

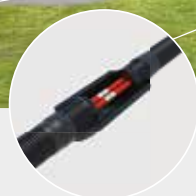


Flexible district heating systems

AustroPUR

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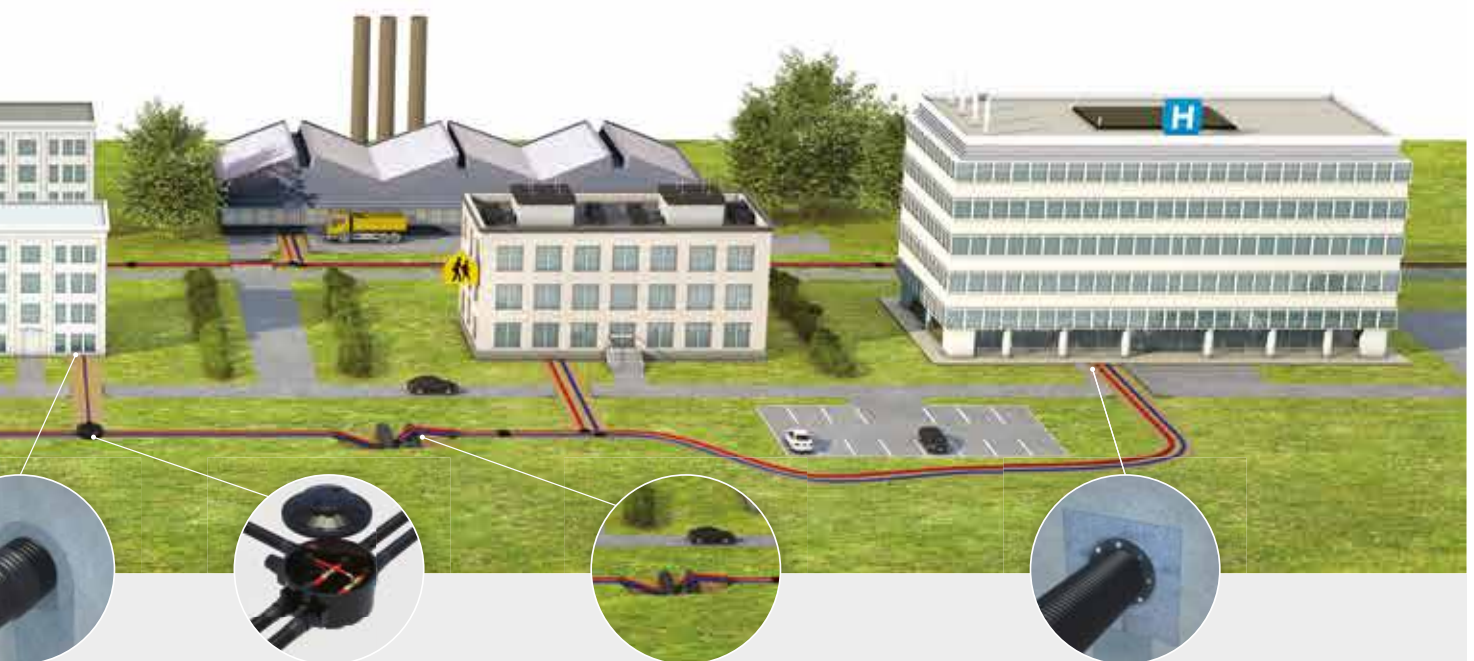


AustroPUR district heating systems

Flexible, pre-insulated piping systems

- Rapid installation
- Outstanding insulation
- Flexible, pre-insulated, self compensating pipes
- Corrosion-resistant
- Long and maintenance-free operational life span
- Eco-friendly system
- Special orders upon request
- High standard of quality
- Proven for 30 years

The information contained herein-the illustrations and graphics-corresponds to the current status of our acquirments and is accurate and reliable to the best of our knowledge. However, this shall not constitute a binding assurance of properties. The user of these products should independently evaluate the suitability for the intended use. Our liability for these products is based solely on our business and delivery conditions. Austroflex Rohr-Isoliersysteme GmbH specifications are subject to change without notice. In addition, Austroflex Rohr-Isoliersysteme GmbH reserves the right, without notice to the purchaser, to modify materials and processes that do not affect compliance with any applicable specification. Printing errors excepted.



AustroPUR district heating systems

pre-insulated pipes are an alternative to conventional pipe systems

With AustroPUR, a pre-insulated pipe system, the Carinthian company Austroflex sets standards in the modern pipeline construction. The Villach pipe specialists developed a tubular type, which allows a wide variety of applications due to its special material combination as well as through its system character. With many services and comprehensive advice, regarding AustroPUR, the company Austroflex offers all users a professional all-in-one solution.

AustroPUR can be used identically constructed in many different ways and the optimal solutions for heating water, hot and cold water or cooling water or local heat.



Preparation of the thermo-plastic corrugated pipe

An extruder presses the heated and plasticized material through the die head in the shape of the corrugator.



State of the art control and regulation technology

The most modern system components make it possible to produce accurate and high quality tubes.



Winding up the finished pipes

The finished pipes are delivered on tube bundles in lengths up to 260m.





A continuous coil

The pipes can be installed directly from the roll into the ditch. An unreeling device can be provided upon request.



Channel less installing

AustroPUR district heating pipes are buried in the ground, channel less. This is particularly useful when the excavated soil is deposited adjacent to the site.

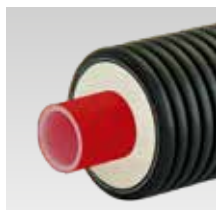


” AustroPUR district heating systems are characterized by flexibility, high insulation and rapid installation ”

AustroPUR single

Single, flexible pre-insulated, self-compensating pipe, suitable for use as a district heating pipe for central heating systems. Corrosion-resistant transport pipe in cross-linked PE-Xa in accordance with DIN 16892/16893, with red oxygen diffusion barrier EVOH in accordance with DIN 4726 is embedded in an elastic, CFC-free foam insulation made from polyurethane. The periphery made from cross-linked PE-X with closed microcellular structure together with the corrugated outside casing in PE-HD ensures high-great protection to the piping system.

- Max operating pressure: 6,6 bar at +95 °C
- Max fluid temperature: +95 °C
- PE-Xa pipes: SDR 11
- At 250mm outer casing the delivery form is in 12m bars
- Specific requests? Please contact us!



AustroPUR single	single-Plus	PE-Xa (O.D. x s)	PE-Xa (I.D.)	Outer Casing (O.D.)	Weight	Bending-radius	Coil-length	Price
Art. No.		mm	DN	mm	kg/m	m	m	€/m
114APE125125		25x2,3	20	125	1,26	0,40	260	35,55
114APE125132		32x2,9	25	125	1,35	0,50	260	39,75
114APE145140		40x3,7	32	145	1,91	0,50	240	51,90
114APE145150		50x4,6	40	145	2,10	0,60	240	57,65
114APE175163	Plus	63x5,8	50	175	3,25	0,70	150	83,65
114APE200163		63x5,8	50	200	3,60	0,80	100	102,75
114APE175175	Plus	75x6,8	65	175	3,59	0,80	150	91,65
114APE200175		75x6,8	65	200	3,94	0,90	100	105,70
114APE200190	Plus	90x8,2	75	200	4,47	1,00	100	114,75
114APE240190		90x8,2	75	240	6,19	1,10	85	140,00
114APE200110	Plus	110x10,0	90	200	5,29	1,10	100	145,35
114APE240110		110x10,0	90	240	7,00	1,20	85	177,40
114APE240125		125x11,4	100	240	7,57	1,30	85	194,45
114APE250160		160x14,6	130	250	15,47	-*	-*	333,65

Trading group: 114

*12m bars

Heat loss AustroPUR single

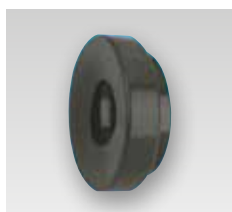
Overburden: 800 mm

λ Ground: 1,0 [W/m · K]

Tf = Temperature flow

Tg = Temperature ground

Heat loss in W/m at $\Delta T = T_f - T_g$											
ΔT [K] Dimension	10	20	30	40	50	60	70	80	90	100	U-value [W/m · K]
125 1x25	0,90	1,80	2,70	3,60	4,50	5,40	6,29	7,19	8,09	8,99	0,0899
125 1x32	1,07	2,14	3,22	4,29	5,36	6,43	7,51	8,58	9,65	10,72	0,1072
145 1x40	1,12	2,24	3,36	4,48	5,60	6,72	7,84	8,96	10,08	11,20	0,1120
145 1x50	1,37	2,74	4,10	5,47	6,84	8,21	9,58	10,95	12,31	13,68	0,1368
175 1x63	1,44	2,87	4,31	5,74	7,18	8,62	10,05	11,49	12,93	14,36	0,1436
175 1x75	1,76	3,51	5,27	7,02	8,78	10,54	12,29	14,05	15,81	17,56	0,1756
200 1x63	1,24	2,47	3,71	4,95	6,18	7,42	8,65	9,89	11,13	12,36	0,1236
200 1x75	1,47	2,93	4,40	5,86	7,33	8,80	10,26	11,73	13,20	14,66	0,1466
200 1x90	1,82	3,64	5,46	7,28	9,10	10,92	12,74	14,56	16,38	18,20	0,1820
200 1x110	2,48	4,95	7,43	9,91	12,38	14,86	17,34	19,82	22,29	24,77	0,2477
240 1x90	1,46	2,91	4,37	5,83	7,29	8,74	10,20	11,66	13,12	14,57	0,1457
240 1x110	1,85	3,71	5,56	7,41	9,26	11,12	12,97	14,82	16,67	18,53	0,1853
240 1x125	2,24	4,47	6,71	8,95	11,19	13,42	15,66	17,90	20,14	22,37	0,2237
250 1x160	2,82	5,63	8,45	11,26	14,08	16,89	19,71	22,53	25,34	28,16	0,2816



Outer casing + transport pipe
Typ
A125-1x25
A125-1x32
A145-1x40
A145-1x50
A175-1x63
A200-1x63
A175-1x75
A200-1x75
A200-1x90
A240-1x90
A200-1x110
A240-1x110
A240-1x125
A250-1x160

Rubber end cap single	Price
Art. No.	€/pcs.
116ENS125025	28,10
116ENS125032	28,10
116ENS145040	30,10
116ENS145050	30,10
116ENS175063	32,15
116ENS200063	42,75
116ENS175075	32,15
116ENS200075	42,75
116ENS200090	42,75
116ENS200110	42,75

Heat shrink end cap single	Price
Art. No.	€/pcs.
116ENO125020	26,40
116ENO125040	29,00
116ENO145050	30,55
116ENO145050	30,55
116ENO200080	43,00
116ENO200080	43,00
116ENO200080	43,00
116ENO200080	43,00
116ENO200090	45,05
116ENO250100	81,30
116ENO200090	45,05
116ENO250100	81,30
116ENO250100	81,30
116ENO250110	81,30

Restraining clamps for single	Price
Art. No.	€/pcs.
116AFS125	62,50
116AFS132	62,50
116AFS140	66,05
116AFS150	66,85
116AFS163	75,55
116AFS163	75,55
116AFS175	85,65
116AFS175	85,65
116AFS190	88,25
116AFS190	88,25
116AFS199	90,85
116AFS199	90,85
116AFS200	101,55

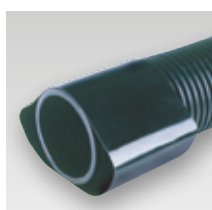
Adaptor with male thread	Price
Art. No.	€/pcs.
116WHA025034	22,95
116WHA032001	26,50
116WHA040054	30,00
116WHA050064	46,50
116WHA063002	75,95
116WHA063002	75,95
116WHA075212	94,20
116WHA075212	94,20
116WHA090003	157,90
116WHA090003	157,90
116WHA110004	196,80
116WHA110004	196,80
116WHA125004	312,65
116WHA160005	485,55

Alternative fittings can be found on page 10-17. The installation of restraining clamps is required to absorb the possible effects of thermal expansions / shrinkage of the PE-Xa transport pipes.



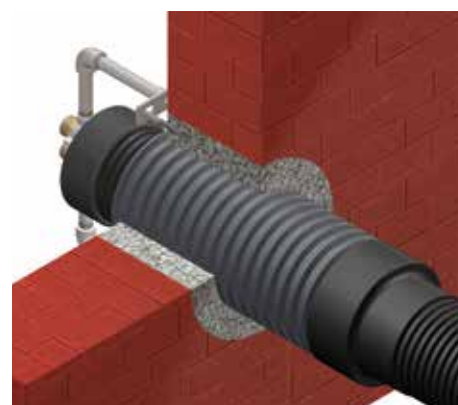
Wall feed-through for pressurised water	Outer Casing (O.D.)	Sealing range / Core drilling	Price
Art. No.	mm	mm	€/pcs.
116HED125200	125	198 - 202	224,60
116HED145200	145	198 - 202	224,60
116HED145250	145	248 - 252	308,85
116HED175250	175	248 - 252	308,85
116HED200300	200	298 - 302	382,85
116HED240350	240	348 - 352	505,40
116HED250300	250	298 - 302	435,25
116HED250350	250	348 - 352	505,40

Trading group: 116



Wall feed-through for non-pressurised water	Outer Casing (O.D.)	Wall feed through pipe (O.D.)	Length	Price
Art. No.	mm	mm	mm	€/pcs.
116HEN125	125	160	500	43,00
116HEN145	145	175	500	45,00
116HEN175	175	235	500	46,85
116HEN200	200	250	500	53,30
116HEN250	250 + 240	290	500	87,85

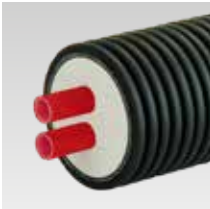
Trading group: 116



AustroPUR double

Double, flexible pre-insulated, self-compensating pipe, suitable for use as a district heating pipe for central heating systems. Corrosion-resistant transport pipes in cross-linked PE-Xa in accordance with DIN 16892/16893, with red oxygen diffusion barrier EVOH in accordance with DIN 4726 are embedded in an elastic, CFC-free foam insulation made from polyurethane. The marked return line allows quick and safe connection of pipe ends. The peripherality made from cross-linked PE-X with closed microcellular structure together with the corrugated outside casing in PE-HD ensures high-great protection to the piping system.

- Max operating pressure: 6,6 bar at +95 °C
- Max fluid temperature: +95 °C
- PE-Xa pipes: SDR 11
- Specific requests? Please contact us!



AustroPUR double	double Plus	PE-Xa (O.D. x s)	PE-Xa (I.D.)	Outer Casing (O.D.)	Weight	Bending-radius	Coil-length	Price
Art. No.		mm	DN	mm	kg/m	m	m	€/m
114APE125220		2-20x1,9	16	125	1,31	0,50	260	40,15
114APE125225		2-25x2,3	20	125	1,40	0,50	260	42,80
114APE145225	Plus	2-25x2,3	20	145	1,84	0,60	240	50,35
114APE145232		2-32x2,9	25	145	2,00	0,60	240	52,20
114APE175232	Plus	2-32x2,9	25	175	2,84	0,80	150	67,75
114APE175240		2-40x3,7	32	175	3,10	0,80	150	73,55
114APE200240	Plus	2-40x3,7	32	200	3,45	1,00	100	93,20
114APE200250		2-50x4,6	40	200	3,83	1,10	100	104,85
114APE240250	Plus	2-50x4,6	40	240	5,57	1,20	85	125,00
114APE200263		2-63x5,8	50	200	4,46	1,20	100	140,10
114APE240263	Plus	2-63x5,8	50	240	6,17	1,30	85	160,55
114APE240275		2-75x6,8	65	240	6,86	1,40	85	189,40

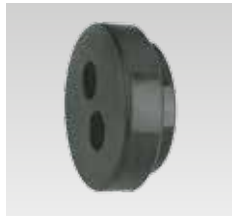
Trading group: 114

Heat loss AustroPUR double

Overburden: 800 mm λ Ground: 1,0 [W/m · K]

Tf = Temperature flow Tr = Temperature return Tg = Temperature ground

Heat loss in W/m at $\Delta T = (Tf+Tr)/2 - Tg$											
ΔT [K]	10	20	30	40	50	60	70	80	90	100	U-value [W/m · K]
125 2x20	1,29	2,57	3,86	5,14	6,43	7,72	9,00	10,29	11,58	12,86	0,1286
125 2x25	1,58	3,15	4,73	6,31	7,88	9,46	11,04	12,62	14,19	15,77	0,1577
145 2x25	1,32	2,64	3,96	5,28	6,60	7,92	9,24	10,56	11,88	13,20	0,1320
145 2x32	1,68	3,36	5,04	6,72	8,40	10,08	11,76	13,44	15,12	16,81	0,1681
175 2x32	1,37	2,74	4,11	5,49	6,86	8,23	9,60	10,97	12,34	13,72	0,1372
175 2x40	1,73	3,45	5,18	6,90	8,63	10,36	12,08	13,81	15,53	17,26	0,1726
200 2x40	1,44	2,89	4,33	5,78	7,22	8,66	10,11	11,55	13,00	14,44	0,1444
200 2x50	1,85	3,70	5,55	7,40	9,25	11,10	12,95	14,80	16,66	18,51	0,1851
200 2x63	2,52	5,03	7,55	10,07	12,59	15,10	17,62	20,14	22,66	25,17	0,2517
240 2x50	1,48	2,95	4,43	5,91	7,39	8,86	10,34	11,82	13,30	14,77	0,1477
240 2x63	1,87	3,75	5,62	7,49	9,37	11,24	13,11	14,99	16,86	18,73	0,1873
240 2x75	2,53	5,05	7,58	10,11	12,63	15,16	17,69	20,21	22,74	25,27	0,2527



Outer Casing + transport pipe
Typ
A125-2x20
A125-2x25
A145-2x25
A145-2x32
A175-2x32
A175-2x40
A200-2x40
A200-2x50
A240-2x50
A200-2x63
A240-2x63
A240-2x75
116

Rubber end cap double	Price
Art. No.	€/pcs.
116ENS125220	19,90
116ENS125225	19,90
116ENS145225	24,95
116ENS145232	24,95
116ENS175232	35,10
116ENS175240	35,10
116ENS200240	45,65
116ENS200250	45,65
116ENS200263	45,65
116	

Heat shrink end cap double	Price
Art. No.	€/pcs.
116ENO125220	82,35
116ENO145230	84,45
116ENO145230	84,45
116ENO145230	84,45
116ENO200260	104,60
116ENO200260	104,60
116ENO200260	104,60
116ENO200270	111,35
116ENO200290	135,75
116ENO240210	207,65
116ENO240210	207,65
116	

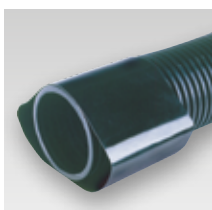
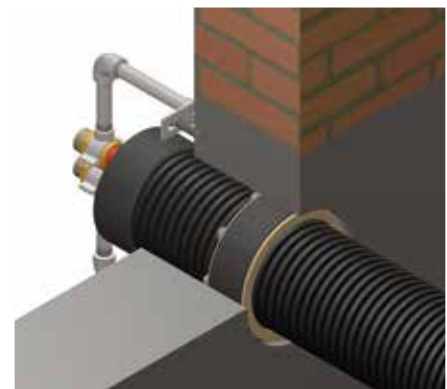
Restraining clamps for double	Price
Art. No.	€/pcs.
116AFS225	66,95
116AFS225	66,95
116AFS225	66,95
116AFS232	68,95
116AFS232	68,95
116AFS240	71,00
116AFS240	71,00
116AFS250	73,15
116AFS250	73,15
116AFS263	81,25
116AFS263	81,25
116AFS275	92,40
116	

Adaptor with male thread	Price
Art. No.	€/pcs.
116WHA020034	22,05
116WHA025034	22,95
116WHA025034	22,95
116WHA032001	26,50
116WHA032001	26,50
116WHA040054	30,00
116WHA040054	30,00
116WHA050064	46,50
116WHA050064	46,50
116WHA063002	75,95
116WHA063002	75,95
116WHA075212	94,20
116	

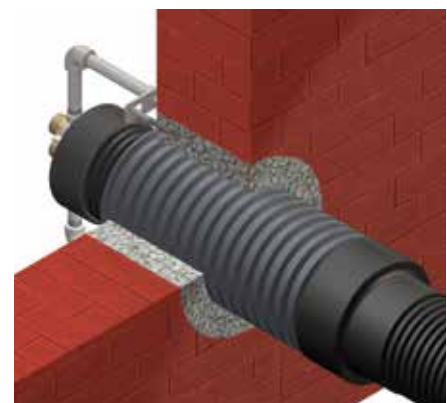
Alternative fittings can be found on page 10-17. The installation of restraining clamps is required to absorb the possible effects of thermal expansions / shrinkage of the PE-Xa transport pipes.



Wall feed-through for pressurised water	Outer Casing (O.D.)	Sealing range / Core drilling	Price
Art. No.	mm	mm	€/pcs.
116HED125200	125	198 - 202	224,60
116HED145200	145	198 - 202	224,60
116HED145250		248 - 252	308,85
116HED175250	175	248 - 252	308,85
116HED200300	200	298 - 302	382,85
116HED240350	240	348 - 352	505,40
116HED250300	250	298 - 302	435,25
116HED250350		348 - 352	505,40
Trading group: 116			



Wall feed-through for non-pressurised water	Outer Casing (O.D.)	Wall feed through pipe (O.D.)	Length	Price
Art. No.	mm	mm	mm	€/pcs.
116HEN125	125	160	500	43,00
116HEN145	145	175	500	45,00
116HEN175	175	235	500	46,85
116HEN200	200	250	500	53,30
116HEN250	250 + 240	290	500	87,85
Trading group: 116				



Adaptor PE-Xa, PN 6



with male thread			
Art. No.	PE-Xa (O.D. x s)	Thread (male)	Price
	mm	Inch	€/pcs.
116SHA020034	20x1,9	¾"	22,05
116SHA025034	25x2,3	¾"	22,95
116SHA032001	32x2,9	1"	29,20
116SHA040054	40x3,7	1 ¼"	57,70
116SHA050064	50x4,6	1 ½"	67,50
116SHA063002	63x5,8	2"	102,00
116SHA075052	75x6,8	2 ½"	297,25
116SHA090003	90x8,2	3"	378,70
116SHA110004	110x10,0	4"	444,50
116SHA125005	125x11,4	5"	838,90

with welding end		
Art. No.	PE-Xa - Steel (O.D. x s)	Price
	mm	€/pcs.
116SHS025026	25x2,3 - 26,9x2,3	25,55
116SHS032033	32x2,9 - 33,7x2,6	38,75
116SHS040042	40x3,7 - 42,4x2,6	51,05
116SHS050048	50x4,6 - 48,3x2,6	64,45
116SHS063060	63x5,8 - 60,3x2,9	108,70
116SHS075076	75x6,8 - 76,1x2,9	188,70
116SHS090088	90x8,2 - 88,9x3,2	238,25
116SHS110114	110x10,0 - 114,3x3,6	296,15
116SHS125139	125x11,4 - 139,7x3,6	721,15
116SHS160168	160x14,6 - 168,3x4,1	921,35

Trading group: 116

Straight and reducing coupler PE-Xa, PN 6

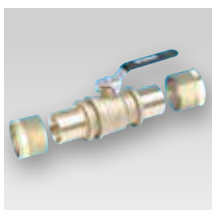


straight coupler			
Art. No.	PE-Xa (O.D. x s)	PE-Xa (O.D. - O.D.)	Price
	mm	mm	€/pcs.
116SHK020020	20x1,9	20 - 20	19,25
116SHK025025	25x2,3	25 - 25	19,60
116SHK032032	32x2,9	32 - 32	35,10
116SHK040040	40x3,7	40 - 40	56,60
116SHK050050	50x4,6	50 - 50	80,35
116SHK063063	63x5,8	63 - 63	112,45
116SHK075075	75x6,8	75 - 75	371,90
116SHK090090	90x8,2	90 - 90	489,25
116SHK110110	110x10,0	110 - 110	533,90
116SHK125125	125x11,4	125 - 125	976,40
116SHK160160	160x14,6	160 - 160	1.313,00

reducing coupler		
Art. No.	PE-Xa (O.D. - O.D.)	Price
	mm	€/pcs.
116SHK025020	25 - 20	21,70
116SHK032025	32 - 25	31,80
116SHK040020	40 - 20	82,95
116SHK040032	40 - 32	56,10
116SHK050032	50 - 32	74,95
116SHK050040	50 - 40	76,85
116SHK063050	63 - 50	103,70
116SHK075063	75 - 63	366,30
116SHK090075	90 - 75	479,50
116SHK110090	110 - 90	616,65

Trading group: 116

Elbow 90°/ Ball valve PE-Xa, PN 6

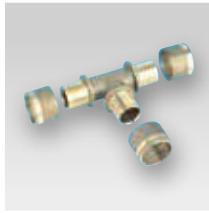


Elbow coupler 90°			
Art. No.	PE-Xa (O.D. x s)	PE-Xa (O.D. - O.D.)	Price
	mm	mm	€/pcs.
116SHW020020	20x1,9	20 - 20	30,60
116SHW025025	25x2,3	25 - 25	31,25
116SHW032032	32x2,9	32 - 32	50,10
116SHW040040	40x3,7	40 - 40	93,25
116SHW050050	50x4,6	50 - 50	158,60
116SHW063063	63x5,8	63 - 63	196,30
116SHW075075	75x6,8	75 - 75	613,65
116SHW090090	90x8,2	90 - 90	736,55
116SHW110110	110x10,0	110 - 110	951,95

Ball valve with hand lever		
Art. No.	PE-Xa (O.D. - O.D. / male)	Price
	mm	€/pcs.
116SKS020020	20 - 20	60,20
116SKS025025	25 - 25	63,15
116SKS032032	32 - 32	96,15
116SKS040040	40 - 40	123,35
116SKS050050	50 - 50	191,90
116SKS063063	63 - 63	313,70
116SKA025001	25 - 1" AG	85,00
116SKA032001	32 - 1" AG	95,95

Trading group: 116

T-Piece PE-Xa, PN 6



Art. No.	PE-Xa (O.D. - O.D. - O.D.)	Price
	end-branch-end (mm)	€/pcs.
116SHT202020	20-20-20	26,95
116SHT202520	20-25-20	28,80
116SHT252525	25-25-25	28,80
116SHT252025	25-20-25	28,80
116SHT252520	25-25-20	28,80
116SHT252020	25-20-20	28,80
116SHT323232	32-32-32	61,45
116SHT322032	32-20-32	61,45
116SHT322532	32-25-32	61,45
116SHT323225	32-32-25	61,45
116SHT322525	32-25-25	61,45
116SHT404040	40-40-40	120,45
116SHT403240	40-32-40	115,05
116SHT402540	40-25-40	115,05
116SHT402040	40-20-40	115,05
116SHT403232	40-32-32	110,15
116SHT505050	50-50-50	162,95
116SHT504050	50-40-50	154,65
116SHT503250	50-32-50	142,80
116SHT502550	50-25-50	131,50
116SHT502050	50-20-50	131,50
116SHT503240	50-32-40	161,80
116SHT502540	50-25-40	147,00
116SHT636363	63-63-63	206,35
116SHT637563	63-75-63	877,40
116SHT635063	63-50-63	200,95
116SHT634063	63-40-63	183,10
116SHT633263	63-32-63	200,95
116SHT632563	63-25-63	176,00
116SHT632063	63-20-63	176,00
116SHT635050	63-50-50	273,85
116SHT634050	63-40-50	235,85
116SHT633250	63-32-50	219,75
116SHT634040	63-40-40	228,50
116SHT757575	75-75-75	756,20
116SHT756375	75-63-75	662,00
116SHT755075	75-50-75	551,75
116SHT754075	75-40-75	551,75
116SHT753275	75-32-75	551,75
116SHT752575	75-25-75	551,75
116SHT756363	75-63-63	648,90
116SHT755063	75-50-63	648,90
116SHT753263	75-32-63	648,90
116SHT909090	90-90-90	876,25
116SHT906390	90-63-90	654,20
116SHT904090	90-40-90	603,40
116SHT903290	90-32-90	603,40
116SHT111010	110-110-110	1.104,25
116SHT116311	110-63-110	885,20
116SHT115011	110-50-110	848,30
116SHT113211	110-32-110	737,70

Trading group: 116

All press connections and the corresponding slide sleeves are included. We are happy to provide a suitable crimping tool free of charge for three days. If needed, renting of the device is also possible.

Molded parts with integrated resistance wire. By electric current, this wire is heated to the required sealing temperature and thereby carries out the welding. Each fitting has an integrated detection resistance which ensures an automatic adjustment of welding parameters on the Monomatic welding machine.

FUSAPEX coupler PE-Xa, PN 6



Art. No.	PE-Xa (O.D. x s)	PE-Xa (O.D. - O.D.)	Price
	mm	mm	€/pcs.
116ESM050050	50	50 - 50	62,95
116ESM063063	63	63 - 63	68,15
116ESM075075	75	75 - 75	79,45
116ESM090090	90	90 - 90	102,90
116ESM110110	110	110 - 110	124,55
116ESM125125	125	125 - 125	166,10
116ESM160160	160	160 - 160	218,40

Trading group: 116

FUSAPEX adaptor with male thread PE-Xa /AG, PN 6



Art. No.	PE-Xa (O.D. x s)	Thread (male)	Price
	mm	Inch	€/pcs.
116ESA050112	50	1 ½"	188,50
116ESA063002	63	2"	279,00
116ESA075212	75	2 ½"	318,15

Trading group: 116

FUSAPEX flanged adaptor PE-Xa, PN 6



Art. No.	PE-Xa (O.D. x s)	Flange dimension	Price
	mm	DN	€/pcs.
116SMF050040	50	40	286,20
116SMF063050	63	50	303,35
116SMF075065	75	65	340,80
116SMF090080	90	80	361,25
116SMF110100	110	100	404,50
116SMF125100	125	100	429,45

Trading group: 116

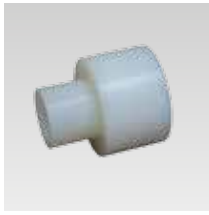
FUSAPEX elbow 90° PE-Xa, PN6



Art. No.	PE-Xa (O.D. x s)	PE-Xa (O.D. - O.D.)	Price
	mm	mm	€/pcs.
116ESW075075	75	75-75	147,00
116ESW090090	90	90-90	184,25
116ESW110110	110	110-110	221,35
116ESW125125	125	125-125	410,60

Trading group: 116

FUSAPEX reducing fitting PE-Xa, PN 6



Art. No.	PE-Xa (O.D. x s)	PE-Xa (O.D. x s)	Price
	mm	mm	€/pcs.
116SMG063050	63	50	134,45
116SMG075050	75	50	142,45
116SMG075063	75	63	142,45
116SMG090050	90	50	151,25
116SMG090063	90	63	151,25
116SMG090075	90	75	151,25
116SMG110050	110	50	151,25
116SMG110063	110	63	151,25
116SMG110075	110	75	151,25
116SMG110090	110	90	151,25
116SMG125050	125	50	162,75
116SMG125063	125	63	162,75
116SMG125075	125	75	162,75
116SMG125090	125	90	162,75
116SMG125110	125	110	162,75
116SMG160075	160	75	174,75
116SMG160090	160	90	174,75
116SMG160110	160	110	174,75
116SMG160125	160	125	174,75

Trading group: 116

FUSAPEX T-piece PE-Xa, PN 6



Art. No.	PE-Xa (O.D. - O.D. - O.D.)	Price
	end-branch-end (mm)	€/pcs.
116SMT505050	50-50-50	129,65
116SMT636363	63-63-63	161,35
116SMT757575	75-75-75	330,65
116SMT909090	90-90-90	393,40
116SMT111111	110-110-110	431,55
116SMT121212	125-125-125	759,90

Trading group: 116

Tangit KS cleaning wipes / special cleaner



Art. No.	Description	Price
		€/pcs.
116TRT001	100 pcs. cleaning wipes	49,85
116TSR001	1 l special cleaner	62,50

Trading group: 116

We are happy to provide a suitable welding tool free of charge for three days.
If needed, renting of the device is also possible.

Bolt type connectors for use in piping systems equipped with transport pipes (SDR 11) for heating, cold or cooling water applications. The coupling has a long supporting pipe for optimal clamping, a conical outside thread ISO7 and a clamping ring with stainless steel bolt.

- Max operating pressure: 6 bar / 16 bar
- Max fluid temperature: +95 °C / +25 °C
- PE-Xa and PE pipes: SDR 11
- Supporting pipe material: CW617N

Adaptor with male thread PE-Xa/AG, PN 6

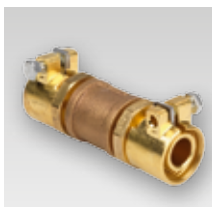
The bolt type coupler has a tapered pipe thread according to ISO7/EN 10226.



Art. No.	PE-Xa (O.D. x s)	Thread (male)	Price
	mm	Inch	€/pcs.
116WHA020034	20x1,9	¾"	22,05
116WHA025034	25x2,3	¾"	22,95
116WHA032001	32x2,9	1"	26,50
116WHA040054	40x3,7	1¼"	30,00
116WHA050064	50x4,6	1½"	46,50
116WHA063002	63x5,8	2"	75,95
116WHA075212	75x6,8	2½"	94,20
116WHA090003	90x8,2	3"	157,90
116WHA110004	110x10,0	4"	196,80
116WHA125004	125x11,4	4"	312,65
116WHA160005	160x14,6	5"	485,55

Trading group: 116

Straight coupler PE-Xa, PN 6



Art. No.	PE-Xa (O.D. x s)	PE-Xa (O.D. - O.D.)	Price
	mm	mm	€/pcs.
116WHK020020	20x1,9	20 - 20	53,60
116WHK025025	25x2,3	25 - 25	55,40
116WHK032032	32x2,9	32 - 32	65,95
116WHK040040	40x3,7	40 - 40	78,90
116WHK050050	50x4,6	50 - 50	113,10
116WHK063063	63x5,8	63 - 63	184,40
116WHK075075	75x6,8	75 - 75	262,75
116WHK090090	90x8,2	90 - 90	401,85
116WHK110110	110x10,0	110 - 110	560,90
116WHK125125	125x11,4	125 - 125	792,65
116WHK160160	160x14,6	160 - 160	1.162,55

Trading group: 116

The coupler is delivered in parts and must be sealed on site.

Elbow 90° PE-Xa, PN 6



Art. No.	PE-Xa (O.D. x s)	PE-Xa (O.D. - O.D.)	Price
	mm	mm	€/pcs.
116WHW020020	20x1,9	20 - 20	54,80
116WHW025025	25x2,3	25 - 25	56,55
116WHW032032	32x2,9	32 - 32	65,40
116WHW040040	40x3,7	40 - 40	77,75
116WHW050050	50x4,6	50 - 50	112,55
116WHW063063	63x5,8	63 - 63	187,95
116WHW075075	75x6,8	75 - 75	294,55
116WHW090090	90x8,2	90 - 90	432,45
116WHW110110	110x10,0	110 - 110	617,50
116WHW125125	125x11,4	125 - 125	849,20

Trading group: 116

The elbow is delivered in parts and must be sealed on site.

T-piece PE-Xa, PN 6



Art. No.	PE-Xa (O.D. - O.D. - O.D.)	Price
	end-branch-end (mm)	€/pcs.
116WHT202020	20 - 20 - 20	80,40
116WHT252525	25 - 25 - 25	83,05
116WHT323232	32 - 32 - 32	94,85
116WHT403240	40 - 32 - 40	118,00
116WHT404040	40 - 40 - 40	114,85
116WHT504050	50 - 40 - 50	171,15
116WHT505050	50 - 50 - 50	179,10
116WHT635063	63 - 50 - 63	260,35
116WHT636363	63 - 63 - 63	274,55
116WHT757575	75 - 75 - 75	420,70
116WHT909090	90 - 90 - 90	626,90
116WHT111111	110 - 110 - 110	1.044,10
116WHT121212	125 - 125 - 125	1.391,65

Trading group: 116

The T-piece is delivered in parts and must be sealed on site.

Anti-Seize copper based lubricant

An anti-seize copper based lubricant, available in a handy stick. Provides a shield against seizing and galling. Content 20 g.



Art. No.	Description	Price
		€/pcs.
116LOC8065	Copper based lubricant. Content 20g.	27,95

Trading group: 116

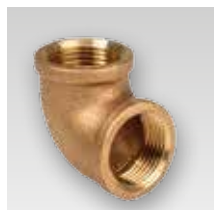
T-piece



Art. No.	Thread (female)	Price
	Inch	€/pcs.
116TIG343434	¾"	14,10
116TIG010101	1"	15,30
116TIG545454	1¼"	24,75
116TIG646464	1½"	39,40
116TIG020202	2"	46,50
116TIG030212	2½"	137,75
116TIG030303	3"	153,15
116TIG040404	4"	453,70
116TIG050505	5"	760,75

Trading group: 116

Elbow 90°



Art. No.	Thread (female)	Price
	inch	€/pcs.
116WIG903434	¾"	10,65
116WIG900101	1"	12,35
116WIG905454	1¼"	17,65
116WIG906464	1½"	19,40
116WIG900202	2"	35,90
116WIG900212	2½"	106,00
116WIG900303	3"	116,65
116WIG900404	4"	223,90
116WIG900505	5"	380,90

Trading group: 116

Coupler



Art. No.	Thread (female)	Price
	Inch	€/pcs.
116MUF903434	¾"	9,45
116MUF900101	1"	12,95
116MUF905454	1¼"	18,85
116MUF906464	1½"	20,00
116MUF900202	2"	32,35
116MUF900212	2½"	74,20
116MUF900303	3"	85,95
116MUF900404	4"	167,35
116MUF900505	5"	469,35

Trading group: 116

The red brass fittings have a conical pipe thread according to ISO 7 / EN 10226.

Reduction



Art. No.	Thread (Inch)		Price €/pcs.
	AG	IG	
116UIA100034	1"	¾"	3,15
116UIA114034	1¼"	¾"	10,15
116UIA114001	1¼"	1"	6,65
116UIA112034	1½"	¾"	21,00
116UIA112001	1½"	1"	10,15
116UIA112114	1½"	1¼"	8,55
116UIA200034	2"	¾"	45,10
116UIA200100	2"	1"	15,50
116UIA200114	2"	1¼"	15,25
116UIA200112	2"	1½"	15,25
116UIA212114	2½"	1¼"	75,90
116UIA212112	2½"	1½"	52,90
116UIA212200	2½"	2"	41,30
116UIA300100	3"	1"	156,25
116UIA300114	3"	1¼"	160,40
116UIA300112	3"	1½"	160,40
116UIA300200	3"	2"	101,70
116UIA300212	3"	2½"	57,50
116UIA400200	4"	2"	287,65
116UIA400212	4"	2½"	210,20
116UIA400300	4"	3"	165,95
116UIA500400	5"	4"	243,30

Trading group: 116

Flange (Steel galvanized)

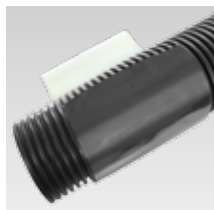


Art. No.	Thread	Flange	Price €/pcs.
	Inch	DN	
116GFL016020	¾"	20	20,55
116GFL001025	1"	25	21,50
116GFL054032	1¼"	32	27,95
116GFL064040	1½"	40	29,05
116GFL002050	2"	50	38,45
116GFL212065	2½"	65	46,15
116GFL003080	3"	80	55,60
116GFL004100	4"	100	68,35
116GFL005150*	5"	150	61,90

Trading group: 116

* execution as a non galvanized welding flange

Repair tape



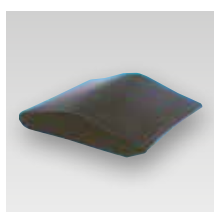
Repair tape suitable for repair of any incidental local damage to the outside casing.

Art. No.	Length	Width	Price
	mm	mm	€/pcs.
116REP001	1000	225	52,50

Trading group: 116

Heat Shrink Sleeve

Used to repair incidental local damage to the outer casing.



Art. No.	Outer Casing (O.D.)	Width	Price
	mm	mm	€/pcs.
116SSS125	145 + 125	225	14,55
116SSS175	175	225	15,80
116SSS200	200	225	21,60
116SSS250	250 + 240	385	39,90

Trading group: 116

Heat shrink blind end cap

Heat shrink cap for sealing blind ends in the ground, which are connected at a later time.



Art. No.	Outer Casing (O.D.)	Price
	mm	€/pcs.
116ENO125000	145 + 125	56,35
116ENO175000	175	88,70
116ENO200000	200	154,85
116ENO250000	250 + 240	207,65

Trading group: 116

Warning tape



Used to show the location of underground pipes during excavation work. The tape is placed in the trenches above the pre-insulated pipe.

Art. No.	Length	Width	Price
	m	mm	€/pcs.
116TWB100	250	40	42,20

Trading group: 116

Chamber

Used to connect single und double pipes. The chamber has 6 connection points, enables connection of different pipes and integration of shut off valves. Kit comprises inspection chamber, lid and stainless steel bolts. The heat shrink sleeve must be ordered to fit any outlet to the outside casing separately! Additional two elastomeric foam insulation package are required.



Art. No.	Outer Casing (O.D.)	Diameter	H	Weight	Price
	mm	mm	mm	kg	€/pcs.
116ESD200	200 + 175 + 145 + 125	810	770	35,00	1.260,80
116ESD250	250 + 240 + 200 + 175 + 145+ 125	1200	800	55,00	4.197,40

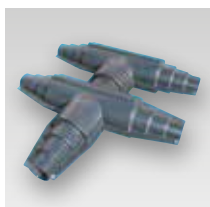
Trading group: 116

Double T-Schroud set for tee connections

Guarantees complete insulation and sealing of branch connection between single and double pipes. Complete shroud includes: shroud made of HDPE, stainless steel bolts and a lubricant against fretting.

ATTENTION: Don't forget to order the wished insulation package.

Insulation tube bits are NOT required.



Art. No.	Type	Outer Casing (O.D.)	L	W	H	Weight	Price
		mm	mm	mm	mm	kg	€/pcs.
116IST003	T-insulation	200 + 175 + 145 + 125	1300	860	270	7,00	265,55
116IST004	double T	200 + 175 + 145 + 125	1300	1250	270	14,00	995,80

Trading group: 116

I-Shroud set (alternative) for straight connections

Guarantees complete insulation and sealing of straight extensions of single and double pipes. Complete shroud includes: smooth black pipe made of HDPE, 2 heat shrink sleeves and a elastomeric foam package for the insulation.

ATTENTION: Insulation tube bits are NOT required.



Art. No.	Outer Casing (O.D.)	L	Insulationkit (O.D.)	Weight	Price
	mm	mm	mm	kg	€/pcs.
116ISL125	125	710	140	2,50	82,75
116ISL145	145	830	160	3,00	91,95
116ISL175	175	830	200	4,50	120,90
116ISL200	200	1000	225	6,00	136,10
116ISL250	250 + 240	1000	280	10,50	201,35

Trading group: 116

Y-Shroud set

Guarantees complete insulation and sealing of a connection between two single and one double pipe. Complete shroud includes: shroud made of HDPE, stainless steel bolts and a lubricant against fretting.

ATTENTION: Don't forget to order the disired insulation package.

Insulation tube bits are NOT required.



Art. No.	Outer Casing (O.D.)	L	W	H	Weight	Price
	mm	mm	mm	mm	kg	€/pcs.
116ISH100	2x (200-125) + 1x (200-125)	1170	460	230	7,00	409,40

Trading group: 116

Insulation kits

Guarantees complete insulation and sealing of straight, elbow and T-connections between single or double pipes.



PU- Insulation

The polyurethane foam insulation package consists of a 2 Component PU foam, a drill for produce the filling openings, three matching sealing plugs, adhesive patches and a sealant for the insulation kit.
Note: durability is 3 months.



Art. No.	Insulation kit	Weight	Price
		kg	€/Set
116ISD011	sleeve tube 125+145	2,40	79,40
116ISD020	sleeve tube 175+200	3,10	87,35
116ISD038	sleeve tube 240+250	4,60	124,85
116ISD042	longitudinal or elbow Shroud	5,10	130,15
116ISD058	T-Shroud	6,30	164,45
116ISD087	double T-Shroud	10,00	275,75

Trading group: 116

Elastomeric foam- insulation

The elastomeric foam insulation package consists of a rubber mat plus a matching tape and a sealant for the Insulation kit. Note: durability is 3 months.



Art. No.	Insulation Kit	Weight	Price
		kg	€/Set
116ISD500	Elastomeric foam- insulation universal	0,90	39,10
116ISD900	Elastomeric foam- insulation double T	2,60	136,90

Trading group: 116

Shroud kits

The shroud kits consists of two HDPE- shells, stainless steel bolts, a lubricant against fretting and installation guidelines.

ATTENTION: Don't forget to order the insulation tube bits and the desired insulation package!

Insulation tube bit

The insulation tube bits come with shrink tubing to seal the outer casing.



Art. No.	Outer Casing (O.D.)	L	Weight	Price
	mm	mm	kg	€/Set
116IRE125090	125	230	0,90	44,25
116IRE145150	145	230	0,95	44,25
116IRE175150	175	230	1,00	44,25
116IRE200200	200	230	1,10	44,25
116IRE250200	250 + 240	230	1,25	44,25

Trading group: 116

T-Shroud set for tee connections



Art. No.	Outer Casing (O.D.)	L	W	H	Weight	Price
		mm	mm	mm	kg	€/Set
116IST005	universal	1070	730	300	5,75	93,60

Trading group: 116

L-Shroud set for elbow 90° connections



Art. No.	Outer Casing (O.D.)	L	W	H	Weight	Price
		mm	mm	mm	kg	€/Set
116ISE003	universal	730	730	300	4,25	93,60

Trading group: 116

I-Shroud set for straight connections



Art. No.	Outer Casing (O.D.)	L	W	H	Weight	Price
		mm	mm	mm	kg	€/Set
116ISL002	universal	1070	160	300	4,75	93,60

Trading group: 116

Insulated with polyurethane foam parts guarantee complete insulation and sealing. Including medium pipe connections. Special designs on request.

Pre- insulated T-piece single



Pre-insulated T-piece	PE-Xa (O.D.-O.D.-O.D.)	Outer Casing (O.D.-O.D.-O.D.)	Price
Art. No.	end-branch-end (mm)	end-branch-end (mm)	€/pcs.
116VTS252525	25 - 25 - 25	140 - 140 - 140	948,65
116VTS323232	32 - 32 - 32	140 - 140 - 140	1.035,55
116VTS322525	32 - 25 - 25	140 - 140 - 140	1.100,65
116VTS322532	32 - 25 - 32	140 - 140 - 140	1.021,55
116VTS404040	40 - 40 - 40	140 - 140 - 140	1.154,45
116VTS403232	40 - 32 - 32	140 - 140 - 140	1.227,85
116VTS403240	40 - 32 - 40	140 - 140 - 140	1.113,10
116VTS402532	40 - 25 - 32	140 - 140 - 140	1.139,45
116VTS402540	40 - 25 - 40	140 - 140 - 140	1.031,40
116VTS505050	50 - 50 - 50	180 - 180 - 180	1.445,50
116VTS504040	50 - 40 - 40	180 - 140 - 180	1.407,75
116VTS504050	50 - 40 - 50	180 - 140 - 180	1.349,85
116VTS503232	50 - 32 - 32	180 - 140 - 140	1.307,45
116VTS503240	50 - 32 - 40	180 - 140 - 180	1.329,70
116VTS503250	50 - 32 - 50	180 - 140 - 180	1.271,30
116VTS502540	50 - 25 - 40	180 - 140 - 180	1.295,60
116VTS502550	50 - 25 - 50	180 - 140 - 180	1.237,15
116VTS636363	63 - 63 - 63	200 - 200 - 200	1.721,60
116VTS635050	63 - 50 - 50	180 - 180 - 180	1.723,15
116VTS635063	63 - 50 - 63	200 - 180 - 200	1.664,20
116VTS634050	63 - 40 - 50	180 - 140 - 180	1.545,30
116VTS634063	63 - 40 - 63	200 - 140 - 200	1.494,60
116VTS633250	63 - 32 - 50	180 - 140 - 180	1.518,90
116VTS633263	63 - 32 - 63	200 - 140 - 200	1.563,90
116VTS632550	63 - 25 - 50	200 - 140 - 140	1.529,80
116VTS632563	63 - 25 - 63	200 - 140 - 200	1.426,40
116VTS757575	75 - 75 - 75	200 - 200 - 200	2.283,05
116VTS756363	75 - 63 - 63	200 - 200 - 200	2.139,85
116VTS756375	75 - 63 - 75	200 - 200 - 200	2.112,45
116VTS755050	75 - 50 - 50	200 - 180 - 180	1.913,90
116VTS755063	75 - 50 - 63	200 - 180 - 200	1.981,65
116VTS755075	75 - 50 - 75	200 - 180 - 200	1.954,25
116VTS754063	75 - 40 - 63	200 - 140 - 200	1.834,30
116VTS754075	75 - 40 - 75	200 - 140 - 200	1.854,45
116VTS753263	75 - 32 - 63	200 - 140 - 200	1.808,95
116VTS753275	75 - 32 - 75	200 - 140 - 200	1.828,60
116VTS752563	75 - 25 - 63	200 - 140 - 200	1.821,90
116VTS752575	75 - 25 - 75	200 - 140 - 200	1.794,50
116VTS909090	90 - 90 - 90	200 - 200 - 200	2.093,30
116VTS907575	90 - 75 - 75	200 - 200 - 200	2.518,80
116VTS907590	90 - 75 - 90	200 - 200 - 200	2.182,25
116VTS906363	90 - 63 - 63	200 - 200 - 200	2.034,35
116VTS906375	90 - 63 - 75	200 - 200 - 200	2.237,05
116VTS906390	90 - 63 - 90	200 - 200 - 200	1.900,45
116VTS905075	90 - 50 - 75	200 - 180 - 200	2.151,20
116VTS905090	90 - 50 - 90	200 - 180 - 200	1.824,75
116VTS904075	90 - 40 - 75	200 - 140 - 200	2.051,45
116VTS904090	90 - 40 - 90	200 - 140 - 200	1.724,70
116VTS903275	90 - 32 - 75	200 - 140 - 200	2.026,10
116VTS903290	90 - 32 - 90	200 - 140 - 200	1.699,35
116VTS902575	90 - 25 - 75	200 - 140 - 200	2.001,30
116VTS902590	90 - 25 - 90	200 - 140 - 200	1.664,70

Trading group:116

ATTENTION: Non stock items!



Pre-insulated T-piece	PE-Xa (O.D.-O.D.-O.D.)	Outer Casing (O.D.-O.D.-O.D.)	Price
Art. No.	end-branch-end (mm)	end-branch-end (mm)	€/pcs.
116VTS111010	110 - 110 - 110	200 - 200 - 200	2.794,35
116VTS119090	110 - 90 - 90	200 - 200 - 200	3.233,30
116VTS119011	110 - 90 - 110	200 - 200 - 200	2.707,50
116VTS117575	110 - 75 - 75	200 - 200 - 200	3.198,15
116VTS117590	110 - 75 - 90	200 - 200 - 200	3.325,85
116VTS117511	110 - 75 - 110	200 - 200 - 200	3.107,15
116VTS116390	110 - 63 - 90	200 - 200 - 200	3.033,20
116VTS116311	110 - 63 - 110	200 - 200 - 200	3.014,10
116VTS115090	110 - 50 - 90	200 - 180 - 200	2.941,20
116VTS115011	110 - 50 - 110	200 - 180 - 200	2.968,60
116VTS114090	110 - 40 - 90	200 - 140 - 200	2.906,05
116VTS114011	110 - 40 - 110	200 - 140 - 200	2.722,50
116VTS113290	110 - 32 - 90	200 - 140 - 200	2.705,45
116VTS113211	110 - 32 - 110	200 - 140 - 200	2.705,45
116VTS112590	110 - 25 - 90	200 - 140 - 200	2.701,30
116VTS112511	110 - 25 - 110	200 - 140 - 200	2.701,30

Trading group:116

ATTENTION: Non stock items!

Pre- insulated T-piece double



Pre-insulated T-piece	PE-Xa (O.D.-O.D.-O.D.)	Outer Casing (O.D.-O.D.-O.D.)	Price
Art. No.	end-branch-end (mm)	end-branch-end (mm)	€/pcs.
116VTD202020	20 - 20 - 20	140 - 140 - 140	1.387,10
116VTD252525	25 - 25 - 25	140 - 140 - 140	1.387,10
116VTD252020	25 - 20 - 20	140 - 140 - 140	1.387,10
116VTD252025	25 - 20 - 25	140 - 140 - 140	1.387,10
116VTD323232	32 - 32 - 32	140 - 140 - 140	1.575,25
116VTD322032	32 - 20 - 32	140 - 140 - 140	1.544,25
116VTD322525	32 - 25 - 25	140 - 140 - 140	1.687,45
116VTD322532	32 - 25 - 32	140 - 140 - 140	1.544,25
116VTD404040	40 - 40 - 40	180 - 180 - 180	1.788,80
116VTD403232	40 - 32 - 32	180 - 140 - 180	1.950,10
116VTD403240	40 - 32 - 40	180 - 140 - 180	1.745,90
116VTD402532	40 - 25 - 32	180 - 140 - 180	1.786,75
116VTD402540	40 - 25 - 40	180 - 140 - 180	1.582,50
116VTD402040	40 - 20 - 40	180 - 140 - 180	1.582,50
116VTD505050	50 - 50 - 50	180 - 180 - 180	2.363,20
116VTD504040	50 - 40 - 40	180 - 180 - 180	2.331,15
116VTD504050	50 - 40 - 50	180 - 140 - 180	2.208,60
116VTD503232	50 - 32 - 32	180 - 140 - 180	2.128,45
116VTD503240	50 - 32 - 40	180 - 140 - 180	2.188,45
116VTD503250	50 - 32 - 50	180 - 140 - 180	2.066,95
116VTD502540	50 - 25 - 40	180 - 140 - 180	2.124,35
116VTD502550	50 - 25 - 50	180 - 140 - 180	2.002,30
116VTD502050	50 - 20 - 50	180 - 140 - 180	2.002,30
116VTD636363	63 - 63 - 63	200 - 200 - 200	2.871,40
116VTD635050	63 - 50 - 50	180 - 180 - 180	2.901,90
116VTD635063	63 - 50 - 63	200 - 180 - 200	2.786,60
116VTD634050	63 - 40 - 50	200 - 140 - 200	2.591,20
116VTD634063	63 - 40 - 63	200 - 140 - 200	2.475,90
116VTD633250	63 - 32 - 50	200 - 140 - 200	2.539,50
116VTD633263	63 - 32 - 63	200 - 140 - 200	2.423,65
116VTD632550	63 - 25 - 50	200 - 140 - 200	2.558,60
116VTD632563	63 - 25 - 63	200 - 140 - 200	2.358,55
116VTD632063	63 - 20 - 63	200 - 140 - 200	2.358,55

Trading group:116

ATTENTION: Non stock items!

Pre- insulated bow 90° single



Pre- insulated bow 90° single	PE-Xa (O.D.xs)	PE-Xa (di)	Outer Casing (O.D.)	Arm length L1xL2	Price
Art. No.	mm	DN	mm	mm	€/pcs.
116VWS125125	25x2,3	20	140	1500x1000	310,70
116VWS125132	32x2,9	25	140	1500x1000	336,05
116VWS145140	40x3,7	32	140	1500x1000	382,05
116VWS145150	50x4,6	40	180	1500x1000	420,30
116VWS175163	63x5,8	50	200	1500x1000	547,50
116VWS175175	75x6,8	65	200	1500x1000	683,45
116VWS200190	90x8,2	75	200	1500x1000	969,35
116VWS200110	110x10,0	90	200	1500x1000	1.163,75
116VWS250125	125x11,4	100	250	1500x1000	1.790,85
116VWS250160	160x14,6	130	250	1500x1000	2.087,60

Trading group: 116

ATTENTION: Non stock items!

Pre- insulated bow 90° double



Pre- insulated bow 90° double	PE-Xa (O.D.xs)	PE-Xa (di)	Outer Casing (O.D.)	Arm length L1xL2	Price
Art. No.	mm	DN	mm	mm	€/pcs.
116VWD125220	2-20x1,9	16	140	1500x1000	458,55
116VWD125225	2-25x2,3	20	140	1500x1000	458,55
116VWD145232	2-32x2,9	25	140	1500x1000	563,50
116VWD175240	2-40x3,7	32	180	1500x1000	727,40
116VWD200250	2-50x4,6	40	180	1500x1000	849,40
116VWD200263	2-63x5,8	50	200	1500x1000	1.102,75

Trading group:116

ATTENTION: Non stock items!

Pre- insulated Y- piece

Total length 1,8m



Y- piece single - double	PE-Xa double (O.D.xs)	PE-Xa single (di)	Outer Casing double (O.D.)	Outer Casing single (O.D.)	Price
Art. No.	mm	DN	mm	mm	€/pcs.
116VYA125225	2-25x2,3	25x2,3	140	2x140	1.053,10
116VYA145232	2-32x2,9	32x2,9	140	2x140	1.117,75
116VYA175240	2-40x3,7	40x3,7	180	2x180	1.174,60
116VYA200250	2-50x4,6	50x4,6	180	2x180	1.296,10
116VYA200263	2-63x5,8	63x5,8	200	2x200	1.775,35

Trading group:116

ATTENTION: Non stock items!

Period of time - inner pressure resistance

Allowable working pressure according to DIN 16892/93 based on the flow medium water and are calculated with a safety factor of 1.25 (in accordance with DIN EN ISO 12162). The values are monitored by long-term studies and tested and confirmed by independent test institutes in different countries. The maximum operating temperature is set at 95°C, but a temporary overheating (malfunction temperature) of 110°C is taken into account. The pressure and temperature limits of the pipes depends on the combination of pressure, temperature and time. These technical data are determined in accordance with DIN 16892/93 and can only give a general statement on the long-term rupture strength, because the maximum temperature and pressure in the concrete application can vary widely.

Long-term behavior in response to temperature and pressure:

average working temperature °C	Working pressure (SDR11)	
	bar	years of operation
40	11,9	50
50	10,6	50
60	9,5	50
70	8,5	50
80	7,6	25
90	6,9	15

average working temperature °C	Working pressure (SDR 7.4)	
	bar	years of operation
40	18,9	50
50	16,8	50
60	15,0	50
70	13,4	50
80	12,1	25
90	11,0	15

Installation time - pipe

The installation time is highly dependant on local conditions. Obstacles, use of tools and weather can have a significant impact on the installation.



Outer Casing (O.D.)	Time*	Number of workers
mm	min/100m	
Single		
125	40	3
145	50	3
175	60	4
200	90	5
240	100	5
250	120	6
Double		
125	40	3
145	50	3
175	60	4
200	75	4
240	100	5

* All installation times are approximate and refer to 100 m pipe. Transport and digging not included.

Installation time - accessories



Accessories	Time*	Number of workers
	min	
Terminal connections PE-X/PE-X up to O.D. 63	30	1
Terminal connections PE-X/PE-X O.D. 75 to O.D. 110	40	1
Terminal connections PE-X/PE-X O.D. 125 to O.D. 160	50	2
Tees PE-X up to O.D. 63	60	1
Tees PE-X O.D. 75 and O.D. 110	80	1
Tees PE-X O.D. 75 and O.D. 110	120	2
I-Shroud set 125–250	40	1
T-Shroud set 125–250	60	2
Heat shrink caps Ø 125–250 mm	30	1

* All installation times are approximate.

Coil sizes



Outer Casing (O.D.)	Coil- Dimension										
	25 m		50 m		75 m		100 m		max. coil dimension		
mm	W (m)	D (m)	W (m)	D (m)	W (m)	D (m)	W (m)	D (m)	Length (m)	W (m)	D (m)
125	0,3	2,1	0,4	2,3	0,5	2,3	0,6	2,3	260	1,1	2,5
145	0,3	2,2	0,5	2,2	0,7	2,2	1,1	2,2	240	1,2	2,7
175	0,4	2,3	0,6	2,5	1,0	2,4	1,2	2,4	150	1,2	2,7
200	0,4	2,5	0,7	2,5	1,0	2,5	1,2	2,5	100	1,2	2,5
240	0,8	2,3	1,2	2,3	1,2	2,7	-	-	85	1,2	2,7
250	12m bars										

Groundwork and laying of the pipe



AustroPUR pipes are laid in trenches in the ground.

The following guidelines should be followed during pipe installation:

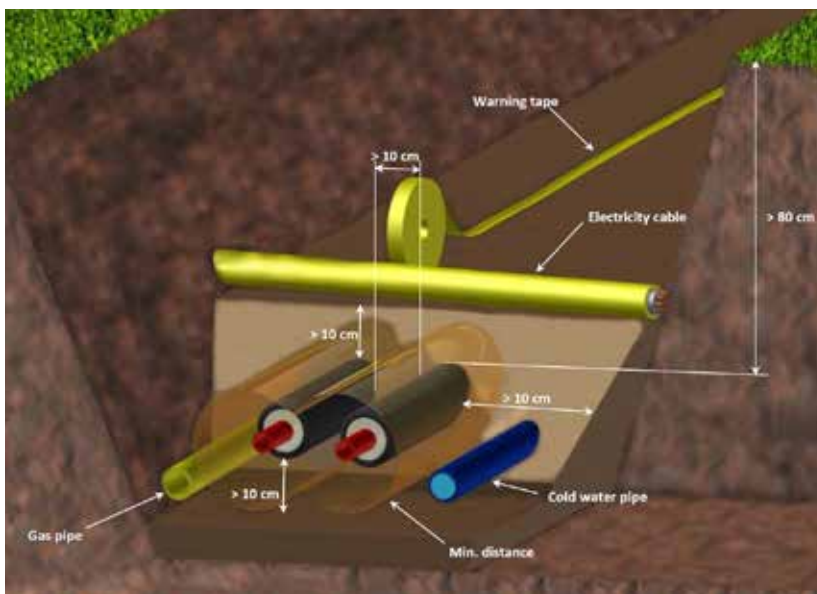
- Lay the pipes in a bed of sand (min. 10 cm); grain size 0-4mm.
- Avoid damaging the casing, remove sharp objects from the trench.
- Always grasp the transport pipe and not the outer casing.
- Only use pulling and lift assistance which does not harm the outer casing.
- Keep to the stated bending radiuses.
- Lay the line in a serpentine course.
- The code of good craftsmanship for installing underground pipes must be observed. Read our installation instructions.
- Sketch how and where the pipe network runs on a plan (including branches and connections), this plan should be kept in your records.



If possible put the soil on one side of the trench. The following steps can be performed from the other side:

- Position the coil alongside the trench.
- Remove the packaging foil.
- Place the end of the pipe in position.
- Cut the straps layer after layer during the roll-off.
- Roll the pipe alongside or straight into the trench.
- Apply the rubber end caps or shrink caps.
- Connect your pipes with couplings.
- Conduct the pressure test - fill in the report
- Fill the trench with the first sand layer (min 10 cm).
- Apply the warning tape
- Fill in the trench with the soil from the side.

Our pre-insulated pipes as well as our longitudinal, elbow- and T-insulation kits are suitable for the stress caused by heavy goods vehicles SLW 60 under defined installation conditions according to ATV DVWK-A127. The laying of the pipe must be carried out in accordance with the currently applicable guidelines DWA-A127 for underground pipes.



Minimum distance from crossing pipes:	
Line Type	Minimum distance
1 kV, signal, measuring cables	0,3 m
10-kV- or a 30-kV- cable	0,6 m
Several 30 kV cables or cable >60 kV	1,0 m
Gas and water pipes	0,2 m

Minimum distance for parallel pipes:		
Line Type	Minimum distance for parallel lines	
	< 5 m	> 5 m
1 kV, signal, measuring cables	0,3 m	0,3 m
10-kV- or a 30-kV- cable	0,6 m	0,7 m
Several 30 kV cables or cable >60 kV	1,0 m	1,5 m
Gas and water pipes	0,5 m	0,5 m

Further installation guidelines you will find in our technical manual.

PRESSURE LOSS

		5 (K)	7 (K)	10 (K)	15 (K)	20 (K)	25 (K)	30 (K)	40 (K)		20 x 1,9	25 x 2,3	32 x 2,9	40 x 3,7	50 x 4,6	63 x 5,8	75 x 6,8	90 x 8,2	
kg/h at H ₂ O 70°C	ℓ/sec at H ₂ O 70°C	kW (at the several Temp. difference in Kelvin z.B.: 20 (K) = 80 / 60°C, TM = 70°C) 1 [ℓ / sec] x 3,6 = 1 [m³ / h]								Pressure loss Flow speed. (at H ₂ O 70°C)	O.D. (Outside Diameter PE-Xa carrier pipe times wallthickness SDR11 = 6 bar bei 95°C) 100.000 Pa = 1 bar								
43	0,012	0,25	0,35	0,5	0,75	1	1,25	1,5	2	Pa/m m/sec	5 0,06	2 0,04							
107	0,031	0,625	0,875	1,25	1,875	2,5	3,125	3,75	5	Pa/m m/sec	24 0,15	8 0,09							
215	0,061	1,25	1,75	2,5	3,75	5	6,25	7,5	10	Pa/m m/sec	80 0,30	27 0,19	8 0,11						
430	0,122	2,5	3,5	5	7,5	10	12,5	15	20	Pa/m m/sec	273 0,59	90 0,37	27 0,23	10 0,15					
644	0,183	3,75	5,25	7,5	11,25	15	18,75	22,5	30	Pa/m m/sec	565 0,89	185 0,56	56 0,34	20 0,22					
859	0,244	5	7	10	15	20	25	30	40	Pa/m m/sec	952 1,18	310 0,75	93 0,45	32 0,29	11 0,19				
1.074	0,305	6,25	8,75	12,5	18,75	25	31,25	37,5	50	Pa/m m/sec	1432 1,48	465 0,93	138 0,57	48 0,37	16 0,23				
1.289	0,366	7,5	10,5	15	22,5	30	37,5	45	60	Pa/m m/sec		647 1,12	192 0,68	67 0,44	23 0,28				
1.504	0,427	8,75	12,25	17,5	26,25	35	43,75	52,5	70	Pa/m m/sec		858 1,31	254 0,79	88 0,51	30 0,33				
1.718	0,488	10	14	20	30	40	50	60	80	Pa/m m/sec		1096 1,49	323 0,91	112 0,58	38 0,37	13 0,24			
1.933	0,549	11,25	15,75	22,5	33,75	45	56,25	67,5	90	Pa/m m/sec			400 1,02	139 0,66	47 0,42	15 0,26			
2.148	0,610	12,5	17,5	25	37,5	50	62,5	75	100	Pa/m m/sec			485 1,13	168 0,73	57 0,47	19 0,29			
2.363	0,671	13,75	19,25	27,5	41,25	55	68,75	82,5	110	Pa/m m/sec			577 1,24	199 0,80	67 0,51	22 0,32			
2.578	0,732	15	21	30	45	60	75	90	120	Pa/m m/sec			677 1,36	233 0,88	79 0,56	26 0,35			
2.792	0,793	16,25	22,75	32,5	48,75	65	81,25	97,5	130	Pa/m m/sec			785 1,47	270 0,95	91 0,61	30 0,38			
3.007	0,854	17,5	24,5	35	52,5	70	87,5	105	140	Pa/m m/sec			899 1,58	309 1,02	104 0,65	34 0,41			
3.222	0,915	18,75	26,25	37,5	56,25	75	93,75	112,5	150	Pa/m m/sec			1021 1,70	350 1,10	118 0,70	39 0,44			
3.437	0,976	20	28	40	60	80	100	120	160	Pa/m m/sec				394 1,17	132 0,75	43 0,47	18 0,33		
3.652	1,037	21,25	29,75	42,5	63,75	85	106,25	127,5	170	Pa/m m/sec				441 1,24	148 0,79	48 0,50	20 0,35		
3.866	1,098	22,5	31,5	45	67,5	90	112,5	135	180	Pa/m m/sec				489 1,32	164 0,84	54 0,53	23 0,37		
4.296	1,220	25	35	50	75	100	125	150	200	Pa/m m/sec				594 1,46	199 0,93	65 0,59	27 0,41		
4.726	1,343	27,5	38,5	55	82,5	110	137,5	165	220	Pa/m m/sec				709 1,61	237 1,03	77 0,65	33 0,45		
5.155	1,465	30	42	60	90	120	150	180	240	Pa/m m/sec				833 1,76	277 1,12	90 0,71	38 0,49		
5.585	1,587	32,5	45,5	65	97,5	130	162,5	195	260	Pa/m m/sec				966 1,90	321 1,21	104 0,76	44 0,54		
6.014	1,709	35	49	70	105	140	175	210	280	Pa/m m/sec				1108 2,05	368 1,31	119 0,82	50 0,58		
6.444	1,831	37,5	52,5	75	112,5	150	187,5	225	300	Pa/m m/sec					418 1,40	135 0,88	57 0,62		
6.874	1,953	40	56	80	120	160	200	240	320	Pa/m m/sec					471 1,49	152 0,94	64 0,66	27 0,46	
7.303	2,075	42,5	59,5	85	127,5	170	212,5	255	340	Pa/m m/sec					526 1,59	170 1,00	72 0,70	30 0,49	
7.733	2,197	45	63	90	135	180	225	270	360	Pa/m m/sec					585 1,68	189 1,06	80 0,74	33 0,52	
8.592	2,441	50	70	100	150	200	250	300	400	Pa/m m/sec					711 1,87	229 1,18	96 0,82	40 0,57	
9.666	2,746	56,25	78,75	112,5	168,75	225	281,25	337,5	450	Pa/m m/sec					885 2,10	285 1,32	120 0,93	50 0,65	
10.740	3,051	62,5	87,5	125	187,5	250	312,5	375	500	Pa/m m/sec					1077 2,33	346 1,47	145 1,03	60 0,72	
11.814	3,356	68,75	96,25	137,5	206,25	275	343,75	412,5	550	Pa/m m/sec						412 1,62	173 1,13	71 0,79	
12.888	3,661	75	105	150	225	300	375	450	600	Pa/m m/sec						485 1,76	203 1,24	84 0,86	
13.962	3,966	81,25	113,75	162,5	243,75	325	406,25	487,5	650	Pa/m m/sec						562 1,91	235 1,34	97 0,93	

		5 (K)	7 (K)	10 (K)	15 (K)	20 (K)	25 (K)	30 (K)	40 (K)		63 x 5,8	75 x 6,8	90 x 8,2	110 x 10,0	125 x 11,4	160 x 14,6
kg / h at H ₂ O 70°C	ℓ / sec at H ₂ O 70°C	kW (at the several Temp. difference in Kelvin z.B.: 20 (K) = 80 / 60°C, TM = 70°C) 1 [ℓ / sec] x 3,6 = 1 [m³ / h]								Pressure loss Flow speed. (at H ₂ O 70°C)	O.D. (Outside Diameter PE-Xa carrier pipe times wallthickness SDR11 = 6 bar bei 95°C) 100.000 Pa = 1 bar					
15.036	4,272	87,5	122,5	175	262,5	350	437,5	525	700	Pa/m m/sec	645 2,06	269 1,44	111 1,00	42 0,67	23 0,52	
16.110	4,577	93,75	131,25	187,5	281,25	375	468,75	562,5	750	Pa/m m/sec	734 2,21	306 1,55	126 1,08	47 0,72	26 0,56	
17.184	4,882	100	140	200	300	400	500	600	800	Pa/m m/sec	828 2,35	345 1,65	142 1,15	53 0,77	29 0,60	
18.258	5,187	106,25	148,75	212,5	318,75	425	531,25	637,5	850	Pa/m m/sec	927 2,50	386 1,75	159 1,22	60 0,82	32 0,63	
19.332	5,492	112,5	157,5	225	337,5	450	562,5	675	900	Pa/m m/sec	1032 2,65	429 1,85	176 1,29	66 0,86	36 0,67	
20.406	5,797	118,75	166,25	237,5	356,25	475	593,75	712,5	950	Pa/m m/sec		475 1,96	195 1,36	73 0,91	39 0,71	
21.480	6,102	125	175	250	375	500	625	750	1000	Pa/m m/sec		522 2,06	214 1,43	80 0,96	43 0,74	
22.554	6,407	131,25	183,75	262,5	393,75	525	656,25	787,5	1050	Pa/m m/sec		572 2,16	234 1,51	88 1,01	47 0,78	
23.628	6,713	137,5	192,5	275	412,5	550	687,5	825	1100	Pa/m m/sec		624 2,27	256 1,58	96 1,06	51 0,82	16 0,50
24.702	7,018	143,75	201,25	287,5	431,25	575	718,75	862,5	1150	Pa/m m/sec		678 2,37	278 1,65	104 1,10	56 0,86	17 0,52
25.776	7,323	150	210	300	450	600	750	900	1200	Pa/m m/sec		734 2,47	300 1,72	112 1,15	60 0,89	18 0,54
26.850	7,628	156,25	218,75	312,5	468,75	625	781,25	937,5	1250	Pa/m m/sec		792 2,58	324 1,79	121 1,20	65 0,93	20 0,57
27.924	7,933	162,5	227,5	325	487,5	650	812,5	975	1300	Pa/m m/sec		853 2,68	349 1,86	130 1,25	70 0,97	21 0,59
28.998	8,238	168,75	236,25	337,5	506,25	675	843,75	1012,5	1350	Pa/m m/sec		916 2,78	374 1,94	139 1,29	75 1,00	23 0,61
30.072	8,543	175	245	350	525	700	875	1050	1400	Pa/m m/sec		980 2,89	400 2,01	149 1,34	80 1,04	24 0,64
31.146	8,848	181,25	253,75	362,5	543,75	725	906,25	1087,5	1450	Pa/m m/sec			427 2,08	159 1,39	85 1,08	26 0,66
32.217	9,153	187,5	262,5	375	562,5	750	937,5	1125	1500	Pa/m m/sec			455 2,15	169 1,44	91 1,12	27 0,68
33.294	9,459	193,75	271,25	387,5	581,25	775	968,75	1162,5	1550	Pa/m m/sec			484 2,22	180 1,49	97 1,15	29 0,70
34.368	9,764	200	280	400	600	800	1000	1200	1600	Pa/m m/sec			514 2,29	191 1,53	102 1,19	31 0,73
36.516	10,374	212,5	297,5	425	637,5	850	1062,5	1275	1700	Pa/m m/sec			575 2,44	214 1,63	115 1,26	34 0,77
38.664	10,984	225	315	450	675	900	1125	1350	1800	Pa/m m/sec			640 2,58	237 1,73	127 1,34	38 0,82
40.812	11,594	237,5	332,5	475	712,5	950	1187,5	1425	1900	Pa/m m/sec			709 2,73	263 1,82	141 1,41	42 0,86
42.959	12,205	250	350	500	750	1000	1250	1500	2000	Pa/m m/sec			781 2,87	289 1,92	155 1,49	46 0,91
45.107	12,815	262,5	367,5	525	787,5	1050	1312,5	1575	2100	Pa/m m/sec				317 2,01	169 1,56	51 0,95
47.255	13,425	275	385	550	825	1100	1375	1650	2200	Pa/m m/sec				345 2,11	185 1,64	55 1,00
49.403	14,035	287,5	402,5	575	862,5	1150	1437,5	1725	2300	Pa/m m/sec				375 2,21	201 1,71	60 1,04
51.551	14,646	300	420	600	900	1200	1500	1800	2400	Pa/m m/sec				406 2,30	217 1,79	65 1,09
53.699	15,256	312,5	437,5	625	937,5	1250	1562,5	1875	2500	Pa/m m/sec				439 2,40	234 1,86	70 1,14
55.848	15,866	325	455	650	975	1300	1625	1950	2600	Pa/m m/sec				472 2,49	252 1,93	75 1,18
57.995	16,476	337,5	472,5	675	1012,5	1350	1687,5	2025	2700	Pa/m m/sec				507 2,59	270 2,01	81 1,23
60.143	17,086	350	490	700	1050	1400	1750	2100	2800	Pa/m m/sec					290 2,08	86 1,27
62.291	17,697	362,5	507,5	725	1087,5	1450	1812,5	2175	2900	Pa/m m/sec					309 2,16	92 1,32
64.439	18,307	375	525	750	1125	1500	1875	2250	3000	Pa/m m/sec					329 2,23	98 1,36
66.587	18,917	387,5	542,5	775	1162,5	1550	1937,5	2325	3100	Pa/m m/sec					350 2,31	104 1,41
68.735	19,527	400	560	800	1200	1600	2000	2400	3200	Pa/m m/sec					372 2,38	110 1,45

Max transmissible power
3200 [kW]
at 20[K] Temp. difference.
For further information
pleas contact us.

Pressure Test

The pressure test procedure is obligatory before closing the trench!

Leak-tightness testing with water:

1. Pipes must be accessible and must not be covered.
2. Dismantle safety and counting devices where required and replace with pipe pieces or pipe end stops.
3. Fill pipes from the deepest point of the system, excluding any air, with filtered drinking water. Here the water temperature must match the ambient temperature ($\Delta \vartheta \leq 10 \text{ K}$ ambient temperature to water temperature)
4. Bleed the draw-off points until no air can be determined in the expelled water.
5. Use a pressure testing device with an accuracy of 100 hPa (0.1 bar) for the pressure test.
6. Connect the pressure testing device at the deepest point of the heating network system.
7. Carefully close all draw-off points.
8. Make sure that the temperature remains as constant as possible during the pressure test.
9. Prepare the pressure test record sheet and note the system data.

Pressure test for system with PE-Xa-pipes:

1. Build up the test pressure (= 1.1 x max. operating pressure) slowly in the installation.
2. Maintain the test pressure for 30 minutes. Build up the test pressure again where necessary.
3. Note down the test pressure in the pressure test record after 30 minutes.
4. Verify the leaktightness of the entire installation, particularly the connecting points, by means of a visual inspection.
5. Slowly reduce the test pressure to 0.5 x maximum test pressure and note down the test pressure in the pressure test report.
6. Read the test pressure after 2 hours and note it down in the pressure test record.
7. Verify the leaktightness of the entire installation, particularly the connecting points, by means of a visual inspection.
8. If the test pressure drops away:
 - Carry out another precise visual inspection of the pipes, draw-off points and connecting points.
 - After rectifying the cause of the drop in pressure repeat the pressure test on the system (steps 1-7).
9. If no leaks have been found during the visual inspection the leak-tightness test can be concluded.

Concluding the pressure test with water

Following conclusion of the pressure test:

1. The company that performed the test and the client must confirm the pressure test in the pressure test record.
2. Remove the pressure test device.
3. Re-attach the removed safety and metering equipment.

Pressure test record

1. Project data:

Object: _____ Builder: _____
 Street/No.: _____ ZIP/Place: _____

The filling water is filtered and the pipesystem is without any air.

The allowable working pressure is: _____ bar

Water temperature $\vartheta_W =$ _____ °C Ambient temperature $\vartheta_A =$ _____ °C $\Delta \vartheta = \vartheta_A - \vartheta_W =$ _____ K

2. Pressure test

Step 1:

$\Delta \vartheta \leq 10 \text{ K}$ between ambient temperature and water temperature

Test pressure: _____ bar (1,1 x max. working pressure)

Waiting time: _____ min. (minimum 30 minutes); hold test pressure, repressurise when necessary.

Pressure after 30 min.: _____ bar

The whole installation, specially the connections, are checked and no leaks are detected.

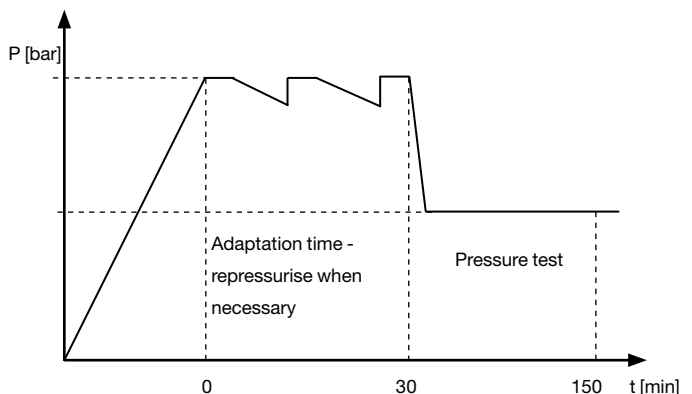
Step 2:

Test pressure: _____ bar (0,5 x max. test pressure)

Test time: _____ min. (120 min.)

Pressure after 120 min.: _____ bar

The whole installation, specially the connections, are checked and no leaks are detected.



3. Check notes

At step 2 of the pressure test no pressure loss at the manometer was detected.

The whole installation is sealed.

4. Confirmation

For the client:

For the Contractor:

Place:

Date:

Attachment:

General Terms and Conditions of Business and Delivery

1. General:

The following „Terms and Conditions“ apply, for all supplies and services delivered by Austroflex Rohr-Isoliersysteme GmbH, Finkensteiner Strasse 7, A-9585 Gödersdorf, Austria (hereinafter referred to as „The Seller“), Austrian Registered Company Number FN 199010 m. All variations must be expressly agreed in writing. Any commitment or supplementary agreement by the Company's employees or independent representatives, which fall outside these Terms and Conditions, require The Seller's written consent in order to be valid. Company sales representatives do not have signing authority. Any other conditions requested by the Purchaser cannot be considered an integral part of the contract, unless these have been accepted by The Seller in writing. All tenders are without obligation with regard to indications of price, quantity, delivery time and availability and only become part of the purchase contract with the written acknowledgement of the order with the expressly contracted points therein confirmed. Verbal or telephone information and explanations shall remain unbinding until they shall have been confirmed in writing. These terms also apply to information in brochures, catalogues, price lists, newsletters, advertisements, etc.; Expressly stated or tacitly implied authorisations, Norm-tests, technical data, properties, application and performance specifications and instructions shall be considered as guaranteed features only if explicitly referred to as such in writing in the contract.

2. Place of Contractual Fulfilment and Court of Jurisdiction:

Unless otherwise agreed, the Place of Fulfilment shall be deemed the loading dock; for the Payment it shall be deemed the Headquarters of The Seller. Only Austrian law shall apply. As to the Court of Jurisdiction the competent commercial court of The Seller shall be deemed the agreed venue.

3. Delivery:

All delivery dates and deadlines given apply only approximately; they are only binding if The Seller indicated them as such in writing. Furthermore, The Seller shall not be held liable for adherence to the delivery deadline in case of impediments due to force majeure, or other unforeseeable extraordinary circumstances outside its control, which affect The Seller or its suppliers, with reference to interruption of operations, strikes, raw material or shortage of goods. If The Seller fails to meet agreed delivery times, the Purchaser has the right to withdraw from the non-fulfilled part of the contract after expiration of a reasonable grace period set by the Purchaser. Equally, in these cases The Seller reserves the right to withdraw from the agreement wholly or in part, with regard to the unfulfilled part of the delivery. Any damages claimed by the Purchaser shall be ruled out. Liability is restricted to wilful intent or gross negligence on the part of The Seller. Partial deliveries are permissible. In the case of call-forward orders, the delivery time begins on the next working day after the goods have been called forward upon receipt. (Mon.-Fri.). For transport- and production-related technical reasons The Seller reserves the right to an excess or short delivery of up to 5 % of the quantity ordered. If the Purchaser does not take delivery of the goods after expiration of a reasonable grace period, The Seller is entitled to withdraw from the contract and to claim damages due to non-fulfilment. Return shipments are only admissible after permission has been obtained from The Seller, a handling fee of 15% shall apply and the Purchaser shall assume the freight costs. Each return shall only be accepted when accompanied by the return coupon confirmation issued by Austroflex Rohr-Isoliersysteme GmbH. Special or custom-made products are non-returnable.

4. Shipping, Transfer of Risk, Non-acceptance

Unless otherwise agreed, delivery is made ex-work at the contract Purchaser's risk and expense. The risk shall pass to the Purchaser upon the transfer of the goods to the first carrier (post, railway, transport company etc.). (This shall also apply to deliveries for which The Seller has agreed to pay for the transport of the goods.). It shall be the duty of the Purchaser, his receiver or designated agent to check out and exonerate the transport vehicle at the place of destination. Pallets, which are not explicitly declared as non-returnable, must be either replaced immediately upon delivery or returned to The Seller undamaged, at the expense of the Purchaser within two weeks. Otherwise, the costs will be charged to the Purchaser at current market prices. Similarly, the Purchaser is liable for all additional costs incurred for any casual reason (such as demurrage, truck demurrage and the like). Unless otherwise explicitly agreed in writing, delivery does not include unloading. Trucks organised by The Seller shall be unloaded within a maximum of two hours of arrival at the unloading site. The receiver of the delivery will be billed for any resulting down time and other costs based on the Freight Forwarder's bill. If the fulfilment of the contract is prevented as the fault of the Purchaser and/or his vicarious agent, The Seller may either claim financial compensation due to non-fulfilment or withdraw from the contract. Any additional expenses (storage charges, transport, distress sale) can be added to the invoiced amount.

5. Warranty - Complaints - Deadlines:

The condition of the goods on arrival at the delivery point is fundamental. The Purchaser shall report immediately in writing to the Seller open defects, specifying them on the delivery note or waybill. The Purchaser expressly undertakes to inspect the delivered product for its suitability. In case of defective goods or incorrect delivery the Purchaser shall not in any way transform, adapt or resell the goods. The Seller reserves the right to inspect the products before processing. Otherwise all implied warranties are excluded. The shipper or carrier is liable for damages or losses incurred during transit. Prerequisite for a warranty is compliance with Seller's written instructions concerning storage, processing, etc. and/

or compliance with the guidelines and their relevant standards and regulations established. The Seller's processing instructions are in accordance with present knowledge and experience. Under no circumstances do they constitute a legal guarantee and do not form part of a sale's contract. Specific conditions with regard to building type, technology and regulations must always be taken into consideration when utilising the purchased items. Warranty in consulting is generally excluded.

6. Liability:

Liability for damage is limited in cases of deliberate or gross negligence. The warranty covers only damage limitation (delivery of spare parts) and is limited to the amount of the order. The Seller is not liable for the fulfilment of specific rules or for import licenses and authorisations in Austria, unless they were expressly agreed by contract. The duty of replacement is excluded for damage resulting from product liability law and also product liability claims which might be derived from other provisions. The Purchaser is entitled to compensation, particularly for non-fulfilment, specific contract violation or damages resulting from defects, only in the case of gross negligence or intent. Unless expressly acknowledged by The Seller in writing, claims for damages shall lapse six months after delivery.

7. Prices and Payment:

Prices are subject to change without notice and are based on the current price list and/or the order. The prices are, unless expressly agreed otherwise, "ex works" from The Seller, excluding freight, customs, and packaging, plus any statutory value added tax (VAT) due. Should relevant prices vary considerably after posting of the tender or confirmation of the order prior to delivery, customer and supplier shall consult each other and agree to a price adjustment. In the case of follow-up orders The Seller shall not be bound by previous prices. Payment shall be made within 30 days after the invoice date, net without any deductions of any kind, and net of bank costs and fees for the recipient (Seller). The Seller grants a 3 % discount when payment is made within eight days of the invoice date. Discounts or rebates shall be granted only if there are no other outstanding claims against the Purchaser. Terms of payment agreed verbally or over the phone shall not apply to new customers when a credit check does not support a line of credit. In this case, the delivery will only be on receipt of payment by cheque or cash on receipt of the goods. In the case of non-payment, The Seller is entitled to charge interest for delayed payment at the rate of 5% above the discount rate of the Austrian National Bank and to claim additional costs of eleven (11) Euro for each reminder sent. Counterclaims cannot not be compensated with the invoice amount. In case of change in currency values, the currency amount on the day of the invoice shall be accounted. Bills of exchange shall be accepted only with a waiver of recourse by the involved bank(s) and then only as a payment on condition that all the costs associated with the realisation of a bill of exchange shall be borne by the Purchaser. If after successful delivery or part delivery a basic deterioration in the Purchaser's financial circumstances becomes known, payment becomes due immediately. Agreed bonuses cannot compensate open claims against The Seller, where the Purchaser is in arrears with payments for previous deliveries.

8. Retention of Title

The goods are delivered exclusively under proprietary rights (retention of title) and pass into the property of the Purchaser only after payment in full. In the event of processing the said goods either into a new object or by combining it with a new object, The Seller acquires co-ownership of the new product or of the main product as long as the relevant products are subject to retention of title. Should the Purchaser sell the reserved goods on credit, the resulting claims for the purchase price are understood as relinquished to The Seller from the moment they occur without the need for a transfer deed. With payment by means of a bill of exchange the agreed retention of title remains, until the bill of exchange has been honoured in favour of The Seller. The Purchaser shall not be entitled to pledge goods subject to reservation of title, nor transfer them as security.

9. Severability

Should one or more provisions of these general terms and conditions be partly or fully void, the remaining terms and conditions shall remain in full force and effect.

10. Data protection

The shop assistant extinguishes all personal data which were processed exclusively on the basis of and to the fulfilment of the concrete contract or were stored, at the end of the tax-juridical and enterprise-juridical safekeeping duties (BAO, UGB), unless, there is a longer period for safekeeping according to the regulations of another federal law. Personal data are processed exclusively for the purpose of the order treatment and contract fulfilment. A use going out it, as for example for commercial purposes, does not occur. Because the data processing is based within the scope of the described order fulfilment on a legal obligation, no data protection-juridical contradiction right exists. The buyer expressly agrees with the fact that the shop assistant processes the buyer and/or his enterprise to concerning personal data (because name, address, e-mail, phone number) in this respect, leaves or transmits (isd of data protection act) when this is necessary to the fulfilment of the contract and which to us in the connection of the buyer to transferred duties and suitable or arises from legal obligations of the company (e.g. safekeeping duty of calculations etc.).

Austroflex - the expert for flexible insulated pipe systems and insulation solutions

ABOUT AUSTROFLEX:

In 1985, Austroflex was founded and began producing technical insulation and heating products. In the mid-90's Austroflex started the production of solar connection systems. The company headquarters lay on a total area of 25.000m² in Gödersdorf, Villach. In addition to a wide range of their own products, the company is also an importer of some specialized products.

SERVICE:

Thanks to over 30 years of experience in transportation and preservation of thermal or cooling energy we are able to support our clients in solving general as well as individual problems. This includes all variations of

- Calculations regarding heat loss, insulation thickness and dimensions
- Training for technology, inside sales or marketing
- Advising on projects to be implemented

SELF-UNDERSTANDING:

We at Austroflex are a partner for industry and wholesale while following a three-stage channel of distribution. Thanks to high innovation and flexibility we are able to meet the highest demands of our customers.



Austroflex[®]
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