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EUROPRESS

STAINLESS STEEL AND CARBON STEEL
PRESS FIT PIPE SYSTEMS

Technical Manual

316L & 304 Stainless Steel Carbon Steel 316L Stainless Steel Gas

Smarter pipeline solutions.

WATER WORKS

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Europress Pressfit System

The EUROPRESS Pressfitting System is a fast and simple modular piping system, producing reliable joints with high mechanical resistance for civil, hot and cold water, potable water, fire sprinklers, compressed air, industrial gases, chemical lines, oil & lubricant lines, vacuum, and glycol pipeline installations. Standard diameters range from 15 to 108 mm. Other sizes are available for special applications.

Materials

Depending on the application, the following materials are used:

- Stainless Steel 316L
- Stainless Steel 304
- Carbon Steel

Benefits

Europress is a fast, easy, and risk-free piping system manufactured in Europe. Europress brings market leading innovation and quality to deliver you a pipeline solution which saves money and which you can trust.

Fast - Being a modular system, Europress is up to 10 times faster to install than conventional technology generating project savings of up to 30%.

Simple - Europress can be installed by a competent pipeline installer.

Reduce Plant Downtime - Europress joins can be pressed wet or dry meaning there is no need to completely drain the pipe contents prior to alterations. This combined with fast installation can reduce plant downtime by up to 50%.

Reliability - Pressing tools have pre-set torque settings and safety features to ensure each pressed connection is consistent leaving no uncertainty of joint integrity.

Trust - Europress is a reputable European manufactured product which has been successfully used throughout Europe for over 20 years. 25 Year Manufacturer backed product guarantee for all approved applications. Additionally, pressfit tightness is guaranteed by the manufacturer to be in excess of 30 years.

Cost Effective - Along with reducing installation time and eliminating consumable costs, Europress is available in 316L and 304 grade stainless steel and carbon steel allowing for a specific solution for your needs.

Safe - No naked flames, No hot work permits, No gas bottles, No fire hazard, No heavy installation equipment makes Europress easier to comply with Health & Safety regulations.

Pressing Process

The pipe is pushed into the fitting, up to the stop, then the jaw attachments of the pressing tool press the toroidal end of the fitting into the pipe.

Pressing produces two deformations. The first, radial deformation, compresses the O-ring in the toroidal chamber and guarantees that the pipe is hermetically sealed. The second, geometric deformation of both fitting and pipe, creates a mechanical joint, resistant to slipping and rotation.

The resulting pressing profile varies according to diameter. **Fig 1** shows an assembled joint before and after pressing. Joints produced in this way are extremely strong, but flexible enough to withstand the stresses resulting from initial installation and those, such as vibrations and thermal expansion etc., that occur in normal operating conditions. This is provided that installation has been carried out according to the instructions in this manual.

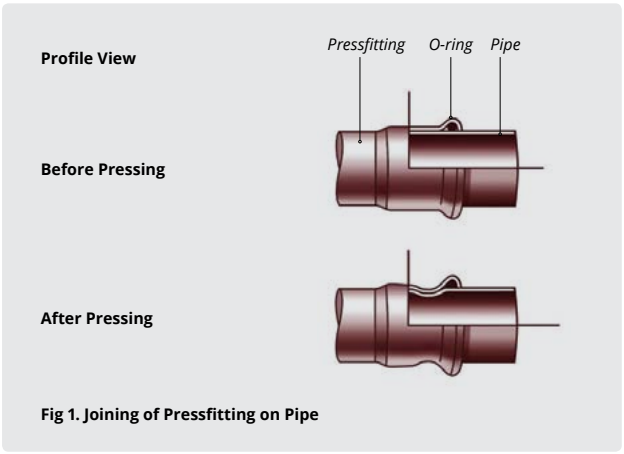


Fig 1. Joining of Pressfitting on Pipe

Certifications

The Europress 316L Stainless Steel pipe and standard fittings have been certified for drinking water use by many national and international authorities. Notably it exceeds the demanding quality requirements of the Australian Watermark and the German Standard DVGW W534.

Some major certifications are as follows, please contact Waterworks for applications where a certification not listed is required.

Watermark
AS 3688
AS 5200.053
WMKA22265

Activfire
AS 4118.2.1
VdS2344en
VdS2100-26en

Please note: Mill certificates are available on application. These must be requested at time of order if required

Press Check Sleeves

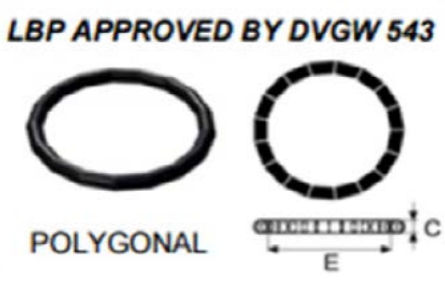
Europress are at the forefront of pressing systems with the innovative Press check sleeve. Rather than wait to fill an installation with fluid to see if any joint leaks because it has not been pressed, Europress fittings up to and including 54mm have a thin coloured film applied externally on the O-ring seat.

When the joint is pressed the film is shredded and detaches from the fitting for easy removal and visual witness to the completed press cycle.

Blue sleeves Stainless Steel
Yellow sleeves Gas Fittings
Red sleeves Carbon Steel Fittings

Leak Before Press (LBP) Seal

A patented innovatively designed O-ring which is available in EPDM for diameters from 15 to 54mm. It has polygonal shaped, including a succession of tubular sections with rectilinear axis and constant section, arranged as a ring to generate a multitude of flows between the non-deformed O-ring and its seat. If the fitting is inadvertently not pressed, the profile of the O-ring identifies the anomalous condition, both during the seal test and visually, through leaking of water or air in the form of dripping. This characteristic is commonly known as “Leak Before Press (LBP). Otherwise, after the fitting has been pressed, the O-ring easily closes all the flows, ensuring the hermetic seal as with the traditional type.



EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

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Stainless Steel Tube & Fittings

All 316L tube and pressfittings are made of austenitic stainless Cr- Ni-Mo steel, n. 1.4404 which conforms to Standard UNI EN 10088 (AISI 316L).

304 grade stainless steel tube n. 1.4307 is available as a more economic alternative to 316L. The nominal dimension used to identify both components of the joint refers to the outside diameter of the pipe.

Tube for use in mains systems is manufactured to AS 5200.053 and conform to Standard DVGW- GW 547/2004 and are marked as such. Dimensional tolerances conform to Standard EN ISO 1127 D4/T4. These tubes are sold in 6-metre lengths and are capped both ends.

Outside Diameter (mm)	Thickness
15	1
22	1.2
28	1.2
35	1.5
42	1.5
54	1.5
76.1	2
88.9	2
108	2
139.7	2
168.3	2

Stainless Steel Pressfittings

Press fittings are manufactured from the same material as the tubes and conform to AS 3688.

The special process used to make the press fittings can be broken down into the following main stages:

cutting the pipe into sections and mechanical working

forming the toroidal seat

any welding of other parts of the fitting

heat treatment in a controlled atmosphere at 1050°C to restore the material's original characteristics

All process stages conform to Standards UNI EN ISO 9001 and in compliance with related technical specifications from DVGW, VdS, etc.

General Applications

The Europress Stainless Steel system is the ideal solution for drinking water systems as the AISI 316L stainless steel used is completely hygienic and highly corrosion resistant. The standard O-rings made of black EPDM, are resistant to aging, heat and chemical additives and are particularly suitable for all types of treated water.

The reliable, high-quality components are suitable for heating, cooling, compressed air, oil and diesel lines in the civil, industrial and manufacturing sectors.

Conditions of use

Maximum operating pressure: 16 bar

Operating temperature: -20°C +120°C

Maximum temperature: 180°C (on approved applications).

Up to 40 Bar/580 psi available on approved applications. Please refer to technical department.

The Europress Pressfitting System complies with the CSIRO ACTIVFIRE certification and has been evaluated and verified as conforming to AS 4118.2.1-1995. It also has been granted the internationally recognized VdS - certification for fire extinguisher systems according to VdS CEA 4001 for both carbon steel and stainless steel products 22mm - 108mm (DN20-DN100).

Please note: Mill certificates are available on application. These must be requested at time of order if required.

WATER WORKS

Pipe – Austenitic (6 metre lengths)

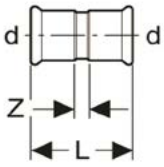
Part No. 316L	Part No. 304	Ext. Ø [mm]	Thickness [mm]	Length [m]	Weight [kg/m]
U31615-06	**U30415-06**	15	1	6	0.351
U31622-06	**U30422-06**	22	1.2	6	0.625
U31628-06	**U30428-06**	28	1.2	6	0.805
U31635-06	**U30435-06**	35	1.5	6	1.258
U31642-06	**U30442-06**	42	1.5	6	1.521
U31654-06	**U30454-06**	54	1.5	6	1.972
U31676-06	**U30476-06**	76.1	2	6	3.711
U31689-06	**U30489-06**	88.9	2	6	4.352
U316108-06	**U304108-06**	108	2	6	5.308

Stainless steel pipes type 1.4404 (316L) with Watermarked approval for potable water.

N.B. *Stainless Steel tube is available in both 304 and 316L grades. All fittings are 316L.*

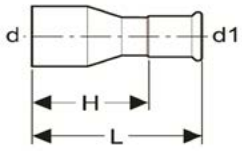
Coupling

Part No.	d	L	Z	Weight [gm]
UC15S	15	52	10	39
UC22S	22	59	13	62
UC28S	28	61	13	78
UC35S	35	72	18	109
UC42S	42	79	15	147
UC54S	54	90	16	205
UC76S	76.1	142	32	604
UC89S	88.9	163	37	837
UC108S	108	192	38	1193



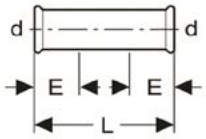
Reducing Coupling (Spigot x Adaptor) *Other sizes available on indent.*

Part No.	d-d1	L	H	Weight [gm]
URC2215S	22-15	60	39	45
URC2815S	28-15	72	51	56
URC2822S	28-22	67	44	65
URC3515S	35-15	82	61	89
URC3522S	35-22	83	60	98
URC3528S	35-28	73	49	112
URC4215S	42-15	91	70	118
URC4222S	42-22	87	64	125
URC4228S	42-28	98	74	140
URC4235S	42-35	79	52	120
URC5415S	54-15	110	89	197
URC5422S	54-22	107	84	191
URC5428S	54-28	99	75	193
URC5435S	54-35	128	101	237
URC5442S	54-42	97	65	191
URC7642S	76.1-42	151	119	425
URC7654S	76.1-54	140	103	451
URC8954S	88.9-54	156	119	586
URC8976S	88.9-76.1	156	101	653
URC10854S	108-54	204	167	880
URC10876S	108-76.1	196	141	978
URC10889S	108-88.9	190	127	992



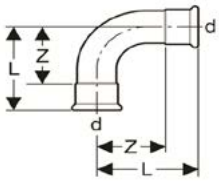
Slip Coupling

Part No.	d	L	E	Weight [gm]
USC15S	15	71	24	47
USC22S	22	82	27	85
USC28S	28	90	28	114
USC35S	35	99	31	149
USC42S	42	115	35	216
USC54S	54	139	40	316
USC76S	76.1	230	60	874
USC89S	88.9	258	70	1196
USC108S	108	305	80	1775



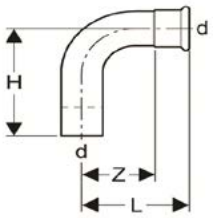
Elbow 90°

Part No.	d	L	Z	Weight [gm]	Radius
UE15-90S	15	48	27	57	1.5d
UE22-90S	22	60	37	97	1.5d
UE28-90S	28	71	47	143	1.5d
UE35-90S	35	87	60	198	1.5d
UE42-90S	42	15	83	314	1.5d
UE54-90S	54	142	105	499	1.5d
UE76-90S	76.1	150	95	977	1.2d
UE89-90S	88.9	174	11	1325	1.2d
UE108-90S	108	215	138	2091	1.2d



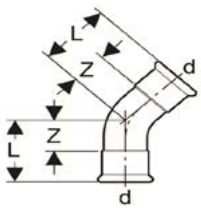
Elbow 90° with Spigot End

Part No.	d	L	H	Z	Weight [gm]	Radius
UES15-90S	15	48	56	27	58	1.5d
UES22-90S	22	60	68	37	98	1.5d
UES28-90S	28	71	80	47	147	1.5d
UES35-90S	35	87	93	60	200	1.5d
UES42-90S	42	115	125	83	331	1.5d
UES54-90S	54	142	149	105	505	1.5d
UES76-90S	76.1	150	165	95	982	1.2d
UES89-90S	88.9	174	190	111	1317	1.2d
UES108-90S	108	215	238	138	2068	1.2d



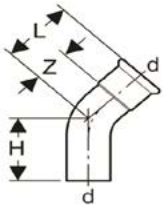
Elbow 45°

Part No.	d	L	Z	Weight [gm]	Radius
UE15-45S	15	37	16	49	1.5d
UE22-45S	22	44	21	81	1.5d
UE28-45S	28	51	27	118	1.5d
UE35-45S	35	59	32	161	1.5d
UE42-45S	42	77	45	254	1.5d
UE54-45S	54	88	51	369	1.5d
UE76-45S	76.1	98	43	773	1.2d
UE89-45S	88.9	112	49	991	1.2d
UE108-45S	108	138	61	1600	1.2d



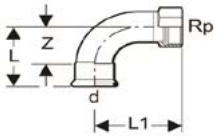
Elbow 45° with Spigot End

Part No.	d	L	H	Z	Weight [gm]	Radius
UES15-45S	15	37	48	16	53	1.5d
UES22-45S	22	44	53	21	85	1.5d
UES28-45S	28	51	60	27	117	1.5d
UES35-45S	35	59	66	32	160	1.5d
UES42-45S	42	77	80	45	237	1.5d
UES54-45S	54	88	97	51	366	1.5d
UES76-45S	76.1	98	117	43	767	1.2d
UES89-45S	88.9	112	131	49	998	1.2d
UES108-45S	108	138	154	61	1510	1.2d



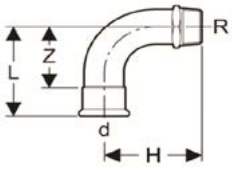
Elbow Adaptor 90° with Female Thread

Part No.	d-Rp	L	L1	H	Weight [gm]
UFE1515S	15-½	48	58	27	76
UFE2220S	22-¾	60	68	37	123
UFE2825S	28-1	71	81	47	172
UFE3532S	35-1¼	87	95	60	267



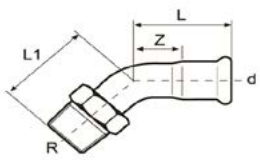
Elbow Adaptor 90° with Male Thread

Part No.	d-R	L	L1	H	Weight [gm]
UME1515S	15-½	48	58	27	75
UME2220S	22-¾	60	69	37	119
UME2825S	28-1	71	81	47	184
UME3532S	35-1¼	87	94	60	262
UME4240S	42-1½	115	116	83	376
UME5450S	54-2	142	143	105	667



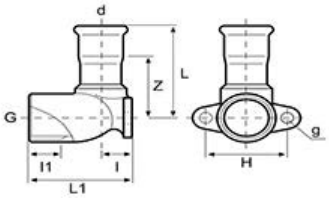
Elbow Adaptor 45° with Male Thread

Part No.	d-R	L	L1	H	Weight [gm]
UME1515-45S	15-½	37	38	16	64
UME2220-45S	22-¾	44	51	21	102



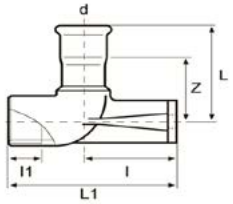
90° Female Elbow with Flush Wall Mount

Part No.	d-G [ISO 228]	L	L1	Z	I	I1	H	g	Weight [gm]
UBE1515S	15-½	46	43	25	12	12	34	5	104
UBE2220S	22-¾	52	51	29	16	13	40	6	147



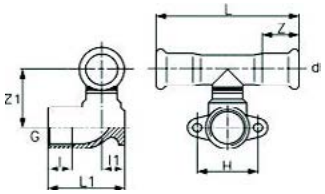
90° Female Elbow with Extended Offset Wall Mount

Part No.	d-G [ISO 228]	L	I	L1	z	I1	Weight [gm]
UFW1515S	15-½	46	36	65	25	12	148
UFW2220S	22-¾	52	32	65	29	13	176



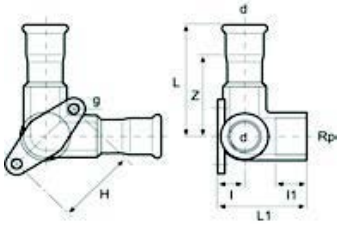
Off Centred Tee with Female Thread

Part No.	d-G	L	L1	Z	Z1	H	I	I1	Weight [gm]
UOCT1515S	15-½	74	43	21	31	34	12	13	130



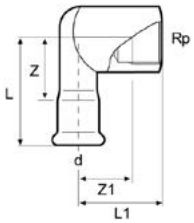
Lugged Elbow with Female Tap Outlet

Part No.	d-G	L	L1	I	I1	Z	H	weight [gm]
ULE1515S	15-½	56	44	15	12	35	139	166



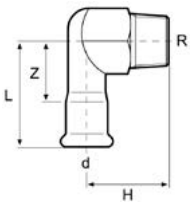
Elbow Adaptor 90° with Female Thread

Part No.	d-R	L	H	Z	Z1	Weight [gm]
UFAE1515S	15-½	53	36	32	24	121
UFAE2220S	22-¾	57	46	34	33	180
UFAE2825S	28-1	71	54	47	38	329
UFAE3532S	35-1¼	72	62	45	45	455



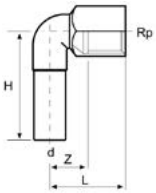
Elbow Adaptor 90° with Male Thread

Part No.	d-R	L	H	Z	Weight [gm]
UMAE1515S	15-½	53	36	32	91
UMAE1520S	15-¾	62	38	41	137
UMAE2220S	22-¾	58	40	35	145
UMAE2825S	28-1	63	44	39	245
UMAE3532S	35-1¼	71	48	44	338
UMAE4240S	42-1½	81	53	49	425
UMAE5450S	54-2	92	59	55	716



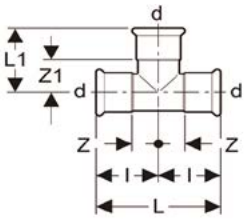
Elbow 90° Spigot with Female Thread

Part No.	d-R	L	H	Z	Weight [gm]
UFES15-90S	15-½	35	53	23	66



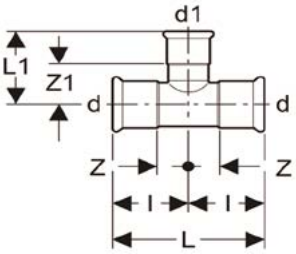
Equal Tee

Part No.	d	L	L1	Z	Z1	I	Weight [gm]
UT15S	15	74	35	16	14	37	67
UT22S	22	82	40	18	17	41	112
UT28S	28	92	45	22	21	46	149
UT35S	35	102	55	24	28	51	189
UT42S	42	118	61	27	29	59	27
UT54S	54	142	72	34	35	71	382
UT76S	76.1	232	115	61	60	116	1192
UT89S	88.9	262	127	68	64	131	1617
UT108S	108	312	155	79	78	156	2450



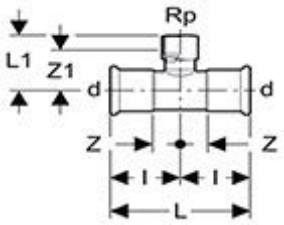
Reducing Tee

Part No.	d-d1-d	L	L1	Z	Z1	I	Weight [gm]
URT2215S	22-15-22	82	39	18	18	41	98
URT2815S	28-15-28	92	42	22	21	46	130
URT2822S	28-22-28	92	45	22	22	46	140
URT3515S	35-15-35	102	45	24	24	51	164
URT3522S	35-22-35	102	46	24	23	51	172
URT3528S	35-28-35	102	48	24	24	51	175
URT4215S	42-15-42	118	48	27	27	59	213
URT4222S	42-22-42	118	51	27	28	59	239
URT4228S	42-28-42	118	53	27	29	59	240
URT4235S	42-35-42	118	60	27	33	59	242
URT5415S	54-15-54	142	56	34	35	71	326
URT5422S	54-22-54	142	57	34	34	71	325
URT5428S	54-28-54	142	60	34	36	71	348
URT5435S	54-35-54	142	66	34	39	71	344
URT5442S	54-42-54	142	64	34	32	71	368
URT7622S	76.1-22-76.1	232	68	61	45	116	942
URT7628S	76.1-28-76.1	232	71	61	47	116	956
URT7635S	76.1-35-76.1	232	75	61	48	116	968
URT7642S	76.1-42-76.1	232	79	61	47	116	981
URT7654S	76.1-54-76.1	232	80	61	43	116	1067
URT8922S	88.9-22-88.9	262	76	68	53	131	1256
URT8928S	88.9-28-88.9	262	76	68	52	131	1244
URT8935S	88.9-35-88.9	262	83	68	56	131	1267
URT8942S	88.9-42-88.9	262	85	68	53	131	1271
URT8954S	88.9-54-88.9	262	93	68	56	131	1297
URT8976S	88.9-76.1-88.9	262	116	68	61	131	1479
URT10822S	108-22-108	312	85	79	62	156	1919
URT10828S	108-28-108	312	88	79	64	156	1939
URT10835S	108-35-108	312	94	79	67	156	1955
URT10842S	108-42-108	312	96	79	64	156	1886
URT10854S	108-54-108	312	102	79	65	156	1967
URT10876S	108-76.1-108	312	125	79	70	156	2147
URT10889S	108-88.9-108	312	135	79	72	156	2255



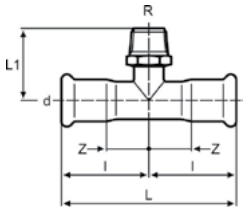
Female Centred Tee

Part No.	d-Rp	L	L1	Z	Z1	I	Weight [gm]
UFT1515S	15-½-15	74	37	16	25	37	83
UFT2215S	22-½-22	82	41	18	29	41	117
UFT2220S	22-¾-22	82	41	18	28	41	131
UFT2815S	28-½-28	92	44	22	32	46	144
UFT2820S	28-¾-28	92	45	22	32	46	159
UFT2825S	28-1-28	92	48	22	32	46	175
UFT3515S	35-½-35	102	48	24	36	51	178
UFT3520S	35-¾-35	102	48	24	35	51	189
UFT3532S	35-1¼-35	102	57	24	40	51	255
UFT4215S	42-½-42	118	46	27	34	59	240
UFT4220S	42-¾-42	118	52	27	39	59	254
UFT4240S	42-1½-42	118	59	27	42	59	38
UFT5415S	54-½-54	142	55	34	43	71	362
UFT5420S	54-¾-54	142	58	34	45	71	364
UFT5450S	54-2-54	142	69	34	47	71	523
UFT7620S	76.1-¾-76.1	232	68	61	55	116	1009
UFT7650S	76.1-2-76.1	232	81	61	59	116	1194
UFT8920S	88.9-¾-88.9	262	87	68	74	131	1210
UFT8950S	88.9-2-88.9	262	88	68	66	131	1450
UFT10820S	108-¾-108	312	86	79	73	156	1956
UFT10850S	108-2-108	312	98	79	76	156	2118



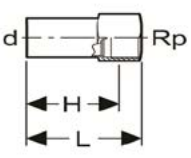
Male Centred Tee

Part No.	d	L	L1	Z	Z1	I	Weight [gm]
UMT1515S	15-½-15	74	38	16	15	37	75
UMT2220S	22-¾-22	82	43	18	17	41	105
UMT2825S	28-1-28	92	50	22	21	46	130
UMT3532S	35-1¼-35	102	56	24	28	51	170



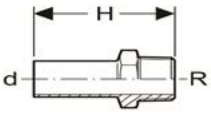
Adaptor with Female Thread and Spigot End

Part No.	d-Rp	L	H	Weight [gm]
UFS1515S	15-½	136	148	95
UFS2215S	22-½	140	152	150
UFS2220S	22-¾	139	152	148
UFS2825S	28-1	94	110	145
UFS3532S	35-1¼	93	110	210
UFS4240S	42-1½	93	110	300
UFS5450S	54-2	98	120	408



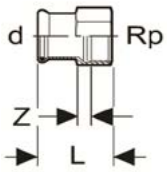
Adaptor with Male Thread and Spigot End

Part No.	d-R	L	Weight [gm]
UMS1515S	15-½	70	55
UMS2220S	22-¾	75	80
UMS2825S	28-1	75	120
UMS3532S	35-1¼	80	170
UMS4240S	42-1½	91	220
UMS5450S	54-2	102	384



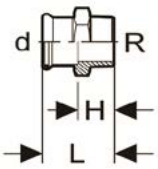
Adaptor with Female Thread

Part No.	d-Rp	L	H	Weight [gm]
UFA1515S	15-½	53	20	52
UFA1520S	15-¾	67	33	81
UFA2215S	22-½	52	17	77
UFA2220S	22-¾	56	20	75
UFA2225S	22-1	70	31	105
UFA2820S	28-¾	73	36	105
UFA2825S	28-1	62	22	103
UFA2832S	28-1¼	80	39	171
UFA3525S	35-1	81	38	136
UFA3532S	35-1¼	72	28	170
UFA3540S	35-1½	83	39	259
UFA4232S	42-1¼	94	45	221
UFA4240S	42-1½	74	25	252
UFA5440S	54-1½	106	52	328
UFA5450S	54-2	84	25	342



Adaptor with Male Thread

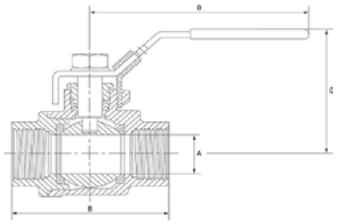
Part No.	d-R	L	H	Weight [gm]
UMA1510S	15-⅜	50	29	50
UMA1515S	15-½	52	31	52
UMA1520S	15-¾	64	43	66
UMA2215S	22-½	68	45	73
UMA2220S	22-¾	58	35	74
UMA2225S	22-1	72	49	116
UMA2820S	28-¾	73	49	100
UMA2825S	28-1	62	38	115
UMA2832S	28-1¼	79	55	166
UMA3525S	35-1	82	55	148
UMA3532S	35-1¼	70	43	165
UMA3540S	35-1½	84	57	198
UMA4232S	42-1¼	93	61	216
UMA4240S	42-1½	75	43	204
UMA5440S	54-1½	105	68	271
UMA5450S	54-2	87	50	368
UMA7665S	76.1-2½	125	70	820
UMA8980S	88.9-3	138	75	1158



2 Piece 316 Stainless Steel Ball Valves – BSP Connections

Part No.	A	B	C	D
SSBV152P	15	57	55	95
SSBV202P	20	65	59	110
SSBV252P	25	78	73	135
SSBV322P	32	90.5	78	135
SSBV402P	38	105	91	147
SSBV502P	50	127	99	165
SSBV652P	65	160	130	215
SSBV802P	80	180	142	215
SSBV1002P	100	220	165	310

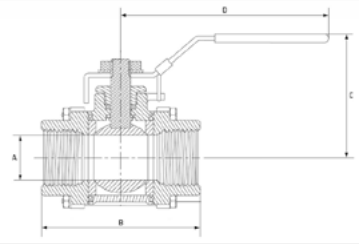
Maximum pressure 1000 PSI / 69 Bar W.O.G. (Water, Oil, Gas). PTFE Seal maximum temperature 250°C. Full Port. Lockable latch handle. Red handle sleeve available for hot water indication.



3 Piece 316 Stainless Steel Ball Valves – BSP Connections

Part No.	A	B	C	D
SSBV153P	15	64	52	95
SSBV203P	20	75	56	110
SSBV253P	25	85	70	135
SSBV323P	32	97	75	135
SSBV403P	38	110	87	147
SSBV503P	50	132	95	165
SSBV653P	65	167	124	215
SSBV803P	80	187	136	215
SSBV1003P	100	230	160	310

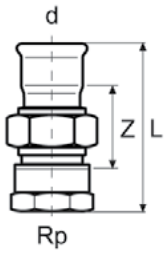
Maximum pressure 1000 PSI / 69 Bar W.O.G. (Water, Oil, Gas). PTFE Seal maximum temperature 250°C. Full Port. Lockable latch handle. Red handle sleeve available for hot water indication.



3 Piece Ball Valves with ISO mounting pad also available.

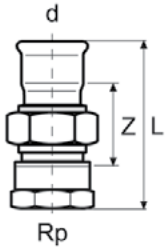
Female Barrel Union Brass Nut EPDM Flat Seal

Part No.	d-RP	NUT	L	Z	Weight [gm]
UFUB1515S	15-½	BRASS	73	40	145
UFUB1520S	15-¾	BRASS	75	41	182
UFUB2220S	22-¾	BRASS	76	40	212
UFUB2225S	22-1	BRASS	79	40	242
UFUB2825S	28-1	BRASS	83	43	398
UFUB3532S	35-1¼	BRASS	93	49	467
UFUB4240S	42-1½	BRASS	96	47	562
UFUB5450S	54-2	BRASS	113	54	973



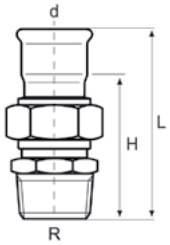
Female Barrel Union Stainless Steel Nut EPDM Flat Seal

Part No.	d-RP	NUT	L	Z	Weight [gm]
UFU1515S	15-½	ST. STEEL	73	40	139
UFU1520S	15-¾	ST. STEEL	75	41	176
UFU2220S	22-¾	ST. STEEL	76	40	205
UFU2225S	22-1	ST. STEEL	79	40	235
UFU2825S	28-1	ST. STEEL	83	43	387
UFU3532S	35-1¼	ST. STEEL	93	49	448
UFU4240S	42-1½	ST. STEEL	96	47	542
UFU5450S	54-2	ST. STEEL	113	54	943



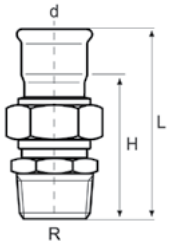
Male Barrel Union Brass Nut EPDM Flat Seal

Part No.	d-RP	NUT	L	H	Weight [gm]
UMUB1515S	15-½	BRASS	76	55	147
UMUB1520S	15-¾	BRASS	80	59	166
UMUB2215S	22-½	BRASS	80	57	239
UMUB2220S	22-¾	BRASS	82	59	222
UMUB2225S	22-1	BRASS	86	63	256
UMUB2825S	28-1	BRASS	88	64	360
UMUB3532S	35-1¼	BRASS	100	73	544
UMUB4240S	42-1½	BRASS	106	74	628
UMUB5450S	54-2	BRASS	122	85	1008



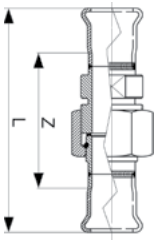
Male Barrel Union Stainless Steel Nut EPDM Flat Seal

Part No.	D-RP	NUT	L	H	Weight [gm]
UMU1515S	15-½	ST. STEEL	76	55	141
UMU1520S	15-¾	ST. STEEL	80	59	160
UMU2215S	22-½	ST. STEEL	80	57	232
UMU2220S	22-¾	ST. STEEL	82	59	215
UMU2225S	22-1	ST. STEEL	86	63	249
UMU2825S	28-1	ST. STEEL	88	64	349
UMU3532S	35-1¼	ST. STEEL	100	73	525
UMU4240S	42-1½	ST. STEEL	106	74	608
UMU5450S	54-2	ST. STEEL	122	85	978



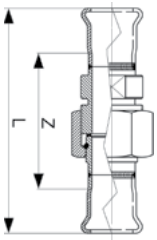
Tube x Tube Barrel Union Brass Nut EPDM Flat

Part No.	D-RP	NUT	L	Z	Weight [gm]
UBUB1515S	15	BRASS	97	55	170
UBUB2222S	22	BRASS	105	59	222
UBUB2828S	28	BRASS	111	63	345
UBUB3535S	35	BRASS	124	70	540
UBUB4242S	42	BRASS	134	70	640
UBUB5454S	54	BRASS	144	70	970



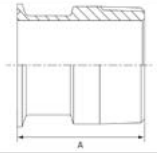
Tube x Tube Barrel Union Stainless Steel Nut EPDM Flat

Part No.	D-RP	NUT	L	Z	Weight [gm]
UBU1515S	15	ST. STEEL	97	55	154
UBU2222S	22	ST. STEEL	105	59	215
UBU2828S	28	ST. STEEL	111	63	334
UBU3535S	35	ST. STEEL	124	70	521
UBU4242S	42	ST. STEEL	134	70	620
UBU5454S	54	ST. STEEL	144	70	940



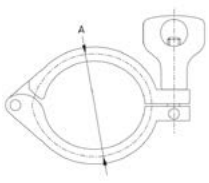
Press Fit to Tri-Clover Ferrule Adaptor

Part No.	A	B	C	D
UWJFER15	9.4	38	15.9	23.2
UWJFER22	15.8	40	23	31.6
UWJFER28	22.1	45	28.9	37.2
UWJFER35	28.5	46	36	44.3
UWJFER42	34.8	51	43	53.3
UWJFER54	47.5	56	55	65.4
UWJFER76	72.9	63	78	94.7
UWJFER108	97.3	86	111	132.8



304 Stainless Steel Tri-Clover Clamp

Part No.	Size	A
STCC1520	12.7-19.05 (½"-¾")	37
STCC2540	25.4-38.1 (1-1½")	53.9
STCC50	50.8 (2")	67.4
STCC80	76.2 (3")	94.4
STCC100	101.6 (4")	122.4



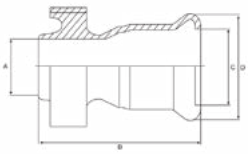
EPDM Tri-Clover Seal

Part No.	Size
TCS15E	12.7 (½")
TCS20E	19.05 (¾")
TCS25E	25.4 (1")
TCS32E	31.8 (1¼")
TCS40E	38.1 (1½")
TCS50E	50.8 (2")
TCS80E	76.2 (3")
TCS100E	101.6 (4")

Suitable for temperatures up to 120°C.

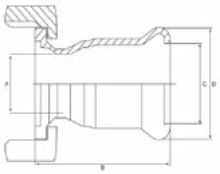
Press Fit to RJT Male Part

Part No.	A	B	C	D
UWJMP15	9.6	42	15.9	23.2
UWJMP22	16	44	23	31.6
UWJMP28	22.2	49	28.9	37.2
UWJMP35	28.6	50	36	44.3
UWJMP42	34.9	55	43	53.3
UWJMP54	47.6	60	55	65.4
UWJMP76	73	67	78	94.7
UWJMP108	97.6	90	111	132.8



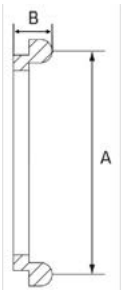
Press Fit to RJT Liner & Hex Nut

Part No.	A	B	C	D
UWJWL15	9.6	38	15.9	23.2
UWJWL22	16	40	23	31.6
UWJWL28	22.2	45	28.9	37.2
UWJWL35	28.6	46	36	44.3
UWJWL42	34.9	51	43	53.3
UWJWL54	47.6	56	55	65.4
UWJWL76	73	63	78	94.7
UWJWL108	97.6	86	111	132.8



Nitrile RJT Stepped Seal

Part No.	Size	A	B
NRJTSS15	12.7 (½")	16	3.5
NRJTSS20	19.05 (¾")	21	3.5
NRJTSS25	25.4 (1")	33.3	12.5
NRJTSS32	31.8 (1¼")	39.7	12.5
NRJTSS40	38.1 (1½")	46	12.5
NRJTSS50	50.8 (2")	58.7	12.5
NRJTSS80	76.2 (3")	84.1	12.5
NRJTSS100	101.6 (4")	109.5	12.5



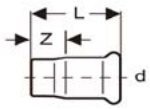
Suitable for temperatures up to 100°C. Suitable for oils, hydrocarbon fuels, hydraulic fluids, fats and flame retardant liquids.

EPDM available on application. Suitable for temperatures up to 120°C. Suitable for hot water, steam, alcohols, coolants, acids and bases.

½" and ¾" sizes require a flat seal.

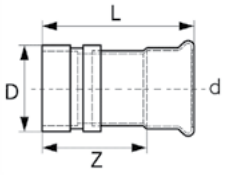
End Cap

Part No.	d	L	Z	Weight [gm]
UEC15S	15	37	16	27
UEC22S	22	41	18	44
UEC28S	28	46	22	63
UEC35S	35	51	24	81
UEC42S	42	59	27	119
UEC54S	54	72	35	171
UEC76S	76.1	95	40	427
UEC89S	88.9	107	44	559
UEC108S	108	127	50	821



Roll Groove Adaptor

Part No.	d-D	L	Z	Weight [gm]
URG28S	28 x 33.7	87	63	171
URG35S	35 x 42.4	94.5	67.5	239
URG42S	42 x 48.3	105.5	73.5	298
URG54S	54 x 60.3	124	87	429
URG76S	76.1 x 76.1	150	95	986
URG89S	88.9 x 88.9	165.5	102.5	1.229
URG108S	108 x 114.4	184	107	1.393



Imperial Weld Adaptor (Fabricated to Order)

Part No.	d1	D imp	OD imp/mm	L	H	Weight [gm]
UIA15S	15	½	0.840/21.3	60	39	0.045
UIA22S	22	¾	1.050/26.7	67	44	0.065
UIA28S	28	1	1.315/33.4	73	49	0.112
UIA35S	35	1¼	1.900/42.2	79	52	0.12
UIA42S	42	1½	1.900/48.3	97	65	0.191
UIA54S	54	2	2.375/60.3	140	103	0.451
UIA76S	76.1	2½	2.87/73.0	156	101	0.653
UIA763S	76.1	3	3.50/88.9	190	127	0.653
UIA89S	88.9	3	3.50/88.9	190	127	0.992
UIA108S	108	4	4.50/114.3	184	107	1.393

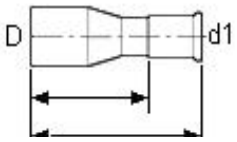
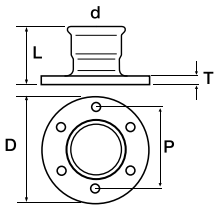


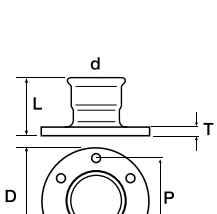
Table E Adaptor Flange

Part No.	d	Normal Flange Size	Inch Size	D	P	L	T
UFLA1515S	15	15	½	95	67	30	6
UFLA2220S	22	20	¾	102	73	32	6
UFLA2825S	28	25	1	114	83	36	7
UFLA3532S	35	32	1¼	121	87	41	8
UFLA4240S	42	40	1½	133	98	46	9
UFLA5450S	54	50	2	152	114	50	10
UFLA7680S	76.1	80	3	185	146	77	11
UFLA8980S	88.9	80	3	185	146	91	11
UFLA108100S	108	100	4	215	178	107	13



ANSI 150 Adaptor Flange

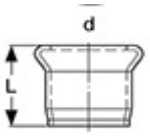
Part No.	d	Normal Flange Size	Inch Size	D	P	L	T
UFAA1515S	15	15	½	88.9	60.5	35.2	11.2
UFAA2220S	22	20	¾	98.6	69.9	38.7	12.7
UFAA2825S	28	25	1	108	79.2	43.2	14.2
UFAA3532S	35	32	1¼	117.3	88.9	48.7	15.7
UFAA4240S	42	40	1½	127	98.6	54.5	17.5
UFAA5450S	54	50	2	152.4	120.7	59.1	19.1
UFAA7680S	76.1	80	3	190.5	152.4	89.9	23.9
UFAA8980S	88.9	80	3	190.5	152.4	103.9	23.9
UFAA108100S	108	100	4	228.6	190.5	117.9	23.9



Other flange configurations can be fabricated on request.

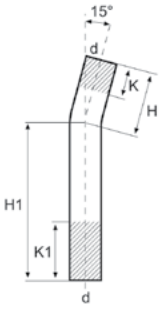
Weld Joint

Part No.	d	L	Weight [gm]
UWJ15S	15	25	17
UWJ22S	22	27	30
UWJ28S	28	30	37
UWJ35S	35	34	51
UWJ42S	42	38	67
UWJ54S	54	44	100
UWJ76S	76	68	290
UWJ89S	89	78	390
UWJ108S	108	94	595



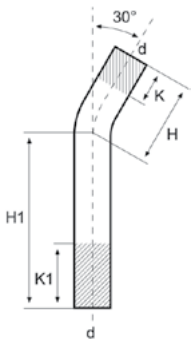
15° Plain Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-15S	15	122	60	21	83	76
UB22-15S	22	124	50	7	81	110
UB28-15S	28	136	45	7	47	146
UB35-15S	35	234	62	30	110	381
UB42-15S	42	276	94	41	144	558
UB54-15S	54	337	117	65	165	869
UB76-15S	76.1	203	226	65	65	1.607
UB89-15S	88.9	260	240	80	80	2.109
UB108-15S	108	291	222	95	95	2.546



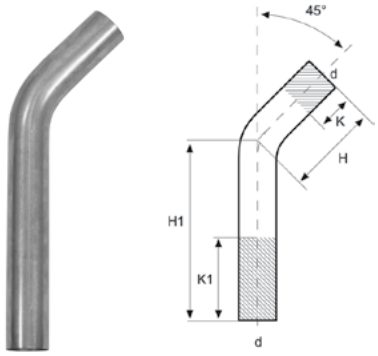
30° Plain Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-30S	15	122	60	21	83	76
UB22-30S	22	124	50	6	80	110
UB28-30S	28	130	54	7	47	144
UB35-30S	35	218	80	30	110	382
UB42-30S	42	274	98	44	144	560
UB54-30S	54	324	137	65	165	905
UB76-30S	76.1	200	202	66	66	1.41
UB89-30S	88.9	262	264	80	80	2.183
UB108-30S	108	259	272	95	95	2.622



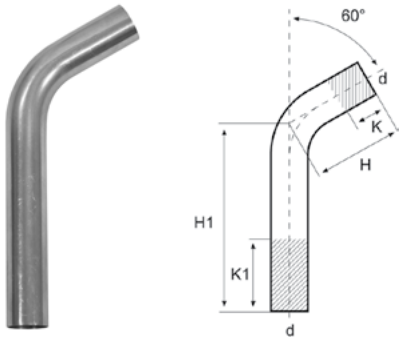
45° Plain Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-45S	15	120	62	19	77	76
UB22-45S	22	120	56	7	71	111
UB28-45S	28	122	58	2	66	146
UB35-45S	35	206	94	20	132	380
UB42-45S	42	262	114	1	149	576
UB54-45S	54	321	146	37	212	928
UB76-45S	76.1	225	225	69	69	1.577
UB89-45S	88.9	267	267	103	103	2.323
UB108-45S	108	293	293	66	66	2.901



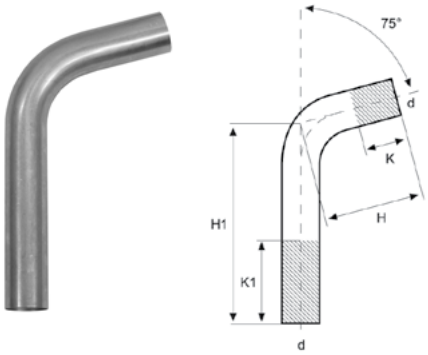
60° Plain Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-60S	15	122	60	21	83	76
UB22-60S	22	118	60	5	63	112
UB28-60S	28	116	71	7	47	140
UB35-60S	35	226	101	30	110	383
UB42-60S	42	251	124	44	145	564
UB54-60S	54	308	162	65	165	889
UB76-60S	76.1	219	223	70	70	1.479
UB89-60S	88.9	250	257	80	80	1.996
UB108-60S	108	288	298	95	95	2.78



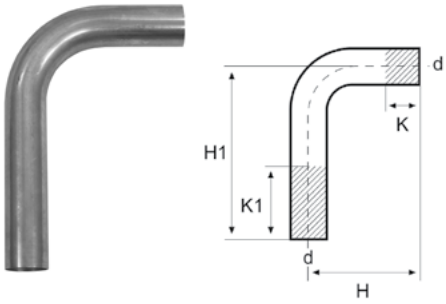
75° Plain Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-75S	15	117	66	22	73	77
UB22-75S	22	118	64	9	63	114
UB28-75S	28	114	71	7	50	150
UB35-75S	35	200	110	26	119	393
UB42-75S	42	251	137	44	158	595
UB54-75S	54	305	178	60	187	960
UB76-75S	76.1	240	240	62	62	1.682
UB89-75S	88.9	280	280	90	90	2.436
UB108-75S	108	345	345	60	60	3.416



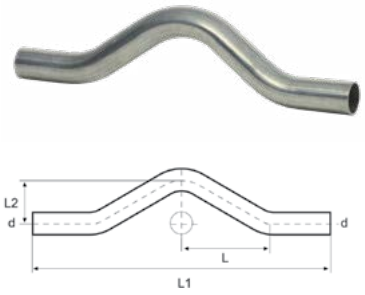
90° Plain Bend

Part No.	d	H1	H	K	K1	[gm]
UB15-90S	15	120	70	22	72	59
UB22-90S	22	120	70	9	59	102
UB28-90S	28	125	97	7	47	153
UB35-90S	35	200	120	30	110	183
UB42-90S	42	250	160	44	144	565
UB54-90S	54	305	200	65	165	868
UB76-90S	76.1	250	250	62	62	1.752
UB89-90S	88.9	291	291	90	90	2.532
UB108-90S	108	264	364	45	45	3.604



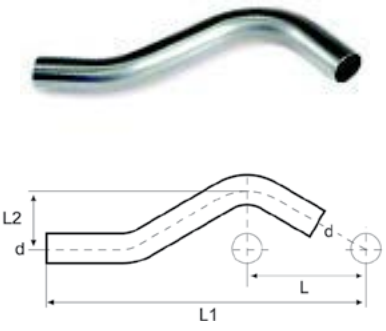
Pipe Bridge

Part No.	d	L1	L2	L	Weight [gm]
UPB15S	15	202	38	65	74
UPB22S	22	233	40	68	158
UPB28S	28	303	64	93	258



Pipe Bridge Short

Part No.	d	L1	L2	L	Weight [gm]
USPB15S	15	145	37	57	54
USPB22S	22	181	40	60	122
USPB28S	28	241	55	83	215



Stainless Steel Super Sizes

Contents

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

Tube – Austenitic (6 metre lengths)

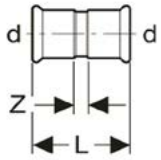
Part No. 316L	DN	Ext. Ø [mm]	Thickness [mm]	Weight [kg/m]
U316140-06	125	139.7	2	6.896
U316168-06	150	168.3	2	8.328

Tube – Austenitic (6 metre lengths)

Part No. 304	DN	ext. Ø [mm]	thickness [mm]	weight [kg/m]
U304140-06	125	139.7	2	6.896
U304168-06	150	168.3	2	8.328

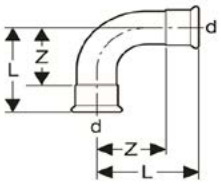
Coupling

Part No. 316 L	d	L	Z	Weight [kg]
UC140S	139.7	258.5	62.3	2.031
UC168S	168.3	308.8	72.6	2.835



Elbow 90°

Part No. 316 L	d	Wall Thickness	L	Z	Weight [kg]
UE140-90S	139.7	2.6	319.3	221.2	3.813
UE168-90S	168.3	2.6	383.4	265.3	5.651



Elbow 45°

Part No. 316 L	d	Wall Thickness	L	Z	Weight [kg]
UE140-45S	139.7	2.6	208	109.9	1.906
UE168-45S	168.3	2.6	249.3	131.2	2.825

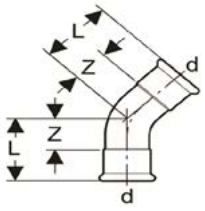
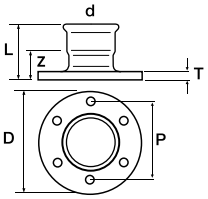


Table E Adaptor Flange

Part No. 316 L	d	D	P (pcd)	L	T	Z	Weight [kg]
UFLA140125S	139.7	250	210	144	25	46	3.26
UFLA168160S	168.3	285	235	170	26	53	3.94



Other flange configurations can be manufactured to order.

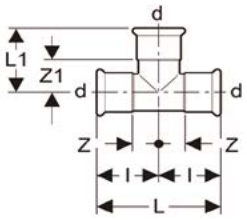
Stainless Steel Super Sizes

Contents

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

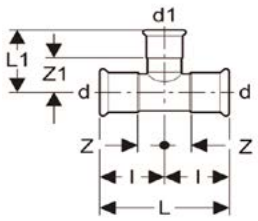
Equal Tee

Part No. 316 L	d	Wall Thickness	L	L1	Z	Z1	I	Weight [kg]
UT140S	139.7	2.6	433	192	98.5	93.9	216.5	3.94
UT168S	168.3	2.6	520	243.6	118	125.1	260	5.69



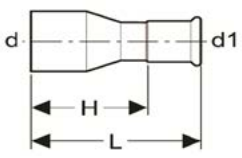
Reducing Tee

Part No. 316 L	d	d1	L	L1	Z	Z1	I	Weight [kg]
URT14076S	139.7	76.1	433	145	98.5	90.4	216.5	3.33
URT14089S	139.7	88.9	433	155	98.5	97.4	216.5	3.62
URT140108S	139.7	108	433	171	98.5	100	216.5	3.65
URT16876S	168.3	76.1	520	160	118	105.4	260	4.71
URT16889S	168.3	88.9	520	170	118	112.4	260	4.71
URT168108S	168.3	108	520	186	118	114.7	260	4.93
URT168140S	168.3	139.7	520	218	118	120	260	5.22



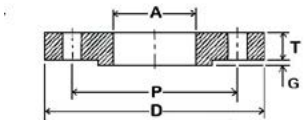
Reducing Coupler (Spigot x Adaptor)

Part No. 316 L	d	d1	#	L	H	Weight [kg]
URC14089S	139.7	88.9	2.6	363	305.4	2.22
URC140108S	139.7	108	2.6	-	-	2.1
URC16889S	168.3	88.9	2.6	470	421.4	3.23
URC168108S	168.3	108	2.6	-	-	3.11
URC168140S	168.3	139.7	2.6	365.3	267.2	2.93



DIN Backing Rings

Part No.	Pipe Size d	Nominal Flange Size	Inch Size	P (mm)	A (mm)	D (mm)	T (mm)	Bolt holes No. x dia	Bolt
USBRD15	15	15	½	65.0	29	95	14.0	4 x 14	M12
USBRD22	22	20	¾	75.0	34	105	16.0	4 x 14	M12
USBRD28	28	25	1	85.0	40	115	16.0	4 x 14	M12
USBRD35	35	32	1¼	100.0	46	140	18.0	4 x 18	M16
USBRD42	42	40	1½	110.0	54	150	18.0	4 x 18	M16
USBRD54	54	50	2	125.0	67.9	165	18.0	4 x 18	M16
USBRD76	76.1	80	3	145.0	83	185	20.0	8 x 18	M16
USBRD89	88.9	80	3	160.0	97	200	20.0	8 x 18	M16
USBRD108	108	100	4	180.0	110	220	22.0	8 x 18	M16



ANSI Backing Rings – CLASS 150

Part No.	Pipe Size d	Nominal Flange Size	Inch Size	P (mm)	A (mm)	D (mm)	T (mm)	Bolt holes No. x dia	Bolt
USBRA15	15	15	½	60.5	29	90	11.5	4 x 16	M12
USBRA22	22	20	¾	70.0	34	98	13.0	4 x 16	M12
USBRA28	28	25	1	79.5	40	108	14.5	4 x 16	M12
USBRA35	35	32	1¼	89.0	46	117	16.0	4 x 16	M12
USBRA42	42	40	1½	98.5	54	127	17.5	4 x 16	M12
USBRA54	54	50	2	120.7	61.9	152.4	19.1	4 x 20	M16
USBRA76	76.1	65	2½	139.5	83	178	22.5	4 x 20	M16
USBRA89	88.9	80	3	152.5	97	191	24.0	4 x 20	M16
USBRA108	108	100	4	190.5	110	229	24.0	8 x 20	M16

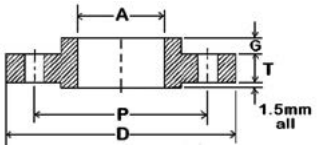
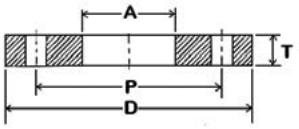


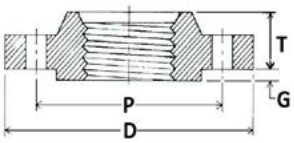
TABLE E Backing Rings

Part No.	Pipe Size d	Nominal Flange Size	Inch Size	P (mm)	A (mm)	D (mm)	T (mm)	Bolt holes No. x dia	Bolt
USBRE15	15	15	½	67.0	29	95	6.0	4 x 14	M12
USBRE22	22	20	¾	73.0	34	100	6.0	4 x 14	M12
USBRE28	28	25	1	83.0	40	115	7.0	4 x 14	M12
USBRE35	35	32	1¼	87.0	46	120	8.0	4 x 14	M12
USBRE42	42	40	1½	98.0	54	135	9.0	4 x 14	M12
USBRE54	54	50	2	114.0	61.9	150	10.0	4 x 18	M16
USBRE76	76.1	65	2½	127.0	76.1	165	10.0	4 x 18	M16
USBRE89	88.9	80	3	146.0	88.9	184	11.0	4 x 18	M16
USBRE108	108	100	4	178.0	114.3	216	13.0	8 x 18	M16



DIN BSP Threaded Flanges

Part No.	Nominal Flange Size	Inch Size	P (mm)	D (mm)	T (mm)	G (mm)	Bolt Holes No. x dia	Bolt
USFD15S	15	½	65.0	95	16.0	2.0	4 x 14	M12
USFD20S	20	¾	75.0	105	18.0	2.0	4 x 14	M12
USFD25S	25	1	85.0	115	18.0	2.0	4 x 14	M12
USFD32S	32	1¼	100.0	140	18.0	2.0	4 x 18	M16
USFD40S	40	1½	110.0	150	18.0	3.0	4 x 18	M16
USFD50S	50	2	125.0	165	18.0	3.0	4 x 18	M16
USFD65S	65	2½	145.0	185	22.0	3.0	8 x 18	M16
USFD80S	80	3	160.0	200	22.0	3.0	8 x 18	M16
USFD100S	100	4	180.0	220	22.0	3.0	8 x 18	M16



ANSI 150 BSP Threaded Flanges

Part No.	Nominal Flange Size	Inch Size	P (mm)	D (mm)	T (mm)	G (mm)	Bolt Holes No. x dia	Bolt
USFA15	15	½	60.5	90	14	1.6	4 x 16	M12
USFA20	20	¾	70.0	99	14	1.6	4 x 16	M12
USFA25	25	1	79.5	108	16	1.6	4 x 16	M12
USFA32	32	1¼	89.0	117	19	1.6	4 x 16	M12
USFA40	40	1½	98.5	127	21	1.6	4 x 16	M12
USFA50	50	2	120.5	152	24	1.6	4 x 19	M16
USFA65	65	2½	140	178	27	1.6	4 x 19	M16
USFA80	80	3	152.5	191	28	1.6	4 x 19	M16
USFA100	100	4	190.5	229	32	1.6	8 x 19	M16

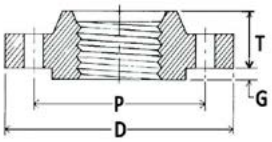
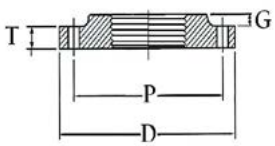


TABLE E BSP Threaded Flanges

Part No.	Nominal Flange Size	Inch Size	P (mm)	D (mm)	T (mm)	Bolt Holes No. x dia	Bolt
USFE15	15	½	67.0	95	16	4 x 14	M12
USFE20	20	¾	73.0	100	17	4 x 14	M12
USFE25	25	1	83.0	115	18	4 x 14	M12
USFE32	32	1¼	87.0	120	19	4 x 14	M12
USFE40	40	1½	98.0	135	21	4 x 14	M12
USFE50	50	2	114.0	150	22	4 x 18	M16
USFE65	65	2½	127.0	165	26	4 x 18	M16
USFE80	80	3	146.0	185	27	4 x 18	M16
USFE100	100	4	178.0	215	33	8 x 18	M16



EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

Contents

Stainless Steel Gas Tube & Fittings

Gas Application

The Europress System meets AS 5200.053 and is approved in Australia, New Zealand and many European countries for use in gas distribution systems, with external above-ground pipes, installed inside or outside buildings. It can be used for all types of combustible gas, both natural and liquid. The O-ring gaskets are made of yellow HNBR, and are compatible with any of the gas varieties used and are resistant to ageing and heat.

Conditions of Use

Maximum operating pressure: 5 bar

(Europress is rated to 5 bar for flammable gas, however is suitable up to 16 bar for inert gas)

Operating temperature: -20 °C +70 °C

CERTIFICATION

The Europress pressfittings comply with AS NZS 5601.1.2013 which requires certification as conforming to the German Standard DVGW VP614 for gas applications. To conform to this standard, each of the welded fittings, complete with o-rings, undergoes a special helium test. These fittings have a yellow label with the letters “PN5” or equivalent yellow mark, to indicate their application.

WATER WORKS

Stainless Steel Gas AISI 316L

Contents

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

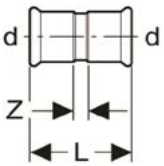
Tube – Austenitic (6 metre lengths)

Part No. 316L	Ext. Ø [mm]	Thickness [mm]	Length [m]	Weight [kg/m]
U31615-06	15	1	6	0.351
U31622-06	22	1.2	6	0.625
U31628-06	28	1.2	6	0.805
U31635-06	35	1.5	6	1.258
U31642-06	42	1.5	6	1.521
U31654-06	54	1.5	6	1.972
U31676-06	76.1	2	6	3.711
U31689-06	88.9	2	6	4.352
U316108-06	108	2	6	5.308

Stainless steel type 1.4404 (316L) has AS 3688 and DVGW approval for natural gas as per AS 5601.1:2013

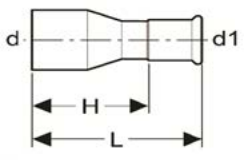
Coupling

Part No.	d	L	Z	weight [gm]
UC15G	15	52	10	39
UC22G	22	59	13	62
UC28G	28	61	13	78
UC35G	35	72	18	109
UC42G	42	79	15	147
UC54G	54	90	16	205
UC76G	76.1	142	32	604
UC89G	88.9	163	37	837
UC108G	108	192	38	1193



Reducing Coupling (Spigot x Adaptor) *Other sizes available on indent.*

Part No.	d-d1	L	H	Weight [gm]
URC2215G	22-15	60	39	45
URC2815G	28-15	72	51	56
URC2822G	28-22	67	44	65
URC3522G	35-22	83	60	98
URC3528G	35-28	73	49	112
URC4228G	42-28	98	74	140
URC4235G	42-35	79	52	120
URC5428G	54-28	99	75	193
URC5435G	54-35	128	101	237
URC5442G	54-42	97	65	191
URC7642G	76.1-42	151	119	425
URC7654G	76.1-54	140	103	451
URC8954G	88.9-54	156	119	586
URC8976G	88.9-76.1	156	101	653
URC10854G	108-54	204	167	880
URC10876G	108-76.1	196	141	978
URC10889G	108-88.9	190	127	992



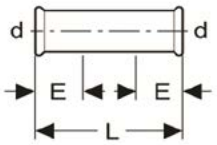
Stainless Steel Gas AISI 316L

Contents

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

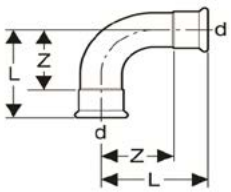
Slip Coupling

Part No.	d	L	E	weight [gm]
USC15G	15	71	24	47
USC22G	22	82	27	85
USC28G	28	90	28	114
USC35G	35	99	31	149
USC42G	42	115	35	216
USC54G	54	139	40	316



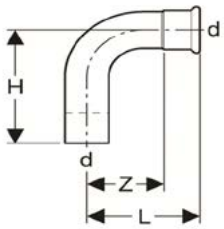
Elbow 90°

Part No.	d	L	Z	Weight [gm]	Radius
UE15-90G	15	48	27	57	1.5d
UE22-90G	22	60	37	97	1.5d
UE28-90G	28	71	47	143	1.5d
UE35-90G	35	87	60	198	1.5d
UE42-90G	42	115	83	314	1.5d
UE54-90G	54	142	105	499	1.5d
UE76-90G	76.1	150	95	977	1.2d
UE89-90G	88.9	174	111	1325	1.2d
UE108-90G	108	215	138	2091	1.2d



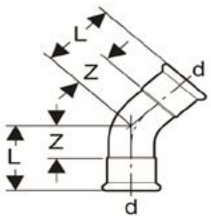
Elbow 90° with Spigot End

Part No.	d	L	H	Z	Weight [gm]	Radius
UES15-90G	15	48	56	27	58	1.5d
UES22-90G	22	60	68	37	98	1.5d
UES28-90G	28	71	80	47	147	1.5d
UES35-90G	35	87	93	60	200	1.5d
UES42-90G	42	115	125	83	331	1.5d
UES54-90G	54	142	149	105	505	1.5d
UES76-90G	76.1	150	165	95	982	1.2d
UES89-90G	88.9	174	190	111	1317	1.2d
UES108-90G	108	215	238	138	2068	1.2d



Elbow 45°

Part No.	d	L	Z	Weight [gm]	Radius
UE15-45G	15	37	16	49	1.5d
UE22-45G	22	44	21	81	1.5d
UE28-45G	28	51	27	118	1.5d
UE35-45G	35	59	32	161	1.5d
UE42-45G	42	77	45	254	1.5d
UE54-45G	54	88	51	369	1.5d
UE76-45G	76.1	98	43	773	1.2d
UE89-45G	88.9	112	49	991	1.2d
UE108-45G	108	138	61	1600	1.2d



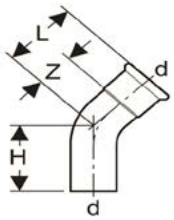
WATER WORKS

Importer of quality, innovative pipeline solutions.

Stainless Steel Gas AISI 316L

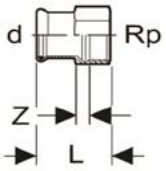
Elbow 45° with Spigot End

Part No.	d	L	H	Z	Weight [gm]	Radius
UES15-45G	15	37	48	16	53	1.5d
UES22-45G	22	44	53	21	85	1.5d
UES28-45G	28	51	60	27	117	1.5d
UES35-45G	35	59	66	32	160	1.5d
UES42-45G	42	77	80	45	237	1.5d
UES54-45G	54	88	97	51	366	1.5d
UES76-45G	76.1	98	117	43	767	1.2d
UES89-45G	88.9	112	131	49	998	1.2d
UES108-45G	108	138	154	61	1510	1.2d



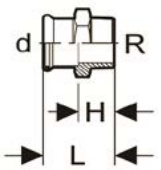
Adaptor with Female Thread

Part No.	d-Rp	L	H	Weight [gm]
UFA1515G	15-½	53	20	52
UFA2215G	22-½	52	17	77
UFA2220G	22-¾	56	20	75
UFA2225G	22-1	70	31	105
UFA2825G	28-1	62	22	103
UFA3525G	35-1	81	38	136
UFA3532G	35-1¼	72	28	170
UFA4240G	42-1½	74	25	252
UFA5450G	54-2	106	52	328



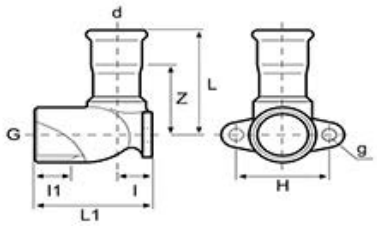
Adaptor with Male Thread

Part No.	d-R	L	H	Weight [gm]
UMA1515G	15-½	52	31	52
UMA2215G	22-½	68	45	73
UMA2220G	22-¾	58	35	74
UMA2225G	22-1	72	49	116
UMA2820G	28-¾	73	49	100
UMA2825G	28-1	62	38	115
UMA3525G	35-1	82	55	148
UMA3532G	35-1¼	70	43	165
UMA3540G	35-1½	84	57	198
UMA4240G	42-1½	75	43	204
UMA5450G	54-2	87	50	368
UMA7665G	76.1-2½	125	70	820
UMA8980G	88.9-3	138	75	1158



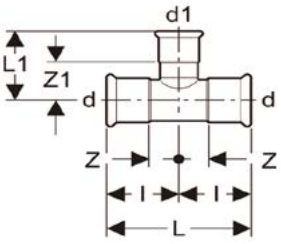
90° Female Elbow with Flush Wall Mount

Part No.	d-G [ISO 228]	L	L1	Z	I	I1	H	g	Weight [gm]
UBE1515G	15-½	46	43	25	12	12	34	5	104
UBE2220G	22-¾	52	51	29	16	13	40	6	147



Reducing Tee

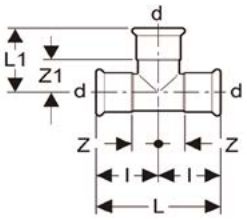
Part No.	d-d1-d	L	L1	Z	Z1	I	Weight [gm]
URT2215G	22-15-22	82	39	18	18	41	98
URT2815G	28-15-28	92	42	22	21	46	130
URT2822G	28-22-28	92	45	22	22	46	140
URT3515G	35-15-35	102	45	24	24	51	164
URT3522G	35-22-35	102	46	24	23	51	172
URT3528G	35-28-35	102	48	24	24	51	175
URT4222G	42-22-42	118	51	27	28	59	239
URT4228G	42-28-42	118	53	27	29	59	240
URT4235G	42-35-42	118	60	27	33	59	242
URT5422G	54-22-54	142	57	34	34	71	325
URT5428G	54-28-54	142	60	34	36	71	348
URT5435G	54-35-54	142	66	34	39	71	344
URT5442G	54-42-54	142	64	34	32	71	368
URT7622G	76.1-22-76.1	232	68	61	45	116	942
URT7628G	76.1-28-76.1	232	71	61	47	116	956
URT7635G	76.1-35-76.1	232	75	61	48	116	968
URT7642G	76.1-42-76.1	232	79	61	47	116	981
URT7654G	76.1-54-76.1	232	80	61	43	116	1067
URT8922G	88.9-22-88.9	262	76	68	53	131	1256
URT8928G	88.9-28-88.9	262	76	68	52	131	1244
URT8935G	88.9-35-88.9	262	83	68	56	131	1267
URT8942G	88.9-42-88.9	262	85	68	53	131	1271
URT8954G	88.9-54-88.9	262	93	68	56	131	1297
URT10822G	108-22-108	312	85	79	62	156	1919
URT10828G	108-28-108	312	88	79	64	156	1939
URT10835G	108-35-108	312	94	79	67	156	1955
URT10842G	108-42-108	312	96	79	64	156	1886
URT10854G	108-54-108	312	102	79	65	156	1967



Stainless Steel Gas AISI 316L

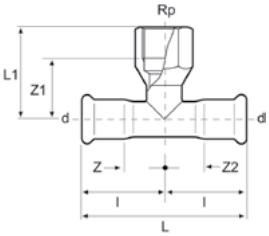
Equal Tee

Part No.	d	L	L1	Z	Z1	I	Weight [gm]
UT15G	15	74	35	16	14	37	67
UT22G	22	82	40	18	17	41	112
UT28G	28	92	45	22	21	46	149
UT35G	35	102	55	24	28	51	189
UT42G	42	118	61	27	29	59	275
UT54G	54	142	72	34	35	71	382
UT76G	76.1	232	115	61	60	116	1192
UT89G	88.9	262	127	68	64	131	1617
UT108G	108	312	155	79	78	156	2450



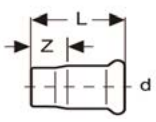
Female Centred Tee

Part No.	d-Rp	L	L1	Z	Z1	I	Weight [gm]
UFT1515G	15-½-15	74	37	16	25	37	83
UFT2215G	22-½-22	82	41	18	29	41	117
UFT2220G	22-¾-22	82	41	18	28	41	131
UFT2815G	28-½-28	92	44	22	32	46	144
UFT2820G	28-¾-28	92	45	22	32	46	159
UFT3515G	35-½-35	102	48	24	36	51	178
UFT3520G	35-¾-35	102	48	24	35	51	189
UFT4215G	42-½-42	118	46	27	34	59	240
UFT5415G	54-½-54	142	55	34	43	71	362
UFT5420G	54-¾-54	142	58	34	45	71	364
UFT5450G	54-2-54	142	69	34	47	71	523
UFT7620G	76.1-¾-76.1	232	68	61	55	116	1009
UFT7650G	76.1-2-76.1	232	81	61	59	116	1194
UFT8920G	88.9-¾-88.9	262	87	68	74	131	1210
UFT8950G	88.9-2-88.9	262	88	68	66	131	1450
UFT10820G	108-¾-108	312	86	79	73	156	1956
UFT10850G	108-2-108	312	98	79	76	156	2118



End Cap

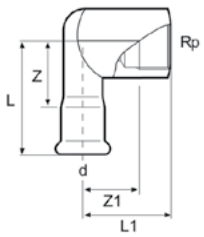
Part No.	d	L	Z	Weight [gm]
UEC15G	15	37	16	27
UEC22G	22	41	18	44
UEC28G	28	46	22	63
UEC35G	35	51	24	81
UEC42G	42	59	27	119
UEC54G	54	72	35	171



Stainless Steel Gas AISI 316L

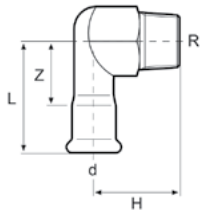
Elbow Adaptor 90° with Female Thread

Part No.	d-Rp	L	L1	Z	Z1	Weight [gm]
UFAE1515G	15-½	53	36	32	24	121
UFAE2220G	22-¾	57	46	34	33	180
UFAE2825G	28-1	71	54	47	38	329
UFAE3532G	35-1¼	72	62	45	45	455



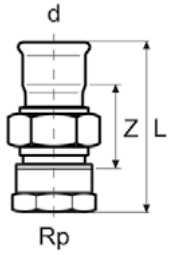
Elbow Adaptor 90° with Male Thread

Part No.	d-R	L	H	Z	Weight [gm]
UMAE1515G	15-½	53	36	32	91
UMAE2220G	22-¾	58	40	35	145
UMAE2825G	28-1	63	44	39	245
UMAE3532G	35-1¼	71	48	44	338



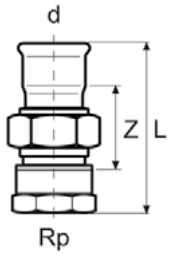
Female Barrel Union Brass Nut HNBR Flat Seal

Part No.	D-RP	NUT	L	Z	Weight [gm]
UFUB1515G	15-½	BRASS	73	40	145
UFUB1520G	15-¾	BRASS	75	41	182
UFUB2220G	22-¾	BRASS	76	40	212
UFUB2225G	22-1	BRASS	79	40	242
UFUB2825G	28-1	BRASS	83	43	398
UFUB3532G	35-1¼	BRASS	93	49	467
UFUB4240G	42-1½	BRASS	96	47	562
UFUB5450G	54-2	BRASS	113	54	973



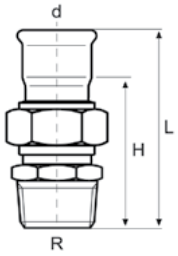
Female Barrel Union Stainless Steel Nut HNBR Flat Seal

Part No.	D-RP	NUT	L	Z	Weight [gm]
UFU1515G	15-½	ST. STEEL	73	40	145
UFU1520G	15-¾	ST. STEEL	75	41	182
UFU2220G	22-¾	ST. STEEL	76	40	212
UFU2225G	22-1	ST. STEEL	79	40	242
UFU2825G	28-1	ST. STEEL	83	43	398
UFU3532G	35-1¼	ST. STEEL	93	49	467
UFU4240G	42-1½	ST. STEEL	96	47	562
UFU5450G	54-2	ST. STEEL	113	54	973



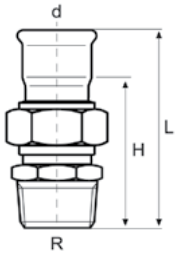
Male Barrel Union Brass Nut HNBR Flat Seal

Part No.	D-RP	NUT	L	H	Weight [gm]
UMUB1515G	15-½	BRASS	76	55	147
UMUB1520G	15-¾	BRASS	80	59	166
UMUB2215G	22-½	BRASS	80	57	239
UMUB2220G	22-¾	BRASS	82	59	222
UMUB2225G	22-1	BRASS	86	63	256
UMUB2825G	28-1	BRASS	88	64	360
UMUB3532G	35-1¼	BRASS	100	73	544
UMUB4240G	42-1½	BRASS	106	74	628
UMUB5450G	54-2	BRASS	122	85	1.008



Male Barrel Union Stainless Steel Nut HNBR Flat Seal

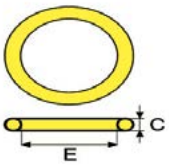
Part No.	D-RP	NUT	L	H	Weight [gm]
UMU1515G	15-½	ST. STEEL	76	55	147
UMU1520G	15-¾	ST. STEEL	80	59	166
UMU2215G	22-½	ST. STEEL	80	57	239
UMU2220G	22-¾	ST. STEEL	82	59	222
UMU2225G	22-1	ST. STEEL	86	63	256
UMU2825G	28-1	ST. STEEL	88	64	360
UMU3532G	35-1¼	ST. STEEL	100	73	544
UMU4240G	42-1½	ST. STEEL	106	74	628
UMU5450G	54-2	ST. STEEL	122	85	1.008



Seal Ring HNBR (yellow) for Gas

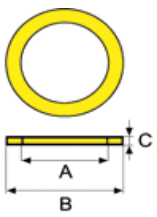
Part No.	Ø	E	C	Weight [gm]
UOR15G	15	15	2.6	0.3
UOR22G	22	22	3.2	0.7
UOR28G	28	28	3.1	0.8
UOR35G	35	35	3.1	1.0
UOR42G	42	42	4.1	2.2
UOR54G	54	54	4.1	2.8
UOR76G	76.1	76.8	8	11.5
UOR89G	88.9	89.3	8.2	17.5
UOR108G	108	108.6	11	33.8

** Check with technical department before ordering*



FLAT GASKET HNBR (yellow) Gas

Part No.	Ø	A	B	C	Weight [gm]
UFW15G	15	15	23	2	0.5
UFW22G	22	22.5	29.6	2	0.7
UFW28G	28	27	38.6	2	1.4
UFW35G	35	35	44.6	2	1.3
UFW42G	42	40	50.6	2	1.7
UFW54G	54	53.5	67	3	4



For flanges, backing rings, and BSP threaded backing rings please refer to pages 20, 26, & 27.

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

Contents

Carbon Steel Tube & Fittings

All tube and pressfittings are made of carbon steel, E195 or E235 n. 1.0034 which conforms to Standard EN 10305. The nominal dimension used to identify both components of the joint refers to the outside diameter of the tube.

The following range of diameters and thicknesses can be used:

Outside Diameter (mm)	Thickness
15	1.2
22	1.2
28	1.2
35	1.5
42	1.5
54	1.5
76.1	2
88.9	2
108	2

Tube is sold in 6-metre lengths and dimensional tolerances must conform to Standard EN 10305.

Pressfitting

The special process used to make the press fittings can be broken down into the following main stages:

- cutting the tube into sections and mechanical working
- forming the toroidal seat
- any welding of other parts of the fitting
- any annealing heat treatments
- zinc surface treatments

All process stages are subjected to a quality certified system conforming to Standard UN1 EN ISO 9001/2000.

Marking

All Europress tube and press fittings are stamped in accordance with the relevant standard to indicate their application.

Various Applications

The Europress Pressfit System in carbon steel is indicated for use in various types of civil and industrial installations where stainless steel pipework is not essential.

Typical applications are:

- closed-circuit heating and cooling water systems
- compressed air and inert gas systems
- closed-circuit sprinkler systems
- oil and diesel lines

All applications should be checked with Europress Technical department.

The O-ring gaskets, made of black EPDM, are resistant to ageing, heat and chemical additives and are therefore particularly suitable for all types of treated water.

Conditions of use

- Maximum operating pressure: 16 bar
- Operating temperature: -20°C +85°C
- Maximum temperature: 120°C (On approved applications. Please refer to technical department)

WATER WORKS

Hot Galvanising

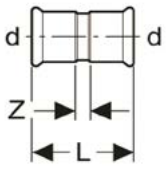
Part No. External Only	Part No. External & Internal	Ext. Ø [mm]	Thickness [mm]	Length [m]	Weight [kg/m]
UCST15-06	**UDGCT15-06**	15	1.2	6	0.408
UCST22-06	**UDGCT22-06**	22	1.5	6	0.758
UCST28-06	**UDGCT28-06**	28	1.5	6	0.980
UCST35-06	**UDGCT35-06**	35	1.5	6	1.239
UCST42-06	**UDGCT42-06**	42	1.5	6	1.498
UCST54-06	**UDGCT54-06**	54	1.5	6	1.942
UCST76-06	**UDGCT76-06**	76.1	2	6	3.655

Electrolytic Galvanising

Part No. External Only	Part No. External & Internal	Ext. Ø [mm]	Thickness [mm]	Length [m]	Weight [kg/m]
UCST89-06	**UDGCT89-06**	88.9	2	6	4.286
UCST108-06	**UDGCT108-06**	108	2	6	5.228

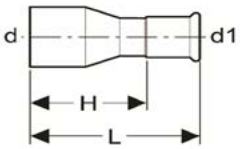
Coupling

Part No.	d	L	Z	Weight [gm]
UC15C	15	52	10	36
UC22C	22	59	13	60
UC28C	28	61	13	77
UC35C	35	72	18	103
UC42C	42	79	15	142
UC54C	54	90	16	202
UC76C	76.1	142	32	619
UC89C	88.9	163	37	817
UC108C	108	192	38	1204



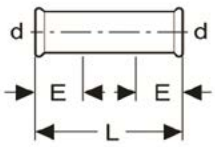
Reducing Coupling (Spigot x Adaptor)

Part No.	d	L	H	Weight [gm]
URC2215C	22-15	60	39	42
URC2815C	28-15	81	60	62
URC2822C	28-22	70	47	67
URC3515C	35-15	84	63	84
URC3522C	35-22	76	53	95
URC3528C	35-28	74	48	87
URC4222C	42-22	87	64	177
URC4228C	42-28	100	76	128
URC4235C	42-35	78	52	115
URC5422C	54-22	110	88	185
URC5428C	54-28	100	76	185
URC5435C	54-35	129	102	206
URC5442C	54-42	108	76	189
URC7642C	76.1-42	151	119	425
URC7654C	76.1-54	145	108	545
URC8954C	88.9-54	157	120	591
URC8976C	88.9-76.1	157	105	660
URC10854C	108-54	204	167	880
URC10876C	108-76.1	196	144	948
URC10889C	108-88.9	192	133	962



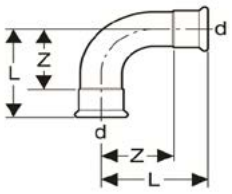
Slip Coupling

Part No.	d	L	Z	Weight [gm]
USC15C	15	75	24	51
USC22C	22	86	27	81
USC28C	28	92	28	112
USC35C	35	99	31	136
USC42C	42	119	35	203
USC54C	54	145	40	280
USC76C	76.1	230	60	875
USC89C	88.9	262	70	1200
USC108C	108	304	80	1705



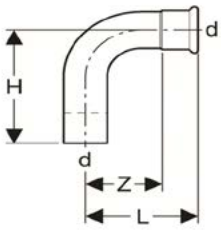
Elbow 90° R 1.2

Part No.	d	L	Z	Weight [gm]
UE15-90C	15	41	20	47
UE22-90C	22	49	26	78
UE28-90C	28	59	35	112
UE35-90C	35	72	45	175
UE42-90C	42	91	59	246
UE54-90C	54	110	73	395
UE76-90C	76.1	150	95	977
UE89-90C	88.9	174	111	1324
UE108-90C	108	215	138	1991



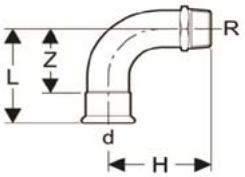
Elbow 90° with Spigot End R1.2

Part No.	d	L	H	Z	Weight [gm]
UES15-90C	15	41	49	20	47
UES22-90C	22	49	59	26	80
UES28-90C	28	59	69	35	113
UES35-90C	35	72	83	45	175
UES42-90C	42	91	96	59	250
UES54-90C	54	110	116	73	392
UES76-90C	76.1	150	166	95	991
UES89-90C	88.9	174	190	111	1329
UES108-90C	108	215	230	138	1988



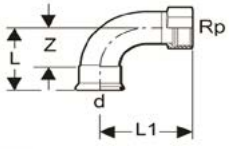
Elbow Adaptor 90° with Male Thread

Part No.	d	R	L	H	Z	Weight [gm]
UME1510C	15	⅜	41	39	20	54
UME1515C	15	½	41	40	20	62
UME2220C	22	¾	49	54	26	100
UME2825C	28	1	59	68	35	180
UME3532C	35	1¼	72	102	45	259
UME4240C	42	1½	91	116	59	375
UME5450C	54	2	110	142	73	670



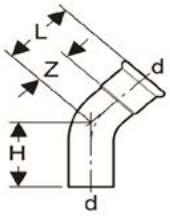
Elbow Adaptor 90° with Female Thread

Part No.	d	Rp	L	L1	Z	Weight [gm]
UFE1510C	15	⅜	41	44	20	60
UFE1515C	15	½	41	44	20	74
UFE2220C	22	¾	49	56	26	119
UFE2815C	28	½	59	64	35	97



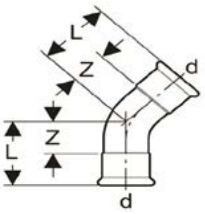
Elbow 45° with Spigot End R1.2

Part No.	d	L	H	Z	Weight [gm]
UES15-45C	15	30	42	9	39
UES22-45C	22	35	47	12	66
UES28-45C	28	41	47	17	90
UES35-45C	35	36	66	29	153
UES42-45C	42	63	70	31	202
UES54-45C	54	75	82	38	316
UES76-45C	76.1	98	119	43	800
UES89-45C	88.9	113	130	50	1054
UES108-45C	108	138	160	61	1580



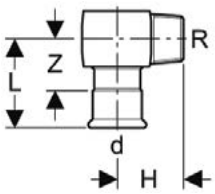
Elbow 45° R 1.2

Part No.	d	L	Z	Weight [gm]
UE15-45C	15	30	9	39
UE22-45C	22	35	12	63
UE28-45C	28	41	17	90
UE35-45C	35	36	29	150
UE42-45C	42	63	31	201
UE54-45C	54	75	38	304
UE76-45C	76.1	98	43	800
UE89-45C	88.9	113	50	1034
UE108-45C	108	138	61	1550



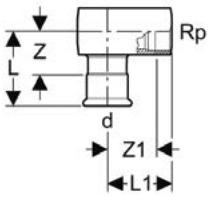
Short Elbow Adaptor 90° with Male Thread

Part No.	d	R	L	H	Z	Weight [gm]
UMSE1510C	15	⅜	34	23	13	82
UMSE1515C	15	½	34	28	13	95
UMSE2220C	22	¾	39	36	16	189



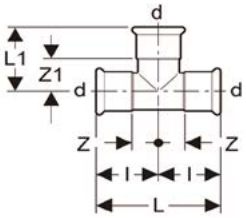
Short Elbow Adaptor 90° with Female Thread

Part No.	d	Rp	L	L1	Z	Z1	Weight [gm]
UFSE1515C	15	½	36	27	15	15	173
UFSE2215C	22	½	42	40	19	28	254
UFSE2220C	22	¾	42	30	19	17	285
UFSE2815C	28	½	47	43	23	31	436



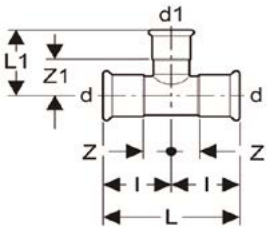
Equal Tee

Part No.	d	L	L1	Z	Z1	I	Weight [gm]
UT15C	15	74	36	16	15	37	67
UT22C	22	82	43	18	20	41	109
UT28C	28	92	46	22	22	46	144
UT35C	35	102	55	24	28	51	189
UT42C	42	118	60	27	28	59	270
UT54C	54	142	73	34	36	71	396
UT76C	76.1	232	121	61	66	116	1150
UT89C	88.9	262	126	68	63	131	1600
UT108C	108	312	152	79	75	156	2319



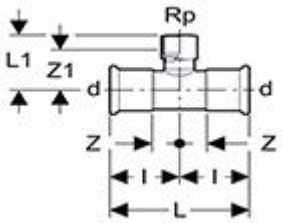
Reducing Tee

Part No.	d-d1-d	L	L1	Z	Z1	I	Weight [gm]
URT2215C	22-15-22	82	40	18	19	41	98
URT2815C	28-15-28	92	42	22	21	46	126
URT2822C	28-22-28	92	46	22	23	46	135
URT3515C	35-15-35	102	45	24	24	51	159
URT3522C	35-22-35	102	48	24	25	51	169
URT3528C	35-28-35	102	50	24	25	51	178
URT4215C	42-15-42	118	52	27	31	59	224
URT4222C	42-22-42	118	54	27	31	59	233
URT4228C	42-28-42	118	53	27	29	59	239
URT4235C	42-35-42	118	57	27	30	59	254
URT5415C	54-15-54	142	54	34	33	71	349
URT5422C	54-22-54	142	56	34	33	71	360
URT5428C	54-28-54	142	59	34	35	71	339
URT5435C	54-35-54	142	64	34	37	71	350
URT5442C	54-42-54	142	68	34	36	71	378
URT7622C	76.1-22-76.1	232	68	61	45	116	942
URT7628C	76.1-28-76.1	232	71	61	47	116	956
URT7635C	76.1-35-76.1	232	75	61	48	116	968
URT7642C	76.1-42-76.1	232	79	61	47	116	981
URT7654C	76.1-54-76.1	232	80	61	43	116	1050
URT8922C	88.9-22-88.9	262	76	68	53	131	1256
URT8928C	88.9-28-88.9	262	75.5	68	51.5	131	1244
URT8935C	88.9-35-88.9	262	83	68	56.5	131	1267
URT8942C	88.9-42-88.9	262	85	68	53	131	1271
URT8954C	88.9-54-88.9	262	92.5	68	55.5	131	1297
URT8976C	88.9-76.1-88.9	262	128	68	73	131	1500
URT10822C	108-22-108	312	85	79	62	156	1838
URT10828C	108-28-108	312	87.5	79	63.5	156	1939
URT10835C	108-35-108	312	93.5	79	66	156	1955
URT10842C	108-42-108	312	96	79	64	156	1886
URT10854C	108-54-108	312	102	79	65	156	1967
URT10876C	108-76.1-108	312	125.2	79	70.2	156	2147
URT10889C	108-88.9-108	312	135	79	72	156	2184



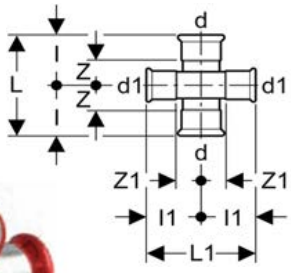
Female Centred Tee

Part No.	d-Rp	L	L1	Z	Z1	I	Weight [gm]
UFT1515C	15-½-15	74	38	16	23	37	82
UFT2215C	22-½-22	82	42	18	30	41	113
UFT2220C	22-¾-22	82	43	18	30	41	120
UFT2815C	28-½-28	92	44	22	32	46	140
UFT2820C	28-¾-28	92	45	22	32	46	159
UFT3515C	35-½-35	102	48	24	36	51	176
UFT3520C	35-¾-35	102	48	24	35	51	191
UFT4215C	42-½-42	118	46	27	34	59	250
UFT4220C	42-¾-42	118	51	27	38	59	255
UFT5415C	54-½-54	142	58	34	46	71	333
UFT5420C	54-¾-54	142	59	34	46	71	350
UFT7620C	76.1-¾-76.1	232	69	61	56	116	950
UFT8920C	88.9-¾-88.9	262	76	68	63	131	1240
UFT10820C	108-¾-108	312	86	79	73	156	1830



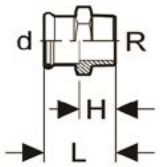
Off Centre Cross

Part No.	d	d1	L	L1	Z	Z1	I	I1	Weight [gm]
UOCC1515C	15	15	74	74	16	16	37	37	100
UOCC2215C	22	15	82	74	18	16	41	37	130
UOCC2815C	28	15	92	74	22	16	46	37	156
UOCC2822C	28	22	92	82	22	18	46	41	186
UOCC3522C	35	22	102	82	18	18	51	41	218
UOCC4222C	42	22	118	82	27	18	59	41	280
UOCC5422C	54	22	142	82	34	18	71	41	376



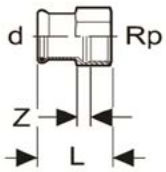
Adaptor with Male Thread

Part No.	d	R	L	H	Weight [gm]
UMA1510C	15	⅜	43	22	41
UMA1515C	15	½	43	22	55
UMA1520C	15	¾	44	23	87
UMA2215C	22	½	44	21	75
UMA2220C	22	¾	45	22	95
UMA2225C	22	1	47	24	154
UMA2820C	28	¾	47	23	101
UMA2825C	28	1	49	25	107
UMA3532C	35	1¼	54	27	169
UMA3540C	35	1½	54	27	172
UMA4240C	42	1½	58	26	226
UMA5450C	54	2	69	32	368
UMA7665C	76.1	2½	123	68	830
UMA8980C	88.9	3	134	71	1160
UMA108100C	108	4	156	78	2005



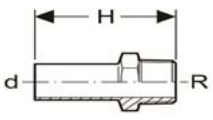
Adaptor with Female Thread

Part No.	d	Rp	L	Z	Weight [gm]
UFA1510C	15	⅜	35	4	65
UFA1515C	15	½	37	4	70
UFA1520C	15	¾	38	4	71
UFA2215C	22	½	37	3	87
UFA2220C	22	¾	40	4	80
UFA2225C	22	1	43	4	114
UFA2815C	28	½	45	9	191
UFA2820C	28	¾	43	6	139
UFA2825C	28	1	45	5	119
UFA3525C	35	1	45	8	130
UFA3532C	35	1¼	73	25	300
UFA4240C	42	1½	75	20	270
UFA5450C	54	2	85	18	360



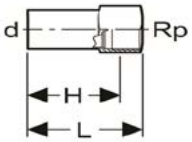
Adaptor with Male Thread and Spigot End

Part No.	d	R	H	Weight [gm]
UMS1515C	15	½	57	70
UMS2215C	22	½	57	77
UMS2220C	22	¾	59	105



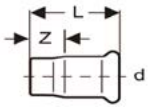
Adaptor with Female Thread and Spigot End

Part No.	d	Rp	L	Z	Weight [gm]
UFS1510C	15	⅜	74	64	57
UFS1515C	15	½	61	49	60
UFS2215C	22	½	61	49	65
UFS2220C	22	¾	65	52	93



End Cap

Part No.	d	L	Z	Weight [gm]
UEC15C	15	38	17	27
UEC22C	22	42	19	45
UEC28C	28	46	22	62
UEC35C	35	51	24	79
UEC42C	42	59	27	123
UEC54C	54	73	36	179
UEC76C	76.1	95	40	361
UEC89C	88.9	115	52	495
UEC108C	108	130	53	707



Weld Joint

Part No.	d	L	Weight [gm]
UWJ15C	15	25	17
UWJ22C	22	27	29
UWJ28C	28	30	36
UWJ35C	35	34	50
UWJ42C	42	38	65
UWJ54C	54	44	97
UWJ76C	76.1	68	282
UWJ89C	88.9	78	375
UWJ108C	108	94	578

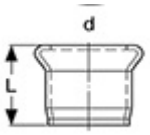
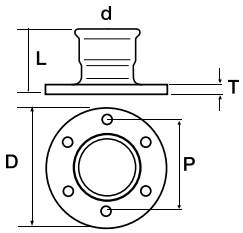


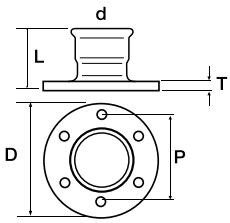
Table E Adaptor Flange

Part No.	d	Normal Flange Size	Inch Size	D	P	L	T
UFLA1515C	15	15	½	95	67	30	6
UFLA2220C	22	20	¾	102	73	32	6
UFLA2825C	28	25	1	114	83	36	7
UFLA3532C	35	32	1¼	121	87	41	8
UFLA4240C	42	40	1½	133	98	46	9
UFLA5450C	54	50	2	152	114	50	10
UFLA7680C	76.1	80	3	185	146	77	11
UFLA8980C	88.9	80	3	185	146	91	11
UFLA108100C	108	100	4	215	178	107	13



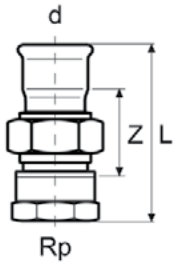
ANSI 150 Adaptor Flange

Part No.	d	Normal Flange Size	Inch Size	D	P	L	T
UFAA1515C	15	15	½	95	67	30	6
UFAA2220C	22	20	¾	102	73	32	6
UFAA2825C	28	25	1	114	83	36	7
UFAA3532C	35	32	1¼	121	87	41	8
UFAA4240C	42	40	1½	133	98	46	9
UFAA5450C	54	50	2	152	114	50	10
UFAA7680C	76.1	80	3	185	146	77	11
UFAA8980C	88.9	80	3	185	146	91	11
UFAA108100C	108	100	4	215	178	107	13



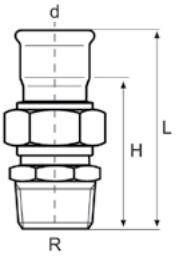
Female Barrel Union Adaptor Brass Nut EPDM Flat Seal

Part No.	d	Rp	NUT	L	Z	Weight [gm]
UFUB1515C	15	½	BRASS	59	26	188
UFUB1520C	15	¾	BRASS	61	26	157
UFUB2220C	22	¾	BRASS	63	27	184
UFUB2225C	22	1	BRASS	66	28	212
UFUB2825C	28	1	BRASS	71	31	388
UFUB3532C	35	1¼	BRASS	77	32	429
UFUB4240C	42	1½	BRASS	82	33	509
UFUB5450C	54	2	BRASS	95	37	872



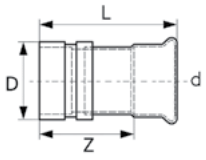
Male Barrel Union Adaptor Brass Nut EPDM Flat Seal

Part No.	d	R	NUT	L	Z	Weight [gm]
UMUB1515C	15	½	BRASS	61	40	136
UMUB1520C	15	¾	BRASS	63	42	124
UMUB2215C	22	½	BRASS	67	44	210
UMUB2220C	22	¾	BRASS	68	45	195
UMUB2225C	22	1	BRASS	73	50	227
UMUB2825C	28	1	BRASS	75	51	384
UMUB3532C	35	1¼	BRASS	80	53	462
UMUB4240C	42	1½	BRASS	85	53	560
UMUB5450C	54	2	BRASS	97	60	863



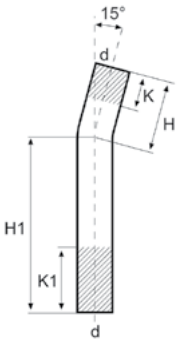
Roll Groove Adaptor

Part No.	d	D	L	Z	Weight [gm]
URG28C	28	33.7	74	50	152
URG35C	35	42.4	79	52	212
URG42C	42	48.3	86	54	260
URG54C	54	60.3	99	62	367
URG76C	76.1	76.1	108	53	802
URG89C	88.9	88.9	119	56	991
URG108C	108	114.4	128	51	1055



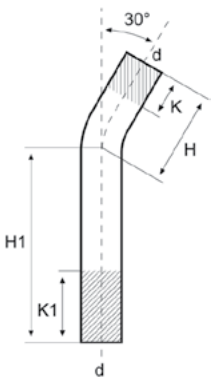
15° Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-15C	15	122	60	21	83	76
UB22-15C	22	124	50	7	81	110
UB28-15C	28	136	45	7	47	146
UB35-15C	35	234	62	30	110	381
UB42-15C	42	276	94	41	144	558
UB54-15C	54	337	117	65	165	869
UB76-15C	76.1	203	226	65	65	1.607
UB89-15C	88.9	260	240	80	80	2.109
UB108-15C	108	291	222	95	95	2.546



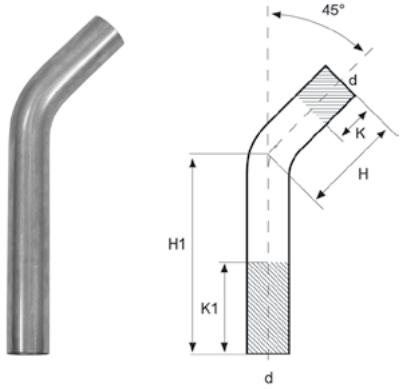
30° Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-30C	15	122	60	21	83	76
UB22-30C	22	124	50	6	80	110
UB28-30C	28	130	54	7	47	144
UB35-30C	35	218	80	30	110	382
UB42-30C	42	274	98	44	144	560
UB54-30C	54	324	137	65	165	905
UB76-30C	76.1	200	202	66	66	1.41
UB89-30C	88.9	262	264	80	80	2.183
UB108-30C	108	259	272	95	95	2.622



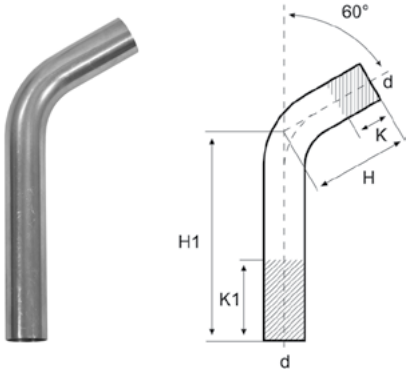
45° Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-45C	15	120	62	19	77	76
UB22-45C	22	120	56	7	71	111
UB28-45C	28	122	58	2	66	146
UB35-45C	35	206	94	20	132	380
UB42-45C	42	262	114	1	149	576
UB54-45C	54	321	146	37	212	928
UB76-45C	76.1	225	225	69	69	1.577
UB89-45C	88.9	267	267	103	103	2.323
UB108-45C	108	293	293	66	66	2.901



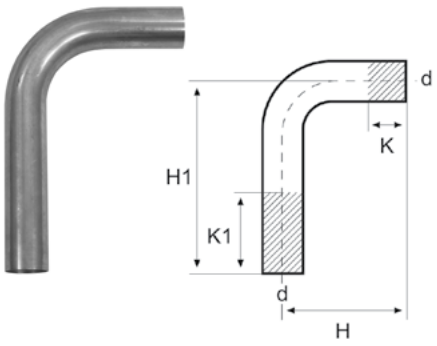
60° Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-60C	15	122	60	21	83	76
UB22-60C	22	118	60	5	63	112
UB28-60C	28	116	71	7	47	140
UB35-60C	35	226	101	30	110	383
UB42-60C	42	251	124	44	145	564
UB54-60C	54	308	162	65	165	889
UB76-60C	76.1	219	223	70	70	1.479
UB89-60C	88.9	250	257	80	80	1.996
UB108-60C	108	288	298	95	95	2.78



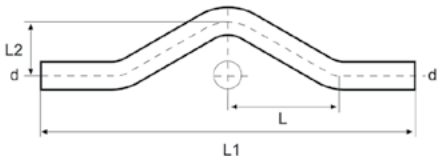
90° Bend

Part No.	d	H1	H	K	K1	Weight [gm]
UB15-90C	15	120	70	22	72	88
UB22-90C	22	120	70	9	59	132
UB28-90C	28	125	97	7	47	190
UB35-90C	35	201	121	62	62	359
UB42-90C	42	254	160	90	90	553
UB54-90C	54	302	202	45	45	877
UB76-90C	76.1	250	250	62	60	1752
UB89-90C	88.9	291	291	90	90	2532
UB108-90C	108	364	364	45	45	3604



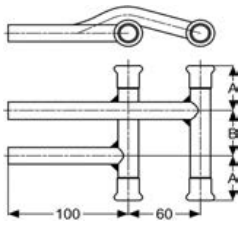
Pipe Bridge

Part No.	d	L1	L2	L	Weight [gm]
UPB15C	15	37	64	64	110
UPB22C	22	42	58	58	159
UPB28C	28	50	102	102	335



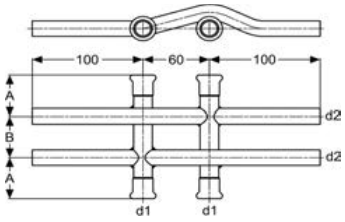
Single Crossover

Part No.	d1-d2	A	B	Weight [gm]
USCO1515C	15-15	40	40	250
USCO2215C	22-15	40	40	320
USCO2815C	28-15	40	40	450



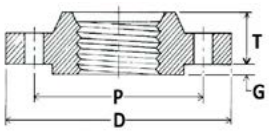
Double Crossover

Part No.	d1-d2	A	B	Weight [gm]
UDCO1515C	15-15	40	40	355
UDCO2215C	22-15	40	40	420
UDCO2815C	28-15	40	40	560
UDCO3515C	35-15	40	40	660



DIN BSP Threaded Flanges

Part No.	Pipe Size d	Nominal Flange Size	Inch Size	P (mm)	D (mm)	T (mm)	G (mm)	Bolt Holes No. x dia	Bolt
USFD15C	15	15	½	65.0	95	14.0	2.0	4 x 14	M12
USFD20C	22	20	¾	75.0	105	16.0	2.0	4 x 14	M12
USFD25C	28	25	1	85.0	115	16.0	2.0	4 x 14	M12
USFD32C	35	32	1¼	100.0	140	18.0	2.0	4 x 18	M16
USFD40C	42	40	1½	110.0	150	18.0	3.0	4 x 18	M16
USFD50C	54	50	2	125.0	165	20.0	3.0	4 x 18	M16
USFD65C	76.1	65	2½	145.0	185	20.0	3.0	8 x 18	M16
USFD80C	88.9	80	3	160.0	200	20.0	3.0	8 x 18	M16
USFD100C	108	100	4	180.0	220	22.0	3.0	8 x 18	M16



ANSI 150 BSP Threaded Flanges

Part No.	Pipe Size d	Nominal Flange Size	Inch Size	P (mm)	D (mm)	T (mm)	G (mm)	Bolt Holes No. x dia	Bolt
USFA15C	15	15	½	60.5	90	9.7	4.5	4 x 16	M12
USFA20C	22	20	¾	70.0	99	11.2	3.0	4 x 16	M12
USFA25C	28	25	1	79.5	108	12.7	3.0	4 x 16	M12
USFA32C	35	32	1¼	89.0	117	14.2	4.9	4 x 16	M12
USFA40C	42	40	1½	98.5	127	15.7	4.9	4 x 16	M12
USFA50C	54	50	2	120.5	152	17.5	6.4	4 x 19	M16
USFA65C	76.1	65	2½	139.7	177.8	20.6	6.3	4 x 19	M16
USFA80C	88.9	80	3	152.5	191	22.4	6.0	4 x 19	M16
USFA100C	108	100	4	190.5	229	22.4	9.4	8 x 19	M16

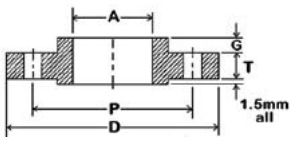
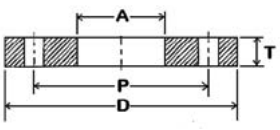


TABLE E BSP Threaded Flanges

Part No.	Pipe Size d	Nominal Flange Size	Inch Size	P (mm)	D (mm)	T (mm)	G (mm)	Bolt Holes No. x dia	Bolt
USFE15C	15	15	½	67.0	95	6.0	9.5	4 x 14	M12
USFE20C	22	20	¾	73.0	100	6.0	11.1	4 x 14	M12
USFE25C	28	25	1	83.0	115	7.0	11.1	4 x 14	M12
USFE32C	35	32	1¼	87.0	120	8.0	11.1	4 x 14	M12
USFE40C	42	40	1½	98.0	135	9.0	12.7	4 x 14	M12
USFE50C	54	50	2	114.0	150	10.0	12.7	4 x 18	M16
USFE65C	76.1	65	2½	127.0	165.1	10.3	15.9	4 x 18	M16
USFE80C	88.9	80	3	146.0	185	11.0	15.9	4 x 18	M16
USFE100C	108	100	4	178.0	215	13.0	19	8 x 18	M16



EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

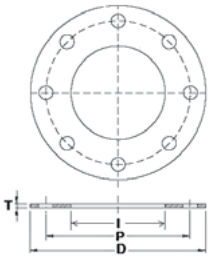
Contents

Accessories - Gaskets, Seals, and Brackets

WATER WORKS

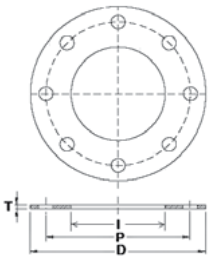
DIN Gaskets - EPDM

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGD15E	15	15	½	65	22	95	3	4 x 14
FGD22E	22	20	¾	75	27	105	3	4 x 14
FGD28E	28	25	1	85	34	115	3	4 x 14
FGD35E	35	32	1¼	100	43	140	3	4 x 18
FGD42E	42	40	1½	110	49	150	3	4 x 18
FGD54E	54	50	2	125	61	165	3	4 x 18
FGD76E	76.1	65	2½	145	77	185	3	8 x 18
FGD89E	88.9	80	3	160	89	200	3	8 x 18
FGD108E	108	100	4	180	115	220	3	8 x 18
FGD140E	139	125	5	210	141	250	3	8 x 18
FGD168E	168	150	6	240	169	285	3	8 x 22



DIN Gaskets - NBR

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGD15N	15	15	½	65	22	95	3	4 x 14
FGD22N	22	20	¾	75	27	105	3	4 x 14
FGD28N	28	25	1	85	34	115	3	4 x 14
FGD35N	35	32	1¼	100	43	140	3	4 x 18
FGD42N	42	40	1½	110	49	150	3	4 x 18
FGD54N	54	50	2	125	61	165	3	4 x 18
FGD76N	76.1	65	2½	145	77	185	3	8 x 18
FGD89N	88.9	80	3	160	89	200	3	8 x 18
FGD108N	108	100	4	180	115	220	3	8 x 18
FGD140N	139	125	5	210	141	250	3	8 x 18
FGD168N	168	150	6	240	169	285	3	8 x 22



DIN Gaskets - FKM

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGD15V	15	15	½	65	22	95	3	4 x 14
FGD22V	22	20	¾	75	27	105	3	4 x 14
FGD28V	28	25	1	85	34	115	3	4 x 14
FGD35V	35	32	1¼	100	43	140	3	4 x 18
FGD42V	42	40	1½	110	49	150	3	4 x 18
FGD54V	54	50	2	125	61	165	3	4 x 18
FGD76V	76.1	65	2½	145	77	185	3	8 x 18
FGD89V	88.9	80	3	160	89	200	3	8 x 18
FGD108V	108	100	4	180	115	220	3	8 x 18
FGD140V	139	125	5	210	141	250	3	8 x 18
FGD168V	168	150	6	240	169	285	3	8 x 22

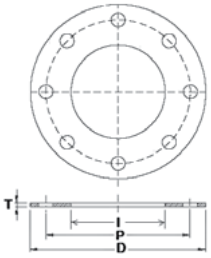


Table E Gaskets

Contents

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

Table E Gaskets - EPDM

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGE15E	15	15	½	67	21	95	3	4 x 14
FGE22E	22	20	¾	73	27	101	3	4 x 14
FGE28E	28	25	1	83	34	114	3	4 x 14
FGE35E	35	32	1¼	87	43	121	3	4 x 14
FGE42E	42	40	1½	98	48	133	3	4 x 14
FGE54E	54	50	2	114	60	152	3	4 x 19
FGE76E	76.1	65	2½	127	76	165	3	4 x 19
FGE89E	88.9	80	3	146	89	184	3	4 x 19
FGE108E	108	100	4	178	114	216	3	4 x 19
FGE140E	139	125	5	210	140	254	3	8 x 17
FGE168E	168	150	6	235	168	279	3	8 x 22

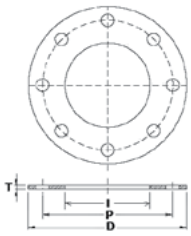


Table E Gaskets - NBR

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGE15N	15	15	½	67	21	95	3	4 x 14
FGE22N	22	20	¾	73	27	101	3	4 x 14
FGE28N	28	25	1	83	34	114	3	4 x 14
FGE35N	35	32	1¼	87	43	121	3	4 x 14
FGE42N	42	40	1½	98	48	133	3	4 x 14
FGE54N	54	50	2	114	60	152	3	4 x 19
FGE76N	76.1	65	2½	127	76	165	3	4 x 19
FGE89N	88.9	80	3	146	89	184	3	4 x 19
FGE108N	108	100	4	178	114	216	3	4 x 19
FGE140N	139	125	5	210	140	254	3	8 x 17
FGE168N	168	150	6	235	168	279	3	8 x 22

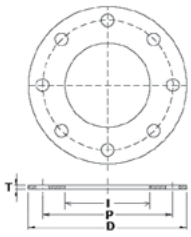
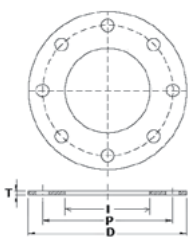


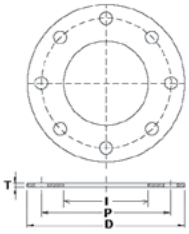
Table E Gaskets - FKM

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGE15V	15	15	½	67	21	95	3	4 x 14
FGE22V	22	20	¾	73	27	101	3	4 x 14
FGE28V	28	25	1	83	34	114	3	4 x 14
FGE35V	35	32	1¼	87	43	121	3	4 x 14
FGE42V	42	40	1½	98	48	133	3	4 x 14
FGE54V	54	50	2	114	60	152	3	4 x 19
FGE76V	76.1	65	2½	127	76	165	3	4 x 19
FGE89V	88.9	80	3	146	89	184	3	4 x 19
FGE108V	108	100	4	178	114	216	3	4 x 19
FGE140V	139	125	5	210	140	254	3	8 x 17
FGE168V	168	150	6	235	168	279	3	8 x 22



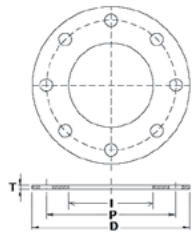
ANSI 150 Gaskets - EPDM

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGA15E	15	15	½	61	21	89	3	4 x 14
FGA22E	22	20	¾	70	26.9	99	3	4 x 14
FGA28E	28	25	1	79	33.3	108	3	4 x 14
FGA35E	35	32	1¼	89	42	118	3	4 x 14
FGA42E	42	40	1½	99	49	127	3	4 x 14
FGA54E	54	50	2	121	61	152	3	4 x 18
FGA76E	76.1	65	2½	140	73	178	3	4 x 18
FGA89E	88.9	80	3	152	89	191	3	4 x 18
FGA108E	108	100	4	191	114	229	3	8 x 19
FGA140E	139	125	5	216	141	254	3	8 x 19
FGA168E	168	150	6	241	168	279	3	8 x 22



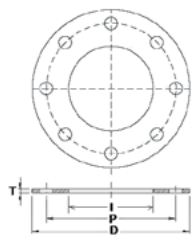
ANSI 150 Gaskets - NBR

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGA15N	15	15	½	61	21	89	3	4 x 14
FGA22N	22	20	¾	70	26.9	99	3	4 x 14
FGA28N	28	25	1	79	33.3	108	3	4 x 14
FGA35N	35	32	1¼	89	42	118	3	4 x 14
FGA42N	42	40	1½	99	49	127	3	4 x 14
FGA54N	54	50	2	121	61	152	3	4 x 18
FGA76N	76.1	65	2½	140	73	178	3	4 x 18
FGA89N	88.9	80	3	152	89	191	3	4 x 18
FGA108N	108	100	4	191	114	229	3	8 x 19
FGA140N	139	125	5	216	141	254	3	8 x 19
FGA168N	168	150	6	241	168	279	3	8 x 22



ANSI 150 Gaskets - FKM

Part No.	Pipe Size (mm)	Nominal Flange Size	Inch Size	P (mm)	I (mm)	D (mm)	T (mm)	Bolt Holes No. x dia
FGA15V	15	15	½	61	21	89	3	4 x 14
FGA22V	22	20	¾	70	26.9	99	3	4 x 14
FGA28V	28	25	1	79	33.3	108	3	4 x 14
FGA35V	35	32	1¼	89	42	118	3	4 x 14
FGA42V	42	40	1½	99	49	127	3	4 x 14
FGA54V	54	50	2	121	61	152	3	4 x 18
FGA76V	76.1	65	2½	140	73	178	3	4 x 18
FGA89V	88.9	80	3	152	89	191	3	4 x 18
FGA108V	108	100	4	191	114	229	3	8 x 19
FGA140V	139	125	5	216	141	254	3	8 x 19
FGA168V	168	150	6	241	168	279	3	8 x 22



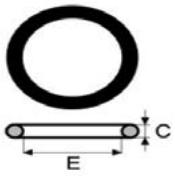
O-rings

Contents

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

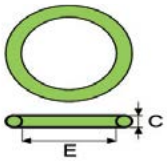
Seal Ring EPDM (Black)
for potable water STANDARD for stainless and carbon steel

Part No.	Ø	E	C	Weight [gm]
UOR15E	15	15	2.6	0.3
UOR22E	22	22	3.2	0.7
UOR28E	28	28	3.1	0.8
UOR35E	35	35	3.1	1.0
UOR42E	42	42	4.1	2.2
UOR54E	54	54	4.1	2.8
UOR76E	76.1	76.8	8	11.5
UOR89E	88.9	89.3	8.2	17.5
UOR108E	108	108.6	11	33.8



Seal Ring FKM (Green)
for Oil - Hydrocarbon up to 180° C

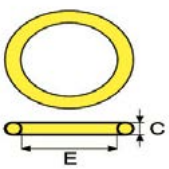
Part No.	Ø	E	C	Weight [gm]
UOR15V	15	15	2.6	0.3
UOR22V	22	22	3.2	0.7
UOR28V	28	28	3.1	0.8
UOR35V	35	35	3.1	1.0
UOR42V	42	42	4.1	2.2
UOR54V	54	54	4.1	2.8
UOR76V	76.1	76.8	8	11.5
UOR89V	88.9	89.3	8.2	17.5
UOR108V	108	108.6	11	33.8



** Check with technical department before ordering*

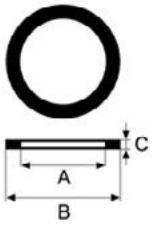
Seal Ring HNBR (Yellow) for Gas

Part No.	Ø	E	C	Weight [gm]
UOR15G	15	15	2.6	0.3
UOR22G	22	22	3.2	0.7
UOR28G	28	28	3.1	0.8
UOR35G	35	35	3.1	1.0
UOR42G	42	42	4.1	2.2
UOR54G	54	54	4.1	2.8
UOR76G	76.1	76.8	8	11.5
UOR89G	88.9	89.3	8.2	17.5
UOR108G	108	108.6	11	33.8

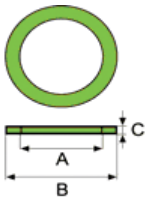


** Check with technical department before ordering*

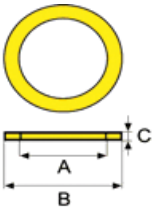
Flat Gasket EPDM (Black) Potable Water					
Part No.	Ø	A	B	C	Weight [gm]
UFW15E	15	15	23	2	0.5
UFW22E	22	22.5	29.6	2	0.7
UFW28E	28	27	38.6	2	1.4
UFW35E	35	35	44.6	2	1.3
UFW42E	42	40	50.6	2	1.7
UFW54E	54	53.5	67	3	4



Flat Gasket FKM (Green) Oil - Hydrocarbon to 180°C					
Part No.	Ø	A	B	C	Weight [gm]
UFW15V	15	15	23	2	0.5
UFW22V	22	22.5	29.6	2	0.7
UFW28V	28	27	38.6	2	1.4
UFW35V	35	35	44.6	2	1.3
UFW42V	42	40	50.6	2	1.7
UFW54V	54	53.5	67	3	4



Flat Gasket HNBR (Yellow) Gas					
Part No.	Ø	A	B	C	Weight [gm]
UFW15G	15	15	23	2	0.5
UFW22G	22	22.5	29.6	2	0.7
UFW28G	28	27	38.6	2	1.4
UFW35G	35	35	44.6	2	1.3
UFW42G	42	40	50.6	2	1.7
UFW54G	54	53.5	67	3	4



O-RINGS and FLAT GASKETS

Made of synthetic rubber they guarantee that a joint is hermetically sealed. In no instance can common commercially available O-rings be substituted. Depending on the application, O-rings with the following materials are used:

EPDM - Black (commonly associated to WATER applications)

The standard material, available in diameters from 15 to 168.3 mm, suitable for temperatures between -20 and +120 °C and for pressures up to a maximum of 16 bar. It has a host of applications and is used for drinking water, heating, cooling, steam and fire fighting.

HNBR - Yellow (commonly associated to GAS applications)

This material is used in gas systems. It is available in diameters from 15 to 108 mm and is suitable for temperatures between -20 and +70°C.

FKM – Green, coinciding with FKM

This material is used for particularly testing conditions, with temperatures between -20 and + 180°C. It is available in diameters from 15 to 108 mm and is particularly suitable for solar systems. It is not recommended for systems with the presence of steam.

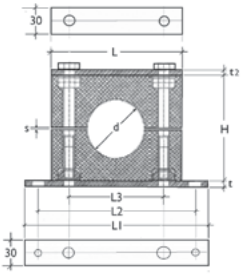
To fully understand the compatibility of the seals with the various types of fluids a brief chemical compatibility list is on page 80. All applications should be confirmed with the technical department. Temperature, pressure and exact chemical specification needs to be known.

Flat seals are used in barrel union assemblies and as such are subject to multiple deformations when assembling/disassembling unions. The manufacturer recommends that seals are replaced each time the joint is disassembled.

Kova Pipe Clamp Set
Stainless Steel Plates and Bolts, Polypropylene Body, Grooved Internal Surface

Part No.	Clamp Body Group	d dia.	dia. Code	L	L1	L2	L3	H	S Tension Clearance	t	t2
USKC-15	2	15	0150	42	70	56	26	33	0.6	3	3
USKC-22	3	22	0220	50	78	64	33	36	0.6	3	3
USKC-28	4	28	0280	59	87	73	40	42	0.6	3	3
USKC-35	5	35	0350	71	100	86	52	58	0.8	3	3
USKC-42	5	42	0420	71	100	86	52	58	0.8	3	3
USKC-54	6	54	0540	86	115	100	66	66	0.8	3	3
USKC-76	7	76.1	0761	121	150	136	94	93	0.8	3	5
USKC-89	8	88.9	0889	147	178	162	120	118	0.8	3	5

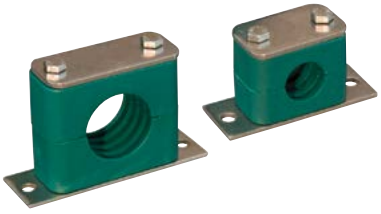
Other sizes available on request.

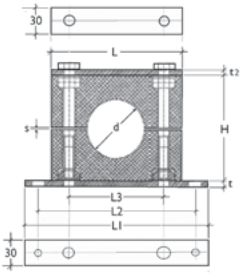


Kova Pipe Clamp Set
Galvanised Plates and Bolts, Polypropylene Body, Grooved Internal Surface

Part No.	Clamp Body Group	d dia.	dia. Code	L	L1	L2	L3	H	S Tension Clearance	t	t2
UKC-15	2	15	0150	42	70	56	26	33	0.6	3	3
UKC-22	3	22	0220	50	78	64	33	36	0.6	3	3
UKC-28	4	28	0280	59	87	73	40	42	0.6	3	3
UKC-35	5	35	0350	71	100	86	52	58	0.8	3	3
UKC-42	5	42	0420	71	100	86	52	58	0.8	3	3
UKC-54	6	54	0540	86	115	100	66	66	0.8	3	3
UKC-76	7	76.1	0761	121	150	136	94	93	0.8	3	5
UKC-89	8	88.9	0889	147	178	162	120	118	0.8	3	5

Other sizes available on request.





Bolted Clips & Mounting Plates

Contents

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

316 Stainless Steel Bolted Clip Head

Part No.	Pipe Size	Description
USPC-15	15mm	S.S. Bolted Clip Head M10
USPC-22	22mm	S.S. Bolted Clip Head M10
USPC-28	28mm	S.S. Bolted Clip Head M10
USPC-35	35mm	S.S. Bolted Clip Head M10
USPC-42	42mm	S.S. Bolted Clip Head M10
USPC-54	54mm	S.S. Bolted Clip Head M10
USPC-76	76mm	S.S. Bolted Clip Head M10
USPC-89	89mm	S.S. Bolted Clip Head M10
USPC-108	108mm	S.S. Bolted Clip Head M10
USPC-140	140mm	S.S. Bolted Clip Head M12
USPC-168	168mm	S.S. Bolted Clip Head M12

Zinc Insulated Bolted Clip Head

Part No.	Pipe Size	Description
UPC-15	15mm	Insulated Zinc Bolted Clip Head M10
UPC-22	22mm	Insulated Zinc Bolted Clip Head M10
UPC-28	28mm	Insulated Zinc Bolted Clip Head M10
UPC-35	35mm	Insulated Zinc Bolted Clip Head M10
UPC-42	42mm	Insulated Zinc Bolted Clip Head M10
UPC-54	54mm	Insulated Zinc Bolted Clip Head M10
UPC-76	76mm	Insulated Zinc Bolted Clip Head M10
UPC-89	89mm	Insulated Zinc Bolted Clip Head M10
UPC-108	108mm	Insulated Zinc Bolted Clip Head M10
UPC-140	140mm	Insulated Zinc Bolted Clip Head M10
UPC-168	168mm	Insulated Zinc Bolted Clip Head M10

Stainless Steel Mounting Plates

Part No.	Description
UBPSS	Stainless Steel Mounting Plate M10
UDBP10	Diamond Base Plate M10
URBP10	Round Base Plate M10

Rods, Clips & Brackets

316 Stainless Steel Threaded Rod

Part No.	Description
SSTR10	Allthread Stainless Steel 10mm x 1m

Zinc Thread Rod

Part No.	Description
M10TRZ	M10 threaded zinc rod x 1 metre
M10TRZ2	M10 threaded zinc rod x 2 metre

316 Stainless Steel Clip Head

Clip head and bolt only. Tee bracket separate, see below

Part No.	Pipe Size (mm)	Description
UCH-15	15mm	S.S. Clip head w bolt, no bracket
UCH-22	22mm	S.S. Clip head w bolt, no bracket
UCH-28	28mm	S.S. Clip head w bolt, no bracket
UCH-35	35mm	S.S. Clip head w bolt, no bracket
UCH-42	42mm	S.S. Clip head w bolt, no bracket
UCH-54	54mm	S.S. Clip head w bolt, no bracket
UCH-76	76mm	S.S. Clip head w bolt, no bracket

316 Stainless Steel Tee Bracket

Part No.	Description
UTBSS	Tee Bracket Stainless Steel

304 Stainless Steel Hinged Tube Clamp - M10

Part No.	Pipe Size (mm)	Description
UHTC28	28	304 Stainless Steel Hinged Tube Clamp - M10
UHTC35	35	304 Stainless Steel Hinged Tube Clamp - M10
UHTC42	42	304 Stainless Steel Hinged Tube Clamp - M10
UHTC54	54	304 Stainless Steel Hinged Tube Clamp - M10
UHTC76	76	304 Stainless Steel Hinged Tube Clamp - M10
UHTC89	89	304 Stainless Steel Hinged Tube Clamp - M10
UHTC108	108	304 Stainless Steel Hinged Tube Clamp - M10

Clic Clamps

CLIC Top Pipe Clamps		
Part No.	Pipe Size (mm)	Description
CLIC15	15	CLIC TOP 15 Pipe Clamp (14.3-16.8mm)
CLIC22	22	CLIC TOP 22 Pipe Clamp (21.8-24.8mm)
CLIC28	28	CLIC TOP 28 Pipe Clamp (27.8-31.2mm)
CLIC36	35	CLIC TOP 36 Pipe Clamp (35.5-39.5mm)
CLIC40	42	CLIC TOP 40 Pipe Clamp (39.5-43.5mm)
CLIC51	54	CLIC TOP 51 Pipe Clamp (50.5-55.5mm)

CLIC Top Double Ratchet Pipe Clamps		
Part No.	Pipe Size (mm)	Description
CLIC 71	76.1mm	CLIC TOP 71 DR Pipe Clamp (71-80mm)
CLIC 80	88.9mm	CLIC TOP 80 DR Pipe Clamp (80-90mm)
CLIC 101	108mm	CLIC TOP 101 DR Pipe Clamp (101-113mm)

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

Contents

Tools

PRESSING TOOLS

The pressing process is achieved using pressing tools with a range of jaw attachments that vary according to the fitting and tube diameters.

Various types of pressing tools are commercially available:

- electromechanical tools, either battery or mains - powered versions (18V or 240V), may be used for the full range of diameters.
- electrohydraulic tools are used primarily for larger diameters, from 76.1 to 108 mm.
- hand operated hydraulic tools are also available for critical environments.

The Europress System can be used with a wide variety of pressing tools, provided that these are equipped with Europress approved "M" - profile jaws.

As it is not possible to guarantee all pressing tools commercially available, users should contact the Waterworks Technical Department for further discussion prior to commencing a project. Some approved tooling brands are as follows:

Brand	Comments	Diameters Approved
Novapress	All the machines adaptors, jaws and chains declared by the manufacturer to be suitable for 'M' profile pressing.	15 - 108
Klauke	All the machines adaptors, jaws and chains declared by the manufacturer to be suitable for 'M' profile pressing.	15 - 108
Rems	All the machines adaptors, jaws and chains declared by the manufacturer to be suitable for 'M' profile pressing. For the mini model, the use for stainless gas 35mm is still being validated.	15 - 54

For high pressure applications, such as oil and lubricant systems, we recommend using the Klauke (Europress) UTB05 or UTB08 or equivalent.

WATER WORKS

UTB02 (Presses sizes 15-28mm)

Features and Benefits:

- Compact lightweight unit only 1.7Kg without jaws,
- 2.3Kg incl. jaws
- 18volt/1.5Ah Li-ion Makita battery
- Constant thrust for nominal sizes up to 28mm SS
- One-handed operation
- Interchangeable mini jaws
- LED display of tool information
- LED light illuminates workpiece
- Short press cycle 5–6 seconds
- 22 min charge time
- Automatic piston return
- 2 component grip
- "Quickstop" function for extra safety
- Autostop" extends battery and tool life
- HPC monitoring gives precise press force
- Jaws rotate approx 350° for max access
- 1.5 Ah produces 150 pressings(NS 20),
- 3.0 Ah produces 300 pressings (NS20) plus
- Mains power option
- Ergonomic design

UTB05 (Presses sizes 15-54mm)

Features and Benefits:

- Compact lightweight unit only 3.5Kg
- 18volt/3.0 Ah Li-ion Makita battery
- Constant thrust for nominal sizes to 54mm SS
- One-handed operation
- Interchangeable jaws or pressing chain
- LED display of tool information
- LED light illuminates workpiece
- Short press cycle
- 22 min charge time
- Automatic piston return
- 2 component grip
- "Quickstop" function for extra safety
- "Autostop" extends battery and tool life
- HPC monitoring gives precise press force
- Jaws rotate approx 350° for max access
- 3.0 Ah produces 300 pressings (NS20) plus
- Mains power option
- Ergonomic design

UTB08 (Presses sizes 15-108mm)

Features and Benefits:

- Compact unit only 4.3Kg
- 18volt/3.0 Ah Li-ion Makita battery
- Constant thrust for nominal sizes to 108mm SS
- One-handed operation
- Interchangeable jaws or pressing chains
- LED display of tool information
- LED light illuminates workpiece
- Short press cycle
- 22 min charge time
- Automatic piston return
- 2 component grip
- "Quickstop" function for extra safety
- "Autostop" extends battery and tool life
- HPC monitoring gives precise press force
- Jaws rotate approx 350° for max access
- 3.0 Ah produces 300 pressings (NS20) plus
- Mains power option
- Ergonomic design

UTB10 (Presses sizes 140-168mm)

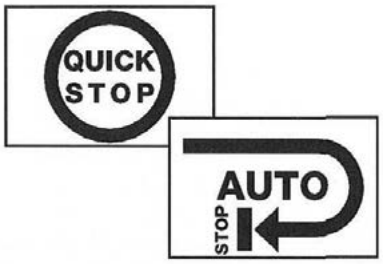
Features and Benefits:

- Weight incl. adaptor jaw, not incl. battery 13 Kg
- 18 volt/3.0 Ah Li-ion battery
- Length 660mm
- Width 105mm
- Height 280mm
- Power consumption 400 W
- Piston force 100 kN
- Piston stroke 60 mm
- Battery capacity 15-20 press cycles
- Charging time approx 60 min
- Max noise level 93 db(A)
- Noise pressure level at the user's ear 82 db(A)
- Protection level IP20
- Temp range during operation -10°C to +50°C
- Jaws rotate 180°

Immediate stop as required and after use:

Should unclear situations occur during a pressing operation, for example use of an incorrect fitting or incorrect pressing jaw, the immediate **"Quickstop"** function on the motor permits a swift reaction. As soon as the trigger is released, the tool comes to an immediate standstill - without even the slightest follow-up movement - so that the user can make the necessary corrections without delay.

The **"Autostop"** after pressing tells the user that the pressing operation has finished. This function also reduces tool wear and prolongs battery life.

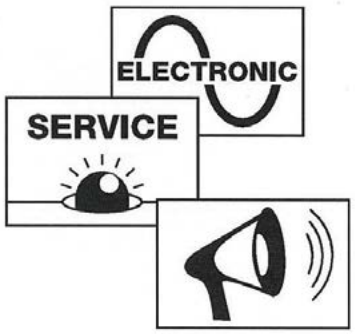


Electronic control for optimum benefit:

The Europress tool generation is equipped with a robust construction site standard electronic system. This system provides the user with all important information on machine status, pressing result and battery power. The information is displayed via a light diode or an audible signal:

When 20% battery power remains: visual LED signal
Service notification: visual LED signal
Pressure deviation: audible signal, buzzer

Key data such as the tool's year of manufacture, serial number, revision status of the integrated machine parts, number of pressing cycles and the last or next service are also evident for our Service Centre hence guaranteeing the best possible service result.



We recommend:

Following the use and maintenance methods for tools and jaws as set by the manufacturer closely, including:

- regularly checking the working surfaces of the jaws;
- frequently cleaning the jaws with a degreaser;
- keeping it correctly lubricated;
- when the tools have worn out, dispose of all the components, especially the batteries, according to the local regulations.

No claim will be accepted, unless the compliance with the maintenance/revision programme specified by the manufacturers is documented. The use of jaws and chain with a V profile or declared valid for both M and V profiles is absolutely not tolerated for any diameter.

Europress Crimp Heads

Features and Benefits:
Excellent corrosion protection due to special surface finish. Easy to differentiate between the system related profiles due to varying surface colours. Optimised safety based on the use of high resilience tool steel. The working surfaces of the jaws should be regularly checked for defects and cleaned with a de-greaser.

Pressing Jaws:
Europress pressing jaws with approval from over 150 system suppliers for the applications concerned.

Profile Coding
to verify the used system pressing jaw on request.

Easy Assignment
of pressing jaws and profiles thanks to coding with nominal size, profile and production data.

Minimum Wear
thanks to additional induction-hardening of the wear points at infeed chamfers and profile geometry.

Environmentally friendly high-quality synthetic oils for optimum functionality.

Close attention has been paid to environmental issues. All new Europress tools use synthetic hydraulic oils. These oils are highly biodegradable and harmless to water. Furthermore, these hydraulic oils are tested to the most stringent standards and are available worldwide.

The press tools should receive regular servicing, at the intervals recommended by the manufacturer, at the appropriate service centre.

Intelligent Solutions for Efficient Pressing Technology

Features and benefits of the EUROPRESS tools:

Improved ergonomics and comfort.
The Europress tool incorporates a 2-component plastic housing with soft inlay, which gives the feeling of a pleasant, secure grip, prevents slipping and avoids pressure points in the grip area. The optimised centre of gravity makes work effortless - even when continuously assembling overhead.

Optimum illumination.
The new, integrated workplace illumination for Europress tools makes it easier to identify the pressing location and to correctly mount the pressing jaw on the fittings in difficult light conditions. This means guaranteed reliable pressing and higher efficiency at all times, even under difficult conditions.

Reliably monitored pressing: Hydraulic Pressure Check.

HPC

Hydraulic Pressure Check, HPC for short, monitors the oil pressure in the tool's oil circuit, hence ensuring a continuous, consistent press quality.

During each pressing cycle, the achieved pressing pressure is determined by a pressure sensor and compared to the required minimum value. An audible warning signal sounds if the achieved pressure differs from the specified working pressure. The user will know immediately that the fitting has not been pressed to the correct pressure and the fitting must be replaced and the tool must be serviced. If three consecutive pressings occur outside the required pressure range, the tools switch off automatically and must be sent in for service.

For sizes 42mm and above, for superior connections we recommend Pressing Chains:

Special features and benefits:

- Simple chain changeover even when working overhead by separating the chain from the machine.
- Optimum force transmission thanks to the toggle action principle.
- The pressing chains can be changed by one person.
- Simultaneous constriction of the fitting and deformation of the toroidal seat thanks to 4 segment technology.
- Easy chain removal after the pressing operation due to polished profile surfaces.
- Optimised safety based on the use of high-resilience tool steel.
- International approvals including special system tests with large dimensions.

Reliable Form Fit thanks to forced segment guidance.

Synchronised pressing thanks to 4 segment technology.

Solid Chain Lock allows strong forces to be absorbed and prevents slipping from the fitting.

Firm Positioning of the adapter jaw thanks to optimised design.

Press Tool (Presses sizes 140 & 168mm)		
Item No.	Description	Includes
UTB10	Crimp up to 168mm (Jaws not included)	Case, 18V Battery, Jaw adaptor with handle as shown

Press Tool (Presses sizes 15-108mm)		
Item No.	Description	Includes
UTB08	Crimp from 15 to 108mm (Jaws not included)	Case, 18V Battery 22 min charge time

Press Tool (Presses sizes 15-54mm)		
Item No.	Description	Includes
UTB05	Crimp from 15 to 54mm (Jaws not included)	Case, 18V Battery 22 min charge time

Press Tool (Presses sizes 15-28mm)		
Item No.	Description	Includes
UTB02	Crimp from 15 to 28mm (Jaws not included)	Case, 12V or 18V Battery 22 min charge time

Press Tool Set		
Item No.	Description	Includes
UTB08, UTB05, UTB02	Comes complete with carry case, battery and battery charger as pictured. Press Heads are sold as required (Jaws not included).	Case, 18 V Battery 22 min charge time

Pressing Heads & Accessories		
Item No.	Description	Includes
UTD054	Pressing Chain Set 42 – 54mm	Adaptor and Metal case

Pressing Heads & Accessories		
Part No.	Description	To Suit
UMK015	Ø 15mm Jaw Mini	Mini TB02 Crimping Tool Only
UMK022	Ø 22mm Jaw Mini	Mini TB02 Crimping Tool Only
UMK028	Ø 28mm Jaw Mini	Mini TB02 Crimping Tool Only

Pressing Heads & Accessories		
Part No.	Description	To Suit
UMJ015	Ø 15mm Jaw Mini	TB08, TB05 Crimp Tool
UMJ022	Ø 22mm Jaw Mini	TB08, TB05 Crimp Tool
UMJ028	Ø 28mm Jaw Mini	TB08, TB05 Crimp Tool
UMJ035	Ø 35mm Jaw Mini	TB08, TB05 Crimp Tool

Pressing Heads & Accessories		
Part No.	Description	Requirements
UMC042	Ø 42mm Pressing Collar	Requires UTA054 Adaptor
UMC054	Ø 54mm Pressing Collar	Requires UTA054 Adaptor

Pressing Heads & Accessories		
Part No.	Description	To Suit
UTA054	Jaw Adaptor	42 & 54 Press Heads
UTA108	Jaw Adaptor	76, 89 & 108 Press Chains

Pressing Heads & Accessories		
Part No.	Description	Requirements
UMC076	Ø76.1mm Pressing Chain	Requires UTA108 Adaptor
UMC089	Ø88.9 mm Pressing Chain	Requires UTA108 Adaptor
UMC108	Ø108mm Pressing Chain	Requires UTA108 Adaptor

Pressing Heads & Accessories	
Part No.	Description
UMC140	139.7 Pressing Collar to Suit UTB10
UMC168	168.3 Pressing Collar to Suit UTB10
UTA168	Jaw Adaptor for UMC140 & UMC168

Pressing Heads & Accessories	
Part No.	**Description**
UTBBC18	18V Battery Charger

Pressing Heads & Accessories	
Part No.	**Description**
UTBT12	240V to 12V Adaptor (Replaces Battery)
UTBT18	240V to 18V Adaptor (Replaces Battery)

Pressing Heads & Accessories	
Part No.	**Description**
UTBB18	18V 4.0 Ah Lithium Ion Battery

Pressing Heads & Accessories	
Part No.	**Description**
UTM05	Manual Hydraulic Pressing Tool (For use in Fire and Explosion Protected Areas)

Pipe Tools	
Item No.	**Description**
UTR015054	Multi Reamer 15 - 54mm. Inside and outside deburring tool. Hand operated or with adaptor (UTS-TR) mounts into power drill for fast and easy deburring.

Pipe Tools	
Item No.	**Description**
UMRSP1554	Multi Reamer 15 - 54mm with battery drill spindle. Inside and outside deburring tool. Hand operated or mounts into drill for fast and easy deburring.

Pipe Tools	
Item No.	Description
UTS-TR	Multi reamer battery drill spindle adaptor

Pipe Tools	
Item No.	Description
UTE121	Bench mount orbital tube cutters give a burr-free square cut. Having a multiple jaw concentric clamping system, optimal cutting speed, a cold cutting blade to match different wall thickness, basic jaws Ø24 to 121 mm. • Additional jaws: Ø5 to 108 mm • Cutting precision: Square cuts < 0.25 mm • Scalability: May be transformed into a bevelling and orbital welding machine • Dual-output cutting motor with 2 blade positions for uptake • Weight: 37 kg (easy handling)

Pipe Tools	
Item No.	Description
UTE108	Bench mount 240v, right angle power cutter with foot switch. Ball bearing roller support. Chip free, no outer burr, dry cuts 22 - 108mm.

Pipe Tools	
Item No.	Description
UTE1618	Hand held, fast, orbital action, reciprocating saw with pipe clamp for 90° guide support up to 4". Free cuts up to 6". Variable speed for easy start, stepless control up to optimised 2400rpm. Needle bearings. 230V, 1050W. Other options available.

Pipe Tools	
Item No.	Description
UDG054	Insertion depth gauge 15 - 54mm

Pipe Tools	
Item No.	Description
UTT015168	Pipe deburrer for steel pipe 15 - 168mm. 3 spare blades in handle.

Pipe Tools	
Item No.	Description
UTF015035	Cu/Al/SS Rotary pipe cutter 15 - 35mm. Built-in Deburrer.

Pipe Tools	
Item No.	Description
UTP015076	Cu/Al/SS Rotary pipe cutter 15 - 76mm with bearing. Built-in Deburrer.

Pipe Tools	
Item No.	Description
UTF054108	Cu/Al/SS Rotary pipe cutter 54 - 108mm

Pipe Tools	
Item No.	Description
UTGO15035	Replacement wheel suits UTF015035
UTQ015076	Replacement wheel suits UTP015076
UTGO54108	Replacement wheel suits UTF054108

EUROPRESS
STAINLESS STEEL AND CARBON STEEL PRESS FIT PIPE SYSTEMS

Contents

Technical Specifications

UTB02, UTB05, & UTB08 Intelligent, Self Monitoring Press Tools

Red LED	White LED Torch	Audible Alarm	When	Why
20 Sec				Battery low, recharge before anymore presses
2 x			After inserting battery	Self check, OK to use
20 Sec / 2 Hz			After working cycle	SERVICE Return tool to authorised service centre
20 Sec / 5 Hz			While exceeding the temp. limit	Unit too hot, allow to cool before further use
20 Sec 20 Sec / 2 Hz			After working cycle	SERVICE Battery is low and tool requires service
1 x			After working cycle	Error: Joint is not correctly pressed • Required pressure has not been achieved • The operator has interrupted the pressing cycle manually while motor was running
3 x	3 x		After working cycle	Serious Error: • The pressure has not been reached while the motor was running

WATER WORKS

Chemical composition % of stainless steels								
	Chromium	Nickel	Molybdenum	Manganese max%	Silicon max %	Phosphorus max %	Suphur max %	Carbon max %
AISI 316L	16.5 - 18.5	10 - 13	2 - 2.5	2	1	0.045	0.015	0.03
AISI 304	17 - 19.5	8 - 10.5		2	1	0.045	0.015	0.07

Stainless Steel Tube Expansion Quick Guide

Tube length (m)	Change in length (mm)									
	Temp difference °Celsius									
	10	20	30	40	50	60	70	80	90	100
1	0.165	0.33	0.495	0.66	0.825	0.99	1.155	1.32	1.485	1.65
6	0.99	1.98	2.97	3.96	4.95	5.94	6.93	7.92	8.91	9.9
10	1.65	3.3	4.95	6.6	8.25	9.9	11.55	13.2	14.85	16.5
20	3.3	6.6	9.9	13.2	16.5	19.8	23.1	26.4	29.7	33
30	4.95	9.9	14.85	19.8	24.75	29.7	34.65	39.6	44.55	49.5
40	6.6	13.2	19.8	26.4	33	39.6	46.2	52.8	59.4	66
50	8.25	16.5	24.75	33	41.25	49.5	57.75	66	74.25	82.5
60	9.9	19.8	29.7	39.6	49.5	59.4	69.3	79.2	89.1	99
70	11.55	23.1	34.65	46.2	57.75	69.3	80.85	92.4	103.95	115.5
80	13.2	26.4	39.6	52.8	66	79.2	92.4	105.6	118.8	132
90	14.85	29.7	44.55	59.4	74.25	89.1	103.95	118.8	133.65	148.5
100	16.5	33	49.5	66	82.5	99	115.5	132	148.5	165

Carbon Steel Tube Expansion Quick Guide

Tube length (m)	Change in length (mm)									
	Temp difference °Celsius									
	10	20	30	40	50	60	70	80	90	100
1	0.11	0.22	0.33	0.44	0.55	0.66	0.77	0.88	0.99	1.1
6	0.66	1.32	1.98	2.64	3.3	3.96	4.62	5.28	5.94	6.6
10	1.1	2.2	3.3	4.4	5.5	6.6	7.7	8.8	9.9	11
20	2.2	4.4	6.6	8.8	11	13.2	15.4	17.6	19.8	22
30	3.3	6.6	9.9	13.2	16.5	19.8	23.1	26.4	29.7	33
40	4.4	8.8	13.2	17.6	22	26.4	30.8	35.2	39.6	44
50	5.5	11	16.5	22	27.5	33	38.5	44	49.5	55
60	6.6	13.2	19.8	26.4	33	39.6	46.2	52.8	59.4	66
70	7.7	15.4	23.1	30.8	38.5	46.2	53.9	61.6	69.3	77
80	8.8	17.6	26.4	35.2	44	52.8	61.6	70.4	79.2	88
90	9.9	19.8	29.7	39.6	49.5	59.4	69.3	79.2	89.1	99
100	11	22	33	44	55	66	77	88	99	110

Thermal Expansion

Tube expands as a function of the materials they are made of and the temperature variation to which they are subjected. Therefore, when installing pipework systems three rules must be followed to ensure good results:

- leave sufficient room for expansion
- use expansion compensators
- position both fixed and sliding collars correctly

The following formula is used to calculate longitudinal expansion: Δ L = • L • ΔT ÷ 1000 where:

- Δ L is the expansion in mm.
- is the coefficient of expansion of the material expressed in mm/m• °C
  Coefficient of thermal expansion
  Stainless Steel 16.5, Carbon Steel 11
- L is the length of the pipe in m.
- ΔT is the permitted temperature difference

For a practical calculation of the thermal expansion, according to the tube length and the temperature variation, see the graph in **fig. 4**, which applies to stainless steel and is also applicable to carbon steel, but allowing for the fact that the thermal expansion of carbon steel is reduced by 1/3 (-33%). Example: The thermal expansion of a 20-metre stainless steel tube, subjected to a temperature variation of 70°C is the following:

ΔL= 16.5 x 20 x 70/1000=23.1 mm

The same result can also be obtained from the graph in **fig. 4**

If the tube is carbon steel, the expansion is:
ΔL= 11 x 20 x 70/1000= 15.4 mm

The same result can also be obtained from the graph in **fig 4**, but reduce the expansion for stainless steel by 1/3 (-7.7mm).

PIPE MATERIAL
Coefficient of thermal expansion

STAINLESS STEEL	16.5
CARBON STEEL	11

Fig. 4
Thermal expansion in stainless steel as a function of the length and the temperature variation. Carbon steel is 30% less.

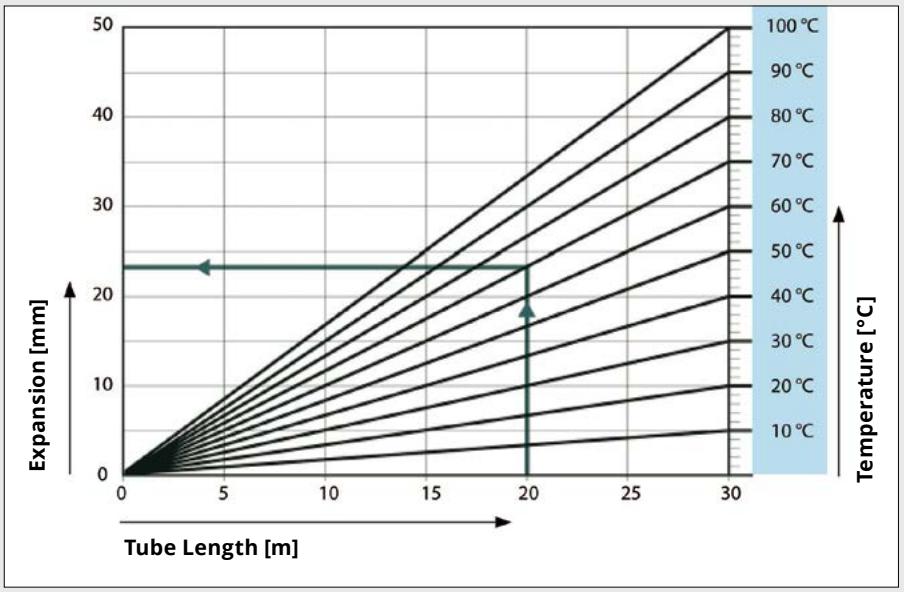
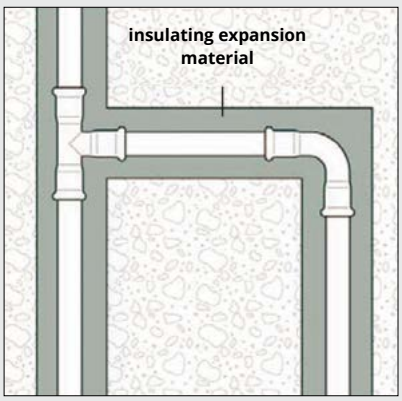


Fig. 5
Chased pipe



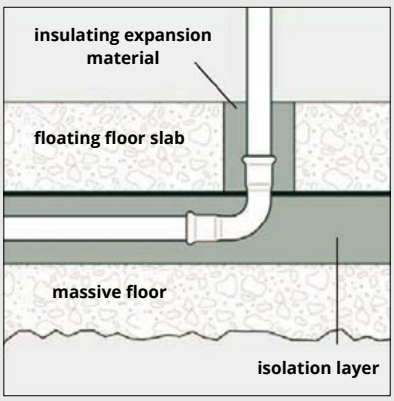


Fig. 6
Pipe under floating floor

Expansion Room

When installing pipework, distinctions should be made between:

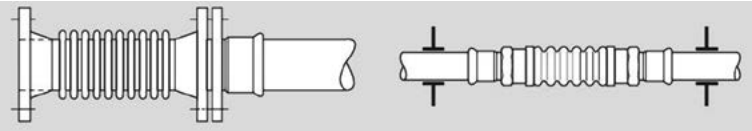
- visible pipes
- chased pipes
- pipes under "floating" floors

Expansion in visible pipes is absorbed by the elasticity of the run itself provided that the pipes are correctly fixed. Chased pipes must not be in direct contact with the plaster, but wrapped in a pad of elastic material, such as glass wool or plastic foam **fig. 5.** Thus fitted, soundproofing requirements are also satisfied. Under a "floating" floor, pipes are laid below the isolation layer and can expand freely **fig. 6.** Vertical channels must be coated in elastic insulating materials. The same type of coating must be applied to pipes passing through walls and ceilings.

Expansion Compensators

Minimum pipe expansion can sometimes be compensated for by the degree of elasticity of the pipe system itself. If this is not possible, expansion compensators must be used.

Compensators can be either U or Z-shaped, and can be preformed or made up when the Europress Pressfitting components are being assembled. **fig. 7** shows the configuration of U-shaped compensators, while the diagram in **fig.8** allows the compensation length to be calculated, for the estimated expansion, in steel pipes. Similarly, **fig. 10** shows the configuration of a Z-shaped compensator, while the diagrams in **figs. 12 and 13** allow the compensation length to be calculated, for the estimated expansion, in steel pipes. The latter diagrams can also be used to calculate compensation in T-shaped branches **(fig 11)**.



Flanged and threaded expansion compensators

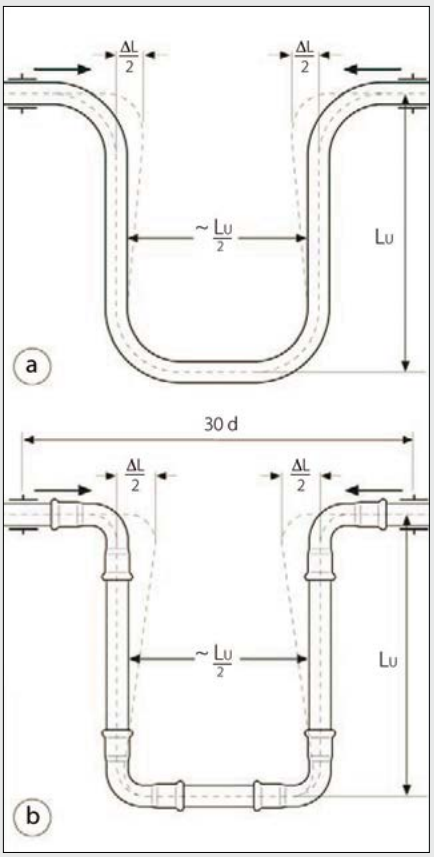


Fig. 7
Expansion compensators U-shaped
a) through preformed pipe
b) with pressfittings

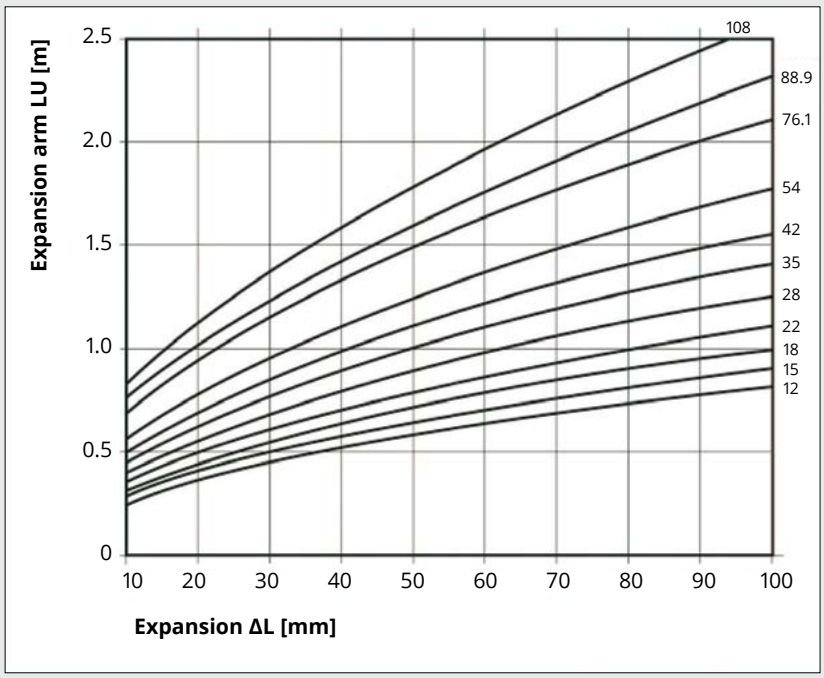


Fig. 8
Length LU of compensator U-shaped
in stainless steel and carbon steel

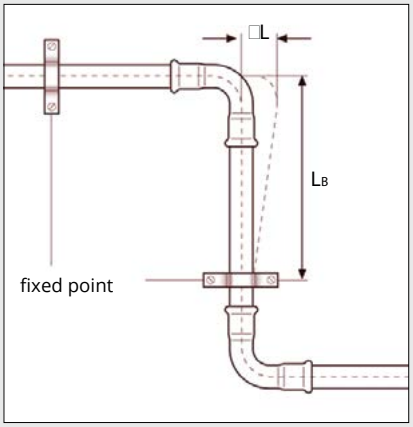
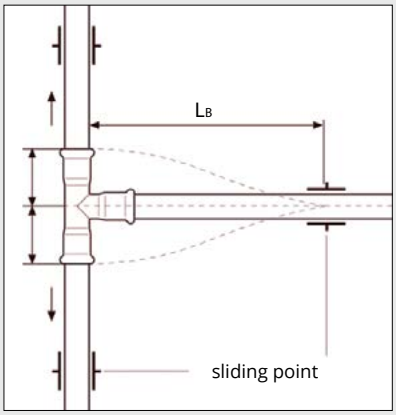


Fig. 10
Expansion compensators Z-shaped

Fig. 11
T-shaped branch



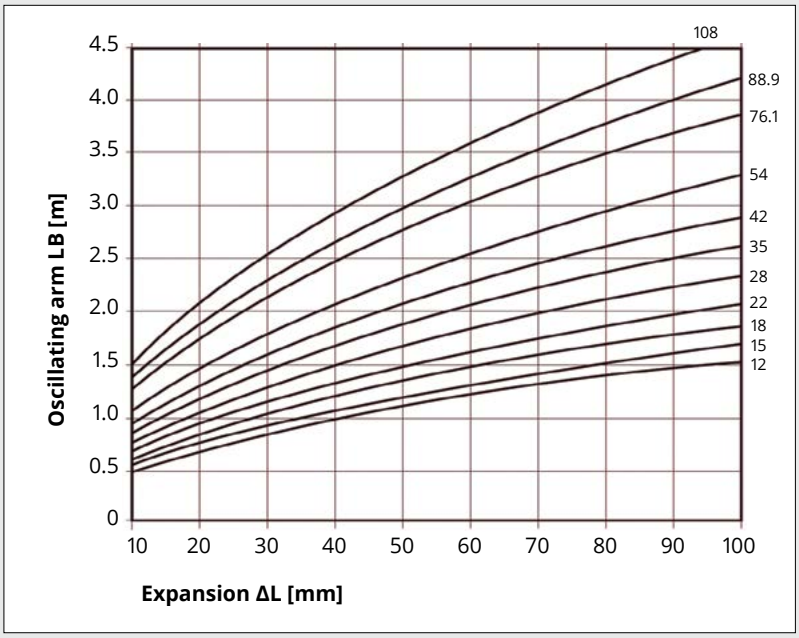


Fig. 12
Length LB of compensator Z-shaped in stainless steel and carbon steel

Table 4
Maximum Distance Between Fixing Point

Pipe	15	22	28	35	42	54	76.1	88.9	108	139.7	168.3
Recommended	1.5	2	2.3	2.5	3	3	3.5	3.7	4	4.5	4.8
Maximum (refer tech dept)	1.5	2.5	2.5	3.5	3.5	3.5	5	5	5	5	5

Pipe Fixing

The pipe support collars serve two purposes:
• locking the pipe
• orienting expansion caused by temperature fluctuations

Collars or Fixing Points
There are two types of collars or fixing points:
• fixed, which lock pipes rigidly
• sliding, which allow axial movement

Positioning Fixing Points
A pipe with no changes of direction or expansion compensators must have only one fixed anchoring point **(fig. 14)**. In the case of long pipes, we recommend placing this collar towards the centre of the section so as to allow expansion in both directions. This solution is also particularly suitable for vertical pipes that pass through many floors precisely because it allows for expansion in two directions, also decreasing stress on the branches. Fixed collars must not be placed on fittings **(fig. 15)** and even sliding collars must be positioned so as not to foul fittings and become potentially dangerous fixed points **(fig.16)**.

Minimum Distances
Installing pipework correctly involves observing certain minimum distances, which depend on several different factors:

- **Distance between fixing points**
  Fixing points must be placed at an adequate distance from each other. If the brackets are too close together they can prevent the absorption of expansion. If they are too far apart they can increase vibration and amplify noise. **Tab. 2** shows the distances recommended by Europress.

- **Manoeuvring space for the pressing tool**
  Adequate space for manoeuvring and avoidance of obstacles must be allowed for, and this will vary according to the size of the pressing tool. **Tab. 3** shows the minimum space to be allowed.

- **Distance between fittings**
  Two pressfittings too close together can compromise the perfect seal of the joints. **Tab. 4** shows the minimum distances to observe.

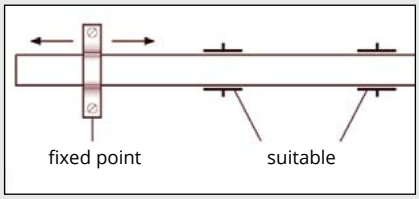


Fig. 14
Pipe fixing: straight pipe, only one fixed point: suitable

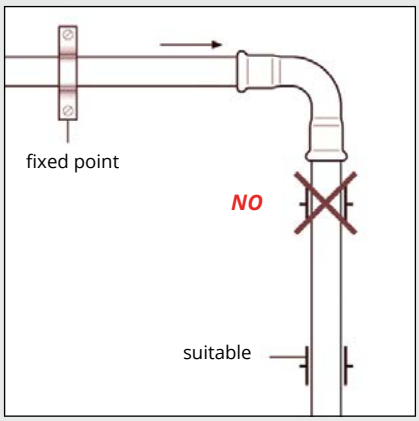


Fig. 16
Pipe fixing: sliding point too near to fitting: wrong

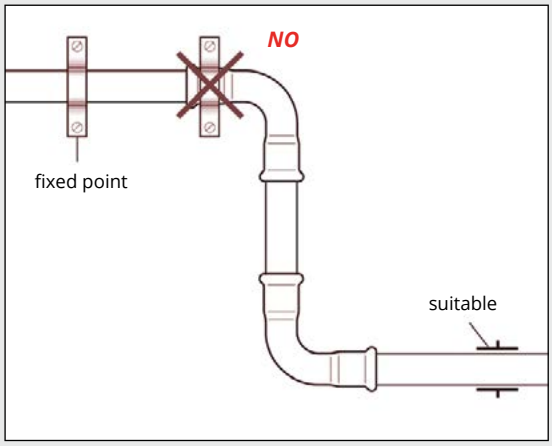
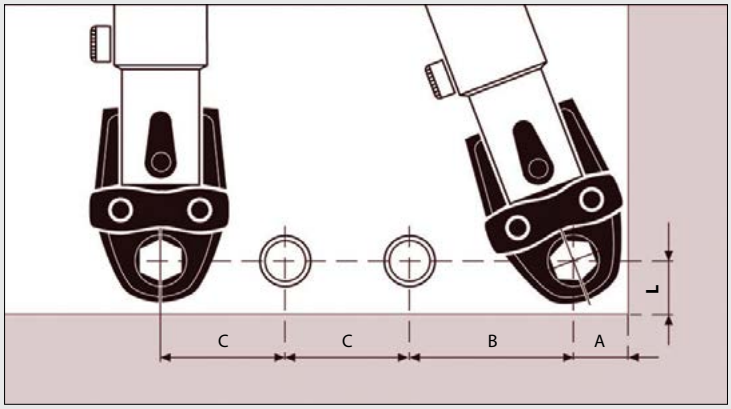


Fig. 15
Pipe fixing: fixed point on fitting: wrong

Table 3
Minimum pressing spaces



Ø / Pipe	15	22	28	35	42	54	76.1	88.9	108	139	168
A (mm)	25	35	35	45	76	86	190	210	210	230	260
B (mm)	75	81	81	85	120	125	200	250	250	290	330
C (mm)	56	76	76	76	120	125	200	250	250	290	330
L (mm)	24	32	32	32	78	88	170	170	170	230	260

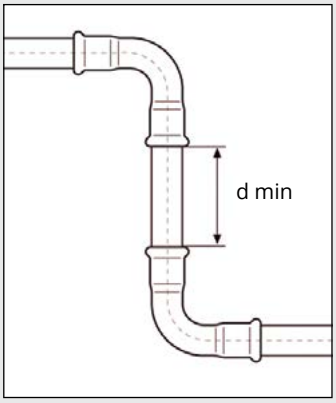


Table 4
Minimum distances between fittings

pipe size	d min (mm)
15	10
22-28	10
35	10
42	20
54	20
76.1	20
88.9	20
108	20
139	32
168	37

Corrosion Resistance

Stainless steel installations for drinking water.

Resistance to Internal Corrosion
Stainless steel does not change the characteristics of drinking water, nor does the water affect it in any way. For this reason, drinking water, even when treated, is absolutely compatible with the AISI 316L stainless steel used by Europress. Perfect hygiene is thus guaranteed.

Resistance to Bimetallic Corrosion
Stainless steel is resistant to corrosion, even in systems where it is in contact with non-ferrous metals (bronze, copper and brass). If however, it is in direct contact with carbon steel, bimetallic corrosion can occur. This risk can be reduced by inserting a nonferrous joint between the two metals or it can be completely eliminated by using non-ferrous spacers at least 150mm in length.

Resistance to External Corrosion
External corrosion can only occur on a stainless steel system in very particular situations, such as prolonged contact with high concentrations of chlorides. In these cases, we recommend covering the pipes with a closed cell coating, taking care to apply waterproof glue to the cutting and junction points. Alternatively, protective anticorrosion tape can be used. Felt sheathing must not be used as it holds moisture that can lead to corrosion.

Carbon Steel Installations for Heating/Cooling

Resistance to Internal Corrosion
Oxygen is not normally able to penetrate closed-circuit water heating systems from the outside so carbon steel pipes are not subject to internal corrosion. Carbon steel components can also be used in mixed installations with other non-ferrous metals, such as copper, aluminium, etc.

However, such systems must always be kept filled, even when not operating, or should be emptied and kept dry, to avoid both air and water being in contact with the metal, a situation that can lead to corrosion.

Resistance to External Corrosion
External corrosion can frequently occur on carbon steel systems in chased installations, or in humid conditions. To prevent this, we recommend covering the pipes with closed-cell coating or protective anti-corrosion tape, ensuring that the pipes are entirely covered. Felt sheathing must not be used as it holds moisture that can lead to corrosion.

Commissioning and Testing

System Commissioning
After installation and before enclosing in any walls, insulation or painting, the system must undergo testing to ensure its carrying capacity and seal integrity. The test method and result must be documented in a report (contact Technical Department for approved work method and report form).

The choice of the test method depends on the type of installation, the medium that the system is designed for, the fluid selected for testing with, and the progress over time of the building works as well as the requirements related to hygiene and corrosion.

Seal Testing
If using a dry test with compressed air it must done with oil-free compressed air so there is no residual oil left in the pipework. This is done in 2 phases - a seal test followed by the load test.

Drinking water or heating installations are tested using water at a pressure at least 1.5 times the operating pressure. If no leaks are detected during testing, it is best practice to flush the pipes thoroughly before charging the system with water. The testing procedure should include:

Seal Test:
- Pressurise the system to 1.5 times the operation keeping in mind the maximum pressure capabilities of Europress. Refer to Technical Department if exceeding 16 Bar. Hold this pressure for 10 minutes then release.
- Repeat this step a second time.

Load Test:
- Repeat the above step a third time.
- Repeat this step a fourth time except hold for a minimum of 1 hour.

Document all results.

Gas systems are to be tested in accordance with the relevant Australian Standard for the type of gas. Test procedures involving pressures greater than 20 bar should be confirmed with Europress technical department.

Noise Insulation

Pipes are a possible means of transmitting noise from other sources (pumps, valves, etc.) and, for this reason, they must be insulated with elastic materials to avoid direct contact with collars, walls, etc.

Thermal Insulation

Hot water pipes must be insulated in compliance with the codes of practice relating to energy conservation and heating systems. This also acts as a safety precaution against accidental contact.

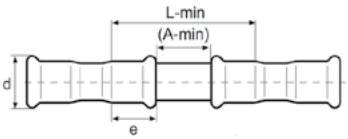
Cold water pipes must also be adequately insulated to prevent condensation and dripping. For stainless steel installations the insulating material has to be without chlorine or its compounds.

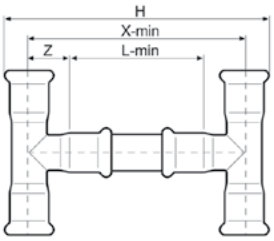
Protection Against Freezing
Where there is a danger of water freezing in pipes, they must be protected with insulating material of sufficient thickness, or antifreeze should be used to avoid leaks caused by loosened joints or swelling.

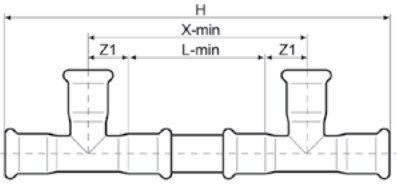
Guarantee

The use of original Europress fittings, with the correct pipes and approved pressing tools, coupled with strict adherence to the technical instructions given for both the design and installation of the system, will guarantee the longevity of the system for 25 years. Furthermore, the manufacturer's guarantee that when installation is done in accordance with guidelines, pressfit tightness guarantee is in excess of 30 years.

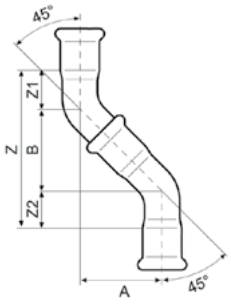
Minimum Proximity Tables

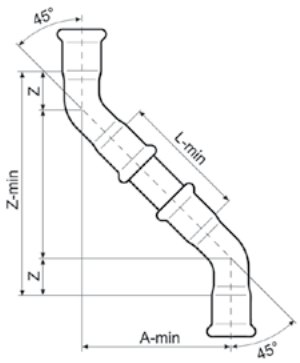


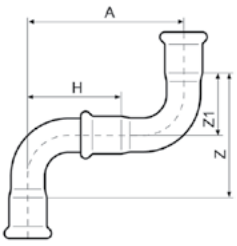




Minimum Distance Between Two Presses					Double Tee					Side Mounted Tees				
DN	d	L-min	A-min	e	DN	H	L-min	X-min	Z	DN	H	L-min	X-min	Z1
15	23	52	10	21	15	103	52	83	16	15	158	52	93	21
22	32	56	10	23	22	123	56	96	20	22	178	56	104	24
28	37	58	10	24	28	135	58	102	22	28	194	58	106	24
35	44	64	10	27	35	161	64	121	29	35	213	64	116,5	26
42	54	84	20	32	42	187	84	140	28	42	256	84	148	32
54	65	94	20	37	54	225	94	166	36	54	304	94	168	37
76	96	130	20	55	76	333	130	252	61	76	484	130	240	55
89	110	146	20	63	88	365	146	272	63	88	544	146	272	63
108	133	176	20	78	108	437	176	324	74	108	644	176	332	78

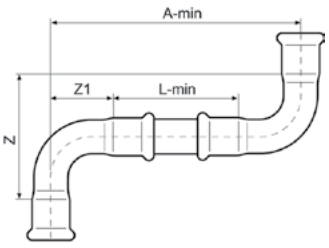


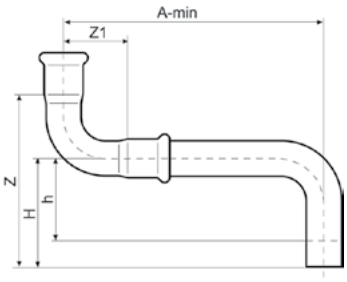


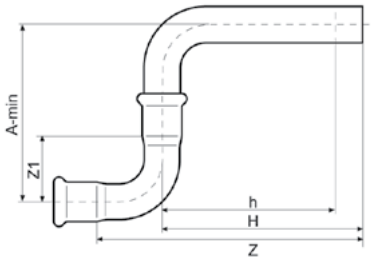


Elbow 45°FF with Elbow 45°MF						2 Elbows 45°FF with Pipe					Elbow 90°FF with Elbow 90°MF				
DN	A	Z	Z1	Z2	B	DN	L-min	A-min	Z-min	Z	DN	A	H	Z	Z1
Radius 1.5						Radius 1.5					Radius 1.5				
15	45	77	16	16	45	15	52	59	91	16	15	83	56	54	27
22	52	94	21	21	52	22	56	69	111	21	22	105	68	74	37
28	62	116	27	27	62	28	58	79	133	27	28	127	80	94	47
35	69	133	32	32	69	35	64	91	155	32	35	154	93	122	61
42	88	178	45	45	88	42	84	123	213	45	42	208	125	166	83
54	105	207	51	51	105	54	94	139	241	51	54	255	149	212	106
Radius 1.2						Radius 1.2					Radius 1.2				
76	115	201	43	43	115	76	130	153	239	43	76	261	166	190	95
89	127	227	50	50	127	88	146	174	274	50	88	301	190	222	111
108	156	276	62	62	152	108	176	209	329	60	108	367	230	274	137

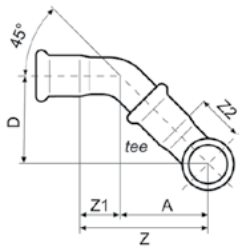
Minimum Proximity Tables

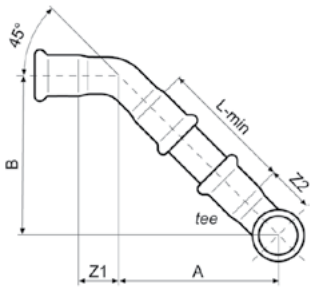


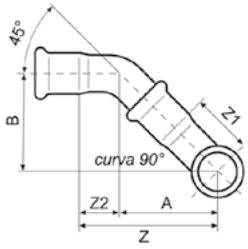




2 Elbows 90°FF with Pipe					Elbow 90°FF and Elbow with Plain Ends 90° (Long Side)						Elbow 90°FF and Elbow with Plain Ends 90° (Short Side)					
DN	L-min	A-min	Z	Z1	DN	A-min	Z1	Z	H	h	DN	A-min	Z1	Z	H	h
Radius 1.5					Radius 1.5						Radius 1.5					
15	52	114	54	27	15	147	27	97	70	48	15	97	27	147	120	48
22	56	122	74	37	22	157	37	107	70	61	22	107	37	157	120	61
28	58	126	94	47	28	172	47	144	97	90	28	144	47	172	125	78
35	64	138	122	61	35	262	61	182	121	59	35	182	61	262	201	139
42	84	188	166	83	42	337	83	243	160	70	42	243	83	337	254	164
54	94	208	212	106	54	408	106	308	202	157	54	308	106	408	302	257
Radius 1.2					Radius 1.2						Radius 1.2					
76	130	280	190	95	76	345	95	345	250	190	76	345	95	345	250	190
88	146	312	222	111	88	402	111	402	291	201	88	402	111	402	291	201
108	176	372	274	137	108	501	137	501	364	319	108	501	137	501	364	319

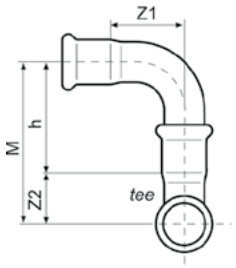


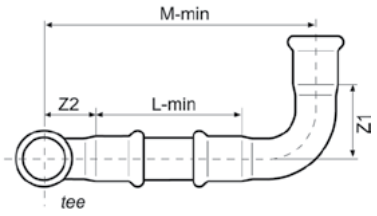


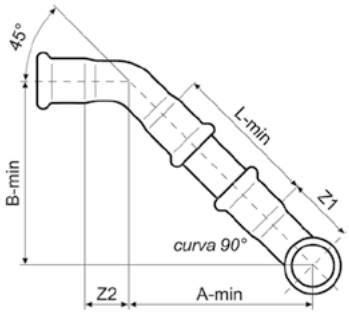


Elbow 45°MF with Lateral Tee						Elbow 45°MF with Lateral Tee & Pipe						Elbow 45°MF and Lateral Elbow 90°FF					
DN	Z	A	D	Z1	Z2	DN	A	B	L-min	Z1	Z2	DN	Z	A	B	Z1	Z2
Radius 1.5						Radius 1.5						Radius 1.5					
15	60	44	44	16	16	15	59	59	52	16	16	15	60	44	44	27	16
22	72	51	51	21	20	22	69	69	56	21	20	22	72	51	51	37	21
28	85	58	58	27	22	28	76	76	58	27	22	28	85	58	58	47	27
35	98	66	66	32	29	35	88	88	64	32	29	35	98	66	66	61	32
42	121	76	76	45	28	42	111	111	84	45	28	42	121	76	76	83	45
54	145	94	94	51	36	54	128	128	94	51	36	54	145	94	94	106	51
Radius 1.2						Radius 1.2						Radius 1.2					
76	174	131	131	43	61	76	165	165	130	43	61	76	174	131	131	95	43
88	186	136	136	50	63	88	183	183	146	50	63	88	186	136	136	111	50
108	225	165	165	60	74	108	219	219	176	60	74	108	225	165	165	137	60

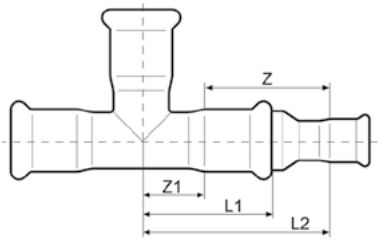
Minimum Proximity Tables







Elbow 90°MF With Lateral Tee					Elbow 90°MF with Lateral Tee & Pipe					Lateral Elbow 90°FF & Pipe					
DN	M	h	Z1	Z2	DN	M-min	L-min	Z1	Z2	DN	A-min	B-min	L-min	Z1	Z2
Radius 1.5					Radius 1.5					Radius 1.5					
15	71	55	27	16	15	94	52	27	16	15	67	67	52	27	16
22	88	68	37	20	22	113	56	37	20	22	81	81	56	37	21
28	102	80	47	22	28	127	58	47	22	28	93	93	58	47	27
35	121	93	61	29	35	153	64	61	29	35	111	111	64	61	32
42	153	125	83	28	42	195	94	83	28	42	150	150	84	83	45
54	185	149	106	36	54	236	104	106	36	54	178	178	94	106	51
Radius 1.2					Radius 1.2					Radius 1.2					
76	232	171	95	61	76	291	140	95	61	76	190	190	130	95	43
88	253	190	111	63	88	320	156	111	63	88	217	217	146	111	50
108	304	230	137	74	108	387	186	137	74	108	264	264	176	137	60



Tee and Reducer									
DN	L2	L1	Z	Z1	DN	L2	L1	Z	Z1
22-15	61	42	42	19	**54-28**	109	71	75	34
28-15	83	46	61	22	**54-35**	135	71	101	34
28-22	67	46	45	22	**54-42**	112	71	78	34
35-15	88	51	64	24	**76.1-42**	182	116	121	61
35-22	78	51	54	24	**76.1-54**	170	116	109	61
35-28	73	51	49	24	**88.9-54**	190	131	122	68
42-22	82	59	55	27	**88.9-76.1**	173	131	105	68
42-28	104	59	77	27	**108-54**	245	156	167	78
42-35	74	59	47	27	**108-76.1**	222	156	144	78
54-22	122	71	88	34	**108-88.9**	211	156	133	78

Chemical Compatibility of Europress Pipes and O-Rings

Refer to the Europress Technical Department to obtain confirmation of suitability of individual liquids for food process applications. As every aspect of an application may not be known by the supplier, applications remain the responsibility of the user.

	PIPE & SEALS				
FLUID	AISI 316L	C-Steel	EPDM	HNBR	FKM-FPM
Acetic acid 20%	A	D	A	D	D
Acetone 100 %	A	A	A	D	D
Acetylene	A	A	A	A	A
Ammonia dry	A	A	A	A	D
Ammonium chloride 1%	A	D	A	A	A
Ammonium nitrate 10-50%	A	D	A	A	A
Ammonium phosphate 10%	C	X	A	A	D
Ammonium sulfate 10%	C	C	A	A	D
Aniline	A	A	B	A	C
Aqua regia, aqua fortis	A	D	C	D	B
Battery acid	A	D	B	X	A
Benzene	A	A	D	D	A
Boric acid 5%	A	D	A	A	A
Butane	A	A	D	A	A
Butanol	A	A	A	D	A
Calcium Hydroxide ≤ 10°C	C	B	A	A	A
Calcium Hypochlorite	D	D	B	B	A
Carbon dioxide	A	C	B	A	A
Caustic soda ≤ 50%	A	D	B	B	C
Chlorine (dry)	B	B	A	B	A
Citric acid 5%	A	D	A	A	A
Compressed air*	A	B	D	A	A
Copper chloride	D	D	A	A	A
Copper nitrate	A	D	A	A	A
Copper sulfate 10%	A	D	A	A	A
Photo developer/fixing bath	A	X	B	A	A
Engine oil	A	B	D	A	A
Ethane	A	A	D	A	A
Ethylene glycol	A	A	A	A	A
Ethylene Oxide	A	X	C	D	D
Ferric chloride, watery	D	D	A	A	A
Ferric sulfate	C	D	A	A	A
Formaldehyde	A	D	A	B	D
Formic acid	C	D	A	D	D
Gas oil	A	X	D	A	A
Gasoline	A	A	D	A	A
Gear oil	A	B	D	A	A
Hexane	A	A	B	D	A
Hydrochloric acid 100%	D	D	D	A	A
Hydrogen fluoride	D	D	D	D	D
Hydrogen peroxide 10%	A	D	A	D	A
Kerosene	A	B	D	A	A

	PIPE & SEALS				
FLUID	AISI 316L	C-Steel	EPDM	HNBR	FKM-FPM
Linseed oil	A	A	D	D	A
Lubricating oils	A	A	D	A	A
Machine oil	A	B	D	A	A
Magnesium chloride ≤20%	A	B	A	A	A
Magnesium hydroxide 100°C	C	B	A	B	A
Magnesium sulfate <40%	A	B	A	A	A
Methane	A	A	D	A	A
Methanol	A	B	A	B	D
Mineral oil	A	A	D	A	A
Naphtha	A	A	D	B	A
Naphthalene	A	A	D	X	A
Nickel chloride 10-30%	C	D	A	A	A
Nickel sulfate	A	D	A	A	A
Nitric acid ≤20%	A	D	D	B	A
Paraffin	A	B	D	A	A
Phosphoric acid	A	D	A	D	A
Potassium chloride	A	D	A	A	A
Potassium hydroxide ≤ 50°C	C	D	A	B	D
Potassium sulfate 10%	A	B	A	A	A
Propane (liquefied)	A	A	D	A	A
Prussic acid	C	D	A	X	A
Sea water	A	D	A	A	A
Sodium bicarbonate	A	C	A	A	A
Sodium chloride 5%	A	C	A	A	A
Sodium nitrate ≤ 40%	A	C	A	B	A
Sodium phosphate	C	D	A	A	A
Sodium sulfate 10%	A	B	A	A	A
Sulfuric acid 10% 60°C	D	D	B	X	A
Sulfuric acid, smoking	D	D	D	X	A
Sulfuric acid 100%, moist	C	D	C	X	A
Sulphur dioxide (dry)	C	B	A	D	B
Tannin	A	D	A	X	A
Tanning agents for leather	A	X	B	A	A
Tartaric Acid 10% 100°C	A	D	B	X	A
Toluol 20°C	A	C	A	D	D
Trichloroethylene	C	B	D	D	A
Turpentine	C	B	D	A	B
Water ≤ 100°C	A	C	A	A	B
Water, deionised	A	X	B	B	A
Water, distilled	A	X	A	A	A
Zinc chloride	A	X	A	A	A
Zinc sulfate 10%	A	X	A	A	A

A: Excellent - Material not affected
B: Good - Material slightly affected but suitable
C: Fair - Some degree of reaction but suitable

D: Severe effect - Not recommended
X: No data available, refer to Waterworks Technical Department

Pressure Drops

Water or gas flow in the pipes, gradually loses it pressure, because of the different resistances it meets. These resistances are due to straight pipe resistance or to single casual conditions such as direction changes, section reductions, etc.

Therefore the total pressure drop for a pipe system is calculated according to the following formula:

$\Delta p = \Delta p1 + \Delta p2$

where:
Δp1 is the pressure drop due to straight lengths
Δp2 is the pressure drop due to single localized resistances

Pressure Drop of a Straight Pipe

The following formula is used to calculate pressure drop, due to straight lengths

$\Delta p1 = \Sigma R \cdot l$

where:
R is the unitary pressure drop expressed in mbar or in Pa/m
l is the straight pipe length in m

As well, the following formula is used to calculate the unitary pressure drop:

$R = \lambda \times \rho \times v2 \div 2 \times d$

where:
λ is the pipe friction coefficient
ρ is the fluid density expressed in kg/m^3
v is the fluid speed expressed in m/s
d is the internal pipe diameter in mm

For a practical calculation of pressure drops it is possible to refer to the following tables.

Pressure Drop of Single Localised Resistances

The following formula is used to calculate pressure drops due to single localized resistances.

$\Delta p2 = \Sigma Z$

where:
Z is the pressure drop of the single fitting expressed in mbar

As well, the following formula is used to calculate the pressure drop of the single fitting

$Z = \xi \times \rho \times v2 \div 2$

where:
ξ is the coefficient, which depends on the fitting type
ρ is the fluid density expressed in Kg/m3
v is the fluid speed expressed in m/s

Please refer to page 85 for the resistance coefficients.

Possible Causes of Leaks

1. Tube inserted into the fitting could be creased or damaged.
2. Tube not pushed fully home in the fitting.
3. Non-standard connection between tubes or non-matched sizes.
4. Incorrect installation fixing.
5. Connection made to the fitting by the operator using incompatible products.
6. Installations subject to mechanical stress, e.g. mountings not properly lined up.
7. Other objects anchored to the hanging system.
8. Thermal expansion not compensated for by adequate fitting techniques or equipment.
9. Freezing of the installation.
10. Pressure or temperature specifications outside those indicated in the conditions of use.
11. Unforeseen external causes such as accidental impacts
12. Fittings welded by the operator rather than pressed.
13. Double pressing by the operator either of the fitting itself or near it.
14. Minimum distance between two fittings not observed.
15. Poor storage and handling of the fittings with deterioration of the o-ring, caused by external agents such as light, temperature, dirt, ozone etc.
16. Mechanical damage to the fitting (cuts, bending, crushing).
17. Replacement of washers or spare parts not supplied by Europress.
18. Tearing of the o-ring, for example caused by pipes not properly deburred.
19. Incorrect tube insertion causing the o-ring to become dislodged from its position.
20. Use of unsuitable o-ring lubricants. Use only soap and water.
21. Internal or external liquids not compatible with the o-ring composition.
22. Pressing carried out with worn clamp jaws.
23. Use of a pressing tool no longer capable of exerting sufficient force (the result of wear and tear, operator error or lack of maintenance).
24. Clamp jaws not correctly positioned in relation to the fitting when pressed.
25. Clamp jaws not fully pressed home.
26. Use of non-standard clamp jaws or jaws made for other section types.

Technical Specifications

Tab. 1

Stainless steel pipes for drinkable water (roughness ***k*** = 0.0015 mm).
Pressure drops ***R*** as a function of peak flow rate ***Vp*** and speed ***v*** at ***10°C*** temperature.

Contents

Nominal size	Pipe outside diameter x wall thickness					
d_e x s / OD x t [mm]	15 x 1.0		22 x 1.2		28 x 1.2	
d_i / ID [mm]	13.0		19.5		25.6	
Peak flow rate **Vp** l/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s
0.05	2.2	0.4	0.3	0.2	0.1	0.1
0.1	7.3	0.8	1.1	0.3	0.3	0.2
0.15	14.8	1.1	2.1	0.5	0.6	0.3
0.2	24.5	1.5	3.5	0.7	1	0.4
0.25	36.2	1.9	5.1	0.8	1.4	0.5
0.3	50	2.3	7.1	1	2	0.6
0.35	65.6	2.6	9.3	1.2	2.6	0.7
0.4	83.2	3	11.7	1.3	3.3	0.8
0.45	102.5	3.4	14.4	1.5	4	0.9
0.5	123.7	3.8	17.3	1.7	4.9	1
0.55	146.6	4.1	20.5	1.8	5.7	1.1
0.6	171.3	4.5	23.9	2	6.7	1.2
0.65	197.5	4.9	27.6	2.2	7.7	1.3
0.7	225.5	5.3	31.5	2.3	8.8	1.4
0.75			35.6	2.5	10	1.5
0.8			39.9	2.7	11.1	1.6
0.85			44.5	2.9	12.4	1.7
0.9			49.2	3	13.7	1.8
0.95			54.2	3.2	15.1	1.9
1			59.4	3.3	16.5	1.9
1.05			64.8	3.5	18	2.1
1.1			7.4	3.7	19.6	2.1
1.15			76.3	3.8	21.2	2.3
1.2			82.3	4	22.9	2.3
1.25			88.6	4.2	23.9	2.4
1.3			95	4.3	26.4	2.5
1.35			101.7	4.5	28.2	2.6
1.4			108.6	4.6	30.1	2.7
1.45			115.6	4.8	32	2.8
1.5			122.9	5	34	2.9
1.55					36.1	3
1.6					38.2	3.1
1.65					40.4	3.2
1.7					42.6	3.3
1.75					44.9	3.4
1.8					47.2	3.5
1.85					49.6	3.6
1.9					52	3.7
1.95					54.5	3.8
2					57	3.9
2.05					59.6	4
2.1					62.2	4.1
2.15					64.3	4.2
2.2					67.7	4.3
2.25					70.5	4.4
2.3					73.3	4.5
2.35					82.8	4.8
2.4					86	4.9
2.45					89.2	5
2.5					92.5	5.1

Nominal size	Pipe outside diameter x wall thickness					
d_e x s / OD x t [mm]	35 x 1.5		42 x 1.5		54 x 1.5	
d_i / ID [mm]	32		39		51	
Peak flow rate **Vp** l/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s
0.2	0.3	0.2	0.1	0.2	0	0.1
0.4	1.1	0.5	0.4	0.3	0.1	0.2
0.6	2.3	0.7	0.9	0.5	0.3	0.3
0.8	3.8	1	1.5	0.7	0.4	0.4
1	5.7	1.2	2.2	0.8	0.6	0.5
1.2	7.9	1.5	3.1	1	0.8	0.6
1.4	10.3	1.7	4	1.2	1.1	0.7
1.6	13.1	2	5.1	1.3	1.4	0.8
1.8	16.2	2.2	6.3	1.5	1.7	0.9
2	19.5	2.5	7.6	1.7	2.1	1
2.2	23.1	2.7	9	1.8	2.5	1.1
2.4	27.1	3	10.5	2	2.9	1.2
2.6	31.2	3.2	12.1	2.2	3.3	1.3
2.8	35.7	3.5	13.8	2.3	3.8	1.4
3	40.4	3.7	15.6	2.5	4.3	1.5
3.2	45.4	4	17.5	2.7	4.8	1.6
3.4	50.6	4.2	19.5	2.9	5.4	1.7
3.6	56.1	4.5	21.7	3	6	1.8
3.8	61.9	4.7	23.9	3.2	6.6	1.9
4	67.9	5	26.2	3.4	7.2	2
4.2	74.1	5.2	28.6	3.5	7.9	2.1
4.4			31.1	3.7	8.6	2.2
4.6			33.7	3.9	9.3	2.3
4.8			36.3	4	10	2.4
5			39.1	4.2	10.8	2.5
5.2			42.1	4.4	11.6	2.6
5.4			45	4.5	12.4	2.7
5.6			48	4.7	13.2	2.7
5.8			51.1	4.9	14.1	2.8
6			54.4	5	14.9	2.9
6.2					15.9	3
6.4					16.9	3.1
6.6					17.8	3.2
6.8					18.7	3.3
7					19.7	3.4
7.2					20.7	3.5
7.4					21.8	3.6
7.6					22.9	3.7
7.8					24	3.8
8					25.1	3.9
8.2					26.3	4
8.4					27.4	4.1
8.6					28.6	4.2
8.8					29.9	4.3
9					31.1	4.4
9.2					32.4	4.5
9.4					33.7	4.6
9.6					35	4.7
9.8					36.3	4.8
10					37.6	4.9

Nominal size	Pipe outside diameter x wall thickness					
d_e x s / OD x t [mm]	76.1 x 2.0		88.9 x 2.0		108 x 2.0	
d_i / ID [mm]	72.1		84.9		104	
Peak flow rate **Vp** l/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s
1	0.1	0.2	0.1	0.2	0	0.1
2	0.4	0.5	0.2	0.4	0.1	0.2
3	0.8	0.7	0.4	0.5	0.1	0.4
4	1.4	1	0.6	0.7	0.2	0.5
5	2	1.2	0.9	0.9	0.4	0.6
6	2.8	1.5	1.3	1.1	0.5	0.7
7	3.7	1.7	1.7	1.2	0.6	0.8
8	4.7	2	2.2	1.4	0.8	0.9
9	5.9	2.2	2.7	1.6	1	1.1
10	7.1	2.5	3.2	1.8	1.2	1.2
11	8.4	2.7	3.8	1.9	1.4	1.3
12	9.9	2.9	4.5	2.1	1.7	1.4
13	11.4	3.2	5.2	2.3	2	1.5
14	13	3.4	5.9	2.5	2.2	1.7
15	14.8	3.7	6.7	2.7	2.5	1.8
16	16.5	3.9	7.5	2.8	2.8	1.9
17	18.5	4.2	8.4	3	3.2	2
18	20.6	4.4	9.3	3.2	3.5	2.1
19	22.7	4.7	10.3	3.4	3.9	2.2
20	24.9	4.9	11.3	3.5	4.3	2.4
21	27.2	5.1	12.4	3.7	4.6	2.5
22			13.4	3.9	5.1	2.6
23			14.6	4.1	5.5	2.7
24			15.7	4.2	5.9	2.8
25			17	4.4	6.4	3
26			18.2	4.6	6.8	3.1
27			19.6	4.8	7.3	3.2
28			20.9	5	7.8	3.3
29			22.2	5.1	8.4	3.4
30					8.9	3.5
31					9.5	3.7
32					10	3.8
33					10.6	3.9
34					11.1	4
35					12.3	4.2
36					12.9	4.3
37					13.6	4.4
38					14.3	4.6
39					15	4.7
40					15.7	4.8
41					16.4	4.9
42					17.1	5
43					17.9	5.2
44						
45						
46						
47						
48						
49						
50						

Tab. 2

Stainless steel pipes for gas (roughness ***k*** = 0.0015 mm).
Pressure drops ***R*** as a function of peak flow rate ***Vp*** and speed ***v*** at ***10°C*** temperature.

Nominal size	Pipe outside diameter x wall thickness											
d_e x s / OD x t [mm]	15 x 1.0		22 x 1.2		28 x 1.2		35 x 1.5		42 x 1.5		54 x 1.5	
d_i / ID [mm]	13.0		19.5		25.6		32		39		51	
Peak flow rate **Vp** $m^3 h$	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s	**R** mbar/m	**v** m/s
1	0.0629	2.1										
1.5	0.0943	3.1	0.0168	1.3								
2	0.1257	4.2	0.0224	1.8	0.0092	1.1						
2.5	0.3032	5.2	0.0281	2.2	0.0115	1.4						
3	0.4137	6.3	0.0337	2.7	0.0138	1.7	0.0051	1				
3.5	0.5386	7.3	0.0705	3.1	0.0161	2	0.0060	1.2				
4	0.6777	8.3	0.0883	3.5	0.0184	2.3	0.0069	1.4				
4.5			0.1079	4	0.0377	2.5	0.0077	1.6	0.0035	1		
5			0.1292	4.4	0.0451	2.8	0.0086	1.7	0.0039	1.2		
5.5			0.1520	4.9	0.0530	3.1	0.0166	1.9	0.0043	1.3		
6			0.1764	5.3	0.0615	3.4	0.0192	2.1	0.0047	1.4		
6.5			0.2024	5.7	0.0705	3.7	0.0220	2.2	0.0050	1.5		
7			0.2300	6.2	0.0800	4	0.0250	2.4	0.0099	1.6	0.0020	1
7.5			0.2593	6.6	0.0900	4.2	0.0281	2.6	0.0111	1.7	0.0022	1.1
8					0.1006	4.5	0.0313	2.8	0.0124	1.9	0.0023	1.1
8.5					0.1116	4.8	0.0347	2.9	0.0137	2	0.0043	1.2
9					0.1231	5.1	0.0383	3.1	0.0151	2.1	0.0047	1.3
9.5					0.1351	5.4	0.0420	3.3	0.0165	2.2	0.0051	1.3
10					0.1476	5.7	0.0459	3.5	0.0181	2.3	0.0056	1.4
10.5					0.1607	5.9	0.0499	3.6	0.0196	2.4	0.0061	1.5
11					0.1740	6.2	0.0540	3.8	0.0212	2.6	0.0066	1.6
11.5					0.1881	6.5	0.0583	4	0.0229	2.7	0.0071	1.6
12					0.2024	6.8	0.0628	4.1	0.0246	2.8	0.0076	1.7
12.5					0.2172	7.1	0.0673	4.3	0.0264	2.9	0.0082	1.8
13					0.2328	7.4	0.0720	4.5	0.0282	3	0.0088	1.8
13.5					0.2485	7.6	0.0769	4.7	0.0301	3.1	0.0093	1.9
14					0.2647	7.9	0.0818	4.8	0.0321	3.3	0.0099	2
14.5							0.0869	5	0.0341	3.4	0.0105	2.1
15							0.0923	5.2	0.0361	3.5	0.0112	2.1
15.5							0.0977	5.4	0.0382	3.6	0.0118	2.2
16							0.1032	5.5	0.0404	3.7	0.0125	2.3
16.5							0.1088	5.7	0.0426	3.8	0.0131	2.3
17							0.1146	5.9	0.0448	4	0.0138	2.4
17.5							0.1204	6	0.0471	4.1	0.0145	2.5
18							0.1265	6.2	0.0495	4.2	0.0153	2.5
18.5							0.1327	6.4	0.0519	4.3	0.0160	2.6
19							0.1390	6.6	0.0543	4.4	0.0167	2.7
19.5							0.1455	6.7	0.0568	4.5	0.0175	2.8
20							0.1519	6.9	0.0593	4.7	0.0183	2.8
21							0.1655	7.3	0.0646	4.9	0.0199	3
22									0.0700	5.1	0.0215	3.1
23									0.0757	5.3	0.0233	3.3
24									0.0814	5.6	0.0250	3.4
25									0.0874	5.8	0.0269	3.5
26									0.0936	6	0.0288	3.7
27									0.0999	6.3	0.0307	3.8
28									0.1065	6.5	0.0327	4
29									1.132	6.7	0.0347	4.1
30									0.1201	7	0.0368	4.2
31									0.1273	7.2	0.0390	4.4

Tab. 3

Carbon steel pipes for heating (roughness ***k*** = 0.0015 mm).
Pressure drops ***R*** as a function of mass flow ***m*** and speed ***v*** at ***80°C*** water temperature.

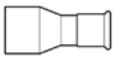
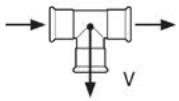
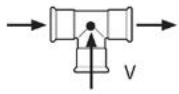
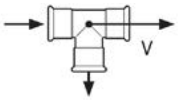
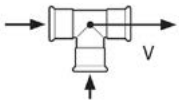
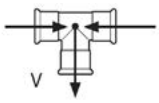
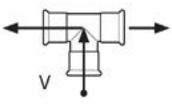
Nominal size	Pipe outside diameter x wall thickness							
d_e x s / OD x t [mm]	15 x 1.2		22 x 1.5		28 x 1.5		35 x 1.5	
d_i / ID [mm]	12.6		19		25		32	
Pressure drops **R** [Pa/m]	***m*** [kg/h]	***v*** [m/s]	***m*** [kg/h]	***v*** [m/s]	***m*** [kg/h]	***v*** [m/s]	***m*** [kg/h]	***v*** [m/s]
29	61	0.14	187	0.19	393	0.23	766	0.27
32	64	0.15	197	0.2	414	0.24	807	0.29
35	67	0.15	207	0.21	435	0.25	847	0.30
39	72	0.16	219	0.22	461	0.27	898	0.32
44	77	0.17	234	0.24	493	0.29	958	0.34
49	81	0.19	249	0.25	522	0.3	1.016	0.36
54	86	0.2	262	0.26	551	0.32	1.070	0.38
59	90	0.2	275	0.28	578	0.34	1.123	0.40
64	94	0.22	288	0.29	604	0.35	1.173	0.42
69	98	0.23	300	0.3	629	0.37	1.222	0.43
74	102	0.23	312	0.31	654	0.38	1.269	0.46
78	106	0.24	323	0.33	678	0.4	1.315	0.47
88	113	0.26	345	0.35	723	0.42	1.402	0.50
98	120	0.28	366	0.37	766	0.45	1.485	0.53
108	127	0.29	386	0.39	807	0.47	1.565	0.56
118	133	0.31	405	0.41	846	0.49	1.640	0.58
128	140	0.32	423	0.43	884	0.52	1.713	0.61
137	145	0.33	440	0.44	921	0.54	1.783	0.63
147	151	0.35	457	0.46	956	0.56	1.851	0.66
157	156	0.36	474	0.48	990	0.58	1.916	0.68
167	162	0.37	490	0.49	1.023	0.6	1.980	0.70
177	167	0.38	505	0.51	1.056	0.62	2.042	0.73
186	167	0.39	521	0.53	1.087	0.63	2.102	0.75
196	172	0.41	535	0.54	1.118	0.66	2.161	0.77
216	186	0.43	564	0.57	1.177	0.69	2.275	0.81
235	196	0.45	591	0.6	1.234	0.72	2.384	0.85
255	204	0.47	618	0.62	1.288	0.75	2.488	0.89
275	213	0.49	643	0.65	1.341	0.78	2.589	0.92
294	221	0.51	668	0.67	1.391	0.81	2.687	0.96
324	233	0.53	703	0.71	1.464	0.85	2.827	1.00
353	244	0.56	737	0.74	1.534	0.89	2.961	1.05
392	259	0.59	780	0.79	1.624	0.95	3.132	1.11
441	276	0.63	831	0.84	1.729	1	3.334	1.19
490	292	0.67	880	0.89	1.829	1.07	3.526	1.26
540	308	0.71	926	0.93	1.924	1.12	3.709	1.32
589	323	0.74	970	0.98	2.016	1.17	3.883	1.38
638	337	0.77	1.012	1.02	2.103	1.23	4.051	1.44
687	351	0.8	1.053	1.06	2.188	1.27	4.213	1.50
736	364	0.82	1.093	1.1	2.269	1.32	4.369	1.55
785	377	0.87	1.131	1.14	2.348	1.37	4.520	1.61
883	402	0.92	1.204	1.21	2.499	1.46	4.808	1.71
981	425	0.98	1.274	1.28	2.642	1.54	5.082	1.81
1.079	448	1.03	1.340	1.35	2.778	1.61	5.342	1.90
1.177	469	1.08	1.403	1.41	2.908	1.69	5.591	1.99
1.275	489	1.12	1.464	1.48	3.303	1.77	5.829	2.07
1.373	509	1.17	1.522	1.53	3.153	1.84	6.059	2.15
1.471	528	1.21	1.578	1.59	3.269	1.9	6.281	2.23
1.570	547	1.25	1.633	1.65	3.381	1.97	6.496	2.31
1.669	564	1.29	1.686	1.7	3.490	2.03	6.704	2.38
1.766	582	1.33	1.737	1.75	3.596	2.09	6.907	2.46
1.864	599	1.38	1.787	1.8	3.699	2.15	7.103	2.52
1.962	615	1.41	1.836	1.85	3.799	2.21	7.295	2.59

Nominal size	Pipe outside diameter x wall thickness			
d_e x s / OD x t [mm]	42 x 1.5		54 x 1.5	
d_i / ID [mm]	39.0		51.0	
Pressure drops **R** [Pa/m]	***m*** [kg/h]	***v*** [m/s]	***m*** [kg/h]	***v*** [m/s]
13	835	0.2	1.640	0.23
22	1.086	0.26	2.210	0.31
29	1.253	0.3	2.570	0.36
32	1.336	0.32	2.712	0.38
39	1.503	0.36	3.000	0.42
47	1.670	0.4	3.285	0.46
53	1.755	0.42	3.570	0.50
63	1.940	0.46	3.880	0.54
72	2.100	0.5	4.150	0.58
78	2.180	0.52	4.310	0.60
89	2.340	0.56	4.600	0.64
98	2.450	0.59	4.850	0.68
103	2.515	0.6	5.000	0.70
108	2.600	0.62	5.280	0.73
118	2.715	0.65	5.430	0.76
130	2.850	0.68	5.710	0.80
137	2.925	0.7	5.855	0.82
151	3.070	0.74	6.160	0.86
157	3.130	0.75	6.270	0.88
164	3.200	0.76	6.420	0.90
180	3.350	0.8	6.720	0.94
196	3.500	0.84	7.000	0.98
201	3.550	0.85	7.170	1.00
207	3.600	0.86	7.380	1.03
216	3.675	0.88	7.550	1.06
225	3.780	0.9	7.700	1.08
235	3.880	0.93	7.870	1.10
255	4.040	0.96	8.200	1.15
270	4.170	1	8.440	1.18
279	4.230	1.01	8.570	1.20
283	4.260	1.02	8.740	1.22
294	4.340	1.04	8.920	1.25
309	4.450	1.07	9.140	1.28
319	4.520	1.08	9.280	1.30
329	4.593	1.1	9.425	1.32
353	4.760	1.14	9.775	1.37
368	4.945	1.18	9.975	1.40
374	5.000	1.2	10.060	1.41
392	5.130	1.23	10.300	1.44
407	5.225	1.25	10.495	1.47
441	5.440	1.3	10.920	1.53
452	5.510	1.32	11.060	1.50
471	5.630	1.35	11.440	1.60
490	5.740	1.38	11.670	1.63
509	5.845	1.4	11.900	1.67
540	6.020	1.44	12.250	1.72
589	6.285	1.50	12.800	1.79
595	6.320	1.51	12.860	1.80
638	6.700	1.6	13.320	1.86
663	6.835	1.64	13.570	1.90
736	7.200	1.72	14.300	2.00
805	7.530	1.8	14.950	2.10
1.000	8.490	2	16.950	2.30

Nominal size	Pipe outside diameter x wall thickness					
d_e x s / OD x t [mm]	76.1 x 2		88.9 x 2		108 x 2	
d_i / ID [mm]	39.0		51.0		51.0	
Pressure drops **R** [Pa/m]	***m*** [kg/h]	***v*** [m/s]	***m*** [kg/h]	***v*** [m/s]	***m*** [kg/h]	***v*** [m/s]
11	3.950	0.28	6.200	0.32	10.500	0.36
13	4.250	0.30	6.650	0.34	11.500	0.39
16	4.900	0.35	7.600	0.39	12.750	0.44
21	5.600	0.40	8.800	0.45	14.750	0.51
25	6.200	0.44	9.600	0.49	16.250	0.56
30	6.800	0.48	10.750	0.54	18.000	0.63
31	7.000	0.50	10.900	0.56	18.500	0.64
35	7.450	0.53	11.700	0.59	19.500	0.68
37	7.700	0.55	12.000	0.62	20.000	0.69
40	8.000	0.58	12.500	0.64	21.000	0.73
45	8.450	0.61	13.250	0.68	22.500	0.78
50	9.050	0.65	14.000	0.72	23.750	0.82
55	9.600	0.68	15.000	0.76	25.000	0.86
58	9.900	0.70	15.250	0.78	25.750	0.88
60	10.000	0.72	15.500	0.79	26.000	0.91
65	10.500	0.75	16.250	0.83	27.500	0.95
70	10.800	0.78	17.000	0.87	28.500	0.99
74	11.250	0.80	17.750	0.90	29.500	1.02
80	11.800	0.84	18.250	0.94	31.000	1.08
85	12.000	0.86	18.750	0.97	31.500	1.11
90	12.400	0.89	19.500	1.00	33.000	1.14
95	12.750	0.92	20.000	1.04	33.500	1.18
100	13.250	0.95	20.750	1.07	34.500	1.20
105	13.500	0.98	21.500	1.09	35.500	1.24
110	14.000	1.00	22.000	1.13	36.500	1.27
120	14.500	1.05	23.000	1.18	38.000	1.34
130	15.250	1.10	24.000	1.23	40.000	1.39
140	16.000	1.15	25.000	1.29	41.500	1.45
150	16.500	1.18	26.000	1.33	43.000	1.52
155	17.000	1.20	26.500	1.36	44.000	1.54
165	17.500	1.25	27.500	1.40	45.500	1.59
175	18.000	1.30	28.000	1.45	46.500	1.65
185	18.500	1.35	29.000	1.50	48.000	1.69
200	19.500	1.39	30.000	1.57	51.000	1.77
215	20.250	1.45	31.500	1.63	51.500	1.84
225	21.000	1.50	32.000	1.67	54.000	1.88
240	21.500	1.55	33.500	1.73	56.000	1.96
250	22.000	1.58	34.000	1.76	56.500	2.00
255	22.500	1.60	34.500	1.78	58.000	2.02
270	23.000	1.65	35.500	1.84	60.000	2.09
280	23.750	1.70	36.500	1.87	61.000	2.13
300	24.500	1.75	38.000	1.94	63.000	2.20
320	25.000	1.80	39.000	2.00	65.000	2.28
350	26.500	1.90	41.000	2.11	69.000	2.40
390	28.000	2.00	44.000	2.25	71.000	2.56
400	28.500	2.05	45.500	2.28		
420	29.500	2.10	46.000	2.35		
460	31.000	2.20	48.000	2.46		
500	32.000	2.30				
600	35.500	2.56				

Contents

Tab. 5 Coefficients ξ of low resistance.

Name	Pressfitting	Pressure Drops	Drinkable Water	Heating	Gas
Elbow or Bend		0.7	X	X	X
Angle Adapter		1.5		X	
Preformed Pipe Bridge		0.5	X	X	X
45° Elbow		0.5	X	X	X
Reducer		0.2	X	X	X
Coupling, male adapter Combination pipe		0.1	X	X	X
Tee Main flow from line into branch		1.3	X	X	X
Tee Main flow from branch into line		0.9	X	X	X
Tee Mainly through, some line into branch		0.3	X	X	X
Tee Mainly through, some branch into line		0.2	X	X	X
Tee Counterflow from line into branch		1.5	X	X	X
Tee Counterflow from branch into line		3.0	X	X	X

Tab. 6

Stainless steel pipes for drinkable water.
Pressure drops **Z** as a function of speed **v** and addition of resistance values **Σ ξ** at ***10°C*** temperature.

Pressure drop Z (mbar) due to minor losses																											
∑ ξ v(m/s)	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
0.1	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.12	0.15	0.17	0.20	0.22	0.25	0.27	0.30	0.32	0.35	0.37	0.40	0.42	0.45	0.47	0.50
0.2	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	0.05	0.06	0.07	0.80	0.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00
0.3	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90	1.12	1.35	1.57	1.80	2.02	2.25	2.47	2.70	2.92	3.15	3.37	3.60	3.82	4.05	4.27	4.50
0.4	0.16	0.32	0.48	0.64	0.80	0.96	1.12	1.28	1.44	1.60	2.00	2.40	2.80	3.20	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00
0.5	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	3.12	3.75	4.37	5.00	5.62	6.25	6.87	7.50	8.12	8.75	9.37	10.00	10.62	11.25	11.87	12.50
0.6	0.36	0.72	1.08	1.44	1.80	2.16	2.52	2.88	3.24	3.60	4.50	5.40	6.30	7.20	8.10	9.00	9.90	10.80	11.70	12.60	13.50	14.40	15.30	16.20	17.09	17.99
0.7	0.49	0.98	1.47	1.96	2.45	2.94	3.43	3.92	4.41	4.90	6.12	7.35	8.57	9.80	11.02	12.25	13.47	14.70	15.92	17.14	18.37	19.59	20.82	22.04	23.27	24.49
0.8	0.64	1.28	1.92	2.56	3.20	3.84	4.48	5.12	5.76	6.40	8.00	9.60	11.20	12.80	14.40	16.00	17.59	19.19	20.79	22.39	23.99	25.59	27.19	28.79	30.39	31.99
0.9	0.81	1.62	2.43	3.24	4.05	4.86	5.67	6.48	7.29	8.10	10.12	12.15	14.17	16.20	18.22	20.24	22.27	24.29	26.32	28.34	30.37	32.39	34.41	36.44	38.46	40.49
1.0	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	12.50	15.00	17.49	19.99	22.49	24.99	27.49	29.99	32.49	34.99	37.49	39.99	42.49	44.99	47.49	49.99
1.1	1.21	2.42	3.63	4.84	6.05	7.26	8.47	9.68	10.89	12.10	15.12	18.14	21.17	24.19	27.22	30.24	33.27	36.29	39.31	42.34	45.36	48.39	51.41	54.43	57.46	60.48
1.2	1.44	2.88	4.32	5.76	7.20	8.64	10.08	11.52	12.96	14.40	17.99	21.59	0.00	28.79	32.39	35.99	39.59	43.19	46.79	50.38	53.98	57.58	61.18	64.78	68.38	71.98
1.3	1.69	3.38	5.07	6.76	8.45	10.14	11.83	13.52	15.21	16.89	21.12	25.34	29.57	33.79	38.01	42.24	46.46	50.68	54.91	59.13	63.36	67.58	71.80	76.03	80.25	84.47
1.4	1.96	3.92	5.88	7.84	9.80	11.76	13.72	15.68	17.63	19.59	24.49	29.39	34.29	39.19	44.09	48.99	53.88	58.78	63.68	68.58	73.48	78.38	83.28	88.17	93.07	97.97
1.5	2.25	4.50	6.75	9.00	11.25	13.50	15.75	17.99	20.24	22.49	28.12	33.74	39.36	44.99	50.61	56.23	61.86	67.48	73.10	78.73	84.35	89.97	95.60	101.22	106.84	112.47
1.6	2.56	5.12	7.68	10.24	12.80	15.36	17.91	20.47	23.03	25.59	31.99	38.39	44.79	51.18	57.58	63.98	70.38	76.78	83.18	89.57	95.97	102.37	108.77	115.17	121.56	127.96
1.7	2.89	5.78	8.67	11.56	14.45	17.33	20.22	23.11	26.00	28.89	36.11	43.34	50.56	57.78	65.01	72.23	79.45	86.67	93.90	101.12	108.34	115.57	122.79	130.01	137.23	144.46
1.8	3.24	6.48	9.72	12.96	16.20	19.43	22.67	25.91	29.15	32.39	40.49	48.59	56.68	64.78	72.88	80.98	89.07	97.17	105.27	113.37	121.46	129.56	137.66	145.76	153.85	161.95
1.9	3.61	7.22	10.83	14.44	18.04	21.65	25.26	28.87	32.48	36.09	45.11	54.13	63.16	72.18	81.20	90.22	99.25	108.27	117.29	126.31	135.33	144.36	153.38	162.40	171.42	180.45
2.0	4.00	8.00	12.00	16.00	19.99	23.99	27.99	31.99	35.99	39.99	49.99	59.98	69.98	79.98	89.97	99.97	109.97	119.96	129.96	139.96	149.96	159.95	169.95	179.95	189.94	199.94
2.1	4.41	8.82	13.23	17.63	22.04	26.45	30.86	35.27	39.68	44.09	55.11	66.13	77.15	88.17	99.20	110.22	121.24	132.26	143.28	154.30	165.33	176.35	187.37	198.39	209.41	220.43
2.2	4.84	9.68	14.52	19.35	24.19	29.09	33.87	38.71	43.55	48.39	60.48	72.58	84.67	96.77	108.87	120.96	133.06	145.16	157.25	169.35	181.45	193.54	205.64	217.73	229.83	241.93
2.3	5.29	10.58	15.87	21.15	26.44	31.73	37.02	42.31	47.60	52.88	66.11	79.33	92.55	105.77	118.99	132.21	145.43	158.65	171.87	185.09	198.32	211.54	224.76	237.98	251.20	264.42
2.4	5.76	11.52	17.27	23.03	28.79	34.55	40.31	46.07	51.82	57.58	71.98	86.37	100.77	115.17	129.56	143.96	158.35	172.75	187.14	201.54	215.94	230.33	244.73	259.12	273.52	287.91
2.5	6.25	12.50	18.74	24.99	31.24	37.49	43.74	49.99	56.23	62.48	78.10	93.72	109.34	124.96	140.58	156.20	171.82	187.44	203.06	218.68	234.30	249.93	265.55	281.17	296.79	312.41
2.6	6.76	13.52	20.27	27.03	33.79	40.55	47.31	54.06	60.82	67.58	84.47	101.37	118.26	135.16	152.05	168.95	185.84	202.74	219.63	236.53	253.42	270.32	287.21	304.11	321.00	337.90
2.7	7.29	14.58	21.86	29.15	36.44	43.73	51.01	58.30	65.59	72.88	91.10	109.32	127.54	145.76	163.98	182.20	200.41	218.63	236.85	255.07	273.29	291.51	309.73	327.95	346.17	364.39
2.8	7.84	15.68	23.51	31.35	39.19	47.03	54.86	62.70	70.54	78.38	97.97	117.56	137.16	156.75	176.35	195.94	215.54	235.13	254.72	274.32	293.91	313.51	333.10	352.69	372.29	391.88
2.9	8.41	16.81	25.22	33.63	42.04	50.44	58.85	67.26	75.67	84.70	105.09	126.11	147.13	168.15	189.17	210.19	231.21	252.22	273.24	294.26	315.28	336.30	357.32	378.34	399.36	420.37
3.0	9.00	17.99	26.99	35.99	44.99	53.98	62.98	71.98	80.98	89.97	112.47	134.96	157.45	179.95	202.44	224.93	247.43	269.92	292.41	314.91	337.40	359.89	382.39	404.88	427.37	449.87
3.1	9.61	19.21	28.82	38.43	48.04	57.64	67.25	76.86	86.46	97.07	120.09	144.11	168.12	192.14	216.16	240.18	264.20	288.21	312.23	336.25	360.27	384.28	408.30	432.32	456.34	480.36
3.2	10.24	20.47	30.71	40.95	51.18	61.42	71.66	81.90	92.13	102.37	127.96	153.55	179.15	204.74	230.33	255.92	281.52	307.11	332.70	358.29	383.88	409.48	435.07	460.66	486.25	511.85
3.4	11.56	23.11	34.67	46.23	57.78	69.34	80.90	92.45	104.01	115.57	144.46	173.35	202.24	231.13	260.02	288.91	317.80	346.70	375.59	404.48	433.37	462.26	491.15	520.04	548.94	577.83
3.6	12.96	25.91	38.87	51.82	64.78	77.74	90.69	103.65	116.61	129.56	161.95	194.34	226.73	259.12	291.51	323.90	356.29	388.68	421.07	453.46	485.85	518.24	550.63	583.03	615.42	647.81
3.8	14.44	28.87	43.31	57.74	72.18	86.61	101.05	115.49	129.92	144.36	180.45	216.54	252.62	288.71	324.80	360.89	396.98	433.07	469.16	505.25	541.34	577.43	613.52	649.61	685.69	721.78
4.0	16.00	31.99	47.99	63.98	79.98	95.97	111.97	127.96	143.96	159.95	199.94	239.93	279.92	319.90	359.89	399.88	439.87	479.86	519.84	559.82	599.82	639.81	679.80	719.78	759.77	799.76
4.2	17.63	35.27	52.90	70.54	88.71	105.81	123.44	141.08	158.71	176.35	220.43	264.52	308.61	352.69	396.78	440.87	484.95	529.04	573.13	617.21	661.30	705.39	749.48	793.56	837.65	881.74
4.4	19.35	38.71	58.06	77.42	96.77	116.13	135.48	154.83	174.19	193.54	241.93	290.31	338.70	387.08	435.47	483.85	532.24	580.63	629.01	677.40	725.78	774.17	822.55	870.94	919.32	967.71
4.6	21.15	42.31	63.46	84.61	105.77	126.92	148.08	169.23	190.38	211.54	264.42	317.30	370.19	423.07	475.96	528.84	581.73	634.61	687.49	740.38	793.26	846.15	899.03	951.91	1.004.80	1.057.68
4.8	23.03	46.07	69.10	92.13	115.17	138.20	161.23	184.26	207.30	230.33	287.91	345.50	403.08	460.66	518.24	575.83	633.41	690.99	748.58	806.16	863.74	921.32	378.91	1.036.49	1.094.07	1.151.65
5.0	24.99	49.99	74.98	99.97	124.96	149.96	174.95	199.94	224.93	249.93	312.41	374.89	437.37	499.85	562.33	624.81	687.29	749.78	812.26	874.74	937.22	999.70	1.062.18	1.124.66	1.187.14	1.249.63

Contents

Tab. 7

Stainless steel pipes for gas.
Pressure drops ***Z*** as a function of speed ***v*** and addition of resistance values **Σ ξ** at ***10°C*** temperature.

	Pressure drop Z (mbar) due to minor losses																												
Σ ξ v(m/s)	0.3	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	13.0
1.0	0.0009	0.002	0.003	0.005	0.006	0.008	0.009	0.011	0.012	0.014	0.015	0.017	0.018	0.020	0.021	0.023	0.024	0.026	0.028	0.029	0.031	0.032	0.034	0.035	0.037	0.040
1.1	0.0011	0.002	0.004	0.006	0.007	0.009	0.011	0.013	0.015	0.017	0.019	0.020	0.022	0.024	0.026	0.028	0.030	0.031	0.033	0.035	0.037	0.039	0.041	0.043	0.044	0.048
1.2	0.0013	0.002	0.004	0.007	0.009	0.011	0.013	0.015	0.018	0.020	0.022	0.024	0.026	0.029	0.031	0.033	0.035	0.037	0.040	0.042	0.044	0.046	0.048	0.051	0.053	0.057
1.3	0.0016	0.003	0.005	0.008	0.010	0.013	0.016	0.018	0.021	0.023	0.026	0.028	0.031	0.034	0.036	0.039	0.041	0.044	0.047	0.049	0.052	0.054	0.057	0.059	0.062	0.067
1.4	0.0018	0.003	0.006	0.009	0.012	0.015	0.018	0.021	0.024	0.027	0.030	0.033	0.036	0.039	0.042	0.045	0.048	0.051	0.054	0.057	0.060	0.063	0.066	0.069	0.072	0.078
1.5	0.0021	0.003	0.007	0.010	0.014	0.017	0.021	0.024	0.028	0.031	0.034	0.038	0.041	0.045	0.048	0.052	0.055	0.059	0.062	0.065	0.069	0.072	0.076	0.079	0.083	0.090
1.6	0.0024	0.004	0.008	0.012	0.016	0.020	0.024	0.027	0.031	0.035	0.039	0.043	0.047	0.051	0.055	0.059	0.063	0.067	0.071	0.074	0.078	0.082	0.086	0.090	0.094	0.102
1.7	0.0027	0.004	0.009	0.013	0.018	0.022	0.027	0.031	0.035	0.040	0.044	0.049	0.053	0.057	0.062	0.066	0.071	0.075	0.080	0.084	0.088	0.093	0.097	0.102	0.106	0.115
1.8	0.0030	0.005	0.010	0.015	0.020	0.025	0.030	0.035	0.040	0.045	0.050	0.055	0.059	0.064	0.069	0.074	0.079	0.084	0.089	0.094	0.099	0.104	0.109	0.114	0.119	0.129
1.9	0.0033	0.006	0.011	0.017	0.022	0.028	0.033	0.039	0.044	0.050	0.055	0.061	0.066	0.072	0.077	0.083	0.088	0.094	0.099	0.105	0.110	0.116	0.122	0.127	0.133	0.144
2.0	0.0037	0.006	0.012	0.018	0.024	0.031	0.037	0.043	0.049	0.055	0.061	0.067	0.073	0.080	0.086	0.092	0.098	0.104	0.110	0.116	0.122	0.129	0.135	0.141	0.147	0.159
2.1	0.0040	0.007	0.013	0.020	0.027	0.034	0.040	0.047	0.054	0.061	0.067	0.074	0.081	0.088	0.094	0.101	0.108	0.115	0.121	0.128	0.135	0.142	0.148	0.155	0.162	0.175
2.2	0.0044	0.007	0.015	0.022	0.030	0.037	0.044	0.052	0.059	0.067	0.074	0.081	0.089	0.096	0.104	0.111	0.118	0.126	0.133	0.141	0.148	0.156	0.163	0.170	0.178	0.193
2.3	0.0049	0.008	0.016	0.024	0.032	0.040	0.049	0.057	0.065	0.073	0.081	0.089	0.097	0.105	0.113	0.121	0.129	0.138	0.146	0.154	0.162	0.170	0.178	0.186	0.194	0.210
2.4	0.0053	0.009	0.018	0.026	0.035	0.044	0.053	0.062	0.071	0.079	0.088	0.097	0.106	0.115	0.123	0.132	0.141	0.150	0.159	0.167	0.176	0.185	0.194	0.203	0.212	0.229
2.5	0.0057	0.010	0.019	0.029	0.038	0.048	0.057	0.067	0.077	0.086	0.096	0.105	0.115	0.124	0.134	0.143	0.153	0.163	0.172	0.182	0.191	0.201	0.210	0.220	0.230	0.249
2.6	0.0062	0.010	0.021	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.134	0.145	0.155	0.165	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
2.7	0.0067	0.011	0.022	0.033	0.045	0.056	0.067	0.078	0.089	0.100	0.112	0.123	0.134	0.145	0.156	0.167	0.178	0.190	0.201	0.212	0.223	0.234	0.245	0.257	0.268	0.290
2.8	0.0072	0.012	0.024	0.036	0.048	0.060	0.072	0.084	0.096	0.108	0.120	0.132	0.144	0.156	0.168	0.180	0.192	0.204	0.216	0.228	0.240	0.252	0.264	0.276	0.288	0.312
2.9	0.0077	0.013	0.026	0.039	0.051	0.064	0.077	0.090	0.103	0.116	0.129	0.142	0.154	0.167	0.180	0.193	0.206	0.219	0.232	0.244	0.257	0.270	0.283	0.296	0.309	0.335
3.0	0.0083	0.014	0.028	0.041	0.055	0.069	0.083	0.096	0.110	0.124	0.138	0.151	0.165	0.179	0.193	0.207	0.220	0.234	0.248	0.262	0.275	0.289	0.303	0.317	0.330	0.358
3.1	0.0088	0.015	0.029	0.044	0.059	0.074	0.088	0.103	0.118	0.132	0.147	0.162	0.176	0.191	0.206	0.221	0.235	0.250	0.265	0.279	0.294	0.309	0.323	0.338	0.353	0.382
3.2	0.0094	0.016	0.031	0.047	0.063	0.078	0.094	0.110	0.125	0.141	0.157	0.172	0.188	0.204	0.219	0.235	0.251	0.266	0.282	0.298	0.313	0.329	0.345	0.360	0.376	0.407
3.3	0.0100	0.017	0.033	0.050	0.067	0.083	0.100	0.117	0.133	0.150	0.167	0.183	0.200	0.217	0.233	0.250	0.267	0.283	0.300	0.317	0.333	0.350	0.367	0.383	0.400	0.433
3.4	0.0106	0.018	0.035	0.053	0.071	0.088	0.106	0.124	0.141	0.159	0.177	0.195	0.212	0.230	0.248	0.265	0.283	0.301	0.318	0.336	0.354	0.371	0.389	0.407	0.424	0.460
3.5	0.0112	0.019	0.037	0.056	0.075	0.094	0.112	0.131	0.150	0.169	0.187	0.206	0.225	0.244	0.262	0.281	0.300	0.319	0.337	0.356	0.375	0.394	0.412	0.431	0.450	0.487
3.6	0.0119	0.020	0.040	0.059	0.079	0.099	0.119	0.139	0.159	0.178	0.198	0.218	0.238	0.258	0.278	0.297	0.317	0.337	0.357	0.377	0.397	0.416	0.436	0.456	0.476	0.516
3.7	0.0126	0.021	0.042	0.063	0.084	0.105	0.126	0.147	0.168	0.189	0.209	0.230	0.251	0.272	0.293	0.314	0.335	0.356	0.377	0.398	0.419	0.440	0.461	0.482	0.503	0.545
3.8	0.0133	0.022	0.044	0.066	0.088	0.110	0.133	0.155	0.177	0.199	0.221	0.243	0.265	0.287	0.309	0.331	0.353	0.376	0.398	0.420	0.442	0.464	0.486	0.508	0.530	0.574
3.9	0.0140	0.023	0.047	0.070	0.093	0.116	0.140	0.163	0.186	0.209	0.233	0.256	0.279	0.303	0.326	0.349	0.372	0.396	0.419	0.442	0.465	0.489	0.512	0.535	0.559	0.605
4.0	0.0147	0.024	0.049	0.073	0.098	0.122	0.147	0.171	0.196	0.220	0.245	0.269	0.294	0.318	0.343	0.367	0.392	0.416	0.441	0.465	0.490	0.514	0.539	0.563	0.588	0.636
4.1	0.0154	0.026	0.051	0.077	0.103	0.129	0.154	0.180	0.206	0.231	0.257	0.283	0.309	0.334	0.360	0.386	0.412	0.437	0.463	0.489	0.514	0.540	0.566	0.592	0.617	0.669
4.2	0.0162	0.027	0.054	0.081	0.108	0.135	0.162	0.189	0.216	0.243	0.270	0.297	0.324	0.351	0.378	0.405	0.432	0.459	0.486	0.513	0.540	0.567	0.594	0.621	0.648	0.702
4.3	0.0170	0.028	0.057	0.085	0.113	0.141	0.170	0.198	0.226	0.255	0.283	0.311	0.339	0.368	0.396	0.424	0.453	0.481	0.509	0.538	0.566	0.594	0.622	0.651	0.679	0.736
4.4	0.0178	0.030	0.059	0.089	0.118	0.148	0.178	0.207	0.237	0.267	0.296	0.326	0.355	0.385	0.415	0.444	0.474	0.504	0.533	0.563	0.592	0.622	0.652	0.681	0.711	0.770
4.5	0.0186	0.031	0.062	0.093	0.124	0.155	0.186	0.217	0.248	0.279	0.310	0.341	0.372	0.403	0.434	0.465	0.496	0.527	0.558	0.589	0.620	0.651	0.682	0.713	0.744	0.806
4.6	0.0194	0.032	0.065	0.097	0.129	0.162	0.194	0.227	0.259	0.291	0.324	0.356	0.388	0.421	0.453	0.486	0.518	0.550	0.583	0.615	0.647	0.680	0.712	0.745	0.777	0.842
4.7	0.0203	0.034	0.068	0.101	0.135	0.169	0.203	0.237	0.270	0.304	0.338	0.372	0.406	0.439	0.473	0.507	0.541	0.575	0.608	0.642	0.676	0.710	0.744	0.777	0.811	0.879
4.8	0.0212	0.035	0.071	0.106	0.141	0.176	0.212	0.247	0.282	0.317	0.353	0.388	0.423	0.458	0.494	0.529	0.564	0.599	0.635	0.670	0.705	0.740	0.776	0.811	0.846	0.917
4.9	0.0220	0.037	0.073	0.110	0.147	0.184	0.220	0.257	0.294	0.331	0.367	0.404	0.441	0.478	0.514	0.551	0.588	0.625	0.661	0.698	0.735	0.771	0.808	0.845	0.882	0.955
5.0	0.0230	0.038	0.077	0.115	0.153	0.191	0.230	0.268	0.306	0.344	0.383	0.421	0.459	0.497	0.536	0.574	0.612	0.650	0.689	0.727	0.765	0.803	0.842	0.880	0.918	0.995

Tab. 8

Carbon steel pipes for heating.
Pressure drops **Z** as a function of speed **v** and addition of resistance values **Σ ξ** at **80°C** water temperature.

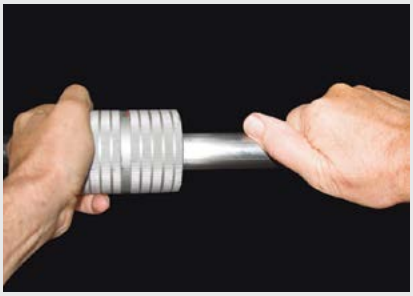
Pressure drop Z (mbar) due to minor losses																										
Σ ξ v(m/s)	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
0.10	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.12	0.15	0.17	0.20	0.22	0.25	0.27	0.29	0.32	0.34	0.37	0.39	0.42	0.44	0.47	0.49
0.15	0.02	0.04	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.22	0.28	0.33	0.39	0.44	0.50	0.55	0.61	0.66	0.72	0.77	0.83	0.88	0.94	1.00	1.05	1.11
0.20	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.31	0.35	0.39	0.49	0.59	0.69	0.79	0.88	0.98	1.08	1.18	1.28	1.38	1.47	1.57	1.67	1.77	1.87	1.97
0.25	0.06	0.12	0.18	0.25	0.31	0.37	0.43	0.49	0.55	0.61	0.77	0.92	1.08	1.23	1.38	1.54	1.69	1.84	2.00	2.15	2.30	2.46	2.61	2.77	2.92	3.07
0.30	0.09	0.18	0.27	0.35	0.44	0.53	0.62	0.71	0.80	0.88	1.11	1.33	1.55	1.77	1.99	2.21	2.43	2.65	2.88	3.10	3.32	3.54	3.76	3.98	4.20	4.42
0.35	0.12	0.24	0.36	0.48	0.60	0.72	0.84	0.96	1.08	1.20	1.51	1.81	2.11	2.41	2.71	3.01	3.31	3.61	3.91	4.22	4.52	4.82	5.12	5.42	5.72	6.02
0.40	0.16	0.31	0.47	0.63	0.79	0.94	1.10	1.26	1.42	1.57	1.97	2.36	2.75	3.15	3.54	3.93	4.33	4.72	5.11	5.51	5.90	6.29	6.69	7.08	7.47	7.87
0.45	0.20	0.40	0.60	0.80	1.00	1.19	1.39	1.59	1.79	1.99	2.49	2.99	3.48	3.98	4.48	4.98	5.48	5.97	6.47	6.97	7.47	7.96	8.46	8.96	9.46	9.95
0.50	0.25	0.49	0.74	0.98	1.23	1.47	1.72	1.97	2.21	2.46	3.07	3.69	4.30	4.92	5.53	6.15	6.76	7.37	7.99	8.60	9.22	9.83	10.45	11.06	11.68	12.29
0.55	0.30	0.59	0.89	1.19	1.49	1.78	2.08	2.38	2.68	2.97	3.72	4.46	5.20	5.95	6.69	7.44	8.18	8.92	9.67	10.41	11.15	11.90	12.64	13.38	14.13	14.87
0.60	0.35	0.71	1.06	1.42	1.77	2.12	2.48	2.83	3.19	3.54	4.42	5.31	6.19	7.08	7.96	8.85	9.73	10.62	11.50	12.39	13.27	14.16	15.04	15.93	16.81	17.70
0.65	0.42	0.83	1.25	1.66	2.08	2.49	2.91	3.32	3.74	4.15	5.19	6.23	7.27	8.31	9.35	10.39	11.42	12.46	13.50	14.54	15.58	16.62	17.65	18.69	19.73	20.77
0.70	0.48	0.96	1.45	1.93	2.41	2.89	3.37	3.85	4.34	4.82	6.02	7.23	8.43	9.64	10.84	12.04	13.25	14.45	15.66	16.86	18.07	19.27	20.48	21.68	22.88	24.09
0.75	0.55	1.11	1.66	2.21	111.00	3.32	3.87	4.42	4.98	5.53	6.91	8.30	9.68	11.06	12.44	13.83	15.21	16.59	17.97	19.36	20.74	22.12	23.50	24.89	26.27	27.65
0.80	0.63	1.26	1.89	2.52	3.15	3.78	4.40	5.03	5.66	6.29	7.87	9.44	11.01	12.58	14.16	15.73	17.30	18.88	20.45	22.02	23.60	25.17	26.74	28.32	29.89	31.46
0.85	0.71	1.42	2.13	2.84	3.55	4.26	4.97	5.68	6.39	7.10	8.88	10.66	12.43	14.21	15.98	17.76	19.53	21.31	23.09	24.86	26.64	28.41	30.19	31.97	33.74	35.52
0.90	0.80	1.59	2.39	3.19	3.98	4.78	5.57	6.37	7.17	7.96	9.95	11.95	13.94	15.93	17.92	19.91	21.90	23.89	25.88	27.87	29.86	31.86	33.85	35.84	37.83	39.82
0.95	0.89	1.77	2.66	3.55	4.44	5.32	6.21	7.10	7.99	8.87	11.09	13.31	15.53	17.75	19.97	22.18	24.40	26.62	28.84	31.06	33.28	35.49	37.71	39.93	42.15	44.37
1.00	0.98	1.97	2.95	3.93	4.92	5.90	6.88	7.87	8.85	9.83	12.29	14.75	17.21	19.66	22.12	24.58	27.04	29.50	31.95	34.41	36.87	39.33	41.79	44.24	46.70	49.16
1.05	1.08	2.17	3.25	4.34	5.42	6.50	7.59	8.67	9.76	10.84	13.55	16.26	18.97	21.68	24.39	27.10	29.81	32.52	35.23	37.94	40.65	43.36	46.07	48.78	51.49	54.20
1.10	1.19	2.38	3.57	4.76	5.95	7.14	8.33	9.52	10.71	11.90	14.87	17.85	20.82	23.79	26.77	29.74	32.72	35.69	38.66	41.64	44.61	47.59	50.56	53.54	56.51	59.48
1.15	1.30	2.60	3.90	5.20	6.50	7.80	9.10	10.40	11.70	13.00	16.25	19.50	22.75	26.01	29.26	32.51	35.76	39.01	42.26	45.51	48.76	52.01	55.26	58.51	61.76	65.01
1.20	1.42	2.83	4.25	5.66	7.08	8.49	9.91	11.33	12.74	14.16	17.70	21.24	24.78	28.32	31.86	35.40	38.93	42.47	46.01	49.55	53.09	56.63	60.17	63.71	67.25	70.79
1.30	1.66	3.32	4.98	6.65	8.31	9.97	11.63	13.29	14.95	16.62	20.77	24.92	29.08	33.23	37.39	41.54	45.69	49.85	54.00	58.16	62.31	66.46	70.62	74.77	78.93	83.08
1.40	1.93	3.85	5.78	7.71	9.64	11.56	13.49	15.42	17.34	19.27	24.09	28.91	33.72	38.54	43.36	48.18	52.99	57.81	62.63	67.45	72.27	77.08	81.90	86.72	91.54	96.35
1.50	2.21	4.42	6.64	8.85	11.06	13.27	15.49	17.70	19.91	22.12	27.65	33.18	38.71	44.24	49.77	55.31	60.84	66.37	71.90	77.43	82.96	88.49	94.02	99.55	105.08	110.61
1.60	2.52	5.03	7.55	10.07	12.58	15.10	17.62	20.14	22.65	25.17	31.46	37.75	44.05	50.34	56.63	62.92	69.22	75.51	81.80	88.09	94.39	1 00.68	106.97	113.26	119.56	125.85
1.70	2.84	5.68	8.52	11.37	14.21	17.05	19.89	22.73	25.57	28.41	35.52	42.62	49.73	56.83	63.93	71.04	78.14	85.24	92.35	99.45	106.55	113.66	120.76	127.87	134.97	142.07
1.80	3.19	6.37	9.56	12.74	15.93	19.11	22.30	25.48	28.67	31.86	39.82	47.78	55.75	63.71	71.68	79.64	87.60	95.57	103.53	111.49	119.46	127.42	135.39	143.35	151.31	159.28
1.90	3.55	7.10	10.65	14.20	17.75	21.30	24.85	28.39	31.94	35.49	44.37	53.24	62.11	70.99	79.86	88.73	97.61	106.48	115.35	124.23	133.10	141.97	150.85	159.72	168.59	177.47
2.00	3.93	7.87	11.80	15.73	19.66	23.60	27.53	31.46	35.40	39.33	49.16	58.99	68.82	78.66	88.49	98.32	108.15	117.98	127.82	137.65	147.48	157.31	167.14	176.98	186.81	196.64
2.10	4.34	8.67	13.01	17.34	21.68	26.02	30.35	34.69	39.02	43.36	54.20	65.04	75.88	86.72	97.56	108.40	119.24	130.08	140.92	151.76	162.60	173.44	184.28	195.12	205.96	216.80
2.20	4.76	9.52	14.28	19.03	23.79	28.55	33.31	38.07	42.83	47.59	59.48	71.38	83.28	95.17	107.07	118.97	130.86	142.76	154.66	166.55	178.45	190.35	202.24	214.14	226.04	237.93
2.30	5.20	10.40	15.60	20.80	26.01	31.21	36.41	41.61	46.81	52.01	65.01	78.02	91.02	104.02	117.03	130.03	143.03	156.03	169.04	182.04	195.04	208.05	221.05	234.05	247.05	260.06
2.40	5.66	11.33	16.99	22.65	28.32	33.98	39.64	45.31	50.97	56.63	70.79	84.95	99.11	113.26	127.42	141.58	155.74	169.90	184.06	198.21	212.37	226.53	240.69	254.85	269.00	283.16
2.50	6.15	12.29	18.44	24.58	30.73	36.87	43.02	49.16	55.31	61.45	76.81	92.18	107.54	122.90	138.26	153.63	168.99	184.35	199.71	215.08	230.44	245.80	261.16	276.53	291.89	307.25
2.60	6.65	13.29	19.94	26.59	33.23	39.88	46.53	53.17	59.82	66.46	83.08	99.70	116.31	132.93	149.54	166.16	182.78	199.39	216.01	232.63	249.24	265.86	282.47	299.09	315.71	332.32
2.70	7.17	14.34	21.50	28.67	35.84	43.01	50.17	57.34	64.51	71.68	89.59	107.51	125.43	143.35	161.27	179.19	197.11	215.03	232.94	250.86	268.78	286.70	304.62	322.54	340.46	358.38
2.80	7.71	15.42	23.12	30.83	38.54	46.25	53.96	61.67	69.37	77.08	96.35	115.62	134.90	154.17	173.44	192.71	211.98	231.25	250.52	269.79	289.06	308.33	327.60	346.87	366.14	385.41
2.90	8.27	16.54	24.81	33.07	41.34	49.61	57.88	66.15	74.42	82.69	103.36	124.03	144.70	165.37	186.05	206.72	227.39	248.06	268.73	289.40	310.08	330.75	351.42	372.09	392.76	413.44

Contents

Sizes: 15, 22, 28 & 35

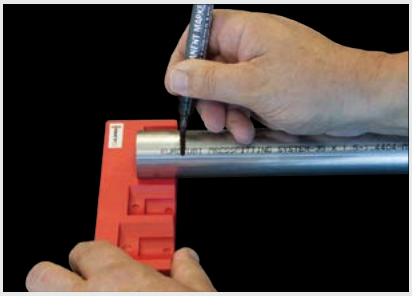
1. Cutting

Cut the pipe using burr free approved cutters. Do not use oxyacetylene or abrasive cut off wheels. Pipes must be cut at right angles to their axis, using a pipe cutter or finetooth saw, taking into account the depth of insertion into the fitting.



2. Deburring

All pipe cuts must be carefully deburred, both inside and outside, using a manual or electric deburring tool. Any cutting residue (swarf) must be removed to preclude damage to the O-ring when the pipe is inserted into the fitting, avoiding possible leaks.



3. Witness Mark Insertion Depth

To ensure a correctly inserted joint the pipe must be marked with a fine-point felt-tip pen where it meets the fitting using the Europress depth gauge so that full insertion can be verified.

4. Assemble Fitting on Tube

Before assembling the fittings, the positioning of the O-rings must be checked and, if necessary, lubricate O-ring with water or talc to ease the insertion of the pipe. Never use oils, greases, glues or other similar substances. The pipe is inserted in the fitting with a slight rotating motion until it hits the stop.

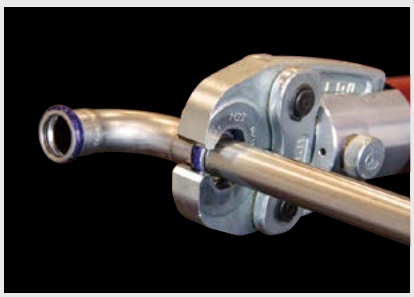
Check pipe is fully inserted to witness mark.

5. Press Tool & Jaw

The pressing tools must be equipped with M-shaped profile jaw attachments or pressing jaw corresponding to the diameter of the fitting to be pressed. Retract the lock pin, position the jaws into the tool head and ensure the lock pin is fully engaged.

6. Position Press Jaw

Open the jaws by squeezing the two ends together, then position jaws over the fitting so that the internal channel of the jaws form a perfect fit round the toroidal seat of the fitting. Release the jaws and check for a snug fit.



7. Press Joint

Initiate the press cycle by squeezing the trigger (1) - hold until press cycle is completed. Do not allow interruption to the press cycle. If the LED light (2) comes on or warning beep sounds, the joint is NOT approved. If the hydraulic ram stops mid-cycle the automatic reset function can be manually overridden by depressing the reset button (3).

Check L.E.D. light after each press. If it comes on, battery must be recharged or changed before attempting the next press, see trouble-shooting guide.

Sizes: 42, 54, 76.1, 88.9 & 108

1. Cutting & 2. Deburring

Cut the pipe using burr free approved cutters. Do not use oxyacetylene or abrasive cut off wheels. Pipes must be cut at right angles to their axis, using a pipe cutter or finetooth saw, taking into account the depth of insertion into the fitting.

All pipe cuts must be carefully deburred, both inside and outside, using a manual or electric deburring tool. Any cutting residue (swarf) must be removed to preclude damage to the O-ring when the pipe is inserted into the fitting, avoiding possible leaks.

3. Witness Mark Insertion Depth

To ensure a correctly inserted joint, the pipe must be marked with a fine-point felt-tip pen.

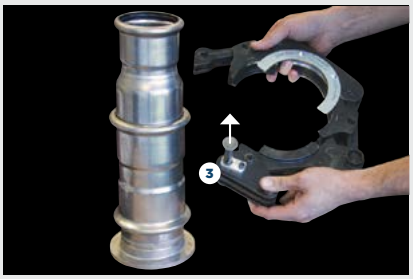
42 & 54 use the Europress depth gauge.

Large sizes use ruler (pictured)
76.1 mark at 55mm
88.9 mark at 63mm
108 mark at 78mm
140 mark at 97mm
169 mark at 117mm

4. Assemble Fitting on Tube

Before assembling the fittings, the positioning of the O-rings must be checked and, if necessary, lubricate O-ring with water or talc to ease the insertion of the pipe. Never use oils, greases, glues or other similar substances. The pipe is inserted in the fitting with a slight rotating motion until it hits the stop.

Check pipe is fully inserted to witness mark.



5. Attach Press Collar

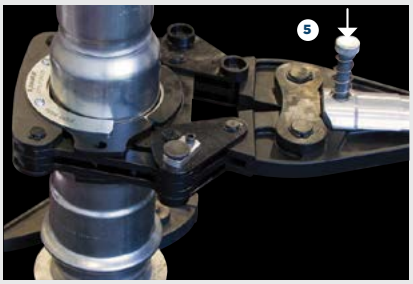
The pressing collar must be M-shaped profile corresponding to the diameter of the fitting to be pressed. Retract the lock pin 3, open the jaws and position the jaws around the fitting.

6. Lock Collar

Ensure that the internal channel of the jaws form a perfect fit around the O-ring seat of the fitting. Ensure the lock pin is fully engaged 4.

7. Attach Adaptor

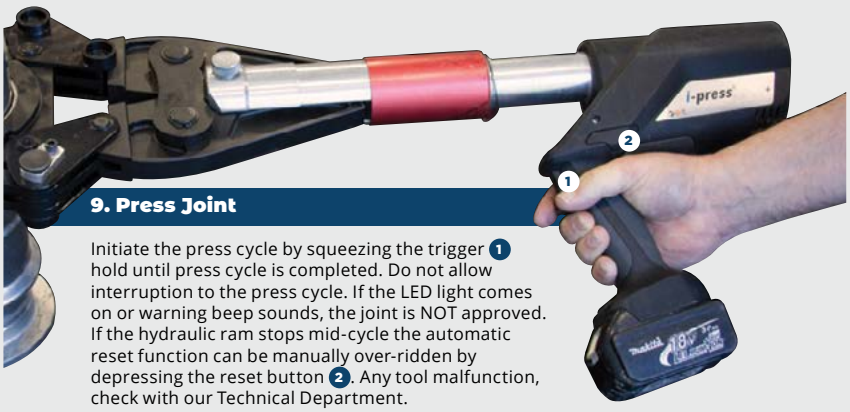
Squeeze the back of the adaptor arms together and hook onto the pressing collar.



8. Connect Press Tool

Retract the lock pin, engage the adaptor and make sure lock pin is fully engaged 5.

Check witness mark for insertion and depth alignment before initialising press cycle.



9. Press Joint

Initiate the press cycle by squeezing the trigger 1 hold until press cycle is completed. Do not allow interruption to the press cycle. If the LED light comes on or warning beep sounds, the joint is NOT approved. If the hydraulic ram stops mid-cycle the automatic reset function can be manually over-ridden by depressing the reset button 2. Any tool malfunction, check with our Technical Department.
Do not continue using tool without approval.

Frequently Asked Questions:

How long do the O-rings last?

There are currently no direct duration tests for seals, only indirect tests. The seals used in Europress joints have successfully passed the most stringent laboratory tests, intentionally exaggerated to obtain maximum safety.

What is the difference between an 'open-circuit' system and a 'closed-circuit' system?

The term 'closed-circuit' refers to a system characterised by the total absence of air. All the systems that do not belong to this type must be considered as 'open circuits'.

Is the use of glycols permitted in Europress systems?

Yes, however it is recommended to check the characteristics of the product before using to avoid possible serious damage. It is recommended to use stainless steel in these applications.

Is it possible to use different materials in the same system?

In so-called 'mixed' installations, stainless steel and carbon steel can be used in contact with non-ferrous metals without any problem. Direct contact between them, on the other hand, must be avoided to avoid bimetallic corrosion. Refer to 'Bimetallic Corrosion' information on Page 76 for further details on this topic.

Are stainless steel systems for drinking water subject to corrosion over time?

Stainless steel has an excellent resistance to corrosion, thanks to the high performance of the material. Local perforating corrosion may only occur in extremely aggressive environments that are absolutely outside the norm.

Are stainless steel systems for other applications subject to corrosion over time?

Compared with systems for drinking water, there are no additional requirements to be respected. However, in extreme cases such as the presence of large concentrations of chlorine, salt, marine environments or high temperatures, normal stainless steel decay phenomena may occur. This consideration is valid in general terms and not linked to the type of press fitting proposed.

What materials can be used for compressed air systems?

Compressed air systems include a wide range of applications. As a general tip, choose materials based on an in-depth analysis of the requirements needed for the type of installation.

Compressed air systems usually have oil, therefore it is advisable, depending on the purity requirements, to have a dryer or oil separator available. If the amount of residual oil is high (≥ 5 mg/m³), we advise replacing the black EPDM o-ring with the green FKM (Viton) o-ring which has good resistance to oil and mineral grease, oil and synthetic grease and to gas oil.

For these systems, both the stainless steel and the carbon steel Europress system can be used. In any case it is worthwhile to remember that the operating temperature and pressure are two fundamental elements to know when choosing the type of material. The maximum operating pressure is 16 bar.

In carbon steel systems, the presence of moisture may generate corrosion. Installing a dryer is essential.

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