



new era
of district
heating

FIBREFLEX^(R) ULTRA

TECHNICAL DESCRIPTION



TECHNICAL
PRODUCT
CATALOGUE

FIBREFLEX^(R) ULTRA

TECHNICAL PRODUCT CATALOGUE

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This document is the Technical Documentation which at present consists of:

1. General system's description
2. Product catalogue
3. Design Manual
4. Installation Manual

The product catalogue is designed to enable consultants, buyers, suppliers and other interested persons to acquire general information about the Product.

Additional information can be obtained from FIBREFLEX ULTRA specialists.

The current version of this document, as well as the remaining parts of the Technical Documentation is always available on the website www.radiuspipesolutions.com.

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FIBREFLEX ULTRA PIPE

FIBREFLEX ULTRA pipes are designed for transporting liquids (water) under pressure. Used in construction and renovation of:

- branch lines of District Heating system primary loop;
- high temperature District Heating networks;
- high temperature ventilation networks.

Maximum operating pressure: 16 bar.

Maximum operating temperature: +130°C.

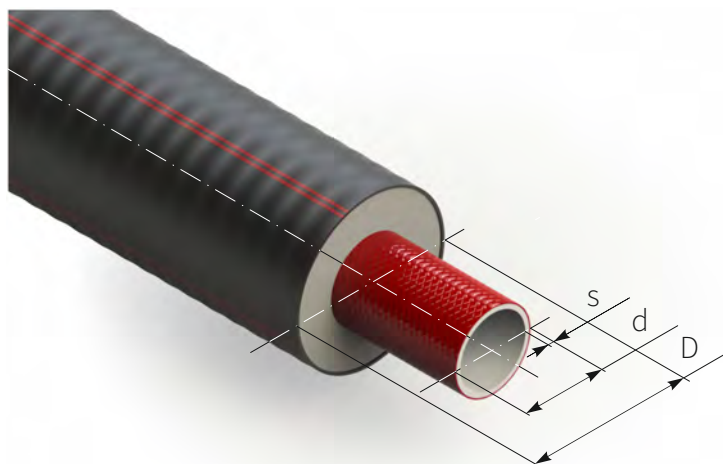


Table 1. FIBREFLEX ULTRA pipes specifications

Pos	Item	d, mm	s, mm	D, mm	Weight kg/m	Min bending radius, m
1	50/111	49,5	4,5	111	1,97	0,9
2	63/126	58,5	4,0	126	2,38	1,0
3	75/142	69,5	4,6	142	2,94	1,1
4	90/162	84,0	6,0	162	4,02	1,2
5	110/182	101,0	6,5	182	4,99	1,3
6	125/202	116,0	6,8	202	6,02	1,4
7	140/202	127,0	7,1	202	6,30	1,4
8	160/225	144,0	7,5	225	7,68	1,6

2 FIBREFLEX ULTRA CONNECTORS

2.1 FIBREFLEX ULTRA OUTER SLEEVE

Used in construction with all FIBREFLEX ULTRA connectors. Outer sleeves can not be ordered separately.

Material:

- a) steel;
- b) stainless steel.

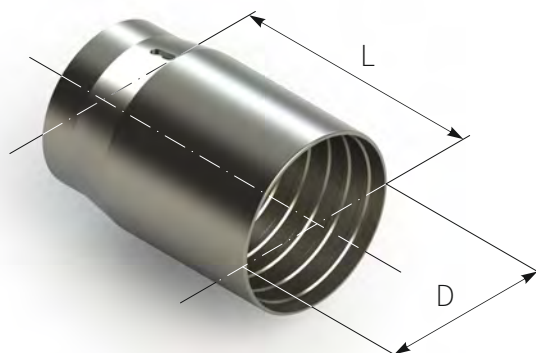


Table 2.1. FIBREFLEX ULTRA Outer Sleeves specifications

Pos	Item	D, mm	L, mm	Weight, kg
1	50	53	90	0,34
2	63	67	105	0,46
3	75	78	120	0,45
4	90	94	138	0,63
5	110	111	145	1,31
6	125	126	175	1,81
7	140	137	181	2,07
8	160	154	181	2,37

2.2 FIBREFLEX ULTRA WELD ADAPTOR

Used to provide a weld connection to FIBREFLEX ULTRA pipe.
Kit:

- 1. weld adaptor (1 ps);
- 2. outer sleeve (1 ps).

Material:

- a) steel;
- b) stainless steel.

The FIBREFLEX ULTRA Weld Adaptor is supplied complete with a Outer Sleeve.

By special order it is possible to supply the product with a welded steel pipe.

Attention! Prior to the installation of the Weld Adaptor, a steel pipe (or other pipe element, 400 mm long (at least, must be welded to the Weld Adaptor.

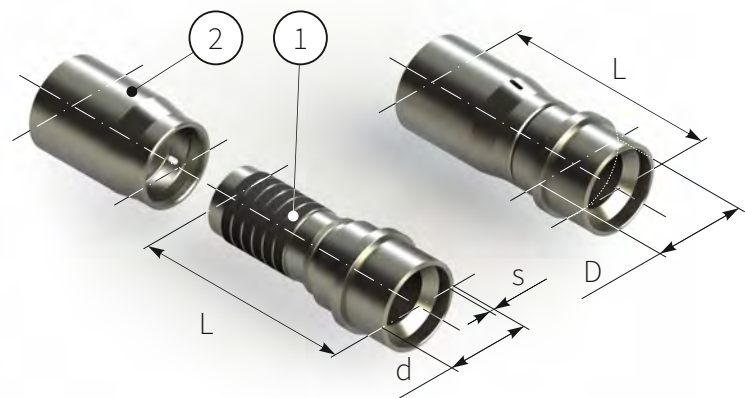


Table 2.2. FIBREFLEX ULTRA Weld Adaptors specifications

Pos	Item	d×s, mm	D, mm	L, mm	Weight*, kg
1	50	45×4,5	60	180	0,99 (1,33)
2	63	57×4,0	76	195	1,54 (2,00)
3	75	76×5,0	95	210	2,36 (2,81)
4	90	89×5,0	108	230	3,59 (4,22)
5	110	108×4,5	127	240	4,86 (6,17)
6	125	127×5,5	146	267	5,95 (7,76)
7	140	135×6,0	159	273	6,35 (8,42)
8	160	159×6,0	178	273	8,26 (10,63)

* In parentheses are the weight of the product complete with outer sleeve.

2.3 FIBREFLEX ULTRA COUPLER

Used to connect two FIBREFLEX ULTRA pipes of the same cross section.

Kit:

- 1. coupler (1 ps);
- 2. outer sleeve (2 ps).

Material:

- a) stainless steel.

The FIBREFLEX ULTRA Coupler is supplied complete with Outer Sleeves.

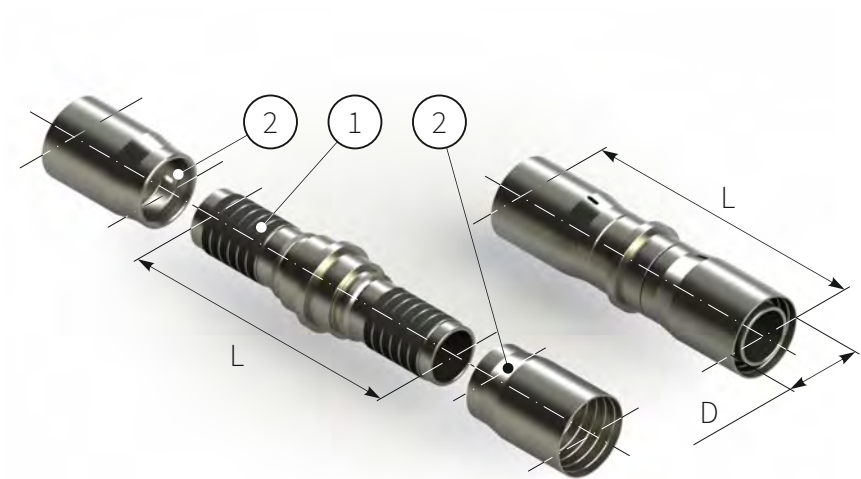


Table 2.3. FIBREFLEX ULTRA Couplers specifications

Pos	Item	D, mm	L, mm	Weight*, kg
1	50-50	60	250	1,49 (2,17)
2	63-63	76	280	2,56 (3,48)
3	75-75	95	310	3,85 (4,75)
4	90-90	108	348	6,15 (7,41)
5	110-110	127	365	8,58 (11,20)
6	125-125	146	432	10,26 (13,88)
7	140-140	159	434	10,80 (14,94)
8	160-160	178	434	14,27 (19,01)

* In parentheses are the weight of the product complete with outer sleeves.

2.4 FIBREFLEX ULTRA REDUCER

Used to connect two FIBREFLEX ULTRA pipes of different sections.

Kit:

- 1. reducer (1 ps);
- 2. outer sleeve (2 ps).

Material:

- a) stainless steel.

The FIBREFLEX ULTRA Reducer is supplied complete with Outer Sleeves.

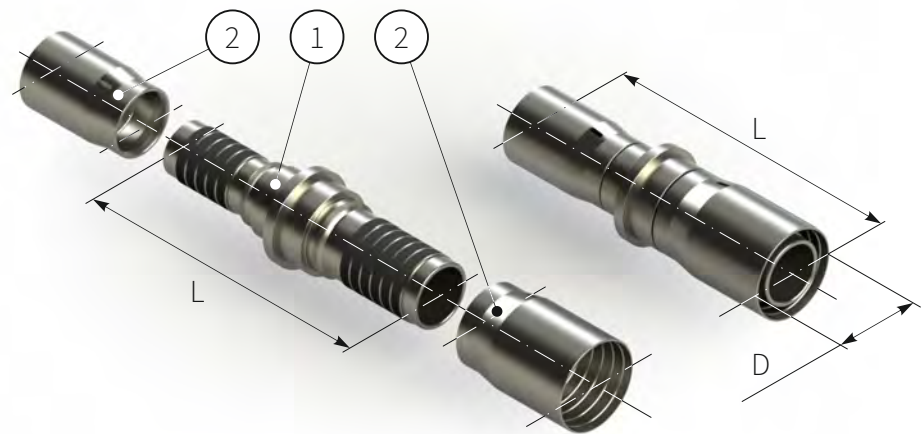


Table 2.4. FIBREFLEX ULTRA Reducers specifications

Pos	Item	D, mm	L, mm	Weight* , kg
1	63-50	76	265	2,03 (2,83)
2	75-63	95	295	3,21 (4,12)
3	90-75	108	330	5,00 (6,08)
4	110-90	127	358	7,36 (9,30)
5	125-110	146	392	9,42 (12,54)
6	140-125	159	428	10,53 (14,41)
7	160-140	178	434	12,54 (16,98)

* In parentheses are the weight of the product complete with outer sleeves.

2.5 FIBREFLEX ULTRAX 90 DEGREE ELBOW

Used to change the direction of the pipeline by 90 degrees without changing the cross-section of the pipeline.

Kit:

- 1. 90 degree elbow (1 ps);
- 2. outer sleeve (2 ps).

Material:

- a) stainless steel.

The FIBREFLEX ULTRA 90 Degree Elbow is supplied complete with a Outer Sleeves.

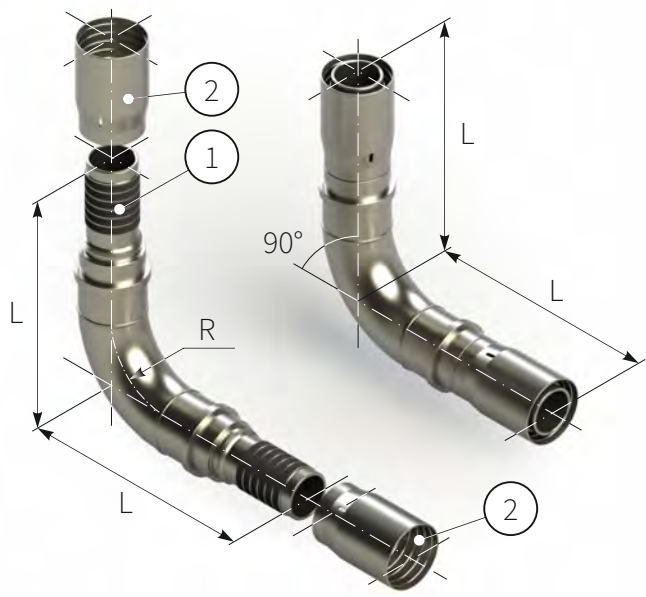


Table 2.5. FIBREFLEX ULTRA 90 Degree Elbows specifications

Pos	Item	L, mm	R, mm	Weight*, kg
1	50	240	60	2,30 (2,98)
2	63	270	75	3,52 (4,44)
3	75	310	100	5,90 (6,80)
4	90	350	120	8,56 (9,82)
5	110	390	150	11,96 (14,58)
6	125	457	190	18,30 (21,92)
7	140	463	190	15,86 (20,00)
8	160	498	225	23,74 (28,48)

* In parentheses are the weight of the product complete with outer sleeves.

2.6 FIBREFLEX ULTRA BRANCH

Used to branch the pipeline 90 degrees.

Kit:

- 1. t-branch (1 ps);
- 2. outer sleeve (3 ps).

Material:

- a) stainless steel.

The FIBREFLEX ULTRA T-branch is supplied complete with a Outer Sleeves.

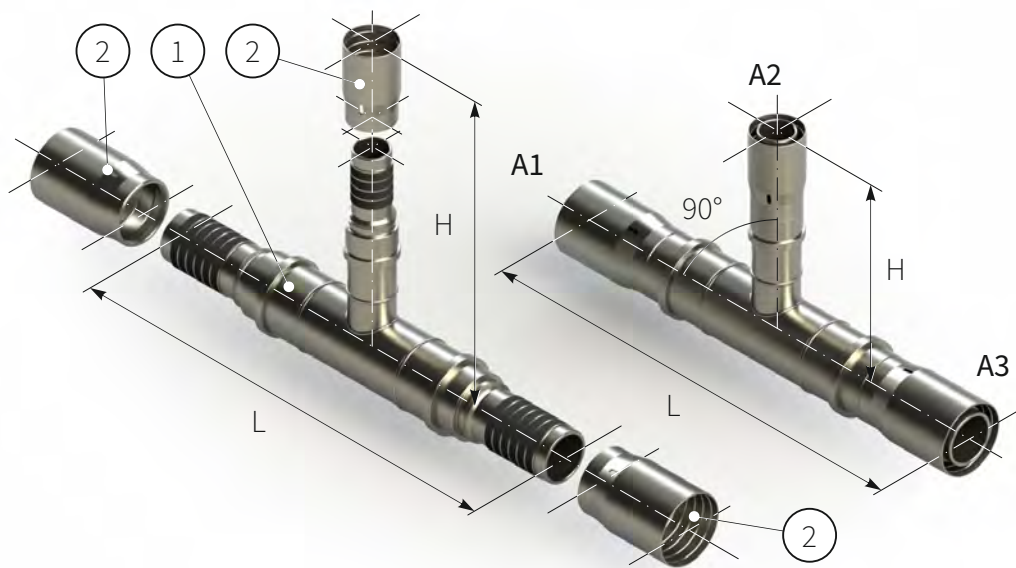


Table 2.6-1. FIBREFLEX ULTRA T-branches

A1	A3	A2							
		50	63	75	90	110	125	140	160
50	50	Pos. 1*							
63	50	Pos. 2	Pos. 3				* Reference to the item position in the table 2.6-2.		
	63	Pos. 4	Pos. 5						
75	63	Pos. 6	Pos. 7	Pos. 8					
	75	Pos. 9	Pos. 10	Pos. 11					
90	75	Pos. 12	Pos. 13	Pos. 14	Pos. 15				
	90	Pos. 16	Pos. 17	Pos. 18	Pos. 19				
110	90	Pos. 20	Pos. 21	Pos. 22	Pos. 23	Pos. 24			
	110	Pos. 25	Pos. 26	Pos. 27	Pos. 28	Pos. 29			
125	110	Pos. 30	Pos. 31	Pos. 32	Pos. 33	Pos. 34	Pos. 35		
	125	Pos. 36	Pos. 37	Pos. 38	Pos. 39	Pos. 40	Pos. 41		
140	125	Pos. 42	Pos. 43	Pos. 44	Pos. 45	Pos. 46	Pos. 47	Pos. 48	
	140	Pos. 49	Pos. 50	Pos. 51	Pos. 52	Pos. 53	Pos. 54	Pos. 55	
160	140	Pos. 56	Pos. 57	Pos. 58	Pos. 59	Pos. 60	Pos. 61	Pos. 62	Pos. 63
	160	Pos. 64	Pos. 65	Pos. 66	Pos. 67	Pos. 68	Pos. 69	Pos. 70	Pos. 71

Table 2.6-2. FIBREFLEX ULTRA T-branches specifications

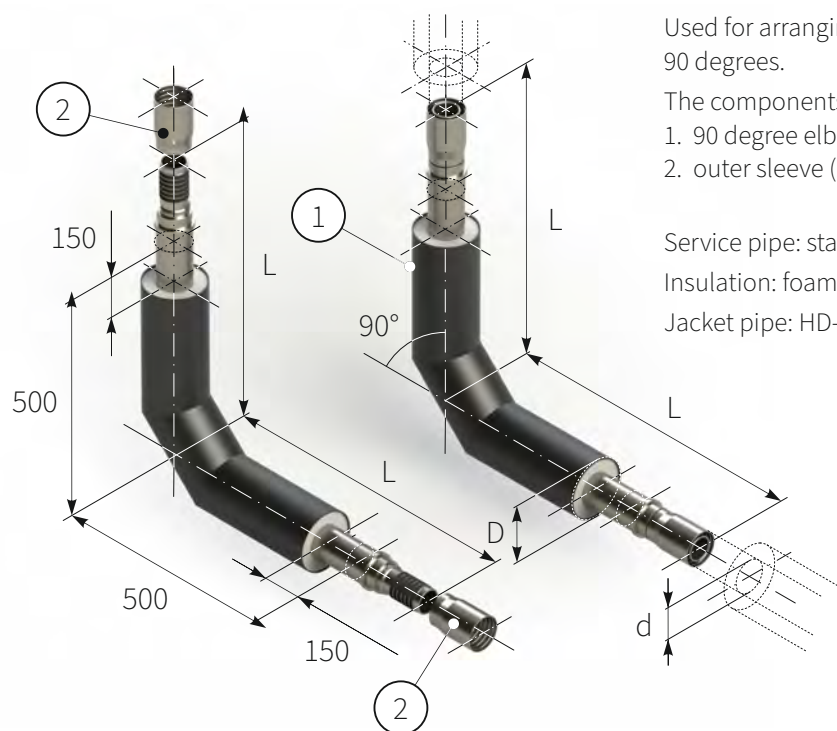
Pos	Item	L, mm	H, mm	Weight*, kg
1	50-50-50	480	240	3,53 (4,55)
2	63-50-50	505	247	4,38 (5,52)
3	63-50-63	505	260	5,08 (6,34)
4	63-63-50	520	247	4,93 (6,19)
5	63-63-63	520	260	5,63 (7,01)
6	75-50-63	545	253	6,06 (7,31)
7	75-63-63	545	266	6,77 (8,14)
8	75-75-63	545	280	6,77 (8,13)
9	75-50-75	560	253	6,88 (8,12)
10	75-63-75	560	266	7,59 (8,95)
11	75-75-75	560	280	7,59 (8,94)
12	90-50-75	600	260	8,77 (10,19)
13	90-63-75	600	273	9,47 (11,01)
14	90-75-75	600	287	9,47 (11,00)
15	90-90-75	600	310	12,01 (13,72)
16	90-50-90	620	260	10,00 (11,60)
17	90-63-90	620	273	10,70 (12,42)
18	90-75-90	620	287	10,70 (12,41)
19	90-90-90	620	310	13,24 (16,13)
20	110-50-90	650	270	11,90 (14,18)
21	110-63-90	650	283	12,60 (15,00)
22	110-75-90	650	297	12,60 (14,99)
23	110-90-90	650	320	15,13 (17,70)
24	110-110-90	650	330	16,72 (19,97)
25	110-50-110	660	270	13,17 (16,13)
26	110-63-110	660	283	13,87 (16,95)
27	110-75-110	660	297	13,87 (16,94)
28	110-90-110	660	320	16,40 (19,65)
29	110-110-110	660	330	17,99 (21,92)
30	125-50-110	697	278	14,83 (18,29)
31	125-63-110	697	291	15,53 (19,11)
32	125-75-110	697	305	15,53 (19,10)
33	125-90-110	697	328	18,06 (21,81)
34	125-110-110	697	338	19,65 (24,08)
35	125-125-110	697	362	21,02 (25,95)
36	125-50-125	724	278	15,83 (19,88)
37	125-63-125	724	291	16,62 (20,70)

Pos	Item	L, mm	H, mm	Weight*, kg
38	125-75-125	724	305	16,62 (20,69)
39	125-90-125	724	328	19,15 (23,40)
40	125-110-125	724	338	20,74 (25,67)
41	125-125-125	724	362	22,11 (27,54)
42	140-50-125	750	285	16,82 (21,04)
43	140-63-125	750	298	17,52 (21,86)
44	140-75-125	750	312	17,52 (21,85)
45	140-90-110	750	335	20,06 (24,57)
46	140-110-125	750	345	21,64 (26,83)
47	140-125-125	750	369	23,01 (28,70)
48	140-140-125	750	378	23,67 (29,62)
49	140-50-140	756	285	17,22 (21,70)
50	140-63-140	756	298	17,92 (22,52)
51	140-75-140	756	312	17,92 (22,51)
52	140-90-140	756	335	20,46 (25,23)
53	140-110-140	756	345	22,04 (27,49)
54	140-125-140	756	369	23,41 (29,36)
55	140-140-140	756	378	24,07 (30,28)
56	160-50-140	786	295	20,31 (25,09)
57	160-63-140	786	308	21,02 (25,92)
58	160-75-140	786	322	21,02 (25,91)
59	160-90-140	786	345	23,55 (28,62)
60	160-110-140	786	355	25,13 (30,88)
61	160-125-140	786	379	26,51 (32,76)
62	160-140-140	786	388	27,16 (33,67)
63	160-160-140	786	393	29,66 (36,47)
64	160-50-160	786	395	22,22 (27,30)
65	160-63-160	786	308	22,93 (28,13)
66	160-75-160	786	322	22,93 (28,12)
67	160-90-160	786	345	25,46 (30,83)
68	160-110-160	786	355	27,04 (33,09)
69	160-125-160	786	379	28,42 (34,97)
70	160-140-160	786	388	29,07 (35,88)
71	160-160-160	786	393	31,57 (38,68)

* In parentheses are the weight of the product complete with outer sleeves.

3 PRE-INSULATED CONNECTING ELEMENTS

3.1 FIBREFLEX ULTRA 90 DEGREE ELBOW PRE-INSULATED



Used for arranging a turn of the pipeline at an angle of 90 degrees.

The components of the kit:

1. 90 degree elbow pre-insulated (1 ps);
2. outer sleeve (2 ps).

Service pipe: stainless steel.

Insulation: foamed polyurethane.

Jacket pipe: HD-PE.

Table 3.1. FIBREFLEX ULTRA 90 Degree Elbows specifications

Pos	Item, d/D	L, mm	Weight*, kg
1	50/111	680	7,76 (8,44)
2	63/126	695	9,32 (10,24)
3	75/142	710	14,72 (15,62)
4	90/162	730	19,02 (20,28)
5	110/182	740	22,92 (25,54)
6	125/202	767	30,36 (33,98)
7	140/202	773	33,68 (37,82)
8	160/225	773	42,22 (46,96)

* In parentheses are the weight of the product complete with outer sleeves.

3.2 FIBREFLEX PRO 90 DEGREE ELBOW FOR WELDING PRE-INSULATED

Used for arranging an entry of the pipeline into the building at an angle of 90 degrees.

The components of the kit:

- 1. 90 degree elbow for welding pre-insulated (1 ps);
- 2. outer sleeve (1 ps).

Service pipe: stainless steel.

Insulation: foamed polyurethane.

Jacket pipe: HD-PE.

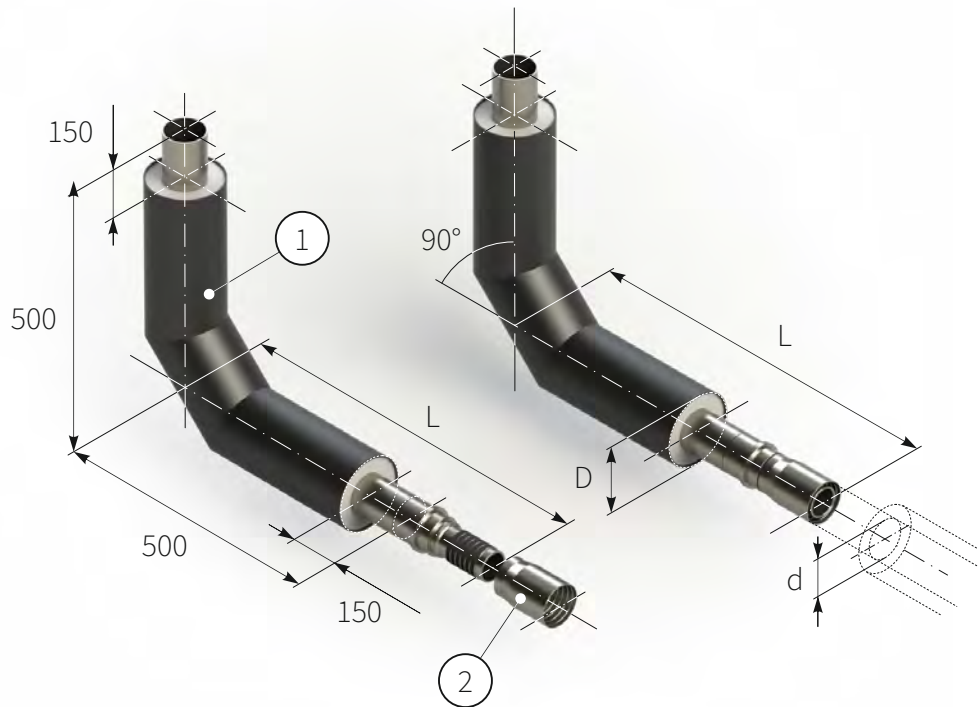


Table 3.2. FIBREFLEX ULTRA 90 Degree Elbows For Welding specifications

Pos	Item, d/D	L, mm	Weight*, kg
1	50/111	680	6,77 (7,11)
2	63/126	695	7,78 (8,24)
3	75/142	710	12,36 (12,81)
4	90/162	730	15,43 (16,06)
5	110/182	740	18,06 (19,37)
6	125/202	767	24,41 (26,22)
7	140/202	773	27,33 (29,40)
8	160/225	773	33,96 (36,33)

* In parentheses are the weight of the product complete with outer sleeve.

3.3 FIBREFLEX ULTRA T-BRANCH PRE-INSULATED

The product is used to arrange a branching of the pipeline at an angle of 90 degrees.

The components of the kit:

1. t-branch pre-insulated (1 ps);
2. outer sleeve (3 ps).

Service pipe: stainless steel.

Insulation: foamed polyurethane.

Jacket pipe: HD-PE.

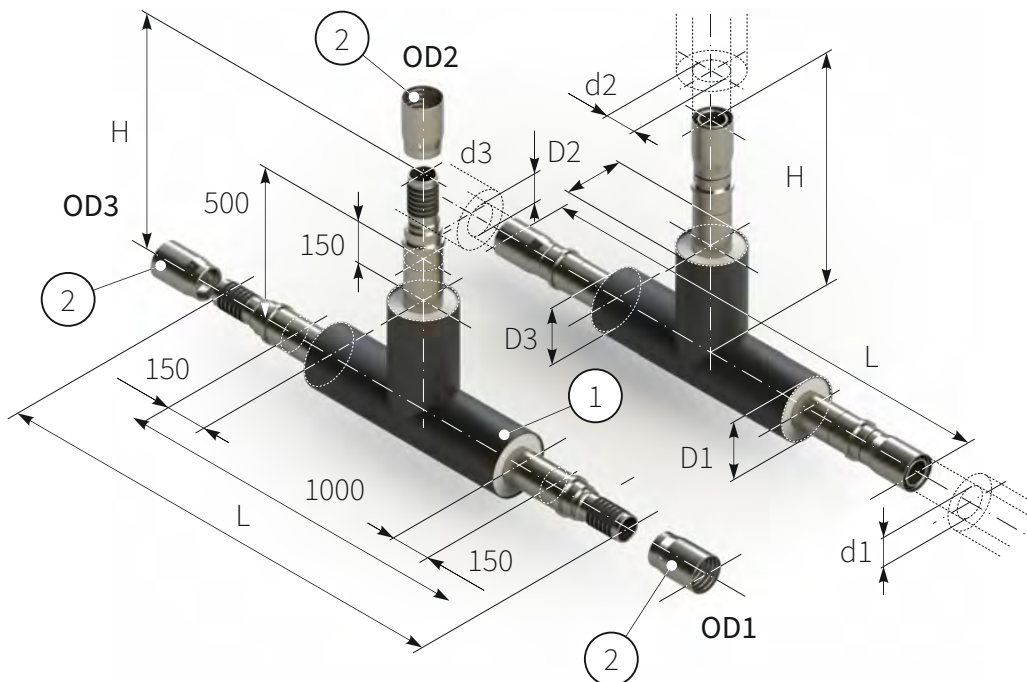


Table 3.3-1. FIBREFLEX ULTRA T-branches Pre-insulated

OD1	OD3	OD2							
		50/111	63/126	75/142	90/162	110/182	125/202	140/202	160/225
50/111	50/111	Pos. 1							
63/126	50/111	Pos. 2	Pos. 3						
	63/126	Pos. 4	Pos. 5						
75/142	63/126	Pos. 6	Pos. 7	Pos. 8					
	75/142	Pos. 9	Pos. 10	Pos. 11					
90/162	75/142	Pos. 12	Pos. 13	Pos. 14	Pos. 15				
	90/162	Pos. 16	Pos. 17	Pos. 18	Pos. 19				
110/182	90/162	Pos. 20	Pos. 21	Pos. 22	Pos. 23	Pos. 24			
	110/182	Pos. 25	Pos. 26	Pos. 27	Pos. 28	Pos. 29			
125/202	110/182	Pos. 30	Pos. 31	Pos. 32	Pos. 33	Pos. 34	Pos. 35		
	125/202	Pos. 36	Pos. 37	Pos. 38	Pos. 39	Pos. 40	Pos. 41		
140/202	125/202	Pos. 42	Pos. 43	Pos. 44	Pos. 45	Pos. 46	Pos. 47	Pos. 48	
	140/202	Pos. 49	Pos. 50	Pos. 51	Pos. 52	Pos. 53	Pos. 54	Pos. 55	
160/225	140/202	Pos. 56	Pos. 57	Pos. 58	Pos. 59	Pos. 60	Pos. 61	Pos. 62	Pos. 63
	160/225	Pos. 64	Pos. 65	Pos. 66	Pos. 67	Pos. 68	Pos. 69	Pos. 70	Pos. 71

* Reference to the item position in the table 3.3-2.

Table 3.3-2. FIBREFLEX ULTRA T-branches Pre-insulated specifications

Pos	d1-d2-d3	D1-D2-D3	L, mm	H, mm	Weight*, kg
1	50-50-50	111-111-111	1360	680	11,64 (12,66)
2	63-50-50	126-111-111	1375	680	12,42 (13,56)
3	63-50-63	126-111-126	1390	680	13,20 (14,46)
4	63-63-50	126-126-111	1375	695	13,20 (14,46)
5	63-63-63	126-126-126	1390	695	13,98 (15,36)
6	75-50-63	142-111-126	1405	680	15,90 (17,15)
7	75-63-63	142-126-126	1405	695	16,68 (18,05)
8	75-75-63	142-142-126	1405	710	19,38 (20,74)
9	75-50-75	142-111-142	1420	680	18,60 (19,84)
10	75-63-75	142-126-142	1420	695	19,38 (20,74)
11	75-75-75	142-142-142	1420	710	22,08 (23,43)
12	90-50-75	162-111-142	1440	680	20,75 (22,17)
13	90-63-75	162-126-142	1440	695	21,53 (23,07)
14	90-75-75	162-142-142	1440	710	24,23 (25,76)
15	90-90-75	162-162-142	1440	730	26,38 (28,09)
16	90-50-90	162-111-162	1460	680	22,90 (24,50)
17	90-63-90	162-126-162	1460	695	23,68 (25,40)
18	90-75-90	162-142-162	1460	710	26,38 (28,09)
19	90-90-90	162-162-162	1460	730	28,53 (30,42)
20	110-50-90	182-111-162	1470	680	24,85 (27,13)
21	110-63-90	182-126-162	1470	695	25,63 (28,03)
22	110-75-90	182-142-162	1470	710	28,33 (30,72)
23	110-90-90	182-162-162	1470	730	30,48 (33,05)
24	110-110-90	182-182-162	1470	740	32,43 (35,68)
25	110-50-110	182-111-182	1480	680	26,80 (29,76)
26	110-63-110	182-126-182	1480	695	27,58 (30,66)
27	110-75-110	182-142-182	1480	710	30,28 (33,35)
28	110-90-110	182-162-182	1480	730	32,43 (35,68)
29	110-110-110	182-182-182	1480	740	34,38 (38,31)
30	125-50-110	202-111-182	1507	680	30,52 (33,98)
31	125-63-110	202-126-182	1507	695	31,30 (34,88)
32	125-75-110	202-142-182	1507	710	34,00 (37,57)
33	125-90-110	202-162-182	1507	730	36,15 (39,90)
34	125-110-110	202-182-182	1507	740	38,10 (42,53)
35	125-125-110	202-202-182	1507	767	41,82 (46,75)
36	125-50-125	202-111-202	1534	680	34,24 (38,20)
37	125-63-125	202-126-202	1534	695	35,02 (39,10)
38	125-75-125	202-142-202	1534	710	37,72 (41,79)
39	125-90-125	202-162-202	1534	730	39,87 (44,12)
40	125-110-125	202-182-202	1534	740	41,82 (46,75)
41	125-125-125	202-202-202	1534	767	45,54 (50,97)
42	140-50-125	202-111-202	1540	680	35,90 (40,12)
43	140-63-125	202-126-202	1540	695	36,68 (41,02)
44	140-75-125	202-142-202	1540	710	39,38 (43,71)
45	140-90-110	202-162-202	1540	730	41,53 (46,04)

Table 3.3-2. FIBREFLEX ULTRA T-branches Pre-insulated specifications

Pos	d1-d2-d3	D1-D2-D3	L, mm	H, mm	Weight*, kg
46	140-110-125	202-182-202	1540	740	43,48 (48,67)
47	140-125-125	202-202-202	1540	767	47,20 (52,89)
48	140-140-125	202-202-202	1540	773	48,86 (54,81)
49	140-50-140	202-111-202	1546	680	37,56 (42,04)
50	140-63-140	202-126-202	1546	695	38,34 (42,94)
51	140-75-140	202-142-202	1546	710	41,04 (45,63)
52	140-90-140	202-162-202	1546	730	43,19 (47,96)
53	140-110-140	202-182-202	1546	740	45,14 (50,59)
54	140-125-140	202-202-202	1546	767	48,86 (54,81)
55	140-140-140	202-202-202	1546	773	50,52 (56,73)
56	160-50-140	225-111-202	1546	680	41,83 (46,61)
57	160-63-140	225-126-202	1546	695	42,61 (47,51)
58	160-75-140	225-142-202	1546	710	45,31 (50,20)
59	160-90-140	225-162-202	1546	730	47,46 (52,53)
60	160-110-140	225-182-202	1546	740	49,41 (55,16)
61	160-125-140	225-202-202	1546	767	53,13 (59,38)
62	160-140-140	225-202-202	1546	773	54,79 (61,30)
63	160-160-140	225-225-202	1546	773	59,06 (65,87)
64	160-50-160	225-111-225	1546	680	46,10 (51,18)
65	160-63-160	225-126-225	1546	695	46,88 (52,08)
66	160-75-160	225-142-225	1546	710	49,58 (54,77)
67	160-90-160	225-162-225	1546	730	51,73 (57,10)
68	160-110-160	225-182-225	1546	740	53,68 (59,73)
69	160-125-160	225-202-225	1546	767	57,40 (63,95)
70	160-140-160	225-202-225	1546	773	59,06 (65,87)
71	160-160-160	225-225-225	1546	773	63,33 (70,44)

* In parentheses are the weight of the product complete with outer sleeves.

3.4 FIBREFLEX ULTRA BALL VALVE PRE-INSULATED

Used to control the flow of medium in FIBREFLEX ULTRA pipelines.
The components of the kit:
1. ball valve pre-insulated (1 ps);
2. outer sleeve (2 ps).

Service pipe: stainless steel.
Insulation: foamed polyurethane.
Jacket pipe: HD-PE.

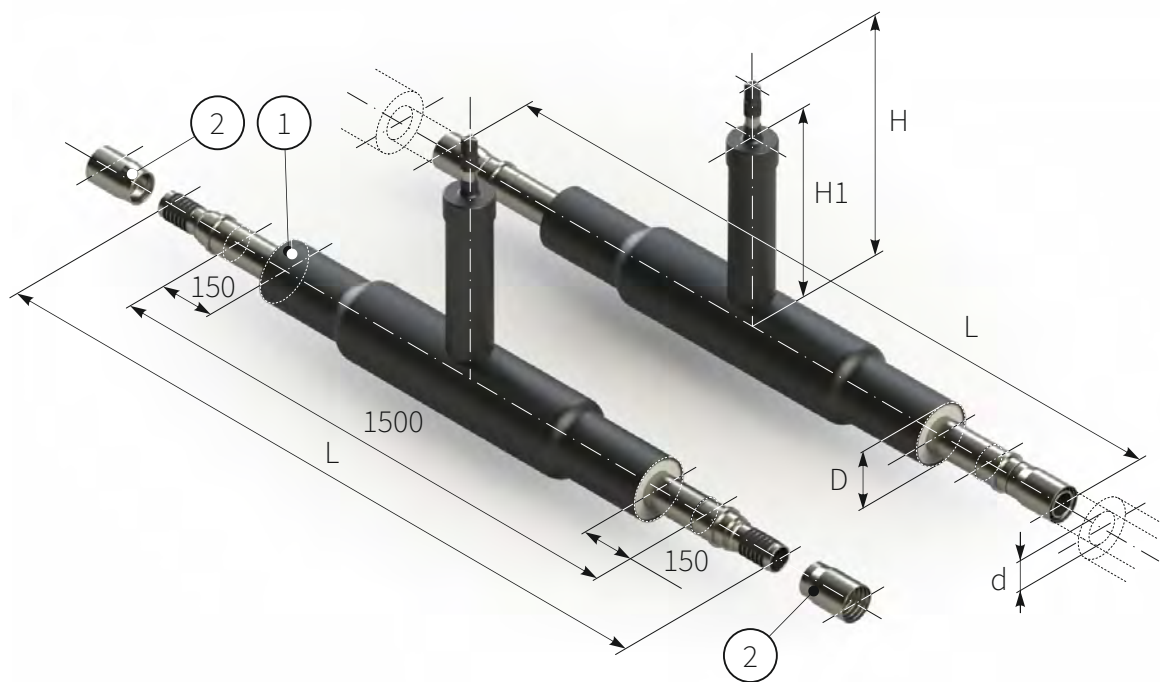


Table 3.4. FIBREFLEX ULTRA Valves Pre-insulated specifications

Pos	Item, d/D	L, mm	Weight*, kg
1	50/111	1860	15,44 (16,12)
2	63/126	1890	20,38 (21,80)
3	75/142	1920	22,46 (23,36)
4	90/162	1960	27,40 (28,66)
5	110/182	1980	39,16 (41,78)
6	125/202	2034	50,82 (54,44)
7	140/202	2046	52,92 (57,06)
8	160/225	2046	68,06 (72,80)

* In parentheses are the weight of the product complete with outer sleeves.

4 ACCESSORIES AND MATERIALS

4.1 END CAP HEAT SHRINK

Used for insulation FIBREFLEX ULTRA pipe end seal.
Material: Cross-linked polyethylene PEX-c.



Table 4.1. End Cap Heat Shrink specifications

Pos	Item	Service pipe dimension	Jacket pipe dimension	Weight, kg
1	25-50/76-126	50	91-126	0,17
2	60-76/126-142	63-75	126-142	0,19
3	60-90/162-182	75-90	162-182	0,22
4	89-114/162-225	110	162-225	0,25
5	75-140/162-250	90-160	162-225	0,18

4.2 HEAT-SHRINKABLE KIT

The heat-shrinkable kit is used for the insulation of FIBREFLEX ULTRA couplers and FIBREFLEX ULTRA Pre-insulated Connecting Elements.

The components of the kit:

1. heat-shrinkable sleeve (1 ps);
2. heat-shrinkable hosepipe (3 ps);
3. mounting plug (1 ps);
4. PUR Set.

Depending on the purpose of the kit, the heat-shrinkable sleeve may be supplied in two options:

- a) straight – to isolate the joint of pipes of same sizes;
- b) reduced – for insulation of the joint of pipes of various sizes.

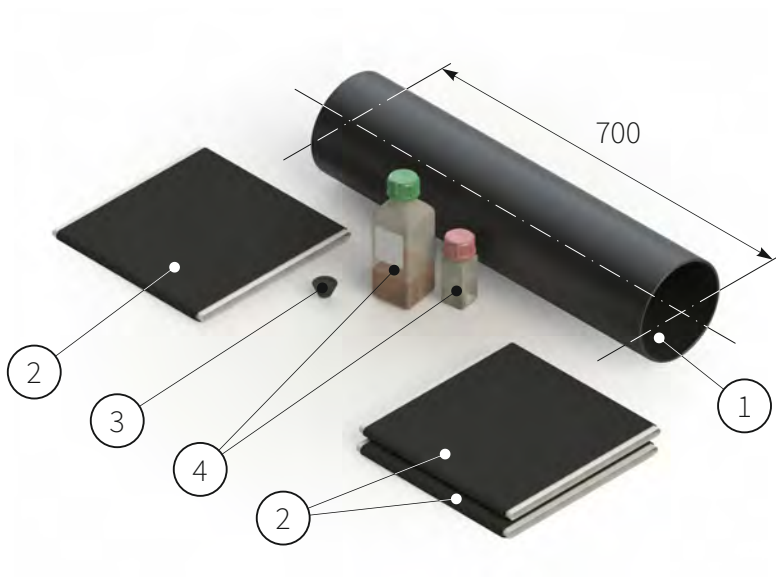


Table 4.2. Heat-shrinkable Kits specifications

Pos	Item	PUR Set	Weight, kg
Straight			
1	111-111	2	1,32
2	126-126	3	1,43
3	142-142	4	1,55
4	162-162	5	2,02
5	182-182	6	2,22
6	202-202	7	2,40
7	225-225	8	3,11
Reduced			
8	126-111	3	1,75
9	142-126	4	1,79
10	162-142	5	2,10
11	182-162	6	2,40
12	202-182	6	2,64
13	225-202	7	2,92

4.3 PLUG HEAT-SHRINKABLE KIT

The plug heat-shrinkable kit is used for the insulation of a prospective branch' temporary plug of FIBREFLEX ULTRA pipelines.

The components of the kit:

1. heat-shrinkable dead-end (1 ps);
2. heat-shrinkable hosepipe (2 ps);
3. mounting plug (1 ps);
4. PUR Set.

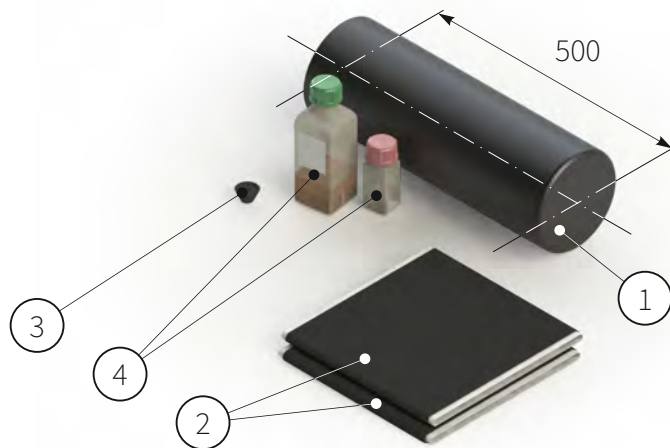


Table 4.3. Plug Heat-shrinkable Kits specifications

Pos	Item	PUR Set	Weight, kg
1	111	2	1,71
2	126	3	1,84
3	142	4	1,98
4	162	5	2,21
5	182	6	2,56
6	202	6	2,78
7	225	7	3,33

4.4 STRAIGHT INSULATION KIT (Clam Shell)

The straight insulation kit is used for the insulation of FIBREFLEX ULTRA Couplers.

The components of the kit:

- 1. upper shell half (1 ps);
- 2. lower shell half (1 ps);
- 3. sealing ring (2 ps);
- 4. plug-in clips;
- 5. plugs (2 ps);
- 6. clamps (2 sets of two items).

Sealing rings are not included; in the custom specification, they should be indicated by separate items.

The kit also includes a set of components for polyurethane foam.

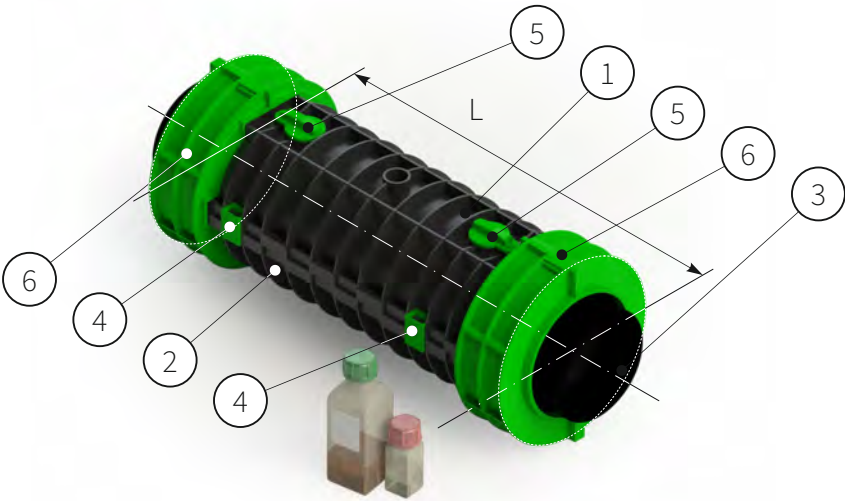


Table 4.4. Straight Insulation Kits specifications

Pos	Item	Jacket pipe dimension	PUR Set	L, mm	Weight, kg
1	Small	111-142	6	580	2,08
2	Big	111-202	8	700	4,50

4.5 ELBOW 90 DEGREE INSULATION KIT (Clam Shell)

The elbow 90 degree insulation kit is used for the insulation of FIBREFLEX ULTRA Elbows 90 Degree.

The components of the kit:

- 1. upper shell half (1 ps);
- 2. lower shell half (1 ps);
- 3. sealing ring (2 ps);
- 4. plug-in clips;
- 5. plugs (2 ps);
- 6. clamps (2 sets of two items).

Sealing rings are not included in the basic kit; they must be specified in the customer's specification separately.

The kit also includes a set of components for polyurethane foam.

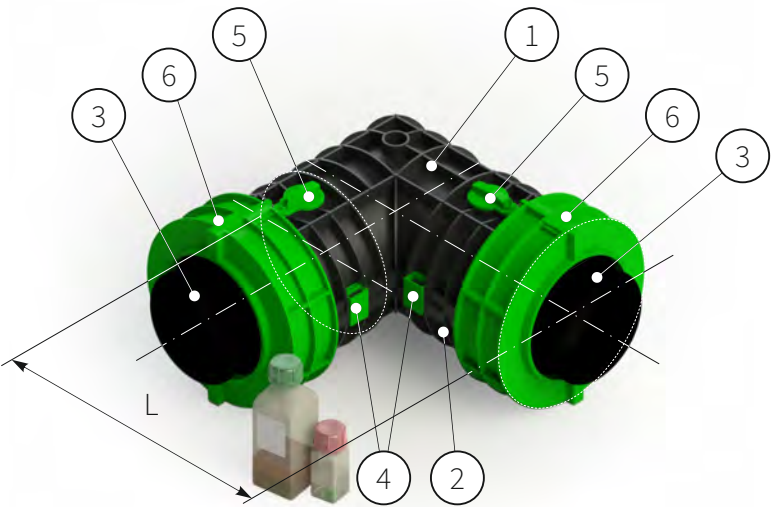


Table 4.5. Elbow 90 Degree Insulation Kits specifications

Pos	Item	Jacket pipe dimension	PUR Set	L, mm	Weight, kg
1	Small	111-142	6	380	2,16
2	Big	111-202	8	500	4,40

4.6 T-BRANCH INSULATION KIT (Clam Shell)

The T-branch insulation shell kit is used for the insulation of FIBREFLEX ULTRA T-branch.

The components of the kit:

- 1. upper shell half (1 ps);
- 2. lower shell half (1 ps);
- 3. sealing ring (3 ps);
- 4. plug-in clips;
- 5. plugs (2 ps);
- 6. clamps (2 sets of two items).

Sealing rings are not included in the basic kit; they must be specified in the customer's specification separately.

The kit also includes a set of components for polyurethane foam.

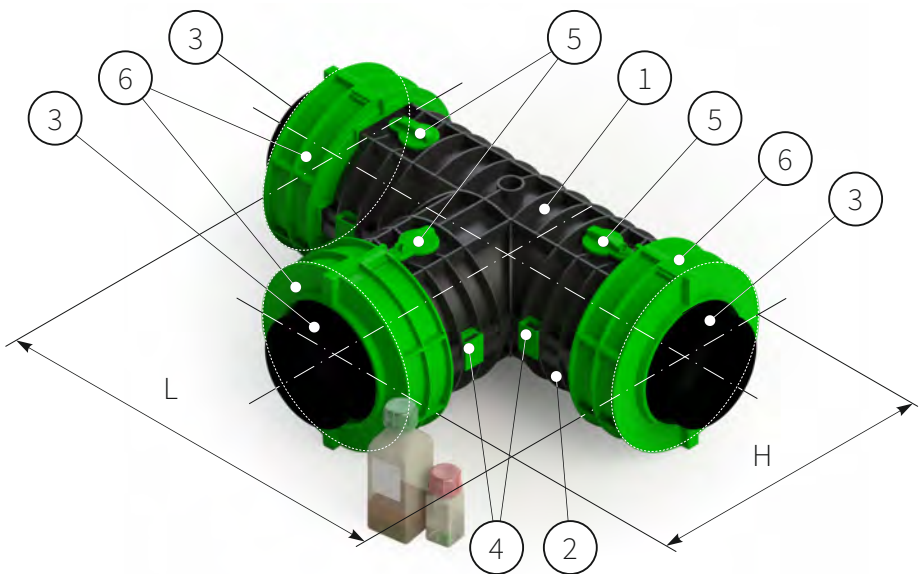


Table 4.6. T-branch Insulation Kits specifications

Pos	Item	Jacket pipe dimension	PUR Set	L, mm	H, mm	Weight, kg
1	Small	111-142	7	580	380	2,82
2	Big	111-202	9	700	500	8,00

4.7 SEALING RING

Sealing rings are used in Insulation Shells to provide and guarantee shell's water tightness.

Material: EPDM.



Table 4.7. Sealing Rings specifications

Pos	Item	Jacket pipe dimension	Weight, kg
1	Small 111	111	0,60
2	Small 126	126	0,60
3	Small 142	142	0,60
4	Large 111	111	0,80
5	Large 126	126	0,80
6	Large 142	142	0,80
7	Large162	162	0,80
8	Large 182	182	0,80
9	Large 202	202	0,80

4.8 PUR LIQUID COMPONENTS

For FIBREFLEX ULTRA pipe joint insulation.

Composition: polyol with pentane, isocyanate (in two separate plastic bottles).



Таблица 4.8. PUR Liquid Components Sets specifications

Pos	PUR Set	Polyol with pentane volume, l	Isocyanate volume, l	Weight, kg
1	1	0,15	0,20	0,52
2	2	0,17	0,23	0,57
3	3	0,19	0,25	0,62
4	4	0,23	0,30	0,72
5	5	0,26	0,35	0,82
6	6	0,35	0,48	1,07
7	7	0,40	0,56	1,22
8	8	0,66	0,91	2,03
9	9	0,89	1,24	2,69

4.9 WALL SEALING RING

FIBREFLEX ULTRA pipe wall penetration sleeve, up to 0,5 bar compression pressure.

Material: neoprene.

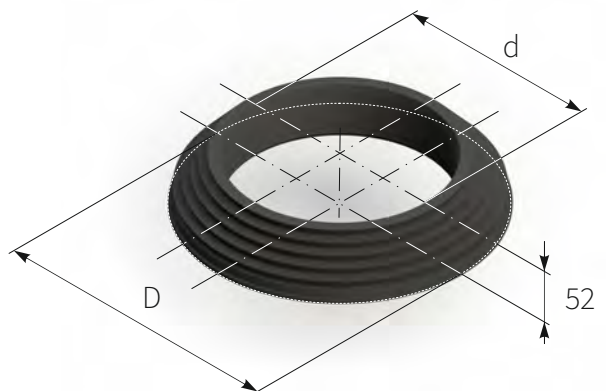


Table 4.9. Wall Sealing Rings specifications

Pos	Jacket pipe dimension, mm	D, mm	d, mm	Weight, kg
1	111	155	111	0,32
2	126	170	126	0,34
3	142	190	146	0,36
4	162	202	158	0,38
5	182	222	178	0,39
6	202	237	193	0,47
7	225	263	219	0,55

4.10 WALL COMPRESSION SEAL 40

Used to seal the annular gap between the pipe and the bore hole.

Material: steel, EPDM.

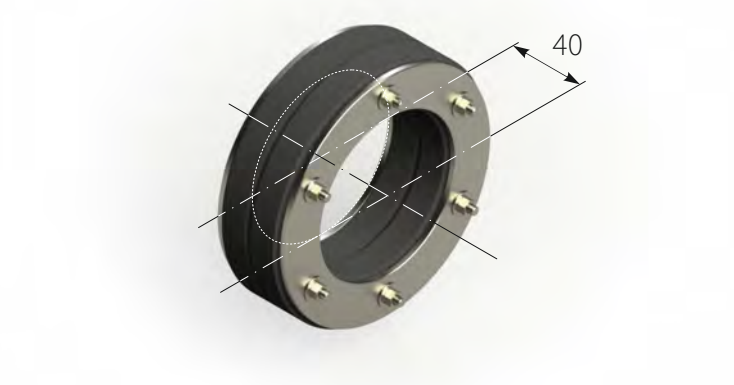


Table 4.10. Wall Compression Seals 40 specifications

Pos	Jacket pipe dimension, mm	Bore diameter, mm	Width, kg
1	111	200	2,40
2	126	200	2,40
3	142	200	1,90
4	162	250	2,74
5	182	250	2,18
6	202	250	1,64
7	225	350	5,74

4.11 WALL COMPRESSION SEAL 80

FIBREFLEX ULTRA pipe wall penetration sleeve, up to 1,0 bar pressure tightness.

Material: steel, EPDM.

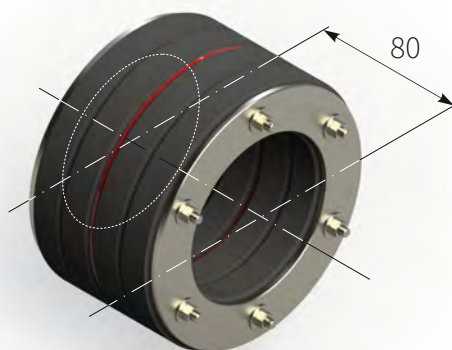


Table 4.11. Wall Compression Seals 80 specifications

Pos	Jacket pipe dimension, mm	Bore diameter, mm	Weight, kg
1	111	200	3,06
2	126	200	2,40
3	142	200	2,10
4	162	250	3,76
5	182	250	3,21
6	202	250	2,30
7	225	350	7,97

4.12 PVC PIPE SLEEVE

Bore hole sleeve for increased Wall Compression Seal tightness.

Material: PVC.

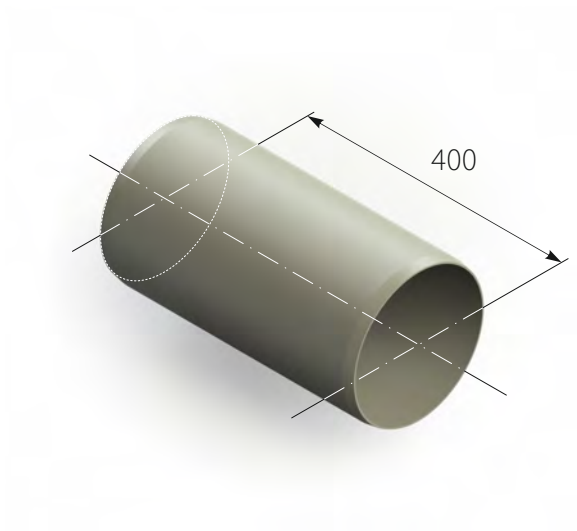


Table 4.12. PVC Pipe Sleeves specifications

Pos	Bore diameter, mm	Outside diameter, mm	Weight, kg
1	150	158	1,24
2	200	210	1,67
3	250	280	6,22

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