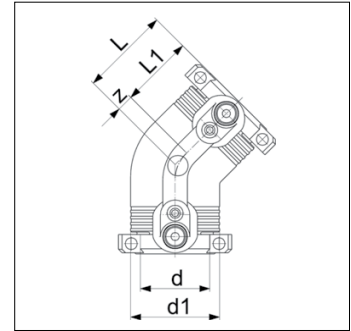
EF ELBOWS

ELBOW 45° WITH INTEGRAL PIPE FIXATION SDR11

d32 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	Z (mm)
32	EFE03245GF	44	44	36	8
40	EFE04045GF	54	50	39	11
50	EFE05045GF	66	56	43	13
63	EFE06345GF	81	63	48	15

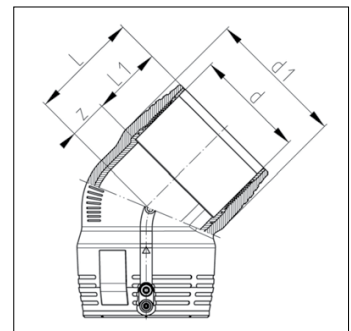


ELBOW 45° SDR11

d75 – 180 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	Z (mm)
75	EFE07545GF	97	71	54	17
90	EFE09045GF	115	91	62	29
110	EFE11045GF	140	112	72	40
125	EFE12545GF	160	119	78	49
160	EFE16045GF	196	135	92	42
180	EFE18045GF	217	144	95	47

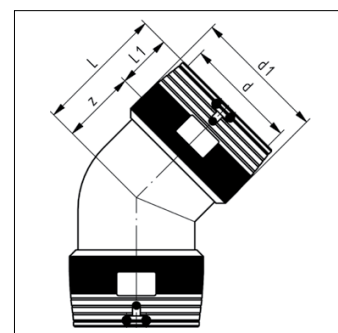


ELBOW 45° SDR11

d200 – 250 mm

- ▶ PE 100 SDR 11 (ISO S5)
 - ▶ 10 bar Gas / 16 bar Water
 - ▶ 4 mm pin connectors
 - ▶ Limited path fusion indicators
- ▶ Two separate fusion zones

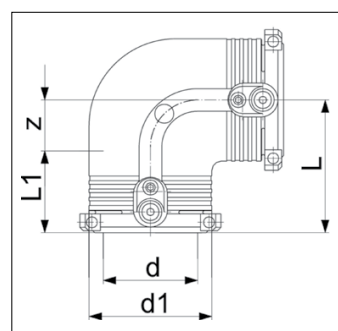
d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	Z (mm)
200	EFE20045GF	250	232	104	128
225	EFE22545GF	280	247	112	135
250	EFE25045GF	310	275	123	152

**ELBOW 90° WITH INTEGRAL PIPE FIXATION SDR11**

d20 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	z (mm)
20	EFE02090GF	35	54	34	20
25	EFE02590GF	35	54	34	20
32	EFE03290GF	44	53	36	17
40	EFE04090GF	54	62	39	23
50	EFE05090GF	66	71	43	28
63	EFE06390GF	81	81	48	32

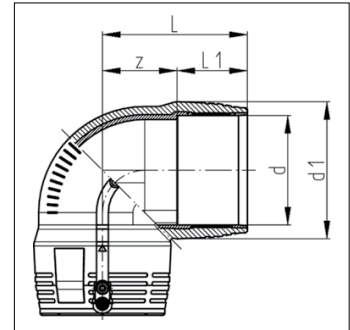


ELBOW 90° SDR11

d75 – 180 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

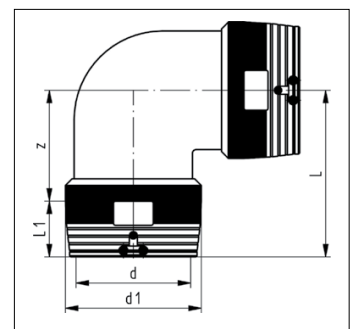
d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	z (mm)
75	EFE07590GF	97	94	54	40
90	EFE09090GF	115	122	62	60
110	EFE11090GF	140	147	72	76
125	EFE12590GF	160	155	77	68
160	EFE16090GF	196	191	92	103
180	EFE18090GF	219	210	96	114

**ELBOW 90° SDR11**

d200 – 250 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors
- ▶ Two separate fusion zones

d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	z (mm)
200	EFE20090GF	250	298	104	194
225	EFE22590GF	280	318	112	206
250	EFE25090GF	310	347	123	224



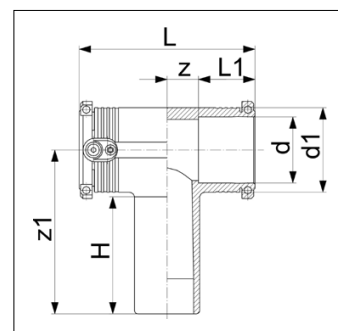
EF TEES

TEE 90° EQUAL WITH INTEGRAL PIPE FIXATION SDR11

d20 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	z (mm)	z1 (mm)	H (mm)
20	EFT020GF	35	88	32	11	92	67
25	EFT025GF	35	90	32	11	92	70
32	EFT032GF	44	102	34	15	100	74
40	EFT040GF	54	119	39	21	114	82
50	EFT050GF	66	135	42	24	126	90
63	EFT063GF	81	151	46	28	150	102

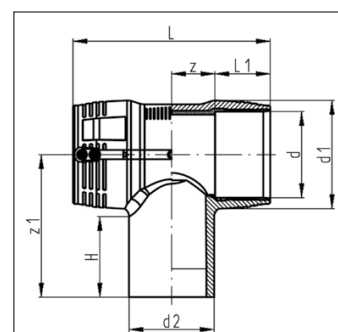


TEE 90° EQUAL SDR11

d75 – 180 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	z (mm)	z1 (mm)	H (mm)
75	EFT075GF	97	178	54	35	143	87
90	EFT090GF	115	205	62	41	161	94
110	EFT110GF	140	255	72	56	184	104
125	EFT125GF	161	276	78	60	207	113
160	EFT160GF	196	325	92	71	206	103
180	EFT180GF	225	344	90	82	250	110

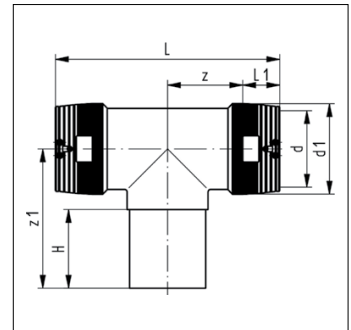


TEE 90° EQUAL SDR11

d200 – 250 mm

- ▶ PE 100 SDR 11 (ISO S5)
 - ▶ 10 bar Gas / 16 bar Water
 - ▶ Limited path fusion indicators
 - ▶ 4 mm pin connectors
- ▶ Two separate fusion zones

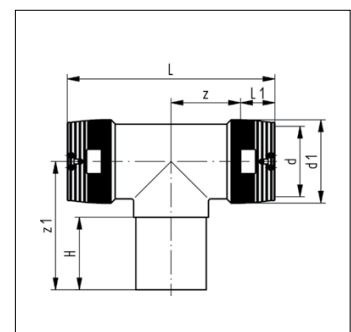
d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	z (mm)	z1 (mm)	H (mm)
200	EFT200GF	250	590	104	191	250	117
225	EFT225GF	280	636	112	206	270	122
250	EFT250GF	310	685	123	220	288	127

**TEE 90° REDUCED SDR11**

d110 – 250 mm

- ▶ PE 100 SDR 11 (ISO S5)
 - ▶ 10 bar Gas / 16 bar Water
 - ▶ Limited path fusion indicators
 - ▶ 4 mm pin connectors
- ▶ Two separate fusion zones

d (mm)	d2 (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	z (mm)	z1 (mm)	H (mm)
110	90	EFRT110090GF	140	255	72	56	245	80
125	90	EFRT125090GF	156	255	75	53	245	80
160	63	EFRT160063GF	200	493	90	127	176	65
160	90	EFRT160090GF	200	492	90	158	188	79
160	110	EFRT160110GF	200	491	90	158	195	85
200	90	EFRT200090GF	250	595	104	194	215	81
200	110	EFRT200110GF	250	600	104	194	218	84
200	160	EFRT200160GF	250	595	104	194	236	101
225	90	EFRT225090GF	280	666	112	217	226	80
225	110	EFRT225110GF	280	670	112	217	235	85
225	160	EFRT225160GF	280	667	112	217	255	105
250	110	EFRT250110GF	310	709	123	220	245	85
250	160	EFRT250160GF	310	711	123	220	264	101



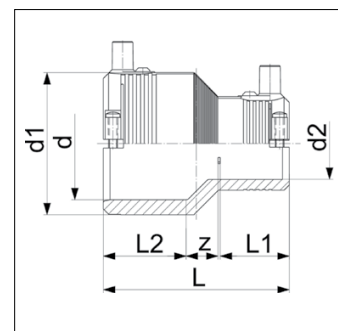
EF REDUCERS

REDUCER WITH INTEGRAL PIPE FIXATION SDR11

INLET d25 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	d2 (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	L2 (mm)	z (mm)
25	20	EFR02520GF	35	74	34	34	6
32	20	EFR03220GF	44	79	33	36	10
32	25	EFR03225GF	44	79	33	36	10
40	20	EFR04020GF	54	88	33	39	15
40	25	EFR04025GF	54	88	33	39	15
40	32	EFR04032GF	54	88	33	39	13
50	32	EFR05032GF	66	96	35	43	18
50	40	EFR05040GF	66	96	39	43	14
63	32	EFR06332GF	81	105	35	48	23
63	40	EFR06340GF	81	105	39	48	19
63	50	EFR06350GF	81	105	43	48	15

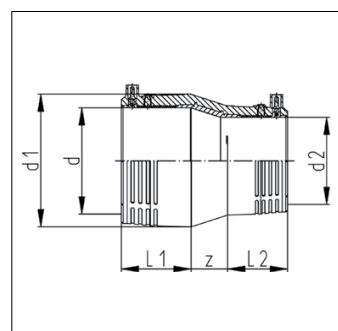


REDUCER SDR11

INLET d90 – 180 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	d2 (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	L2 (mm)	z (mm)
90	63	EFR09063GF	113	146	63	47	36
110	63	EFR11063GF	140	184	71	58	55
110	90	EFR11090GF	138	173	73	63	38
125	90	EFR125090GF	152	180	79	61	40
160	90	EFR160090GF	202	227	90	72	65
160	110	EFR160110GF	202	226	90	71	65
180	125	EFR180125GF	225	254	96	78	80

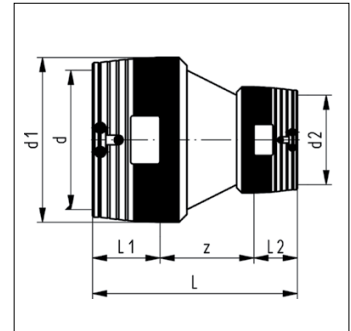


REDUCER SDR11

INLET d200 – 250 mm

- ▶ PE 100 SDR 11 (ISO S5)
 - ▶ 10 bar Gas / 16 bar Water
 - ▶ 4 mm pin connectors
 - ▶ Limited path fusion indicators
- ▶ Two separate fusion zones

d (mm)	d2 (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)	L2 (mm)	z (mm)
200	160	EFR200160GF	250	365	104	90	171
225	160	EFR225160GF	280	385	112	90	183
225	200	EFR225200GF	280	400	112	104	184
250	160	EFR250160GF	310	400	123	90	187
250	200	EFR250200GF	310	427	123	104	200
250	225	EFR250225GF	310	439	123	112	204



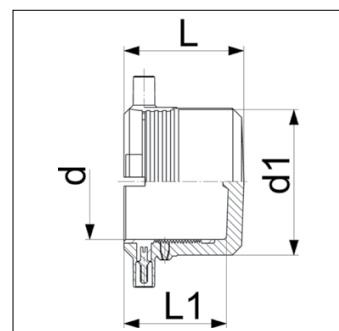
EF END CAPS

END CAP WITH INTEGRAL PIPE FIXATION SDR11

d20 – 63 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)
20	EFEC020GF	35	52	44
25	EFEC025GF	35	52	44
32	EFEC032GF	44	52	44
40	EFEC040GF	54	56	47
50	EFEC050GF	66	60	49
63	EFEC063GF	81	66	54

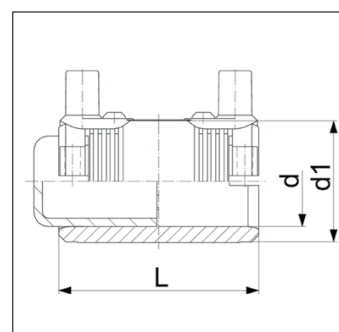


END CAP (KIT) SDR11

d75 – 225 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors
- ▶ Supplied as kit including EF Coupler

d (mm)	Hygrade Code	d1 (mm)	L (mm)
75	EFEC075GF	96	110
90	EFEC090GF	113	125
110	EFEC110GF	133	145
125	EFEC125GF	155	158
140	EFEC140GF	175	170
160	EFEC160GF	197	180
180	EFEC180GF	220	194

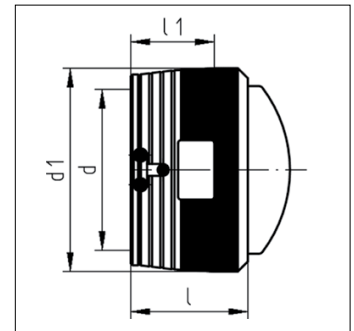


END CAP SDR11

d160 – 250 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ Limited path fusion indicators
- ▶ 4 mm pin connectors

d (mm)	Hygrade Code	d1 (mm)	L (mm)	L1 (mm)
160	EFEC160GF	200	143	90
200	EFEC200GF	250	162	104
225	EFEC225GF	280	170	112
250	EFEC250GF	310	185	123



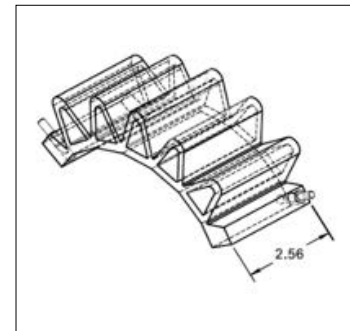
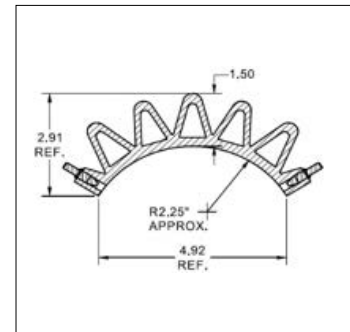
EF FLEX RESTRAINTS

FLEX RESTRAINTS

d160 – 1600 mm

- ▶ Permanently attached to pipe by electrofusion
- ▶ Multiple units make up a puddle flange on pipe
- ▶ Designed to restrain polyethylene pipe movement
- ▶ Axial resistance rated at 32kN per restraint
- ▶ **INSTALLATION:** Requires EFWELDPIN4.7GF

d (mm)	Hygrade Code
160 - 1600	EFRESTRAINTGF



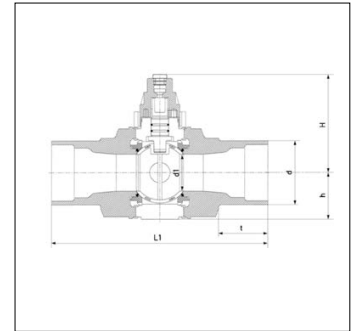
PE BALL VALVES

ELGEF PLUS BALL VALVE "FULL BORE" SDR11

d110 – 160 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ d1 = diameter of bore (DN)
- ▶ For extension spindles with polygon connection

d (mm)	Hygrade Code	L1 (mm)	t (mm)	H (mm)	H1 (mm)	d1 (mm)
110	VBPEFB110GF	92	561	100	359	242
160	VBPEFB160GF	120	645	145	475	325

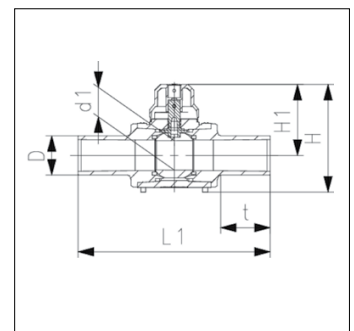


ELGEF PLUS BALL VALVE SDR11

d20 – 225 mm

- ▶ PE 100 SDR 11 (ISO S5)
- ▶ 10 bar Gas / 16 bar Water
- ▶ d1 = diameter of bore (DN)
- ▶ d20 – d110 in accordance with DVGW GW336 / DVGW VP302 / DVGW W364
- ▶ d160 up to d225 are supplied with base plate and straps
- ▶ With regards to pressure rating and application, local standards and regulations need to be considered

d (mm)	Hygrade Code	d1 (mm)	L1 (mm)	t (mm)	H (mm)	H1 (mm)
20	VBPE020GF	23	264	72	134	96
25	VBPE025GF	23	264	72	134	96
32	VBPE032GF	23	274	76	134	96
40	VBPE040GF	30	301	85	142	100
50	VBPE050GF	38	327	92	156	107
63	VBPE063GF	48	350	101	173	114
75	VBPE075GF	48	376	114	173	114
90	VBPE090GF	68	439	128	240	158
110	VBPE0110GF	83	497	148	267	171
125	VBPE0125GF	64	405	112	365	280
160	VBPE0160GF	92	450	117	481	364
180	VBPE0180GF	92	540	123	481	364
200	VBPE0200GF	92	540	123	481	364
225	VBPE0225GF	120	877	240	755	540



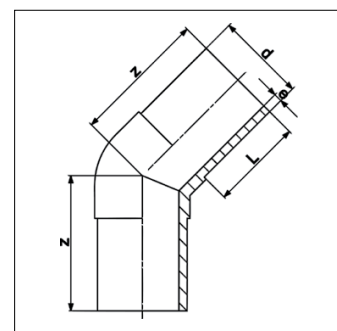
BW ELBOWS

ELBOW 45° SDR11

d20 – 315 mm

- ▶ 10 bar Gas / 16 bar Water
- ▶ Long spigot for butt- and electrofusion

d (mm)	Hygrade Code	z (mm)	L (mm)	e (mm)
20	BWE02045GF	70	52	3
25	BWE02545GF	75	52	3
32	BWE03245GF	80	54	3
40	BWE04045GF	85	57	3.7
50	BWE05045GF	90	63	4.6
63	BWE06345GF	95	65	5.8
75	BWE07545GF	105	72	6.8
90	BWE09045GF	120	81	8.2
110	BWE11045GF	130	86	10
125	BWE12545GF	140	92	11.4
140	BWE14045GF	164	120	12.7
160	BWE16045GF	162	102	14.6
180	BWE18045GF	170	107	16.4
200	BWE20045GF	186	116	18.2
225	BWE22545GF	200	123	20.5
250	BWE25045GF	220	130	22.7
280	BWE28045GF	230	140	25.4
315	BWE31545GF	250	150	28.6

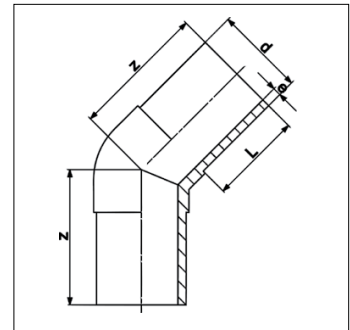


ELBOW 45° PE100 SDR17

d90 – 315 mm

- ▶ 5 bar Gas / 10 bar Water
- ▶ Long spigot for butt- and electrofusion

d (mm)	Hygrade Code	z (mm)	L (mm)	e (mm)
90	BWE09045.17GF	120	81	5.4
110	BWE11045.17GF	130	86	6.6
125	BWE12545.17GF	140	92	7.4
140	BWE14045.17GF	164	120	8.3
160	BWE16045.17GF	162	102	9.5
180	BWE18045.17GF	170	107	10.7
200	BWE20045.17GF	186	116	11.9
225	BWE22545.17GF	205	123	13.4
250	BWE25045.17GF	217	130	14.8
280	BWE28045.17GF	230	140	16.6
315	BWE31545.17GF	250	150	18.7

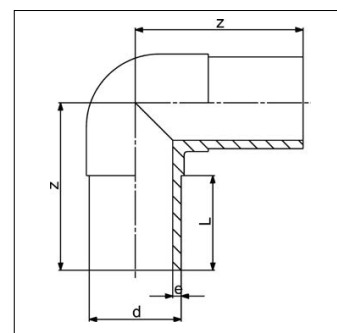


ELBOW 90° PE100 SDR11

d20 – 315 mm

- ▶ 10 bar Gas / 16 bar Water
- ▶ Long spigot for butt- and electrofusion

d (mm)	Hygrade Code	z (mm)	L (mm)	e (mm)
20	BWE02090GF	75	52	3
25	BWE02590GF	80	52	3
32	BWE03290GF	85	54	3
40	BWE04090GF	95	57	3.7
50	BWE05090GF	105	63	4.6
63	BWE06390GF	115	65	5.8
75	BWE07590GF	130	72	6.8
90	BWE09090GF	150	81	8.2
110	BWE11090GF	165	86	10
125	BWE12590GF	180	92	11.4
140	BWE14090GF	194	92	12.7
160	BWE16090GF	210	102	14.6
180	BWE18090GF	232	107	16.4
200	BWE20090GF	253	117	18.2
225	BWE22590GF	270	122	20.5
250	BWE25090GF	292	130	22.7
280	BWE28090GF	320	140	25.4
315	BWE31590GF	370	150	28.6

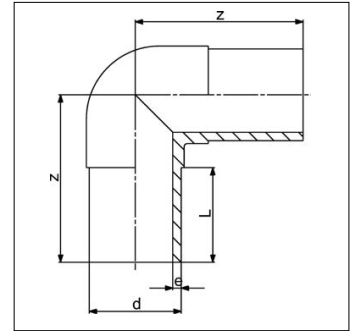


ELBOW 90° PE100 SDR17

d90 – 315 mm

- ▶ 5 bar Gas / 10 bar Water
- ▶ Long spigot for butt and electrofusion

d (mm)	Hygrade Code	z (mm)	L (mm)	e (mm)	PSI
90	BWE09090.17GF	150	81	5.4	130
110	BWE11090.17GF	165	86	6.6	130
125	BWE12590.17GF	180	93	7.4	130
140	BWE14090.17GF	194	92	8.3	130
160	BWE16090.17GF	210	102	9.5	130
180	BWE18090.17GF	232	107	10.7	130
200	BWE20090.17GF	253	115	11.9	130
225	BWE22590.17GF	270	120	13.4	130
250	BWE25090.17GF	292	130	14.8	130
280	BWE28090.17GF	320	140	16.6	
315	BWE31590.17GF	370	150	18.7	



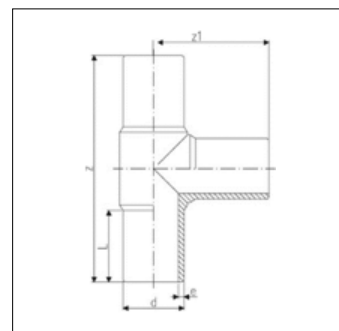
BW TEES - PE100

TEE 90° EQUAL SDR11

d20 – 630 mm

- ▶ 10 bar Gas/ 16 bar Water
- ▶ Long spigot for butt- and electrofusion

d (mm)	Hygrade Code	z (mm)	z1 (mm)	L (mm)	e (mm)
20	BWT020GF	150	75	52	3
25	BWT025GF	160	80	52	3
32	BWT032GF	170	85	54	3
40	BWT040GF	190	95	57	3.7
50	BWT050GF	210	105	63	4.6
63	BWT063GF	230	115	65	5.8
75	BWT075GF	264	132	72	6.8
90	BWT090GF	300	150	81	8.2
110	BWT110GF	330	165	86	10
125	BWT125GF	366	183	92	11.4
140	BWT140GF	393	193	92	12.7
160	BWT160GF	420	210	102	14.6
180	BWT180GF	460	230	107	16.4
200	BWT200GF	500	250	117	18.2
225	BWT225GF	540	270	122	20.5
250	BWT250GF	575	288	130	22.7
280	BWT280GF	615	308	139	25.4
315	BWT315GF	695	346	150	28.6
355	BWT355GF	820	410	170	32.3
400	BWT400GF	900	450	190	40.9
450	BWT450GF	980	490	200	45.5
500	BWT500GF	1070	535	220	50.9
560	BWT560GF	1200	600	245	57.3
630	BWT630GF	1300	650	265	64.5

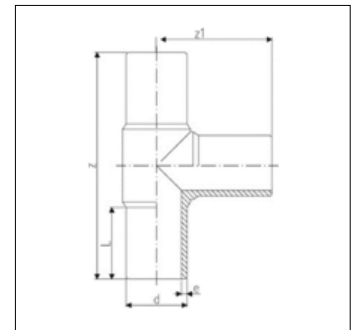


TEE 90° EQUAL SDR17

d20 – 630 mm

- ▶ 5 bar Gas / 10 bar Water
- ▶ Long spigot for butt- and electrofusion

d (mm)	Hygrade Code	z (mm)	z1 (mm)	L (mm)	e (mm)
90	BWT090.17GF	300	150	80	5.4
110	BWT110.17GF	330	165	86	6.6
125	BWT125.17GF	366	183	92	7.4
140	BWT140.17GF	396	196	92	8.3
160	BWT160.17GF	428	214	104	9.5
180	BWT180.17GF	460	230	105	10.7
200	BWT200.17GF	500	250	115	11.9
225	BWT225.17GF	540	270	122	13.4
250	BWT250.17GF	575	288	130	14.8
280	BWT280.17GF	615	308	139	16.6
315	BWT315.17GF	695	346	150	18.7
355	BWT355.17GF	820	410	170	21.1
400	BWT400.17GF	900	450	190	23.7
450	BWT450.17GF	980	490	200	26.7
500	BWT500.17GF	1070	535	220	29.7
560	BWT560.17GF	1200	600	245	33.2
630	BWT630.17GF	1630	815	250	37.4

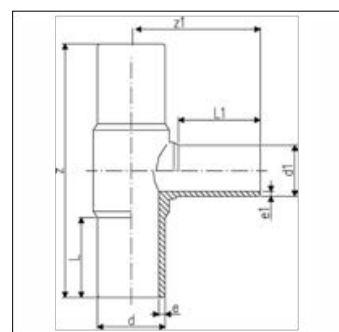


TEE 90° EQUAL SDR11

d63 – 315 mm

- ▶ 10 bar Gas/ 16 bar Water
- ▶ Long spigot for butt- and electrofusion

d (mm)	d1 (mm)	Hygrade Code	z (mm)	z1 (mm)	L (mm)	L1 (mm)	e (mm)	e1 (mm)
63	40	BWT063040GF	230	107	60	58	2	1.75
63	50	BWT063050GF	216	103	60	56	5.8	4.6
75	32	BWT075032GF	258	106	70	46	6.8	2.9
75	50	BWT075050GF	257	110	70	56	6.8	4.6
75	63	BWT075063GF	252	117	70	63	6.8	5.8
90	50	BWT090050GF	280	120	79	55	8.2	4.6
90	63	BWT090063GF	282	127	79	63	8.2	5.8
90	75	BWT090075GF	272	138	73	68	8.2	6.8
110	63	BWT110063GF	322	148	87	63	10	5.8
110	75	BWT011075GF	305	148	83	68	10	6.8
110	90	BWT110090GF	322	164	86	79	10	8.2
125	90	BWT125090GF	332	168	109	89	11.4	8.2
125	110	BWT120110GF	340	167	90	83	11.4	10
160	63	BWT160063GF	416	174	105	65	14.6	5.8
160	75	BWT160075GF	344	179	101	76	14.6	6.8
160	90	BWT160090GF	415	190	101	79	14.6	8.2
160	110	BWT160110GF	415	200	101	82	14.6	10
180	90	BWT180090GF	420	200	136	97	16.4	8.2
180	110	BWT180110GF	430	206	145	101	16.4	10
180	160	BWT180160GF	414	203	105	94	16.4	14.6
200	63	BWT200063GF	503	196	122	63	18.2	5.8
200	90	BWT200090GF	500	216	122	79	18.2	8.2
200	110	BWT200110GF	505	219	122	82	18.2	10
200	160	BWT200160GF	500	237	122	98	18.2	14.6
225	75	BWT225075GF	560	219	120	70	20.5	6.8
225	90	BWT22590GF	555	228	120	80	20.5	8.2
225	110	BWT225110GF	559	238	120	82	20.5	10
225	160	BWT225160GF	555	258	120	98	20.5	14.6
225	180	BWT225180GF	559	284	120	105	20.5	16.4
250	110	BWT250110GF	584	284	130	82	22.7	10
250	160	BWT250160GF	586	266	127	98	22.7	14.6
315	110	BWT315110GF	705	282	150	82	28.6	10
315	160	BWT315160GF	705	301	150	102	28.6	14.6
315	225	BWT315225GF	658	335	170	145	28.6	20.5
315	250	BWT315250GF	695	331	150	130	28.6	22.7

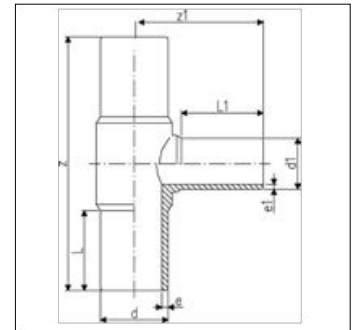


TEE 90° EQUAL SDR17

d90 – 315 mm

- ▶ 5 bar Gas/ 10 bar Water
- ▶ Long spigot for butt- and electrofusion

d (mm)	d1 (mm)	Hygrade Code	z (mm)	z1 (mm)	L (mm)	L1 (mm)	e (mm)	e1 (mm)
90	50	BWT090050.17GF	275	117	79	55	5.4	3
90	63	BWT090063.17GF	275	123	79	63	5.4	3.8
90	75	BWT090075.17GF	286	132	80	75	5.4	4.5
110	63	BWT110063.17GF	318	147	82	63	6.6	3.8
110	75	BWT110.75.17GF	315	152	84	70	6.6	4.5
110	90	BWT110090.17GF	318	158	82	79	6.6	5.4
125	110	BWT125110.17GF	334	168	84	83	7.4	6.6
160	63	BWT160063.17GF	330	130	86	63	9.5	3.8
160	75	BWT160075.17GF	343	180	98	74	9.5	4.5
160	90	BWT160090.17GF	410	188	98	79	9.5	5.4
160	110	BWT160110.17GF	410	195	98	82	9.5	6.6
180	90	BWT180090.17GF	422	204	134	97	10.7	5.4
180	160	BWT180160.17GF	411	205	105	94	10.7	9.5
200	63	BWT200063.17GF	500	190	122	63	11.9	3.8
200	90	BWT200090.17GF	500	207	122	79	11.9	5.4
200	110	BWT200110.17GF	500	215	122	82	11.9	6.6
200	160	BWT200160.17GF	500	234	122	98	11.9	9.5
225	75	BWT225075.17GF	555	277	120	70	13.4	4.5
225	90	BWT225090.17GF	555	226	127	80	13.4	5.4
225	110	BWT225110.17GF	555	235	127	82	13.4	6.6
225	160	BWT225160.17GF	555	253	127	98	13.4	9.5
225	180	BWT225180.17GF	550	280	120	105	13.4	10.7
250	110	BWT250110.17GF	575	242	130	82	14.8	6.6
250	160	BWT250160.17GF	575	261	130	98	14.8	9.5
315	110	BWT315110.17GF	695	277	150	82	18.7	6.6
315	160	BWT315160.17GF	695	296	150	102	18.7	9.5
315	225	BWT315225.17GF	650	335	170	145	18.7	13.4
315	250	BWT315250.17GF	695	325	150	130	18.7	14.8

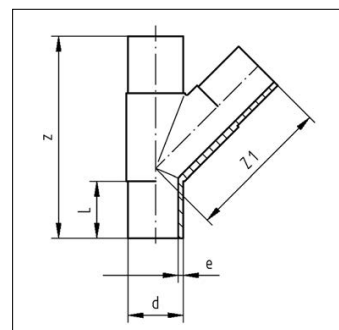


TEE 45° EQUAL SDR11

d50 – 110 mm

- ▶ 10 bar Gas/ 16 bar Water
- ▶ Long spigot for butt- and electrofusion

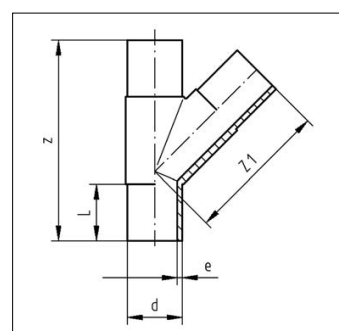
d (mm)	Hygrade Code	z (mm)	z1 (mm)	L (mm)	e (mm)
50	BWY05045GF	218	139	56	4.6
63	BWY06345GF	255	158	63	6.2
75	BWY07545GF	301	190	70	6.8
90	BWY09045GF	368	234	79	8.2
110	BWY11045GF	395	260	82	10

**TEE 45° EQUAL SDR17**

d90 – 110 mm

- ▶ 5 bar Gas/ 10 bar Water
- ▶ Long spigot for butt- and electrofusion

d (mm)	Hygrade Code	z (mm)	z1 (mm)	L (mm)	e
90	BWY09045.17GF	368	234	79	5.4
110	BWY11045.17GF	395	260	82	6.6



BW REDUCERS

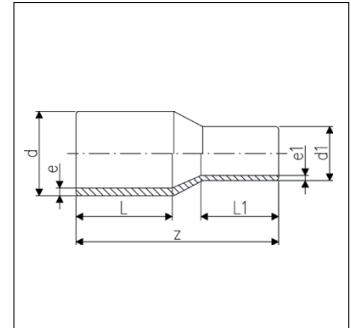
REDUCER SDR11

INLET d25 – 630 mm

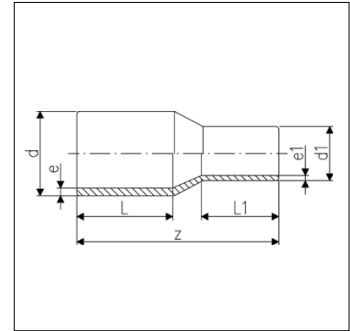
► Long spigot version

► 10 bar Gas / 16 bar Water

d (mm)	d1 (mm)	Hygrade Code	z (mm)	L1 (mm)	L (mm)	e (mm)	e1 (mm)
25	20	BWR02520GF	115	52	52	3	3,0
32	20	BWR03220GF	120	54	52	3	3,0
32	25	BWR03225GF	120	54	52	3	3,0
40	20	BWR04020GF	129	57	52	3,7	3,0
40	25	BWR04025GF	129	57	52	3,7	3,0
40	32	BWR04032GF	129	57	53	3,7	3,0
50	20	BWR05020GF	149	63	52	4,6	3,0
50	25	BWR05025GF	139	63	52	4,6	3,0
50	32	BWR05032GF	140	63	53	4,6	3,0
50	40	BWR05040GF	139	63	57	4,6	3,7
63	32	BWR06332GF	149	65	53	5,8	3,0
63	40	BWR06340GF	150	65	57	5,8	3,7
63	50	BWR06350GF	150	65	63	5,8	4,6
75	40	BWR07540GF	170	72	57	6,8	3,7
75	50	BWR07550GF	170	72	63	6,8	4,6
75	63	BWR07563GF	170	72	65	6,8	5,8
90	50	BWR09050GF	190	81	63	8,2	4,6
90	63	BWR09063GF	190	81	65	8,2	5,8
90	75	BWR09075GF	190	81	70	8,2	6,8
110	63	BWR11063GF	205	86	65	10	5,8
110	75	BWR11075GF	205	86	70	10	6,8
110	90	BWR11090GF	205	86	81	10	8,2
125	63	BWR12563GF	214	87	63	11,4	5,8
125	75	BWR12575GF	210	92	72	11,4	6,8
125	90	BWR12590GF	212	92	81	11,4	8,2
125	110	BWR125110GF	212	92	86	11,4	10,0
140	75	BWR14075GF	230	110	70	12,7	6,8
140	90	BWR14090GF	230	110	79	12,7	8,2
140	110	BWR140110GF	234	110	88	12,7	10,0
140	125	BWR140125GF	235	110	90	12,7	11,4
160	90	BWR16090GF	244	120	79	14,6	8,2
160	110	BWR160110GF	244	102	86	14,6	10,0
160	125	BWR160125GF	245	102	92	14,6	11,4
160	140	BWR160140GF	260	120	110	14,6	12,7
180	90	BWR18090GF	245	105	79	16,4	8,2
180	110	BWR180110GF	270	105	82	16,4	10,0
180	125	BWR180125GF	258	107	92	16,4	11,4
180	140	BWR180140GF	270	120	110	16,4	12,7
180	160	BWR180160GF	255	107	102	16,4	14,6
200	140	BWR240140GF	275	120	110	18,2	12,7
200	160	BWR200160GF	265	117	102	18,2	14,6
200	180	BWR200180GF	265	117	107	18,2	16,4



d (mm)	d1 (mm)	Hygrade Code	z (mm)	L1 (mm)	L (mm)	e (mm)	e1 (mm)
225	140	BWR225140GF	295	130	110	20.5	12,7
225	160	BWR225160GF	279	122	102	20.5	14,6
225	180	BWR225180GF	280	122	107	20.5	16,4
225	200	BWR225200GF	280	122	117	20.5	18,2
250	160	BWR250160GF	300	130	100	22.7	14,6
250	180	BWR250180GF	295	130	105	22.7	16,4
250	200	BWR250200GF	315	130	112	22.7	18,2
250	225	BWR250225GF	332	130	120	22.7	20,5
280	200	BWR280200GF	333	140	112	25.4	18,2
280	225	BWR280225GF	335	140	120	25.4	20,5
280	250	BWR280250GF	340	140	130	25.4	22,7
315	200	BWR315200GF	380	180	134	28.6	18,2
315	225	BWR315225GF	365	150	120	28.6	20,5
315	250	BWR315250GF	365	150	130	28.6	22,7
315	280	BWR315280GF	365	150	139	28.6	25,4
355	250	BWR355250GF	390	165	130	32.3	22,7
355	280	BWR355280GF	390	165	139	32.3	25,4
355	315	BWR355315GF	390	165	150	32.3	28,6
400	280	BWR400280GF	415	180	139	36.4	25,4
400	315	BWR400315GF	415	180	150	36.4	28,6
400	355	BWR400355GF	420	180	165	36.4	32,3
450	280	BWR450280GF	389	195	139	40.9	25,4
450	315	BWR450315GF	390	195	150	40.9	28,6
450	355	BWR450355GF	393	195	164	40.9	32,3
450	400	BWR450400GF	395	195	179	40.9	36,4
500	315	BWR500315GF	422	212	150	45.5	28,6
500	355	BWR500355GF	424	212	164	45.5	32,3
500	400	BWR500400GF	426	212	179	45.5	36,4
500	450	BWR500450GF	428	212	195	45.5	40,9
560	355	BWR560355GF	459	230	164	50.9	32,3
560	400	BWR560400GF	461	230	179	50.9	36,4
560	450	BWR560450GF	463	230	195	50.9	40,9
560	500	BWR560500GF	466	230	212	50.9	45,5
630	400	BWR630400GF	502	250	179	57.3	36,4
630	450	BWR630450GF	503	250	195	57.3	40,9
630	500	BWR630500GF	506	250	212	57.3	45,5
630	560	BWR630560GF	506	250	230	57.3	50,9



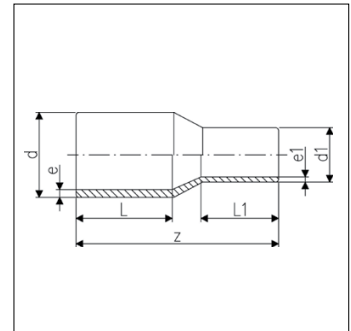
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INLET d90 – 1000 mm

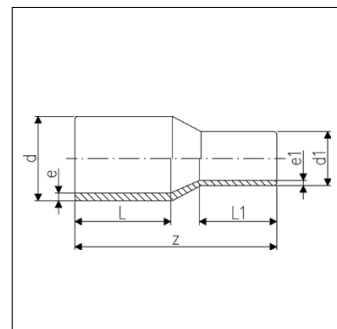
► 5 bar Gas / 10 bar Water

► Long spigot for butt- and electrofusion

d (mm)	d1 (mm)	Hygrade Code	z (mm)	L1 (mm)	L (mm)	e (mm)	e1 (mm)
90	63	BWR090063.17GF	182	70	79	5.4	3,8
90	75	BWR090075.17GF	185	70	79	5.4	4,5
110	63	BWR110063.17GF	185	63	82	6.6	3,8
110	90	BWR110090.17GF	205	80	85	6.6	5,4
125	63	BWR125063.17GF	200	63	87	7.4	3,8
125	90	BWR125090.17GF	215	80	90	7.4	5,4
125	110	BWR125110.17GF	215	85	90	7.4	6,6
140	75	BWR140075.17GF	230	70	112	8.3	4,5
140	90	BWR140090.17GF	230	79	112	8.3	5,4
140	110	BWR140110.17GF	230	82	112	8.3	6,6
140	125	BWR140125.17GF	235	87	115	8.3	7,4
160	90	BWR160090.17GF	248	85	120	9.5	5,4
160	110	BWR160110.17GF	245	85	100	9.5	6,6
160	125	BWR160125.17GF	245	90	100	9.5	7,4
160	140	BWR160140.17GF	260	110	120	9.5	8,3
180	90	BWR180090.17GF	237	79	105	10.7	5,4
180	110	BWR180110.17GF	270	92	120	10.7	6,6
180	125	BWR180125.17GF	255	90	105	10.7	7,4
180	140	BWR180140.17GF	270	110	120	10.7	8,3
180	160	BWR180160.17GF	255	100	105	10.7	9,5
200	140	BWR200140.17GF	275	110	120	11.9	8,3
200	160	BWR200160.17GF	265	100	115	11.9	9,5
200	180	BWR200180.17GF	265	105	115	11.9	10,7
225	140	BWR225140.17GF	280	100	120	13.4	8,3
225	160	BWR225160.17GF	280	100	120	13.4	9,5
225	180	BWR225180.17GF	280	105	120	13.4	10,7
225	200	BWR225200.17GF	280	115	120	13.4	11,9
250	160	BWR250160.17GF	290	100	130	14.8	9,5
250	180	BWR250180.17GF	295	105	130	14.8	10,7
250	200	BWR250200.17GF	302	112	130	14.8	11,9
250	225	BWR250225.17GF	332	120	162	14.8	13,4
280	200	BWR280200.17GF	333	112	140	16.6	11,9
280	225	BWR280225.17GF	335	120	140	16.6	13,4
280	250	BWR280250.17GF	340	130	140	16.6	14,8
315	200	BWR315200.17GF	380	134	180	18.7	11,9
315	225	BWR315225.17GF	365	120	150	18.7	13,4
315	250	BWR315250.17GF	365	130	150	18.7	14,8
315	280	BWR315280.17GF	365	140	150	18.7	16,6
355	250	BWR355250.17GF	390	130	165	21.1	14,8
355	280	BWR355280.17GF	390	140	165	21.1	16,6
355	315	BWR355315.17GF	390	150	165	21.1	18,7
400	280	BWR400280.17GF	415	140	180	23.7	16,6
400	315	BWR400315.17GF	415	150	180	23.7	18,7
400	355	BWR400355.17GF	420	165	180	23.7	21,1



d (mm)	d1 (mm)	Hygrade Code	z (mm)	L1 (mm)	L (mm)	e (mm)	e1 (mm)
450	280	BWR450280.17GF	389	140	195	26.7	16,6
450	315	BWR450315.17GF	390	150	195	26.7	18,7
450	355	BWR450355.17GF	393	164	195	26.7	21,1
450	400	BWR450400.17GF	395	179	195	26.7	23,7
500	315	BWR500315.17GF	422	150	212	29.7	18,7
500	355	BWR500355.17GF	424	164	212	29.7	21,1
500	400	BWR500400.17GF	426	179	212	29.7	23,7
500	450	BWR500450.17GF	428	195	212	29.7	26,7
560	355	BWR560355.17GF	459	164	230	33.2	21,1
560	400	BWR560400.17GF	461	179	230	33.2	23,7
560	450	BWR560450.17GF	463	195	230	33.2	26,7
560	500	BWR560500.17GF	466	212	230	33.2	29,7
630	400	BWR630400.17GF	502	179	250	37.4	23,7
630	450	BWR630450.17GF	503	195	250	37.4	26,7
630	500	BWR630500.17GF	506	212	250	37.4	29,7
630	560	BWR630560.17GF	506	230	250	37.4	33,3
710	500	BWR710500.17GF	790	300	300	42.1	29,7
710	560	BWR710560.17GF	770	300	300	42.1	33,2
710	630	BWR710630.17GF	740	300	300	42.1	37,4
800	560	BWR800560.17GF	800	300	300	47.4	33,2
800	630	BWR800630.17GF	780	300	300	47.4	37,4
800	710	BWR800710.17GF	750	300	300	47.4	42,1
900	630	BWR900630.17GF	820	300	300	53.3	37,4
900	710	BWR900710.17GF	790	300	300	53.3	42,1
900	800	BWR900800.17GF	760	300	300	53.3	47,4
1000	710	BWR1000710.17GF	820	300	300	59.3	42,1
1000	800	BWR1000800.17GF	780	300	300	59.3	47,4
1000	900	BWR1000900.17GF	740	300	300	59.3	53,3

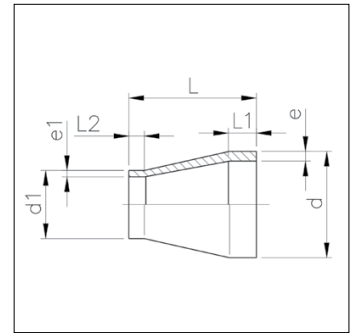


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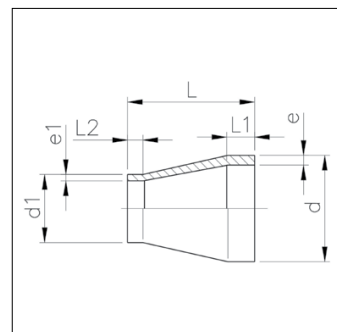
INLET d32 – 710 mm

- ▶ 10 bar Gas / 16 bar Water
- ▶ Short spigot for butt-fusion only
- ▶ Conventional butt welding according to DVS 2207
- ▶ IR = Infrared – (IR Plus®) compatible. Choose fusion parameters: PE100
- ▶ Up to d315 injection moulded, above machined

d (mm)	d1 (mm)	Hygrade Code	L (mm)	L1 (mm)	L2 (mm)	e (mm)	e1 (mm)	FM
25	20	BWSR025020GF	50	20	18	2.3	2,3	IR
32	20	BWSR032020GF	50	20	18	2.9	1,9	IR
32	25	BWSR032025GF	50	20	18	2.9	2,3	IR
40	20	BWSR040020GF	58	20	20	3.7	2,9	IR
40	25	BWSR040025GF	55	20	18	3.7	2,3	IR
40	32	BWSR040032GF	55	20	18	3.7	2,9	IR
50	25	BWSR050025GF	60	20	18	4.6	3,7	IR
50	32	BWSR050032GF	60	20	18	4.6	2,9	IR
50	40	BWSR050040GF	60	20	18	4.6	3,7	IR
63	32	BWSR063032GF	65	20	18	5.8	4,6	IR
63	40	BWSR063040GF	65	20	18	5.8	3,7	IR
63	50	BWSR063050GF	65	20	18	5.8	4,6	IR
75	40	BWSR075040GF	68	20	20	6.8	5,8	IR
75	50	BWSR075050GF	65	20	18	6.8	5,8	IR
75	63	BWSR075063GF	65	20	18	6.8	6,8	IR
90	63	BWSR090063GF	75	21	17	8.2	6,2	IR
90	75	BWSR090075GF	75	22	17	8.2	6,8	IR
110	63	BWSR110063GF	90	28	28	10.6	8,2	IR
110	75	BWSR110075GF	90	28	17	10	10,0	IR
110	90	BWSR110090GF	90	28	20	10	10,0	IR
125	110	BWSR125110GF	100	32	26	11.4	11,4	IR
140	110	BWSR140110GF	110	35	28	12.7	10,0	IR
140	125	BWSR140125GF	110	35	28	12.7	12,7	IR
160	110	BWSR160110GF	120	40	25	14.6	8,2	IR
160	140	BWSR160140GF	120	40	33	14.6	10,0	IR
180	90	BWSR180090GF	145	50	40	16.4	11,4	IR
180	110	BWSR180110GF	150	55	42	16.4	12,7	IR
180	125	BWSR180125GF	143	52	40	16.4	14,6	IR
180	140	BWSR180140GF	135	51	47	16.4	14,6	IR
180	160	BWSR180160GF	135	55	52	16.4	16,4	IR
200	160	BWSR200160GF	150	50	35	18.2	10,0	IR
200	180	BWSR200180GF	145	62	54	18.2	14,6	IR
225	110	BWSR225110GF	171	55	45	20.5	20,5	IR
225	160	BWSR225160GF	160	55	37	20.5	18,2	IR
225	180	BWSR225180GF	160	64	59	22.7	14,6	IR
225	200	BWSR225200GF	160	55	48	20.5	16,4	IR
250	160	BWSR250160GF	177	65	53	20.5	18,2	IR



d (mm)	d1 (mm)	Hygrade Code	L (mm)	L1 (mm)	L2 (mm)	e (mm)	e1 (mm)	FM
250	180	BWSR250180GF	175	60	55	22.7	20,5	IR
250	200	BWSR250200GF	180	60	60	22.7	18,2	IR
250	225	BWSR250225GF	180	65	65	22.7	20,5	IR
280	200	BWSR280200GF	205	70	50	25.4	22,7	IR
280	225	BWSR280225GF	210	75	58	25.4	20,5	IR
280	250	BWSR280250GF	206	75	60	25.4	20,5	IR
315	200	BWSR315200GF	225	80	50	28.6	22,7	IR
315	225	BWSR315225GF	237	84	57	28.6	25,4	IR
315	250	BWSR315250GF	236	86	64	28.6	20,5	IR
315	280	BWSR315280GF	231	86	72	28.6	22,7	IR
355	225	BWSR355225GF	245	90	55	32.3	25,4	IR
355	250	BWSR355250GF	245	90	60	32.3	28,6	IR
355	280	BWSR355280GF	245	90	70	32.3	25,4	IR
355	315	BWSR355315GF	245	90	80	32.3	28,6	IR
400	225	BWSR400225GF	260	95	60	36.4	20,5	IR
400	280	BWSR400280GF	260	95	70	36.4	25,4	IR
400	315	BWSR400315GF	260	95	80	36.4	28,6	IR
400	355	BWSR400355GF	260	95	90	36.4	32,3	IR
450	280	BWSR450280GF	230	60	70	40.9	25,4	IR
450	315	BWSR450315GF	230	60	80	40.9	28,6	IR
450	355	BWSR450355GF	230	60	90	40.9	32,3	IR
450	400	BWSR450400GF	230	60	95	40.9	36,4	IR
500	355	BWSR500355GF	230	60	90	45.5	32,3	IR
500	400	BWSR500400GF	230	60	95	45.5	36,4	IR
500	450	BWSR500450GF	200	60	60	45.5	40,9	IR
710	500	BWSR710500GF	190	84	40	64.5	45,4	IR
710	560	BWSR710560GF	170	81	40	64.5	50,8	IR
710	630	BWSR710630GF	140	71	40	64.5	57,2	IR

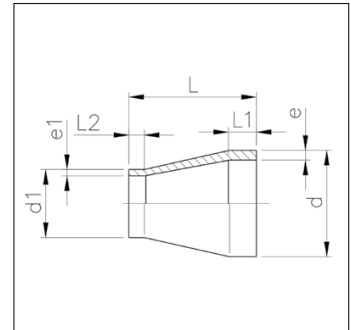


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INLET d32 – 710 mm

- ▶ 5 bar Gas / 10 bar Water
- ▶ Short spigot for butt-fusion only
- ▶ Conventional butt welding according to DVS 2207
- ▶ IR = Infrared – (IR Plus®) compatible. Choose fusion parameters: PE100
- ▶ Up to d315 injection moulded, above machined

d (mm)	d1 (mm)	Hygrade Code	L (mm)	L1 (mm)	L2 (mm)	e (mm)	e1 (mm)	FM
315	250	BWSR315250.17GF	100	30	20	17.9	14,2	
315	280	BWSR315280.17GF	63	30	18	17.9	15,9	
355	225	BWSR355225.17GF	245	90	55	21.1	13,4	
355	250	BWSR355250.17GF	245	90	60	21.1	14,8	
355	280	BWSR355280.17GF	245	90	70	21.1	16,6	
355	315	BWSR355315.17GF	245	90	80	21.1	18,7	
400	225	BWSR400225.17GF	260	95	60	23.7	13,4	
400	250	BWSR400250.17GF	260	95	70	23.7	14,8	
400	280	BWSR400280.17GF	260	95	70	23.7	16,6	
400	315	BWSR400315.17GF	260	95	80	23.7	18,7	
400	355	BWSR400355.17GF	260	95	90	23.7	21,1	
450	280	BWSR450280.17GF	230	60	70	26.7	16,6	
450	315	BWSR450315.17GF	230	60	80	26.7	18,7	
450	355	BWSR450355.17GF	230	60	90	26.7	21,1	
450	400	BWSR450400.17GF	230	60	95	26.7	23,7	
500	315	BWSR500315.17GF	230	60	80	29.7	18,7	
500	355	BWSR500355.17GF	230	60	90	29.7	21,1	
500	400	BWSR500400.17GF	230	60	95	29.7	23,7	
500	450	BWSR500450.17GF	200	60	60	29.7	26,7	
560	400	BWSR560400.17GF	230	60	95	33.2	23,7	
560	450	BWSR560450.17GF	200	60	60	33.2	26,7	
560	500	BWSR560500.17GF	200	60	60	33.2	29,7	
630	400	BWSR630400.17GF	230	60	95	37.4	23,7	
630	450	BWSR630450.17GF	200	60	60	37.4	26,7	
630	500	BWSR630500.17GF	200	60	60	37.4	29,7	
630	560	BWSR630560.17GF	200	60	60	37.4	33,2	
710	500	BWSR710500.17GF	190	84	40	42.1	29,7	
710	560	BWSR710560.17GF	170	81	40	42.1	33,2	
710	630	BWSR710630.17GF	140	71	40	42.1	37,4	
800	560	BWSR800560.17GF	200	85	40	47.4	33,2	
800	630	BWSR800630.17GF	180	85	40	47.4	37,4	
800	710	BWSR800710.17GF	150	78	40	47.4	42,1	
900	630	BWSR900630.17GF	220	96	40	53.3	37,4	
900	710	BWSR900710.17GF	190	89	40	53.3	42,1	
900	800	BWSR900800.17GF	160	85	40	53.3	47,4	
1000	710	BWSR1000710.17GF	220	91	40	59.3	42,1	
1000	800	BWSR1000800.17GF	180	86	40	59.3	47,4	
1000	900	BWSR1000900.17GF	140	75	40	59.3	53,3	



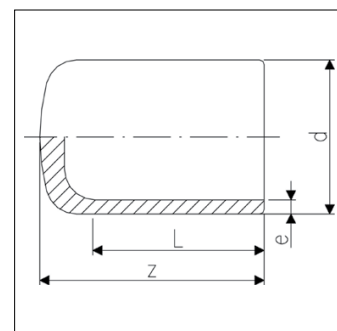
BW END CAPS

CAP PE100 SDR11

d20 – 280 mm

- ▶ 10 bar Gas / 16 bar Water
- ▶ Long spigot for butt- and electrofusion
- ▶ *Fabricated fitting made from pipe

d (mm)	Hygrade Code	z (mm)	L (mm)	e (mm)
20	BWEC020GF	52	52	3
25	BWEC025GF	52	52	3
32	BWEC032GF	54	54	3
40	BWEC040GF	57	57	3.7
50	BWEC050GF	63	63	4.6
63	BWEC063GF	65	65	5.8
75	BWEC075GF	80	72	6.8
90	BWEC090GF	90	81	8.2
110	BWEC110GF	98	86	10
125	BWEC125GF	105	92	11.4
140	BWEC140GF	136	92	12.7
160	BWEC160GF	120	102	14.6
180	BWEC180GF	128	107	16.4
200	BWEC200GF	138	115	18.2
225	BWEC225GF	148	122	20.5
250	BWEC250GF	205	130	22.7
280	BWEC280GF	235	139	25.4
315	BWEC315GF	255	150	28.6
355*	BWEC355GF	280	165	32.3
400*	BWEC400GF	310	180	36.4
450*	BWEC450GF	275	195	40.9
500*	BWEC500GF	297	212	45.5
560*	BWEC560GF	325	230	50.9
630*	BWEC630GF	355	250	57.3

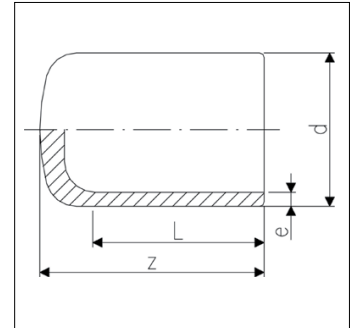


CAP PE100 SDR17

d90 – 630 mm

- ▶ 5 bar Gas / 10 bar Water
- ▶ Long spigot for butt- and electrofusion
- ▶ *Fabricated fitting made from pipe

d (mm)	Hygrade Code	z (mm)	L (mm)	e (mm)
90	BWEC090.17GF	90	81	5.4
110	BWEC110.17GF	98	86	6.6
125	BWEC125.17GF	105	92	7.4
140	BWEC140.17GF	136	92	8.3
160	BWEC160.17GF	120	102	9.5
180	BWEC180.17GF	128	107	10.7
200	BWEC200.17GF	138	115	11.9
225	BWEC225.17GF	148	122	13.4
250	BWEC250.17GF	205	130	14.8
280	BWEC280.17GF	235	139	16.6
315	BWEC315.17GF	255	150	18.7
355*	BWEC355.17GF	280	165	21.1
400*	BWEC400.17GF	310	180	23.7
450*	BWEC450.17GF	340	195	26.7
500*	BWEC500.17GF	310	212	29.7
560*	BWEC560.17GF	320	230	33.2
630*	BWEC630.17GF	340	250	37.4



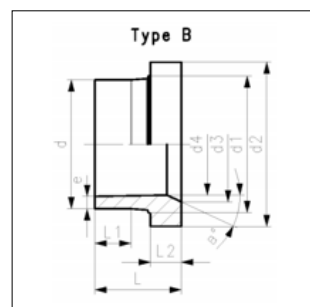
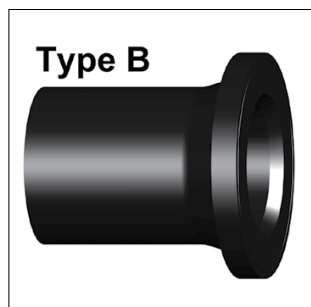
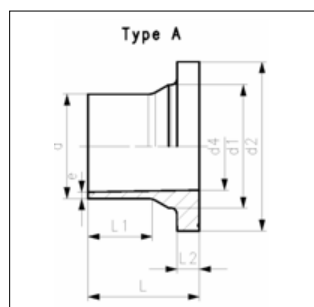
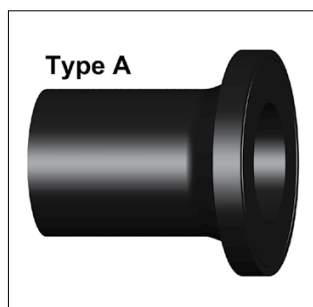
FLANGES - PE100

STUB FLANGE LONG SPIGOT SDR11

d20 – 800 mm

- ▶ 10 bar Gas / 16 bar Water
- ▶ Long spigot for butt, IR Plus® and electrofusion
- ▶ Type A without chamfer
- ▶ Type B with chamfer
- ▶ * Installation support through moulded ribs
- ▶ Suitable for flange connections to metric, (from d110 to ANSI/ ASME B 16.5 also)

d (mm)	Flange DN (mm)	Hygrade Code	d1 (mm)	d2 (mm)	d3 (mm)	d4 (mm)	L (mm)	L1 (mm)	L2 (mm)	e (mm)	Type	a°
20	15	BWSF020GF	27	45		16	85	41	7	3		
25	20	BWSF025GF	33	58		20	90.5	62	9	3		
32	25	BWSF032GF	40	68		26	91.5	61	10	3	A	
40	32	BWSF040GF	50	78		32	94.5	61.5	11	4	A	
50	40	BWSF050GF	61	88		40	90	62	12	5	A	
63	50	BWSF063GF	75	102		51	98	69	14	6	A	
75	65	BWSF075GF	89	122	66	61	125	89	16	7	B	30
90	80	BWSF090GF	105	138	78	73	140	103	17	8	B	30
110	100	BWSF110GF	125	158	100	90	160	114	18	10	B	30
125	100	BWSF125GF	132	158	114	102	170	125	25	11	B	30
140	125	BWSF140GF	155	188	127	114	200	147	25	13	B	30
160	150	BWSF160GF	175	212	151	130	200	147	25	15	B	30
180	150	BWSF180GF	183	212	158	147	200	170	30	16	B	30
200	200	BWSF200GF	232	268	203	163	200	128	32	18	B	30
225	200	BWSF225GF	235	268	210	184	200	138	32	20.5	B	30
250	250	BWSF250GF	285	320	245	204	219	138	35	22.7	B	25
280	250	BWSF280GF	291	320	265	229	231	144	35	25.4	B	30
315	300	BWSF315GF	335	370	300	257	239	158	35	28.6	B	50
355*	350	BWSF355GF	373	430	342	284	267	170	40	32	B	45
400*	400	BWSF400GF	427	482	387	320	292	185	46	36	B	45
450*	450	BWSF450GF	514	585	400	360	330	205	60	41	B	15
500*	500	BWSF500GF	530	585	442	400	351	220	60	46	B	15
560	600	BWSF560GF	616	685	490	458	370	240	60	51	B	30
630	600	BWSF630GF	644	644	545	515	390	260	60	57	B	30
710	700	BWSF710GF	737	737		581	400	280	60	65	A	
800	800	BWSF800GF	840	840		652	400	280	65	74	A	

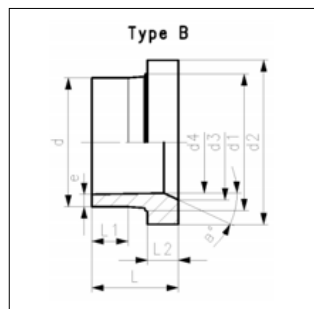
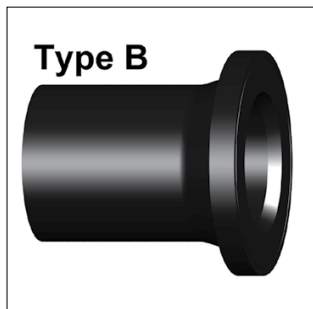
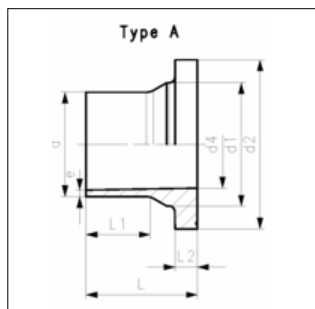
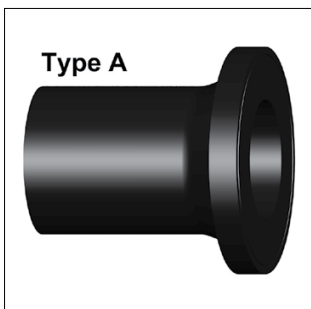


STUB FLANGE LONG SPIGOT SDR17

D90 – 900 mm

- ▶ 5 bar Gas / 10 bar Water
- ▶ Long spigot for butt, IR Plus® and electrofusion
- ▶ Type A without chamfer
- ▶ Type B with chamfer
- ▶ * Installation support through moulded ribs
- ▶ Not suitable for use with butterfly valves above d355
- ▶ Suitable for flange connections to metric, (from d110 to ANSI/ ASME B 16.5 also)

d (mm)	Flange DN (mm)	Hygrade Code	d1 (mm)	d2 (mm)	d3 (mm)	d4 (mm)	L (mm)	L1 (mm)	L2 (mm)	e (mm)	Type	a°
90	80	BWSF090.17GF	105	138		79	140	103	17	5.4	A	
110	100	BWSF110.17GF	125	158		96	160	117	18	6.6	A	
125	100	BWSF125.17GF	132	158	114	110	170	125	25	7.4	B	30
140	125	BWSF140.17GF	155	188	127	123	200	147	25	8.3	B	30
160	150	BWSF160.17GF	175	212	151	141	200	147	25	9.5	B	30
180	150	BWSF180.17GF	180	212		158	200	170	30	10.7	A	
200	200	BWSF200.17GF	232	268	203	176	200	128	32	11.9	B	30
225	200	BWSF225.17GF	235	268	210	198	200	138	32	13.4	B	30
250	250	BWSF250.17GF	285	320	245	220	220	148	25	14.8	B	25
280	250	BWSF280.17GF	291	320	265	246	230	154	25	16.6	B	30
315	300	BWSF315.17GF	335	370	300	277	242	166	36	18.7	B	30
355*	350	BWSF355.17GF	373	430	340	312	261	179	30	21.1	B	21
400*	400	BWSF400.17GF	427	482	395	350	282	185	36	23.7	B	21
450*	450	BWSF450.17GF	514	585		400	316	205	46	26.7	A	
500*	500	BWSF500.17GF	530	585		400	337	220	46	29.7	A	
560	600	BWSF560.17GF	616	685		493	370	250	50	33.2	A	
630	600	BWSF630.17GF	644	685		555	390	270	50	37.4	A	
710	700	BWSF710.17GF	737	800		626	400	280	50	42.1	A	
800	800	BWSF800.17GF	840	905		705	400	280	52	47.4	A	
900	900	BWSF900.17GF	944	1005		793	400	260	55	53.3	A	
1000	1000	BWSF1000.17GF	1047	1110		881	400	260	60	59.3	A	

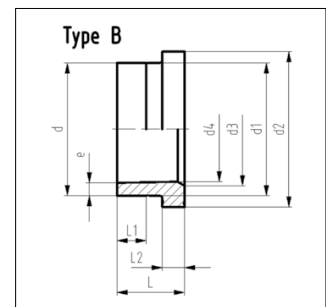
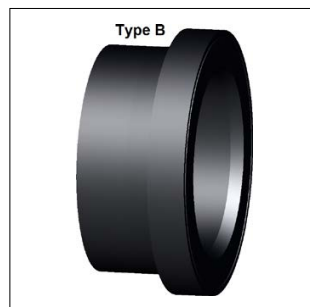
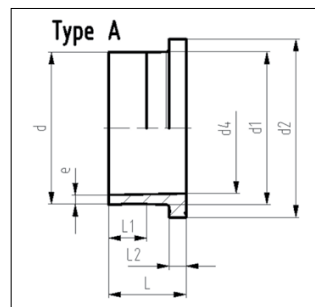
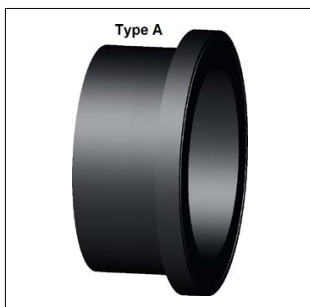


STUB FLANGE SHORT SPIGOT SDR11

d250 – 800 mm

- ▶ 10 bar Gas / 16 bar Water
 - ▶ Short spigot for butt-fusion only
 - ▶ Not suitable for use with butterfly valves above d315
 - ▶ IR = Infrared – (IR Plus®) compatible.
- ▶ Conventional butt welding according to DVS 2207

d (mm)	Flange DN (mm)	Hygrade Code	d1 (mm)	d2 (mm)	d3 (mm)	d4 (mm)	L (mm)	L1 (mm)	L2 (mm)	e (mm)	Type	a°
250	250	BWSSF250GF	285	320	252	203	120	45	35	22.7	B	25
280	250	BWSSF280GF	291	320	265	228	120	45	37	25.4	B	30
315	300	BWSSF315GF	335	370	300	256	150	50	50	28.6	B	22
355	350	BWSSF355GF	373	430	342	284	162	70	40	32.2	B	45
400	400	BWSSF400GF	427	482	387	320	172	70	46	36.3	B	45
450	500	BWSSF450GF	514	585	400	360	225	105	60	40.9	B	15
500	500	BWSSF500GF	530	585	442	400	231	105	60	45.4	B	15
560	600	BWSSF560GF	615	685	490	458	135	20	60	50.8	B	30
630	600	BWSSF630GF	642	685	545	516	135	40	60	57.2	B	30
710	700	BWSSF710GF	737	800		581	120	20	60	64.5	A	
800	800	BWSSF800GF	840	905		655	120	18	65	72.6	A	

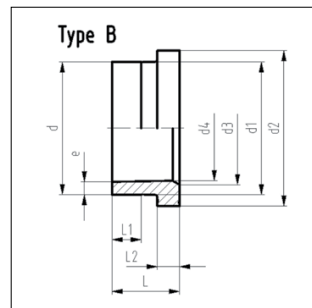
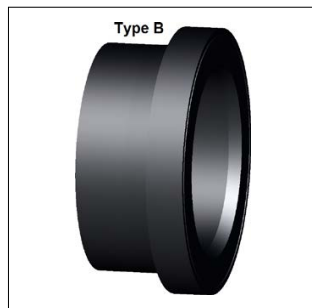
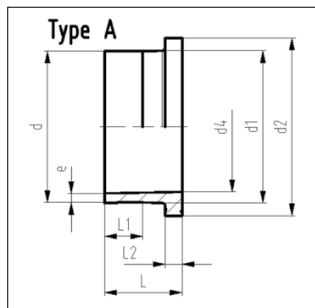
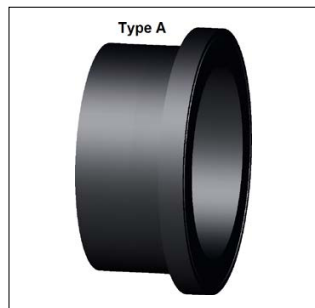


STUB FLANGE SHORT SPIGOT SDR17

d250 – 1000 mm

- ▶ 5 bar Gas / 10 bar Water
 - ▶ Short spigot for butt-fusion only
 - ▶ ** Not suitable for use with butterfly valves above d315
 - ▶ IR = Infrared – (IR Plus®) compatible.
- ▶ Conventional butt welding according to DVS 2207

d (mm)	Flange DN (mm)	Hygrade Code	d1 (mm)	d2 (mm)	d3 (mm)	d4 (mm)	L (mm)	L1 (mm)	L2 (mm)	e (mm)	Type	a°
250	250	BWSSF250.17GF	285	320	252	220	120	45	25	14.8	B	25
280	280	BWSSF280.17GF	291	320	265	247	120	45	35	16.6	B	30
315	315	BWSSF315.17GF	335	370	300	278	150	50	50	18.7	B	21
355	355	BWSSF355.17GF	373	430	346	310	155	70	33	21.1	B	21
400	400	BWSSF400.17GF	427	482	395	350	162	70	36	23.7	B	21
450	450	BWSSF450.17GF	514	585	400	400	211	105	46	26.7	B	4
500	500	BWSSF500.17GF	530	585	400	442	217	105	46	29.7	A	2
560	560	BWSSF560.17GF	615	685	430	493	142	60	50	33.2	A	
630	630	BWSSF630.17GF	642	685	545	555	144	71	50	37.4	A	
710	710	BWSSF710.17GF	737	800		626	120	20	50	42.1	A	
800	800	BWSSF800.17GF	840	905		705	120	18	52	47.4	A	
900	900	BWSSF900.17GF	944	1005		793	140	15	55	53.3	A	
1000	1000	BWSSF1000.17GF	1047	1110		881	140	10	60	59.3	A	



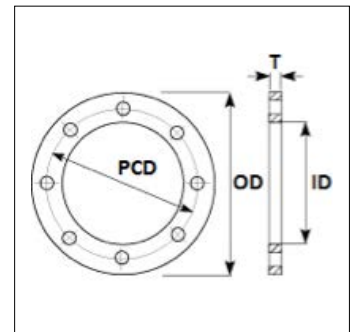
BACKING RINGS

GALVANIZED – AS4087 B7

d63 – 630 mm

- ▶ PN16
- ▶ For use with PE stub flanges
- ▶ Hot-dipped galvanized
- ▶ Other sizes & flanges drillings available on request

d (mm)	Flange DN (mm)	Hygrade Code	OD (mm)	ID (mm)	PCD (mm)	# Holes x Hole dia. (mm)	Bolt size	T
63	50	BWBRG063	150	78	114	4 X 18	M16	11
75	65	BWBRG075	165	92	127	4 X 18	M16	11
90	80	BWBRG090	185	108	146	4 X 18	M16	11
110	100	BWBRG110	215	128	178	4 X 18	M16	13
125	100	BWBRG125	215	135	178	4 X 18	M16	13
140	125	BWBRG140	255	158	210	8 X 18	M16	13
160	150	BWBRG160	280	178	235	8 X 18	M16	13
180	150	BWBRG180	280	188	235	8 X 18	M16	15
200	200	BWBRG225	335	235	292	8 X 18	M16	19
225	200	BWBRG225	370	238	324	8 X 18	M16	19
250	250	BWBRG250	405	288	356	8 X 22	M20	19
280	250	BWBRG280	405	294	356	8 X 22	M20	19
315	300	BWBRG315	455	338	406	12 X 22	M20	23
355	350	BWBRG355	525	376	470	12 X 26	M24	30
400	400	BWBRG400	580	430	521	12 X 26	M24	30
450	450	BWBRG450	640	470	584	12 X 26	M24	30
500	500	BWBRG500	705	533	641	16 X 26	M24	38
560	600	BWBRG560	710	618	699	16 X 30	M27	48
630	600	BWBRG630	825	645	756	16 X 30	M27	48

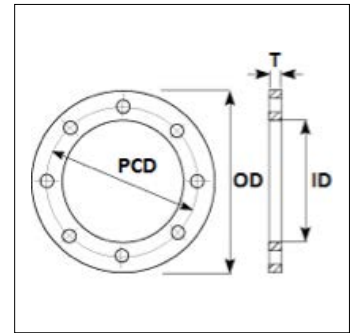


FUSION BONDED EPOXY COATING – AS4087 B7

d63 – 630 mm

- ▶ PN16
- ▶ For use with PE stub flanges
- ▶ Fusion bonded epoxy coating
- ▶ Other sizes & flanges drillings available on request

d (mm)	Flange DN (mm)	Hygrade Code	OD (mm)	ID (mm)	PCD (mm)	# Holes x Hole dia. (mm)	Bolt size	T
63	50	BWBRN063	150	78	114	4 X 18	M16	11
90	80	BWBRN090	185	108	146	4 X 18	M16	11
110	100	BWBRN110	215	128	178	4 X 18	M16	13
125	100	BWBRN125	215	135	178	4 X 18	M16	13
160	150	BWBRN160	280	178	235	8 X 18	M16	13
180	150	BWBRN180	280	188	235	8 X 18	M16	15
225	200	BWBRN200-225	370	238	324	8 X 18	M16	19
250	250	BWBRN250	405	288	356	8 X 22	M20	19
280	250	BWBRN280	405	294	356	8 X 22	M20	19
315	300	BWBRN315	455	338	406	12 X 22	M20	23
355	350	BWBRN355	525	376	470	12 X 26	M24	30
400	400	BWBRN400	580	430	521	12 X 26	M24	30
450	450	BWBRN450	640	470	584	12 X 26	M24	30
500	500	BWBRN500	705	533	641	16 X 26	M24	38
560	600	BWBRN560	710	618	699	16 X 30	M27	48
630	600	BWBRN630	825	645	756	16 X 30	M27	48

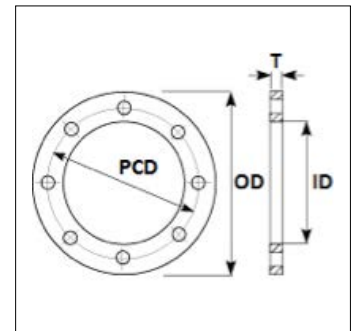


STAINLESS STEEL – AS4087 B7

d63 – 630 mm

- ▶ PN16
 - ▶ For use with PE stub flanges
 - ▶ 316 Stainless Steel
- ▶ Other sizes & flanges drillings available on request

d (mm)	Flange DN (mm)	Hygrade Code	OD (mm)	ID (mm)	PCD (mm)	# Holes x Hole dia. (mm)	Bolt size	T
63	50	BWBRSS063	150	78	114	4 X 18	M16	11
75	65	BWBRSS075	165	92	127	4 X 18	M16	11
90	80	BWBRSS090	185	108	146	4 X 18	M16	11
110	100	BWBRSS110	215	128	178	4 X 18	M16	13
125	100	BWBRSS125	215	135	178	4 X 18	M16	13
140	125	BWBRSS140	255	158	210	8 X 18	M16	13
160	150	BWBRSS160	280	178	235	8 X 18	M16	13
180	150	BWBRSS180	280	188	235	8 X 18	M16	15
225	200	BWBRSS225	370	238	324	8 X 18	M16	19
250	250	BWBRSS250	405	288	356	8 X 22	M20	19
280	250	BWBRSS280	405	294	356	8 X 22	M20	19
315	300	BWBRSS315	455	338	406	12 X 22	M20	23
355	350	BWBRSS355	525	376	470	12 X 26	M24	30
400	400	BWBRSS400	580	430	521	12 X 26	M24	30
450	450	BWBRSS450	640	470	584	12 X 26	M24	30
500	500	BWBRSS500	705	533	641	16 X 26	M24	38
560	600	BWBRSS560	710	618	699	16 X 30	M27	48
630	600	BWBRSS630	825	645	756	16 X 30	M27	48



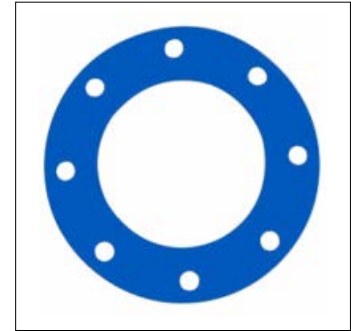
DRESSING SETS

POTABLE WATER. GALVANIZED BOLTS. AS 4087

d63 – 355 mm

- ▶ PN16
- ▶ Hot-dipped galvanized fastenings
- ▶ Reinforced blue EPDM gasket for use with potable water
- ▶ Third party certified to AS/NZS 4020
- ▶ WSA 109 - 2002 compliant
- ▶ Other flange drillings & bolt lengths available on request
- ▶ For all dressings sets refer tech guide PF12.2

d (mm)	Flange DN (mm)	Hygrade Code	Bolt size	Bolt Length (mm)
63	50	DSG050P	M16	75
90	80	DSG080090P	M16	90
125	100	DSG10090P	M16	90
180	150	DSG150110P	M16	110
200	200	DSG200110P	M16	110
225	200	DSG200110P	M16	110
250	250	DSG250110P	M20	110
280	250	DSG250110P	M20	110
315	300	DSG300140P	M20	140
355	350	DSG350140P	M24	140

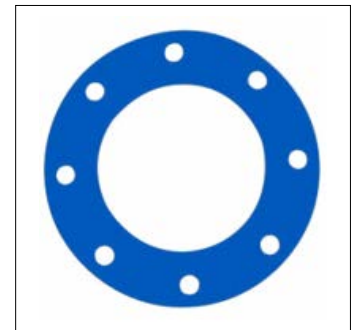


POTABLE WATER. STAINLESS STEEL BOLTS. AS 4087

d63 – 355 mm

- ▶ PN16
- ▶ 316 Stainless Steel fastenings
- ▶ Reinforced blue EPDM gasket for use with potable water
- ▶ Third party certified to AS/NZS 4020
- ▶ WSA 109 - 2002 compliant
- ▶ Nuts are coated with genuine molybdenum anti-seize agent.
- ▶ Other flange drillings & bolt lengths available on request
- ▶ For all dressings sets refer tech guide PF12.2

d (mm)	Flange DN (mm)	Hygrade Code	Bolt size	Bolt Length (mm)
63	50	DSSS050P	M16	75
90	80	DSSS080090P	M16	90
125	100	DSSS10090P	M16	90
180	150	DSSS150110P	M16	110
200	200	DSSS200110P	M16	110
225	200	DSSS200110P	M16	110
250	250	DSSS250110P	M20	110
280	250	DSSS250110P	M20	110
315	300	DSSS300140P	M20	140
355	350	DSSS350140P	M24	140

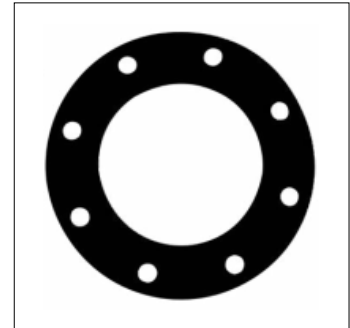


NON-POTABLE WATER. GALVANIZED BOLTS. AS 4087

d63 – 355 mm

- ▶ PN16
- ▶ Hot-dipped galvanized fastenings
- ▶ Black insertion rubber for Non-Potable application
- ▶ Third party certified to AS/NZS 4020
- ▶ WSA 109 - 2002 compliant
- ▶ Other flange drillings & bolt lengths available on request
- ▶ For all dressings sets refer tech guide PF12.2

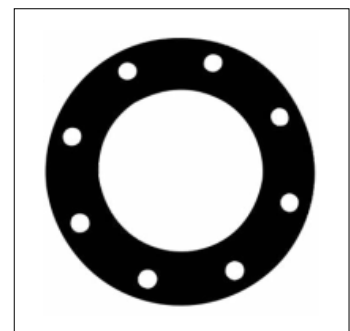
d (mm)	Flange DN (mm)	Hygrade Code	Bolt size	Bolt Length (mm)
63	50	DSG050NP	M16	75
90	80	DSG080090NP	M16	90
125	100	DSG10090NP	M16	90
180	150	DSG150110NP	M16	110
200	200	DSG200110NP	M16	110
225	200	DSG200110NP	M16	110
250	250	DSG250110NP	M20	110
280	250	DSG250110NP	M20	110
315	300	DSG300140NP	M20	140
355	350	DSG350140NP	M24	140

**NON-POTABLE WATER. STAINLESS STEEL BOLTS. AS 4087**

d63 – 355 mm

- ▶ PN16
- ▶ 316 Stainless Steel fastenings
- ▶ Reinforced blue EPDM gasket for use with potable water
- ▶ WSA 109 - 2002 compliant
- ▶ Nuts are coated with genuine molybond anti-seize agent.
- ▶ Other flange drillings & bolt lengths available on request
- ▶ For all dressings sets refer tech guide PF12.2

d (mm)	Flange DN (mm)	Hygrade Code	Bolt size	Bolt Length (mm)
63	50	DSSS050NP	M16	75
90	80	DSSS080090NP	M16	90
125	100	DSSS10090NP	M16	90
180	150	DSSS150110NP	M16	110
200	200	DSSS200110NP	M16	110
225	200	DSSS200110NP	M16	110
250	250	DSSS250110NP	M20	110
280	250	DSSS250110NP	M20	110
315	300	DSSS300140NP	M20	140
355	350	DSSS350140NP	M24	140





Terms and Conditions of Supply

1. APPLICABILITY

Unless otherwise agreed in writing by Hygrade, all quotes given by Hygrade, and supplies of Goods by Hygrade to the Customer are governed by these terms and conditions to exclusion of all other terms and conditions or representations. These terms and conditions will not be deemed to be modified, cancelled or waived in whole or in part except by written amendment of Hygrade. In these terms and conditions: "Hygrade" means Hygrade Products Ltd and includes any of its divisions; "Customer" means any company, person or other body which orders or requests, either itself or through an agent, the supply of Goods from Hygrade or makes an application for credit from Hygrade in relation to any such supply; "Goods" means all drainage, streetware, watermain, and hardware related products and fittings supplied by Hygrade to the Customer; "GST" means goods and services tax. Pursuant to the Goods and services Tax Act 1985; "PPSA" means the Personal Property Securities Act 1999 and "Signatory" means any person signing an order or credit application for or on behalf of the Customer.

2. PRICES

Prices quoted are indicative only and subject to variation by Hygrade without notice. Quotes may be withdrawn by Hygrade, at any time prior to receipt of written acceptance. Quotes are otherwise valid for 30 days and will lapse if not accepted in writing by the Customer within that time. All quotes must be kept confidential between the Customer and Hygrade. Unless otherwise agreed by Hygrade in writing, the price payable for the Goods is the price specified in the invoice the particular delivery of Goods.

3. PAYMENT TERMS, CREDIT AND INTEREST

Unless otherwise agreed in writing by Hygrade, all Goods must be paid for in cash. If Hygrade grants credit to the Customer the following terms shall apply.

- a. Payments will be made in full without deduction no later than the 20th day of the month following invoice
- b. Should the Customer default in payment of any monies due to Hygrade then:
 - i. All monies due by the Customer to Hygrade shall immediately become due and payable.
 - ii. Hygrade may charge the Customer interest at Hygrade then current bank overdraft rate plus 2% on all overdue amounts, from the date payment was due until payment in full.
 - iii. Hygrade may suspend further deliveries of Goods to the Customer until the Customer has paid all monies due by the Customer to Hygrade; and
 - iv. Hygrade may revoke all credit provided to the Customer and require that all further deliveries be on a cash on or before delivery basis.
- c. Any expenses, costs or disbursements incurred by Hygrade in recovering any outstanding monies including debt collection agency fees or legal fees, shall be recoverable from the Customer.
- d. Hygrade is entitled to request security from the Customer and shall be entitled to withhold the supply of Goods or credit until such security has been obtained.

4. RESERVATION OF TITLE

All Goods supplied by Hygrade shall remain the property of Hygrade until payment in full by the Customer of all amounts owing is received by Hygrade. Until property in the Goods passes to the Customer, the Customer shall hold the Goods as a bailee and shall be liable to Hygrade accordingly. If the Customer breaches any of these terms and conditions Hygrade shall have the right (without giving notice) to retake possession of the Goods and the Customer authorizes Hygrade or its representatives, servants, agents or employees to enter any premises upon which the Goods are stored for the purpose of retaking possession of the Goods and Hygrade shall not be liable for any costs or damage incurred by the Customer by reason of such entry.

5. PERSONAL PROPERTY SECURITIES ACT 1999

The Customer must do all such things and execute or arrange for execution of all such documents as Hygrade may require to ensure that Hygrade has a perfected first ranking security interest(s) in the Goods and any wooden pallets/dunnage supplied by Hygrade. The Customer waives its right to receive a copy of any verification statement(s) under the PPSA and agree that as between Hygrade and the Customer, the Customer will have no rights under (or by reference to) sections 114(1)(a), 116, 117(1)(c), 119, 120(2), 121, 125, 129, 131, 132, 133 and 134 of the PPSA. Immediately upon request by Hygrade the Customer must (at the Customer's cost) procure from any person considered by Hygrade to be relevant to its security position such agreements and waivers as Hygrade may at any time require to the intent that Hygrade will have a first-ranking security interest(s) under the PPSA in the Goods and any wooden pallets/dunnage supplied by Hygrade until all sums owing by the Customer to Hygrade have been paid.

6. TAXES

GST and any duty or other tax, levy or impost on or relating to the Goods, is payable by the Customer to Hygrade upon demand, in addition to the price of the Goods.

7. CLAIMS

Hygrade shall not be liable in respect of any claim for defective Goods unless such claim is notified to Hygrade in writing within 7 days of delivery of the Goods. The liability of Hygrade for defective Goods shall be limited to an amount not exceeding the purchase price of the defective Goods. Hygrade will not otherwise be liable for any loss or damage (including direct or consequential loss, or loss of profits) incurred by the Customer or any third party as a consequence of the Goods being defective. Hygrade will not in any circumstances be liable for any loss of damage caused by wilful or accidental damage, negligent or improper use, maintenance or storage or any other circumstances whether or not beyond Hygrade's control.

8. CREDITS

The customer does not have a right to return the Goods. However Hygrade may, in its sole and absolute discretion, permit the Customer to return Goods for credit if the Customer pays a handling charge of 15% of the purchase price for the Goods plus GST and the Goods are, at the Customer's cost, returned to Hygrade in first class resalable condition.

9. DELIVERY

Hygrade will use reasonable endeavors to deliver Goods ordered within a reasonable time. Delivery dates are estimates only and Hygrade shall not be liable for any damage or loss arising out of delay in delivery. All risks in respect of the Goods will pass to the Customer on delivery to a carrier or to the Customer or nominee as the case may be. If Hygrade is requested to store Goods, or if Hygrade is requested to store Goods because of the fault of the Customer after the Goods are ready for dispatch, the Customer shall pay all charges of and incidental to such storage. Such storage will be at the Customer's risk, and will not entitle the Customer to postpone payment of any sums due to Hygrade. A receipted consignment note, bill of lading weigh bill or dispatch advice, shall be conclusive proof of delivery unless otherwise stated, delivery costs will be paid by the Customer. Transit insurance to the Customer's account can be arranged by Hygrade if requested by the Customer. Hygrade shall not be liable to the Customer or any third party for short delivery, or loss in transit of the Goods. Any deliveries necessitating delivery outside the hours of 7.30am – 4.00pm on weekdays must be by special arrangement. Where the Goods are delivered by Hygrade direct to the Customer or nominee, the Customer shall provide at its expense, safe hard roading suitable for use by usual road transport to deliver materials to the site specified by the Customer or to an area alongside such site, with sufficient clear hard space at all times for unloading and stacking and unless otherwise specified, shall supply all necessary cranes and other unloading facilities.

10. ORDERS

Orders of Goods may be verbal or written. Hygrade will not be liable for any error in the Customer's order and the Customer will be responsible for errors arising out of verbal orders not confirmed in writing. Cancellation of orders for Goods placed with and accepted by Hygrade may be made only with the written consent of Hygrade. Hygrade will not be liable for any loss or damage suffered by the Customer or any third party as a result of cancellation of an order.

11. CONFIDENTIALITY

All drawings, designs, specifications, technical data and other information which Hygrade supplies in connection with a quotation, or order are confidential. All such information remains Hygrade's property, and must not be disclosed to any third person without our written permission and shall be returned immediately upon Hygrade's request.

12. INTELLECTUAL PROPERTY

If Goods are supplied to the Customer's designs or specifications the Customer warrants that none of its designs or specifications infringe any copyright, patent or other intellectual property right. If the Customer's designs or specifications infringe, or are alleged to infringe any patent, registered design, copyright or other intellectual property rights, the Customer will indemnify Hygrade for any liabilities incurred by Hygrade as a result of the Customer's breach of this clause.

13. TESTING

If the customer requires any Goods or material samples to be specially tested prior to delivery, arrangements may be made for the carrying out of such tests at the Customer's cost.

14. CUSTOMER MATERIALS

If the Customer supplies Hygrade with its own materials for use in completing the Goods, the Customer undertakes that such materials will be in all respects suitable for the operation for which they are supplied. The Customer will at its own expense replace materials which in Hygrade's opinion are unsatisfactory and will pay Hygrade for the cost of work already carried out on such materials and for the cost of any damage incurred by Hygrade as a result of such materials being unsatisfactory. Such materials remain the property of the Customer whilst in Hygrade possession. The risk of loss of, or damage to, such materials will at all times be borne by the Customer.

15. WOODEN PALLET/ DUNNAGE

Where wooden pallet/dunnage are supplied by Hygrade, Hygrade may require the Customer to purchase such pallets/dunnage for such an amount as shall be at the sole discretion of Hygrade. All wooden pallets/dunnage supplied by Hygrade remain the property of Hygrade until the Customer has paid all amounts payable by the Customer to Hygrade. The risk of loss of, or damage to such wooden pallets/dunnage passes to the Customer upon delivery to a carrier or to the Customer or nominee, as the case may be. Hygrade may, in its sole and absolute discretion, permit the Customer to return purchased wooden pallets/dunnage for credit, provided the Customer provides proof of purchase of the wooden pallets/dunnage.

16. INVENTORY CONTROL

If Goods are required at the request of the Customer prior to the recommended release date as specified by Hygrade, Hygrade shall not be liable for any defect or failure in the Goods and the Customer shall indemnify Hygrade against any claims made in respect of any such defect or failure.

17. SECOND GRADE GOODS

Second grade Goods are sold as such and marked accordingly. Under no circumstances should second grade Goods be used as a substitute for first grade Goods and Hygrade shall not be liable for any loss or damage caused by such substitutions or attempted substitutions.

18. FORCE MAJEURE

Hygrade will not be liable to the Customer if delivery of the Goods is prevented or delayed, by reason of any circumstances beyond Hygrade's reasonable control.

19. CONSUMER GUARANTEES ACT 1993

The Customer agrees that where it is buying the Goods for the purposes of a business the Consumer Guarantee Act 1993 does not apply. The implied conditions under the Sale of Goods Act 1908 do not apply to the supply of Goods by Hygrade to the Customer.



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**HYGRADE GF
PRODUCT CATALOGUE**
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