

Building Services

	<p>Planning and Calculation Assistance</p> <p>Page 2</p>		<p>Pipe Marking System</p> <p>Page 78</p>
	<p>Pipe Clamps, SML Joining Technique</p> <p>Page 7</p>		<p>FORLEN Pipe Insulation and Lagging</p> <p>Page 80</p>
	<p>Mounting Rail System, Consoles and Accessories</p> <p>Page 22</p>		<p>Perforated Tapes, Mounting Clamps, Countersunk Nails</p>
	<p>Mounting Rail System STRUT</p> <p>Page 49</p>		<p>Sealing and Soldering Material</p> <p>Page 126</p>
	<p>Sliding Connectors and Carriages</p> <p>Page 65</p>		<p>Sound-proofing Profiles for Sanitary Ware</p> <p>Page 135</p>
	<p>Profiled Sheeting Fixture, Ventilation Assembly</p>		<p>Installation Accessories, Floor Heating Accessories</p> <p>Page 136</p>
	<p>Ground and Assembly Panels</p>		<p>Fire Protection</p> <p>Page 149</p>
	<p>Solar Fixtures Stainless Steel</p> <p>Page 74</p>		<p>Smoke Detectors</p> <p>Page 183</p>

Measurements and Weights of Uninsulated and Thermally Insulated Piping

General information about piping					Pipe weight			Weight of pipe with insulation kg/m						Mounting distances in m	
Pipe norm	Nominal size		OD ¹	ID ²	Empty pipe kg/m	Water-filled l/m	Full pipe kg/m	Cold rubber		Heating rubber		Miner. wool jack.		acc. to DIN 1988 part 2	Recommendation
	DN	Inches	mm	mm				13 mm	19 mm	ENEV ³ 50 %	ENEV ³ 100 %	ENEV ³ 50 %	ENEV ³ 100 %		
Threaded pipes DIN EN 10255 (DIN 2440)	6	1/8	10,2	6,2	0,41	0,03	0,44	0,50	0,54	0,48	0,55	0,49	0,59	1,25	0,75
	8	1/4	13,5	8,8	0,65	0,06	0,71	0,77	0,83	0,75	0,84	0,77	0,88	1,50	0,75
	10	3/8	17,2	12,5	0,86	0,12	0,98	1,05	1,11	1,03	1,12	1,05	1,17	2,25	1,20
	15	1/2	21,3	16,0	1,22	0,20	1,42	1,50	1,56	1,48	1,58	1,50	1,63	2,75	1,50
	20	3/4	26,9	21,6	1,59	0,37	1,96	2,06	2,12	2,03	2,14	2,05	2,20	3,00	2,00
	25	1	33,7	27,2	2,45	0,58	3,03	3,14	3,22	3,17	3,39	3,21	3,51	3,50	2,50
	32	1 1/4	42,4	35,9	3,14	1,01	4,15	4,29	4,37	4,35	4,68	4,42	4,86	3,75	2,75
	40	1 1/2	48,3	41,8	3,62	1,37	4,99	5,14	5,23	5,26	5,70	5,36	5,94	4,25	3,25
	50	2	60,3	53,0	5,11	2,21	7,32	7,50	7,60	7,76	8,45	7,91	8,83	4,75	4,00
	65	2 1/2	76,1	68,8	6,53	3,72	10,25	10,47	10,59	10,98	12,14	11,23	12,77	5,50	4,50
	80	3	88,9	80,8	8,49	5,13	13,62	13,87	14,01	14,62	16,21	14,96	17,08	6,00	5,00
	100	4	114,3	105,3	12,21	8,71	20,92	21,23	21,40	22,47	24,96	22,98	26,31	6,00	5,50
	125	5	139,7	130,0	16,16	13,27	29,43	29,80	30,00	31,22	33,95	31,81	35,45	6,00	5,75
150	6	165,1	155,4	19,20	18,97	38,17	38,61	38,83	40,20	43,17	40,87	44,83	6,00	6,00	
Smoke pipe, seamless DIN EN 10220 (DIN 2448)	6	-	10,2	7,0	0,34	0,04	0,38	0,44	0,48	0,42	0,49	0,43	0,53	1,25	0,75
	8	-	13,5	9,9	0,52	0,08	0,60	0,66	0,72	0,64	0,73	0,66	0,77	1,50	0,75
	10	-	17,2	13,6	0,68	0,15	0,83	0,90	0,96	0,88	0,97	0,90	1,02	2,25	1,00
	15	-	21,3	17,3	0,95	0,24	1,19	1,27	1,33	1,25	1,35	1,27	1,40	2,75	1,25
	20	-	26,9	22,3	1,40	0,39	1,79	1,89	1,95	1,91	2,11	1,95	2,22	3,00	1,50
	25	-	33,7	28,5	2,00	0,64	2,64	2,75	2,83	2,78	3,00	2,82	3,12	3,50	1,75
	32	-	42,4	37,2	2,56	1,09	3,65	3,79	3,87	3,87	4,20	3,94	4,39	3,75	2,25
	40	-	48,3	43,1	2,94	1,46	4,40	4,55	4,64	4,69	5,14	4,79	5,39	4,25	2,50
	50	-	60,3	54,5	4,11	2,33	6,44	6,62	6,72	6,91	7,64	7,06	8,03	4,75	3,25
	65	-	76,1	70,3	5,25	3,88	9,13	9,35	9,47	9,86	11,06	10,11	11,70	5,50	3,50
	80	-	88,9	82,5	6,78	5,35	12,13	12,38	12,52	13,17	14,82	13,51	15,72	6,00	4,25
	100	-	114,3	107,1	9,85	9,01	18,86	19,17	19,34	20,41	22,90	20,92	24,25	6,00	4,50
	125	-	139,7	131,7	13,41	13,62	27,03	27,40	27,60	28,82	31,55	29,41	33,05	6,00	5,00
	150	-	168,3	159,3	18,21	19,93	38,14	38,58	38,81	40,20	43,20	40,88	44,88	6,00	5,75
	200	-	219,3	207,5	31,11	33,82	64,93	65,50	65,78	67,47	70,95	68,31	72,95	6,00	6,00
250	-	273,0	260,4	41,52	53,26	94,78	95,48	95,83	97,82	101,81	98,84	104,15	6,00	6,00	
300	-	323,9	309,7	55,58	75,33	130,91	131,74	132,14	134,43	138,90	135,61	141,56	6,00	6,00	
350	-	355,6	339,6	68,71	90,58	159,29	160,19	160,63	163,11	167,88	164,39	170,74	6,00	6,00	
400	-	406,4	388,8	86,45	118,73	205,18	206,21	206,70	209,48	214,73	210,92	217,91	6,00	6,00	
500	-	508,0	486,0	135,08	185,51	320,59	321,87	322,48	325,85	332,05	327,60	335,87	6,00	6,00	
Copper pipe DIN EN 1057	10	-	10,0	8,0	0,25	0,05	0,30	0,36	0,40	0,34	0,41	0,35	0,45	1,00	0,75
	12	-	12,0	10,0	0,31	0,08	0,39	0,45	0,50	0,43	0,51	0,45	0,55	1,25	1,00
	15	-	15,0	13,0	0,39	0,13	0,52	0,59	0,64	0,57	0,65	0,58	0,70	1,25	1,25
	18	-	18,0	16,0	0,48	0,20	0,68	0,76	0,81	0,73	0,82	0,75	0,87	1,50	1,50
	22	-	22,0	20,0	0,59	0,31	0,90	0,99	1,05	0,96	1,06	0,98	1,11	2,00	1,75
	28	-	28,0	25,0	1,12	0,49	1,61	1,71	1,78	1,73	1,94	1,77	2,05	2,25	2,00
	35	-	35,0	32,0	1,41	0,80	2,21	2,33	2,40	2,35	2,58	2,40	2,70	2,75	2,25
	42	-	42,0	39,0	1,71	1,19	2,90	3,03	3,12	3,13	3,50	3,21	3,69	3,00	2,50
	54	-	54,0	50,0	2,92	1,96	4,88	5,04	5,14	5,25	5,86	5,38	6,19	3,50	2,75
	64	-	64,0	60,0	3,49	2,83	6,32	6,51	6,62	6,85	7,72	7,03	8,19	4,00	3,00
	76	-	76,1	72,1	4,17	4,08	8,25	8,47	8,59	9,01	10,26	9,26	10,93	4,25	3,50
	89	-	88,9	84,9	4,89	5,66	10,55	10,80	10,94	11,62	13,34	11,98	14,26	4,75	4,00
	108	-	108,0	103,0	7,42	8,33	15,75	16,05	16,20	17,24	19,67	17,74	20,98	5,00	4,25
	133	-	133,0	127,0	10,97	12,67	23,64	24,00	24,18	25,36	28,03	25,94	29,50	5,00	4,50
	159	-	159,0	153,0	13,16	18,39	31,55	31,97	32,19	33,52	36,43	34,18	38,06	5,00	4,50

OD¹ = outside diameter

ID² = inside diameter

ENEV³ = (German) Energy Saving Regulation

Measurements and Weights of Uninsulated and Thermally Insulated Piping

General information about piping					Pipe weight			Weight of pipe with insulation kg/m						Mounting distances in m	
Pipe norm	Nominal size		OD ¹	ID ²	Empty pipe kg/m	Water-filled l/m	Full pipe kg/m	Cold rubber		Heating rubber.		Miner. wool jack.		acc. to DIN 1988 part 2	Recommendation
	DN	Inches	mm	mm				13 mm	19 mm	ENEV ³ 50 %	ENEV ³ 100 %	ENEV ³ 50 %	ENEV ³ 100 %		
Stainl. st. pipes DIN EN 1127 (DIN 2463)	15	-	15,0	13,0	0,35	0,13	0,48	0,55	0,60	0,53	0,61	0,54	0,66	1,25	1,25
	18	-	18,0	16,0	0,42	0,20	0,62	0,70	0,75	0,67	0,76	0,69	0,81	1,50	1,50
	22	-	22,0	19,6	0,62	0,30	0,92	1,01	1,07	0,98	1,08	1,00	1,13	2,00	1,75
	28	-	28,0	25,6	0,80	0,51	1,31	1,41	1,48	1,43	1,64	1,47	1,75	2,25	2,00
	35	-	35,0	32,0	1,24	0,80	2,04	2,16	2,23	2,18	2,41	2,23	2,53	2,75	2,25
	42	-	42,0	39,0	1,50	1,19	2,69	2,82	2,91	2,92	3,29	3,00	3,48	3,00	2,50
	54	-	54,0	51,0	1,95	2,04	3,99	4,15	4,25	4,38	5,00	4,51	5,34	3,50	2,75
	76	-	76,1	72,1	3,67	4,08	7,75	7,97	8,09	8,51	9,76	8,76	10,43	4,25	3,50
	89	-	88,9	84,9	4,30	5,66	9,96	10,21	10,35	11,03	12,75	11,39	13,67	4,75	4,00
	108	-	108,0	104,0	5,25	8,49	13,74	14,04	14,19	15,23	17,66	15,73	18,97	5,00	4,25
	133	-	133,0	127,0	9,65	12,67	22,32	22,68	22,86	24,04	26,71	24,62	28,18	5,00	4,50
159	-	159,0	153,0	11,59	18,39	29,98	30,40	30,62	31,95	34,86	32,61	36,49	5,00	4,50	
Mapress VA 1.4521	10	-	12,0	10,0	0,34	0,08	0,42	0,48	0,53	0,46	0,54	0,48	0,58	-	1,00
	12	-	15,0	13,0	0,44	0,13	0,57	0,64	0,69	0,62	0,70	0,63	0,75	-	1,00
	15	-	18,0	16,0	0,54	0,20	0,74	0,82	0,87	0,79	0,88	0,81	0,93	-	1,50
	20	-	22,0	19,6	0,83	0,30	1,13	1,22	1,28	1,19	1,29	1,21	1,34	-	1,50
	25	-	28,0	25,6	1,05	0,51	1,56	1,66	1,73	1,68	1,89	1,72	2,00	-	2,00
	32	-	35,0	32,0	1,32	0,80	2,21	2,24	2,31	2,26	2,49	2,31	2,61	-	2,50
	40	-	42,0	39,0	1,62	1,19	2,81	2,94	3,03	3,04	3,41	3,12	3,60	-	3,00
	50	-	54,0	51,0	2,10	2,04	4,14	4,30	4,40	4,53	5,15	4,66	5,49	-	3,00
JRG Sanipex MT	12	-	16,0	11,5	0,14	0,10	0,24	0,31	0,37	0,29	0,38	0,31	0,42	-	1,00
	15	-	20,0	15,0	0,19	0,18	0,37	0,45	0,51	0,43	0,52	0,45	0,57	-	1,00
	20	-	26,0	20,0	0,29	0,31	0,60	0,70	0,76	0,67	0,77	0,69	0,83	-	1,50
	25	-	32,0	26,0	0,40	0,53	0,93	1,04	1,11	1,06	1,28	1,11	1,40	-	1,50
	32	-	40,0	33,0	0,61	0,86	1,47	1,60	1,68	1,63	1,87	1,68	2,00	-	2,00
	40	-	50,0	42,0	0,86	1,39	2,25	2,40	2,50	2,53	2,98	2,62	3,22	-	2,00
Mepla composite pipes	12	-	16,0	11,5	0,14	0,10	0,24	0,31	0,37	0,29	0,38	0,31	0,42	-	1,00
	15	-	20,0	15,0	0,19	0,18	0,37	0,45	0,51	0,43	0,52	0,45	0,57	-	1,00
	20	-	26,0	20,0	0,30	0,31	0,61	0,71	0,77	0,68	0,78	0,70	0,84	-	1,50
	25	-	32,0	26,0	0,42	0,53	0,95	1,06	1,13	1,08	1,30	1,13	1,42	-	1,50
	32	-	40,0	33,0	0,60	0,86	1,46	1,59	1,67	1,62	1,86	1,67	1,99	-	2,00
	40	-	50,0	42,0	0,84	1,39	2,23	2,38	2,48	2,51	2,96	2,60	3,20	-	2,00
	50	-	63,0	54,0	1,10	2,29	3,39	3,58	3,68	3,85	4,58	4,00	4,98	-	2,50
	65	-	75,0	65,8	1,36	3,40	4,76	4,98	5,10	5,43	6,51	5,66	7,10	-	2,50

OD¹ = outside diameter

ID² = inside diameter

ENEV³ = (German) Energy Saving Regulation

Drain Pipes Measurements and Weights

General information about piping				Pipe weight			Supporting
Pipe norm	Nom. size	AD ¹	ID ²	Empty pipe kg/m	Water-filled l/m	Full pipe kg/m	Widths in m
	DN	mm	mm				
CAST IRON/SML DIN 19522	40	48,0	42,0	3,07	1,39	4,46	1,5*
	50	58,0	51,0	4,34	2,04	6,38	1,5*
	70	78,0	71,0	5,94	3,96	9,90	1,5*
	80	83,0	76,0	6,34	4,54	10,88	1,5*
	100	110,0	103,0	8,49	8,33	16,82	1,5*
	125	135,0	127,0	11,93	12,67	24,60	1,5*
	150	160,0	152,0	14,21	18,15	32,36	1,5*
	200	210,0	200,0	23,35	31,42	54,77	1,5*
	250	274,0	263,0	33,64	54,33	87,97	1,5*
	300	326,0	314,0	43,73	77,44	121,17	1,5*
	400	429,0	412,8	77,65	133,83	211,48	1,5*
	500	532,0	514,0	107,21	207,50	314,71	1,5*
Geberit drain pipe PE	32	32,0	26,0	0,28	0,53	0,81	0,32
	40	40,0	34,0	0,36	0,91	1,27	0,40
	40	48,0	42,0	0,44	1,39	1,83	0,48
	50	50,0	44,0	0,46	1,52	1,98	0,50
	56	56,0	50,0	0,51	1,96	2,47	0,56
	60	63,0	57,0	0,58	2,55	3,13	0,63
	70	75,0	69,0	0,70	3,74	4,44	0,75
	80	90,0	83,0	0,98	5,41	6,39	0,90
	100	110,0	101,4	1,47	8,08	9,55	1,10
	125	125,0	115,2	1,90	10,42	12,32	1,25
	150	160,0	147,6	3,08	17,11	20,19	1,60
	200	200,0	187,6	3,88	27,64	31,52	2,00
	250	250,0	234,4	6,10	43,15	49,25	2,50
	300	315,0	295,4	9,66	68,53	78,19	3,00
Geberit Silent	56	56,0	49,6	0,90	1,93	2,83	0,55
	60	63,0	56,6	1,02	2,52	3,54	0,65
	70	75,0	67,8	1,37	3,61	4,98	0,75
	90	90,0	79,0	2,48	4,90	7,38	0,90
	100	110,0	98,0	3,33	7,54	10,87	1,10
	125	135,0	123,0	4,13	11,88	16,01	1,35
PVC hard	50	50,0	46,4	0,38	1,69	2,07	0,50
	60	63,0	59,2	0,51	2,75	3,26	0,60
	70	75,0	71,2	0,61	3,98	4,59	0,75
	100	110,0	104,6	1,27	8,59	9,86	1,10
	125	125,0	118,8	1,66	11,08	12,74	1,25
GA DIN 19500	150	160,0	152,2	2,68	18,19	20,87	1,60
	50	60,0	-	5,19	2,21	7,39	0,60
	70	80,0	-	7,02	4,19	11,21	0,80
	100	112,0	-	11,33	8,49	19,83	1,15
	125	137,0	-	13,96	13,07	27,03	1,35
	150	162,0	-	20,59	18,15	38,74	1,60
Loro-X steel drain pipe	200	212,0	-	32,42	31,42	63,84	2,00
	40	42,0	-	1,50	1,20	2,70	1,5*
	50	53,0	-	2,20	2,00	4,20	1,5*
	70	73,0	-	3,30	3,80	7,10	1,5*
	80	89,0	-	4,10	5,80	9,90	1,5*
	100	102,0	-	5,80	7,50	13,30	1,5*
	125	133,0	-	9,60	12,90	22,50	1,5*
	150	159,0	-	11,50	18,60	30,10	1,5*
	200	219,0	-	21,50	35,70	57,20	1,5*
	250	273,0	-	22,50	56,00	78,50	1,5*
300	324,0	-	25,00	79,40	104,40	1,5*	

AD¹ = outside diameter

ID² = inside diameter

Round DIN 24145 Spiral-seam Pipes Measurements and Weights

Nominal size DN	Outer pipe Ø in mm	Sheet metal thickn.in mm	Empty pipe weight kg/m
71	75	0,4	0,8
80	84	0,4	0,9
90	94	0,4	1,0
100	105	0,6	1,7
112	117	0,6	1,9
125	130	0,6	2,1
140	145	0,6	2,4
150	155	0,6	2,6
160	165	0,6	2,7
180	185	0,6	3,1
200	205	0,6	3,4
224	229	0,6	3,8
250	255	0,6	4,2
280	285	0,6	4,7
300	307	0,8	5,2
315	322	0,8	7,1
355	362	0,8	8,0
400	407	0,8	9,0
450	457	0,8	10,2
500	507	0,8	11,3
560	567	0,8	12,6
600	609	1,0	13,5
630	639	1,0	17,7
710	719	1,0	20,0
800	810	1,0	22,5
900	910	1,0	25,4
1.000	1.012	1,2	34,9
1.120	1.132	1,2	39,1
1.250	1.262	1,2	43,7

Ventilation Ducts Measurements and Weights

Air Duct Weights Without Insulation

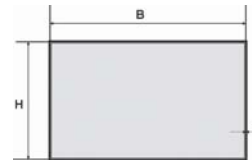
H*W	s = 0,75 mm			s = 0,88 mm						s = 1,0 mm						s = 1,13 mm					s = 1,25 mm					
mm	200	224	250	280	315	355	400	450	500	560	630	710	800	900	1.000	1.120	1.250	1.400	1.600	1.800	2.000	2.240	2.500	2.800	3.150	
200	6,1	6,5	6,9	8,6	9,2	10,0	10,8	11,7	12,6	15,5	16,9	18,6	20,4	22,5	24,5	30,4	33,4	36,9	41,5	46,1	50,7	62,3	68,9	76,5	85,5	
224	-	6,9	7,3	9,1	9,7	10,4	11,2	12,1	13,0	16,0	17,4	19,1	20,9	22,9	25,0	31,0	34,0	37,5	42,1	46,7	51,3	62,9	69,5	77,1	86,1	
250	-	-	7,7	9,5	10,1	10,9	11,7	12,6	13,5	16,5	18,0	19,6	21,4	23,5	25,5	31,6	34,6	38,1	42,7	47,3	51,9	63,5	70,2	77,8	86,7	
280	-	-	-	10,1	10,7	11,4	12,2	13,1	14,0	17,1	18,6	20,2	22,0	24,1	26,1	32,3	35,3	38,7	43,4	48,0	52,6	64,3	70,9	78,6	87,5	
315	-	-	-	-	11,3	12,0	12,8	13,7	14,6	17,9	19,3	20,9	22,8	24,8	26,8	33,1	36,1	39,6	44,2	48,8	53,4	65,2	71,8	79,5	88,4	
355	-	-	-	-	-	12,8	13,6	14,5	15,4	18,7	20,1	21,7	23,6	25,6	27,7	34,0	37,0	40,5	45,1	49,7	54,3	66,2	72,8	80,5	89,4	
400	-	-	-	-	-	-	14,4	15,3	16,2	19,6	21,0	22,7	24,5	26,5	28,6	35,1	38,1	41,5	46,1	50,7	55,4	67,4	74,0	81,6	90,6	
450	-	-	-	-	-	-	-	16,2	17,1	20,6	22,0	23,7	25,5	27,6	29,6	36,2	39,2	42,7	47,3	51,9	56,5	68,6	75,3	82,9	91,8	
500	-	-	-	-	-	-	-	-	18,0	21,6	23,1	24,7	26,5	28,6	30,6	37,4	40,4	43,8	48,4	53,0	57,7	69,9	76,5	84,2	93,1	
560	-	-	-	-	-	-	-	-	-	22,9	24,3	25,9	27,8	29,8	31,8	38,7	41,7	45,2	49,8	54,4	59,0	71,4	78,1	85,7	94,7	
630	-	-	-	-	-	-	-	-	-	-	25,7	27,3	29,2	31,2	33,3	40,4	43,4	46,8	51,4	56,0	60,7	73,2	79,9	87,5	96,4	
710	-	-	-	-	-	-	-	-	-	-	-	29,0	30,8	32,9	34,9	42,2	45,2	48,7	53,3	57,9	62,5	75,3	81,9	89,5	98,5	
800	-	-	-	-	-	-	-	-	-	-	-	-	32,7	34,7	36,7	44,3	47,3	50,7	55,4	60,0	64,6	77,6	84,2	91,8	100,8	
900	-	-	-	-	-	-	-	-	-	-	-	-	-	36,7	38,8	46,6	49,6	53,0	57,7	62,3	67,3	80,1	86,7	94,4	103,3	
1.000	-	-	-	-	-	-	-	-	-	-	-	-	-	40,8	42,9	48,9	51,9	55,4	60,0	64,6	69,2	82,7	89,3	96,9	105,9	
1.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51,7	54,7	58,1	62,7	67,3	72,0	85,7	92,4	100,0	108,9	
1.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57,7	61,1	65,7	70,3	75,0	89,0	95,7	103,3	112,3	
1.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64,4	69,2	73,8	78,4	92,9	99,5	107,2	116,1	
1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73,8	78,4	83,0	98,0	104,6	112,3	121,2	
1.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83,0	87,6	103,1	109,7	117,4	126,3	
2.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92,3	108,2	114,8	122,5	131,4
2.240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114,3	120,9	128,6	137,5
2.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	127,6	135,2	144,1
2.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	142,9	151,8
3.150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160,7

Weight indications in kg/m

Basis for calculation:

Gross density of the air duct: steel sheet metal gal. = 7.850 kg/m³

Weights for flanges and duct reinforcements were calculated based on estimations.



Air Duct Weights With a 40 mm Mineral Fibre Insulation

H*B	s = 0,75 mm			s = 0,88 mm						s = 1,0 mm						s = 1,13 mm					s = 1,25 mm				
mm	200	224	250	280	315	355	400	450	500	560	630	710	800	900	1.000	1.120	1.250	1.400	1.600	1.800	2.000	2.240	2.500	2.800	3.150
200	9,2	9,9	10,3	12,2	13,1	14,0	15,1	16,3	17,6	20,9	22,8	24,9	27,3	30,0	32,7	39,4	43,2	47,7	53,5	59,4	65,3	78,4	86,7	96,2	107,4
224	-	10,4	10,8	12,8	13,6	14,6	15,7	16,9	18,2	21,5	23,4	25,6	28,0	30,6	33,3	40,1	43,9	48,4	54,3	60,1	66,0	79,1	87,4	97,0	108,2
250	-	-	11,4	13,4	14,3	15,3	16,3	17,6	18,8	22,2	24,1	26,2	28,7	31,3	34,0	40,9	44,7	49,1	55,0	60,9	66,8	80,0	88,3	97,8	109,0
280	-	-	-	14,2	15,0	16,0	17,1	18,3	19,5	23,0	24,9	27,1	29,5	32,1	34,8	41,8	45,6	50,0	55,9	61,8	67,7	80,9	89,2	98,8	110,0
315	-	-	-	-	15,9	16,8	17,9	19,1	20,4	24,0	25,8	28,0	30,4	33,1	35,8	42,8	46,6	51,0	56,9	62,8	68,7	82,0	90,3	99,9	111,1
355	-	-	-	-	-	17,8	18,9	20,1	21,3	25,0	26,9	29,1	31,4	34,2	36,8	44,0	47,8	52,2	58,1	64,0	69,9	83,3	91,6	101,2	112,4
400	-	-	-	-	-	-	20,0	21,2	22,4	26,2	28,1	30,3	32,7	35,4	38,0	45,3	49,1	53,5	59,4	65,3	71,2	84,8	93,1	102,6	113,8
450	-	-	-	-	-	-	-	22,4	23,7	27,6	29,5	31,6	34,0	36,7	39,4	46,8	50,6	55,0	60,9	66,8	72,7	86,4	94,7	104,2	115,4
500	-	-	-	-	-	-	-	-	24,9	28,9	30,8	33,0	35,4	38,0	40,7	48,2	52,1	56,5	62,4	68,3	74,2	88,0	96,2	105,8	117,0
560	-	-	-	-	-	-	-	-	-	30,5	32,4	34,6	37,0	39,7	42,3	50,0	53,8	58,3	64,2	70,1	75,9	89,9	98,2	107,7	118,9
630	-	-	-	-	-	-	-	-	-	-	34,3	36,4	38,9	41,5	44,2	52,1	55,9	60,3	66,2	72,1	78,0	92,1	101,4	110,0	121,1
710	-	-	-	-	-	-	-	-	-	-	-	38,6	41,0	43,7	46,4	54,4	58,3	62,7	68,6	74,5	80,4	94,7	103,0	112,5	123,7
800	-	-	-	-	-	-	-	-	-	-	-	-	43,4	46,1	48,8	57,1	60,9	65,3	71,2	77,1	83,0	97,5	105,8	115,4	126,6
900	-	-	-	-	-	-	-	-	-	-	-	-	-	48,8	51,5	60,0	63,9	68,3	74,2	80,1	86,0	100,7	109,0	118,6	129,8
1.000	-	-	-	-	-	-	-	-	-	-	-	-	-	54,1	56,8	63,0	66,8	71,2	77,1	83,0	88,9	103,9	112,2	121,8	132,9
1.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66,5	70,3	74,8	80,7	86,5	92,4	107,7	116,0	125,6	136,8
1.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74,2	78,6	84,5	90,4	96,3	111,9	120,2	129,8	140,9
1.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83,0	88,9	94,8	100,7	116,7	125,0	134,5	145,7
1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94,8	100,7	106,6	123,1	131,4	140,9	152,1
1.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106,6	112,5	129,4	137,7	147,3	158,5
2.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	118,4	135,8	144,1	153,7	164,9
2.240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	143,5	151,8	161,4	172,5
2.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160,1	169,6	180,8
2.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179,2	190,4
3.150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	201,6

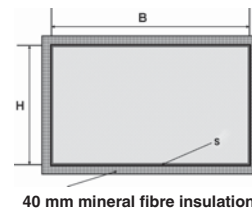
Weight indications in kg/m

Basis for calculation:

Gross density of the air duct: steel sheet metal gal. = 7.850 kg/m³

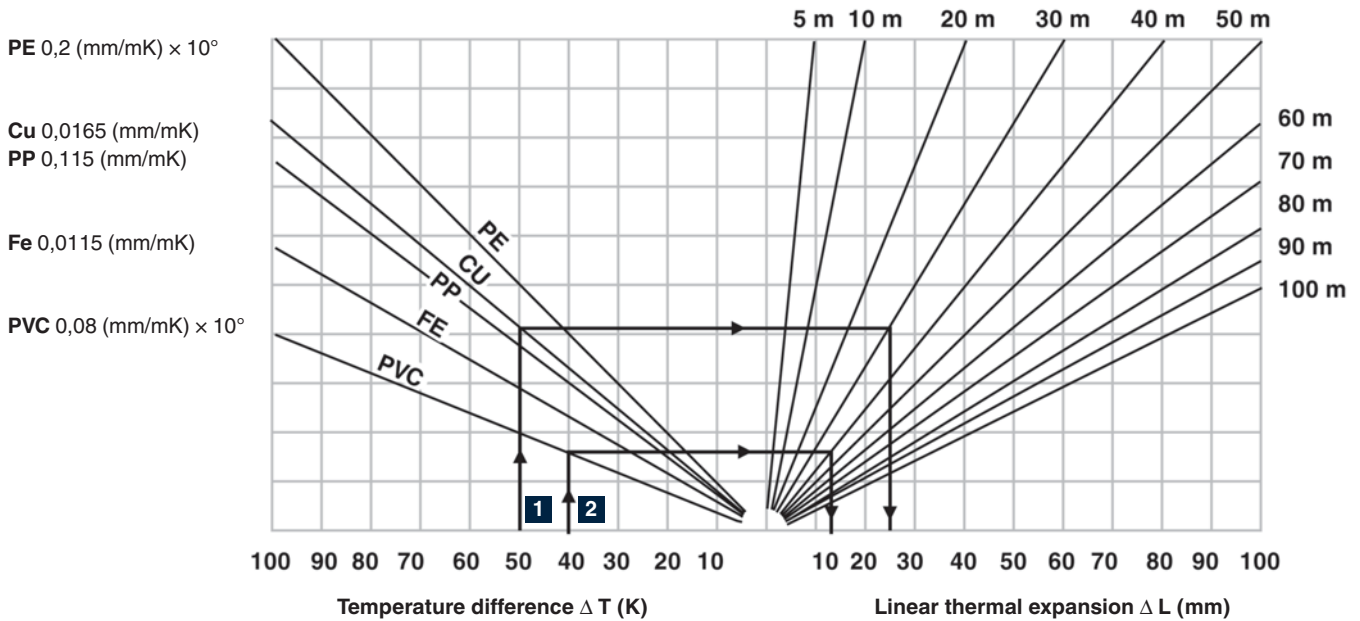
Gross density of the insulation: mineral wool = 80 kg/m³

Weights for flanges and duct reinforcements were calculated based on estimations.



Strain Diagram for Different Types of Pipes

Metal and plastic materials contract at low temperatures and expand under heat. Such physical conditions need to be taken into consideration in particular for pipes of heating installations, which are subject to continuous temperature variations due to the thermostat control. Due to appropriate pipe fixtures, which are able to swing or shift, such stress forces are being avoided.



An example:

- 1** Copper pipe, Cu pipeline length 30 m
Temperature difference $\Delta T = 50^\circ \text{ K}$
Linear thermal expansion $\underline{\Delta L = 24,75 \text{ mm}}$
- 2** PVC pipe, pipeline length $L = 40 \text{ m}$
Temperature difference $\Delta T = 40^\circ \text{ K}$
Linear thermal expansion $\underline{\Delta L = 128 \text{ mm}}$

Calculation formula for linear thermal expansion

$$\Delta L = L \times \Delta T \times \alpha$$

(mm) (m) (mm/mK)

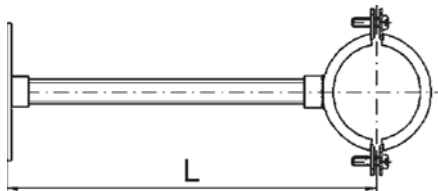
ΔL = linear thermal expansion
 L = pipeline/pipe section length
 ΔT = temperature difference
 α = linear thermal expansion coefficient

Attention!

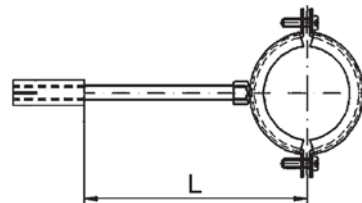
For plastic pipes (PE, PP, PVC), the read-off linear thermal expansion from the diagram must be multiplied by factor 10.

The Permissible Load in Newton (N) During Bending for:

Threaded Pipes



Threaded Pins (4.6)



Threaded rod Ø	Distance L to pipe centre in mm							
	50	100	150	200	250	300	400	500
1/2"	1.222	611	407	305	239	166	93	59
3/4"	2.150	1.075	716	537	430	358	121	136
1"	4.277	2.138	1.425	169	855	712	231	340

Threaded rod Ø	Distance L to pipe centrum in mm					
	50	100	150	200	250	300
M6	34	10	-	-	-	-
M8	85	36	15	-	-	-
M10	170	85	40	22	14	10
M12	300	150	86	48	31	22
M16	780	390	260	173	111	77

Berechnungsgrundlage:

Maximum deflection: $f_{max} = L/150$
 Permissible steel stress: $\alpha = 160 \text{ N/mm}^2$

Pipe Clamp Easy-Click plus M8 **ROMOS**

- Articulated pipe clamp, can be opened widely for building installation
- Locking screw clicks into place when pressed
- Captive locking screw with combi-cross slot
- Galvanized for high corrosion protection
- Special sound insulation insert made of EPDM (halogen and silicone-free) for sound insulation according to DIN 4109
- Heat-resistant from -50 °C to +100 °C
- Building material class: B2 according to DIN 4102
- Sound level improvement up to 19 db (A), measured at a 2"-pipe

Product benefits:

- Practise-oriented clamping ranges, thus compact assortment
- Locking screw is secured against falling out of the thread
- With strong double grooves for high stability
- Connecting nut 4-point welded for high shear-off values
- Optimised sliding properties of sound insulation insert
- Short locking screws for quick installation and optically appealing insulation works
- High M8-connecting nut for secure connection to the thread



Article No.	Article Description	QTY
8601 12 14	PIPE CLAMP 1/4" 12-14 M8	g 150
8601 15 19	PIPE CLAMP 3/8" 15-19 M8	g 200
8601 20 23	PIPE CLAMP 1/2" 20-23 M8	g 200
8601 25 28	PIPE CLAMP 3/4" 25-28 M8	g 150
8601 32 35	PIPE CLAMP 1" 32-35 M8	g 100
8601 40 44	PIPE CLAMP 1 1/4" 40-44 M8	g 100
8601 48 51	PIPE CLAMP 1 1/2" 48-51 M8	75
8601 53 58	PIPE CLAMP 53-58 M8	75
8601 60 65	PIPE CLAMP 2" 60-65 M8	50
8601 75 80	PIPE CLAMP 2 1/2" 75-80 M8	25

Technical Data							
Steel	Steel	Copper VA	PP/HDPE HT	Cast/SML	Max. rec.		
inch	mm	mm	mm	DN	DN	loads in N*	
1/4"	13,5	12	-	12	-	-	550
3/8"	17,2	15 / 18	15 / 18	16	-	-	550
1/2"	21,3	22	22	20	-	-	550
3/4"	26,9	28	28	25	-	-	550
1"	33,7	35	35	32	-	-	550
1 1/4"	42,4	42	42	40	40	-	550
1 1/2"	48,3	-	-	50	50	40	550
-	-	54	54	-	-	50	550
2"	60,3	64	-	63	-	-	800
2 1/2"	76,1	76,1	76,1	75	70	70	1.500

*in case of central tension

Pipe Clamp Easy-Click plus M8/M10 **ROMOS**

- Articulated pipe clamp, can be opened widely for building installation
- Locking screw clicks into place when pressed
- Captive locking screw with combi-cross slot
- Galvanized for high corrosion protection
- Special sound insulation insert made of EPDM (halogen and silicone-free) for sound insulation according to DIN 4109
- Heat-resistant from -50°C to +100°C
- Building material class: B2 according to DIN 4102
- Sound level improvement up to 19 db (A), measured at a 2"-pipe

Product benefits:

- Practise-oriented clamping ranges, thus compact assortment
- Locking screw is secured against falling out of the thread
- With strong double grooves for high stability
- Connecting nut 4-point welded for high shear-off values
- Optimised sliding properties of sound insulation insert
- Short locking screws for quick installation and optically appealing insulation works
- Combi-connection thread M8/M10 for variable threaded connection



Article No.	Article Description	QTY
8601 1 12 14	PIPE CLAMP 1/4"12-14M8/10	g 150
8601 1 15 19	PIPE CLAMP 3/8"15-19M8/10	g 200
8601 1 20 23	PIPE CLAMP 1/2"20-23M8/10	g 200
8601 1 25 28	PIPE CLAMP 3/4"25-28M8/10	g 150
8601 1 32 35	PIPE CLAMP 1" 32-35M8/10	g 100
8601 1 40 44	PIPE CLAMP 1 1/4"40-44M8/10	g 100
8601 1 48 51	PIPE CLAMP 1 1/2"48-51M8/10	75
8601 1 53 58	PIPE CLAMP 53-58M8/10	75
8601 1 60 65	PIPE CLAMP 2" 60-65M8/10	50
8601 1 75 80	PIPE CLAMP 2 1/2"75-80M8/10	25
8601 1 83 90	PIPE CLAMP 3" 83-90M8/10	25
8601 1 108 114	PIPE CLAMP 4"108-114M8/10	25

Technical Data							
Steel	Steel	Copper	VA	PP/HDPE HT	SML	Max. rec.	
inch	mm	mm	mm	mm	DN	DN	loads in N*
1/4"	13,5	12	-	12	-	-	550
3/8"	17,2	15 / 18	15 / 18	16	-	-	550
1/2"	21,3	22	22	20	-	-	550
3/4"	26,9	28	28	25	-	-	550
1"	33,7	35	35	32	-	-	550
1 1/4"	42,4	42	42	40	40	-	550
1 1/2"	48,3	-	-	50	50	40	550
-	-	54	54	-	-	50	550
2"	60,3	64	-	63	-	-	800
2 1/2"	76,1	76,1	76,1	75	70	70	1.500
3"	88,9	88,9	88,9	90	-	80	1.500
4"	114,3	108	108	110	100	100	2.000

*in case of central tension

Articulated Pipe Clamp M8 **VAROBOXX**

- In assortment VAROBOXX 4
- Connection: M8

Contents:

Article No.	Article Description	Quantity
8601 15 19	PIPE CLAMP 3/8" 15-19 M8	100
8601 20 23	PIPE CLAMP 1/2" 20-23 M8	100
8601 25 28	PIPE CLAMP 3/4" 25-28 M8	75
8601 32 35	PIPE CLAMP 1" 32-35 M8	50
9003 4	VAROBOXX SIZE:4 EMPTY	1
9004 0 1	COVER INLAY VAROBOXX	1
9004 1 8	DEEP DRAWN INS.8COMP.VAROBOXX1	1
9004 3 2	INS.BOX INS.W.BOX VAROBOXX3+4	1
9004 3 3	PART.PLATE FRAME VAROBOXX 3+4	1
9004 4 2	SLO.PART.PLATE SHORT VAROBOXX4	1
9004 4 5	PART.PLATE LONG VAROBOXX 4	2



Article No.	Article Description	QTY
9003 8601	VAROBOXX PIPE CLAMP 3/8"-1" M8	1

Pipe Clamp Box

- Robust case
- Ideal for transporting pipe clamps, fittings, etc.
- Dimension L x W x H: 58.0 x 40.5 x 12.5 cm

Article No.	Article Description	QTY
8611 580	PIPE CL. BOX	1



Two-Screw Pipe Clamp Easy-Lock **ROMOS**

- Two-screw pipe clamp with snapping quick-release fastener
- Locking screw with combi-cross slot against falling out
- Sound insulation insert made of high-quality EPDM (halogen and silicone-free) for sound insulation protection according to DIN 4109
- Heat-resistant from -50° C to +110° C
- Building material class: B2 according to DIN 4102
- Sound level improvement up to 20 db (A), measured at a 2"-pipe
- Galvanised for high corrosion protection

Product benefits:

- Audible snapping quick-release fastener
- Locking screw is secured due to deepening of securing clip
- Can be opened and closed with only one hand
- M8-connection for cost-optimized suspensions of small pipe diameters or M8/M10 for variable threaded connection

Fields of application:

- For pipelines in the entire Building Services



Article No.	Article Description	QTY
8602 2 12 14	TWO-SC.PIPE CL. 1/4"12-14 M8/10	100
8602 2 15 19	TWO-SC.PIPE CL. 3/8"15-19 M8/10	100
8602 2 20 23	TWO-SC.PIPE CL. 1/2"20-23 M8/10	g 100
8602 2 24 28	TWO-SC.PIPE CL. 3/4"24-28 M8/10	100
8602 2 31 35	TWO-SC.PIPE CL. 1" 31-35 M8/10	100
8602 2 38 43	TWO-SC.PIPE CL. 1" 38-43 M8/10	100
8602 2 48 51	TWO-SC.PIPE CL. 1 1/4" 48 M8/10	50
8602 2 52 56	TWO-SC.PIPE CL. 1 1/2" 52 M8/10	50

Article No.	Article Description	QTY
8602 2 57 61	TWO-SC.PIPE CL. 2" M8/10	50
8602 2 63 67	TWO-SC.PIPE CL. 63-67 M8/10	50
8602 2 74 80	TWO-SC.PIPE CL. 2 1/2" M8/10	25
8602 2 83 91	TWO-SC.PIPE CL. 3" 83-91 M8/10	25
8602 2 108 114	TWO-SC.PIPE CL. 108-114 M8/10	25
8602 2 123 128	TWO-SC.PIPE CL. 123-128 M8/10	25
8602 2 136 142	TWO-SC.PIPE CL. 5" M8/10	12
8602 2 159 163	TWO-SC.PIPE CL. 159-163 M8/10	12

Technical Data

Art. No.	Steel inch	Steel mm	Cobber mm	VA mm	HT pipe DN	Cast/SML DN	Max. rec. load in N*	Breaking load in N*
8602 2 12 14	1/4"	13,5	12/15	15	-	-	700	2,100
8602 2 15 19	3/8"	17,2	15/18	15/18	-	-	700	2,100
8602 2 20 23	1/2"	21,3	22	22	-	-	700	2,100
8602 2 24 28	3/4"	26,9	28	28	-	-	700	2,100
8602 2 31 35	1"	33,7	35	35	-	-	700	2,100
8602 2 38 43	1"	42,4	42	42	-	-	700	2,100
8602 2 48 51	1 1/4"	48,3	-	-	50	40	700	2,100
8602 2 52 56	1 1/2"	-	54	54	-	50	700	2,100
8602 2 57 61	2"	60,3	64	-	-	-	700	2,100
8602 2 63 67	-	-	68/70	-	-	-	1.200	3,500
8602 2 74 80	2 1/2"	76,1	76,1	76,1	70	70	1.200	3,500
8602 2 83 91	3"	88,9	88,9	88,9	-	-	1.200	3,500
8602 2 108 114	-	108	108	108	100	100	1.200	3,500
8602 2 123 128	4"	114,3	114	-	-	-	1.200	3,500
8602 2 136 142	5"	139,7	133	133	125	125	1.200	3,500
8602 2 159 163	-	-	-	-	150	150	1.200	3,500
8602 2 165 169	-	-	159	159	-	-	1.200	3,500



*for central tension

Sliding Pipe Clip M8

One-piece hinged pipe clip for the installation of coated and uncoated plastic pipes – Noise-insulated in accordance with DIN 4109

- Quick-release safety fastening
- Temperature resistance: -35°C to +70°C
- Galvanised

Product benefits:

- Quick, one-hand installation with just one screw
- Low-noise gliding of pipes
- Screw secured against loss

Areas of application:

- Pipe clip for dry indoor spaces
- For plastic and multi-layer composite pipes



Article No.	Article Description	QTY
8504 15	SLIDING PIPE CLIP M8 15 MM	g 100
8504 20	SLIDING PIPE CLIP M8 20 MM	g 100
8504 25	SLIDING PIPE CLIP M8 25 MM	g 80
8504 32	SLIDING PIPE CLIP M8 32 MM	g 75
8504 38	SLIDING PIPE CLIP M8 38 MM	g 40

Technical Data			
Dimension mm	Connection Thread	Material cross section mm	Max. recom. Load in N*
15	M8	20 × 0.8	750
20	M8	20 × 1.0	750
25	M8	20 × 1.0	750
32	M8	20 × 1.0	750
38	M8	20 × 1.0	750

*With central tension

Fixed Point Pipe Clip

Two-piece, high-capacity pipe clip without noise-insulating insert

- Screw fastening
- Galvanised

Product benefits:

- Two fastening screws for specific adaptation to pipe tolerances
- Connecting thread adapts to the respective pipe diameter

Application areas:

- For installation of pipes in environments at fluctuating temperatures
- Securing of pipelines in areas of increased load



Article No.	Article Description	QTY
8520 21	FIX. POINT PIPE CLIP 1/2" 21MM	ü 10
8520 27	FIX. POINT PIPE CLIP 1/2" 27MM	ü 10
8520 34	FIX. POINT PIPE CLIP 1/2" 34MM	ü 10
8520 42	FIX. POINT PIPE CLIP 3/4" 42MM	ü 10
8520 48	FIX. POINT PIPE CLIP 3/4" 48MM	ü 10
8520 54	FIX. POINT PIPE CLIP 3/4" 54MM	ü 10
8520 60	FIX. POINT PIPE CLIP 3/4" 60MM	ü 10
8520 64	FIX. POINT PIPE CLIP 3/4" 64MM	ü 10
8520 70	FIX. POINT PIPE CLIP 3/4" 70MM	ü 10
8520 76	FIX. POINT PIPE CLIP 1" 76MM	ü 10
8520 89	FIX. POINT PIPE CLIP 1" 89MM	ü 10
8520 108	FIX. POINT PIPE CLIP 1" 108MM	ü 10
8520 140	FIX. POINT PIPE CLIP 1" 140MM	ü 10

Technical Data			
Connector thread Imperial	Nominal size Imperial/mm	Material thickn. mm	Max. recom. Load in N*
1/2"	1/2"	50 × 5.0	6,000
1/2"	3/4"	50 × 5.0	6,000
1/2"	1"	50 × 5.0	6,000
3/4"	1 1/4"	50 × 5.0	6,000
3/4"	1 1/2"	50 × 5.0	6,000
3/4"	54 mm	50 × 5.0	6,000
3/4"	2"	50 × 5.0	6,000
3/4"	64 mm	50 × 5.0	6,000
3/4"	70 mm	50 × 5.0	6,000
1"	1"	50 × 5.0	6,000
1"	1"	50 × 5.0	6,000
1"	1"	50 × 5.0	6,000
1"	1"	50 × 5.0	6,000

*With central tension

Threaded Pipe

- Direct connection between base plate and pipe clip
- Thread in accordance with DIN ISO 228-1
- Material: Electrolytically galvanised steel
- Length: 2 m

Article No.	Article Description	QTY
8544 12 2	THREADED PIPE 1/2" 2M	1
8544 34 2	THREADED PIPE 3/4" 2M	1
8544 1 2	THREADED PIPE 1" 2M	1



Premium Double Screw Pipe Clip

Robust two-piece double screw pipe clip for high load requirements in building technology and pipeline construction – Noise-insulated in accordance with DIN 4109

- Snap lock
- Temperature resistance: -35°C to +100 °C
- Galvanised

Product benefits:

- Good adaption to pipe tolerances thanks to two fastening screws
- Combined thread enables variable thread connection

Application areas:

- Fastening of pipes in indoor areas
- Suitable for the securing of pipes in building technology



Technical Data								
Art. No.	Clamp. range dA in mm	Steel pipe dA in mm	Steel pipe dA, inches	Copp. pipe dA in mm	VA pipe AD mm	HT pipe DN	HPDE pipe AD mm	Cast iron/ SML pipe DN
8502 12 15	12–15	13.5	1/4"	12.0/15.0	15.0	-	12	-
8502 15 20	15–20	17.2	3/8"	15.0/18.0	15.0/18.0	-	16	-
8502 20 25	20–25	21.3	1/2"	22.0	22.0	-	20	-
8502 25 30	25–30	26.9	3/4"	28.0	28.0	-	25	-
8502 32 37	32–37	33.7	1"	35.0	35.0	-	32	-
8502 42 46	42–46	42.4	1 1/4"	42.0	42.0	-	-	-
8502 47 52	47–52	48.3	1 1/2"	-	-	DN 50	50	DN 40
8502 53 58	53–58	54.0	-	54.0	54.0	-	-	DN 50
8502 59 65	59–65	60.3	2"	64.0	-	-	63	-
8502 70 73	70–73	70.0	-	-	-	-	-	-
8502 75 78	75–78	76.1	2 1/2"	76.1	76.1	DN 75	75	DN 70
8502 85 90	85–90	82.5	3"	88.9	88.9	-	90	-
8502 98 102	98–102	101.6	-	-	-	-	-	-
8502 108 114	108–114	108.0	4"	108.0	108.0	DN 110	110	DN 100
8502 121 125	121–125	127.0	-	-	-	DN 125	125	-
8502 132 136	132–136	133.0	-	133.0	133.0	-	-	DN 125
8502 137 141	137–141	139.7	5"	-	139.7	-	140	-
8502 159 163	159–163	159.0	-	159.0	159.0	DN 160	160	DN 150
8502 164 168	164–168	168.3	6"	-	168.3	-	-	-

Article No.	Article Description	QTY
8502 12 15	DS-PIPE C.PR.1/4" 12- 15M 8/10	g 100
8502 15 20	DS-PIPE C.PR.3/8" 15- 20M 8/10	g 200
8502 20 25	DS-PIPE C.PR.1/2" 20- 25M 8/10	g 200
8502 25 30	DS-PIPE C.PR.3/4" 25- 30M 8/10	g 150
8502 32 37	DS-PIPE C.PR.1" 32- 37M 8/10	g 125
8502 42 46	DS-PIPE C.PR.1 1/4" 42- 46M 8/10	g 75
8502 47 52	DS-PIPE C.PR.1 1/2" 47- 52M 8/10	g 75
8502 53 58	DS-PIPE C.PR. 53- 58M 8/10	50
8502 59 65	DS-PIPE C.PR.2" 59- 65M 8/10	50
8502 70 73	DS-PIPE C.PR. 70- 73M 8/10	40

Article No.	Article Description	QTY
8502 75 78	DS-PIPE C.PR.2 1/2" 75- 78M 8/10	30
8502 85 90	DS-PIPE C.PR. 85- 90M 8/10	30
8502 98 102	DS-PIPE C.PR. 98-102M 8/10	25
8502 108 114	DS-PIPE C.PR. 108-114M 8/10	25
8502 121 125	DS-PIPE C.PR. 121-125M10/12	25
8502 132 136	DS-PIPE C.PR. 132-136M10/12	20
8502 137 141	DS-PIPE C.PR.5" 137-141M10/12	12
8502 159 163	DS-PIPE C.PR. 159-163M10/12	12
8502 164 168	DS-PIPE C.PR.6" 164-168M10/12	10

Vent Pipe Clip M8/M10

Two-part, resilient vent pipe clip from DN 80 to DN 630 – Soundproofing in accordance with DIN 4109

- Snap lock up to DN 200
- Temperature resistance: -35°C to +100 °C
- Galvanised

Product benefits:

- High quality galvanisation, thus also suitable for the visible areas
- Good adaption to pipe tolerances thanks to two fastening screws
- Continuous connecting thread M8 / M10
- The pipe can be easily inserted thanks to the large opening angle

Application areas:

- For fastening folded spiral-seam pipes in air conditioning, ventilation and process technology



Article No.	Article Description	QTY
8509 80	VENT. PIPE CLAMP M8/M10 80MM	25
8509 100	VENT. PIPE CLAMP M8/M10 100MM	25
8509 112	VENT. PIPE CLAMP M8/M10 112MM	25
8509 125	VENT. PIPE CLAMP M8/M10 125MM	25
8509 140	VENT. PIPE CLAMP M8/M10 140MM	25
8509 150	VENT. PIPE CLAMP M8/M10 150MM	25
8509 160	VENT. PIPE CLAMP M8/M10 160MM	25
8509 180	VENT. PIPE CLAMP M8/M10 180MM	25
8509 200	VENT. PIPE CLAMP M8/M10 200MM	15
8509 224	VENT. PIPE CLAMP M8/M10 224MM	15
8509 250	VENT. PIPE CLAMP M8/M10 250MM	10
8509 280	VENT. PIPE CLAMP M8/M10 280MM	10
8509 300	VENT. PIPE CLAMP M8/M10 300MM	10
8509 315	VENT. PIPE CLAMP M8/M10 315MM	10
8509 355	VENT. PIPE CLAMP M8/M10 355MM	10
8509 400	VENT. PIPE CLAMP M8/M10 400MM	10
8509 450	VENT. PIPE CLAMP M8/M10 450MM	5
8509 500	VENT. PIPE CLAMP M8/M10 500MM	5
8509 560	VENT. PIPE CLAMP M8/M10 560MM	5
8509 600	VENT. PIPE CLAMP M8/M10 600MM	5
8509 630	VENT. PIPE CLAMP M8/M10 630MM	5

Technical Data

Dimensions	Max. rec. Load in N*
DN	
80–200	610
224–450	1,320
500–630	1,970

*With central tension

Endless Clamp. Strap - Stainless St. 9mm **ROMOS**

- Perfect alternative for standard hose clamps
- The 30 m long stainless steel strap is flexible and can be used for various hose diameters
- The turnbuckles with its worm drive thread guarantees sealed and resistant hose-nozzle-connection
- Space and time saving solution

Art.-No. 8626 1:

- Stainless steel AISI 430/W3
- Dimension:
 - Length: 30 m
 - Width: 9 mm
 - Thickness: 0.6 mm

Art- No. 8626 2:

- Low carbon steel, nickel-faced
- Lock: stainless steel AISI 430/W3
- Screw: 7 mm cross recessed, galvanised steel

Art.-No. 8626 3:

- Stainless steel AISI 304/W4
- Screw: 7 mm cross recessed, stainless steel AISI 304/W4



Article No.	Article Description	QTY
8626 1	RO(30M)ENDLESS STRAP A2 9MM	1 z
8626 2	TURNBUCKLE GA FOR ENDL.STRAP	25
8626 3	TURNBUCKLE A2 FOR ENDL.STRAP	25

Assembly Guide:

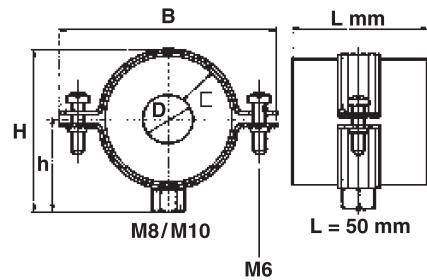
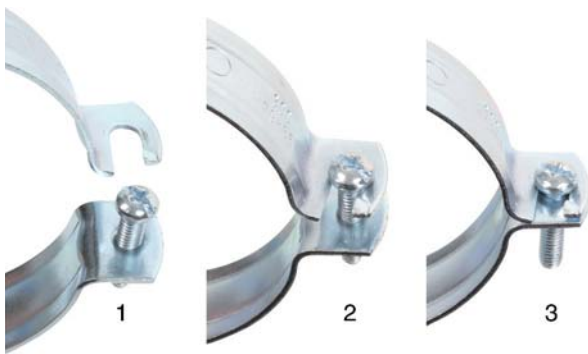


Refrigerant Pipe Clamps 13 mm

- Excellent insulating and mechanical properties
- Bead-reinforced double screw pipe clip with 4-fold welded connecting nut
- Single-sided, quick-release safety fastener for quick, practical installation
- Pipe support made of elastomer rubber with a PIR core (PIR = polyisocyanurate – better insulating properties and fire protection properties, as well as more pressure-resistant and dimensionally stable than polyurethane)
- For fastening thermally insulated pipes made of steel, copper, stainless steel or plastic.
- Can be used with elastomer rubber insulation – adheres to the pipe insulation, forming a vapour-tight seal
- Matched to the increasing insulation thicknesses of cold rubber shapes

Note on usage:

- The contact surfaces of the refrigerant pipe clamp must be aligned horizontally during assembly to prevent tensile and compressive forces.



Article No.	Article Description	QTY
8614 13 12	COLD PIPE CLA. 13X 12MM M8/M10	32
8614 13 15	COLD PIPE CLA. 13X 15MM M8/M10	24
8614 13 18	COLD PIPE CLA. 13X 18MM M8/M10	24
8614 13 22	COLD PIPE CLA. 13X 22MM M8/M10	24
8614 13 28	COLD PIPE CLA. 13X 28MM M8/M10	16
8614 13 35	COLD PIPE CLA. 13X 35MM M8/M10	12
8614 13 42	COLD PIPE CLA. 13X 42MM M8/M10	12
8614 13 48	COLD PIPE CLA. 13X 48MM M8/M10	12
8614 13 54	COLD PIPE CLA. 13X 54MM M8/M10	12
8614 13 60	COLD PIPE CLA. 13X 60MM M8/M10	10
8614 13 64	COLD PIPE CLA. 13X 64MM M8/M10	10
8614 13 70	COLD PIPE CLA. 13X 70MM M8/M10	16
8614 13 76	COLD PIPE CLA. 13X 76MM M8/M10	12
8614 13 89	COLD PIPE CLA. 13X 89MM M8/M10	8
8614 13 102	COLD PIPE CLA. 13X102MM M8/M10	10
8614 13 108	COLD PIPE CLA. 13X108MM M8/M10	10
8614 13 114	COLD PIPE CLA. 13X114MM M8/M10	10

Technical Data								
External Ø	External Impe. Ø	External FE	C Insula. Thickn.	B	H	h	Max.perm. Fa,z ²⁾	Clamp Spacing ¹⁾
mm	mm	mm	mm	mm	mm	mm	m	N
12	-	-	13	75	60	38	-	40
15	1/4"	13.5	13	75	60	37	2.00	50
18	3/8"	17.2	13	75	69	40	2.25	60
22	1/2"	21.3	13	83	71	42	2.75	75
28	3/4"	26.9	13.5	92	77	46	3.00	75
35	1"	33.7	13.5	92	81	48	3.50	150
42	1 1/4"	42.4	14	102	93	55	3.75	200
-	1 1/2"	48.3	14	109	98	57	4.25	275
54	-	54.0	14	117	102	59	-	300
-	2"	60.3	15	117	108	62	4.75	475
64	-	63.5	15	123	112	63	4.75	475
70	-	70.0	15	138	116	62	5.50	600
76.1	2 1/2"	76.1	15	138	123	69	6.00	750
88.9	3"	88.9	15	153	140	76	6.00	1,100
-	3 1/2"	101.6	15.5	169	154	84	6.00	1,300
108	-	108.0	15.5	172	157	86	6.00	1,300
114	4"	114.3	15.5	178	163	89	6.00	1,700

¹⁾ according to DIN 1488 for steel pipe (the specifications of the pipe manufacturer must be taken into account)

²⁾ Load index (Fa,z) is restricted to the pipe support

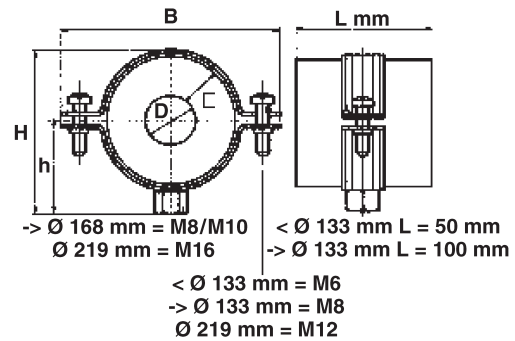
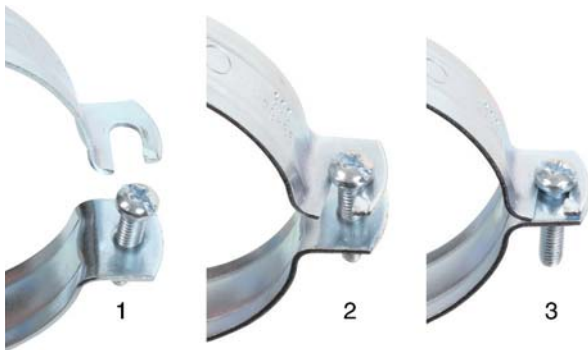
- Pipe clamp material: Electrolytically galvanised steel
- Pipe support material: Elastomer rubber with PIR core and encased in moisture barrier
- Thermal conductivity: 0.036 W/(m×K)
- Water vapour permeability in accordance with DIN EN 13469: > 8,000 µ
- Fire behaviour according to DIN 4102: B2
- Density of PIR core: 120 kg/m³
- Usable temperature range: from -50 °C to +105 °C
- Does not contain CFCs, HCFCs, formaldehyde or cadmium

Refrigerant Pipe Clamps 19 mm

- Excellent insulating and mechanical properties
- Bead-reinforced double screw pipe clip with 4-fold welded connecting nut
- Single-sided, quick-release safety fastener for quick, practical installation
- Pipe support made of elastomer rubber with a PIR core (PIR = polyisocyanurate – better insulating properties and fire protection properties, as well as more pressure-resistant and dimensionally stable than polyurethane)
- For fastening thermally insulated pipes made of steel, copper, stainless steel or plastic.
- Can be used with elastomer rubber insulation – adheres to the pipe insulation, forming a vapour-tight seal
- Matched to the increasing insulation thicknesses of cold rubber shapes

Note on usage:

- The contact surfaces of the refrigerant pipe clamp must be aligned horizontally during assembly to prevent tensile and compressive forces.



Article No.	Article Description	QTY
8614 19 12	COLD PIPE CLA. 19X 12MM M8/M10	26
8614 19 15	COLD PIPE CLA. 19X 15MM M8/M10	24
8614 19 18	COLD PIPE CLA. 19X 18MM M8/M10	24
8614 19 22	COLD PIPE CLA. 19X 22MM M8/M10	12
8614 19 28	COLD PIPE CLA. 19X 28MM M8/M10	12
8614 19 35	COLD PIPE CLA. 19X 35MM M8/M10	12
8614 19 42	COLD PIPE CLA. 19X 42MM M8/M10	12
8614 19 48	COLD PIPE CLA. 19X 48MM M8/M10	12
8614 19 54	COLD PIPE CLA. 19X 54MM M8/M10	16
8614 19 60	COLD PIPE CLA. 19X 60MM M8/M10	12
8614 19 64	COLD PIPE CLA. 19X 64MM M8/M10	12
8614 19 70	COLD PIPE CLA. 19X 70MM M8/M10	12
8614 19 76	COLD PIPE CLA. 19X 76MM M8/M10	18
8614 19 89	COLD PIPE CLA. 19X 89MM M8/M10	14
8614 19 102	COLD PIPE CLA. 19X102MM M8/M10	8
8614 19 108	COLD PIPE CLA. 19X108MM M8/M10	8
8614 19 114	COLD PIPE CLA. 19X114MM M8/M10	8
8614 19 133	COLD PIPE CLA. 19X133MM M8/M10	2
8614 19 139	COLD PIPE CLA. 19X139MM M8/M10	2
8614 19 159	COLD PIPE CLA. 19X159MM M8/M10	2
8614 19 168	COLD PIPE CLA. 19X168MM M8/M10	2
8614 19 219	COLD PIPE CLA. 19X219MM M16	2

Technical Data

Ext. Ø CU	FE	Ext. Ø FE	C	B	H	h	Max. perm. Fa,z ²⁾	clamp spacing ¹⁾
mm	inch	mm	mm	mm	mm	mm	m	N
12	-	-	19	83	72	43	-	40
15	1/4"	13.5	19	92	76	46	2.00	50
18	3/8"	17.2	19.5	92	76	46	2.25	60
22	1/2"	21.3	19.5	92	76	49	2.75	75
28	3/4"	26.9	20	102	89	52	3.00	75
35	1"	33.7	20	109	94	55	3.50	150
42	1 1/4"	42.4	21.5	117	102	59	3.75	200
-	1 1/2"	48.3	21.5	123	111	63	4.25	275
54	-	54.0	21.5	129	119	64	-	300
-	2"	60.3	22	198	123	69	4.75	475
64	-	63.5	22	198	126	71	4.75	475
70	-	70.0	22	144	192	73	5.00	600
76.1	2 1/2"	76.1	22	153	198	77	5.50	750
88.9	3"	88.9	22	162	150	83	6.00	1,100
-	3 1/2"	101.6	22.5	178	163	89	6.00	1,300
108	-	108.0	22.5	187	172	94	6.00	1,300
114	4"	114.3	25.5	187	175	95	6.00	1,700
133	-	133.0	25.5	233	200	107	6.00	2,000
-	5"	139.7	26	233	204	110	6.00	2,000
159	-	160.0	26	255.5	223	120	6.00	2,200
-	-	168.3	26	256	229	122	6.00	2,200
-	-	219.1	26	345.3	290	158	6.00	5,000

¹⁾ according to DIN 1488 for steel pipe (The specifications of the pipe manufacturer must be taken into account)
²⁾ Load index (Fa,z) is restricted to the pipe support

- Pipe clamp material: Electrolytically galvanised steel
- Pipe support material: Elastomer rubber with PIR core and encased in moisture barrier
- Thermal conductivity: 0.036 W / (m*K)
- Water vapour permeability in acc. with DIN EN 13469: > 8,000 μ
- Fire behaviour according to DIN 4102: B2
- Density of PIR core: 120 kg/m³
- Usable temperature range: from -50 °C to +105 °C
- Does not contain CFCs, HCFCs, formaldehyde or cadmium

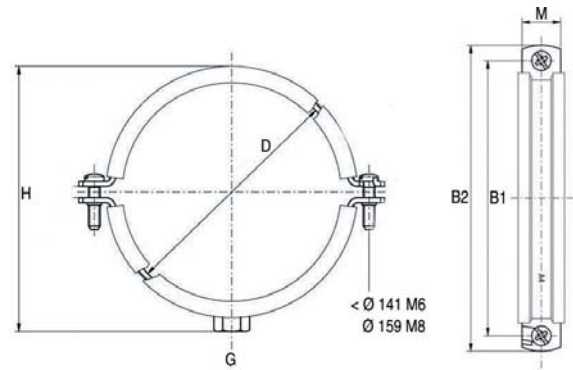
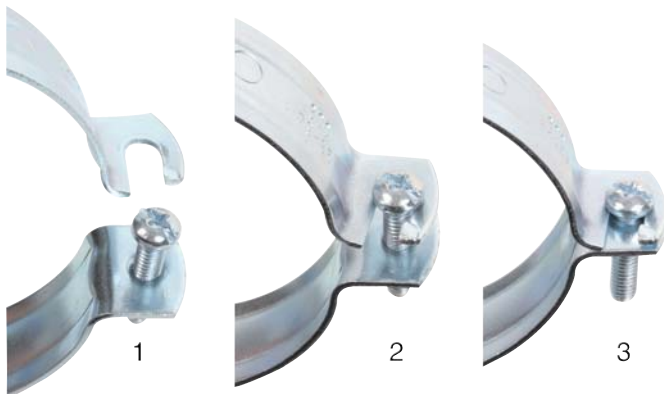
Double Bolt Pipe Clamp, Stainless Steel A4

Robust double bolt pipe clamp with a high degree of corrosion protection and a quick-release safety fastener

- Bead-reinforced double screw pipe clip with 4-fold welded connecting nut
- Single-sided, quick-release safety fastener for quick, practical installation
- Ageing-resistant black noise-insulating insert made of EPDM rubber
- Material: Stainless steel A4 1.4401 (AISI No. 316) – all-round high degree of corrosion protection
- Fulfils construction material class B2 in accordance with DIN 4102
- Noise-insulated according to DIN 4109
- Long-term temperature-resistant from -50°C to +110 °C

Application areas:

- In highly corrosive environments (tunnels, chemical plants, washing facilities)
- For pipes run outdoors



Article No.	Article Description	QTY
8607 14 18	TS. PIPE CLA.A4 14- 18MM M8	100
8607 19 23	TS. PIPE CLA.A4 20- 23MM M8	w 100
8607 25 29	TS. PIPE CLA.A4 25- 28MM M8	w 100
8607 31 35	TS. PIPE CLA.A4 31- 35MM M8	w 100
8607 41 45	TS. PIPE CLA.A4 40- 43MM M8	50
8607 48 54	TS. PIPE CLA.A4 47- 51MM M8	z 50
8607 57 63	TS. PIPE CLA.A4 57- 64MM M8	z 50
8607 64 67	TS. PIPE CLA.A4 64- 67MM M10	25
8607 70 76	TS. PIPE CLA.A4 70- 76MM M10	ü 25
8607 86 91	TS. PIPE CLA.A4 86- 91MM M10	ü 25
8607 108 116	TS. PIPE CLA.A4 108-116MM M10	ü 25
8607 124 132	TS. PIPE CLA.A4 124-132MM M10	ü 25
8607 133 141	TS. PIPE CLA.A4 133-141MM M10	25
8607 159 168	TS. PIPE CLA.A4 159-168MM M10	ü 15

Technical Data								
D	D	DN	G	B1	B2	H	M	Fa,Z
mm	Impe. mm							N
14 – 18	3/8"	10	M8	45.5	61.5	36.5	20 × 1.5	1,520
19 – 23	1/2"	15	M8	48.0	64.0	41.5	20 × 1.5	1,520
25 – 29	3/4"	20	M8	54.0	70.0	46.5	20 × 1.5	1,520
31 – 35	1"	25	M8	62.0	78.0	53.5	20 × 1.5	1,520
40 – 43	1 1/4"	32	M8	69.0	85.0	63.0	20 × 1.5	1,520
47 – 51	1 1/2"	40	M8	75.5	91.5	70.1	20 × 1.5	1,520
57 – 63	2"	50	M8	86.0	102.0	80.0	20 × 2.0	1,910
64 – 67	-	-	M10	93.0	109.0	89.0	20 × 2.0	1,910
70 – 76	2 1/2"	65	M10	102.0	118.0	98.0	20 × 2.0	1,910
86 – 91	3"	80	M10	113.5	129.5	109.0	20 × 2.0	1,910
108 – 116	4"	100	M10	142.0	158.0	137.0	20 × 2.5	2,300
124 – 132	-	-	M10	153.5	169.5	149.1	20 × 2.5	2,300
133 – 141	5"	125	M10	163.0	179.0	158.6	20 × 2.5	2,300
159 – 168	6"	150	M10	213.0	233.0	194.5	25 × 2.5	3,010

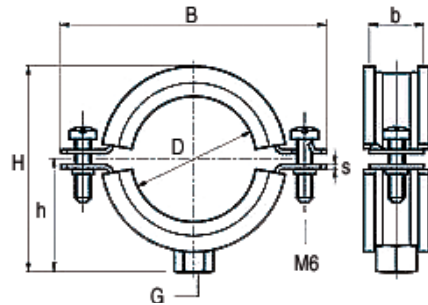
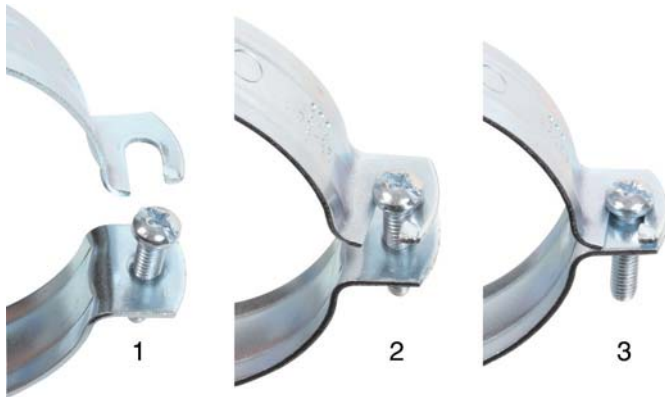
Double Screw Pipe Clip, Silicone

Robust double screw pipe clip with high-temperature-resistant silicone insert and quick-release safety fastener

- Bead-reinforced double screw pipe clip with 4-fold welded connecting nut
- Single-sided, quick-release safety fastener for quick, practical installation
- Age-resistant red-brown noise-insulating insert made of silicone rubber
- Material: Electrolytically galvanised steel
- Fulfils construction material class B2 in accordance with DIN 4102
- Noise-insulated according to DIN 4109
- Long-term temperature-resistant from -50°C to +200°C

Application areas:

- Steam pipes
- Hot water systems



Article No.	Article Description	QTY
8615 11 14	PIPE CLIP HT 11-14MM M8	g 50
8615 15 18	PIPE CLIP HT 15-18MM M8	g 50
8615 20 23	PIPE CLIP HT 20-23MM M8	g 50
8615 25 28	PIPE CLIP HT 25-28MM M8	g 50
8615 31 35	PIPE CLIP HT 31-35MM M8	g 50
8615 40 43	PIPE CLIP HT 40-43MM M8	g 50
8615 48 53	PIPE CLIP HT 48-53MM M8	g 50
8615 64 67	DS PIPE CLIP HT 64-67MM M8/10	10
8615 73 80	PIPE CLIP HT 73-80MM M8/10	g 50
8615 83 91	PIPE CLIP HT 83-91MM M8/10	25
8615 100 106	DS PIP.CLIP HT 100-106MM M8/10	10
8615 108 114	PIPE CLIP HT 108-114MM M8/10	25
8615 124 132	DS PIP.CLIP HT 124-132MM M8/10	5
8615 133 141	DS PIP.CLIP HT 133-141MM M8/10	5
8615 159 168	PIPE CLIP HT 159-168MM M8/10	10

Technical Data

D mm	D inch	DN mm	G	B	H	h	b x s	Fa,Z N
11 – 14	1/4"	8	M8	48	32	20	20 x 1.00	600
15 – 18	3/8"	10	M8	48	44.5	22	20 x 1.00	600
20 – 23	1/2"	15	M8	55	48.5	23	20 x 1.00	600
25 – 28	3/4"	20	M8	60	53.5	26	20 x 1.00	600
31 – 35	1"	25	M8	67	60.5	30	20 x 1.00	600
40 – 43	1 1/4"	32	M8	83	60.5	34	20 x 1.25	800
48 – 53	1 1/2"	40	M8	85	68.5	45	20 x 1.25	800
64 – 67	-	-	M8/10	109	95	55	20 x 2.00	800
73 – 80	2 1/2"	65	M8/10	126	109	61	23 x 2.00	930
83 – 91	3"	80	M8/10	137	121	67	25 x 2.50	930
100 – 106	-	-	M8/10	144	130	72	25 x 2.00	930
108 – 116	4"	100	M8/10	160	141	79	25 x 2.50	930
124 – 132	-	-	M8/10	169	155	84	23 x 2.00	930
133 – 141	5"	125	M8/10	189	170	92	25 x 2.50	930
159 – 168	6"	150	M8/10	233	198	99	25 x 3.00	1,500

The max. permitted load (Fa,Z) was determined from the breaking load using statistical methods while observing a max. permitted distortion of 1.5 mm or 2% of the max. pipe diameter that can be clamped

Premium BGP Double Screw Pipe Clip

Robust two-piece double screw pipe clip for high load requirements in building technology and pipeline construction – fire-tested in accordance with DIN 4102; noise-insulated in accordance with DIN 4109

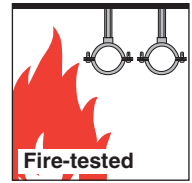
- Pivoting U-fastener
- Temperature resistance: -35°C to +100 °C
- Galvanised

Product benefits:

- Good adaption to pipe tolerances thanks to two fastening screws
- Combined thread enables variable thread connection

Areas of application:

- Fastening of pipes in indoor areas
- Suitable for securing pipes in industrial construction and in building technology



Technical Data

Art. No.	Clamp. range dA in mm	Steel pipe dA in mm	Steel pipe dA, inches	Copper pipe dA in mm	VA pipe da in mm	HT pipe DN	HPDE pipe dA in mm	Cast iron/SML pipe DN
8516 15 20	15–20	17.2	3/8"	15.0/18.0	15.0/18.0	-	-	-
8516 22 28	22–28	21.3	1/2"	22.0/28.0	22.0/26.9	-	25	-
8516 38 42	38–42	38.0	-	42.0	42.0	-	40	-
8516 44 48	44–48	44.5	1 1/4"	-	-	-	-	40
8516 50 54	50–54	54.0	-	54.0	54.0	50	50	-
8516 56 60	56–60	57.0	-	-	-	-	-	50
8516 63 64	63–64	63.5	-	64.0	-	-	63	-
8516 75 83	75–83	76.1	2 1/2"	76.1	76.1	75	75	-
8516 84 89	84–89	88.9	3"	88.9	88.9	-	-	80
8516 90 95	90–95	-	-	-	-	-	90	-
8516 100 105	100–105	101.6	-	-	-	-	-	-
8516 108 112	108–112	108.0	-	108.0	-	110	110	100
8516 114 116	114–116	114.3	-	-	114.3	-	125	-
8516 121 125	121–125	-	-	-	-	125	-	-
8516 132 136	132–136	133.0	-	133.0	-	-	-	125
8516 159 163	159–163	159.0	-	159.0	159.0	160	160	-

Article No.	Article Description	QTY
8516 15 20	PIPE C.BGP M 8/10 3/8" 15- 20	25
8516 22 28	PIPE C.BGP M 8/10 1/2" 22- 28	25
8516 38 42	PIPE C.BGP M8/10 38- 42	25
8516 44 48	PIPE C.BGP M8/10 1 1/4" 44- 48	25
8516 50 54	PIPE C.BGP M8/10 1 1/2" 50- 54	25
8516 56 60	PIPE C.BGP M8/10 56- 60	25
8516 63 64	PIPE C.BGP M8/10 2" 63- 64	25
8516 75 83	PIPE C.BGP M8/10 2 1/2" 75- 83	10

Article No.	Article Description	QTY
8516 84 89	PIPE C.BGP M8/10 84- 89	10
8516 90 95	PIPE C.BGP M8/10 3" 90- 95	10
8516 100 105	PIPE C.BGP M8/10 100-105	10
8516 108 112	PIPE C.BGP M8/10 4" 108-112	10
8516 114 116	PIPE C.BGP M8/10 114-116	10
8516 121 125	PIPE C.BGP M8/10 121-125	10
8516 132 136	PIPE C.BGP M10/12 132-136	10
8516 159 163	PIPE C.BGP M10/12 5" 159-163	10

Heavy-duty Pipe Clip

Heavy-duty, two-piece double screw pipe clip for high load requirements in building technology and pipeline construction – Noise-insulated in accordance with DIN 4109

- Pendulum plug-in nut
- Temperature resistance: -35°C to +100 °C
- Galvanised

Product benefits:

- Combined thread adapted to the load range
- Good adaption to pipe tolerances thanks to two fastening screws

Areas of application:

- For high loads in sanitary installations, heating and system construction, as well as pipeline and machine construction



Article No.	Article Description	QTY
8510 20 25	H.DUTY PIPE C. M 8/10 20- 25	g 50
8510 26 30	H.DUTY PIPE C. M 8/10 26- 30	g 50
8510 31 36	H.DUTY PIPE C. M 8/10 31- 36	g 50
8510 38 45	H.DUTY PIPE C. M 8/10 38- 45	g 50
8510 47 51	H.DUTY PIPE C. M 8/10 47- 51	g 50
8510 53 57	H.DUTY PIPE C. M 8/10 53- 57	g 50
8510 58 64	H.DUTY PIPE C. M 8/10 58- 64	g 50
8510 65 70	H.DUTY PIPE C. M10/12 65- 70	g 50
8510 72 78	H.DUTY PIPE C. M10/12 72- 78	g 50
8510 78 83	H.DUTY PIPE C. M10/12 78- 83	g 50
8510 84 90	H.DUTY PIPE C. M10/12 84- 90	g 50
8510 102 106	H.DUTY PIPE C. M10/12 102-106	g 50
8510 108 112	H.DUTY PIPE C. M10/12 108-112	g 50
8510 120 125	H.DUTY PIPE C. M12/16 120-125	g 50
8510 133 136	H.DUTY PIPE C. M12/16 133-136	25
8510 137 142	H.DUTY PIPE C. M12/16 137-142	25
8510 145 150	H.DUTY PIPE C. M12/16 145-150	25
8510 158 163	H.DUTY PIPE C. M12/16 158-163	25
8510 164 168	H.DUTY PIPE C. M12/16 164-168	25
8510 190 194	H.DUTY PIPE C. M12/16 190-194	10
8510 198 203	H.DUTY PIPE C. M12/16 198-203	10
8510 207 213	H.DUTY PIPE C. M12/16 207-213	10
8510 219 223	H.DUTY PIPE C. M12/16 219-223	10
8510 242 246	H.DUTY PIPE C. M12/16 242-246	1
8510 270 275	H.DUTY PIPE C. M12/16 270-275	1
8510 285 292	H.DUTY PIPE C. M12/16 285-292	1
8510 300 305	H.DUTY PIPE C. M12/16 300-305	1
8510 311 316	H.DUTY PIPE C. M12/16 311-316	1
8510 321 326	H.DUTY PIPE C. M12/16 321-326	1

Technical Data			
Clamp. range dA in mm	Clamp. range dA in inches	Material thickn. mm	Max. recom. capacity in N*
20-25	1/2"	25×3.0	1,500
26-30	3/4"	25×3.0	1,500
31-36	1"	25×3.0	1,500
38-45	1 1/4"	25×3.0	1,500
47-51	1 1/2"	25×3.0	1,500
53-57	-	25×3.0	1,500
58-64	2"	25×3.0	1,850
65-70	-	30×3.0	1,850
72-78	2 1/2"	30×3.0	1,850
84-90	3"	30×3.0	1,850
102-106	-	30×3.0	1,850
108-112	-	30×3.0	1,850
120-125	-	35×4.0	5,000
133-136	-	35×4.0	5,000
137-142	5"	35×4.0	5,000
145-150	-	35×4.0	5,000
158-163	-	35×4.0	5,000
164-168	6"	35×4.0	5,000
190-194	-	35×4.0	5,000
198-203	-	35×4.0	5,000
207-213	-	35×4.0	5,000
219-223	8"	35×4.0	5,000
242-246	-	35×4.0	5,000
270-275	10"	35×4.0	5,000
285-292	-	35×4.0	5,000
300-305	-	35×4.0	5,000
311-316	-	35×4.0	5,000
321-326	-	35×4.0	5,000

*with central tension

Downpipe Clamps, Hot-dip Galvanised, M10

- Riveted
- Captive V2A ring bolt
- Strong triple lead thread
- Galvanised M10 connecting nut
- Clamp body hot-dip galvanised (galvanised all round)



Article No.	Article Description	QTY
8613 1 60	RAIN PIPE CLAMP 60MM M10	25
8613 1 76	RAIN PIPE CLAMP 76MM M10	25
8613 1 80	RAIN PIPE CLAMP 80MM M10	25
8613 1 87	RAIN PIPE CLAMP 87MM M10	25
8613 1 100	RAIN PIPE CLAMP 100MM M10	25
8613 1 120	RAIN PIPE CLAMP 120MM M10	25

ISO Spiral Dowel with Threaded Pin

- Special threaded pin made of A2 stainless steel or with zinc flake coating for good corrosion protection
- Perfect solution for fixing downpipe clamps to the ETIC system: simple, flexible, fast and adjustable!
- Direct thermal-bridge-free attachment to the insulating material
- Pre-assembled special threaded pin: ideal distance of 30 mm between the downpipe and the wall; adjustment by up to a further 25 mm possible by hand
- Pre-assembled sealing ring made of weather-resistant cellular rubber
- Robust, self-drilling (ETICS plaster ≤ 7 mm) nylon dowel, weather resistant



Suitable building materials:

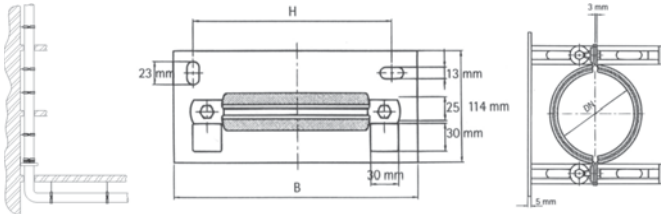
- Heat insulation composite systems (ETICS), polystyrene panels (EPS, XPS), wood fibre insulation boards (pre-drilling: 13 mm), hard foam boards, polystyrene boards and Heraklith boards

Article No.	Article Description	QTY
8137 10 95	ISO SPIR.DOWEL W.THR.PIN M10GV	z 50
8137 10 95 1	ISO SPIR.DOWEL W.THR.PIN M10A2	z 50

Technical Data				
Dowel length mm	Drive Dowel Ø	Drive threaded pin	Ø int. thread / connector thread	Recom. loads in kN polystyrene
95	Size 17	TX 25 / SW 13	M 10	0.10
95	Size 17	TX 25 / SW 13	M 10	0.10

Downpipe Support

- one-piece wall bracket with adjustable wall distance
- rapid assembly (only 2 bore holes)
- high load capacity (e.g. 3000 N at a distance of 130 mm from the wall to the center of the pipe)
- non-aging EPDM rubber inlay
- stainless assembly due to optimum adjustability
- optimum sound insulation profile according to DIN 4109
- steel 1.0332 electrolytically galvanized
- Console CO² welded



Article No.	Article Description	QTY
8627 70	DOWNPIPE SUPP. ID 70	1
8627 80	DOWNPIPE SUPP. ID 80	1
8627 100	DOWNPIPE SUPP. ID100	1
8627 125	DOWNPIPE SUPP. ID125	1
8627 150	DOWNPIPE SUPP. ID150	1
8627 200	DOWNPIPE SUPP. ID200	1

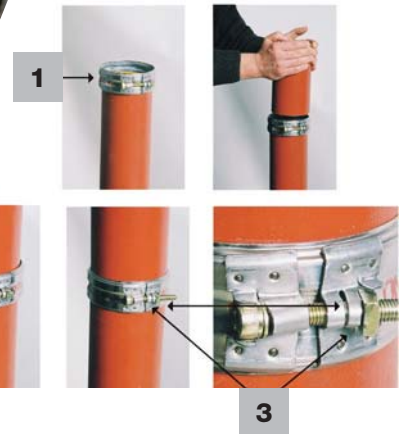
Technical Data				
ID	Height mm	Length mm	Width mm	Admissible load Fy (N)
70	167	210	212	3000
80	167	210	212	3000
100	199	210	244	3000
125	224	210	269	3000
150	248	210	293	3000
200	298	250	343	3000

SML Couplings

- Approval No Z-42.5-255
- Professional clamp made of stabilized chromium steel material number 1.4510/11 according to EN 10088-1
- Closure parts with only one screw
- Cylinder screw with internal hexagon 8.8, galv., yellow chromated
- Grip holders made of material number 1.4301
- Complete with inserted sealing collar made of EPDM, non-aging and resistant to hot water

Assembly instruction:

- Shift the complete coupling (1) up to the center distance ring of the sealing onto the pipe end or fitting
- Shift the following pipe end or fitting from the other side onto the connection
- Firmly tighten the hexagon socket screw (2) using an impact screw driver until the chucking slot (3) is closed. The tightening torque is achieved.

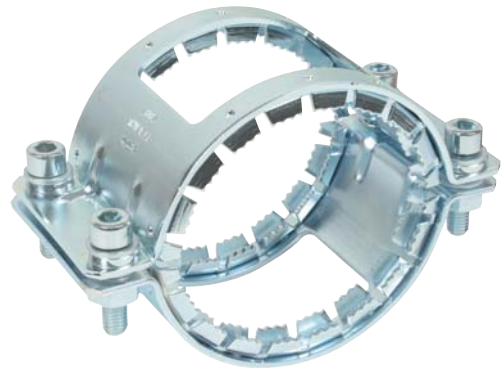


Article No.	Article Description	QTY
8608 9 50	SML COUPLING ID 50	e 100
8608 9 70	SML COUPLING ID 70	e 100
8608 9 80	SML COUPLING ID 80	e 50
8608 9 100	SML COUPLING ID100	e 50
8608 9 125	SML COUPLING ID125	e 20
8608 9 150	SML COUPLING ID150	e 20
8608 9 200	SML COUPLING ID 200	1

Securing Grip Collar for SML Coupling

- Approval No Z-42.5-255
- Galvanized securing clamp for SML pipe systems according to DIN 19 522/EN 877 and for twin-screw couplings
- For pipe systems with an pressure charge of up to 10 bar (ID50 - ID100), 5 bar (ID125 and ID150)

Article No.	Article Description	QTY
8608 1 50	COMB. SEC. GRIP COLL. ID 50	e 10
8608 1 70	COMB. SEC. GRIP COLL. ID 70	e 10
8608 1 80	COMB. SEC. GRIP COLL. ID 80	e 10
8608 1 100	COMB. SEC. GRIP COLL. ID 100	e 10
8608 1 125	COMB. SEC. GRIP COLL. ID 125	e 10
8608 1 150	COMB. SEC. GRIP COLL. ID 150	5
8608 1 200	COMB. SEC. GRIP COLL. ID 200	1



Fix Coupling

- Approval number Z-42.5-255
- Transition coupling including two sealing lips
- For SML pipe system according to DIN 19 522/ EN877 with other pipe systems
- Rubber cuff made of EPDM, tightening strap made of chrome nickel steel material number 1.450/11
- **Advantage:** No cutting required = saving time when assembling!

Assembly instruction:

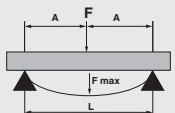
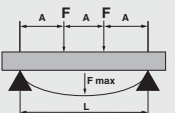
- Put the complete Fix coupling included in the delivery on the pipe end or fitting up to the distance ring of the sealing and fix it using the tension ring (1)
- Pull the opening plug using tongs (2) and remove the rubber membrane
- Label the connection pipe at the required installation depth, provide it with lubricant and insert it

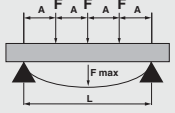
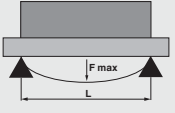


Article No.	Article Description	QTY
8608 2 50	FIX COUPLING ID 50	e 20
8608 2 70	FIX COUPLING ID 70	e 20
8608 2 80	FIX COUPLING ID 80	e 10
8608 2 100	FIX COUPLING ID 100	e 20
8608 2 125	FIX COUPLING ID 125	e 10

Technical Data			
SML pipe ID	SML pipe outer Ø in mm	Outer Ø in in mm	Tightening torques in Nm
50	40 - 56	42	ca. 2
70	56 - 75	55	ca. 2
80	83 - 90	60	ca. 2
100	104 - 110	65	ca. 2
125	125	75	ca. 2

Technical Data for Mounting Rails

Clamping width L mm	Deflection F max mm	Maximum permissible load values in Newton														
																
		TYPE 27		TYPE 28		TYPE 30 stainl. steel		TYPE 38	TYPE 27		TYPE 28		TYPE 30 stainl. steel		TYPE 38	
		27/18	28/30	30/15	30/30	38/40	27/18	28/30	30/15	30/30	38/40	27/18	28/30	30/15	30/30	38/40
250	1,7	873	2.825	899	3.238	6.384	653	2.112	674	2.428	4.774					
500	3,3	418	1.354	449	1.619	3.061	313	1.013	303	1.214	2.291					
750	5,0	279	904	263	1.156	2.045	203	678	155	867	1.534					
1.000	6,7	198	672	129	780	1.523	116	505	76	458	1.143					
1.250	8,3	125	536	90	542	1.216	73	391	53	318	912					
1.500	10,0	84	443	50	305	1.007	49	272	30	179	755					
1.750	11,7	59	336	40	241	859	34	179	23	141	625					
2.000	13,3	43	251	32	195	746	25	148	19	114	472					
2.250	15,0	31	194	25	154	629	18	113	15	90	369					
2.500	16,7	23	151	21	125	500	13	89	12	73	294					
2.750	18,3	16	119	17	103	405	9	72	10	61	238					
3.000	20,0	11	95	14	87	331	6	56		51	195					
3.250	21,7			12	74	274				43	161					
3.500	23,3			11	64	227				37	133					
3.750	25,0				55	189				33	111					
4.000	26,7				49	158				29	92					
4.250	28,3				43	131				25	77					
4.500	30,0				39	108				23	63					
4.750	31,7				35	88				20	52					
5.000	33,3				31	70				18	41					
5.250	35,0				28	54				17	32					
5.500	36,7				26	41				15	24					
5.750	38,3				24	29				14	17					
6.000	40,0				22	17				13	10					

Clamping width L mm	Deflection F max mm	Maximum permissible load values in Newton														
																
		TYPE 27		TYPE 28		TYPE 30 stainl. steel		TYPE 38	TYPE 27		TYPE 28		TYPE 30 stainl. steel		TYPE 38	
		27/18	28/30	30/15	30/30	38/40	27/18	28/30	30/15	30/30	38/40	27/18	28/30	30/15	30/30	38/40
250	1,7	437	1.412	449	1.619	3.192	7.570	24.485	1.797	6.475	55.331					
500	3,3	209	677	217	809	1.530	1.672	5.415	826	3.238	12.242					
750	5,0	140	452	111	578	1.022	738	2.431	421	2.313	5.503					
1.000	6,7	84	336	54	328	761	317	1.344	206	1.248	3.046					
1.250	8,3	52	268	38	228	608	161	848	143	867	1.951					
1.500	10,0	35	195	21	128	503	90	494	81	488	1.342					
1.750	11,7	25	141	17	101	429	54	308	64	385	966					
2.000	13,3	18	106	14	82	339	34	201	52	312	644					
2.250	15,0	13	82	11	65	265	22	138	41	247	448					
2.500	16,7	9	64		53	211	14	97	33	200	320					
2.750	18,3	7	50		43	171	9	70	27	165	236					
3.000	20,0	5	40		36	140	6	51	23	139	177					
3.250	21,7				31	116			20	118	135					
3.500	23,3				27	96			17	102	104					
3.750	25,0				23	80			15	89	81					
4.000	26,7				21	66			13	78	63					
4.250	28,3				18	55			11	69	50					
4.500	30,0				16	45			10	62	38					
4.750	31,7				15	37				55	30					
5.000	33,3				13	30				50	23					
5.250	35,0				12	23				45	17					
5.500	36,7				11	17				41	12					
5.750	38,3					12				38	8					
6.000	40,0					7				35	5					

Technical Data for Mounting Rails

Material characteristics		27 / 18	28 / 30	38 / 40	30 / 15 stainl. st.	30 / 30 stainl. st.	
Material thickness	mm	1,20	1,75	2,0	2,0	2,0	
Delivery length	m	2 / 3	2 / 3	2 / 3 / 6	2	2	
Weight	kg/m	0,59	1,14	1,84	0,87	1,34	
Holes							
Slot width	mm	15	15	15	15	15	
Oblong hole Ø	mm	18,5 × 6,5 / 10,5 × 6,5	26,0 × 10,5 / 8,5 × 10,5	28,0 × 15,0 / 8,5 × 15,0	26,5 × 10,5 / 8,5 × 10,5	26,5 × 10,5 / 8,5 × 10,5	
Grid dimension	mm	100 / 35,5	50 / 100	50 / 100	50 / 100	50 / 100	
Cross-section values							
y-axis							
Profile cross-section	A	cm ²	0,68	1,38	2,24	1,02	1,62
Moment of inertia	I _y	cm ⁴	0,29	1,43	4,40	0,28	1,71
Moment of resistance	W _y	cm ³	0,29	0,91	2,13	0,35	1,08
z-axis							
Moment of inertia	I _z	cm ⁴	0,91	2,03	5,96	1,47	2,65
Moment of resistance	W _z	cm ³	0,67	1,45	3,14	0,98	1,76

Material Constants:

Modulus of elasticity E	Shear modulus G	Poisson's ratio μ	Coefficient of thermal expansion α·T
210.000 N/m ²	81.000 N/m ²	0,3	0,000012 1/K

Calculation method:

The load-bearing capacity values for the bending load (primarily static load) are calculated according to the theory of elasticity, taking their own weight into account. To name but a couple of examples, these calculations use the material and cross-section constants. When calculating the load-bearing capacity values, the permissible steel stress of 160 N/mm² and the maximum deflection of L/150 are not exceeded. **The deflection indicated must be assessed for visual acceptability on a case-by-case basis!**

Load:

If **several different** individual loads in **variable distances** affect a single-span beam (crossbar), they can be added and considered an estimated **individual load positioned centrally**.

For enhanced safety, it is advisable to use U-shaped brackets!

In case of high loads, "push-through installation" is recommended!

Mounting on the ceiling and the wall:

The necessary fixing elements (screws and dowels) must be calculated individually and must be suitable for the load with mounting rails!

Mounting Rail TYPE 27/18

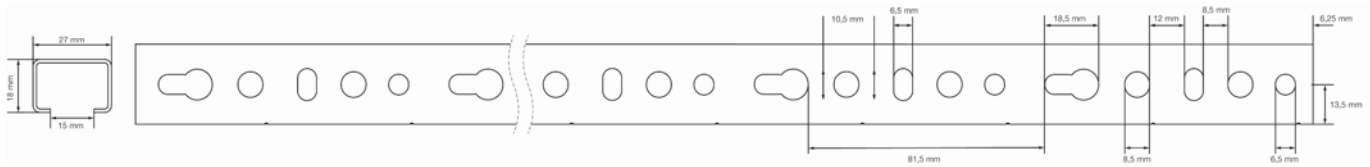
- Perforated mounting rails made of galvanised steel – improved corrosion protection and highest stability
- For manufacturing traverses, wall brackets and support frames for fastening pipe runs and pipe sections in the sanitary, heating, air-conditioning, ventilation and electrical trades

Product benefits:

- Various fixing options due to different hole geometries
- Neat, visually pleasing assembly compared to single fixtures
- High resistance to bending and ultimate strength due to optimized profile cross sections
- The rails are matched to all the connecting parts of the FÖRCH fixing system and enable a variety of different constructions and connections without drilling or welding

Areas of application:

- In house building
- Fastening standpipes
- Substructures



Article No.	Article Description	QTY
8540 27 18	MTR MOUNT. RAIL 2M GAL.27/18	i 50
8540 27 18 3	MTR MOUNT. RAIL 3M GAL.27/18	r 30

Mounting Rail TYPE 28/30

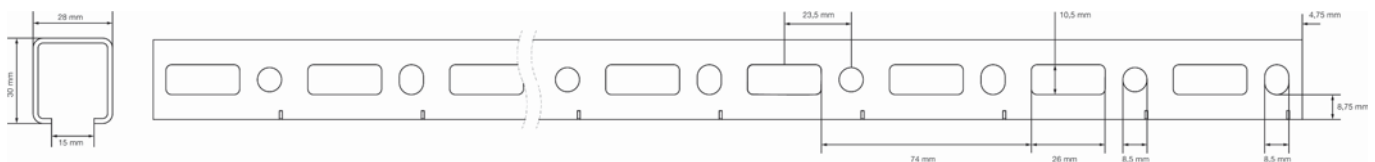
- Perforated mounting rails made of galvanised steel – improved corrosion protection and highest stability
- For manufacturing traverses, wall brackets and support frames for fastening pipe runs and pipe sections in the sanitary, heating, air-conditioning, ventilation and electrical trades

Product benefits:

- Various fixing options due to different hole geometries
- Neat, visually pleasing assembly compared to single fixtures
- High resistance to bending and ultimate strength due to optimized profile cross sections
- The rails are matched to all the connecting parts of the FÖRCH fixing system and enable a variety of different constructions and connections without drilling or welding

Areas of application:

- In house building
- Fixing lengths of pipe in supply ducts
- Fastening standpipes
- Substructures
- Supporting structure for ventilation ducts



Article No.	Article Description	QTY
8540 28 30	MTR MOUNT. RAIL 2M GAL.28/30	i 20
8540 28 30 3	MTR MOUNT. RAIL 3M GAL.28/30	r 24

Mounting Rail TYPE 38/40

- Perforated mounting rails made of galvanised steel – improved corrosion protection and highest stability
- For manufacturing traverses, wall brackets and support frames for fastening pipe runs and pipe sections in the sanitary, heating, air-conditioning, ventilation and electrical trades

Product benefits:

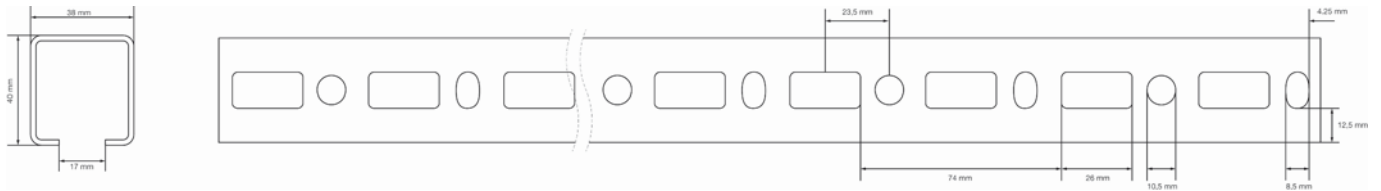
- Various fixing options due to different hole geometries
- Neat, visually pleasing assembly compared to single fixtures
- High resistance to bending and ultimate strength due to optimized profile cross sections
- The rails are matched to all the connecting parts of the FÖRCH fixing system and enable a variety of different constructions and connections without drilling or welding

Areas of application:

- Supporting structure for ventilation ducts
- Fixing lengths of pipe in supply ducts
- Substructures
- Platform construction

Ordering information:

- The minimum order quantity for 6 m mounting rails is 24 m



Article No.	Article Description	QTY
8540 38 40	MTR MOUNT. RAIL 2M GAL. 38/40	i 10
8540 38 40 3	MTR MOUNT. RAIL 3M GAL. 38/40	r 24
8540 38 40 6	MTR MOUNT. RAIL 6M GAL. 38/40	s 24

Mounting Rail TYPE 30 Stainless Steel

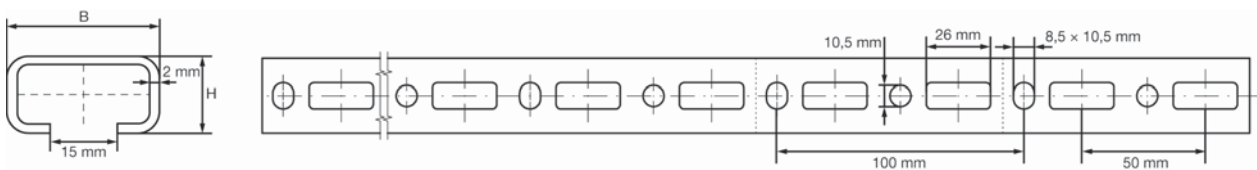
- Perforated mounting rail made from stainless steel A4 (1.4404) – highly corrosion resistant
- For manufacturing traverses, wall brackets and support frames in conjunction with a comprehensive range of system components
- In the workshop as a sub-assembly for fastening pipe runs and pipe sections in the sanitary, heating, ventilation, air-conditioning and electrical trades

Advantages:

- The hole geometry offers numerous fixing options for neat and visually appealing assembly
- High resistance to bending and ultimate strength due to optimized profile cross sections

Areas of application:

- Outdoors
- Mounting frames for solar installations
- In the food industry
- In the photochemical and pharmaceuticals industries
- In nuclear power stations



Article No.	Article Description	QTY
8539 30 15 2	MTR MOUNT. RAIL 2M A4 30/15	i 10
8539 30 30 2	MTR MOUNT. RAIL 2M A4 30/30	i 10

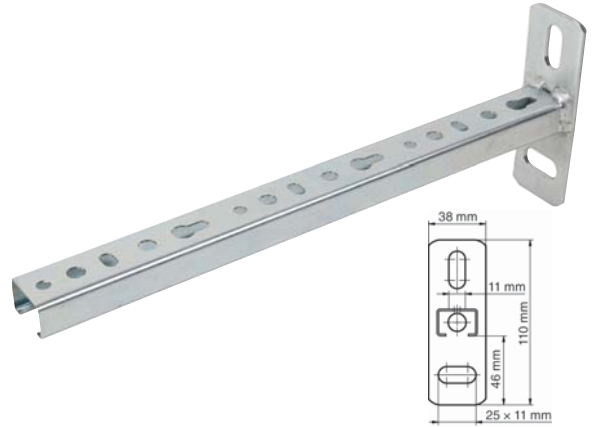
Technical Data	
B	H
mm	mm
30	15
30	30

Console TYPE 27/18

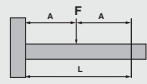
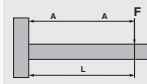
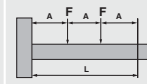
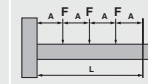
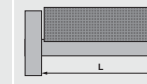
- Galvanised, assembly-ready cantilever bracket
- Robot-controlled precision welding – highest safety and stability
- Good adaptation to structural requirements thanks to graduated lengths
- The mounting holes in the base plate are punched slots at 90° to each other, to improve ease of installation
- Also suitable for fixing to ceilings

Areas of application:

- Projecting support structures for pipe sections, fittings, cable racks, pumps, ventilation ducts, ventilation units and air-conditioning units



Article No.	Article Description	QTY
8545 200	CONSOLE GAL.TYPE 27/18 200MM	e 25
8545 300	CONSOLE GAL.TYPE 27/18 300MM	e 25

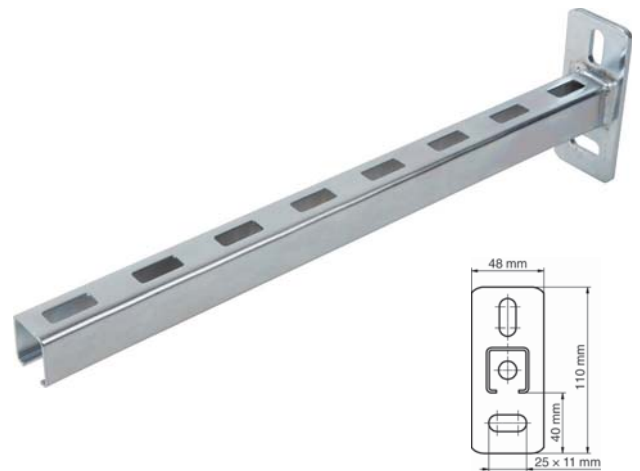
Length projection mm	Total length mm	Load values in Newton (N) for console TYPE 27/18				
						
200	204	530	265	265	177	2.650
300	304	352	140	176	117	1.174

Console TYPE 28/30


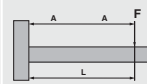
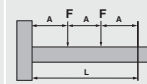
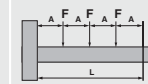
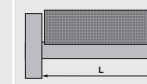
- Galvanised, assembly-ready cantilever bracket
- Robot-controlled precision welding – highest safety and stability
- Good adaptation to structural requirements thanks to graduated lengths
- The mounting holes in the base plate are punched slots at 90° to each other, to improve ease of installation
- Also suitable for fixing to ceilings

Areas of application:

- Projecting support structures for pipe sections, fittings, cable racks, pumps, ventilation ducts, ventilation units and air-conditioning units



Article No.	Article Description	QTY
8546 250	CONSOLE GAL.TYPE 28/30 250MM	e 25
8546 350	CONSOLE GAL.TYPE 28/30 350MM	e 25
8546 400	CONSOLE GAL.TYPE 28/30 400MM	e 25
8546 550	CONSOLE GAL.TYPE 28/30 550MM	e 10

Length projection mm	Total length mm	Load values in Newton (N) for console TYPE 28/30				
						
250	254	1.354	677	677	450	1.354
350	354	965	482	482	322	964
400	404	843	421	421	281	842
550	554	610	305	305	203	610

When calculating the load-bearing capacity values, the permissible steel stress of 160 N/mm² and the maximum deflection of L/150 are not exceeded.

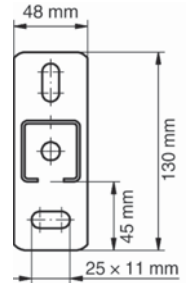
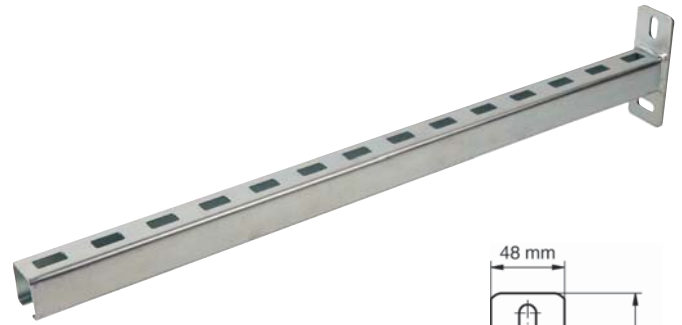
**The loads indicated only apply to the console.
The other design parts must be tested for their permissible maximum load too.**

Console TYPE 38/40


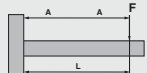



- Galvanised, assembly-ready cantilever bracket
- Robot-controlled precision welding – highest safety and stability
- Good adaptation to structural requirements thanks to graduated lengths
- The mounting holes in the base plate are punched slots at 90° to each other, to improve ease of installation
- Also suitable for fixing to ceilings

Areas of application:

- Projecting support structures for pipe sections, fittings, cable racks, pumps, ventilation ducts, ventilation units and air-conditioning units



Article No.	Article Description	QTY
8547 200	CONSOLE GAL.TYPE 38/40 200MM	e 10
8547 350	CONSOLE GAL.TYPE 38/40 350MM	e 20
8547 450	CONSOLE GAL.TYPE 38/40 450MM	e 10
8547 600	CONSOLE GAL.TYPE 38/40 600MM	e 5
8547 700	CONSOLE GAL.TYPE 38/40 700MM	e 5
8547 1000	CONSOLE GAL.TYPE 38/40 1000MM	1 ü

Length projection mm	Total length mm	Load values in Newton (N) for console TYPE 38/40				
						
200	206	3.828	1.914	1.914	1.276	3.828
350	356	2.128	1.064	1.064	710	2.128
450	456	1.655	868	868	578	1.736
600	606	1.265	572	633	422	1.144
700	706	1.081	418	540	360	836
1.000	1.006	640	200	300	194	398

When calculating the load-bearing capacity values, the permissible steel stress of 160 N/mm² and the maximum deflection of L/150 are not exceeded.

**The loads indicated only apply to the console.
The other design parts must be tested for their permissible maximum load too.**

Console TYPE 30 Stainless Steel

- Assembly-ready cantilever bracket
- Robot-controlled precision welding – highest safety and stability
- Good adaptation to structural requirements thanks to graduated lengths and oblong holes in the base plate
- Stainless steel A4 (1.4404) – highly corrosion resistant



Areas of application:

- Projecting support structures for pipe sections, fittings, cable racks, pumps, ventilation ducts, ventilation units and air-conditioning units
- In corrosive environments and in the food industry

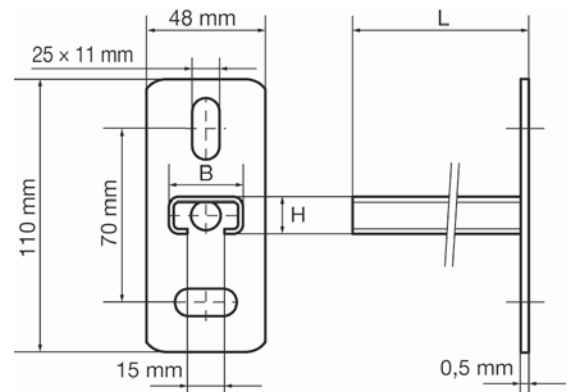


Technical Data

Art. No.	Type	Base plate mm	L mm	B mm	H mm
8539 30 15 200	30/15	48×5	200	30	15
8539 30 30 300	30/30	48×5	300	30	30

Article No.	Article Description	QTY
8539 3015 200	CONSOLE A4 TYPE 30/15 200MM	e 5
8539 30 30 300	CONSOLE A4 TYPE 30/30 300MM	e 10

Length projection mm	Total length mm	Load values in Newton (N) for console TYPE 30	
		Diagram 1	Diagram 2
200	204	202	538
300	304	542	1.349



When calculating the load-bearing capacity values, the permissible steel stress of 160 N/mm² and the maximum deflection of L/150 are not exceeded.

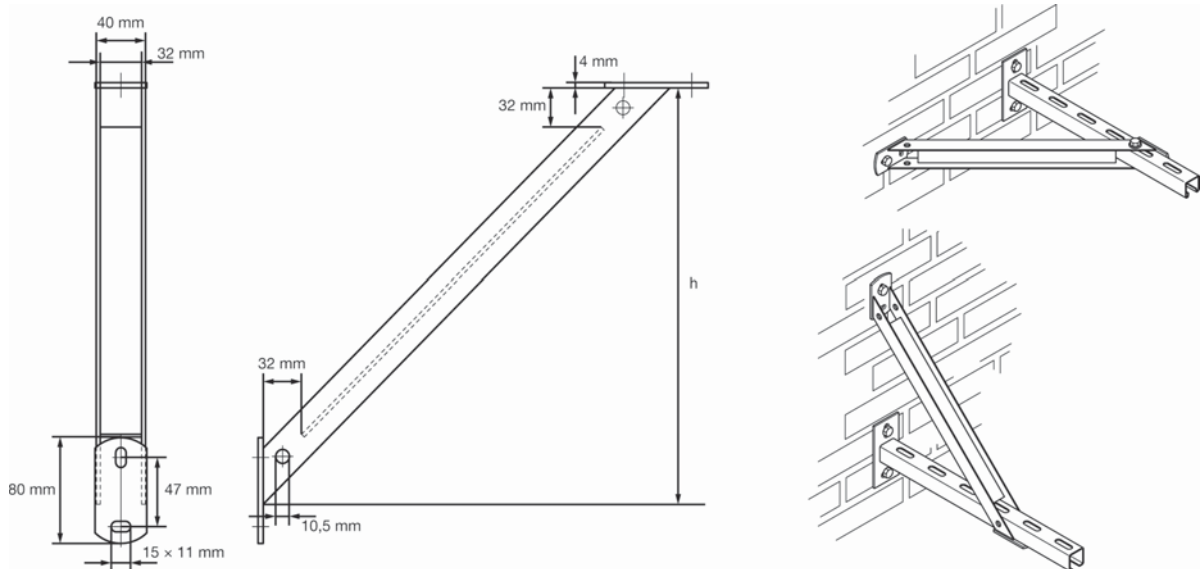
**The loads indicated only apply to the console.
The other design parts must be tested for their permissible maximum load too.**

Console Supporting Beam

- For attaching as a support element above, below or next to a wall console
- Used to increase the load-bearing capability of rail structures
- Electrolytically galvanised
- Vertical attachment of the console supporting beam for consoles:
Type 27/18; Type 28/30
- Horizontal attachment of the console supporting beam for consoles:
Type 27/18



Article No.	Article Description	QTY
8548 250	CONSOLE SUPP. BEAM GAL.250MM	1
8548 350	CONSOLE SUPP. BEAM GAL.350MM	1



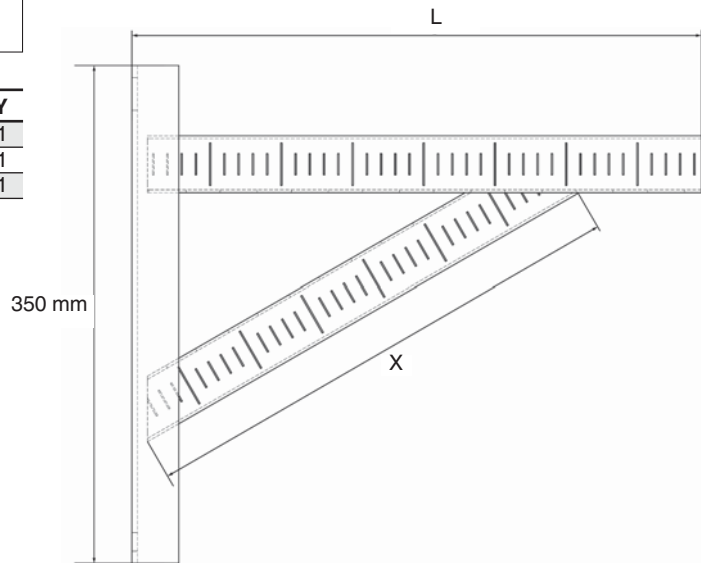
Heavy Duty Console TYPE 38/40


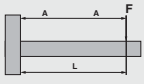

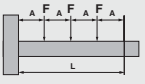
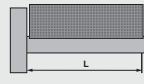
- Hot-dip galvanised console with welded support for fixing heavy pipes
- Suitable for outdoor applications (except for highly corrosive environments)
- Fixing heavy units, pumps and air conditioning equipment
- Profile thickness: 2 mm
- Slot width: 17 mm



Technical Data		
Art. No.	L	X
	mm	mm
8547 2 400	400	350
8547 2 600	600	450
8547 2 800	800	450

Article No.	Article Description	QTY
8547 2 400	CONS.HEAVY 38/40 H-D.GAL.400MM	1
8547 2 600	CONS.HEAVY 38/40 H-D.GAL.600MM	1
8547 2 800	CONS.HEAVY 38/40 H-D.GAL.800MM	1



Length projection mm	Total length mm	Load values in Newton (N) for console TYPE 38/40				
						
400	406	2.128	1.064	1.064	710	2.128
600	606	1.265	572	633	422	1.144
800	806	1.081	418	540	360	836

When calculating the load-bearing capacity values, the permissible steel stress of 160 N/mm² and the maximum deflection of L/150 are not exceeded.

**The loads indicated only apply to the console.
The other design parts must be tested for their permissible maximum load too.**

Console Set TYPE 38/40 SD

- Completely pre-assembled fastening kit for immediate efficient assembly
- Wall rail for extra height adjustment and / or simplification of fixing on an uneven substrate
- Vibration damper with pre-fitted sliding nut, washer and hexagonal locknut
- Soundproofing by means of vibration damper (supports made of vulcanised rubber)
- Various projections (depending on unit size)

Article No.	Article Description	QTY
8547 1 500	CONSOLE SET 38/40 M.SD 500MM	1
8547 1 550	CONSOLE SET 38/40 M.SD 550MM	1
8547 1 650	CONSOLE SET 38/40 M.SD 650MM	1



Sound-deadening Profile Strip

- High degree of soundproofing due to small contact area
- Quick assembly
- Suitable for profiles Type 27/18, Type 28/30, Type 38/40 and Type 30

Areas of application:

- To prevent acoustic bridges during the construction of traverses and consoles in ventilation systems

Usage instructions:

- Push into the mounting rail profile
- Push over the threaded rod



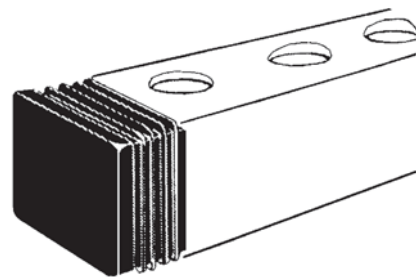
Article No.	Article Description	QTY
8558 273038	RO(30)RAIL DEAD. PROFILE	1

Rail End Cap

- For safe and visually attractive finishing of the ends of mounting rails and consoles
- Made from high quality polyethylene
- Simply press or tap in

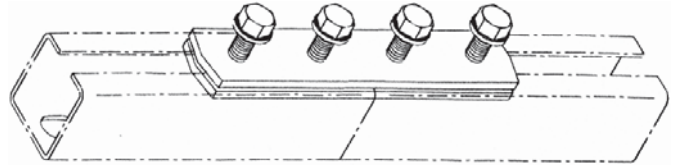


Article No.	Article Description	QTY
8561 27 18	RAIL END CAPS TYPE 27/18	f 100
8561 28 30	RAIL END CAPS TYPE 28/30	f 100
8561 38 40	RAIL END CAPS TYPE 38/40	50



Rail Couplings

- Mounting rails can be joined on site simply by bolting together without drilling or welding
- Galvanised – corrosion-protected
- Pre-assembled and ready for fitting – time-saving and efficient
- Bolted into the oblong holes on the rear of the rail, thus increasing the tensile strength in ascending pipe assemblies



Article No.	Article Description	QTY
8554 27	RAIL COUPLING GAL. TYPE 27	e 25
8554 38	RAIL COUPLING GAL. TYPE 38	e 25

Rail Bracket

- Pre-assembled rail bracket
- Easy to assemble, flexible connecting element for building correctly designed structures with mounting rails (rotationally stable attachment to the building structure)
- The perforations on the bracket permit the alignment of the rail slot in 4 directions
- Due to the clamping spring, the product can be easily and flexibly moved and positioned until it is finally fixed in the rail
- For cross connections in front wall installations and shelves made from mounting rails

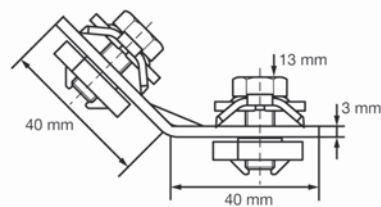


Article No.	Article Description	QTY
8554 28 30 1	RAIL BRACKET GAL. 28/30	25
8554 38 40	RAIL BRACKET GAL. 38/40	e 25

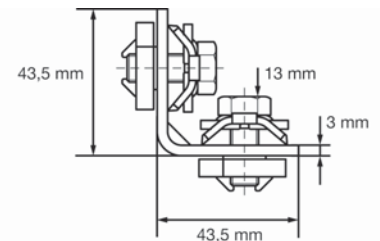
Mounting Bracket TYPE 27

- Pre-assembled mounting bracket for manufacturing and bracing support systems without drilling or welding
- Electrolytically galvanized
- For quick, sturdy fastening
- Suitable for mounting rails Type 27/18 and 28/30
- Suitable for consoles Type 27/18 and Type 28/30

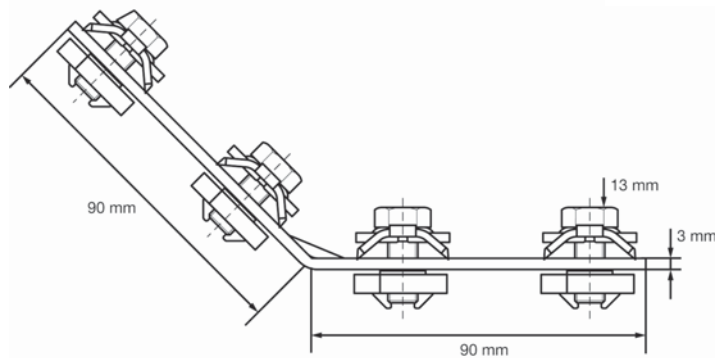
Article No.	Article Description	QTY
8555 45 40	MOUNT.BRACK.45°S TYPE27	e 25
8555 45 90 1	MOUNT.BRACK.45°L TYPE27	e 25
8555 90 45	MOUNT.BRACK.90°S TYPE27	e 25
8555 90 90 1	MOUNT.BRACK.90°L TYPE27	e 25



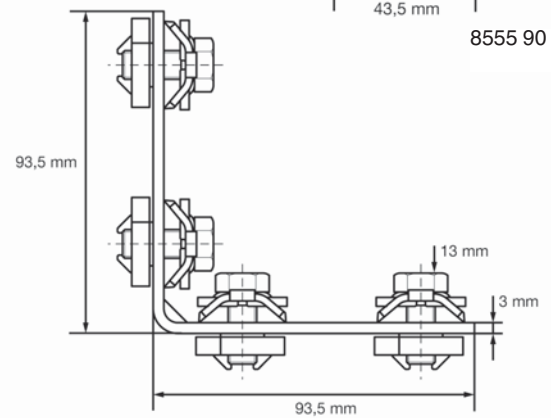
8555 45 40



8555 90 45



8555 90 90 1



8555 45 90 1

Mounting Bracket TYPE 38

- Mounting bracket for manufacturing and bracing support systems without drilling or welding
- For quick, sturdy fastening
- Suitable for mounting rails Type 38/40
- Suitable for consoles Type 38/40

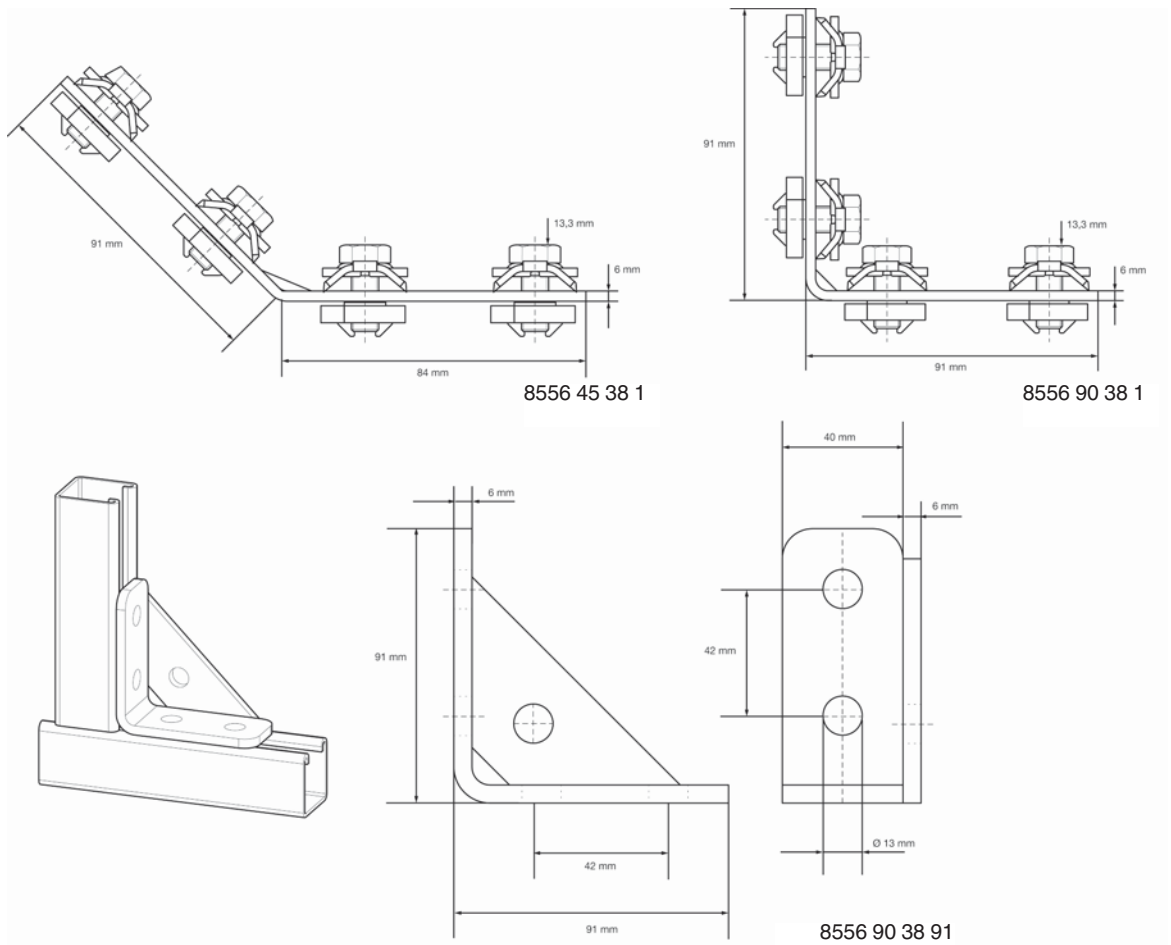
Art. No. 8556 45 38 1 / 8556 90 38 1:

- Electrolytically galvanised
- Pre-assembled

Art. No. 8556 90 38 91:

- High quality galvanisation 8 – 10 μ
- 4-hole bracket not pre-fitted

Article No.	Article Description	QTY
8556 45 38 1	MOU.BRACK.45°GAL.PRE-AS.TYPE38	25
8556 90 38 1	MOU.BRACK.90°GAL.PRE-AS.TYPE38	25
8556 90 38 91	MOUNT.BRACK.90°SUPP. TYPE38	1

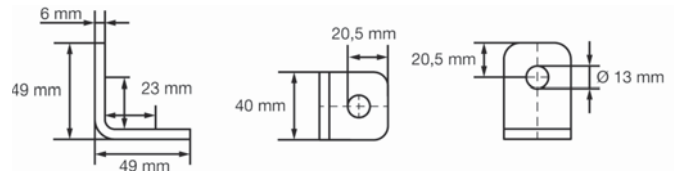


Mounting Bracket TYPE 38 short

- For manufacturing and bracing support systems without drilling or welding
- Hot-dip galvanised
- Easy to fit due to rounded corners
- Suitable for mounting rails Type: 38/40
- Suitable for consoles Type: 38/40



Article No.	Article Description	QTY
8556 90 38	MOUNT.BRACK.90°SHO.GAL. TYPE38	25



Mounting Bracket TYPE 38 VARIO

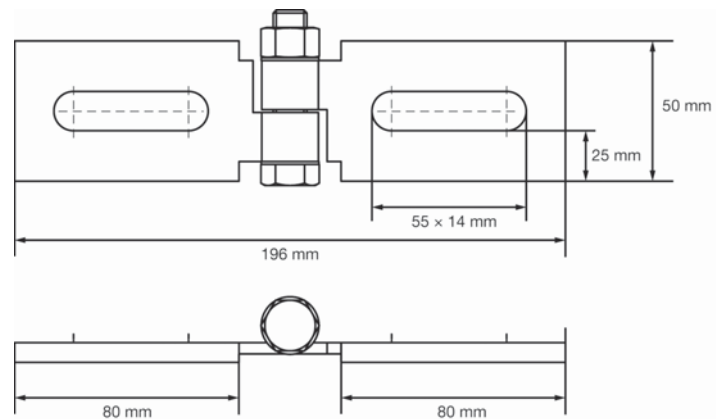
- Freely adjustable angle of inclination permits diverse structures
- Suitable for both galvanised and stainless steel mounting rails
- High quality galvanisation 8 – 10 μ
- Suitable for mounting rails Type 38/40

Areas of application:

- In corrosive environments and outdoors
- Mounting frames for solar installations
- Construction of racks and frameworks



Article No.	Article Description	QTY
8556 80 80 50	MOUNT.BRACK.VARIO 80X50	20



Angle Bracket TYPE 38/40

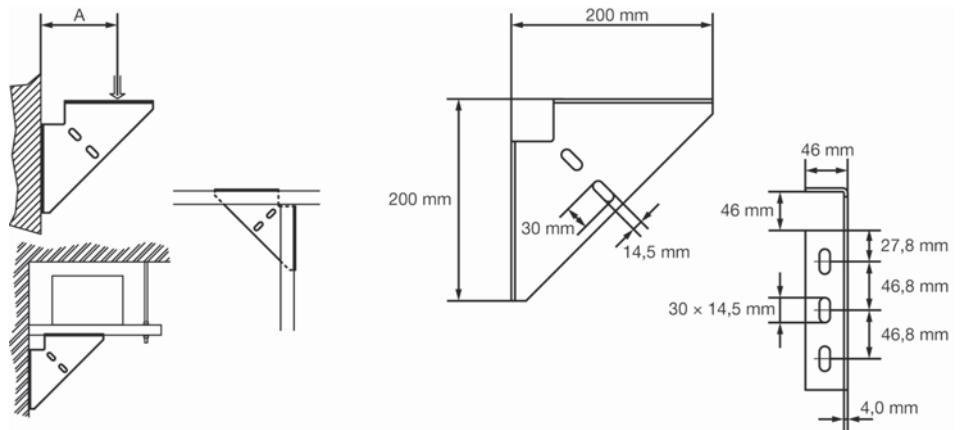
- High quality galvanisation 8 – 10 μ
- One-piece support for attaching as a support element above, below or next to a wall console
- Attaching the support increases the load-bearing capability of the rail structure
- Suitable for installations indoors and outdoors

Areas of application:

- Basic support or connecting element
- Fixing point for crossbars
- Support console for holding water meters, pumps, etc.



Article No.	Article Description	QTY
8547 1 04	ANGLE BRACKET 38/40 200X200X04	1



Rail Holder Upright

- For manufacturing customised support structures in conjunction with mounting rails
- Pre-assembled and ready for fitting, with M10 hexagonal bolt and washer
- Galvanised – corrosion-protected
- Dimensions of base plate: 120 × 40 × 4 mm
- 2 Oblong holes: 11 × 24 mm
- Matching mounting rails
 - Art. No. 8549 27: Type: 27/18, 28/30
 - Art. No. 8549 38: Type: 38/40



Article No.	Article Description	QTY
8549 27	UPR.RAIL SUPP.FL. GAL. TYPE 27	ü 25
8549 38	UPR.RAIL SUPP.FL. GAL. TYPE 38	ü 25

Rail Holder Transverse

- For manufacturing customised support structures in conjunction with mounting rails
- Pre-assembled and ready for fitting, with M10 hexagonal bolt and washer
- Galvanised – corrosion-protected
- Dimensions of base plate: 120 × 40 × 4 mm
- 2 Oblong holes: 11 × 24 mm
- Matching mounting rails
 - Art. No. 8549 27: Type: 27/18, 28/30
 - Art. No. 8549 38: Type: 38/40



Article No.	Article Description	QTY
8550 27	TR. RAIL SUPP.FL. GAL. TYPE 27	ü 25
8550 38	TR. RAIL SUPP.FL. GAL. TYPE 38	ü 25

Rail Runner Upright

- Diverse options for use of mounting rails to create customised brackets and load-bearing systems for wall, floor and ceiling mounting
- System module for assembling sturdy crossbars
- Galvanised – corrosion-protected
- Pre-assembled design for large time savings
- Matching mounting rails
 - Art. No. 8552 27 (1): Type: 27/18, 28/30
 - Art. No. 8552 38 (1): Type: 38/40

Technical Data

Type	Dimensions of base plate	Oblong hole
27	114 × 50 × 4 mm	19 × 11 mm
38	144 × 70 × 6 mm	19 × 11 mm



8552 27
8552 38



8552 27 1
8552 38 1

Article No.	Article Description	QTY
8552 27	UPR.RAIL SUPP.SADDLE GAL. T 27	ü 25
8552 27 1	UPR.RAIL SUPP.SAD.MOUNT T 27	ü 25
8552 38	UPR.RAIL SUPP.SADDLE GAL. T 38	ü 25
8552 38 1	UPR.RAIL SUPP.SAD.MOUNT T 38	ü 25

Rail Runner Transverse

- Diverse options for use of mounting rails to create customised brackets and load-bearing systems for wall, floor and ceiling mounting
- System module for assembling sturdy crossbars
- Galvanised – corrosion-protected
- Pre-assembled design for large time savings
- Matching mounting rails
 - Art. No. 8553 27 (1): Type: 27/18, 28/30
 - Art. No. 8553 38 (1): Type: 38/40

Technical Data

Type	Dimensions of base plate	Oblong hole
27	125 × 40 × 5 mm	19 × 11 mm
38	136 × 50 × 6 mm	19 × 11 mm



8553 27
8553 38



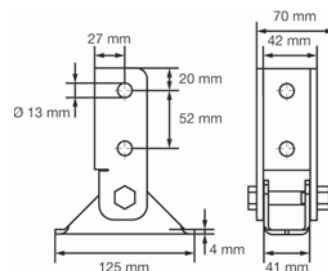
8553 27 1
8553 38 1

Article No.	Article Description	QTY
8553 27	TR. RAIL SUPP.SADDLE GAL. T 27	ü 25
8553 27 1	TR. RAIL SUPP.SAD.MOUNT T 27	ü 25
8553 38	TR. RAIL SUPP.SADDLE GAL. T 38	ü 25
8553 38 1	TR. RAIL SUPP.SAD.MOUNT T 38	5 g

Rail Support Saddle TYPE 38 VARIO

Variable connecting element for mounting rails on inclined surfaces

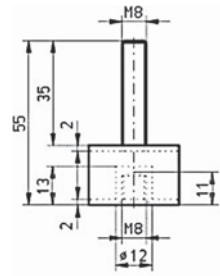
- High quality galvanisation 8 – 10 µ
- Ideal for connecting mounting rails in shafts, arches and on inclined surfaces
- The angle of inclination is adjustable and can be adapted to the on-site circumstances
- Rails can be fitted with the slot facing down or to the side
- For long console booms with struts
- Survives at least 1,000 hours salt spray test in accordance with DIN ISO 9227



Article No.	Article Description	QTY
8552 38 2	VARIO RAIL SUPP.SAD.MOUNT T 38	5

Sound Insulation Buffer M8

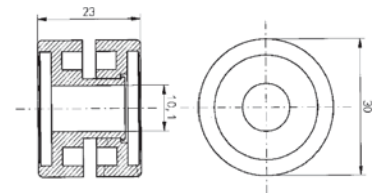
- Sound-insulated one-point fixture
- Sound insulation according to DIN 4109
- Appropriate for sound decoupling of appliances (pumps, fans, air condition systems, etc.)



Article No.	Article Description	QTY
8659 2 8	SOUND INSULATION BUFFER M8	50

Sound Insulation Element M10

- Noiseless and vibration-reducing assembly option
- Complete including washer and counterpart



Article No.	Article Description	QTY
8659 1 10	SOUND INSULATION ELEMENT M10	50

Washers for Mounting Rails

- Specially thick type
- exactly adapted to the mounting rails
- Electrogalvanized – corrosion-resistant



Technical Data			
Type	For profile	Washer Ø mm	Material thickness mm
27	27/18, 28/30	24	2
38	38/24, 38/40, 40/60	36	2

Article No.	Article Description	QTY
8658 27 64	WASHER GAL. 6.5MM TYPE27	200
8658 27 84	WASHER GAL. 8.5MM TYPE27	200
8658 27 105	WASHER GAL. 10.5MM TYPE27	200
8658 38 84	WASHER GAL. 8.5MM TYPE38	150
8658 38 105	WASHER GAL. 10.5MM TYPE38	150
8658 38 125	WASHER GAL. 12.5MM TYPE38	100

(Ø hole mm)

Hexagon Socket Screws Similar to DIN 912 Metric

- Drive:
 - M8 = wrench size 6
 - M10 = wrench size 6
- With very flat cylinder head
 - Perfect for mounting rail fixtures
 - Guarantee sufficiently useable mounting rail height for suspensions directly below the fixing point
- Electrogalvanized – corrosion-resistant



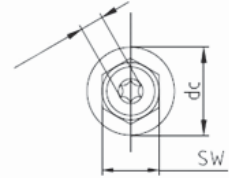
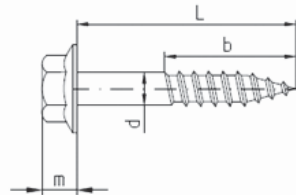
Article No.	Article Description	QTY
8641 8 16	HEX.SOCK.SCR. F.RAIL G. M 8X16	200
8641 10 20	HEX.SOCK.SCR. F.RAIL G.M10X25	100

Washer Screws SHK

- Quick and secure solution for fastening mounting rails
- Washer diameter matched to the rail slot for direct fixing with a TX bit
- Savings in assembly time and cost, since additional washers are not required
- Galvanised – corrosion-protected

Note on usage:

- Ideal for wall, floor and ceiling fastening of mounting rails, consoles, rail support saddles and rail support flanges



Article No.	Article Description	QTY
8641 1 6 60	HEX/TX30 WASHER SCREW.GAL.6X60	100
8641 1 6 80	HEX/TX30 WASHER SCREW.GAL.6X80	100
8641 1 8 60	HEX/TX30 WASHER SCREW.GAL.6X60	100
8641 1 8 80	HEX/TX30 WASHER SCREW.GAL.8X80	100

Technical Data

Ø × length TX drive	SW	dc in mm	d in mm	b in mm	L in mm	M in mm	Suitable for Mounting rail
6 × 60	25	10	13.8	6	36	6.0	27/18, 28/30
6 × 80	25	10	13.8	6	48	6.0	27/18, 28/30
8 × 60	30	13	16.2	8	36	8.0	38/24 – 40/60
8 × 80	30	13	16.2	8	48	8.0	38/24 – 40/60

Fixing Kit for Rails Type BS-S

- Assembly kits to fix mounting rails, consoles, rail support saddles and rail fasteners

Article No.	Article Description	QTY
8641 8	FIX.KIT TYPE BS -S 8	25
8641 10	FIX.KIT TYPE BS -S 10	25

Contents item No 8641 8:

- 2x washers DIN 125 for M 8
- 2x hexagon socket screws DIN 933 galvanized M 8 x 16 mm
- 2x concrete anchor EA M 8

Contents Item No 8641 10:

- 2x washers DIN 125 for M 10
- 2x hexagon socket screws DIN 933 galvanized M10 x 20 mm
- 2x concrete anchor EA M 10



Fixing Kit for Rails Type BSS-S

- Assembly kits to fix mounting rails, consoles, rail support saddles and rail fasteners
- Kit including hexagon socket screw similar to DIN 912 with flat head – no chopping in hammer-head screws or sliding nuts at the fixing point on the whole length of the mounting rails

Article No.	Article Description	QTY
8641 10 1	FIX.KIT TYPE BSS-S 10	25

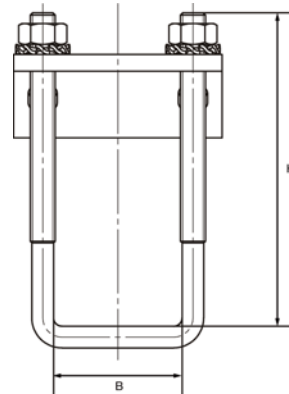
Contents:

- 2x washers DIN 125 for M 10
- 2x hexagon socket screws similar to DIN 912 (flat head) M 10 x 20 mm
- 2x concrete anchor EA M 10



Support Clamping Claw

- For fastening mounting rails to steel beam structures
 - Assembly without drilling or welding
 - Allows subsequent shifting and aligning
- Ideal fixing of row fasteners and air ducts
- **Completely pre-assembled** – no time-consuming assembly of parts; simply push onto the steel beam and tighten
- Completely galvanised – corrosion-protected
- Special clamping claw design – suitable for all steel beams
- Suitable for mounting rails Type 27/18, Type 28/30 and Type 38/40
- Maximum recommended **static load** with central tension: **2,500 N** (when arranged in pairs)

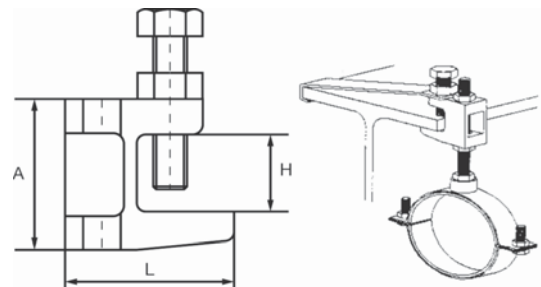


Technical Data		
Art. No.	Width (W) mm	Height (H) mm
8542 27	30.8	75.0
8542 38	44.0	100.0
8542 41	80.0	90.0

Article No.	Article Description	QTY
8542 27	SUPP. CLAMP. CLAW TYPE 27 M6	50
8542 38	SUPP. CLAMP. CLAW TYPE 38 M8	20
8542 41	SUPP. CLAMP. CLAW TYPE 41 M10	25

Beam Clamp

- For fast, simple fastening to steel structures and profiles without welding or drilling
- Galvanised
- The beam clamp can be continuously adjusted to various clamping thicknesses by means of the clamping screw
- VdS and FM approved from size M10



Technical Data						
Art. No.	Thread	Bore mm	L mm	A mm	H mm	Max. recom. load in N
8582 9	For M8	9	38	35	18	1,200
8582 11	For M10	11	44	42	20	2,500
8582 13	For M12	13	58	54	26	3,500
8582 8	M8	-	32	37	18	1,200
8582 10	M10	-	44	42	20	2,500

Article No.	Article Description	QTY
8582 9	PROFILE CLAMP 9MM	75
8582 11	PROFILE CLAMP 11MM	75
8582 13	PROFILE CLAMP 13MM	50
8582 8	PROFILE CLAMP WITH THREAD M8	50
8582 10	PROFILE CLAMP WITH THREAD M10	75

HakoFix Quick Fastener

Insert, turn, fix

- Considerable time savings due to pre-assembled elements
- Large selection of pre-manufactured thread lengths
- Customised suspension length possible with threaded rods and threaded pins when mounting plates are used
- Simple height adjustment in the installed state – thus an up/down slope can be quickly adjusted
- Very good gripping force in the respective profile, yet easy to move in order to ensure optimum positioning in the rail slot

Areas of application:

- Direct connection of pipe clamps to mounting rails



TYPE 27



TYPE 38



TYPE 27



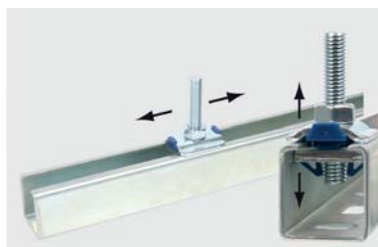
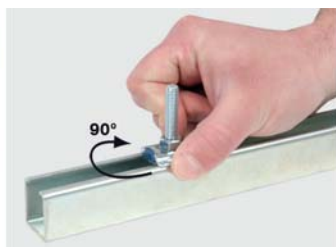
TYPE 38

Article No.	Article Description	QTY
8668 1 6	HAKOFIX QUICK FAST.T 27 M6	120
8668 1 8	HAKOFIX QUICK FAST.T 27 M8	120
8668 1 8 30	HAKOFIX QUICK FAST.T 27 M8X 30	90
8668 1 8 40	HAKOFIX QUICK FAST.T 27 M8X 40	80
8668 1 8 60	HAKOFIX QUICK FAST.T 27 M8X 60	60
8668 1 8 80	HAKOFIX QUICK FAST.T 27 M8X 80	50
8668 1 8 100	HAKOFIX QUICK FAST.T 27 M8X100	40
8668 1 8 120	HAKOFIX QUICK FAST.T 27 M8X120	30
8668 1 10	HAKOFIX QUICK FAST.T 27 M10	120
8668 1 10 40	HAKOFIX QUICK FAST.T 27 M10X40	70
8668 2 6	HAKOFIX QUICK FAST.T 38 M6	100
8668 2 8	HAKOFIX QUICK FAST.T 38 M8	100
8668 2 8 30	HAKOFIX QUICK FAST.T 38 M8X 30	70
8668 2 8 40	HAKOFIX QUICK FAST.T 38 M8X 40	60
8668 2 8 60	HAKOFIX QUICK FAST.T 38 M8X 60	50
8668 2 8 80	HAKOFIX QUICK FAST.T 38 M8X 80	45
8668 2 8 100	HAKOFIX QUICK FAST.T 38 M8X100	40
8668 2 10	HAKOFIX QUICK FAST.T 38 M10	100
8668 2 10 40	HAKOFIX QUICK FAST.T 38 M10X40	50
8668 2 10 60	HAKOFIX QUICK FAST.T 38 M10X60	40
8668 2 10 80	HAKOFIX QUICK FAST.T 38 M10X80	35

Technical Data

Art. No.	Suitable FÖRCH mounting rail	Usable thread length in mm	Tightening torque in N ¹)	Max. perm. tensile load in N	Skid point/transver. thrust load in N ²)
8668 1 6	27/18 – 28/30	-	-	2,700	231
8668 1 8	27/18 – 28/30	-	-	2,700	231
8668 1 8 30	27/18 – 28/30	23	12	2,700	231
8668 1 8 40	27/18 – 28/30	33	12	2,700	231
8668 1 8 60	27/18 – 28/30	53	12	2,700	231
8668 1 8 80	27/18 – 28/30	73	12	2,700	231
8668 1 8 100	27/18 – 28/30	93	12	2,700	231
8668 1 8 120	27/18 – 28/30	113	12	2,700	231
8668 1 10	27/18 – 28/30	-	-	2,900	299
8668 1 10 40	27/18 – 28/30	31	12	2,900	299
8668 2 6	38/24, 38/40, 40/60	-	-	3,500	278
8668 2 8	38/24, 38/40, 40/60	-	-	3,500	278
8668 2 8 30	38/24, 38/40, 40/60	23	13	3,500	278
8668 2 8 40	38/24, 38/40, 40/60	33	13	3,500	278
8668 2 8 60	38/24, 38/40, 40/60	53	13	3,500	278
8668 2 8 80	38/24, 38/40, 40/60	73	13	3,500	278
8668 2 8 100	38/24, 38/40, 40/60	93	13	3,500	278
8668 2 10	38/24, 38/40, 40/60	-	-	3,500	332
8668 2 10 40	38/24, 38/40, 40/60	31	17	3,500	332
8668 2 10 60	38/24, 38/40, 40/60	51	17	3,500	332
8668 2 10 80	38/24, 38/40, 40/60	71	17	3,500	332

- 1) Tightening torque should not be exceeded
- 2) Following the requirements of the Gütegemeinschaft Rohrbefestigung (Quality Assurance Association for Pipe Supports) (RAL-GZ 655) with a safety factor of 2.0



Quick Fastener HakoFix Type 27 **VAROBOXX**

- In assortment VAROBOXX 1
- Stud bolt DIN 976 shape A
- Galvanised steel

Contents:

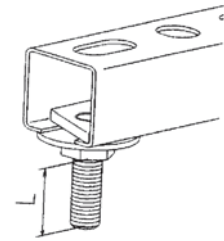
Article No.	Article Description	Quantity
1828 8 40	STUD BOLT DIN 976 4.6 GA 8X 40	100
1828 8 50	STUD BOLT DIN 976 4.6 GA 8X 50	50
1828 8 60	STUD BOLT DIN 976 4.6 GA 8X 60	50
1828 8 70	STUD BOLT DIN 976 4.6 GA 8X 70	50
1828 8 80	STUD BOLT DIN 976 4.6 GA 8X 80	50
1828 8 100	STUD BOLT DIN 976 4.6 GA 8X100	25
1828 10 50	STUD BOLT DIN976 4.6 GA 10X 50	40
1828 10 60	STUD BOLT DIN976 4.6 GA 10X 60	25
1828 10 80	STUD BOLT DIN976 4.6 GA 10X 80	25
2001 8	HEX NUT 934-8 GA 8	200
2001 10	HEX NUT 934-8 GA 10	100
8668 1 8	HAKOFIX QUICK FASTEN.TYPE27 M8	80
8668 1 10	HAKOFIX QUICK FASTEN.TYPE27M10	60
9003 1	VAROBOXX SIZE:1 EMPTY	1
9004 0 1	COVER INLAY VAROBOXX	1
9004 1 0	INSET BOX GREY SIDE.VAROBOXX 1	2
9004 1 5 10	INS.BOX YELL.5X10CM VAROBOXX 1	9
9004 1 10 10	INS.BOX BLUE10X10CM VAROBOXX 1	3



Article No.	Article Description	QTY
9003 8668 27	VAROBOXX HAKOFIX TYPE 27	1

Hammer-Head Bolt Type 27

- For free turning in mounting rails
- Completely preassembled with nut and washer – no loss in assembly time
- Electrogalvanized – corrosion-resistant
- Appropriate for mounting rails type 27/18 and type 28/30
- Appropriate for consoles type 27/18 and type 28/30
- Thickness base plate: 4 mm
- Washer Ø: 28 mm, washer thickness: 2 mm

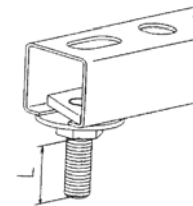


Article No.	Article Description	QTY
8666 8 20	HAM.-HEAD BOLT GAL. 8X20 T.27	100
8666 8 30	HAM.-HEAD BOLT GAL. 8X30 T.27	100
8666 8 40	HAM.-HEAD BOLT GAL. 8X40 T.27	100
8539 8 40	HAM.-HEAD BOLT A4 8X40 T.27	25
8666 8 50	HAM.-HEAD BOLT GAL. 8X50 T.27	100
8666 8 60	HAM.-HEAD BOLT GAL. 8X60 T.27	100
8666 8 80	HAM.-HEAD BOLT GAL. 8X80 T.27	100
8666 8 100	HAM.-HEAD BOLT GAL.8X100 T.27	50

Technical Data		
Material	For profile	Useable thread length L in mm
galvanised	27/18 – 28/30	7
galvanised	27/18 – 28/30	15
galvanised	27/18 – 28/30	25
stainless steel	27/18 – 28/30	25
galvanised	27/18 – 28/30	35
galvanised	27/18 – 28/30	45
galvanised	27/18 – 28/30	65
galvanised	27/18 – 28/30	85

Hammer-Head Bolt Type 38

- Completely preassembled with nut and washer – no loss in assembly time
- Electrogalvanized – corrosion-resistant
- Appropriate for mounting rails type 38/40 and type 40/60
- Appropriate for consoles type 38/40 and type 40/60
- Thickness base plate: 6 mm
- Washer Ø: 35 mm, washer thickness: 3 mm



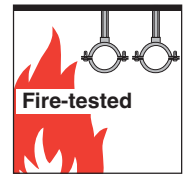
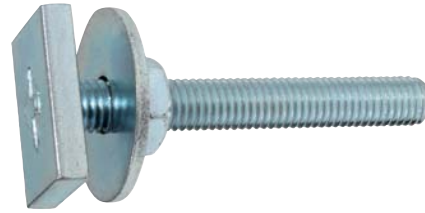
Article No.	Article Description	QTY
8667 8 25	HAM.-HEAD BOLT GAL. 8X25 T.38	100
8667 8 35	HAM.-HEAD BOLT GAL. 8X35 T.38	100
8667 8 40	HAM.-HEAD BOLT GAL. 8X40 T.38	100
8667 8 50	HAM.-HEAD BOLT GAL. 8X50 T.38	100
8667 8 80	HAM.-HEAD BOLT GAL. 8X80 T.38	100
8667 10 35	HAM.-HEAD BOLT GAL. 10X35 T.38	50
8539 10 40	HAM.-HEAD BOLT A4 10X40 T.38	25
8667 10 55	HAM.-HEAD BOLT GAL. 10X55 T.38	50
8667 10 80	HAM.-HEAD BOLT GAL. 10X80 T.38	50
8667 10 100	HAM.-HEAD BOLT GAL. 10X100T.38	50

Technical Data		
Material	For profile	Useable thread length L in mm
galvanised	38/24 – 40/60	7
galvanised	38/24 – 40/60	20
galvanised	38/24 – 40/60	25
galvanised	38/24 – 40/60	34
galvanised	38/24 – 40/60	64
galvanised	38/24 – 40/60	18
stainless steel	38/24 – 40/60	18
galvanised	38/24 – 40/60	35
galvanised	38/24 – 40/60	60
galvanised	38/24 – 40/60	80

Hammerhead Fastener TYPE 38 Robust

Fire-tested as per DIN 4102, test report no. 210006413-2

- Robust hammerhead fastener for affixing pipe clips directly to TYPE 38 mounting rails and brackets
- Completely pre-assembled with washer and nut
- Galvanised for maximum corrosion protection
- Square threaded plate, twist-proof
- Threaded plate dimensions: 32.8 × 23 × 6 mm
- Washer dimensions: 36 × 2.5 mm



Article No.	Article Description	QTY
8667 1 10 100	HAM.HEAD FAST.GV 10X100 TYPE38	50

Technical Data	
For profile	Usable thread length L in mm
38/24 – 40/60	80

Hammer-Head Screws Type 38

- For time-saving, efficient fixing on mounting rails
- For assembly of rail constructions and connecting elements
- Appropriate for mounting rails type 38/40 and type 40/60
- It is possible to directly insert into the rail slot – also between fixing screws



Article No.	Article Description	QTY
8672 8 30	HAM.-HE.SCR.GAL. TYPE38 M 8/30	50
8672 10 30	HAM.-HE.SCR.GAL. TYPE38 M10/30	50

Technical Data	
For profile	Useable thread length L in mm
38/40 - 40/60	20
38/40 - 40/60	19

HakoFix Mounting Plate TYPE 38, M10

- Mounting plate for connecting system components to mounting rails TYPE 38/24 and 38/40
- As a result of fixing in the rail slot, locating and bolting on the system components (such as, e.g., brackets) is very simple and practice-oriented
- Optimum assembly convenience due to fixing in the rail slot, consequently no time-consuming pre-assembly of brackets, sliding nuts and bolts is necessary
- Place the mounting plate on the rail slot and position it in the slot with a 45° turn
- Mounting plate can be moved in the rail slot and repositioned as desired
- Required thread length of the bolts: 25 mm, e.g., Art. No. 1011 10 25



Article No.	Article Description	QTY
8668 4 10	HAKOFIX MOUNT.PLATE TYPE38 M10	50

Sliding Nuts Type 27

- To fix on mounting rails and consoles
- Electrogalvanized – corrosion-resistant
- Appropriate for mounting rails type 27/18 and type 28/30
- Appropriate for consoles type 27/18 and type 28/30
- Material thickness: 4 mm
- Type: single or double

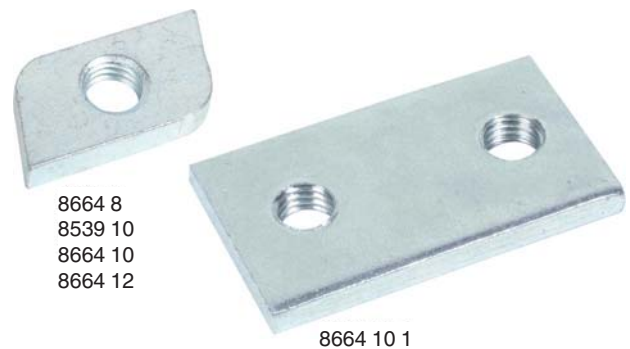
Article No.	Article Description	QTY
8663 8	SLIDING NUT GAL. M8 TYPE27	200
8539 8	SLIDING NUT A4 M8 TYPE27	25
8663 8 1	DOUBLE SLID.NUT GAL. M8 TYPE27	50
8663 10	SLIDING NUT GAL. M10 TYPE27	100



Sliding Nuts Type 38

- To fix on mounting rails and consoles
- Electrogalvanized – corrosion-resistant
- Appropriate for mounting rails type 38/40 and type 40/60
- Appropriate for consoles type 38/40 and type 40/60
- Material thickness: 6 mm
- Type: single or double
- **Art. No. 8539 10: of stainless steel**

Article No.	Article Description	QTY
8664 8	SLIDING NUT GAL. M8 TYPE38	125
8539 10	SLIDING NUT A4 M10 TYPE38	25
8664 10	SLIDING NUT GAL. M10 TYPE38	125
8664 10 1	DOUBLE SLID.NUT GAL.M10 TYPE38	50
8664 12	SLIDING NUT GAL. M12 TYPE38	100



Retaining Bracket

- Prevents the mounting rail or console from spreading out under heavy loads
- Galvanised – corrosion-protected
- Bracket thickness: 2 mm



Article No.	Article Description	QTY
8557 27 8	CLAMP. PL. GAL. TYPE27 M 8	f 100
8557 27 10	CLAMP. PL. GAL. TYPE27 M 10	f 100
8557 38 8	CLAMP. PL. GAL. TYPE38 M 8	f 100
8557 38 10	CLAMP. PL. GAL. TYPE38 M 10	f 100

Technical Data		
Art. No.	For profile	Hole diameter mm
8557 27 8	27/18 – 28/30	8
8557 27 10	27/18 – 28/30	10
8557 38 8	38/40	8
8557 38 10	38/40	10

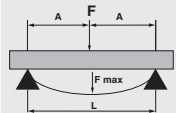
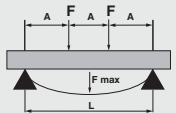
Hanger

- For height adjustment of already suspended pipe and air conditioning pipelines
- For threaded rods from M8 to M12

Article No.	Article Description	QTY
8671 8 12	HANGER GAL. M8 - M12	25

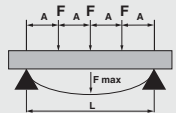
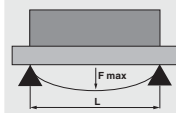


Technical Data for Mounting Rails STRUT

Clamping width L mm	Maximum permissible load values in Newton (N)																	
	 F = single load A = 1/2 x L									 F = single load A = 1/3 x L								
	Single rail					Double rail				Single rail					Double rail			
	41/21	41/21	41/41	41/41	41/62	41/21D	41/41D	41/62D	41/82D	41/21	41/21	41/41	41/41	41/62	41/21D	41/41D	41/62D	41/82D
1,5	2,0	2,0	2,5	2,5	2,5	2,5	2,5	2,5	1,5	2,0	2,0	2,5	2,5	2,5	2,5	2,5	2,5	
250	1.848	2.114	6.556	7.611	14.730	7.081	22.804	32.686	42.030	1.386	1.586	4.917	5.708	11.048	5.311	17.103	24.515	31.523
300	1.540	1.762	5.463	6.342	12.275	5.901	19.004	27.238	35.025	1.155	1.320	4.098	4.757	9.206	4.426	14.253	20.429	26.269
350	1.320	1.560	4.683	5.436	10.522	5.058	16.289	23.347	30.021	990	1.130	3.512	4.077	7.891	3.793	12.217	17.510	22.516
400	1.155	1.320	4.098	4.757	9.206	4.426	14.253	20.429	26.269	866	991	3.073	3.568	6.905	3.319	10.690	15.322	19.702
450	1.027	1.177	3.642	4.228	8.183	3.934	12.669	18.159	23.350	770	881	2.732	3.717	6.138	2.950	9.502	13.619	17.513
500	924	1.057	3.278	3.805	7.365	3.540	11.402	16.343	21.015	693	793	2.459	2.854	5.524	2.655	8.552	12.257	15.761
600	770	881	2.732	3.171	6.138	2.950	9.502	13.619	17.513	578	676	2.049	2.378	4.603	2.213	7.126	10.214	13.134
700	660	755	2.341	2.718	5.261	2.529	8.144	11.674	15.011	427	390	1.756	2.039	3.946	1.897	6.108	8.755	11.258
800	557	638	2.049	2.378	4.603	2.213	7.126	10.214	13.134	327	374	1.537	1.784	3.452	1.660	5.345	7.661	9.851
900	440	504	1.821	2.114	4.092	1.967	6.335	9.079	11.675	258	296	1.366	1.586	3.069	1.475	4.751	6.810	8.756
1.000	356	408	1.639	1.903	3.683	1.770	5.701	8.172	10.508	209	240	1.229	1.427	2.762	1.328	4.276	6.129	7.881
1.200	247	283	1.366	1.586	3.069	1.475	4.751	6.810	8.756	145	166	993	1.163	2.302	1.059	3.563	5.107	6.567
1.400	182	218	1.171	1.359	2.630	1.264	4.072	5.837	7.505	107	123	730	854	1.973	778	3.054	4.378	5.629
1.600	139	160	952	1.114	2.302	1.015	3.563	5.107	6.567	82	94	559	654	1.726	596	2.672	3.830	4.925
1.800	110	126	752	881	2.046	802	3.167	4.540	5.838	65	74	442	517	1.489	471	2.375	3.405	4.378
2.000	89	102	609	713	1.841	650	2.851	-	-	52	60	358	419	1.206	381	2.138	-	-
2.250	70	80	481	564	1.624	513	2.534	-	-	41	47	283	331	953	301	1.900	-	-
2.500	57	66	390	456	1.315	416	2.280	-	-	33	38	229	268	772	244	1.576	-	-
2.750	47	54	322	377	1.087	344	2.073	-	-	28	32	189	221	638	202	1.302	-	-
3.000	40	45	271	317	913	289	1.864	-	-	23	26	159	186	536	169	1.094	-	-
3.250	34	39	231	270	778	246	1.588	-	-	20	23	135	159	457	144	932	-	-
3.500	29	34	199	233	671	212	1.370	-	-	17	19	117	137	394	124	804	-	-
3.750	25	29	173	203	584	185	1.193	-	-	15	17	102	119	343	108	700	-	-
4.000	22	26	152	178	514	162	1.049	-	-	13	15	89	105	302	95	615	-	-
4.250	20	22	135	158	455	144	929	-	-	12	13	79	93	267	84	545	-	-
4.500	18	21	120	141	406	128	828	-	-	10	12	71	83	238	75	486	-	-
4.750	16	18	108	126	364	115	744	-	-	-	-	63	74	214	68	436	-	-
5.000	14	16	97	114	329	104	671	-	-	-	-	57	67	193	61	394	-	-
5.250	13	15	88	104	298	94	609	-	-	-	-	52	61	175	55	357	-	-
5.500	12	13	81	94	272	86	555	-	-	-	-	47	55	159	50	326	-	-
5.750	11	12	74	86	249	79	507	-	-	-	-	43	51	146	46	298	-	-
6.000	-	-	68	79	228	72	466	-	-	-	-	40	47	134	42	274	-	-

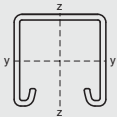



The loads indicated only apply to the rail.
 The other design parts must be tested for their permissible maximum load too.

Technical Data for Mounting Rails STRUT

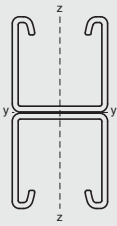
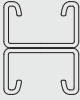
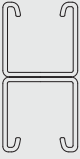


Clamping width L mm	Maximum permissible load values in Newton (N)																		
																			
	Single rail					Double rail					Single rail					Double rail			
	41/21	41/21	41/41	41/41	41/62	41/21D	41/41D	41/62D	41/82D	41/21	41/21	41/41	41/41	41/62	41/21D	41/41D	41/62D	41/82D	
1,5	2,0	2,0	2,5	2,5	2,5	2,5	2,5	2,5	1,5	2,0	2,0	2,5	2,5	2,5	2,5	2,5	2,5		
250	924	1.057	3.278	3.805	7.365	3.540	11.402	16.343	21.015	3.697	4.230	13.112	15.222	29.460	14.162	45.609	65.372	84.060	
300	770	881	2.732	3.171	6.138	2.950	9.502	13.619	17.513	3.081	3.524	10.927	12.685	24.550	11.802	38.007	54.477	70.050	
350	660	755	2.341	2.718	5.261	2.529	8.144	11.674	15.011	2.640	3.020	9.366	10.873	21.043	10.116	32.578	46.694	60.043	
400	578	561	2.049	2.378	4.603	2.213	7.126	10.214	13.134	2.310	2.643	8.195	9.514	18.413	8.851	28.506	40.858	52.538	
450	513	587	1.821	2.114	4.092	1.957	6.335	9.079	11.675	2.054	2.345	7.285	8.457	16.367	7.868	25.338	36.318	46.700	
500	462	529	1.639	1.903	3.683	1.770	5.701	8.172	10.508	1.848	2.115	6.556	7.611	14.730	7.081	22.804	32.686	42.030	
600	385	440	1.366	1.586	3.069	1.475	4.751	6.810	8.756	1.540	1.762	5.463	6.342	12.275	5.901	19.004	27.238	35.025	
700	306	351	1.171	1.359	2.630	1.264	4.072	5.837	7.505	1.163	1.333	4.683	5.436	10.522	5.058	16.289	23.347	30.021	
800	234	269	1.024	1.189	2.302	1.106	3.563	5.107	6.567	891	1.021	4.098	4.757	9.206	4.426	14.253	20.429	26.269	
900	185	212	911	1.057	2.046	983	3.167	4.540	5.838	704	806	3.642	4.228	8.183	3.934	12.669	18.159	23.350	
1.000	150	172	820	951	1.841	885	2.851	4.086	5.254	570	654	3.278	3.805	7.365	3.540	11.402	16.343	21.015	
1.200	104	119	683	793	1.534	738	2.375	3.405	4.378	396	454	2.708	3.170	6.138	2.887	9.502	13.619	17.513	
1.400	77	88	524	613	1.315	558	2.036	2.918	3.753	291	332	1.989	2.329	5.261	2.121	8.144	11.674	15.011	
1.600	59	68	401	469	1.151	427	1.782	2.554	3.284	223	255	1.523	1.783	4.603	1.624	7.126	10.214	13.134	
1.800	46	53	317	371	1.023	338	1.584	2.270	2.919	176	201	1.204	1.409	4.059	1.283	6.335	9.079	11.675	
2.000	38	43	257	300	865	274	1.425	-	-	143	164	975	1.141	3.288	1.039	5.701	-	-	
2.250	30	34	203	237	684	216	1.267	-	-	113	140	770	902	2.598	821	5.068	-	-	
2.500	24	27	164	192	554	175	1.130	-	-	91	105	624	730	2.104	665	4.295	-	-	
2.750	20	23	136	159	458	145	934	-	-	75	86	516	604	1.739	550	3.549	-	-	
3.000	17	19	114	133	385	122	785	-	-	63	72	433	507	1.461	462	2.983	-	-	
3.250	14	16	97	114	328	104	669	-	-	54	62	369	432	1.245	394	2.541	-	-	
3.500	12	14	84	98	283	89	577	-	-	47	53	318	373	1.074	339	2.191	-	-	
3.750	11	12	73	85	246	78	502	-	-	41	46	277	325	935	296	1.909	-	-	
4.000	-	-	64	75	216	68	441	-	-	36	41	244	285	822	260	1.678	-	-	
4.250	-	-	57	67	192	61	391	-	-	32	36	216	253	728	230	1.486	-	-	
4.500	-	-	51	59	171	54	349	-	-	28	32	193	225	649	205	1.326	-	-	
4.750	-	-	45	53	153	48	313	-	-	25	29	173	202	583	184	1.190	-	-	
5.000	-	-	41	48	138	44	283	-	-	23	26	156	183	526	166	1.074	-	-	
5.250	-	-	37	44	126	40	256	-	-	21	24	141	166	477	151	974	-	-	
5.500	-	-	34	40	114	36	234	-	-	19	21	129	151	435	137	887	-	-	
5.750	-	-	31	36	105	33	214	-	-	17	19	118	138	398	126	812	-	-	
6.000	-	-	29	33	96	30	196	-	-	16	18	108	127	365	115	746	-	-	

The loads indicated only apply to the rail.
The other design parts must be tested for their permissible maximum load too.

Technical Data for STRUT Mounting Rails

							
Material characteristics			TYPE 41/21 1,5	TYPE 41/21 2,0	TYPE 41/41 2,0	TYPE 41/41 2,5	TYPE 41/62 2,5
Material thickness	mm		1,5	2,0	2,0	2,5	2,5
Delivery length	m		2 / 3	2 / 3 / 6	2 / 3 / 6	2 / 3 / 6	3
Weight	kg/m		1,15	1,44	2,35	2,45	3,33
Holes							
Slot width	mm		22	22	22	22	22
Oblong hole Ø	mm		30 × 14	30 × 14	30 × 14	30 × 14	30 × 14
Grid dimension	mm		50	50	50	50	50
Cross-section values							
y-axis							
Profile cross-section	A	cm ²	1,34	1,72	2,52	3,0	4,05
Moment of inertia	I _y	cm ⁴	0,78	0,97	5,34	6,26	18,03
Moment of resistance	W _y	cm ³	0,72	0,89	2,56	2,97	5,75
z-axis							
Moment of inertia	I _z	cm ⁴	3,70	4,66	7,79	9,30	13,20
Moment of resistance	W _z	cm ³	1,80	2,27	3,77	4,50	6,39

Technical Data STRUT Double Mounting Rails

						
Material characteristics			TYPE 41/21 2,5	TYPE 41/41 2,5	TYPE 41/62 2,5	TYPE 41/82 2,5
Material thickness	mm		2,5	2,5	2,5	2,5
Delivery length	m		6	6	6	6
Weight	kg/m		3,68	5,24	6,90	8,46
Holes						
Slot width	mm		22	22	22	22
Oblong hole Ø	mm		30 × 14	30 × 14	30 × 14	30 × 14
Grid dimension	mm		50	50	50	50
Cross-section values						
y-axis						
Profile cross-section	A	cm ²	3,98	6,00	8,09	10,08
Moment of inertia	I _y	cm ⁴	5,70	36,79	111,21	240,93
Moment of resistance	W _y	cm ³	2,77	8,91	17,94	29,38
z-axis						
Moment of inertia	I _z	cm ⁴	10,76	18,56	26,37	33,90
Moment of resistance	W _z	cm ³	5,21	8,99	12,77	16,42

Material Constants STRUT:

Modulus of elasticity E	Shear modulus G	Poisson's ratio μ	Coefficient of thermal expansion αT
210.000 N/m ²	81.000 N/m ²	0,3	0,000012 1/K

Calculation method:

The load-bearing capacity values for the bending load (primarily static load) are calculated according to the theory of elasticity, taking their own weight into account. To name but a couple of examples, these calculations use the material and cross-section constants. When calculating the load-bearing capacity values, the permissible steel stress of 160 N/mm² and the maximum deflection of L/150 are not exceeded.

The deflection indicated must be assessed for visual acceptability on a case-by-case basis!

Load:

If **several different** individual loads in **variable distances** affect a single-span beam (crossbar), they can be added and considered an estimated **individual load positioned centrally**.

For enhanced safety, it is advisable to use U-shaped brackets!

In case of high loads, "push-through installation" is recommended!

Mounting on the ceiling and the wall:

The necessary fixing elements (screws and dowels) must be calculated individually and must be suitable for the load with mounting rails!

Mounting Rail Type 41/21 STRUT

Mounting rail for quick fastening of pipes and complex pipe structures

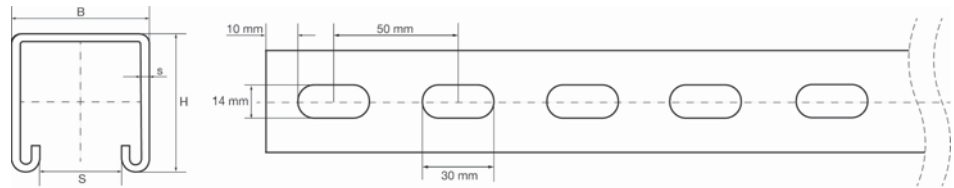
- Sendzimir galvanised
- For medium weight and heavy rail fastenings

Product benefits:

- Compatible with all STRUT accessories
- The distance between the end of the rail and the first perforation is always the same
- With cm scale stamped into the side
- Sides bent inwards with teeth for extra hold
- Different material thicknesses (s) depending on application

Areas of application:

- Supporting structure for ventilation ducts
- Fixing lengths of pipe in supply ducts
- Substructures



Article No.	Article Description	QTY
8541 4121 15 2	MTR-MO.RAIL-STRUT.2M 41/21 1.5	i 20
8541 4121 15 3	MTR-MO.RAIL-STRUT.3M 41/21 1.5	r 30
8541 4121 20 2	MTR-MO.RAIL-STRUT.2M 41/21 2.0	i 20
8541 4121 20 3	MTR-MO.RAIL-STRUT.3M 41/21 2.0	r 30
8541 4121 20 6	MTR-MO.RAIL-STRUT.6M 41/21 2.0	s 60

Technical Data				
Length	B	H	S	s
m	mm	mm	mm	mm
2	41	21	22	1.5
3	41	21	22	1.5
2	41	21	22	2.0
3	41	21	22	2.0
6	41	21	22	2.0

Mounting Rail Type 41/41 STRUT

Mounting rail for quick fastening of pipes and complex pipe structures

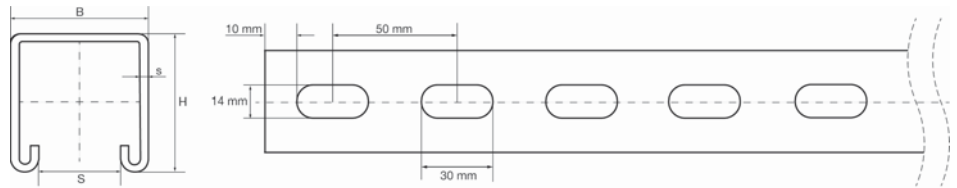
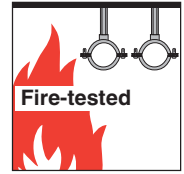
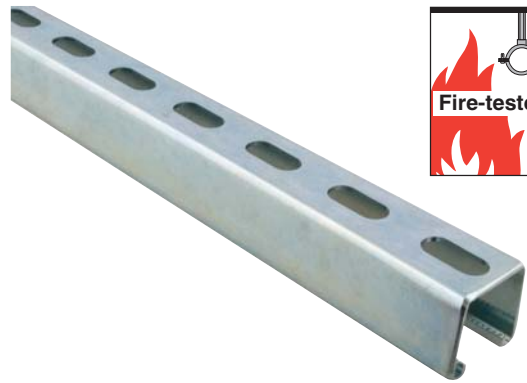
- Sendzimir galvanised
- Fire-tested from material thickness (s) 2.5
- For medium weight and heavy rail fastenings

Product benefits:

- Compatible with all STRUT accessories
- The distance between the end of the rail and the first perforation is always the same
- With cm scale stamped into the side
- Sides bent inwards with teeth for extra hold
- Different material thicknesses (s) depending on application

Areas of application:

- Supporting structure for ventilation ducts
- Fixing lengths of pipe in supply ducts
- Substructures



Technical Data				
Length	B	H	S	s
m	mm	mm	mm	mm
2	41	41	22	2.0
3	41	41	22	2.0
6	41	41	22	2.0
2	41	41	22	2.5
3	41	41	22	2.5
6	41	41	22	2.5

Article No.	Article Description	QTY
8541 4141 20 2	MTR-MO.RAIL-STRUT.2M 41/41 2.0	i 20
8541 4141 20 3	MTR-MO.RAIL-STRUT.3M 41/41 2.0	r 30
8541 4141 20 6	MTR-MO.RAIL-STRUT.6M 41/41 2.0	s 60
8541 4141 25 2	MTR-MO.RAIL-STRUT.2M 41/41 2.5	i 20
8541 4141 25 3	MTR-MO.RAIL-STRUT.3M 41/41 2.5	r 30
8541 4141 25 6	MTR-MO.RAIL-STRUT.6M 41/41 2.5	s 60

Mounting Rail Type 41/62 STRUT

Mounting rail for quick fastening of pipes and complex pipe structures

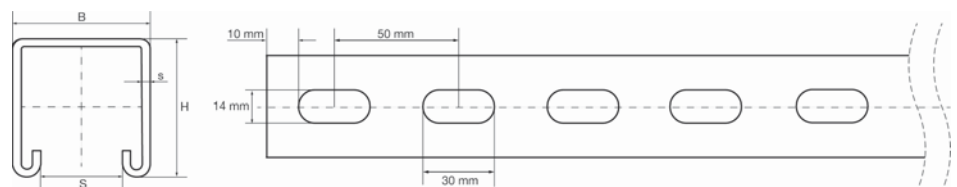
- Sendzimir galvanised
- Fire tested
- For medium weight and heavy rail fastenings

Product benefits:

- Compatible with all STRUT accessories
- The distance between the end of the rail and the first perforation is always the same
- With cm scale stamped into the side
- Sides bent inwards with teeth for extra hold
- Different material thicknesses (s) depending on application

Areas of application:

- Supporting structure for ventilation ducts
- Fixing lengths of pipe in supply ducts
- Substructures



Technical Data				
Length	B	H	S	s
m	mm	mm	mm	mm
3	41	62	22	2.5

Article No.	Article Description	QTY
8541 4162 25 3	MTR-MO.RAIL-STRUT.3M 41/62 2.5	r 30

Mounting Rail Doubled STRUT

Doubled mounting rail for quick fastening of pipes and complex pipe structures

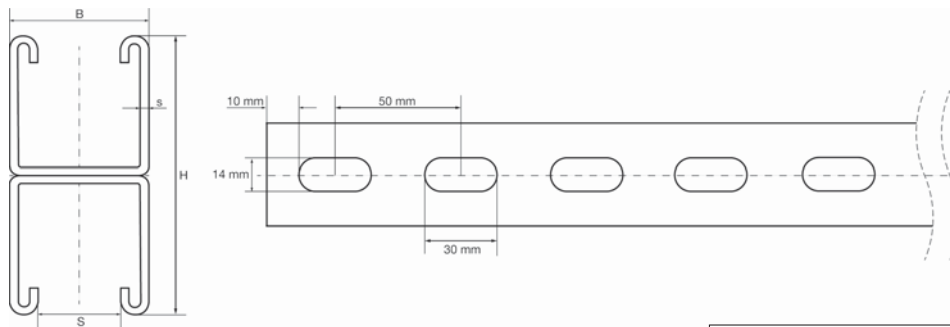
- Sendzimir galvanised
- Fire tested Type 41/41; Type 41/62; Type 41/82
- For heavy rail fastenings

Product benefits:

- Compatible with all STRUT accessories
- Uniform hole pattern matches current trapezoidal profiles
- The distance between the end of the rail and the first perforation is always the same
- With cm scale stamped into the side

Areas of application:

- Mounting pipework, ventilation pipes and cable runs
- Construction of varied steel support structures with a high degree of flexibility for adaptation
- Installation of several pipework levels



Article No.	Article Description	QTY
8551 4121 25 6	MTR-MO.RA.D-STRUT.6M 41/21 2.5	s 30
8551 4141 25 6	MTR-MO.RA.D-STRUT.6M 41/41 2.5	s 30
8551 4162 25 6	MTR-MO.RA.D-STRUT.6M 41/62 2.5	s 30
8551 4182 25 6	MTR-MO.RA.D-STRUT.6M 41/82 2.5	s 30

Technical Data			
B	H	S	s
mm	mm	mm	mm
41	42	22	2.5
41	82	22	2.5
41	124	22	2.5
41	164	22	2.5

Console Type 41/21 STRUT

Cantilever bracket for fixing to walls

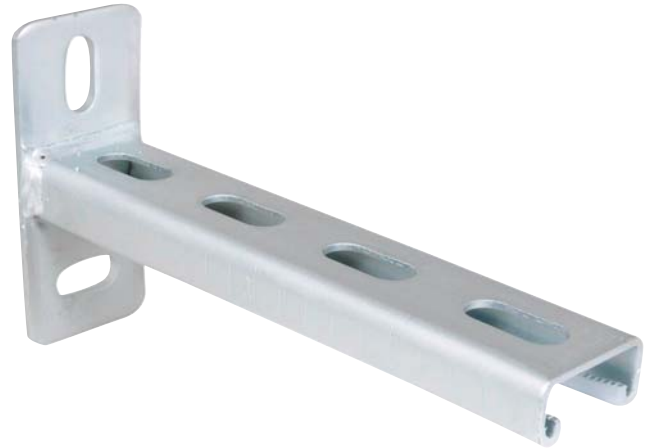
- High quality galvanisation 8 – 10 μ

Product benefits:

- The mounting holes are punched slots at 90° to each other, to improve ease of installation
- Sides bent inwards with teeth for extra hold

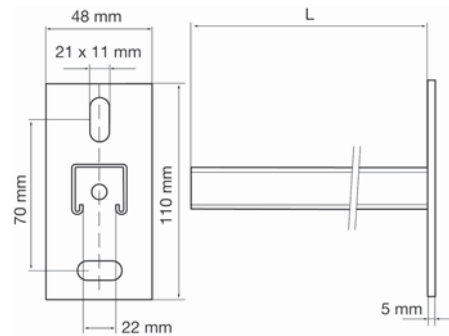
Areas of application:

- Projecting support structures for pipe sections, fittings, cable racks, pumps, ventilation ducts, ventilation units and air-conditioning units



Article No.	Article Description	QTY
8571 4121 200	CONSO.STRUT GAL.41/21 200MM	e 10
8571 4121 300	CONSO.STRUT GAL.41/21 300MM	e 10
8571 4121 450	CONSO.STRUT GAL.41/21 450MM	e 10
8571 4121 600	CONSO.STRUT GAL.41/21 600MM	e 10

Length Console mm	Load values in Newton (N) for console TYPE 41/21		
200	F = single load A = L	Distributed load	
200		638	1.321
300		283	756
450		126	336
600		71	225



Console Type 41/41 STRUT

Cantilever bracket for fixing to walls

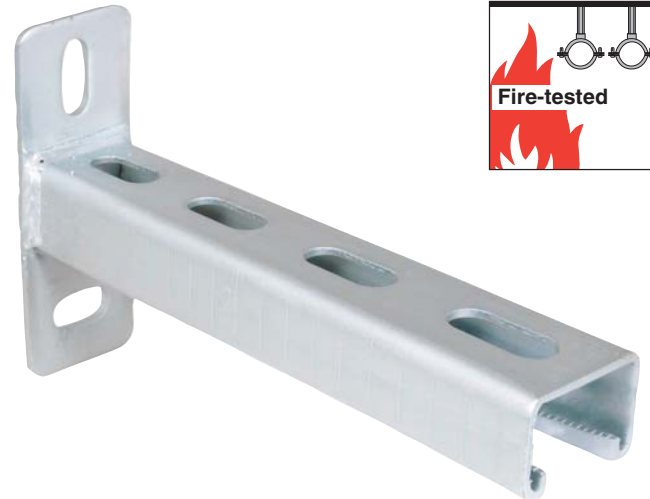
- Galvanised
- Fire tested

Product benefits:

- The mounting holes are punched slots at 90° to each other, to improve ease of installation
- Sides bent inwards with teeth for extra hold

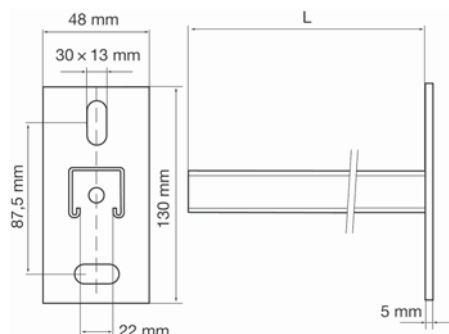
Areas of application:

- Projecting support structures for pipe sections, fittings, cable racks, pumps, ventilation ducts, ventilation units and air-conditioning units



Article No.	Article Description	QTY
8572 4141 300	CONSO.STRUT GAL.41/41 300MM	e 10
8572 4141 450	CONSO.STRUT GAL.41/41 450MM	e 10
8572 4141 600	CONSO.STRUT GAL.41/41 600MM	e 8
8572 4141 750	CONSO.STRUT GAL.41/41 750MM	e 8
8572 4141 1000	CONSO.STRUT GAL.41/41 1000MM	1

Length Console mm	Load values in Newton (N) for console TYPE 41/41		
300	F = single load A = L	Distributed load	
300		1.586	3.171
450		881	2.114
600		495	1.321
750		321	856
1.000		178	476



The loads indicated only apply to the console.
The other design parts must be tested for their permissible maximum load too.

Console with Support Type 41/41 STRUT

Cantilever bracket with support for fixing to walls

- Hot-dip galvanised

Product benefits:

- The mounting holes are punched slots at 90° to each other, to improve ease of installation
- Sides bent inwards with teeth for extra hold

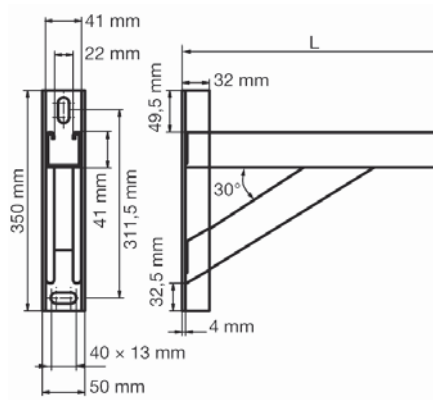
Areas of application:

- Projecting support structures for pipe sections, fittings, cable racks, pumps, ventilation ducts, ventilation units and air-conditioning units



Article No.	Article Description	QTY
8572 4141 600 1	CONSO.STRUT HD-GAL.41/41 600MM	1

Length Console mm	Load values in Newton (N) for console TYPE 41/41	
	Diagram 1 (Single Load)	Diagram 2 (Distributed Load)
600	1.400	3.700



Console Doubled STRUT

Doubled cantilever bracket for fixing to walls

- High quality galvanisation 8 – 10 μ
- Fire tested

Product benefits:

- The mounting holes are punched slots at 90° to each other, to improve ease of installation
- Sides bent inwards with teeth for extra hold

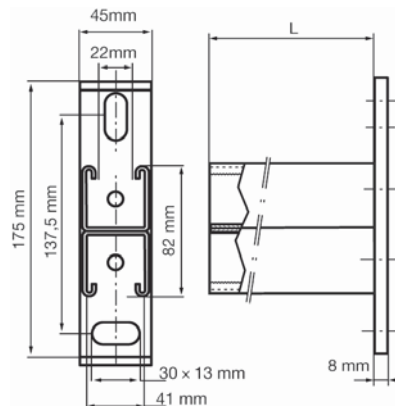
Areas of application:

- Projecting support structures for pipe sections, fittings, cable racks, pumps, ventilation ducts, ventilation units and air-conditioning units



Article No.	Article Description	QTY
8573 4141 450	CONSO.STRUTD GAL.41/41 450MM	e 8
8573 4141 600	CONSO.STRUTD GAL.41/41 600MM	1 v
8573 4141 750	CONSO.STRUTD GAL.41/41 750MM	1 v
8573 4141 1000	CONSO.STRUTD GAL.41/41 1000MM	1

Length Console mm	Load values in Newton (N) for console TYPE 41/21	
	Diagram 1 (Single Load)	Diagram 2 (Distributed Load)
450	3.167	6.335
600	2.375	4.751
750	2.036	4.072
1.000	1.049	2.796



The loads indicated only apply to the console. The other design parts must be tested for their permissible maximum load too.

Mounting Bracket 45° STRUT

Mounting bracket for connecting STRUT rail structures

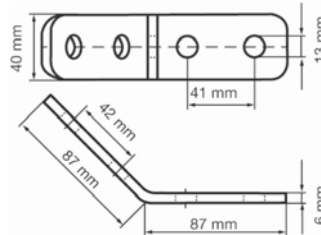
- Hot-dip galvanised

Product benefits:

- Easy to fit due to rounded corners

Areas of application:

- Construction of assembly elements
- Production of corner connections



Article No.	Article Description	QTY
8577 41 135 87	MOUNT.BRACKET STRUT 45° 87MM	25

Mounting Bracket 90° STRUT

Mounting bracket for connecting STRUT rail structures

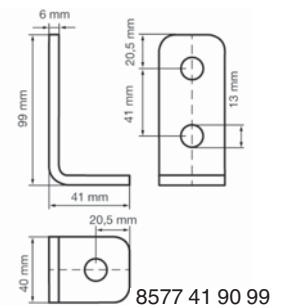
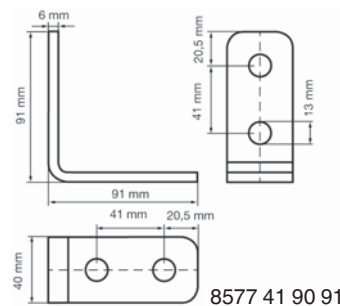
- Hot-dip galvanised

Product benefits:

- Easy to fit due to rounded corners
- 3-hole version (Art. No. 8577 41 90 99)
- 4-hole version (Art. No. 8577 41 90 91)

Areas of application:

- Construction of assembly elements
- Production of corner connections



Article No.	Article Description	QTY
8577 41 90 91	MOUNT.BRACKET STRUT 90° 91MM	25
8577 41 90 99	MOUNT.BRACKET STRUT 90° 99MM	25

Rail Couplings STRUT

U-shaped rail couplings for connecting STRUT rail structures

- High quality galvanisation 8 – 10 μ
- Survives at least 1,000 hours salt spray test in accordance with DIN ISO 9227

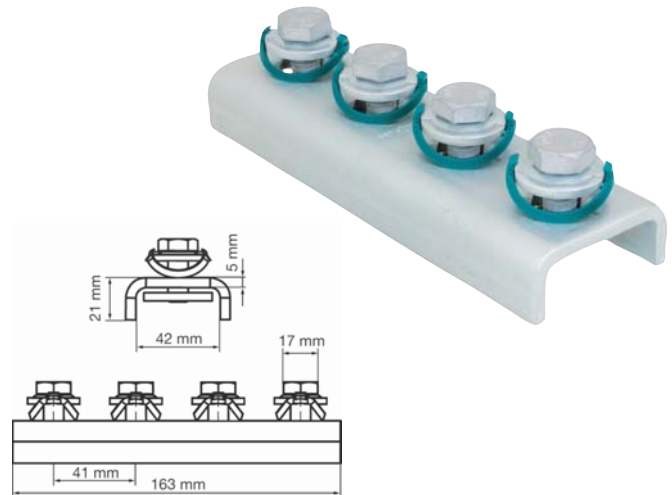
Product benefits:

- Connector is already pre-assembled
- Due to the clamping spring, the product can be easily and flexibly moved and positioned until it is finally fixed in the rail

Areas of application:

- To produce structures with STRUT rails
- Extensions to rails and consoles

Article No.	Article Description	QTY
8574 163	RAIL CONNECTOR STRUT 163MM	e 20



Support Bracket STRUT

Support bracket as a connecting element for manufacturing rail cross-bracings

- Hot-dip galvanised

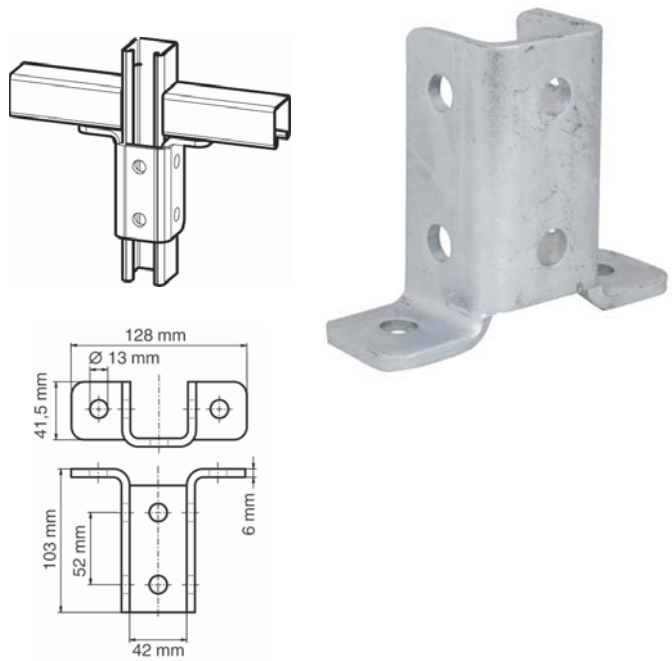
Product benefits:

- Easy to fit due to rounded corners
- High degree of flexibility on the building site
- Enables simple structures without welding

Areas of application:

- To produce structures with STRUT rails

Article No.	Article Description	QTY
8574 2 90	SUPPORT BRACKET STRUT 90	e 10



Rail Bracket STRUT

Rail bracket for manufacturing crossover connections

- Hot-dip galvanised
- Art. No. 8579 41 21; suitable for Type 41/21
- Art. No. 8579 41 41; suitable for Type 41/41

Product benefits:

- Easy to fit due to rounded corners
- The perforations on the rail bracket permit the alignment of the rail slot in four directions

Areas of application:

- For cross connections in front wall installations and shelves made from mounting rails

Article No.	Article Description	QTY
8579 41 21	RAIL BRACKET STRUT FVZ 41/21	25
8579 41 41	RAIL BRACKET STRUT FVZ 41/41	25



Connecting Piece X and T-Form STRUT

Robust connecting piece for STRUT rail structures

- Hot-dip galvanised

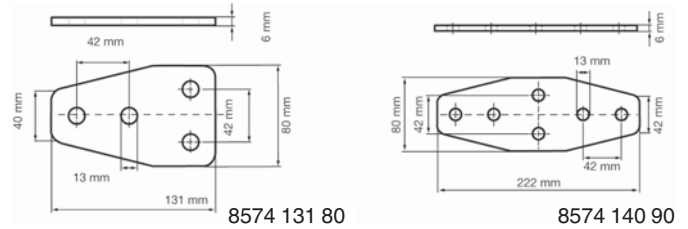
Product benefits:

- Easy to fit due to rounded corners
- T and X-form for optimum adaptation to circumstances

Areas of application:

- For fitted assembly of rail corner connections

Article No.	Article Description	QTY
8574 131 80	CONNECTION PLATE STRUT X 131MM	e 25
8574 140 90	CONNECTION PLATE STRUT T 140MM	e 25



Universal Joint STRUT

Connecting element for fastening to walls

- High quality galvanisation 8 – 10 µ
- Survives at least 1,000 hours salt spray test in accordance with DIN ISO 9227

Product benefits:

- Joint flexibly adjustable up to 90°
- Two Ø 13 mm through holes

Application areas:

- Especially suitable for inclined installations with struts and braces
- For connecting to building structures and mounting rails



Article No.	Article Description	QTY
8574 1 100	UNIVERSAL JOINT STRUT	e 10

Clamping Plate STRUT

U-shaped washer to prevent STRUT mounting rails from bending open

- High quality galvanisation 8 – 10 µ
- Ø 10 mm and Ø 11 mm fire tested

Product benefits:

- U-shape ensures greater stability
- Various hole diameters

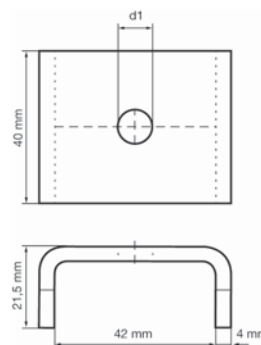
Application areas:

- Stabilisation of STRUT mounting rails



Technical Data	
Art. No.	d1 mm
8576 9	9
8576 11	11
8576 13	13

Article No.	Article Description	QTY
8576 9	CLAMPING PLATE STRUT 9MM	f 100
8576 11	CLAMPING PLATE STRUT 11MM	f 100
8576 13	CLAMPING PLATE STRUT 13MM	f 100



Support Saddle STRUT

For fastening STRUT mounting rails to walls

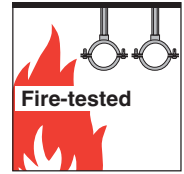
- Hot-dip galvanised
- Heavy duty version (Art. No. 8581 41 41), fire tested

Product benefits:

- The mounting holes are punched slots at 90° to each other, to improve ease of installation
- Pre-fitted sliding nuts

Areas of application:

- System module for assembling sturdy crossbars
- Manufacture of customised consoles from rails

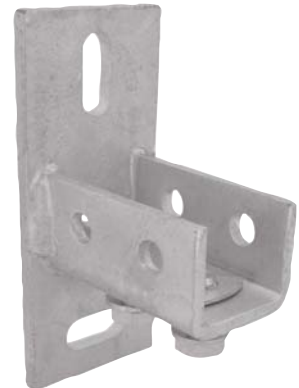


Technical Data		
Art. No.	Dimensions of base plate mm	Dimensions of holes mm
8581 41 21	60 × 133	25 × 11
8581 41 41	70 × 163	34 × 14

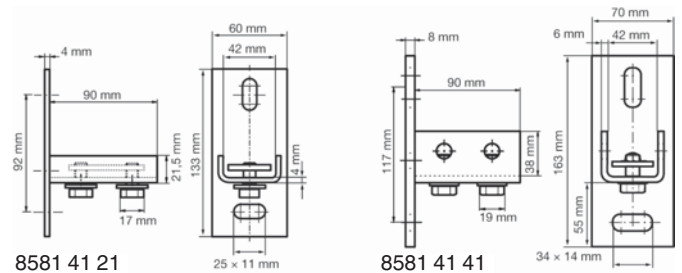
Article No.	Article Description	QTY
8581 41 21	UPR.SUPPORT SADDLE STRUT 41	ü 30
8581 41 41	UPR.SUPPORT SADDLE STRUT S 41	ü 10



8581 41 21



8581 41 41



Rail Support Flange STRUT

For fastening STRUT mounting rails to walls

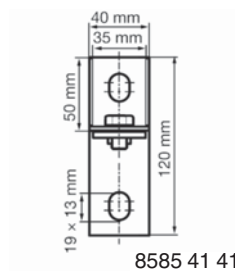
- Hot-dip galvanised
- Pre-fitted sliding nuts

- Transverse and upright base plates for optimum adaptation to local conditions

Areas of application:

- For manufacturing customised support structures in conjunction with STRUT mounting rails

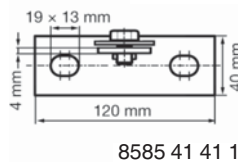
Article No.	Article Description	QTY
8585 41 41	UPR. RAIL SUPPORT FLANGE STRUT	ü 25
8585 41 41 1	TR. RAIL SUPPORT FLANGE STRUT	ü 25



8585 41 41



8585 41 41 1



8585 41 41 1

Rail Foot Solid STRUT

Heavy duty version for fastening STRUT mounting rails to walls

- Hot-dip galvanised
- Art. No. 8580 41 82 suitable for double mounting rail STRUT Type 41/41 (Art. No. 8551 4141 25 6)

Product benefits:

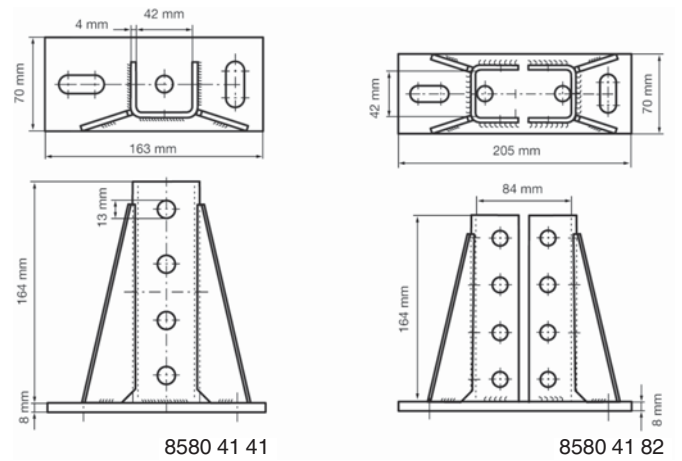
- The mounting holes are punched slots at 90° to each other, to improve ease of installation
- Support Saddle is braced by the base plate

Areas of application:

- System module for assembling sturdy crossbars
- Manufacture of customised consoles from rails



Article No.	Article Description	QTY
8580 41 41	RAIL FOOT STRUT HD-GAL.41/41	ü 10
8580 41 82	RAIL FOOT STRUT HD-GAL.41/82	ü 10



Console Support STRUT

Support for wall consoles and rail structures

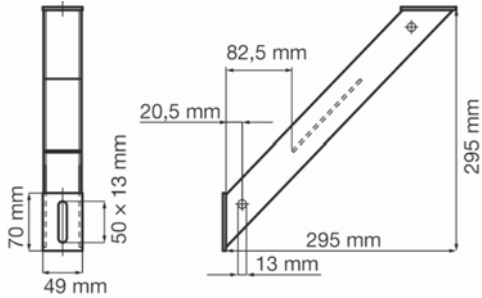
- High quality galvanisation 8 – 10µ

Product benefits:

- Suitable for both indoors and outdoors

Areas of application:

- For attaching as a support element above, below or next to a wall console
- Used to increase the load-bearing capability of rail structures
- Vertical attachment of the console supporting beam for consoles:
Type 41/21; Type 41/41
- Horizontal attachment of the console supporting beam for consoles:
Type 41/21; Type 41/41



Article No.	Article Description	QTY
8574 3840 295	CONSOLE SUPPORT STRUT 295MM	e 10

Quick Fastener Hammerfix STRUT

Quick fastener for fitting pipe clamps to mounting rails

- High quality galvanisation 8 – 10µ
- Insert, turn, fix
- Art. No. 8584 10 60 1 fire-tested version

Product benefits:

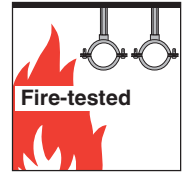
- Time saving due to pre-assembled sliding nut with set screw, washer and spring washer
- Due to the clamping spring, the fastener can be easily moved and positioned until it is finally fixed in the rail
- Survives at least 1,000 hours salt spray test in accordance with DIN ISO 9227
- Suitable for mounting rails Type 41 STRUT

Areas of application:

- Direct connection of pipe clamps to mounting rails
- One system for installation indoors and outdoors

Art. No. 8584 10 60 1:

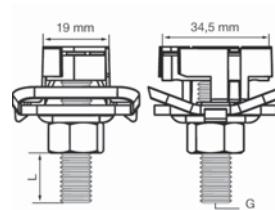
- U-shape for greater stability
- Safety-PLUS: Closure checking by means of assembly marking



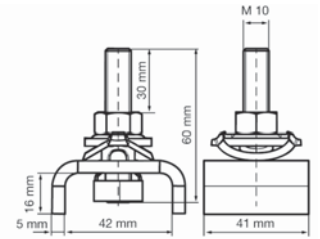
8584 8 40 - 8584 10 60



8584 10 60 1



8584 8 40 - 8584 10 60



8584 10 60 1

Article No.	Article Description	QTY
8584 8 40	STRUT QUICK FAST. M 8X40MM	h 60
8584 8 50	STRUT QUICK FAST. M 8X50MM	h 60
8584 10 40	STRUT QUICK FAST. M10X40MM	h 60
8584 10 60	STRUT QUICK FAST. M10X60MM	g 50
8584 10 60 1	STRUT QUICK FAST.U-S.M10X60MM	g 50

Technical Data		
Usable thread Length L in mm	Tightening torque In Nm ¹	Max. recommended Tensile load in N
16	15	6,000
26	15	6,000
12	15	9,500
32	15	9,500
30	15	10,000

Wing Nut STRUT

For secure connection of system components to rails

- Sliding nut with securing aid
- Fire protection tested from size M10
- Electrolytically galvanised

Product benefits:

- As a result of fixing in the rail slot, locating and bolting on the system components is very simple and practice-oriented
- Compatible with all mounting rails Type 41 STRUT
- Optimum assembly convenience, hence no time-consuming pre-assembly of brackets, sliding nuts and bolts is necessary
- The wing nut can be moved as desired in the rail slot and can be positioned with a 45° rotation

Areas of application:

- When connecting two mounting rails with a bracket, for example



Article No.	Article Description	QTY
8575 8	WING NUT STRUT M 8	g 50
8575 10	WING NUT STRUT M10	g 50
8575 12	WING NUT STRUT M12	g 50

Technical Data		
Art. No.	Tightening Torque in Nm ¹	Max. recommended Tensile load in N
8575 8	15	6,000
8575 10	15	9,500
8575 12	30	10,000

1) Tightening torque should not be exceeded

Sliding Nut STRUT

For fixing in mounting rails and consoles

- Electrolytically galvanised
- Material thickness: 6 mm
- Compatible with all mounting rails Type 41 STRUT



Technical Data

Tightening Torque in Nm ¹	Max. recommended Tensile load in N
15	6,000

1) Tightening torque should not be exceeded

Article No.	Article Description	QTY
8578 8	SLIDING NUT STRUT M 8	f 100
8578 10	SLIDING NUT STRUT M10	f 100
8578 12	SLIDING NUT STRUT M12	f 100

Rail Insulation Profile STRUT

To prevent acoustic bridges during the construction of traverses and consoles in ventilation systems

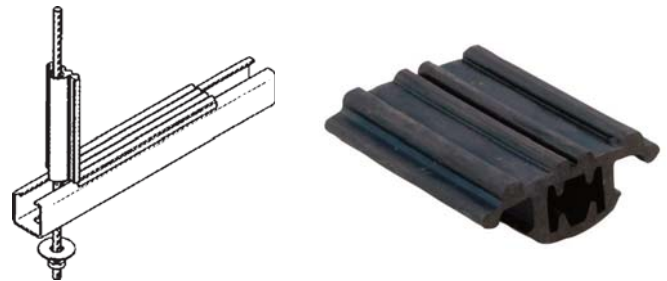
- Sound-deadening insert for mounting rails Type 41 STRUT
- Noise insulation according to DIN 4109

Product benefits:

- Quick assembly
- Made from high quality EPDM rubber
- Can also be used with M6, M8 and M10 threaded rods

Usage instructions:

- Press into the mounting rail profile
- Push over the threaded rod



Technical Data

For rails	For threaded rods
STRUT Type 41	M6 / M8 / M10

Article No.	Article Description	QTY
8574 41	RO(30M)RAIL INS.PROFILE STRUT	e 30



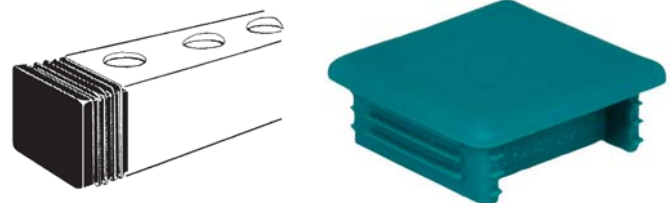
Rail End Cap STRUT

For safe and neat finishing of the ends of mounting rails and consoles

- Simply press or tap in
- Ribbed on the sides for better hold

Product benefits:

- Made from high quality polyethylene
- Suitable for mounting rails Type 41 × 21 and Type 41 × 41 STRUT



Article No.	Article Description	QTY
8574 1 41 21	RAIL END CAP STRUT 41/21	e 50
8574 1 41 41	RAIL END CAP STRUT 41/41	e 50

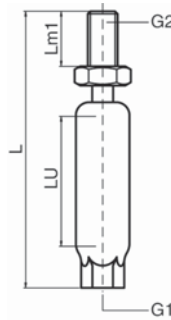
Pendulum Hanger / Ball and Hinge Joint

- For hanging pipes and components with spaced threads
- Recommended for metallic pipes up to DN 50 and for plastic pipes up to DN 100
- Particularly suitable for large ceiling distances
- Prevents tilting of pipe clamps
- Prevents uncontrolled tensile forces on the fixture
- Simple, continuously variable height adjustment (see LU)



Technical Data

Art. No.	L mm	LU mm	G1	G2	Lm1 mm	Max. recommended effective load N
8562 8	49	7	M8	M8	15	3,100
8562 10	49	7	M10	M10	15	3,100
8562 8 1	74	32	M8	M8	15	3,100
8562 10 1	74	32	M10	M10	15	3,100



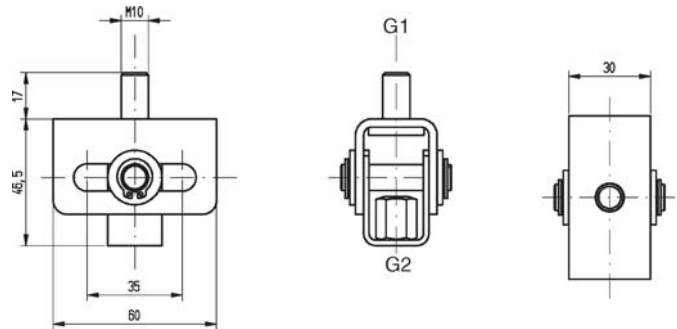
Article No.	Article Description	QTY
8562 8	PENDULUM HANGER SHORT M 8	50
8562 10	PENDULUM HANGER SHORT M 10	50
8562 8 1	PENDULUM HANGER LONG M 8	25
8562 10 1	PENDULUM HANGER LONG M 10	25

Sliding Component M10, Galvanized

- Fixture for pipes with linear thermal expansion
- Avoids strain forces on pipe clamps
- Assembly directly on the ceiling or on a mounting rail by means of a sliding nut M10
- Combined connection thread M8/M10 for variable connection
- Screw and nut CO₂ welded
- Material: steel electrolytically galvanized

Fields of application:

- In installation and pipeline construction



Technical Data		
Connection-thread(G1)	Connection-thread(G2)	Admissible load in N
M10	M8/M10	1300

Article No.	Article Description	QTY
8660 4 10	SLIDING COMPONENT M10	10

Trapezoidal Sheet Metal Hanger VdS

- For fastening installation structures directly on to trapezoidal metal sheets
- Galvanised – corrosion-protected
- Various versions – optimum application options
- Material thickness: 25 × 2.5 mm
- Approved by VdS for fixing pipes up to DN 50 in accordance with VdS Approval No. G 4881021

Art. No. 8583 8, 8583 10:

- Welded nut

Art. No. 8583 8 1, 8583 10 1:

- Rotating threaded part permits subsequent continuous adjustment of the height



Article No.	Article Description	QTY
8583 8	TRAPEZ.METAL SHEET HANG. M8	50
8583 8 1	TRAPEZ.METAL SHEET H. M8 HREG.	50
8583 10	TRAPEZ.METAL SHEET HANG. M10	50
8583 10 1	TRAPEZ.ME.S.HANG.M10 HREG.	50

Trapezodial Sheet Metal Hanger

- Ideal for suspending pipe clips on trapezoidal plates
- Galvanised – corrosion-protected
- Designed with soundproofing element for assembly in accordance with DIN 4109
- Soundproofing element secured from falling out
- With predetermined bend perforations – easy bending and adjustment to the desired trapezoidal plate profiles
- The through-hole of the soundproofing element is dimensioned so that assembly with threaded rods up to a maximum size of M10 is possible
- Material thickness: 25 × 2.5 mm



Article No.	Article Description	QTY
8521 1	TRAPEZ.ME.S.HANG.TYPE L GAL.SD	100
8521 2	TRAPEZ.ME.S.HANG.TYPE L GAL.	100

Trapezoidal Metal Sheet Tongs

- To punch trapezoidal steel sheets with a thickness up to 1.25 mm

Article No.	Article Description	QTY
8625 1	TRAPEZOIDAL METAL SHEET TONGS	1
8625 2	PAIR(2)PUNCHING DIES	1

Delivery volume (item No 8625 1):

- 1x 1 kit punching dies 10.5 mm



Ventilation Pipe Fastener

- Galvanised – corrosion-protected
- Designed with soundproofing element for assembly in accordance with DIN 4109 soundproofing
- Soundproofing element secured from falling out
- With predetermined bend perforations – easy bending and adjustment to the desired pipe diameter
- The through-hole of the soundproofing element is dimensioned so that assembly with threaded rods up to a maximum size of M10 is possible
- Universal fixing options
 - Pop rivets up to max. Ø 4.2 mm
 - Self-tapping screws Ø 3.9 to 4.2 mm
- Material thickness: 35 × 2.00 mm
- Max. recommended load: 900 N



Article No.	Article Description	QTY
8521 3	VENT.PIPE FASTEN.TYPE L GAL.SD	100

Vent Duct Bracket

Vent duct bracket with soundproofing insert in L and Z form for fastening vent ducts in ventilation and air conditioning systems

- Temperature resistance (soundproofing element): -35 °C to +100 °C
- Galvanised

Product benefits:

- Soundproofing element secured from falling out
- Universal fastening options thanks to various hole geometries
 - Pop rivets up to Ø 4.8 mm (Art. No. 2723 48 125)
 - Self-tapping screws up to Ø 4.8 mm (Art. No. 1312 42 95)

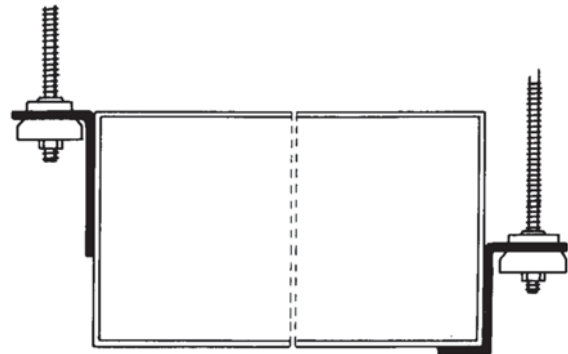
Application areas:

- For assembling ventilation ducts



8522 40 80

8522 40 65



Technical Data

Art. No.	Length mm	Material mm	Rec. perm. load in N
8522 40 65	65	35×2.5	300
8522 40 80	80	35×2.5	300
8522 40 165	165	35×2.5	900

Article No.	Article Description	QTY
8522 40 65	VENT DUCT BRACK. Z40X 65MM	50
8522 40 80	VENT DUCT BRACK. L40X 80MM	50
8522 40 165	VENT DUCT BRACK.BLAC.L40X165MM	50

Air Duct Clamp M8 x 20

- Galvanised
- Connecting element for duct flanges
- Suitable for all duct cross-sections
- Art. No. 8622 8 20 1 in stainless steel

Product benefits:

- The points on the clamp bite into the profile (without making holes) and thus provide a perfect and permanent hold on the duct flange
- The V bead in the clamp increases its rigidity by more than 50 %
- Optimised handling and assembly properties



Article No.	Article Description	QTY
8622 8 20 2	AIR DUCT CLAMP GAL.M8X20	100
8622 8 20 1	AIR DUCT CLAMP A4 M8X20	100

Sealing Tape for the Ventilation Construction

- For the sealing of ventilation ducts and exhaust air units
- Closed PE cell structure
- Weather-proof and resistant against chemicals
- Acts movement-restraining in case of high wind load and similar mechanic influences
- High elasticity
- Perfect thermal insulation values without PE peel off film
- Waste disposal of PE film which accrue when using other sealing tapes is committed
- Constant adhesive power since the sealing tapes are not unrolled and this way do not soil
- Avoids three-point adhesion
- Little consumption of sealing material

Article No.	Article Description	QTY
8802 3 12	MTR<200>SEALING TAPE GREY 3X12	200
8802 3 15	MTR<200>SEALING TAPE GREY 3X15	200
8802 4 9	MTR<200>SEALING TAPE GREY 4X9	200
8802 4 12	MTR<200>SEALING TAPE GREY 4X12	200
8802 4 15	MTR<200>SEALING TAPE GREY 4X15	200



Cold-shrink Tape Butyl

- Elastic polyethylene film, coated with a cold sealing butyl natural rubber glue
- Temperature range: from -30°C up to +80°C
- Reel length: 15 m

Fields of application:

- For durable sealing of butt joints and sleeve joints for sleeve joints of air ducts, spiral pipes and flex pipes in air-technical systems made of aluminum and galvanized steel sheet
- To seal flexible and rigid pipings made of polyethylene and PVC
- For durable sealing of penetrations and to glue butt joints on steep roofs

Article No.	Article Description	QTY
8840 2 50	REEL(15M)COLD-SHRINK TAPE 50MM	1
8840 2 75	REEL(15M)COLD-SHRINK TAPE 75MM	1
8840 2 100	REEL(15M)COLD-SHRINK TAPE100MM	1



Spacing Bolts, Hexagon, Galvanized

- For assembly in electronic engineering
- **Machining steel, galvanized**



Article No.	Article Description	QTY
2210 3 8	SPACING BOLTS ST.GA 3X 8	100
2210 3 10	SPACING BOLTS ST.GA 3X10	100
2210 3 12	SPACING BOLTS ST.GA 3X12	100
2210 3 15	SPACING BOLTS ST.GA 3X15	100
2210 3 20	SPACING BOLTS ST.GA 3X20	100
2210 3 25	SPACING BOLTS ST.GA 3X25	100
2210 3 30	SPACING BOLTS ST.GA 3X30	100
2210 4 10	SPACING BOLTS ST.GA 4X10	100
2210 4 12	SPACING BOLTS ST.GA 4X12	100
2210 4 15	SPACING BOLTS ST.GA 4X15	100
2210 4 20	SPACING BOLTS ST.GA 4X20	100
2210 4 25	SPACING BOLTS ST.GA 4X25	100
2210 4 30	SPACING BOLTS ST.GA 4X30	100
2210 4 35	SPACING BOLTS ST.GA 4X35	100
2210 4 40	SPACING BOLTS ST.GA 4X40	100
2210 5 20	SPACING BOLTS ST.GA 5X20	100
2210 5 25	SPACING BOLTS ST.GA 5X25	100
2210 5 30	SPACING BOLTS ST.GA 5X30	100
2210 5 35	SPACING BOLTS ST.GA 5X35	100
2210 5 40	SPACING BOLTS ST.GA 5X40	100
2210 5 45	SPACING BOLTS ST.GA 5X45	100
2210 5 50	SPACING BOLTS ST.GA 5X50	100
2210 6 20	SPACING BOLTS ST.GA 6X20	100
2210 6 25	SPACING BOLTS ST.GA 6X25	100
2210 6 30	SPACING BOLTS ST.GA 6X30	100
2210 6 35	SPACING BOLTS ST.GA 6X35	100
2210 6 40	SPACING BOLTS ST.GA 6X40	100
2210 6 45	SPACING BOLTS ST.GA 6X45	100
2210 6 50	SPACING BOLTS ST.GA 6X50	100
2210 6 55	SPACING BOLTS ST.GA 6X55	100
2210 6 60	SPACING BOLTS ST.GA 6X60	100
2210 6 70	SPACING BOLTS ST.GA 6X70	100
2210 6 80	SPACING BOLTS ST.GA 6X80	100
2210 6 100	SPACING BOLTS ST.GA 6X100	100
2210 6 120	SPACING BOLTS ST.GA 6X120	100

(thread Ø mm × hexagon length L mm)

Technical Data		
Thread Ø mm	AF mm	B mm
M3	5.5	6
M4	7.0	8
M5	8.0	10
M6	10.0	12

Reducing Sleeves, Galvanized

- Reducing sleeve with female thread at both sides
- Enables the secure connection of fixing parts of different diameters, e.g. M10 threaded rod with M8-pipe clamp
- **Galvanized steel**



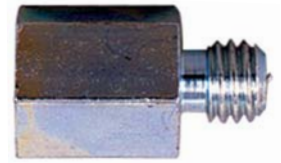
Article No.	Article Description	QTY
2203 8 6	REDUC.SLEEVE GA.M 8-M 6 FEMALE	100
2203 10 8	REDUC.SLEEVE GA.M10-M 8 FEMALE	100
2203 12 10	REDUC.SLEEVE GA.M12-M10 FEMALE	100
2203 16 12	REDUC.SLEEVE GA.M16-M12 FEMALE	100

(female thread)

Technical Data			
Art. No.	D 1	D 2	Male thread-Ø
2203 8 6	M8	M6	13
2203 10 8	M10	M8	16
2203 12 10	M12	M10	16
2203 16 12	M16	M12	22

Reducers, Galvanized

- Connecting element between fastening parts with different thread diameters, e.g. M10 threaded rod and M8 pipe clamp
- **Galvanized steel**



Article No.	Article Description	QTY
2204 6 8	REDUCER GA M 6 I - M8 O	200
2204 6 10	REDUCER GA M 6 I - M10 O	200
2204 8 6	REDUCER GA M 8 I - M6 O	200
2204 8 10	REDUCER GA M 8 I - M10 O	200
2204 8 12	REDUCER GA M 8 I - M12 O	200
2204 10 8	REDUCER GA M10 I - M8 O	200
2204 10 12	REDUCER GA M10 I - M12 O	200
2204 10 16	REDUCER GA M10 I - M16 O	50
2204 12 8	REDUCER GA M12 I - M8 O	100
2204 12 10	REDUCER GA M12 I M10 O	100
2204 16 10	REDUCER GA M16 I M10 O	40
2204 16 12	REDUCER GA M16 I M12 O	40
2204 1 12 10	REDUCER GA 1/2" I- M10 O	25
2204 1 12 12	REDUCER GA 1/2" I- M12 O	25
2204 1 12 16	REDUCER GA 1/2" I- M16 O	10
2204 1 34 16	REDUCER GA 3/4" I- M16 O	10

(female thread - male thread)

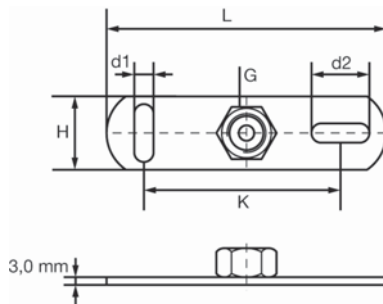
Technical Data

Head size

- 13
- 13
- 13
- 13
- 13
- 13
- 17
- 17
- 17
- 24
- 24
- 24
- 24
- 30
- 30

Base Plate

- For wall, ceiling and floor fixtures in industrial and in-house facilities
- The mounting holes are punched slots at 90° to each other, to improve ease of installation
- Electrolytically galvanized
- Type 1 and 2 with 4-fold welded connecting nut
- Type 3 with CO₂ welded threaded connection
- Stainless steel version:
 Art. No. 8539 1 8 80
 Art. No. 8539 1 10 80
 Art. No. 8539 1 10 145



Article No.	Article Description	QTY
8543 1 8	BASE PLATE GA TYPE 1 M 8	e 50
8539 1 8 80	BASE PLATE A4 TYPE 1 M 8	10
8543 1 8 10	BASE PLATE GA TYPE 1 M8/M10	e 50
8543 1 10	BASE PLATE GA TYPE 1 M 10	e 50
8539 1 10 80	BASE PLATE A4 TYPE 1 M 10	10
8543 1 12	BASE PLATE GA TYPE 1 1/2"	e 50
8543 2 10	BASE PLATE GA TYPE 2 M 10	e 40
8539 1 10 145	BASE PLATE A4 TYPE 2 M 10	10
8543 2 12 0	BASE PLATE GA TYPE 2 1/2"	e 10
8543 2 12	BASE PLATE GA TYPE 2 M 12	e 10
8543 2 16	BASE PLATE GA TYPE 2 M 16	e 10
8543 3 1	BASE PLATE GA TYPE 3 1"	e 10
8543 3 12	BASE PLATE GA TYPE 3 1/2"	e 10
8543 3 34	BASE PLATE GA TYPE 3 3/4"	e 10

Technical Data

G	L	H	K	d1	d2	Fa, z
mm / inch	mm	mm	mm	mm	mm	N
M8	80	25	50	15 × 8.5	15 × 8.5	2,500
M8	80	25	50	15 × 8.5	15 × 8.5	2,500
M8/M10	80	25	50	15 × 8.5	15 × 8.5	2,500
M10	80	25	50	15 × 8.5	15 × 8.5	2,500
M10	80	25	50	15 × 8.5	15 × 8.5	2,500
1/2"	145	38	100	25 × 11	30 × 11	3,800
M10	145	38	100	25 × 11	30 × 11	3,500
M10	145	35	100	30 × 11	25 × 11	3,000
1/2"	145	38	100	25 × 11	30 × 11	3,800
M12	145	38	100	25 × 11	30 × 11	3,800
M16	145	38	100	25 × 11	30 × 11	3,800
1"	145	38	100	25 × 11	30 × 11	5,500
1/2"	145	38	100	25 × 11	30 × 11	4,000
3/4"	145	38	100	25 × 11	30 × 11	5,000

Assembly Plate with Treaded Pin

- Galvanized steel
- With set screw M8
- Slot hole 25 x 8.5 mm
- For flow and return installations



Article No.	Article Description	QTY
8618 65	DOUBLE SUPP. THR.PIN M8 65MM	50
8618 85	DOUBLE SUPP. THR.PIN M8 85MM	50
8618 105	DOUBLE SUPP. THR.PIN M8 105MM	50

Technical Data		
Total length mm	Distance set screws mm	Material thickn. mm
85	65	5
105	85	5
125	105	5

Assembly Plate / Double Support Galvanized Steel

- Galvanized steel
- Plate thickness: 5 mm
- Slot hole: 25 x 8.5 mm
- With inside thread M8
- For flow and return installations



Article No.	Article Description	QTY
8617 55	DOUBLE SUPP. GAL. M8 55MM	50
8617 65	DOUBLE SUPP. GAL. M8 65MM	50
8617 85	DOUBLE SUPP. GAL. M8 85MM	50
8617 105	DOUBLE SUPP. GAL. M8 105MM	50

Technical Data		
Total length mm	Distance set screws mm	Material thickn. mm
75	55	5
85	65	5
105	85	5
125	105	5

Threaded Bolts

- Galvanized steel
- Outside thread: M8
- Appropriate for assembly plates with M8 inside thread

Article No.	Article Description	QTY
8619 25	THR. BOLT GAL. M8 25MM	100
8619 35	THR. BOLT GAL. M8 35MM	100
8619 45	THR. BOLT GAL. M8 45MM	100
8619 55	THR. BOLT GAL. M8 55MM	100
8619 65	THR. BOLT GAL. M8 65MM	100



Solar Roof Mounts Fix, Stainless Steel A2

- For universal fixing of solar modules
- Dimension base plate: 150 x 50 x 4 mm
- Surface: blasted
- Material: 1.4301
- Clip thickness: 5 mm



Article No.	Article Description	QTY
8669 150 50 5	FIX SOL.ROOF MOUNT VA 150X50X4	b 700

Solar Roof Mounts Vario, Stainless Steel A2

- Triple adjustable
- For universal fixing of solar modules
- Dimension base plate: 146 x 46 x 5 mm
- Surface: blasted



Article No.	Article Description	QTY
8669 146 46 5	VARIO SOLAR MOUNT A2 140X46X5	30

Adapter Steel Sheets, Stainless Steel A2

- Between solar mounts and solar module



Article No.	Article Description	QTY
8669 82 40 5 9	AD. ST. SHEET A2 RDØ 9 82X40X5	25
8669 82 40 5 11	AD. ST. SHEET A2 RDØ11 82X40X5	25
8669 82 40 5 13	AD. ST. SHEET A2 RDØ13 82X40X5	25
8669 110 405 13	AD. ST.SHEET A2 RDØ13 110X40X5	25

Anchoring Rail Screws 28/15, Stainless Steel A2

- For eased fixing in mounting rails
- For profiles: 28/15, 38/17, 40/22



Article No.	Article Description	QTY
8669 8 20	ANCH. RAIL SCR.28/15 A2 8X20	100
8669 8 30	ANCH. RAIL SCR.28/15 A2 8X30	100
8669 8 40	ANCH. RAIL SCR.28/15 A2 8X40	100
8669 8 50	ANCH. RAIL SCR.28/15 A2 8X50	100
8669 8 60	ANCH. RAIL SCR.28/15 A2 8X60	100
8669 10 30	ANCH. RAIL SCR.28/15 A2 10X30	100

Threaded Plates, Stainless Steel A2

Article No.	Article Description	QTY
8665 8	THR. PL. TYPE 28/15 A2 M 8	200
8665 10	THR. PL. TYPE 28/15 A2 M10	200



Hex Hanger Bolts Completed, A2

- Fastening set ready-to-fit completed (1x hanger bolt A2, 3x flange nut with locking tooth DIN 6923 A2, 1x EPDM-sealing disk)
- For the fixing of substructures of solar modules on the roof
- With hexagon drive for easy screwing
- Drive:
 - Ø 10 mm = SW 7
 - Ø 12 mm = SW 9
- **Stainless steel A2**

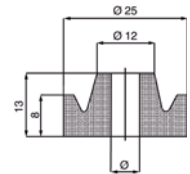


Article No.	Article Description	QTY
1864 2 10 200	HEX HANG.BOLT COMPL.A2 10X200	50
1864 2 12 300	HEX HANG.BOLT COMPL.A2 12X300	50

(Thread Ø × length mm)

Sealing Disk EPDM for Hanger Bolts

Article No.	Article Description	QTY
1862 8	EPDM-SEA.DIS.BLA.F.HAN.BOLT.M8	1000
1862 10 12	EPDM-SEA.DIS.BLA.F.HA.BO.10/12	100

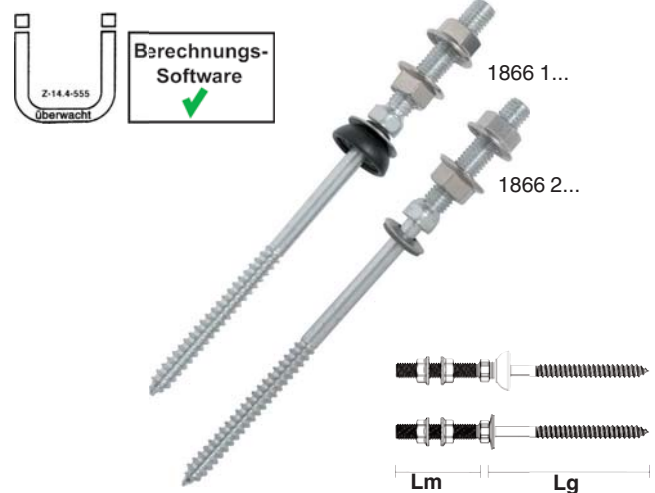


Solar Fastener Type A, A2

- **Stainless steel A2**
- Inside hexagon drive 5mm und SW 13
- With general construction permit Z-14.4-555
- With captive EPDM-stainless steel sealing disk Ø 19mm for the combination with various spherical caps (Art. No. 1866 2....) or with captive EPDM-stainless steel bell joint Ø 25mm for the fixing on corrugated fibre cement sheets (version GD, Art. No. 1866 1)
- With locking tooth flange nut M10-A2 for a faster and easier mounting than standard stop nuts and washers
- Locking tooth-counter nut included to minimize additional time when mounting
- Reduced screwing-in resistance due to special slide coating
- For fixing of solar systems on corrugated fibre cement sheets, trapezoidal, corrugated profile and sandwich elements on wooden substructures
- Consists of: solar fastener A2, 2x locking tooth nut with flange DIN 6923 A2, EPDM-bell joint Ø 25mm or EPDM-sealing disk Ø 19mm

Application:

- Screwing depth in wood min. 35 mm- max. 100 mm
- Predrilling diameter must be 6 mm

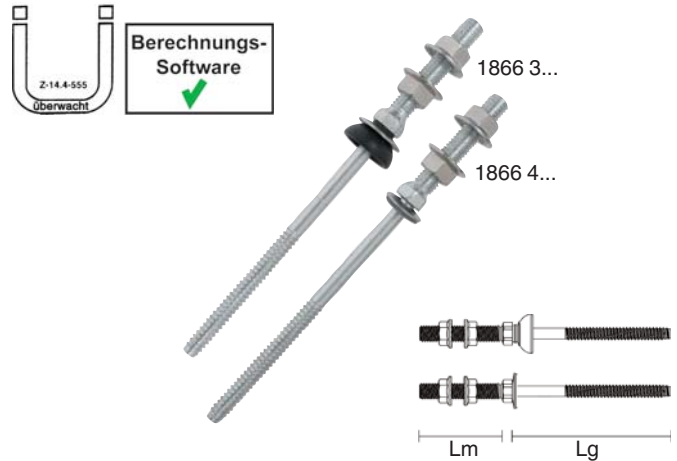


Article No.	Article Description	QTY
1866 1 80 50	SOL.FASTEN.A 8.4/M10X 80/50 GD	20
1866 1 100 50	SOL.FASTEN.A 8.4/M10X100/50 GD	20
1866 1 130 50	SOL.FASTEN.A 8.4/M10X130/50 GD	20
1866 1 150 50	SOL.FASTEN.A 8.4/M10X150/50 GD	20
1866 1 180 50	SOL.FASTEN.A 8.4/M10X180/50 GD	20
1866 1 200 50	SOL.FASTEN.A 8.4/M10X200/50 GD	20
1866 2 80 50	SOL.FASTEN.A 8.4/M10X 80/50	20
1866 2 100 50	SOL.FASTEN.A 8.4/M10X100/50	20
1866 2 130 50	SOL.FASTEN.A 8.4/M10X130/50	20
1866 2 150 50	SOL.FASTEN.A 8.4/M10X150/50	20
1866 2 180 50	SOL.FASTEN.A 8.4/M10X180/50	20
1866 2 200 50	SOL.FASTEN.A 8.4/M10X200/50	20

Technical Data:			
Lm	Lg	Total length	Clamp. range
mm	mm	mm	mm
50	80	136	0 - 35
50	100	156	20 - 55
50	130	186	45 - 85
50	150	206	70 - 105
50	180	236	100 - 135
50	200	256	120 - 155
50	80	136	0 - 40
50	100	156	20 - 60
50	130	186	55 - 90
50	150	206	75 - 110
50	180	236	105 - 140
50	200	256	125 - 160

Solar Fastener Type BZ, A2

- **Stainless steel A2**
- Inside hexagon drive 5mm and SW 13
- With general construction permit Z-14.4-555
- With captive EPDM-stainless steel sealing disk Ø 19mm for the combination with various spherical caps (Art. No. 1866 4) or with captive EPDM-stainless steel bell joint Ø 25mm for the fixing on corrugated fibre cement sheets (version GD, Art. No. 1866 3)
- With locking tooth flange nut M10-A2 for faster and easier mounting than standard stop nuts and washers
- Locking tooth-counter nut included to minimize additional time expenditure when mounting
- Reduced screwing-in resistance due to special slide coating
- For fixing solar systems on corrugated fibre cement sheets, trapezoidal, corrugated profile and sandwich elements on wooden substructures
- Consists of: solar fastener A2, 2x locking tooth nut with flange DIN 6923 A2, EPDM-bell joint Ø 25mm or EPDM-washer Ø 19mm



Application:

- Recommended screw length = trapezoidal profile height / sandwich thickness + 20 mm

Predrilling table:

- Steel thickness / predrilling Ø mm
- 1.5 – 5.0 / 6.8
- 6.0 / 7.0
- 8.0 / 7.2
- ≥10.0 / 7.4

Article No.	Article Description	QTY
1866 3 80 50	SOL.FASTEN.BZ 8.0/10X 80/50 GG	20
1866 3 100 50	SOL.FASTEN.BZ 8.0/10X100/50 GD	20
1866 3 125 50	SOL.FASTEN.BZ 8.0/10X120/50 GD	20
1866 3 150 50	SOL.FASTEN.BZ 8.0/10X150/50 GD	20
1866 3 160 50	SOL.FASTEN.BZ 8.0/10X160/50 GD	20
1866 3 200 50	SOL.FASTEN.BZ 8.0/10X200/50 GD	20
1866 4 80 50	SOL.FASTEN.BZ 8.0/10X 80/50	20
1866 4 100 50	SOL.FASTEN.BZ 8.0/10X100/50	20
1866 4 125 50	SOL.FASTEN.BZ 8.0/10X125/50	20
1866 4 150 50	SOL.FASTEN.BZ 8.0/10X150/50	20
1866 4 160 50	SOL.FASTEN.BZ 8.0/10X160/50	20
1866 4 200 50	SOL.FASTEN.BZ 8.0/10X200/50	20

Technical Data

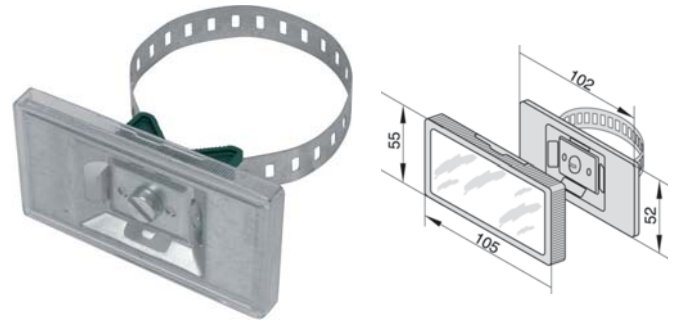
Lm mm	Lg mm	Total length mm	Clamp. range mm
50	80	136	15 - 55
50	100	156	30 - 75
50	125	181	55 - 100
50	150	206	80 - 125
50	160	216	90 - 135
50	200	256	130 - 175
50	80	136	15 - 60
50	100	156	35 - 80
50	125	181	60 - 105
50	150	206	85 - 130
50	160	216	95 - 140
50	200	256	135 - 180

RKZ Universal Holder with Fastening Strap

- Universal holder made of galvanised steel sheet with galvanised fastening strap
- With plastic covering
- Suitable for all pipe materials
- No drilling or welding necessary
- Rotation-free identification

Applications:

- For fastening to horizontal and vertical pipes up to 2 1/2"



Article No.	Article Description	QTY
8673 1 2	UNIVERSAL HOLDER+FASTEN. STRAP	25

Universal Holder RKZ

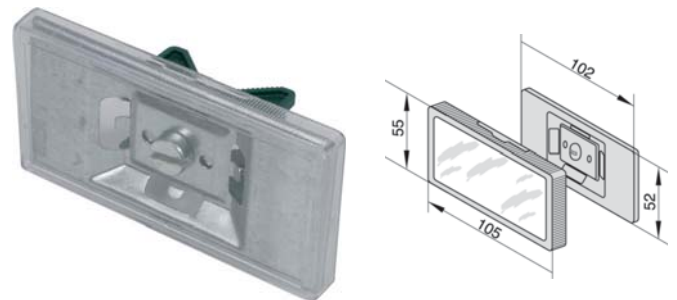
- Universal holder made from galvanised steel sheet
- With plastic covering

Applications:

- For fastening to horizontal and vertical pipes

Product benefits:

- Using the fastening strap (Art. No. 8673 1 6), the holder can be fastened to any pipe (even larger than 2 1/2")
- Less offcut waste with small pipe diameters



Article No.	Article Description	QTY
8673 1 1	UNIVERSAL HOLDER	25

Fastening Strap RKZ

- Galvanised fastening strap for:
 - Universal holder with fastening strap – for pipes larger than 2 1/2"
 - Universal holder – to fasten universally to all pipe sizes
- Roll length: 5 m
- Roll width: 16 mm



Article No.	Article Description	QTY
8673 1 6	RO(5M)FASTENING STRAP GAL.	1

Screwed-on Holder M8 RKZ

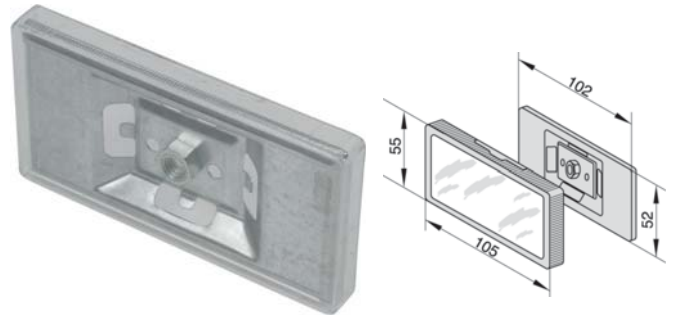
- Screwed-on holder in galvanised sheet steel with riveted M8 connection nut
- Includes plastic cover
- With 2 additional Ø 4.2 mm screw holes for fastening with chipboard screws

Applications:

- For fastening to pipes, walls and machinery

Product benefits:

- Numerous fastening options with hanger bolts, set screws, pipe clamps, threaded studs, HakoFix quick fasteners (in a mounting rail) or screws



Article No.	Article Description	QTY
8673 1 3	SCREWED-ON HOLDER M8	25

Weld-On Holder RKZ

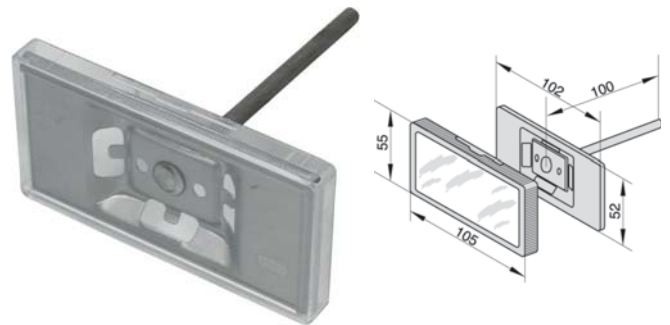
- Weld-on holder in galvanised sheet steel with weld-on pin of untreated steel
- With plastic covering

Applications:

- Can be welded on to pipes or other weldable substrates

Product benefits:

- Best for insulated pipes, as the insulation is only pierced at the welded pin

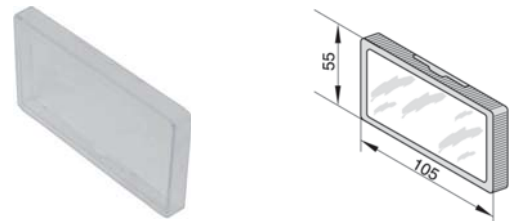


Article No.	Article Description	QTY
8673 1 4	WELD-ON HOLDER	25

Plastic Cover RKZ

- Universal plastic cover for all holders in the RKZ system

Article No.	Article Description	QTY
8673 1 5	PLASTIC COVER	50



RKZ Name Plates

Distinctive features that set the HVP expert apart:

- Quick, clean and simple identification of piping, valves and machines
- Standard colours enable easy distinction
- Tags can easily be labelled or written on with a waterproof marker
- Dimensions (L x W x H): 100 mm x 50 mm x 2 mm

Product benefits:

- Three different variants are available
- Variable application, since smooth or grooved tags become unnecessary
- Fewer bearing brackets and lower costs for tags, since only one tag type is used
- Low one-off costs for printing plates for a customised company logo – no follow-up costs
- Low minimum order quantity of 50 pcs per tag colour
- No expensive insertion moulds
- No fixed printing dates, so no long waiting times for printed tags
- Simple inscription with an inscription device (Art. No. 9851 5000) or pre-printed, self-adhesive text bars (Art. No. 8763 5 ...)

RKZ Name Plate with No Printing

Article No.	Article Description	QTY
8673 2 1	NAME PLATE RED	50
8673 2 2	NAME PLATE BLUE	50
8673 2 3	NAME PLATE GREEN	50
8673 2 4	NAME PLATE YELLOW	50
8673 2 5	NAME PLATE ORANGE	50
8673 2 6	NAME PLATE GREY	50
8673 2 7	NAME PLATE WHITE	50



RKZ Name Plate with Company Legend

- Ordering information: The initial order will incur a one-off tooling charge

Article No.	Article Description	QTY
8673 3 1	NAME PLATE RED WITH PRINT	50
8673 3 2	NAME PLATE BLUE WITH PRINT	50
8673 3 3	NAME PLATE GREEN WITH PRINT	50
8673 3 4	NAME PLATE YELLOW WITH PRINT	50
8673 3 5	NAME PLATE ORANGE WITH PRINT	50
8673 3 6	NAME PLATE GREY WITH PRINT	50
8673 3 99	ONE-OFF PAYMENT PRINT	1



RKZ Name Plate with Custom Design

- Ordering information: The initial order will incur a one-off tooling charge

Article No.	Article Description	QTY
8673 4 2	NAME PLATE WHITE 1-COLOU.PRINT	50
8673 4 3	NAME PLATE WHITE 2-COLOU.PRINT	50
8673 4 4	NAME PLATE WHITE 3-COLOU.PRINT	50
8673 4 5	NAME PLATE WHITE 4-COLOU.PRINT	50
8673 3 99	ONE-OFF PAYMENT PRINT	1



Insulation PE Rohrflex *Forlen*

- Made of flexible, stable, closed-cell soft polyethylene foam (extruded)
- Of universal use for insulating in sanitary and heating technology in the wall, ceiling and duct areas
- Colour: Grey
- Split along its length – no laborious slitting necessary
- Also suitable for pipes made of chrome-nickel-steel conforming to DIN 53 110
- Resistant to ageing, recyclable
- CFC-free
- Length supplied: 2 m

*Insulation for heating pipes in floor constructions conforming to ENEV (German regulation for energy saving in buildings and building systems) and of sanitary cold water pipes



Article No.	Article Description	QTY
8710 9 12	MTR.PE ROHRFLEX 9/ 12	300
8710 9 15	MTR.PE ROHRFLEX 1/4" 9/ 15	232
8710 9 18	MTR.PE ROHRFLEX 3/8" 9/ 18	190
8710 9 22	MTR.PE ROHRFLEX 1/2" 9/ 22	162
8710 9 28	MTR.PE ROHRFLEX 3/4" 9/ 28	126
8710 9 35	MTR.PE ROHRFLEX 1" 9/ 35	92
8710 9 42	MTR.PE ROHRFLEX 1 1/4" 9/ 42	y 110
8710 13 15	MTR.PE ROHRFLEX 50 1/4" 13/ 15	162
8710 13 18	MTR.PE ROHRFLEX 50 3/8" 13/ 18	136
8710 13 22	MTR.PE ROHRFLEX 50 1/2" 13/ 22	120
8710 13 28	MTR.PE ROHRFLEX 50 3/4" 13/ 28	98
8710 13 35	MTR.PE ROHRFLEX 1" 13/ 35	72
8710 13 42	MTR.PE ROHRFLEX 1 1/4" 13/ 42	56
8710 20 15	MTR.PE ROHRFLEX 1/4" 20/ 15	100
8710 20 18	MTR.PE ROHRFLEX 3/8" 20/ 18	88
8710 20 22	MTR.PE ROHRFLEX 1/2" 20/ 22	80
8710 20 28	MTR.PE ROHRFLEX50 3/4" 20/ 28	68
8710 20 35	MTR.PE ROHRFLEX50 1" 20/ 35	50
8710 20 42	MTR.PE ROHRFLEX50 1 1/4"20/ 42	44
8710 25 15	MTR.PE ROHRFLEX100 1/4" 25/ 15	56
8710 25 18	MTR.PE ROHRFLEX100 3/8" 25/ 18	56
8710 25 22	MTR.PE ROHRFLEX100 1/2" 25/ 22	50
8710 25 28	MTR.PE ROHRFLEX100 3/4" 25/ 28	46
8710 25 35	MTR.PE ROHRFLEX 1" 25/ 35	28
8710 25 42	MTR.PE ROHRFLEX50 1 1/4"25/ 42	28

(Inch / insulation thickness x pipe Ø (outer) mm)

Technical Data

ENEV	Exter. Ø mm (CU)	Nom. size DN (CU)	Nom. size DN (FE)	Exter. Ø mm (FE)	Exter. Ø mm (PP)
*	12	10	-	-	12
*	15	-	8	13.5	-
*	18	15	10	17.2	16
*	22	20	15	21.3	20
*	28	25	20	26.9	25
*	35	32	25	33.7	32
*	42	40	32	42.4	40
50 %	15	-	8	13.5	-
50 %	18	15	10	17.2	16
50 %	22	20	15	21.3	20
50 % (FE)	28	25	20	26.9	25
-	35	32	25	33.7	32
-	42	40	32	42.4	40
-	15	-	8	13.5	-
-	18	15	10	17.2	16
-	22	20	15	21.3	20
50 % (CU)	28	25	20	26.9	25
50 %	35	32	25	33.7	32
50 % (FE)	42	40	32	42.4	40
100 %	15	-	8	13.5	-
100 %	18	15	10	17.2	16
100 %	22	20	15	21.3	20
100 % (FE)	28	25	20	26.9	25
-	35	32	25	33.7	32
50 %	42	40	32	42.4	40

Copper pipe (CU) / steel pipe (FE) / polypropylene pipe (PP)

- Material: closed-cell, round extruded soft polyethylene foam
- Thermal conductivity: 0.040 W/(m.K) according to DIN 52613
- Usable temperature range: -45 °C to +105 °C
- Fire behaviour: B1 flame retardant according to DIN 4102
- Structure-borne sound insulation: up to 23 dB (A) reduction according to DIN 52218

Wrapping Tape PE

- To glue joints
- Type: self-adhesive
- Length 15 m
- Width 50 mm
- Thickness 3 mm



Article No.	Article Description	QTY
8711 50 15	RO(15M)PE WRAPPING TAPE 50X3MM	e 10

Adhesive Tape PVC Grey

- To glue PE Rohrflex
- Colour grey
- Length 25 m
- Width 50 mm
- Thickness 0.13 mm



Article No.	Article Description	QTY
8711 30	RO(10M)PVC ADH.TAPE 30MM GREY	e 5
8711 50	RO(25M)PVC ADH.TAPE 50MM GREY	e 3 A

Duct Tape Universal

- Textile adhesive tape with integrated woven fabric
- Tear-resistant under tension - hard-wearing
- Easy to tear by hand from the side
- Versatile range of applications
- Leaves no residues - adhesion tests are recommended
- Water-resistant

Art.-No. 3745 38 10:

- Narrow version, width: 38 mm

Fields of application:

- Sticking to stone, plaster, masonry and foamed materials
- Sticking to pipe insulation, foils, films, etc.
- Universal use as repair tape

Technical Data

Base material:	Polyester fabric
Adhesive:	Natural rubber
Thickness:	0,20 mm (200µ)
Adhesive strength:	3,5 N/cm
Tear strength:	47,1 N/cm
Elongation at fracture:	12,5 %
Colour:	silver, black
Temperature resistance:	up to 80 °C



Article No.	Article Description	QTY
3745 38 10	RO(50M)ADH.TAPE UNI SILV. 38MM	e 32
3745 50 1	RO(50M)ADH.TAPE UNI SILV. 48MM	ev 24
3745 50 20	RO(50M)ADH.TAPE UNI BLACK 38MM	ev 24
3745 50 2	RO(50M)PE-ADH.RIBB.50MM RED	e 24

Rubber & Universal Contact Adhesive K142

- For long-term adhesion of rubber, rubber-metal connections, foam rubber, insulating material, PVC, textiles, paper, cardboard, wood, leather etc.
- Not suitable for polystyrene

Art.-No. 6400 4050:

- Tin with included brush

Article No.	Article Description	QTY
6400 4049	TB(90G)UNIVERSAL ADHESIVE K142	e 12
6400 4050	RUBB.&UNIV.CONT.ADH.K142 200G	e 6
6400 4055	UNIV.CONT.ADHESIVE K142 640G	1



6400 40 49



6400 40 50



6400 40 55

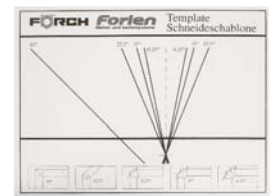
Miter Box

- To cut miters

Article No.	Article Description	QTY
8711 10	MITER BOX	1
8711 15	TEMPLATE FORLEN	1



8711 10



8711 15

Miter Knife

Art. No. 8711 11:

- For cutting PE, fleece, rubber and PUR insulating material

Art. No. 8711 13:

- For cutting insulating material made of mineral fibre

Article No.	Article Description	QTY
8711 11	MITER KNIFE SMOOTH BLADE	1
8711 13	MITER KNIFE CORRUGATED BLADE	1



8711 11



8711 13

Fastening Clips

Article No.	Article Description	QTY
8711 12	FASTENING CLIPS	H 400



Adhesive Textile Tape, Rugged

- high quality textile tape
- PE-coated, shiny surface
- excellent adhesion at low and high temperatures
- good performance on rough surfaces
- excellent tearing and unreeling properties
- leaves no residues - gluing tests are recommended
- suitable for indoor and outdoor applications
- very good UV-resistance
- water-repellent
- thickness: 300 µ
- adhesive on one side
- wide colour range: silver, black, white, red, blue

Technical Data

Adhesive:	natural caoutchouc
Mesh:	70
Thickness:	0,30 +/- 0,03 mm
Bond strength:	5,95 N / 25 mm
Tensile force:	59 N / 50 mm
Rewinding force:	19,6 N / 50 mm
Colours:	silver, black, white, red, blue
Ductility:	10 %
Temperature resistance:	-35 °C up to +80 °C



silver	black	white	red	blue
3745 2 50 1	3745 2 50 2	3745 2 50 3	3745 2 50 4	3745 2 50 5

Article No.	Article Description	QTY
3745 2 50 1	RO(50M)ADH.TAPE RU.SILVER 50MM	e 24
3745 2 50 2	RO(50M)ADH.TAPE RU.BLACK 50MM	e 24
3745 2 50 3	RO(50M)ADH.TAPE RU.WHITE 50MM	e 24
3745 2 50 4	RO(50M)ADH.TAPE RU.RED 50MM	e 24
3745 2 50 5	RO(50M)ADH.TAPE RU.BLUE 50MM	e 24

Non-Woven Hose *Forlen*

- Hose made from PE-coated polyester fleece, highly flexible
- For insulating cold drinking water pipes conforming to DIN 1988 Part 2 for cold water pipes and areas with no ENEV requirements
- CFC-free
- Length supplied: 25 m
- **Art. No. 8712 ...:** white outer skin and grey inner fleece
- **Art. No. 8712 1 ...:** silver-grey outer skin and grey inner fleece



Article No.	Article Description	QTY
8712 4 15	MTR.NON-WOVEN HOSE 1/4" 4/15	g 600
8712 4 18	MTR.NON-WOVEN HOSE 3/8" 4/18	g 550
8712 4 22	MTR.NON-WOVEN HOSE 1/2" 4/22	g 450
8712 4 28	MTR.NON-WOVEN HOSE 3/4" 4/28	g 425
8712 4 35	MTR.NON-WOVEN HOSE 1" 4/35	g 350
8712 1 4 15	MTR.NON-WOV.HOSE GR. 1/4" 4/15	g 600
8712 1 4 18	MTR.NON-WOV.HOSE GR. 3/8" 4/18	g 550
8712 1 4 22	MTR.NON-WOV.HOSE GR. 1/2" 4/22	g 450
8712 1 4 28	MTR.NON-WOV.HOSE GR. 3/4" 4/28	g 425
8712 1 4 35	MTR.NON-WOV.HOSE GR. 1" 4/35	g 350

(inch" / insulation thickness x Ø pipe (outer) mm)

Technical Data

Outs. Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outs. Ø mm (FE)	Outs. Ø mm (PP)
15	-	8	13,5	-
18	15	10	17,2	16
22	20	15	21,3	20
28	25	20	26,9	25
35	32	25	33,7	32
15	-	8	13,5	-
18	15	10	17,2	16
22	20	15	21,3	20
28	25	20	26,9	25
35	32	25	33,7	32

Copper pipe (CU) / Steel pipe (FE) / Polypropylene tube (PP)

- Material: polyester non-woven, incl. PE protective film
- Temperature range: from -50°C to +120°C
- Fire behavior: B2, normally inflammable DIN 4102

Fleece Hose 10 Metres *Forlen*

- Hose made from PE-coated polyester fleece, highly flexible
- For insulating cold drinking water pipes conforming to DIN 1988 Part 2 for cold water pipes and areas with no ENEV requirements
- CFC-free
- Length supplied: 10 m
- **Art. No. 8712 ...:** white outer skin and grey inner fleece
- **Art. No. 8712 1 ...:** silver-grey outer skin and grey inner fleece



Article No.	Article Description	QTY
8712 4 15 10	MTR<10>NON-WOV.HOSE 1/4"4/15	10
8712 4 18 10	MTR<10>NON-WOV.HOSE 3/8"4/18	10
8712 4 22 10	MTR<10>NON-WOV.HOSE 1/2"4/22	10
8712 4 28 10	MTR<10>NON-WOV.HOSE 3/4"4/28	10
8712 4 35 10	MTR<10>NON-WOV.HOSE 1" 4/35	10
8712 1 4 15 10	MTR<10>N-WOV.HOS.GREY 1/4"4/15	10
8712 1 4 18 10	MTR<10>N-WOV.HOS.GREY 3/8"4/18	10
8712 1 4 22 10	MTR<10>N-WOV.HOS.GREY 1/2"4/22	10
8712 1 4 28 10	MTR<10>N-WOV.HOS.GREY 3/4"4/28	10
8712 1 4 35 10	MTR<10>N-WOV.HOS.GREY 1" 4/35	10

(Inch / insulation thickness x pipe Ø (outer) mm)

Technical Data

Exter. Ø mm (CU)	Nom. size DN (CU)	Nom. size DN (FE)	Nom. size DN (FE)	Exter. Ø mm (FE)
15	-	8	8	13.5
18	15	10	10	17.2
22	20	15	15	21.3
28	25	20	20	26.9
35	32	25	25	33.7
15	-	8	8	13.5
18	15	10	10	17.2
22	20	15	15	21.3
28	25	20	20	26.9
35	32	25	25	33.7

Copper pipe (CU) / steel pipe (FE) / polypropylene pipe (PP)

- Material: Polyester fleece, with PE protective film
- Temperature range: -50 °C to +120 °C
- Fire behaviour: B2 normal flammability DIN 4102

Non-Woven Hose for Sewage Water *Forlen*

- Hose made of PE-coated polyester non-woven, highly flexible
- For damping of solid-borne sound of sewage water pipes
- Avoids condensation water formation for HT, PE and SML sewage water pipes
- CFC-free
- Delivery length: 25 m or 10 m (art. no. ending with '10')



Art. No. 8712...:

- White skin and white non-woven at the inside

Art. No. 8712 1...:

- Silver-grey skin and grey non-woven at the inside

Article No.	Article Description	QTY
8712 4 50	MTR.NON-WOVEN HOSE 4/ID 50	g 200
8712 4 70	MTR.NON-WOVEN HOSE 4/ID 70	g 150
8712 4 90	MTR.NON-WOVEN HOSE 4/ID 90	g 100
8712 4 100	MTR.NON-WOVEN HOSE 4/ID 100	g 100
8712 1 4 50	MTR.NON-WOV.HOSE GR. 4/ID 50	g 200
8712 1 4 70	MTR.NON-WOV.HOSE GR. 4/ID 70	g 150
8712 1 4 90	MTR.NON-WOV.HOSE GR. 4/ID 90	g 100
8712 1 4 100	MTR.NON-WOV.HOSE GR. 4/ID 100	g 100

(insulation thickness x Ø pipe (outer) mm)

Technical Data				
Outs. Ø mm (SML)	Nom. size DN (SML)	Nom. size DN (HT)	Outs. Ø mm (HT) pipe	Outs. Ø mm (HT) bush.
58	50	50	50	53,5
78	70	70	75	78,8
-	-	90	90	110,0
110	100	100	100	115,2
58	50	50	50	53,5
78	70	70	75	78,8
-	-	90	90	110,0
110	100	100	100	115,2

Cast iron pipes (SML) DIN 19522 / Plastic mat. pipes (HT) DIN 19560

- Material: polyester non-woven, incl. PE protective film
- Temperature range: from -50 °C to +120 °C
- Fire behavior: B2, normally inflammable DIN 4102

Fleece Hose Waste Water *Forlen* 10 Metres

- Hose made from PE-coated polyester fleece, highly flexible
- For structure-borne sound insulation of waste water pipes
- Prevents formation of condensate in HT, PE and SML drain pipes
- CFC-free
- Length supplied: 10 m



Art. No. 8712 ...:

- White outer skin and white inner fleece

Art. No. 8712 1 ...:

- Silver grey outer skin and grey inner fleece

Article No.	Article Description	QTY
8712 4 50 10	MTR<10>NON-WOV.HOSE 4/DN 50	10
8712 4 70 10	MTR<10>NON-WOV.HOSE 4/DN 70	10
8712 4 90 10	MTR<10>NON-WOV.HOSE 4/DN 90	10
8712 4 100 10	MTR<10>NON-WOV.HOSE 4/DN 100	10
8712 1 4 50 10	MTR<10>NON-WOV.HOS.GREY 4/DN50	10
8712 1 4 70 10	MTR<10>NON-WOV.HOS.GREY 4/DN70	10
8712 1 4 90 10	MTR<10>NON-WOV.HOS.GREY 4/DN90	10
8712 1 4 100 10	MTR<10>NON-WOV.HO.GREY 4/DN100	10

(Inch / insulation thickness x pipe Ø (outer) mm)

Technical Data				
Ext. Ø mm (SML)	Nom. size DN (SML)	Nom. size DN (HT)	Ext. Ø mm (HT) pipe	Ext. Ø mm (HT) sleeve
58	50	50	50	53.5
78	70	70	75	78.8
-	-	90	90	110.0
110	100	100	100	115.2
58	50	50	50	53.5
78	70	70	75	78.8
-	-	90	90	110.0
110	100	100	100	115.2

Copper pipe (CU) / steel pipe (FE) / polypropylene pipe (PP)

- Material: Polyester fleece, with PE protective film
- Temperature range: -50 °C to +120 °C
- Fire behaviour: B2 normal flammability DIN 4102

Non-Woven Wire Wound Former *Forlen*

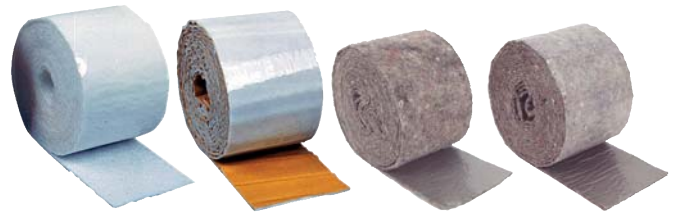
- To wrap junctions and fittings after the pipe assembly
- Material thickness: 2 mm

Item No 8712:

- White plastic coating

Item No 8712 1:

- Silver-grey plastic coating



8712 70 36 1 8712 70 36 2 8712 1 70 361 8712 1 70 362
 8712 100 36 2 8712 1 100 361 8712 1 100 362

Article No.	Article Description	QTY
8712 70 36 1	RE3.6N-WOV.WI.WOU.PLASTIC70	n 196
8712 70 36 2	RE3.6N-WOV.WI.WOU.PLST/S-AD.70	n 196
8712 100 36 2	RE3.6N-WOV.WI.WOU.PLST/S-AD100	n 140
8712 1 70 361	RE3.6N-WOV.WI.WOU.GREY.PLST70	n 196
8712 1 100 361	RE3.6N-WOV.WI.WOU.GREY PLST100	n 140
8712 1 70 362	RE3.6N-WOV.WI.WOU.GREY S-AD.70	n 196
8712 1 100 362	RE3.6N-WOV.WI.WOU.GREY S-AD100	n 140

(Width mm x length m / SK = self-adhesive)

Insulating Sleeve Quadra *Forlen*

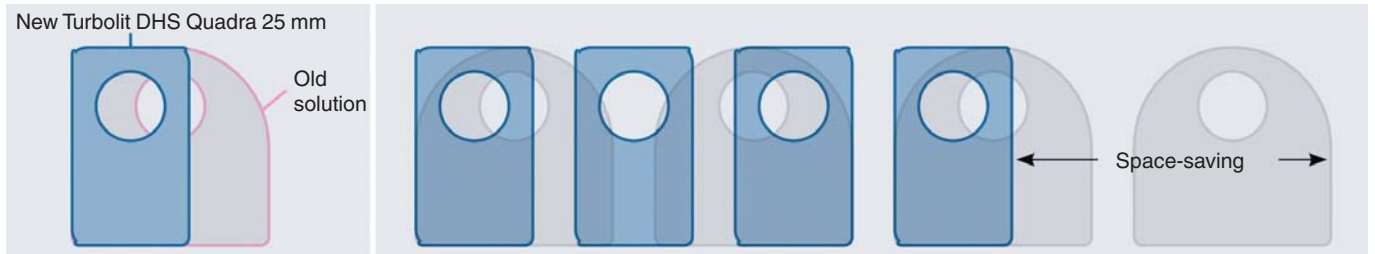
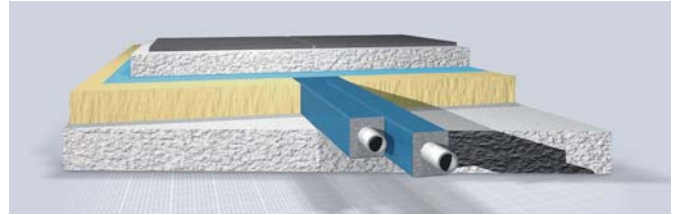
- Square insulating sleeve for floor laying
- The eccentric cross-section minimises the downwards energy losses and at the same time reduces the overall height of the floor structure
- The rectangular profile enables tightly packed assembly of the pipes and brings significant space savings
- Embossed film coating, hence high crush and tear resistance

Fields of application:

- For heating and hot water pipes conforming to EnEV
- For cold water pipes conforming to DIN 1988

Product benefits:

- Compact, space-saving design – cost-saving
- Footfall sound insulation guaranteed by test certificate
- Minimises the risk of crack formation in the screed



Article No.	Article Description	QTY
8713 4 9 15	MTR.INS.SL.QUADRA 1/4" 9/15	190
8713 4 9 18	MTR.INS.SL.QUADRA 3/8" 9/18	160
8713 4 9 22	MTR.INS.SL.QUADRA 1/2" 9/22	140
8713 4 9 28	MTR.INS.SL.QUADRA 3/4" 9/28	100
8713 4 25 15	MTR.INS.SL.QUAD100% 1/4" 25/15	130
8713 4 25 18	MTR.INS.SL.QUAD100% 3/8" 25/18	120
8713 4 25 22	MTR.INS.SL.QUAD100% 1/2" 25/22	100
8713 4 25 28	MTR.INS.SL.QUAD100% 3/4" 25/28	70

Technical Data

EnEV	Insulation thckn. in mm	Height in mm	Cu in mm	FE in inches	FE in mm
App. 5, Z. 7	9	33	15	1/4"	13.5
App. 5, Z. 7	9	36	18	3/8"	17.2
App. 5, Z. 7	9	40	22	1/2"	21.3
App. 5, Z. 7	9	46	28	3/4"	26.9
100 %	27	50	15	1/4"	13.5
100 %	26	52	18	3/8"	17.2
100 %	26	56	22	1/2"	21.3
100 %	25	64	28	3/4"	26.9

Copper pipe (CU) / steel pipe (FE)

- Material: closed cell polyethylene, CFC and silicone free
- Outer skin: co-extruded, moisture blocking outer skin
- Length supplied: 2 m hoses
- Usable temperature range: up to + 100 °C
- Thermal conductivity: 0.040 W (m × K) according to building authority approval Z-23.14-1739
- Fire behaviour: B2, normal flammability according to building authority approval Z-23.14-1739
- Footfall soundproofing: Sound reduction in accordance with test report P-BA 251-1/2006
- EnEV demonstration of equivalence: verified by test report P7-177 / 2006

Insulating Sleeve IsoSlim FÖRCH*****

- For use in floor construction in accordance with energy saving regulations EnEV 2014
- With integrated soundproofing
- Low profile height
- The floor structure height is reduced by this form
- With a constant internal room height, all the interior and exterior brickwork can be made lower; this reduces building costs
- The special shape enables the smallest possible interruption of the load-bearing levelling and/or footfall sound insulating layer
- Structure-borne sound contacts (e.g., building element irregularities or small stones pushing through) are reliably prevented by the fibre pad layer

The resistance to initial tear and propagation of tears is increased by up to a factor of ten compared with pure foam materials.

- Thermally and acoustically tested
- Thermal conductivity 40 °C = 0.035 W/(m × K)
- Water vapour diffusion resistance factor $\mu \geq 5200$
- Building material class B2 according to DIN 4102, EL according to DIN EN 13501-1
- CE marking in accordance with EN 14313
- Dynamic stiffness: 19.7 MN/m²
- Length supplied: 2 m lengths



8713 5 10 15 – 8713 5 15 42



8713 5 20 15 – 8713 5 30 42

Article No.	Article Description	QTY
8713 5 10 15	MTR.INS.S.ISOSLIM 1/4"10/15 5*	90
8713 5 10 18	MTR.INS.S.ISOSLIM 3/8"10/18 5*	90
8713 5 10 22	MTR.INS.S.ISOSLIM 1/2"10/22 5*	90
8713 5 10 28	MTR.INS.S.ISOSLIM 3/4"10/28 5*	90
8713 5 15 35	MTR.INS.S.ISOSLIM 1" 15/35 5*	50
8713 5 15 42	MTR.INS.S.ISOSLIM 1 1/4" 15/42	40
8713 5 20 15	MTR.INS.S.ISOSLIM 1/4"20/15 5*	90
8713 5 20 18	MTR.INS.S.ISOSLIM 3/8"20/18 5*	90
8713 5 20 22	MTR.INS.S.ISOSLIM 1/2"20/22 5*	70
8713 5 20 28	MTR.INS.S.ISOSLIM 3/4"20/28 5*	60
8713 5 30 35	MTR.INS.S.ISOSLIM 1" 30/35 5*	40
8713 5 30 42	MTR.INS.S.ISOSLIM 1 1/4" 30/42	30

Technical Data				
EnEV	Insulation thckn. in mm	CU pipe in mm	FE pipe in inches	Profile height in mm
50 %	10	15	1/4"	29
50 %	10	18	3/8"	32
50 %	10	22	1/2"	36
50 %	10	28	3/4"	42
50 %	15	35	1"	58
50 %	15	42	1 1/4"	65
100 %	20	15	1/4"	39
100 %	20	18	3/8"	42
100 %	20	22	1/2"	46
100 %	20	28	3/4"	52
100 %	30	35	1"	73
100 %	30	42	1 1/4"	80

System Fastener FÖRCH IsoSlim Sound Decoupled

- Sound decoupling system fastening for IsoSlim insulating sleeve FÖRCH 5*
- Made of stainless steel
- With fibre pad layer and tear-resistant mesh weave overlay



Article No.	Article Description	QTY
8713 6 9 15	SYSTEM FAST.ISOSLIM 50% 1/4"	50
8713 6 9 18	SYSTEM FAST.ISOSLIM 50% 3/8"	50
8713 6 9 22	SYSTEM FAST.ISOSLIM 50% 1/2"	50
8713 6 9 28	SYSTEM FAST.ISOSLIM 50% 3/4"	50
8713 6 25 15	SYSTEM FAST.ISOSLIM 100% 1/4"	50
8713 6 25 18	SYSTEM FAST.ISOSLIM 100% 3/8"	50
8713 6 25 22	SYSTEM FAST.ISOSLIM 100% 1/2"	50
8713 6 25 28	SYSTEM FAST.ISOSLIM 100% 3/4"	50

Technical Data	
Art. No. System fastener	Art. No. IsoSlim
8713 6 9 15	8713 5 10 15
8713 6 9 18	8713 5 10 18
8713 6 9 22	8713 5 10 22
8713 6 9 28	8713 5 10 28
8713 6 25 15	8713 5 20 15
8713 6 25 18	8713 5 20 18
8713 6 25 22	8713 5 20 22
8713 6 25 28	8713 5 20 18

Protective Hose „S“ for Sewage Water Pipes **Forlen**

- For damping of solid-borne sound of sewage water pipes – sound pressure level 23 dB (A)
- Avoids condensation water formation on HT, PE and SML sewage water pipes
- Hose made of highly flexible, closed-cell soft polyethylene with hard-wearing, moisture-barrier skin – tear-resistant and non-crushing
- Non-ageing and recyclable
- With interior sliding film – rapid assembly
- Color: red
- CFC-free
- Delivery length: 10 m



Article No.	Article Description	QTY
8714 9 50	MTR.PROTECT. HOSE 'S' 9/ID 50	50
8714 9 70	MTR.PROTECT. HOSE 'S' 9/ID 70	50
8714 9 90	MTR.PROTECT. HOSE 'S' 9/ID 90	50
8714 9 100	MTR.PROTECT. HOSE 'S' 9/ID100	50
8714 9 125	MTR.PROTECT. HOSE 'S' 9/ID125	40

(insulation thickness x nominal size ID)

Technical Data				
Nom. size ID (SML)	Outs. Ø mm (SML)	Nom. size ID (HT)	Outs. Ø mm (HT) pipe	Outs. Ø mm (HT) bush.
50	58	50	50	53,5
70	78	70	75	78,8
-	-	90	90	110,0
100	110	100	100	115,2
125	135	125	125	131,0

Cast iron pipes (SML) DIN 19522 / Plastic mat. pipes (HT) DIN 19560

- Material: closed-cell soft polyethylene foam with moisture-barrier, hard-wearing skin
- Thermal conductivity: R= 0.040 W/(m.K) according to DIN 52613
- Operating temperature range: from -45 °C to +105 °C
- Fire behavior: B2, normally inflammable according to DIN 4102

Protective Hose for Sewage Water Pipes **Forlen**

- For damping of solid-borne sound of sewage water pipes – sound pressure level 23dB (A)
- Avoids condensation water formation on HT, PE and SML sewage water pipes
- Hose made of highly flexible, closed-cell soft polyethylene with hard-wearing, moisture-barrier skin – tear-resistant and non-crushing
- Non-ageing and recyclable
- With interior sliding film – rapid assembly
- Color: red
- CFC-free
- Delivery length: 10 m



Article No.	Article Description	QTY
8714 4 50	MTR.PROTECT. HOSE 4/ID 50	z 100
8714 4 70	MTR.PROTECT. HOSE 4/ID 70	z 100
8714 4 90	MTR.PROTECT. HOSE 4/ID 90	z 100
8714 4 100	MTR.PROTECT. HOSE 4/ID 100	z 100
8714 4 125	MTR.PROTECT. HOSE 4/ID 125	50

(insulation thickness x nominal size ID)

Technical Data				
Nom. size ID (SML)	Outs. Ø mm (SML)	Nom. size ID (HT)	Outs. Ø mm (HT) pipe	Outs. Ø mm (HT) bush.
50	58	50	50	53,5
70	78	70	75	78,8
-	-	90	90	110,0
100	110	100	100	115,2
125	135	125	125	131,0

Cast iron pipes (SML) DIN 19522 / Plastic material pipes (HT) DIN 19560

- Material: closed-cell soft polyethylene foam with moisture-barrier, hard-wearing skin
- Thermal conductivity: R= 0.040 W/(m.K) according to DIN 52613
- Operating temperature range: from -45°C to +105°C
- Fire behavior: B2, normally inflammable according to DIN 4102

Protective Hose for Cold Water Pipes *Forlen*

- For cold water pipes according to DIN 1988 part 2
- Hose made of high-flexible, closed-cell soft polyethylene with hard-wearing, moisture-barrier skin – tear-resistant and non-crushing
- To insulate drinking water pipes of moderate-energy according to TRWI (drinking water supply systems) (DIN 1988) for the 4 mm insulation range as well as to insulate heating pipes without requirements according to ENEC (German regulation for energy saving in buildings and building systems)
- Also applicable for pipes made of chrome nickel steel according to DIN 53110
- Non-ageing and recylcable
- With interior sliding film – rapid assembly
- Color: red
- CFC-free
- Delivery length: 10 m



Article No.	Article Description	QTY
8714 4 15	MTR.PROTECT. HOSE 1/4" 4/15	z 200
8714 4 18	MTR.PROTECT. HOSE 3/8" 4/18	z 200
8714 4 22	MTR.PROTECT. HOSE 1/2" 4/22	z 200
8714 4 28	MTR.PROTECT. HOSE 3/4" 4/28	z 200
8714 4 35	MTR.PROTECT. HOSE 1" 4/35	z 200
8714 4 42	MTR.PROTECT. HOSE 1 1/4" 4/42	z 200

(insulation thickness x Ø pipe (outer) mm)

Technical Data

Outer Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outer Ø mm (FE)	Outer Ø mm (PP)
12/15	-	8	13,5	-
18	15	10	17,2	16
22	20	15	21,3	20
28	25	20	26,9	25
35	32	25	33,7	32
42	40	32	42,4	40

Copper pipe (CU) / Steel pipe (FE) / Polypropylene pipe (PP)

- Material: closed-cell soft polyethylene foam with moisture-barrier, hard-wearing skin
- Thermal conductivity: R = 0.040 W/(m.K) according to DIN 52613
- Operating temperature range: from -45°C to +105°C
- Fire behavior: B2, normally inflammable DIN 4102

Insulating Hose *Forlen*

- According to DIN 1988 part 2 for cold water pipes
- Round extruded, flexible pipe insulation made of closed-cell soft polyethylene foam
- Coextruded, hard-wearing, moisture-barrier skin – non-crushing and tear-resistant
- Universal pipe insulation for sanitary, heating, and air conditioning
- Also appropriate for pipes made of chrome nickel steel according to DIN 53110
- Non-ageing and recyclable
- CFC-free
- Color: red
- Delivery length: 2 m



Article No.	Article Description	QTY
8715 9 15	MTR.INS.HOSE1/4" 9/15	380
8715 9 18	MTR.INS.HOSE3/8" 9/18	330
8715 9 22	MTR.INS.HOSE1/2" 9/22	250
8715 9 28	MTR.INS.HOSE3/4" 9/28	190
8715 9 35	MTR.INS.HOSE1" 9/35	150
8715 9 42	MTR.INS.HOSE1 1/4" 9/42	110
8715 13 15	MTR.INS.HOSE 50 1/4" 13/15	256
8715 13 18	MTR.INS.HOSE 50 3/8" 13/18	220
8715 13 22	MTR.INS.HOSE 50 1/2" 13/22	180
8715 13 28	MTR.INS.HOSE 50 3/4" 13/28	140
8715 13 35	MTR.INS.HOSE1" 13/35	120
8715 20 28	MTR.INS.HOSE 50 3/4" 20/28	96
8715 20 35	MTR.INS.HOSE 50 1" 20/35	70
8715 20 42	MTR.INS.HOSE50 1 1/4"20/42	60
8715 25 15	MTR.INS.HOSE100 1/4" 27/15	90
8715 25 18	MTR.INS.HOSE100 3/8" 26/18	90
8715 25 22	MTR.INS.HOSE100 1/2" 26/22	70
8715 25 28	MTR.INS.HOSE100 3/4" 25/28	66
8715 25 35	MTR.INS.HOSE1" 25/35	56
8715 25 42	MTR.INS.HOSE50 1 1/4"25/42	48

(insulation thickness x Ø pipe (outer) mm)

Technical Data					
Outs. Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outs. Ø mm (FE)	Outs. Ø mm (PP)	Acc. to EnEV %
15	-	8	13,5	-	-
18	15	10	17,2	16	-
22	20	15	21,3	20	-
28	25	20	26,9	25	-
35	32	25	33,7	32	-
42	40	32	42,4	40	-
50%	15	-	8	13,5	50%
50%	18	15	10	17,2	50%
50%	22	20	15	21,3	50%
50% (FE)	28	25	20	26,9	50% (Fe)
35%	35	32	25	33,7	50%
50% (CU)	28	25	20	26,9	50% (Cu)
50%	35	32	25	33,7	50%
50% (FE)	42	40	32	42,4	50% (Fe)
100%	15	-	8	13,5	100%
100%	18	15	10	17,2	100%
100%	22	20	15	21,3	100%
100% (FE)	28	25	20	26,9	100% (Fe)
50%	35	32	25	33,7	50%
50% (CU)	42	40	32	42,4	50% (Cu)

Copper pipe (CU) / Steel pipe (FE) / Polypropylene pipe (PP)

- Material: excentrically extruded soft polyethylene foam with coextruded moisture-barrier, tear-resistant and non-crushing skin
- Thermal conductivity: R = 0.040 W/(m.K) according to DIN 52613
- Operating temperature range: from -45°C to +105°C
- Fire behavior: B1, hardly inflammable according to DIN 4102
- Damping of solid-borne sound up to 23 dB (A) reduction according to DIN 52218

Adhesive Tapes PVC Red

- To glue insulating sleeves, protective hose or insulation hose
- Color: red
- Thickness 0.13 mm

Article No.	Article Description	QTY
8716 30	REEL(10)PVC ADH. TAPE RED 30MM	e 5



Winding Tapes PE Red

- Made of closed-cell PE with hard-wearing, moisture-barrier skin – non-crushing and tear-resistant
- Pipe protection in case of subsequent insulation at hardly accessible places and problem areas
- Color: red

Article No.	Article Description	QTY
8716 70 36	REEL(3.6)PE WIND. TAPE RED 70	e 25
8716 100 36	REEL(3.6)PE WIND. TAPE RED 100	e 25
8716 70 36 1	R.(3.6)PE WIND.T.RED SA 70	e 25
8716 100 36 1	R.(3.6)PE WI. T.RED SA 100	e 25

(SA = self-adhesive)



Lamella Ending Tapes

- Reel length 10 m

Article No.	Article Description	QTY
8721 20	REEL(10M)LAM.END.TAPE20MM	5
8721 25	REEL(10M)LAM.END.TAPE25MM	5
8721 30	REEL(10M)LAM.END.TAPE30MM	5
8721 40	REEL(10M)LAM.END.TAPE40MM	5
8721 50	REEL(10M)LAM.END.TAPE50MM	5
8721 1 20	REEL(10M)LAM.END.TAPE SIL.20MM	5
8721 1 25	REEL(10M)LAM.END.TAPE SIL.25MM	5
8721 1 30	REEL(10M)LAM.END.TAPE SIL.30MM	5
8721 1 40	REEL(10M)LAM.END.TAPE SIL.40MM	5

(Width = suitable for insulation thickness)



Adhesive Tapes PVC Clear Grey

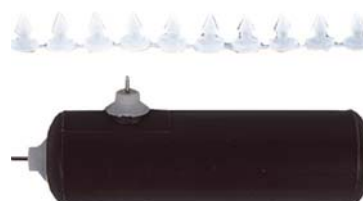
- Color: light grey

Article No.	Article Description	QTY
8721 25 25	R.(25M)PVC ADH.TAPE25MM CL.GR.	e 36
8721 30 10	R.(10M)PVC ADH.TAPE30MM CL.GR.	e 5
8721 30 25	R.(25M)PVC ADH.TAPE30MM CL.GR.	e 12
8721 50 10	R.(10M)PVC ADH.TAPE50MM CL.GR.	e 36



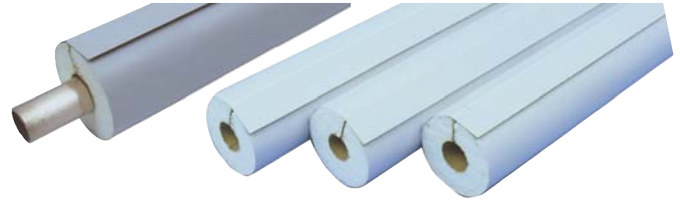
Insulation Accessories

Article No.	Article Description	QTY
8721 1	PVC RIVETS	1000
8721 2 2	RIVET PUNCHER 2FOLD DRIFT	1



Pipe Insulation PUR 035 *Forlen*

- Complies 100% with ENEC (German regulation for energy saving in buildings and building systems)
- Round foamed pipe shells made of polyurethane foam with PVC envelope and self-adhesive closure
- Perfect in the sanitary, heating and air condition technology in the visual range
- Also appropriate for pipes made of chrome nickel steel according to DIN 53110
- CFC-free
- Color: clear grey
- Delivery length: 1 m



Article No.	Article Description	QTY
8718 20 15	MTR.THERMFLEX PUR 100 20/15	70
8718 20 18	MTR.THERMFLEX PUR 100 20/18	70
8718 20 22	MTR.THERMFLEX PUR 100 20/22	60
8718 30 28	MTR.THERMFLEX PUR 100 30/28	28
8718 30 35	MTR.THERMFLEX PUR 100 30/35	24
8718 40 42	MTR.THERMFLEX PUR 100 40/42	15
8718 40 48	MTR.THERMFLEX PUR 100 40/48	12
8718 50 60	MTR.THERMFLEX PUR 100 50/60	8

(insulation thickness x Ø pipe (outer) mm)

Technical Data				
Outs. Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outs. Ø mm (FE)	Outs. Ø mm (PP)
15	-	8	13,5	-
18	15	10	17,2	16
22	20	15	21,3	20
28	25	20	26,9	25
35	32	25	33,7	32
42	40	32	42,4	40
-	-	40	48,3	-
-	-	50	60,3	63

Copper pipe (CU) / Steel pipe (FE) / Polypropylene pipe (PP)

- Thermal conductivity: R = 0.035W(m.K) according to DIN 52613
- Operating temperature range: from -20°C to +115°C
- Fire behavior: B2, normally inflammable according to DIN 4102

Pipe Insulation PUR 040 *Forlen*

- Complies 50% with ENEC (German regulation for energy saving in buildings and building systems)
- Round foamed pipe shells made of polyurethane foam with PVC envelope and self-adhesive closure
- Perfect in the sanitary, heating and air condition technology in the visual range
- Also appropriate for pipes made of chrome nickel steel according to DIN 53110
- CFC-free
- Color: clear grey
- Delivery length: 1 m



Article No.	Article Description	QTY
8719 20 15	MTR.THERMFLEX PUR 50 20/15	70
8719 20 18	MTR.THERMFLEX PUR 50 20/18	70
8719 20 22	MTR.THERMFLEX PUR 50 20/22	60
8719 20 28	MTR.THERMFLEX PUR 50 20/28	48
8719 20 35	MTR.THERMFLEX PUR 50 20/35	40
8719 25 48	MTR.THERMFLEX PUR 50 25/48	20
8719 30 60	MTR.THERMFLEX PUR 50 30/60	15

(insulation thickness x Ø pipe (outer) mm)

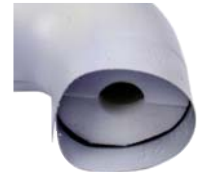
Technical Data				
Outs. Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outs. Ø mm (FE)	Outs. Ø mm (PP)
15	-	8	13.5	-
18	15	10	17.2	16
22	20	15	21.3	20
-	-	-	-	-
35	32	25	33.7	32
-	-	40	48.3	-
-	-	50	60.3	63

Copper pipe (CU) / Steel pipe (FE) / Polypropylene pipe (PP)

- Thermal conductivity: R = 0.040W(m.K) according to DIN 52613
- Operating temperature range: from -20°C to +115°C
- Fire behavior: B2, normally inflammable according to DIN 4102

Pipe Insulation PUR Universal Arc *Forlen*

- PVC arc with insulation core made of soft MF-resin foam
- Appropriate for S-welding arc, bend for welding according to DIN 2605
- Universally applicable for Thermflex-Pur 035 and Thermflex-Pur 040



Article No.	Article Description	QTY
8720 20 15	THERMFLEX PUR ARC 20/15	90
8720 20 18	THERMFLEX PUR ARC 20/18	30
8720 20 22	THERMFLEX PUR ARC 20/22	30
8720 20 28	THERMFLEX PUR ARC 20/28	30
8720 30 28	THERMFLEX PUR ARC 30/28	40
8720 20 35	THERMFLEX PUR ARC 20/35	30
8720 30 35	THERMFLEX PUR ARC 30/35	20
8720 40 42	THERMFLEX PUR ARC 40/42	10
8720 25 48	THERMFLEX PUR ARC 25/48	20
8720 40 48	THERMFLEX PUR ARC 40/48	10
8720 30 60	THERMFLEX PUR ARC 30/60	10

(insulation thickness x Ø pipe (outer) mm)

Technical Data				
Outs. Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outs. Ø mm (FE)	Outs. Ø mm (PP)
15	-	8	13.5	-
18	15	10	17.2	16
20	22	15	21.3	20
28	25	20	26.9	25
28	25	20	26.9	25
35	32	25	33.7	32
35	32	25	33.7	32
42	40	32	42.4	40
-	-	40	48.3	-
-	-	40	48.3	-
-	-	50	60.3	63

Copper pipe (CU) / Steel pipe (FE) / Polypropylene pipe (PP)

Cold Rubber, Insulation Tube *Forlen*

Fire tested according to construction test certificate P-3553/829/11-MPA BS

- Highly flexible, closed-cell insulation material made of synthetic rubber
- Increasing insulating layer thickness
- High steam diffusion resistance according to DIN EN ISO 13469
- Thermal conductivity of 0.036 (W/m*K) at 0°
- Complies with DIN 1988 part 7 (corrosion prevention)
- CFC and HCFC free, Formaldehyde and Cadmium
- Fire rating: hardly flammable – self-extinguishing, does not propagate fire and produces no burning droplets in a fire situation
- Delivery: 2 m tubes

Application areas:

- For condensation prevention and energy loss limitation where pipes and ducts, chillers and air conditioning equipment are required



Article No.	Article Description	QTY
8730 9 06	MTR.COLD RUBBER 9/06	466
8730 9 08	MTR.COLD RUBBER 9/08	406
8730 9 10	MTR.COLD RUBBER 9/10	284
8730 9 12	MTR.COLD RUBBER 9/12	234
8730 9 15	MTR.COLD RUBBER 1/4" 9/15	192
8730 9 18	MTR.COLD RUBBER 3/8" 9/18	168
8730 9 22	MTR.COLD RUBBER 1/2" 9/22	132
8730 9 28	MTR.COLD RUBBER 3/4" 9/28	96
8730 9 35	MTR.COLD RUBBER 1" 9/35	70
8730 9 42	MTR.COLD RUBBER 1 1/4" 9/42	60
8730 13 10	MTR.COLD RUBBER 13/10	192
8730 13 12	MTR.COLD RUBBER 13/12	168
8730 13 15	MTR.COLD RUBBER 1/4" 13/15	144
8730 13 18	MTR.COLD RUBBER 3/8" 13/18	120
8730 13 22	MTR.COLD RUBBER FOAM1/2" 13/22	96
8730 13 28	MTR.COLD RUBBER FOAM3/4" 13/28	80
8730 13 35	MTR.COLD RUBBER 1" 13/35	60
8730 13 42	MTR.COLD RUBBER 1 1/4" 13/42	40
8730 13 48	MTR.COLD RUBBER 1 1/2" 13/48	40
8730 13 54	MTR.COLD RUBBER 13/54	32
8730 19 18	MTR.COLD RUBBER 3/8" 19/18	72
8730 19 22	MTR.COLD RUBBER 1/2" 19/22	64
8730 19 28	MTR.COLD RUBBER 3/4" 19/28	50
8730 19 35	MTR.COLD RUBBER 1" 19/35	40
8730 19 42	MTR.COLD RUBBER 1 1/4" 19/42	32
8730 19 48	MTR.COLD RUBBER 1 1/2" 19/48	24
8730 19 54	MTR.COLD RUBBER 19/54	24
8730 19 60	MTR.COLD RUBBER 2" 19/60	20
8730 19 64	MTR.COLD RUBBER 19/64	18
8730 19 76	MTR.COLD RUBBER 19/76	16
8730 19 89	MTR.COLD RUBBER 19/89	12
8730 19 108	MTR.COLD RUBBER 19/108	10
8730 19 114	MTR.COLD RUBBER 4" 19/114	18
8730 25 18	MTR.COLD RUBBER 3/8" 25/18	50
8730 25 22	MTR.COLD RUBBER 1/2" 25/22	42
8730 25 28	MTR.COLD RUBBER 3/4" 25/28	40
8730 25 35	MTR.COLD RUBBER 1" 25/35	24
8730 25 42	MTR.COLD RUBBER 1 1/4" 25/42	22
8730 25 48	MTR.COLD RUBBER 1 1/2" 25/48	18
8730 25 54	MTR.COLD RUBBER 25/54	16
8730 32 28	MTR.COLD RUBBER 3/4" 32/28	24
8730 32 35	MTR.COLD RUBBER 1" 32/35	22
8730 32 42	MTR.COLD RUBBER 1 1/4" 32/42	16
8730 32 48	MTR.COLD RUBBER 1 1/2" 32/48	12
8730 32 54	MTR.COLD RUBBER 32/54	12

Technical Data					
Insulation thckn. mm	Outer Ø mm (CU)	Nom.width DN (CU)	Inch (FE)	Outer Ø mm (FE)	Nom.width DN (FE)
9.5	6.0	4	-	-	-
9.5	8.0	6	-	-	-
9.5	10.0	8	1/8	10.2	6
9.5	12.0	10	-	-	-
9.5	15.0	-	1/4	13.5	8
10.0	18.0	15	3/8	17.2	10
10.0	22.0	20	1/2	21.3	15
10.5	28.0	25	3/4	26.9	20
10.5	35.0	32	1	33.7	25
11.0	42.0	40	1 1/4	42.4	32
13.0	10.0	8	1/8	10.2	6
13.0	12.0	10	-	-	-
13.0	15.0	-	1/4	13.5	8
13.0	18.0	15	3/8	17.2	10
13.0	22.0	20	1/2	21.3	15
13.5	28.0	25	3/4	26.9	20
13.5	35.0	32	1	33.7	25
14.0	42.0	40	1 1/4	42.4	32
14.0	-	-	1 1/2	48.3	40
14.0	54.0	50	-	54.0	-
19.5	18.0	15	3/8	17.2	10
19.5	22.0	20	1/2	21.3	15
20.0	28.0	25	3/4	26.9	20
20.0	35.0	32	1	33.7	25
21.5	42.0	40	1 1/4	42.4	32
21.5	-	-	1 1/2	48.3	40
21.5	54.0	50	-	54.0	-
22.0	-	-	2	60.3	50
22.0	64.0	-	-	63.5	-
22.0	76.1	65	2 1/2	76.1	65
22.0	88.9	80	3	88.9	80
22.5	108.0	100	-	108.0	-
25.0	114.0	100	4	114.3	100
25.0	18.0	15	3/8	17.2	10
25.0	22.0	20	1/2	21.3	15
25.0	28.0	25	3/4	26.9	20
27.0	35.0	32	1	33.7	25
27.0	42.0	40	1 1/4	42.4	32
27.5	-	-	1 1/2	48.3	40
28.5	54.0	50	-	54.0	-
33.5	28.0	25	3/4	26.9	20
35.0	35.0	32	1	33.7	25
36.5	42.0	40	1 1/4	42.4	32
37.5	-	-	1 1/2	48.3	40
38.0	54.0	50	-	54.0	-

Copper pipe (CU) / Steel pipe (FE)

- Material: Foam based on synthetic rubber
- Application range (temperature):
 - Max. medium temperature: +105°C
 - Min. medium temperature: -40°C (-200°C)
- Thermal conductivity WLF DIN EN ISO 8497:
 - Medium temperature °C: -30 / -20 / 0 / +10 / +20 / +40 / +70
 - Thermal conductivity W/(m·K): 0.033 / 0.034 / 0.036 / 0.037 / 0.038 / 0.040 / 0.043
- Water vapour permeability according to DIN EN 13469: ≥ 8.000 μ
- Fire rating: B_L - s3, d0, highly flame retardant

Cold Rubber, Endless Tube *Forlen*

- Highly flexible, closed-cell insulation material made of synthetic base rubber
- High steam diffusion resistance according to DIN EN ISO 13469
- Low thermal conductivity of 0.036 (W/m*K) at 0°
- Complies with DIN 1988 part 7 (corrosion prevention)
- CFC and HCDF-free, Formaldehyde and Cadmium
- Fire rating: hardly flammable – self-extinguishing, does not propagate fire and produces no burning droplets in a fire situation
- Delivery: Endless tube in dispenser box

Advantages:

- No waste
- Fewer butt seams, saves adhesive
- Saves space during transport and storage due to carton sizes
- Saves time during mounting

Application areas:

- For condensation prevention and energy loss limitation where pipes and ducts, chillers and air conditioning equipment are required



Article No.	Article Description	QTY
8730 5 9 06	RO(40M)ENDL.COLD RUBBER 9X06	1
8730 5 9 08	RO(37M)ENDL.COLD RUBBER 9X08	1
8730 5 9 10	RO(34M)ENDL.COLD RUBBER 9X10	1
8730 5 9 12	RO(31M)ENDL.COLD RUBBER 9X12	1
8730 5 9 15	RO(27M)ENDL.COLD RUBBER 9X15	1
8730 5 9 18	RO(23M)ENDL.COLD RUBBER 9X18	1
8730 5 9 22	RO(19M)ENDL.COLD RUBBER 9X22	1
8730 5 9 28	RO(14M)ENDL.COLD RUBBER 9X28	1
8730 5 13 06	RO(26M)ENDL.COLD RUBBER 13X06	1
8730 5 13 08	RO(26M)ENDL.COLD RUBBER 13X08	1
8730 5 13 10	RO(23M)ENDL.COLD RUBBER 13X10	1
8730 5 13 12	RO(18M)ENDL.COLD RUBBER 13X12	1
8730 5 13 15	RO(17M)ENDL.COLD RUBBER 13X15	1
8730 5 13 18	RO(15M)ENDL.COLD RUBBER 13X18	1
8730 5 13 22	RO(14M)ENDL.COLD RUBBER 13X22	1
8730 5 13 28	RO(10M)ENDL.COLD RUBBER 13X28	1

Technical Data

Ins. thic kn. mm	Outer Ø mm (CU)	Nom. width DN (CU)	Inch (FE)	Outer Ø mm (FE)	Nom. width DN (FE)
9.0	6	4	-	-	-
9.0	8	6	-	-	-
9.0	10	8	1/8"	10.2	6
9.5	12	10	-	-	-
9.5	15	-	1/4"	13.5	8
10.0	18	15	3/8"	17.2	10
10.0	22	20	1/2"	21.3	15
10.5	28	25	3/4"	26.9	20
13.0	6	4	-	-	-
13.0	8	6	-	-	-
13.0	10	8	1/8"	10.2	6
13.0	12	10	-	-	-
13.0	15	-	1/4"	13.5	8
13.0	18	15	3/8"	17.2	10
13.0	22	20	1/2"	21.3	15
13.5	28	25	3/4"	26.9	20

Copper pipe (CU) / steel pipe (FE)

- Material: Foam based on synthetic rubber
- Application range (temperature):
 - Max. medium temperature: +105°C
 - Min. medium temperature: -40°C (-200°C)
- Thermal conductivity WLF DIN EN ISO 8497:
 - Medium temperature °C: -30 / -20 / 0 / +10 / +20 / +40 / +70
 - Thermal conductivity W/(m·K): 0.033 / 0.034 / 0.036 / 0.037 / 0.038 / 0.040 / 0.043
- Water vapour permeability according to DIN EN 13469: ≥ 8.000 µ
- Fire rating: B_L - s3, d0, highly flame retardant

Cold Rubber - Endless Sheets *Forlen*

- Highly flexible, closed-cell insulation material made of synthetic rubber
- Increasing insulation thickness
- High steam diffusion resistance according to DIN EN ISO 13469
- Low thermal conductivity of 0.036 (W/m*K) at 0°
- Complies with DIN 1988 part 7 (corrosion prevention)
- CFC and HCFC free, Formaldehyde and Cadmium
- Fire rating: hardly flammable - self-extinguishing, does not propagate fire and produces no burning droplets in a fire situation
- Delivery: Endless sheets with 1m width, Art. No. 8730 3 ... self-adhesive

Application areas:

- For condensation prevention and energy loss limitation where pipes and ducts, chillers and air conditioning equipment are required



8730 2 ...



8730 3 ...

Article No.	Article Description	QTY
8730 2 06	RO(30M)C-RUBB.ENDL.SHEET 6MM	1
8730 2 09	RO(20M)C-RUBB.ENDL.SHEET 9MM	1
8730 2 13	RO(14M)C-RUBB.ENDL.SHEET 13MM	1
8730 2 19	RO(10M)C-RUBB.ENDL.SHEET 19MM	1
8730 3 06	RO(30M)C-RUB.ENDL.SHEET SA 6MM	1
8730 3 09	RO(20M)C-RUB.ENDL.SHEET SA 9MM	1
8730 3 13	RO(14M)C-RUB.ENDL.SHEET SA13MM	1
8730 3 19	RO(10M)C-RUB.ENDL.SHEET SA19MM	1
8730 3 25	RO(8M)C-RUB.ENDL.SHEET SA25MM	1
8730 3 32	RO(6M)C-RUB.ENDL.SHEET SA32MM	1

Technical Data

Ins. thckn. in mm	Width in m	Length in m
6.0	1	30
10.0	1	20
13.0	1	14
19.0	1	10
6.0	1	30
10.0	1	20
13.0	1	14
19.0	1	10
25.0	1	11
32.0	1	12

- Material: Foam based on synthetic rubber
- Application range (temperature):
 - Max. medium temperature: +85°C
 - Min. medium temperature: -40°C (-200°C)
- Thermal conductivity WLF DIN EN 8497:
 - Medium temperature °C: -30 / -20 / 0 / +10 / +20 / +40 / +70
 - Thermal conductivity W/(m·K): 0,033 / 0,034 / 0,036 / 0,037 / 0,038 / 0,040 / 0,043
- Water vapour permeability according to DIN EN 13469: ≥ 8.000 μ
- Fire rating: B - s3, d0, highly flame retardant

Wrapping Tape for Cold Rubber *Forlen*

- Self-adhesive
- Length: 15 m
- Width: 50 mm
- Material thickness: 3 mm



Article No.	Article Description	QTY
8730 9 50	RO(15M)WR.TAPE SA 50MM C-RUBB.	e 12

Necessary Thickness for Condensation Prevention:

Even Surfaces / Sheet Material

		Insulation thickness in mm acc. to outer temperature and relative humidity																			
		+20 °C					+24 °C					+28 °C					+35 °C				
		60 %	70 %	80 %	85 %	90 %	60 %	70 %	80 %	85 %	90 %	60 %	70 %	80 %	85 %	90 %	60 %	70 %	80 %	85 %	90 %
Medium temperature	+15 °C	-	-	2	8	9	-	2	6	10	19	2	5	11	17	28	6	10	18	26	43
	+10 °C	1	4	8	16	21	3	6	13	19	30	5	9	17	25	40	8	13	24	34	54
	+5 °C	4	8	14	23	34	6	10	18	26	42	8	13	23	34	53	11	17	29	42	66
	0 °C	7	11	20	29	47	9	14	24	34	54	10	16	28	41	64	13	20	35	49	78
	-5 °C	9	15	26	38	60	11	18	30	42	66	13	20	34	49	75	15	24	40	56	88
	-10 °C	12	19	32	45	72	14	21	35	50	77	15	23	39	57	87	18	27	45	64	100
	-15 °C	15	22	37	53	83	16	25	41	58	91	18	27	44	64	98	20	30	50	71	110
	-20 °C	17	26	43	61	95	19	28	46	65	99	20	30	50	71	110	22	34	56	78	121
	-30 °C	22	33	54	76	119	24	35	58	80	123	25	37	60	87	132	27	40	65	91	140

Pipe / Hose Material

		Insulation thickness in mm acc. to outer temperature and relative humidity																			
		+20 °C					+24 °C					+28 °C					+35 °C				
		60 %	70 %	80 %	85 %	90 %	60 %	70 %	80 %	85 %	90 %	60 %	70 %	80 %	85 %	90 %	60 %	70 %	80 %	85 %	90 %
Medium temperature	+15 °C	-	-	9-12	9-12	9-12	9-12	9-12	9-12	9-12	19-26	9-12	9-12	9-12	13-16	19-26	9-12	9-12	19-26	19-26	32-45
	+10 °C	9-12	9-12	9-12	9-12	19-25	9-12	9-12	9-12	19-26	32-45	9-12	9-12	13-16	19-26	32-45	9-12	13-16	19-26	32-45	32-45
	+5 °C	9-12	9-12	13-16	19-26	32-45	9-12	9-12	19-26	19-26	32-45	9-12	9-12	19-26	32-45	32-45	9-12	13-16	19-26	32-45	32-51
	0 °C	9-12	9-12	19-26	19-26	32-45	9-12	13-16	19-26	32-45	32-45	9-12	13-16	19-26	32-45	32-51	13-16	19-26	32-45	32-45	32-60
	-5 °C	9-12	13-16	19-26	32-45	32-45	9-12	13-16	19-26	32-45	32-51	9-12	19-26	32-45	32-45	32-60	13-16	19-26	32-45	32-45	32-64
	-10 °C	9-12	19-26	32-45	32-45	32-51	13-16	19-26	32-45	32-45	32-60	13-16	19-26	32-45	32-45	32-64	13-16	19-26	32-45	32-51	45-73
	-15 °C	13-16	19-26	32-45	32-45	32-60	13-16	19-26	32-45	32-45	32-64	13-16	19-26	32-45	32-51	45-64	19-26	19-26	32-45	32-60	45-82
	-20 °C	13-16	19-26	32-45	32-45	32-64	19-26	19-26	32-45	32-50	32-73	19-26	19-26	32-45	32-51	45-73	19-26	32-45	32-45	32-60	45-82
	-30 °C	19-26	32-45	32-45	32-52	32-80	19-26	32-45	32-45	32-57	32-83	19-26	32-45	32-51	32-64	45-96	19-26	32-45	32-51	45-64	51-96

Pipe Ø from 6 – 160 mm

The figures apply to hose materials with increasing wall thickness.

All specifications apply to normal environmental and ventilation conditions when cold rubber shapes are used without additional coatings and / or paints.

Heating Rubber HK Plus *Forlen*

- Highly flexible, closed cell insulating material with low thermal conductivity (0.036 W/m×K) for applications in the sanitary and heating sectors
- Meets the requirements of DIN 1988 Parts 2 and 7
- Available as 2 m hose or endless roll in dispenser box (Art. No. 8723 5 ...)

Fields of application:

- For insulating heating and hot water pipes in accordance with EnEV 2009
- For insulating cold water pipes in accordance with DIN 1988

Product benefits:

- Lower thermal conductivity due to new microcell structure
- Simplified range, hence lower warehousing costs
- Highly flexible and east-to-process material
- Meets the requirements of the energy saving regulations (EnEV)



Article No.	Article Description	QTY
8723 10 15	MTR.UNV.RUB+ 50 10/15	150
8723 10 18	MTR.UNV.RUB+ 50 10/18	130
8723 10 22	MTR.UNV.RUB+ 50 10/22	100
8723 10 28	MTR.UNV.RUB+ 50 10/28	80
8723 10 35	MTR.UNV.RUB+ 10/35	70
8723 10 42	MTR.UNV.RUB+ 10/42	60
8723 10 48	MTR.UNV.RUB+ 10/48	50
8723 10 54	MTR.UNV.RUB+ 10/54	44
8723 10 60	MTR.UNV.RUB+ 10/60	40
8723 19 28	MTR.UNV.RUB 50 3/4"19/28	48
8723 19 35	MTR.UNV.RUB 50 1" 19/35	36
8723 25 15	MTR.UNV.RUB 100 1/4"25/15	36
8723 25 18	MTR.UNV.RUB 100 3/8"25/18	36
8723 25 22	MTR.UNV.RUB 100 1/2"25/22	36
8723 25 28	MTR.UNV.RUB 100 3/4"25/28	32
8723 25 42	MTR.UNV.RUB 50 1 1/4"25/42	24
8723 36 28	MTR.UNV.RUB+ 100 36/28	18
8723 36 35	MTR.UNV.RUB 100 1" 36/35	16
8723 46 42	MTR.UNV.RUB+ 100 46/42	8

Technical Data			
Application area According to EnEV	External Ø Cu in mm	Steel pipe Fe Imperial	Steel pipe Fe mm
50 %	15	1/4"	13.5
50 %	18	3/8"	17.2
50 %	22	1/2"	21.3
50 % Fe	-	3/4"	26.9
-	35	1"	33.7
-	42	1 1/4"	42.4
-	-	1 1/2"	48.3
-	54	-	-
-	-	2"	60.3
50 % Cu	28	-	-
50 %	35	1"	33.7
100 %	15	1/4"	13.5
100 %	18	3/8"	17.2
100 %	22	1/2"	21.3
100 % Fe	-	3/4"	26.9
50 % Fe	-	1 1/4"	42.4
100 % Cu	28	-	-
100 %	35	1"	33.7
100 %	42	1 1/4"	42.2

Heating Rubber HK Plus Endless Rolls *Forlen*

- Colour: Grey
- Thermal conductivity at 40 °C:
 ≤ 10 mm: 0.036 W / (m × K)
 > 10 mm 0.040 W / (m × K)
- Usable temperature range: -8 °C to +105 °C
- Building material class: B1 – flame retardant according to DIN 4102
- Practical fire behaviour: self-extinguishing, non-dripping, does not propagate fire
- Corrosion risk: conforms to DIN 1988 Part 7, does not contain any substances that attack metals
- Material: Elastomer foam based on synthetic rubber



Article No.	Article Description	QTY
8723 5 10 15	RO(35M)UNV.RUB+ 50 10/15	1
8723 5 10 18	RO(30M)UNV.RUB+ 50 10/18	1
8723 5 10 22	RO(25M)UNV.RUB+ 50 10/22	1
8723 5 10 28	RO(20M)UNV.RUB+ 50 10/28	1

Technical Data			
Application area According to EnEV	External Ø Cu in mm	Steel pipe Fe Imperial	Steel pipe Fe mm
50 %	15	1/4"	13.5
50 %	18	3/8"	17.2
50 %	22	1/2"	21.3
50 % Fe	-	3/4"	26.9

Cu = meets the requirements of the EnEV for copper pipes
 Fe = meets the requirements of the EnEV for steel pipes and plastic pipes

Heating Rubber HK Plus SK *Forlen*

- Furnished with self-adhesive strips, highly flexible and closed-celled insulating material with low thermal conductivity (0.036)
- Meets the requirements of DIN 1988 Parts 2 and 7
- Length supplied: 2 m

Fields of application:

- For insulating heating and hot water pipes in accordance with EnEV 2009
- For insulating cold water pipes in accordance with DIN 1988

Product benefits:

- Self-adhesive strips for retrospective insulation of installed pipes
- Lower thermal conductivity due to new microcell structure
- Simplified range, hence lower warehousing costs
- Highly flexible and east-to-process material



Article No.	Article Description	QTY
8723 2 10 15	MTR.UNV.RUB SK+ 50 10/15	150
8723 2 10 18	MTR.UNV.RUB SK+ 50 10/18	130
8723 2 10 22	MTR.UNV.RUB SK+ 50 10/22	100
8723 2 10 28	MTR.UNV.RUB SK+ 50 10/28	80
8723 2 19 28	MTR.UNV.RUB/SK 50 3/4"18/28	48
8723 2 19 35	MTR.UNV.RUB/SK 50 1" 19/35	40
8723 2 25 15	MTR.UNV.RUB/SK100 1/4"25/15	36
8723 2 25 18	MTR.UNV.RUB/SK100 3/8"25/18	36
8723 2 25 22	MTR.UNV.RUB/SK100 1/2"25/22	36
8723 2 25 28	MTR.UNV.RUB/SK100 3/4"25/28	32

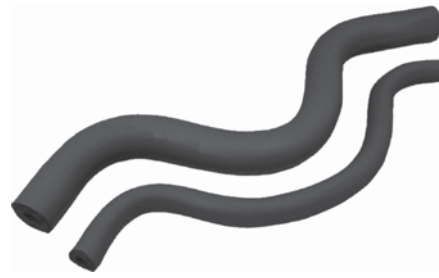
Technical Data			
Application area according to EnEV	External Ø CU in mm	Steel pipe FE imperial	Steel pipe FE mm
50 %	15	1/4"	13.5
50 %	18	3/8"	17.2
50 %	22	1/2"	21.3
50 % FE	-	3/4"	26.9
50 % CU	28	-	-
50 %	35	1"	33.7
100 %	15	1/4"	13.5
100 %	18	3/8"	17.2
100 %	22	1/2"	21.3
100 % FE	-	3/4"	26.9

Cu = meets the requirements of the EnEV for copper pipes
FE = meets the requirements of the EnEV for steel pipes and plastic pipes

- Colour: Grey
- Thermal conductivity at 40°: 10 mm – 0.036 W / (m*K), > 10 mm 0.040 W / (m*K)
- Usable temperature range: -8 °C to +105 °C
- Building material class: B1 – flame retardant according to DIN 4102
- Practical fire behaviour: self-extinguishing, non-dripping, does not propagate fire
- Corrosion risk: Conforms to DIN 1988 Part 7, does not contain any substances that attack metals
- Material: Elastomer foam based on synthetic rubber

Insulation Unvulcanized Rubber/HT **Forlen**

- Made of high-flexible closed-cell elastomer foam on synthesis unvulcanized rubber Basis (appropriate for solar Systems)
- Temperature-resistant from -40 °C to +150 °C, short term permanent load up to +175 °C
- Ozone resistance: excellent according to ISO 7326
- UV resistance: good according to UNI ISO 4892
- In order to gurantee a UV resistance the hose needs to be protected against general environmental influences (e.g. steel sheet envelope or paint coating)
- Color: black
- CFC-free
- Delivery length: 2 m



Article No.	Article Description	QTY
8723 1 13 15	MTR.UNV.RUB/HT 1/4"13/15	112
8723 1 13 18	MTR.UNV.RUB/HT 3/8"13/18	98
8723 1 13 22	MTR.UNV.RUB/HT 1/2"13/22	84
8723 1 13 28	MTR.UNV.RUB/HT 3/4"13/28	64
8723 1 19 15	MTR.UNV.RUB/HT 1/4" 19/15	64
8723 1 19 18	MTR.UNV.RUB/HT 3/8" 19/18	58
8723 1 19 22	MTR.UNV.RUB/HT 1/2" 19/22	50
8723 1 19 28	MTR.UNV.RUB/HT 3/4" 19/28	48
8723 1 19 35	MTR.UNV.RUB/HT 1" 19/35	32

(insulation thickness - pipe Ø (outer) mm)

Technical Data

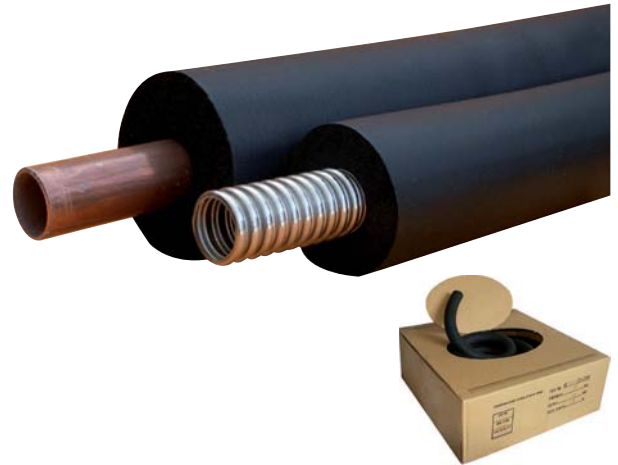
Outer Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outer Ø mm (FE)	Outer Ø mm (PP)
15	-	8	13.5	-
18	15	10	17.2	16
22	20	15	21.3	20
28	25	20	26.9	25
15	-	8	13.5	-
18	15	10	17.2	16
22	20	15	21.3	20
28	25	20	26.9	25
35	32	25	33.7	32

Copper pipe (CU) / Steel pipe (FE) / Polypropylene pipe (PP)

- Coefficient of thermal conductivity: 0,040 W(m·K) acc. to DIN 52613
- Fire behavior: B2, non dropping in case of fire test acc. to DIN4102, part 1
- Steam-diffusion-resistance-number μ value: >3000 in-shop tested according to DIN 52615

High Temp. Unvulcanized Rubber HTK UV **Forlen**

- Weather and UV resistant solar insulation
 - special insulation for applications outdoors
 - Elastic and high-flexible, easy-to-install
 - Closed-cell elastomer foam
 - Also appropriate for insulation of cold pipes outdoors
 - Outstanding insulation properties
 - Environmental-friendly; CFC- and H CFC free
 - Low in nitrosamine
 - UV resistant and weatherproof according to DIN 8580
 - Also complies with DIN 1988 part 7 and Euro class E
 - Available as 2 m hose or as 25 m roll
- The insulation maintains its UV resistance and weatherproofness without envelope or special paint coating**



Article No.	Article Description	QTY
8723 6 13 15	MTR.UNV.RUB HTK UV 1/4"13/15	100
8723 6 13 18	MTR.UNV.RUB HTK UV 3/8"13/18	90
8723 6 13 22	MTR.UNV.RUB HTK UV 1/2"13/22	70
8723 6 13 28	MTR.UNV.RUB HTK UV 3/4"13/28	60
8723 6 13 35	MTR.UNV.RUB HTK UV 1" 13/35	44
8723 6 19 15	MTR.UNV.RUB HTK UV 1/4"19/15	64
8723 6 19 18	MTR.UNV.RUB HTK UV 3/8"19/18	60
8723 6 19 22	MTR.UNV.RUB HTK UV 1/2"19/22	44
8723 6 19 28	MTR.UNV.RUB HTK UV 3/4"19/28	40
8723 6 19 35	MTR.UNV.RUB HTK UV 1" 19/35	30
8723 7 13 15	R.(25M)EL-UNV.RUBHTK UV 13X15	1
8723 7 13 18	R.(25M)EL-UNV.RUBHTK UV 13X18	1
8723 7 13 22	R.(25M)EL-UNV.RUBHTK UV 13X22	1
8723 7 19 15	R.(25M)EL-UNV.RUBHTK UV 19X15	1
8723 7 19 18	R.(25M)EL-UNV.RUBHTK UV 19X18	1
8723 7 19 22	R.(25M)EL-UNV.RUBHTK UV 19X22	1

(Outer Ø mm)

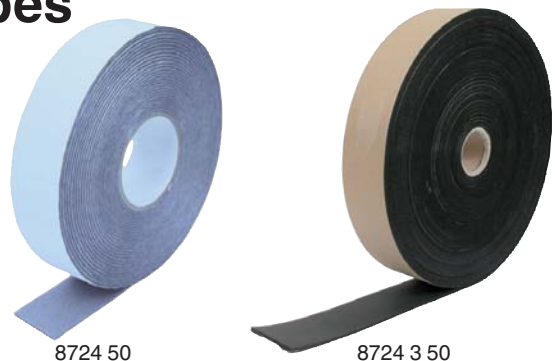
Technical Data					
Outer Ø mm (CU)	Nom. size ID (CU)	Outer Ø mm (FE)	Nom. size ID (FE)	Outer Ø mm (VA)	Nom. size ID (VA)
15	-	13.5	8	14.2	10
18	15	17.2	10	16.7	12
22	20	21.3	15	21.4	16
28	25	26.9	20	26.7	20
35	32	33.7	25	33.0	25

- Material: closed-cell elastomer foam
- Delivery form/length: Box, 2 m hose or 25 m roll
- Operate in temperature range: from -40°C to +150°C
- Heat conductivity: λ 40°C = 0,038 W/m² K / λ 0°C = 0,035 W/m² K
- Fire behavior (DIN 4102): B2 normally inflammable
- Corrosion risk: complies with DIN 1988, part 7
- Weatherproof and UV resistant: complies with DIN 8580
- Water vapor diffusion resistance EN 12086: μ > 3000

Unvulcan. Rubber Winding Tapes

- Self-adhesive
- Length 15 m
- Width 50 mm
- Material thickness 3 mm

Article No.	Article Description	QTY
8724 50	RE15M.WIND.TA.S.-AD50MM UN.RUB	e 12
8724 3 50	RE15M.WIND.TA.S.-AD.50MM HTK UV	e 10



Rubber Adhesive, 220 g

- Special adhesive for rubber products
- Adhesive for bonding joints in rubber insulation
- Final strength after 36 hours
- Usable temperature -50°C to +105°C
- Processing temperature: ideal at 20°C but not below 0°C
- Suitable for processing on metal and plastic pipes
- Not suitable for bonding pipe connections
- Not suitable for use on solar installations

Article No.	Article Description	QTY
8724 220	CN(220G)RUBBER ADHESIVE	1



Corrug. Stainless Steel Tube Solar Comp. **Forlen**

With high temperature unvulcanized rubber pre-isolated corrugated stainless steel tube A4 for the interior and exterior

- Double pipelines easily divisible into single pipelines without damaging the protective film and the insulation
- Connectionless from the roof to the cellar
- High temperature resistant unvulcanized rubber insulation with unchanging insulation thickness
- Utilization in solar thermal and heating systems
- Easy separability of the double pipe at the collector as well as in the central heating room by special gluing technology

Application:

- Division and connection pipelines of solar systems and heating systems



Article No.	Article Description	QTY
8722 1 16 15	MTR.SOLAR COMP. ID16 15M	15
8722 1 16 25	MTR.SOLAR COMP. ID16 25M	25
8722 1 16 50	MTR.SOLAR COMP. ID16 50M	50
8722 1 20 15	MTR.SOLAR COMP. ID20 15M	15
8722 1 20 25	MTR.SOLAR COMP. ID20 25M	25
8722 1 20 50	MTR.SOLAR COMP. ID20 50M	50
8722 1 25 15	MTR.SOLAR COMP. ID25 15M	15
8722 1 25 25	MTR.SOLAR COMP. ID25 25M	25
8722 2 16 15	MTR.SOLAR COMP. 13MM ID16 15M	15
8722 2 16 25	MTR.SOLAR COMP. 13MM ID16 25M	25
8722 2 16 50	MTR.SOLAR COMP. ID16 50M	50
8722 2 20 15	MTR.SOLAR COMP. 13MM ID20 15M	15
8722 2 20 25	MTR.SOLAR COMP. 13MM ID20 25M	25
8722 2 20 50	MTR.SOLAR COMP. ID20 50M	50

(ID mm / Length of each bunch mm)

Technical Data

DN mm	Insulating Ø mm	Dimensions L x B	PN at 250° bar	Bending degree m
16	19	122 x 60	11	0.15
20	19	134 x 66	6.9	0.15
25	19	148 x 73	6.9	0.20
16	13	98 x 48	11	0.15
20	13	110 x 54	6.9	0.15

- Insulation: closed-cell, synthetic high temperature unvulcanized rubber up to +150 °C, short term up to +175 °C
- Heat conductivity: R = 0.038 W/m*K
- Lagging: tear-proof PE lagging, black

Corrugated Stainless Steel Tube A4 **Forlen**

The corrugated stainless steel tube is a parallel corrugated stainless steel tube provided with a longitudinal welding seam. Its little corrugated height and the narrow corrugation provide outstanding flow properties to the tube of this category.

- Parallel corrugated overall metal tube
- Rust-, acid-, heat-, vibration- and pressure-resistant
- Very good flexibility and cross compressive strength
- Easy structure of detachable threaded joints
- **Material Quality 1.4404 (Aisi 316L)**
- Application and solar thermal and heating systems
- Optimum for collector connections and boiler connections



Technical Data

ID mm	Dimension inch	Length m
16	1/2"	50
20	3/4"	50
25	1"	50
32	1 1/4"	50
40	1 1/2"	50

Article No.	Article Description	QTY
8722 3 16 50	MTR.CORR. STAINL.ST TUBE ID16	50
8722 3 20 50	MTR.CORR. STAINL.ST TUBE ID20	50
8722 3 25 50	MTR.CORR. STAINL.ST TUBE ID25	50
8722 3 32 50	MTR.CORR. STAINL.ST TUBE ID32	50
8722 3 40 50	MTR.CORR. STAINL.ST TUBE ID40	50

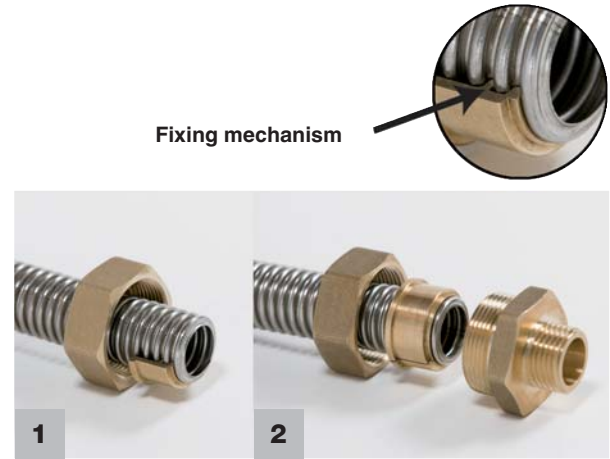
META-DICHT Quick-connection System

Quick-connection system with metallic sealing

- Metallic sealing
- The right connection for any collector
- No special tools necessary
- Quick and easy installation in only four steps
- Suitable for extremely high temperatures > 200 °C
- Half-shells with fixing mechanism prevent the corrugated pipe from falling and thus enable safe and easy installation
- Extremely durable connection without maintenance requirements (replacement of sealing rings no longer necessary)
- Specifically adjusted to the Förch stainless steel corrugated pipes and the Solar Kompakt connection system

Installation note:

- Trim the pipe to the desired length with a pipe cutter
- Slide the union nut over the corrugated pipe (Figure 1)
- Press half-shells onto the second-last corrugation of the corrugated pipe – the last corrugation of the pipe must be visible (see Figure 2)
- Push the fitting all the way into the half-shell and screw it down to the union nut



Screw Connection Set with External Thread

Metallic sealing screw connection with external thread

Technical Data

Art. No.	DN	AG* Reduced Imperial
8722 12 16	16	1/2"
8722 12 22	20	3/4"
8722 12 25	25	1"

*AG = male thread



Article No.	Article Description	QTY
8722 12 16	METAL-SEAL SC.CON.ID16 OT 1/2"	1
8722 12 20	METAL-SEAL SC.CON.ID20 OT 3/4"	1
8722 12 25	METAL-SEAL SC.CON.ID25 OT 1"	1

Soldered and Compression Connector Set

Metallic sealing screw connection set with combined soldered and compression fitting for the transition to a copper pipe

Technical Data

Art. No.	DN	Cu pipe ext. (mm)	Cu pipe int. (mm)
8722 14 16	16	22	18
8722 14 20	20	22	18

Article No.	Article Description	QTY
8722 14 16	METAL-SEAL SOLD./COMP.CON.ID16	1
8722 14 20	METAL-SEAL SOLD./COMP.CON.ID20	1



Compression Fitting Set

Metallic sealing screw connection set with clamping collar for the transition to a copper pipe – consequently no soldering required

Technical Data

Art. No.	DN	Cu pipe External (mm)
8722 15 16 18	16	18
8722 15 16 22	16	22
8722 15 20 18	20	18
8722 15 20 22	20	22



Article No.	Article Description	QTY
8722 15 16 18	METAL-SEAL CLAMP.COL.ID16/18CU	1
8722 15 16 22	METAL-SEAL CLAMP.COL.ID16/22CU	1
8722 15 20 18	METAL-SEAL CLAMP.COL.ID20/18CU	1
8722 15 20 22	METAL-SEAL CLAMP.COL.ID20/22CU	1

Screw Connection Set with 3/4" Internal Thread

Metallic sealing screw connection set with flexible connecting nut and broad sealing surface – for direct connection to collectors with 3/4" male thread

- Suitable seal for 3/4" female thread: Art. No. 8722 10 16

Technical Data

Art. No.	DN	IG* Reduced Imperial
8722 16 16 34	16	3/4"
8722 16 20 34	20	3/4"

*IG = female thread



Article No.	Article Description	QTY
8722 16 16 34	METAL-SEAL SCR.CON.ID16-IT3/4"	1
8722 16 20 34	METAL-SEAL SCR.CON.ID20-IT3/4"	1

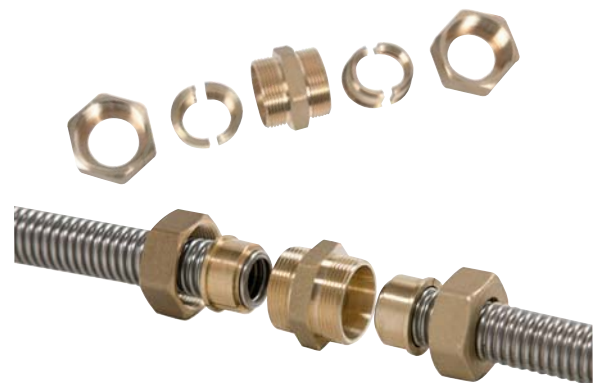
Coupling Kit

Metallic sealing coupling kit for joining stainless steel corrugated pipes of the same diameter

Technical Data

Art. No.	DN
8722 13 16	16
8722 13 20	20
8722 13 25	25

Article No.	Article Description	QTY
8722 13 16	METAL-SEAL COUPLING ID16	1
8722 13 20	METAL-SEAL COUPLING ID20	1
8722 13 25	METAL-SEAL COUPLING ID25	1



Screw Connection Kit

- Screw connection kit for pre-insulated corrugated stainless steel tubes solar compact and corrugated stainless steel tube CSST

Technical Data

Item No	Connection	ID	Cap nut Inch	reduced inch
8722 5 16	Outside thread	16	3/4	1/2
8722 5 20	Outside thread	20	1	3/4
8722 5 25	Outside thread	25	1 1/4	1
8722 5 32	Outside thread	32	1 1/2	1 1/4
8722 5 40	Outside thread	40	2	1 1/2



Article No.	Article Description	QTY
8722 5 16	SCR.CONN.KIT CSST OURS.TH.ID16	1
8722 5 20	SCR.CONN.KIT CSST OURS.TH.ID20	1
8722 5 25	SCR.CONN.KIT CSST OURS.TH.ID25	1
8722 5 32	SCR.CONN.KIT CSST OURS.TH.ID32	1
8722 5 40	SCR.CONN.KIT CSST OURS.TH.ID40	1

Contents:

- 1x Cap nut
- 1x Insert ring
- 1x Easy drill washer
- 1x Special gasket made of graphite
- 1x Screw-in piece with **broad seal face**
- 1x Easy drill assembly instruction for screwing without special tools

Coupling Kit

- Coupling kit for pre-insulated corrugated stainless steel tube solar compact and corrugated stainless steel tube CSST

Article No.	Article Description	QTY
8722 6 16	COUPLING KIT CSST ID16	1
8722 6 20	COUPLING KIT CSST ID20	1
8722 6 25	COUPLING KIT CSST ID25	1
8722 6 32	COUPLING KIT CSST ID32	1
8722 6 40	COUPLING KIT CSST ID40	1



Contents:

- 2x Cap nut
- 2x Insert ring
- 2x Easy drill washer
- 2x Special gasket made of graphite
- 1x Double nipple with **broad seal face**
- 1x Easy drill assembly instruction for screwing without special tools

Compression Fitting Set EWR

- For connecting a stainless steel corrugated pipe to a plain pipe
- Soldering of copper pipes no longer necessary

Article No.	Article Description	QTY
8722 11 20 18	SCREW.CLAMP.COL.SET ID20-18CU	1
8722 11 20 22	SCREW.CLAMP.COL.SET ID20-22CU	1

Contents:

- 2x cap nuts
- 1x insert ring
- 1x Easy-Drill washer
- 1x special graphite seal
- 1x screw-in part with **wide sealing surface**
- 1x clamping collar



Cap Nut

Article No.	Article Description	QTY
8722 8 16	CAP NUT 3/4" ID16	10
8722 8 20	CAP NUT 1" ID20	10
8722 8 25	CAP NUT 1 1/4" ID25	10



Insert Ring

Article No.	Article Description	QTY
8722 9 16	INSERT RING ID16	10
8722 9 20	INSERT RING ID20	10
8722 9 25	INSERT RING ID25	10



Washer Solar

Article No.	Article Description	QTY
8722 10 16	WASHER SOLAR ID16	10
8722 10 20	WASHER SOLAR ID20	10
8722 10 25	WASHER SOLAR ID25	10



Impact Tool

- Impact kit to manufacture flange connections for flexible corrugated stainless steel tubes
- Impact tool with clamping jaws and flanged rod

Article No.	Article Description	QTY
8722 7 16	IMPACT TOOL ID16	1
8722 7 20	IMPACT TOOL ID20	1
8722 7 25	IMPACT TOOL ID25	1



Oval Mounting Clamp

- Oval mounting clamps are excellently appropriate to mount the pre-insulated corrugated stainless steel tube solar compact
- Terminal nut: M8

Article No.	Article Description	QTY
8722 4 16	OVAL MOUNT. CLAMP 19MM ID16	10
8722 4 20	OVAL MOUNT. CLAMP 19MM ID20	10
8722 4 25	OVAL MOUNT. CLAMP 19MM ID25	10
8722 4 16 13	OVAL MOUNT. CLAMP 13MM ID20	10
8722 4 20 13	OVAL MOUNT. CLAMP 13MM ID20	10



Repair Strip for Tube Insulation, Unvulcanized Rub.

- Appropriate to repair any kind of insulation made of unvulcanized rubber (heating, high temperature and low-temperature unvulcanized rubber)
- The repair strip can be applied as additional protection of an insulation made of unvulcanized rubber
- Cost saving since subsequent renewal of insulation is being omitted
- UV-stable
- Fabric reinforced
- Continuously temperature resistant up to + 90° C
- Type of fabric: plastic-laminated, reinforced fabric strip
- Glue on the basis of natural rubber
- Adhesive force: 100 N/25 mm
- Elongation at tear: about 5%
- Appropriate for the long-term use inside and outside
- Dimensions WxT: 50 x 0,3 mm Dimensions WxT: 50 m

Handling instruction:

- At the exterior it is necessary to glue the tape overlapping.



Article No.	Article Description	QTY
8724 5 50	REEL(50M)REPAIR STRIP UNV.RUB	1

Solar Refractometer

- For fast and accurate antifreeze measurement for solar, heating and cooling systems
- Measuring range: Propylene glycol 0 °C to -50 °C

Article No.	Article Description	QTY
8722 88 200	SOLAR REFRACTOMETER	1



Tube Shell Made of Rock Wool SW 50 *Forlen*

Tube shell made of rock wool alu-laminated acc. to EnEV
(German Regulation for Energy Saving and Building Systems)
50 %

- German approval number: Z-23.14-1623
- Stable to formation of decomposition and development of mildew, non-aging
- Rock wool cut from the block
- Concentric, tube shells made of rock wool accurate to dimension slit on one side laminated with a tear-proof, pure aluminum film of AS quality according to AGI Q135
- Highly water repellent and odourless
- Easy assembly due to double sided adhesive tape to close the tube shell
- The alu-laminated type is perfect for efficient vapor barriers
- Resistant to compression stress and dimensionally stable
- Melting point of the rock wool $\geq 1,000\text{ }^{\circ}\text{C}$
- Universally applicable for heat and impact sound insulation

Field of application:

- Heating and processing water pipes, chimneys

Handling instruction:

- Tube shells need to be secured each running meter using at least 6 turns of tie wire according to DIN 4140
- Before gluing the longitudinal and round joints it needs to be made sure that the substructure is free of grease, clean and dry
- In order to guarantee the adhesive force it is necessary to firmly press the adhesive tapes on the substructure
- The self-adhesive overlapping must always show downward



Article No.	Article Description	QTY
8725 20 15	MTR.TUBE SHEL.R.WO50 1/4"20/15	42
8725 20 18	MTR.TUBE SHEL.R.WO50 3/8"20/18	42
8725 20 22	MTR.TUBE SHEL.R.WO50 1/2"20/22	36
8725 20 28	MTR.TUBE SHEL.R.WO50 3/4"20/28	30
8725 20 35	MTR.TUBE SHEL.R.WO50 1"20/35	25
8725 20 42	MTR.TUBE SH.R.WO50 1 1/4"20/42	20
8725 20 57	MTR.TUBE SH.ROCK WOOL 20/57	15
8725 20 60	MTR.TUBE SHELL.R.WOOL 2"20/60	12
8725 20 64	MTR.TUBE SH.ROCK WOOL 20/64	12
8725 25 42	MTR.TUBE SH.R.WO50 1 1/4"25/42	16
8725 25 48	MTR.TUBE SH.R.WO50 1 1/2"25/48	16
8725 30 22	MTR.TUBE SH.ROCK WO.1/2"30/22	20
8725 30 28	MTR.TUBE SH.ROCK WO.3/4"30/28	20
8725 30 35	MTR.TUBE SH.ROCK WOOL 1"30/35	16
8725 30 42	MTR.TUBE SHELL.R.WO1 1/4"30/42	12
8725 30 48	MTR.TUBE SHELL.R.WO1 1/2"30/48	11
8725 30 54	MTR.TUBE SHELL.R.WO50 30/54	9
8725 30 60	MTR.TUBE SHELL R.WO50 2"30/60	9
8725 30 64	MTR.TUBE SH.ROCK WOOL 30/64	9
8725 40 76	MTR.TUBE SH.R.WO50 2 1/2"40/76	5
8725 50 57	MTR.TUBE SH.ROCK WOOL 50/57	5
8725 50 89	MTR.TUBE SH.R.WOOL50 3"50/89	4
8725 60 114	MTR.TUBE SH.ROCK WO50 4"60/114	2

(insulation thickness x pipe Ø (outer) mm)

Technical Data

EnEV	Outer Ø mm (CU)	Outer Ø mm (FE)	Outer Ø mm (PP)
50 %	15	13.5	-
50 %	18	17.2	16
50 %	22	21.3	20
50 %	28	26.9	25
50 %	35	33.7	32
50 % (FE)	42	42.4	40
-	-	-	-
-	-	60.3	-
-	64	-	63
50 % (CU)	42	42.4	40
50 %	-	48.3	-
-	22	21.3	20
-	28	26.9	25
-	34	33.7	32
-	42	42.4	40
-	-	48.3	-
50 %	54	-	-
50 %	-	60.3	-
-	64	-	63
50 %	76,1	76.1	75
-	-	-	-
50 %	89	88.9	90
50 %	-	114.3	-

- Material: concentric, tube shells made of rock wool accurate to dimension slit on one side, laminated with a tear-proof pure aluminum film of AS quality according to AGI Q135
- Fire class: A2 – not inflammable according to DIN 4102 part 1
- Volume weight: 80 kg/m³
- Delivery form/length: box, 1 m
- Operating temperature range: 250 °C for the wool max. 100 °C on the lamination
- Coefficient of thermal conductivity: 0.037 W / (m²K) at 40 °C

Tube Shell Made of Rock Wool SW 100 *Forlen*

Tube shell made of rock wool alu-laminated according to EnEV (German Regulation for Energy Saving and Building and Building systems) 100%

- German approval number: Z-23.14-1623
- Stable to formation of decomposition and development of mildew, non-aging
- Rock wool cut from the block
- Concentric, tube shells made of rock wool accurate to dimension slit on one side laminated with a tear-proof, pure aluminum film of AS quality according to AGI Q135
- Highly water repellent and odourless
- Easy assembly due to double sided adhesive tape to close the tube shell
- Perfect for efficient vapor barriers
- Resistant to compression stress and dimensionally stable
- Melting point of the rock wool ≥ 1.000 °C
- Universally applicable for heat and impact sound insulation

Field of application:

- Heating and processing water pipes, chimneys

Handling instruction:

- Tube shells need to be secured each running meter using at least 6 turns of tie wire according to DIN 4140
- Before gluing the longitudinal and round joints it needs to be made sure that the substructure is free of grease, clean and dry
- In order to guarantee the adhesive force it is necessary to firmly press the adhesive tapes on the substructure
- The self-adhesive overlapping must always show downward



Article No.	Article Description	QTY
8727 23 15	MTR.TUBE SHE.R.WO100 1/4"23/15	36
8727 23 18	MTR.TUBE SHE.R.WO100 3/8"23/18	35
8727 23 22	MTR.TUBE SHE.R.WO100 1/2"23/22	30
8727 23 28	MTR.TUBE SHE.R.WO100 3/4"23/28	25
8727 34 28	MTR.TUBE SHE.R.WO100 3/4"34/28	16
8727 34 35	MTR.TUBE SHELL.R.WO100 1"34/35	12
8727 40 42	MTR.TUBE SH.R.WO100 1 1/4"40/42	9
8727 44 42	MTR.TUBE SH.R.WO100 1 1/4"44/42	9
8727 47 48	MTR.TUBE SH.R.WO100 1 1/2"47/48	6
8727 56 54	MTR.TUBE SHELL R.WO100 56/54	4
8727 59 60	MTR.TUBE SH.R.WOOL100 2"59/60	4
8727 67 64	MTR.TUBE SH.R.WO100 2"67/64	4
8727 76 76	MTR.TUBE SH.R.WO100 2 1/2"76/76	2
8727 80 76	MTR.TUBE SH.R.WO100 2 1/2"80/76	2
8727 90 89	MTR.TUBE SH.R.WO100 3"90/89	1
8727 94 89	MTR.TUBE SH.R.WO100 3"94/89	1
8727 111 108	MTR.TUBE SH.R.WO100 3"111/108	1
8727 111 114	MTR.TUBE SH.R.WO100 4"111/114	1

(insulation thickness - pipe Ø (outer) mm)

Technical Data

Ext. Ø mm (CU)	Nom. size ID (CU)	Ext. Ø mm (FE)	Nom. size ID (FE)	Ext.Ø mm (PP)
15	-	13.5	8	-
18	15	17.2	10	16
22	20	21.3	15	20
28	25	26.9	20	25
28	25	26.9	20	25
35	32	33.7	25	32
42	40	42.4	32	40
42	40	42.4	32	40
-	-	48.3	40	-
54	50	54.0	-	-
-	-	60.3	50	63
-	-	60.3	50	63
76	65	76.1	65	75
76	65	76.1	65	75
89	80	88.9	80	90
89	80	88.9	80	90
108	100	108.0	-	-
-	-	114.3	100	-

- Material: concentric, tube shells made of rock wool accurate to dimension slit on one side, laminated with a tear-proof pure aluminum film of AS quality according to AGI Q135
- Fire class: A2 – not inflammable according to DIN 4102 part 1
- Volume weight: 80 kg/m³
- Delivery form/length: box, 1 m
- Operating temperature range: 250°C for the wool max. 100°C on the lamination
- Coefficient of thermal conductivity: 0.037 W / (m*K) at 40°C

***Deviating minimum insulation thickness for copper according to EnEV (German Regulation for Energy Saving and Building and Building systems)**

Aluminium Adhesive Tape with Separation Layer

- Soft annealed aluminium film coated on one side with polyacrylate adhesive (solvent-free)
- The adhesive side is covered with a silicon-coated polyethylene film, which is removed before processing
- Excellent adhesive strength, heat resistance, shear strength and resistance to ageing
- Permanent secure bonding with no loss of adhesive strength
- Roll length: 100 m

Application areas:

- Used for technical insulation for masking and sheathing aluminium clad mineral wool pipe jackets and lamella mats
- Especially where high temperatures and shearing forces affect the bonding
- In heating, ventilation and air-conditioning systems as insulation against heat and cold
- For sealing and sheathing pipes and heating and fresh air ducts
- For sealing containers and pipes when welding with inert gas



Technical Data

Tensile strength:	≥30 N / 2.5 cm
Elongation at fracture:	5 %
Adhesive strength:	≥15 N / 2.5 cm
Usable temperature range:	-40 °C to +140 °C (briefly +180 °C)
Working temperature:	>5 °C
Overall thickness:	approx. 0.065 mm excl. separation layer
Building material class:	A2 and B1 according to DIN 4102
Colour:	aluminium mill finish

Article No.	Article Description	QTY
8726 50	R.(100M)AL. ADH.T./P.CAR. 50MM	1
8726 70	R.(100M)AL. ADH.T./P.CAR. 70MM	1
8726 100	R.(100M)AL. ADH.T./P.CAR.100MM	1

(Width mm)

Alu-Fix Adhesive Tape with No Separating Layer

- Aluminium film with special acrylic adhesive system with no separating layer
- Enables bonding under very humid conditions and at very low or very high temperatures
- Extremely high adhesive strength
- Vapour-tight
- Roll length: 50 m

Application areas:

- For bonding metal and fibreglass pipes
- For bonding aluminium clad mineral wool pipe jackets and lamella mats
- For sealing seams on sheet steel housings and manufacturing metal housings
- For repair work with a long lifespan

Technical Data

Tensile strength:	81.5 N / 2.5 cm
Elongation at fracture:	5 %
Adhesive strength:	22.6 N / 2.5 cm
Water vapour permeability:	0.01 g/qm / 24 h
SD value:	>3,000 m
Usable temperature range:	-44 °C to +121 °C
Working temperature:	-23 °C to +121 °C
Overall thickness:	approx. 0.065 mm excl. separa. layer
Building material class:	A2 according to DIN 4102

Article No.	Article Description	QTY
8843 50	REEL(50M)AL. FIX ADH.TAPE 50MM	es 36
8843 75	REEL(50M)AL. FIX ADH.TAPE 75MM	e 24

(Roll width in mm)



Mineral Fibre Mats

- Rock wool mat
- Ideal to insulate largely dimensioned tubes where it is not possible to use tube shells made of mineral fibre
- Mineral rock wool with tear-proof, with reinforced grid aluminium film laminated on one side
- Width: 500 mm



Article No.	Article Description	QTY
8727 20	REEL(9.35M)ROCK W.MAT20X500MM	2
8727 30	REEL(6.1 M)ROCK W.MAT30X500MM	2
8727 40	REEL(4.65M)ROCK W.MAT40X500MM	2
8727 50	REEL(3.55M)ROCK W.MAT50X500MM	2
8727 60	REEL(4.0 M)ROCK W.MAT60X500MM	2
8727 70	REEL(3.5 M)ROCK W.MAT70X500MM	2
8727 80	REEL(3.0 M)ROCK W.MAT80X500MM	2
8727 90	REEL(2.5 M)ROCK W.MAT90X500MM	2
8727 100	REEL(2.5 M)ROCK W.MAT100X500MM	2

(Roll length / thickness / width in mm)

Technical Data

- Index for insulation material: 12.05.99.26.04., AGI-Q 132
- Heat conductivity at an average temperature:
 - 50°C 0,045 W/(m.K) DIN 52612
 - 100°C 0.060
 - 150°C 0.075
 - 200°C 0.100
 - 250°C 0.120
- Calculated value of the heat conductivity R: 0.40 W/(m.K)ENEV
- Fire behavior: non-combustible A2, DIN 4102
- Ship building: non-combustible, IMO Res.
- Classification temperature: 400 °C, DIN 52271
- Recommended application temperature: ≤ 250 °C
- Temperature load at lamination: =< 100 °C
- Specific heat capacity c: 0.84 kj/(kg. K)
- Water vapor diffusion resistance: =1 (mineral wool) DIN 52615
- Equivalent air layer thickn. Sd: > 100 (aluminium film) m DIN 52615

Tie Wire for Insulating Materials

- To wrap, harden and stabilize of insulating materials, such as e.g. lamella mats, unlaminated tube shells, etc.

Article No.	Article Description	QTY
8726 065	TIE WIRE 0.65MM 100G	g 100

(Size mm / Weight g)



Film PVC

- Color: gray
- To wrap tube shells made of mineral fiber as sight insulation
- Roll width: 1 m

Article No.	Article Description	QTY
8726 1 25	R.(25M)PVC FILM SIZE1M X0.35MM	1

(length m / width m / thickness mm)



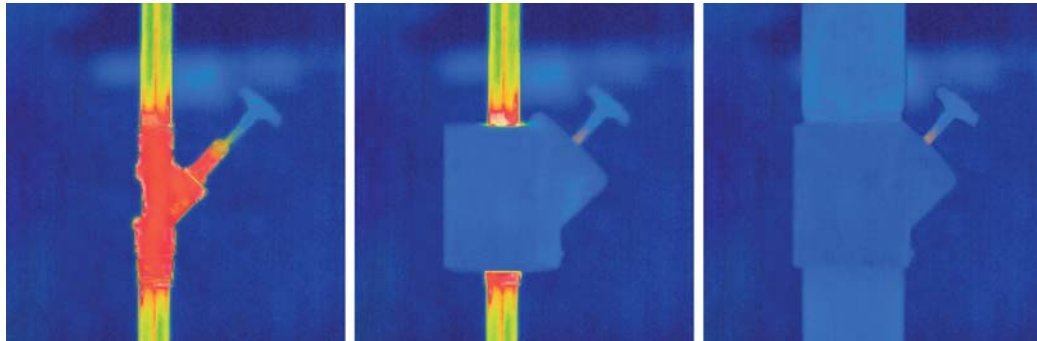
Valve Insulation Universal *Forlen*

The clever valve insulation for virtually all common European slanted seat and KFR types

- Made of closed-cell foamed polyethylene with additional firm mesh effect made of PE
- Easy and rapid assembly: shift, fold and securely closed by means of closing clips
- Equipped with universal recess
- Warm remains warm – cold remains cold!
- Avoids formation of condensation water
- **A non-insulated valve emits as much heat or absorbs as much heat as several meters of tube**
- Offers a rapid and easy mountable closing of gaps in professionally installed and exemplarily insulated cold water bearing drinking water pipes, hot water bearing service water pipes, heating pipes as well as industrial piping networks

Fields of application:

- DIN 1988 TRWI: Protection against heating up, formation of condensation water and sound transmission of drinking water pipes
- EnEV Annex 5: Requirements to limit the heat emission of heat distribution and heat water pipes as well as of fittings



Installation under non-insulated conditions:

The heat loss at the valve is greatest due to the flow resistance.

Insulated valve:

The temperature on the outer skin of the shell almost complies with the environmental temperature.

According to the energy saving regulation of insulated installations:

Piping and valves are exemplarily insulated and this way conforming to the law.

Article No.	Article Description	QTY
8729 1 15	VALVE INSULATION 1/2" DN15	e 10
8729 1 20	VALVE INSULATION 3/4" DN20	e 10
8729 1 25	VALVE INSULATION 1" DN25	e 10
8729 1 32	VALVE INSULATION 1 1/4" DN32	e 10
8729 1 40	VALVE INSULATION 1 1/2" DN40	e 5
8729 1 50	VALVE INSULATION 2" DN50	e 5

Technical Data

Thermal conduct./calcul. value: at 10°C ISO 2581 W/mk 0,035
at 40°C ISO 2581 W/mk 0,040

Noise insulation: DIN 4109 dB

Fire protection: Ü-No Z-23.14-1141 PE foam is quality controlled DIN 4102 B1

Water vapor permeability: ISO 1663 g/m² 1,1 (5,0 mm)

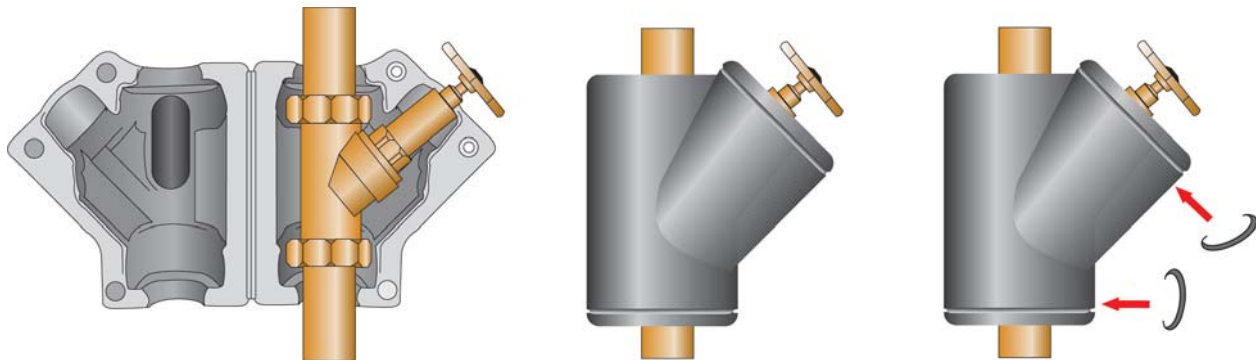
Water vapor diffusion factor: μ ≥ 4000

Use temperature: DIN 1988 -80°C to +100°C

Included in delivery:

- 2x Closing clips
- 1x Valve insulation

Installation Instructions:



1. Put the opened valve isolation against the valve, which needs to be isolated and check if it is fitting.

2. Close the insulation shell.

3. Close the closed valve insulation using the clips included in the delivery.

Insulation for Ball Valves *Forlen*

The clever insulation for ball valves for virtually all common European ball valve types

- Made of closed-cell foamed polyethylene with additional firm mesh effect made of PE
- Easy and rapid assembly: shift, fold and securely closed by means of closing clips
- Equipped with universal recess
- Warm remains warm – cold remains cold!
- Avoids formation of condensation water
- **A non-insulated valve emits as much heat or absorbs as much heat as several meters of tube**
- Offers a rapid and easy mountable closing of gaps in professionally installed and exemplarily insulated cold water bearing drinking water pipes, hot water bearing service water pipes, heating pipes as well as industrial piping networks
- No time consuming cutting of isolation mats, no expensive individual solutions or even brilliant valves which would reduce the overall effect of costly mounted pipe insulations and which would impair the optics of the system

Fields of application:

- DIN 1988 TRWI: Protection against heating up, formation of condensation water and sound transmission of drinking water pipes
- EnEV Annex 5: Requirements to limit the heat emission of heat distribution and heat water pipes as well as of fittings



Article No.	Article Description	QTY
8729 2 15	INSULATION BALL VALVE 1/2"DN15	e 10
8729 2 20	INSULATION BALL VALVE 3/4"DN20	e 10
8729 2 25	INSULATION BALL VALVE 1"DN25	e 10
8729 2 32	INSULAT.BALL VALVE 1 1/4"DN32	e 10
8729 2 40	INSULAT.BALL VALVE 1 1/2"DN40	e 5
8729 2 50	INSULATION BALL VALVE 2"DN50	1

Included in delivery:

- 2x Closing clips
- 1x Valve insulation

Technical Data	
Thermal conduct./calcul. value:	at 10°C ISO 2581 W/mk 0,035 at 40°C ISO 2581 W/mk 0,040
Noise insulation:	DIN 4109 dB
Fire protection:	Ü-No Z-23.14-1141 PE foam is quality controlled DIN 4102 B1
Water vapor permeability:	ISO 1663 g/m ² 1,1 (5,0 mm)
Water vapor diffusion factor:	μ ≥ 4000
Use temperature:	DIN 1988 -80°C to +100°C

Insulation for AP Water Meters *Forlen*

The insulations for water meters are available with the connection diameters 1/2" and 3/4" for all products according to DIN

- Is an accurately fitting solution for water meters of the manufacturers Allmess, Rossweiner, WasserGeräte GmbH, Conter Caracioni and Sensus Metering Systems
- Made of closed-cell foamed polyethylene with additional firm mesh effect made of PE
- Easy and rapid assembly: shift, fold and securely closed by means of locking clips
- Equipped with universal recess
- Warm remains warm – cold remains cold!
- Avoids formation of condensation water
- **A non-insulated valve emits as much heat or absorbs as much heat as several meters of tube**

Fields of application:

- DIN 1988 TRWI: Protection against heating up, formation of condensation water and sound transmission of drinking water pipes
- EnEV Annex 5: Requirements to limit the heat emission of heat distribution and heat water pipes as well as of fittings



Article No.	Article Description	QTY
8729 3 15	AP WATER MET.INSULAT.1/2"DN15	e 10
8729 3 20	AP WATER MET.INSULAT.3/4"DN20	e 10

Included in delivery:

- 2x Closing clips
- 1x Valve insulation

Technical Data	
Thermal conduct./calcul. value:	at 0°C ISO 2581 W/mk 0,035 at 40°C ISO 2581 W/mk 0,040
Noise insulation:	DIN 4109 dB
Fire protection:	Ü-No Z-23.14-1141 PE foam is quality controlled DIN 4102 B1
Water vapor permeability:	ISO 1663 g/m ² 1,1 (5,0 mm)
Water vapor diffusion factor:	μ ≥ 4000
Use temperature:	DIN 1988 -80°C to +100°C

Insulation for UP-Valves *Forlen*

No time consuming cutting of insulation mats and no expensive individual solutions

- Suitable for all DIN products, e.g. JRG and Seppelfricke made of closed-cell foamed polyethylene with additional, solid structure made of PE
- Easy and quick assembly: shift, fold and securely closed by means of closing clips
- Equipped with universal recess
- Warm remains warm - cold remains cold!
- Avoids formation of condensation water
- **A non-insulated valve emits as much heat or absorbs as much heat as several meters of tube**

Fields of application:

- DIN 1988 TRWI: Protection against heating up, formation of condensation water and sound transmission of drinking water pipes
- EnEV Annex 5: Requirements to limit the heat emission of heat distribution and heat water pipes as well as of fittings



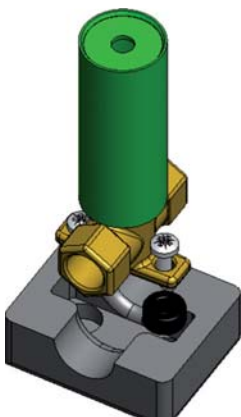
Article No.	Article Description	QTY
8729 4 12	UP-VALVE INSULATION 1/2"	e 20
8729 4 16	UP-VALVE INSULATION Ø16-20MM	e 20
8729 4 32	UP-VALVE INSULATION Ø32MM	e 10
8729 4 34	UP-VALVE INSULATION 3/4"	e 10

Technical Data	
Thermal conduct./calcul. value:	at 10°C ISO 2581 W/mk 0,035 at 40°C ISO 2581 W/mk 0,040
Noise insulation:	DIN 4109 dB
Fire protection:	Ü-Nr. Z-23.14-1141 PE foam is quality controlled DIN 4102 B1
Water vapor permeability:	ISO 1663 g/m ² 1,1 (5,0 mm)
Water vapor diffusion factor:	μ ≥ 4000
Use temperature:	DIN 1988 -80°C to +100°C

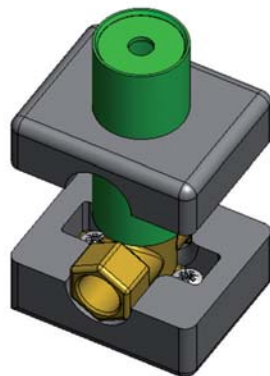
Included in delivery:

- 2x Closing clips
- 1x Valve insulation

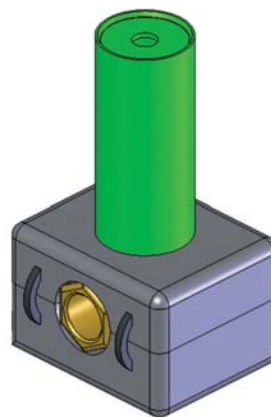
Installation Instructions:



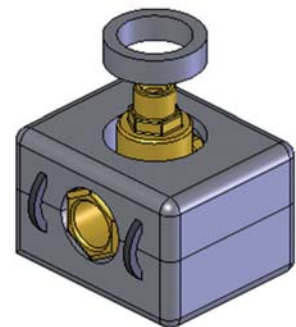
1. The valve has to be mounted with the lower part. If rubber punch rings are delivered valve-sided, insert and fix them into the insulation.



2. Push the upper part over the mounting aid.



3. Securely connect the insulation with the enclosed four clips.



4. After final assembly, after the removal of the mounting aid, insert the sealing ring.

Empty PVC Bend

- For permanent sheathing of mineral fibre pipe insulation
- Particularly suitable when using pipe clamps as lamination insulation
- For permanent protection of mineral fibre lamella mat insulation around pipes
- Colour: Grey

Article No.	Article Description	QTY
8720 90 1820	EMPTY PVC BEND 90° 18 20	5
8720 90 2220	EMPTY PVC BEND 90° 22 20	5
8720 90 2230	EMPTY PVC BEND 90° 22 30	5
8720 90 2820	EMPTY PVC BEND 90° 28 20	5
8720 90 2830	EMPTY PVC BEND 90° 28 30	5
8720 90 3520	EMPTY PVC BEND 90° 35 20	5
8720 90 3530	EMPTY PVC BEND 90° 35 30	5
8720 90 4220	EMPTY PVC BEND 90° 42 20	5
8720 90 4230	EMPTY PVC BEND 90° 42 30	5
8720 90 4830	EMPTY PVC BEND 90° 48 30	5
8720 90 4840	EMPTY PVC BEND 90° 48 40	5
8720 90 4860	EMPTY PVC BEND 90° 48 60	5
8720 90 6030	EMPTY PVC BEND 90° 60 30	5
8720 90 6040	EMPTY PVC BEND 90° 60 40	5
8720 90 6050	EMPTY PVC BEND 90° 60 50	5
8720 90 7050	EMPTY PVC BEND 90° 70 50	5
8720 90 7630	EMPTY PVC BEND 90° 76 30	5
8720 90 7640	EMPTY PVC BEND 90° 76 40	5
8720 90 7650	EMPTY PVC BEND 90° 76 50	5
8720 90 7660	EMPTY PVC BEND 90° 76 60	5
8720 90 7670	EMPTY PVC BEND 90° 76 70	5
8720 90 8930	EMPTY PVC BEND 90° 89 30	5
8720 90 8940	EMPTY PVC BEND 90° 89 40	5
8720 90 8950	EMPTY PVC BEND 90° 89 50	5
8720 90 8980	EMPTY PVC BEND 90° 89 80	5
8720 90 108100	EMPTY PVC BEND 90° 108 100	5
8720 90 114100	EMPTY PVC BEND 90° 114 100	5
8720 45 1220	EMPTY PVC BEND 45° 1220	5
8720 45 2220	EMPTY PVC BEND 45° 2220	5
8720 45 2225	EMPTY PVC BEND 45° 2225	5
8720 45 2240	EMPTY PVC BEND 45° 2240	5
8720 45 3540	EMPTY PVC BEND 45° 3540	5
8720 45 4220	EMPTY PVC BEND 45° 4220	5
8720 45 4225	EMPTY PVC BEND 45° 4225	5
8720 45 4840	EMPTY PVC BEND 45° 4840	5
8720 45 6040	EMPTY PVC BEND 45° 6040	5
8720 45 7640	EMPTY PVC BEND 45° 7640	5
8720 45 7650	EMPTY PVC BEND 45° 7650	5
8720 45 8940	EMPTY PVC BEND 45° 8940	5
8720 45 11440	EMPTY PVC BEND 45° 11440	5
8720 45 11450	EMPTY PVC BEND 45° 11450	5
8720 45 14050	EMPTY PVC BEND 45° 14050	5
8720 45 16850	EMPTY PVC BEND 45° 16850	5

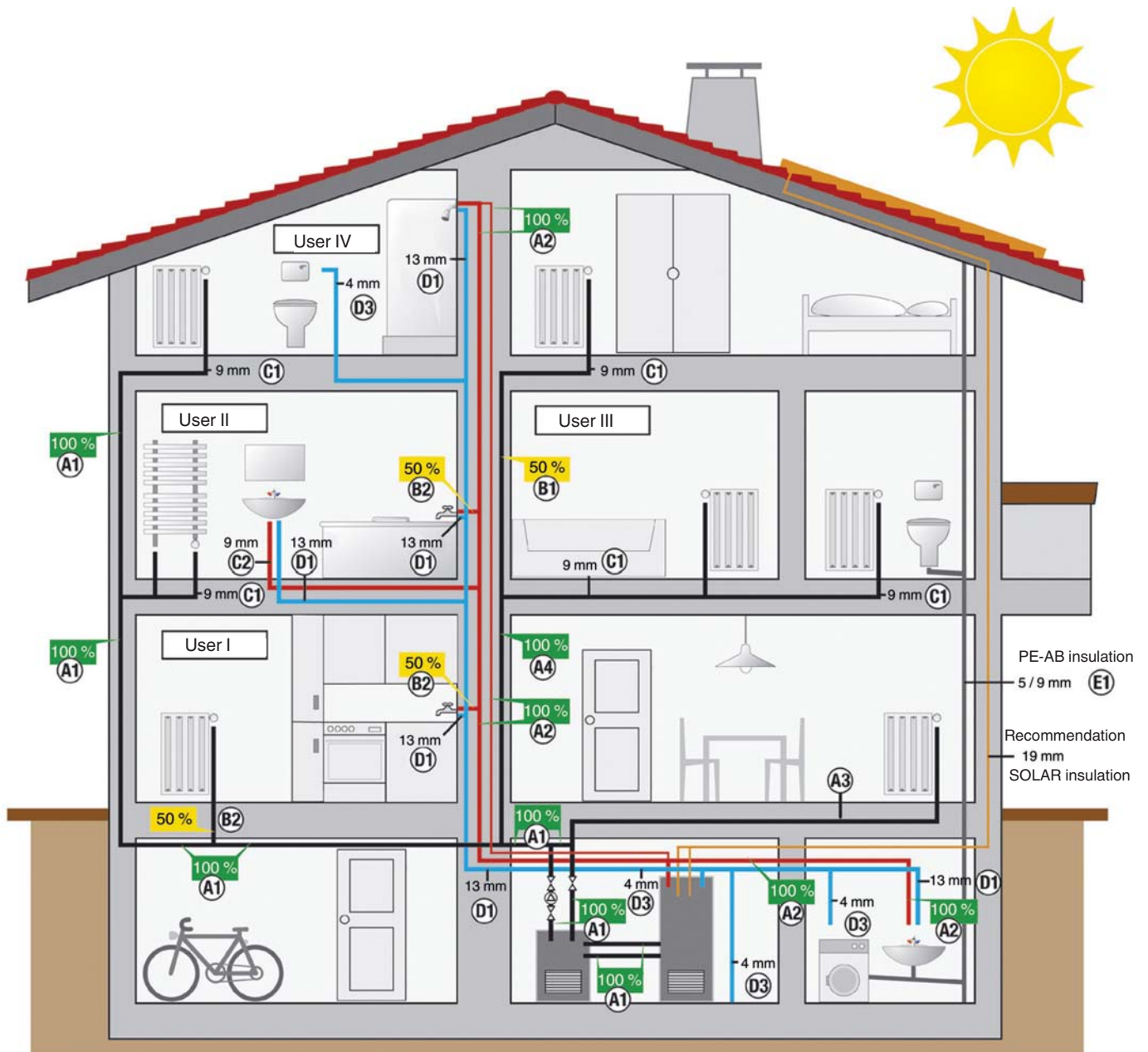


Empty PVC Bend

Insulation thickness													
Outer pipe Ø	15	20	25	30	35	40	45	50	60	70	80	100	
	Art. No.												
15	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	8720 90 1820	-	-	-	-	-	-	-	-	-	-	-
22	-	8720 90 2220	-	8720 90 2230	-	-	-	-	-	-	-	-	-
28	-	8720 90 2820	-	8720 90 2830	-	-	-	-	-	-	-	-	-
35	-	8720 90 3520	-	8720 90 3530	-	-	-	-	-	-	-	-	-
42	-	8720 90 4220	-	8720 90 4230	-	-	-	-	-	-	-	-	-
48	-	-	-	8720 90 4830	-	8720 90 4840	-	-	8720 90 4860	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	8720 90 6030	-	8720 90 6040	-	8720 90 6050	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	8720 90 7050	-	-	-	-	-
76	-	-	-	8720 90 7630	-	8720 90 7640 two-part	-	8720 90 7650	8720 90 7660	8720 90 7670	8720 90 8980 two-part	-	-
89	-	-	-	8720 90 8930	-	8720 90 7630	-	8720 90 8950	-	-	-	-	-
102	-	-	-	-	-	-	-	-	-	-	-	-	-
108	-	-	-	-	-	-	-	-	-	-	-	-	8720 90 108100
114	-	-	-	-	-	-	-	8720 90 11450	-	-	-	-	8720 90 114100 two-part

Empty PVC Bend

Bend dimension													
Outer pipe Ø	15	20	25	30	35	40	45	50	60	70	80	100	
	Art. No.												
52	-	8720 45 1120	-	-	-	-	-	-	-	-	-	-	-
62	-	8720 45 2220	-	-	-	-	-	-	-	-	-	-	-
72	-	-	8720 45 2225	-	-	-	-	-	-	-	-	-	-
82	-	8720 45 4220	-	-	-	-	-	-	-	-	-	-	-
92	-	-	8720 45 4225	-	-	-	-	-	-	-	-	-	-
102	-	-	-	-	-	8720 45 2240	-	-	-	-	-	-	-
115	-	-	-	-	-	8720 45 3540	-	-	-	-	-	-	-
128	-	-	-	-	-	8720 45 4840	-	-	-	-	-	-	-
141	-	-	-	-	-	8720 45 6040	-	-	-	-	-	-	-
154	-	-	-	-	-	8720 45 7640	-	-	-	-	-	-	-
167	-	-	-	-	-	8720 45 8940	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	8720 45 7650	-	-	-	-	-
219	-	-	-	-	-	-	-	8720 45 11450	-	-	-	-	-
245	-	-	-	-	-	-	-	8720 45 14050	-	-	-	-	-
271	-	-	-	-	-	-	-	8720 45 16850	-	-	-	-	-



- Hot water conduits
- Cold water conduits
- Heating conduits

Field of Application acc. to the EnEV (German Regulation for Energy Saving and Building and Building Systems)

Heating Pipes and Hot Water Pipes	
A	- Pipes in external walls - Pipes in a heated room 100%
B	- Hot water pipes combined with circulation pipes - Circulation pipes 100%
C	- Pipes between heated rooms of different users 50%
D	- Pipes and fittings in wall and ceiling breakthroughs at crossings of pipes at pipe connections of central network distributors 50%
E	- Heating pipes in the floor structure between heated rooms of different users 9 mm - Hot water pipes in heated rooms or in components between heated rooms of one user, in flats up to an internal diameter of 22 mm which are neither included in the circulation circuit nor equipped with electrical trace heating and there heat dissipation can be influenced by exposed shut-off devices, it is not necessary to insulate them according to annex 5 of the EnEV EnEV (German Regulation for Energy Saving and Building and Building systems). In order to avoid impact sound clicking and flowing noises and the heating-up of other components we recommend you to insulate using a 9 mm insulation made of unvulcanized rubber.

DIN 1988 Part 2 (Cold Water Pipe)	
F	- Pipe in wall block outs, adjacent to high-temperature pipes - Pipes in a channel adjacent to high-temperature pipes 13 mm
G	- Free laid pipes, in heated rooms 9 mm
H	- Free laid pipes, in non-heated rooms 6 mm
K	- Pipes in key way, ascending pipe 6 mm

The recipient of these indications is responsible in his own interest to clarify in due time if the indications are also applicable to the field of application which he intends.

EnEV (German Regulation for Energy Saving and Building and Building systems) - Annex 5

Demands to limit the heat dissipation and the heat distribution and hot water pipes as well as fittings

The heat dissipation of hot distribution and hot water pipes as well as fittings needs to be limited by heat insulation according to the stipulations of table 1.

Table 1: heat insulation of heat distribution and hot water pipes as well as fittings

Row	Type of pipe / fitting	Minimum thickness of the insulating layer related to a heat conductivity of 0.035 W/(m x K)
1	Internal Ø up to 22 mm	20 mm
2	Internal Ø of more than 22 mm to 35 mm	30 mm
3	Internal Ø of more than 35 mm to 100 mm	equal to internal Ø
4	Internal Ø of more than 100 mm	100 mm
5	Pipes and fittings according to the rows 1 to 4 in wall and ceiling breakthroughs in crossings of pipes and pipe connections for central network distributors	½ of the requirements of rows 1 to 4
6	Pipes of central heating systems according to the rows 1 to 4, which are laid in components between heated rooms of different users after the date when this regulation came into force	½ of the requirements of rows 1 to 4
7	According to row 6 in the floor structure pipes	6 mm

As far as pipes of central heating systems according to the rows 1 to 4 are located in heated rooms or in components between heated rooms of a user and the heat dissipation can be influenced by exposed shut-off devices there are no requirements in the minimum thickness of the insulating layer. This also applies for hot water pipes in flats up to an internal diameter of 22 mm which are neither included in the circulation circuit nor equipped with an electrical trace heating.

For heat distribution and hot water pipes the minimum thickness of the insulating layers according to table 1 may be reduced in so far as a limitation of the heat dissipation of the same value is guaranteed also for other pipe insulating material requirements and considering the insulating effect of the pipe walls.

Technical changes are reserved

Plastic Clip

- Single type
- With brass threaded sleeve M6
 - Stable and fixture that will not tear out
 - Universally applicable in connection with fixing plug for nails M6; fix thread nail /M6, threaded rods M6 mountable
- Made of high quality polypropylene
 - Permanent temperature resistance from -30°C to +120°C
 - Elastic material guarantees indenting of pipes, cables for hoses
- Color: white



Article No.	Article Description	QTY
8630 8	PLASTIC CLIP M6 8MM	120
8630 10	PLASTIC CLIP M6 10MM	120
8630 12	PLASTIC CLIP M6 12MM	100
8630 14 15	PLASTIC CLIP M6 14-15MM	100
8630 16 18	PLASTIC CLIP M6 16-18MM	100
8630 20 22	PLASTIC CLIP M6 20-22MM	65
8630 28	PLASTIC CLIP M6 28MM	50

(Nominal size mm)

Technical Data			
Item No	For Wicu-pipes	For threaded-pipes DIN 2440/41 NW	For blank tubes, hoses and cables
8630 8	-	-	8
8630 10	6	6	10
8630 12	8	-	12
8630 14 15	10	8	14 - 15
8630 16 18	12	10	16 - 18
8630 20 22	15	15	20 - 22
8630 28	22	22	28

Plastic Clip Duo

- Double type
- With brass threaded sleeve M6
 - Stable and fixture that will not tear out
 - Universally applicable in connection with fixing plug for nails M6; fix thread nail /M6, threaded rods M6 mountable
- Made of high quality polypropylene
 - Permanent temperature resistance from -30 °C to +120 °C
 - Elastic material guarantees indenting of pipes, cables for hoses
- Color: white



Article No.	Article Description	QTY
8631 8	PLASTIC CLIP DUO M6 8MM	100
8631 10	PLASTIC CLIP DUO M6 10MM	75
8631 14 15	PLASTIC CLIP DUO M6 14-15MM	45
8631 16 18	PLASTIC CLIP DUO M6 16-18MM	30
8631 20 22	PLASTIC CLIP DUO M6 20-22MM	25
8631 28	PLASTIC CLIP DUO M6 28MM	20

(Nominal size mm)

Technical Data			
Item No	For Wicu-pipes	For threaded-pipes DIN 2440/41 NW	For blank tubes, hoses and cables
8631 8	-	-	8
8631 10	6	6	10
8631 14 15	10	8	14 - 15
8631 16 18	12	10	16 - 18
8631 20 22	15	15	20 - 22
8631 28	22	22	28

Mounting Clamps Fix

- Simple type
- For rapid and efficient mounting of heating pipes and electric lines in the flooring area
- Manufactured from 20 mm wide and 1.5 mm thick band steel – dimensionally stable
- Subsequently galvanized – overall corrosion protected
- Fixing hole Ø: 6.1 mm



Article No.	Article Description	QTY
8700 16	FIX MOUNT. CLAMPS 16MM	100
8700 18	FIX MOUNT. CLAMPS 18MM	100
8700 20	FIX MOUNT. CLAMPS 20MM	100
8700 22	FIX MOUNT. CLAMPS 22MM	100
8700 24	FIX MOUNT. CLAMPS 24MM	100
8700 28	FIX MOUNT. CLAMPS 28MM	100
8700 35	FIX MOUNT. CLAMPS 35MM	50
8700 40	FIX MOUNT. CLAMPS 40MM	25

Technical Data		
Art. No.	For pipe Ø mm	For armor steel tube
8700 16	15 – 16	M16
8700 18	17 – 18	
8700 20	19 – 20	M20
8700 22	21 – 22	
8700 24	23 – 24	
8700 28	27 – 28	
8700 35	34 – 35	M32
8700 40	39 – 40	M40

(Nominal size mm)

Mounting Clamps Duo Fix

- Double type
- For rapid and efficient mounting of heating pipes and electric lines in the flooring area
- Manufactured from 20 mm wide and 1.5 mm thick band steel – dimensionally stable
- Subsequently galvanized – overall corrosion protected
- Fixing hole Ø: 6.1 mm



Article No.	Article Description	QTY
8701 16	FIX DUO MOUNT. CLAMP 16MM	50
8701 18	FIX DUO MOUNT. CLAMP 18MM	50
8701 20	FIX DUO MOUNT. CLAMP 20MM	50
8701 22	FIX DUO MOUNT. CLAMP 22MM	50
8701 24	FIX DUO MOUNT. CLAMP 24MM	50
8701 28	FIX DUO MOUNT. CLAMP 28MM	25
8701 35	FIX DUO MOUNT. CLAMP 35MM	25
8701 40	FIX DUO MOUNT. CLAMP 40MM	25

Technical Data		
Art. No.	For pipe Ø mm	For armor steel pipes
8701 16	15 – 16	M16
8701 18	17 – 18	
8701 20	19 – 20	M20
8701 22	21 – 22	
8701 24	23 – 24	
8701 28	27 – 28	
8701 35	34 – 35	M32
8701 40	39 – 40	M40

(Nominal size mm)

Thread Nails Fix M6

- Rapid fixing of plastic clips as well as electrical add serial clips with M6 connection thread
- Manufactured from hardened galvanized steel - break-proof and corrosion protected
- Nail thickness: 4 mm
- Connection thread M6
- Height connection thread: 8 mm



Article No.	Article Description	QTY
8704 4 18	FIX THREAD NAILS GA M6 4X18MM	W 1000

Rivet Nails Fix Standard

- Rapid and safe fixing of Fix mounting clamps, Fix-Duo mounting clamps and perforated tape in concrete and other solid building materials
- No pre-drilling - efficient
- Saves bolt impulse technology– cost-efficient
- Special steel allows easy driving in using Fix set hammer and sledge hammer
 - No expensive additional tools required
 - Break-proof



Technical Data	
Item No	Max. mounting thickness mm
8702 14	2
8702 18	6
8702 22	10
8702 35	23

Article No.	Article Description	QTY
8702 14	FIX RIVET NAILS F. CLAMPS 14MM	W 1000
8702 18	FIX RIVET NAILS F. CLAMPS 18MM	W 1000
8702 22	FIX RIVET NAILS F. CLAMPS 22MM	W 1000
8702 35	FIX RIVET NAILS F. CLAMPS 35MM	H 500

(length mm)

Rivet Nails Fix Top

- Rapid and safe fixing of Fix mounting clamps, Fix-Duo mounting clamps and perforated tape in concrete and other solid building materials
- No pre-drilling - efficient
- Saves bolt impulse technology – cost-efficient
- Special steel allows easy driving in using Fix set hammer and sledge hammer
 - No expensive additional tools required
 - Break-proof
- Corrugative and with large collar
 - Easy penetration and better hold
 - Also appropriate for perforated tapes of large perforation



Technical Data	
Item No	Max. mounting thickness mm
8703 14	2
8703 18	6
8703 22	10

Article No.	Article Description	QTY
8703 14	FIX RIVET NAILS TOP 14MM	W 1000
8703 18	FIX RIVET NAILS TOP 18MM	W 1000
8703 22	FIX RIVET NAILS TOP 22MM	W 1000

(length mm)

Rivet Setter Fix

- With hand protective handle made of stroke-resistant plastic material
- **Mounting advice:**
 - Only mount set nails using a set hammer
 - Drive in vertically
 - Wear protective goggles

Item No 8702 1:

- For Fix set nails

Item No 8704 1:

- For thread nails



Article No.	Article Description	QTY
8702 1	FIX NAIL RIVET SETTER	1
8704 1	FIX THREAD NAILS RIVET SETTER	1

Mounting Perforated Tape

- Galvanized in a stable plastic box
- Tape thickness 0.75 mm
- For Fix set nails

Article No.	Article Description	QTY
8900 0 10 1	CASE(10M)ROU.PER.TAPE 12MM5MMGA	ez 20
8900 0 10 2	CASE(10M)ROU.PER.T.17MM6.3MMGA	1

(RD = Round hole / Tape thickness / Hole size in mm)



Mounting Perforated Tape Galvanized

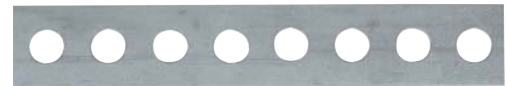
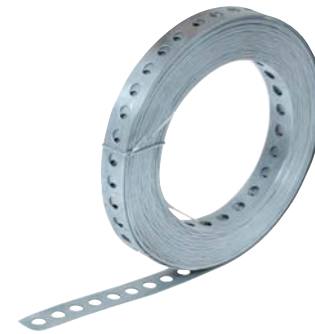
- Tape thickness 0.75 mm
- For:
 - Ø 5.0 mm: Fix set nails
 - Ø 6.3 / 6.5 mm: M6
 - Ø 8.3 mm: M8

Breaking load:

- 12 mm: 193 kg
- 17 mm: 314 kg
- 25 mm: 483 kg

Article No.	Article Description	QTY
8900 0 10	MTR10 ROU.PERF.TAPE12MM 5MM GA	z 100
8900 1 10	MTR10 OBL.H.PER.T.17MM 6.3MMGA	z 100
8900 1 25	MTR25 OBL.H.PER.T.17MM 6.3MMGA	25
8900 3 10	MTR10 ROU.PERF.TAPE17MM6.3MMGA	z 100
8900 3 25	MTR25 ROU.PERF.TAPE17MM6.3MMGA	25
8900 5 10	MTR10 OBL.H.PER.TA.25MM8.3MMGA	z 100
8900 5 25	MTR 25 OBL.H.PE.T.25MM8.3MMGA	g 125
8900 7 10	MTR10 ROU.PERF.T.25MM8.3MM GA	z 50
8900 7 25	MTR25 ROU.PER.TAPE25MM8.3MM GA	g 125

(RD = Round hole / LG = Oblong hole / Tape thickness / Hole size / QTY = content in m)



Round hole design



Oblong hole design

Mounting Perforated Tape Plastic-coated

- Sound-absorbing according to DIN 4109
- For:
 - Ø 5.0 mm: Fix set nails
 - Ø 6.3 / 6.5 mm: M6
 - Ø 8.3 mm: M8

Breaking load:

- 14 mm: 193 kg
- 19 mm: 314 kg
- 27 mm: 483 kg

Article No.	Article Description	QTY
8901 1 10	MTR10 ROU.PER.TAP.14MM5MM PLST	z 100
8901 2 10	MTR10 OB.H.PE.T.19MM6.3MM PLST	z 100
8901 4 10	MTR10 ROU.PE.TA.19MM6.3MM PLST	z 100
8901 8 10	MTR10 ROU.PE.TA.27MM8.3MM PLST	z 50

(RD = Round hole / LG = Oblong hole / Tape thickness / Hole size / QTY = content in m)



Nail Tape, Poly

- Polyester fabric tape, width 15 mm
- Breaking strength up to 300 daN
- Temperature resistance up to +100°C
- Field of application – fixing of pipes and electrical lines on the unfinished ceiling
- Very flexible, but break-proof tape
 - Comfortable, safe mounting
 - Easy-to-use as steel perforated tape
- Nail tape is available in a PVC dispenser box – optimum handling advices and storage

Article No.	Article Description	QTY
8902 15	CASE(15M)NAIL TAPE I. DISP.BOX	e 10
8902 15 1	REEL(15M)REFILL NAIL TAPE	10
8902 15 2	DISPENSER BOX EMPTY 2 PIECES	1



Mounting Eyes, Galvanized

- Galvanized steel
 - Ideal for fastenings in connection with punched tape
 - VdS-approved - for the fixing of sprinkler systems
- Art. No.: 1853 8 12, 1853 10 12**, approved by the Sachversicherer e. V., Köln (VdS), No. G 4820002 E association
- Die-cast zinc - corrosion protective



Article No.	Article Description	QTY
1853 8 9	MOUNTING EYE GA M 8X 9/38MM	200
1853 8 12	MOUNTING EYE GA M 8X12/44MM	125
1853 10 12	MOUNTING EYE GA M10X12/44MM	125

(Connecting thread M / Ø fixing hole mm / length)

Sanitary Silicone

- High-quality, acetate cross-linking, tin-free silicone sealant with excellent adhesion on most substrates typically used in construction
- Specially for use in sanitary facilities, wet rooms and kitchens
- With fungicide
- Weather-resistant, light-fast and UV-resistant
- Can be easily smoothed and shaped
- Permanently elastic in accordance with DIN EN 26927

Meets the requirements of the following standards:

- EN 15651-3 Sanitary joints: XS1
- EN 15651-1 Facade elements: INT/EXT 25LM CC
- EN 15651-2 Glass: 25LM CC

Areas of application:

- For sealing and expansion joints in the following areas: Sanitary facilities and wet rooms, kitchens, interior fittings, windows and glass, AC systems/ventilation systems, high temperature applications
- For indoor and outdoor use
- Not suitable for aquarium construction, underwater jointing, and natural stone (e.g. marble)

Usage:

- Please consult our overview „General Usage Instructions for Sealants“ (Pages 2/100 and 2/101).

Technical Data

Basis:	Acetate cross-linking
Ability to absorb movement:	25 %
Skin formation time*:	approx. 5 – 10 min
Hardening speed*:	approx. 1 – 2 mm per day
Working temperature:	+5 °C to +45 °C
Temperature resistance:	-60 °C to +180 °C (220 °C, briefly up to 3 hrs)
Paintable:	No
With fungicide:	Yes
Fire behaviour:	Class E
Storage stability:	12 months (at temperatures between +5 °C and +30 °C)

Article No.	Article Description	QTY
6820 310 1	SANITARY SILIC.TRANSP.310ML	e 20
6820 310 2	SANITARY SILIC.WHITE 310ML	e 20
6820 310 3	SANITARY SILIC.MANH.310ML	e 20
6820 310 4	SANITARY SILIC.SILV-GREY 310ML	e 20
6820 310 5	SANITARY SILIC.SAN.GREY310ML	e 20
6820 310 6	SANITARY SILIC.ANTHR.310ML	e 20
6820 310 7	SANITARY SILIC.BAHAMAB.310ML	e 20

Colour name	Colour display*
Manhattan	
Silver grey	
Sanitary grey	
Anthracit	
Bahama beige	

*Colour reproduction not binding



Thread Sealing Paste

- DIN-DVGW / ÖVGW / SVGW tested
- Approved for all gas and drinking water pipes, as well as for heating systems in domestic installations
- Can be used in conjunction with hemp for metallic threaded connections
- Can also be used with plastic pipes

Fields of application:

- **Gas:** permanently temperature resistant from -20 °C to +70 °C at max. 5 bar
- **Drinking water:** permanently temperature resistant up to +23 °C at max. 16 bar
- **Hot water:** permanently temperature resistant up to +130 °C at max. 7 bar



Article No.	Article Description	QTY
6885 130	TB(130G)THREAD SEALING PASTE	e 15
6885 250	TB(250G)THREAD SEALING PASTE	e 15
6885 400	DS(400G)THREAD SEALING PASTE	e 18



6885 130

6885 250

6885 400

Hemp

- To seal up thread connections

Article No.	Article Description	QTY
8694 220	TRESS(220G) HEMP	e 10
8694 80	REEL(80G) HEMP	e 10



Hemp Reel Retainer

- Ideal to unroll hemp reels 80g

Article No.	Article Description	QTY
8694 80 1	HEMP REEL RETAINER	1



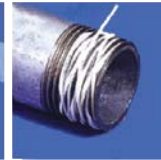
Thread Sealing Yarn

- The non-hardening coated multifilament yarn is an alternative for pastes, hemp and sealing tapes
- For metal and plastic threads up to 6" diameter made of cast iron, steel, brass, copper, chrome
- For nickel-plated and galvanized surfaces, stainless steel and plastic material
- Connections can be turned back for adjustment – no leakages, the connection remains tight
- The white, waterproofed yarn is directly applied from a handy container. The integrated cutting blade eases to cut the sealing yarn to length – convenient working, no dirt
- Do not wind the yarn directly into the thread pitches
- Wind up with tension - recommendation: Roughen the thread before winding up the yarn
- The container of thread-sealing yarn (150m) is sufficient for: Thread size 1/2" – up to max. 385 connections Thread size 3/4" – up to max. 260 connections Thread size 1" – up to max. 180 connections

Approved for:

- **Drinking water:** Loctite 55 fulfills the requirements of the KTW recommendation for cold and hot water and is appropriate for drinking water up to 85°C according to BS 6920
- **Gas and water:** Loctite 55 disposes of the DVDW approval, Reg No DV-5142AUO 166, tested according to EN 751-2 (class ARp) and DIN 30660

Article No.	Article Description	QTY
8694 55	TIN(150M) THREAD-SEALING YARN	e 48



PTFE-Sealing Tape Sanitary Field

- To seal pipe connections, to be used instead of hemp
- Resistant against all aggressive media
- Permanently temperature resistance
- Avoids jamming of threads
- Oxygen-resistant
- For threads DIN 2999-1
- Tested according to DIN DVGW and BAW



Item No 8694 12 1:

- White spool, yellow ring

Item No 8694 12 2:

- Yellow spool, yellow ring



Technical Data

Art. No.	Pipe	Temp. range	Pres.	Nom. size
8694 12 1	Gas	-20 – 125 °C	5 bars	< DN 10 (3/8“) 1)
	Drink. water	-20 – 95 °C	16 bars	
	Hot water	-20 – 125 °C	7 bars	
8694 12 2	Gas	-20 – 125 °C	5 bars	DN 10 (3/8“) – DN 50 (2“)
	Drink. water	-20 – 95 °C	16 bars	
	Hot water	-20 – 125 °C	7 bars	

1) This strip can also be used for other nominal sizes, if the number of threads is $\geq 7,5\text{cm}^2$

Article No.	Article Description	QTY
8694 12 1	REEL(12M)PTFE. S. TAPE FG 12MM	e 10
8694 12 2	REEL(12M)PTFE. S. TAPE GG 12MM	e 10

Plastic Fermit White

- White permanently elastic sealing agent on the basis of plastic material
- Highly elastic and of high adhesive force, without soiling the hands
- Temperature-resistant up to more than 100°C
- Perfect to insert the fittings into wash stands and bath tubs for cold and hot water
- Not appropriate for marble and other natural stones



Article No.	Article Description	QTY
8694 500	TIN(500G)PLASTIC FERMIT WHITE	e 12

Boiler Luting, Fire-Proof

- Permanently elastic sealing cement, fire-proof against open fire up to 1,000 °C
- Free of asbestos
- Good adhesion on metal
- Completely smoke- and gas-tightening for boilers, ovens and stoves



Article No.	Article Description	QTY
8694 1000 1	TIN(1000G)FIRE-PR. BOILER LUT.	1
8694 500 1	TIN(500G)FIRE-PR. BOILER LUT.	1
8694 320	C(310ML)FIRE-PR. BOILER LUTING	1 d

Lubricant, Green, 250 g and 500 g

- Gel-like, water-soluble lubricant with excellent lubrication properties for all plug-in PE and PVC pipes, particularly suitable also in the drinking water sector
- Reduces the friction resistance to an absolute minimum and at the same time protects the pipe during assembly
- Tested by the Hygiene Institute
- Evaporates to a colourless film
- Biologically degradable, toxicologically and physiologically harmless



8694 250 2 8694 500 2

Article No.	Article Description	QTY
8694 250 2	BT(250G)GREEN LUBRICANT	e 24
8694 500 2	BT(500G)GREEN LUBRICANT	e 20

Antifriction Paste for Plug-In Sleeves

- Facilitates the mounting and pulling over of plug-in sleeves on plastic pipes
- Tested and approved by the DVGW research center at Karlsruhe – approved for all plastic pipes and drinking water pipes
- Free from greases, oils or solvents – sealings do not get rough and will not be destroyed
- Soluble in water, toxically and physiologically harmless, biodegradable and neutral to skin– fulfills the values of the Bundesgesundheitsamt für Kunststoff-Trinkwasser-Empfehlungen (TKW) (Federal Health Authority for Plastic Drinking Water Recommendations)



Article No.	Article Description	QTY
8694 250 1	ANT.F.PAS.F.PL-IN SL.WHIT250G	e 5

Fitting Solder No.3

- 97/3 L-SN Cu 3
- 97 % tin, 3 % copper according to DIN EN 29453
- Monitored with the RAL quality sign of the German Quality Association for copper pipe (Gütegemeinschaft Kupferrohr) Lead-free – for all cold and hot water installations of copper pipes as drinking water and heating pipes
- Coil Ø 44 mm



Article No.	Article Description	QTY
8696 27	FITTING SOLDER NO 3 2.7MM 250G	z 50

Fitting Solder Paste

- Lot L-Sn 97 Cu 3 DIN 1707 / DIN EN 29453 (part 60 weight %)
- Flux agents / DIN 8511 F-SW 21 DIN EN 29454 3.1.1.C
- DVGW tested DVGW FI 058 GW7 – for the cold and hot water installation of copper pipes as drinking water and heating pipes
- Monitored with the RAL quality sign of the German Quality Association for copper pipe (Gütegemeinschaft Kupferrohr)e.V., RAL-RG 641/3
- Flux agent residues are soluble in cold and hot water



Article No.	Article Description	QTY
8696 250	FITTING SOLDER PASTE 250G	e 12

Scope of delivery:

- 1x brush holder
- 1x brush



Cleaning Fleece

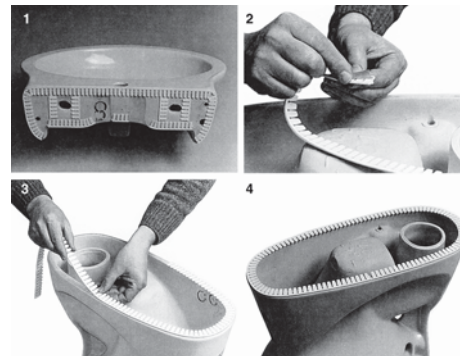
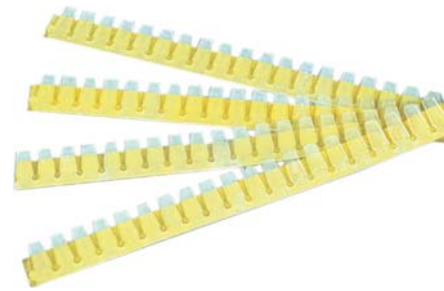
- Nylon fiber with silicon carbide mit - grain 320
- For trouble-free cleaning of pipe ends
- Free from metal
- Solvent-resistant
- Can be used several times
- Kind of container: 10 pieces in a plastic bag
- Dimensions WxL: 60 x 130 mm

Article No.	Article Description	QTY
8694 60 130	BAG(10) CLEANING FLEECE 60X130	1



Mounting Tape Sanitary Field

- Universally applicable in the sanitary ceramics
 - Noise insulation
 - Protects the sanitary ceramics against porcelain breakage
- Self-adhesive moldable smoothly elastic tape
 - Easy and rapid mounting
 - Elastic absorption of impacts
- Compensates uneven wall/flooring surfaces
 - No „crunching „, of the wash stand, wash basin, water-closet, bidet, etc.
 - Reduces the risk of spalling of ceramic edges, spalling screw holes, etc. during the process of fixing or in case of uptight assembly
- Closed surface according to DIN 16778
 - Resistant against thinned mineral acids, soapy water, alcohol, greases and oils
 - Avoids deposit of bacterias
- No waiting times compared to white cement mounting – efficient, time-saving and commercial
- Courts of 50 cm



Article No.	Article Description	QTY
8691 20	MOUNT. TAPE 20X500MM	b 300

Mounting Tape Sanitary Type Zigzag

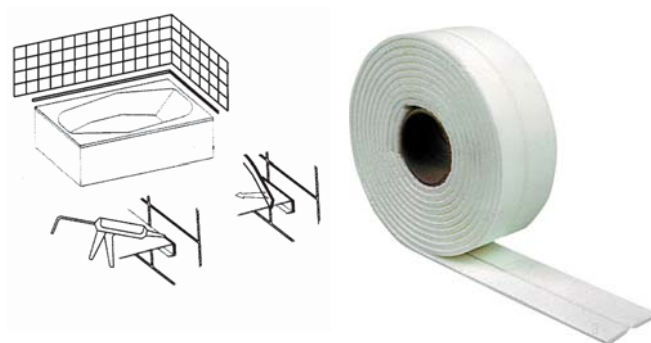
- To interrupt acoustical bridges between wall tiles and hang-up ceramic objects
- Universally applicable
- Easy to process
- PE strip, one-side self-adhesive
- Thickness: 5 mm
- Reel length: 2 x 4,5 m = 9 m



Article No.	Article Description	QTY
8691 48	REEL(9)ZIGZAG MOUNT. TAPE	1

Tub Connection Insulation Profile

- To interrupt acoustical bridges between wall tiles and the bath tub
- PE strip, one-side self-adhesive with special glue (can be removed without residues)
- Universally applicable for any type of tub
- Easy to process
- **Item No 8691 48 33:**
 - Thickness 4 mm
- **Item No 8691 70 33:**
 - Thickness 5 mm



Article No.	Article Description	QTY
8691 48 33	REEL(3.3)TUB CONN.INS.PR. 48MM	1
8691 70 33	REEL(3.3)TUB CONN.INS.PR. 70MM	1

Mounting Tape Hydrostrip

- To interrupt acoustical bridges between floor tiles and ceramic objects
- PE strip, one-side self.adhesive
- Universally applicable
- Thickness: 2 mm
- Length: 0,5 m
- PU: 2 pcs mounting tapes per strip, 150 strips of 2 mounting tapes



Article No.	Article Description	QTY
8691 22	HYDROSTRIP MOUNT. TAPE	b 300

Protectband 2in1 Plus

Soundproofing and wall-sealing with one tape

Ideal for protecting wall joints against breakdown of the silicone seam and for soundproofing the wall in a single step. Simply stick it on the shower tray / bath tub and on the wall for sealing and soundproofing.

- Soundproofing for the joint between the shower tray / bath tub and the wall
- Sealing tape for the wall joints in case the silicone seam breaks down
- Two steps in one with a single product
- Simple treatment
- Putting the soundproofing tape between the wall and the sealing tape provides good protection against moisture penetration.

Art. No. 8691 360:

- Roll length 3.60 m

Art. No. 8691 1000:

- Roll length 10 m



Article No.	Article Description	QTY
8691 360	PROTECTBAND PLUS 2IN1 (3.6M)	1
8691 1000	PROTECTBAND PLUS 2IN1 (10M)	1



1. Installation.



2. Fix the band with noise protection on the rear side of the the tub.



3. Remove upper protection foil.



4. Fix on the wall a little over the tub and press to fasten.



5. Plaster.



6. Apply silicone joint.

Sound Insulation Kit Water-Coset, Bidet and Urinal

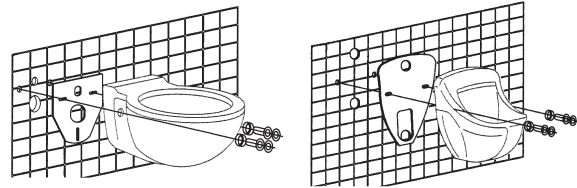
- To interrupt acoustical bridges between wall tiles and hung-up water-closets, bidets or urinals
- Two-side smooth expanded film
- Elastic fixing plate for high loads
- Insulates flowing and cracking noises
- Avoids formation of soild-borne sound
- Reduces the interferences of up to 6 dB (noise insulation certificate)



Article No.	Article Description	QTY
8691 1	WATER-CL./BIDET S.- INSUL. KIT	1

Delivery volume:

- 1x sound insulation plate
- 2x insulation bushings
- 2x collars
- 2x washers



Sound Insulation Kit Wash Stand

- To interrupt acoustical bridges between wall tiles and wash hand basins or wash stands
- Avoids formation of solid-borne sounds, flowing and cracking noises
- Easy to process
- Available in 3 formats
- Thickness: 5 mm

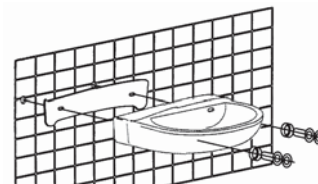


Technical Data	
Item No	Use for
8691 550	Wash hand basins
8691 750	Wash stands
8691 840	Double wash stands

Article No.	Article Description	QTY
8691 550	WASH ST. SOUND INS. KIT 550	1
8691 750	WASH ST. SOUND INS. KIT 750	1
8691 840	WASH ST. SOUND INS. KIT 840	1

Delivery volume:

- 1x sound insulation plate
- 2x insulation bushings
- 2x sealing washers



Universal Sound-deadening Pad

- Rubber pads for acoustic decoupling of shower and bathtub bases
- Also suitable for other purposes everywhere

Technical Data	
Art. No.	Dimensions (L x W x H)
8691 60 60	60 x 60 x 10 mm
8691 100 100	100 x 100 x 10 mm

Article No.	Article Description	QTY
8691 60 60	SOUND-DEAD. PAD 60X 60X10MM	w 100
8691 100 100	SOUND-DEAD. PAD 100X100X10MM	w 100



Water-Closet Fixing Kits Blank Brass

Article No.	Article Description	QTY
8676 6 60	WATER-CL. FIX.KIT MS 6X60	e 25
8676 6 60 1	WATER-CL. FIX.KIT MS/W 6X60	e 25
8676 6 70	WATER-CL. FIX.KIT MS 6X70	e 25
8676 6 70 1	WATER-CL. FIX.KIT MS/W 6X70	e 25
8676 6 80	WATER-CL. FIX.KIT MS 6X80	e 25
8676 6 80 1	WATER-CL. FIX.KIT MS/W 6X80	e 25

Contents of kit, 2 pieces each:

- Nylon expansion anchors F8
- Water-closet collars white, for fixing kit MS additionally with chrome-plated water-closet covering caps
- Oval head countersunk wooden screws DIN 7995
- Water-closet covering caps white



Water-Closet Fixing Kits Chrome-Plated Brass

Article No.	Article Description	QTY
8677 6 60	W.-CL.FIX.KIT MS-CHR.-P.D 6X60	e 25
8677 6 60 1	W.-CL.F.KIT MS-CHR.-P.D/W 6X60	e 25
8677 6 70	W.-CL.F.KIT MS-CHR.-P.L.D 6X70	e 25
8677 6 70 1	W.-CL.F.KIT MS-CHR.-P.D/W 6X70	e 25
8677 6 80	W.-CL.F.KIT MS-CHR.-P.D 6X80	e 25
8677 6 80 1	W.-CL.F.KIT MS-CHR.-P.D/W 6X80	e 25

Contents of kit, 2 pieces each:

- Nylon expansion anchors F8
- Water-closet collars white
- Oval head countersunk wooden screws DIN 7995
- Water-closet covering caps white, for fixing kit MS-VC additionally with chrome-plated water-closet covering caps



Water-Closet Fixtures with Hexagon Blank Brass

Article No.	Article Description	QTY
8678 6 70	HEX. WATER-CL. FIX.KIT MS 6X70	e 25
8678 6 70 1	HEX. WATER-CL. F.KIT MS/W 6X70	e 25
8678 6 80	HEX. WATER-CL. FIX.KIT MS 6X80	e 25
8678 6 80 1	HEX. WATER-CL. F.KIT MS/W 6X80	e 25
8678 6 85	HEX. WATER-CL. FIX.KIT MS 6X85	e 25
8678 6 85 1	HEX. WATER-CL. F.KIT MS/W 6X85	e 25

Contents of kit, 2 pieces each:

- Nylon expansion anchors F8
- Water-closet collars white
- Wooden screws hexagon DIN 571 with slot brass
- Water-closet covering caps white, for fixing kit MS additionally with chrome-plated water-closet covering caps



WC Fastening with Hexagonal Screw, Galvanised

Article No.	Article Description	QTY
8674 6 70 1	HEX-WC-FIX.KIT GAL./W 6X70	e 25
8674 6 70	HEX-WC-FIX.KIT GAL. 6X70	e 25
8674 6 80 1	HEX-WC-FIX.KIT GAL./W 6X80	e 25
8674 6 80	HEX-WC-FIX.KIT GAL. 6X80	e 25

Kit contains 2 each of:

- Nylon expansion plugs F8
- WC rosettes, white
- Wood screws, hexagonal head DIN 571, galvanised
- WC cover caps, white; the galvanised fastening kit additionally has chrome WC cover caps



Bracket Fixtures Galvanized Steel

Article No.	Article Description	QTY
8679 8 60	BRACKET FIXTURES GAL. 8X60	e 25
8679 10 70	BRACKET FIXTURES GAL. 10X70	e 25

Contents of kit, 2 pieces each:

- Nylon expansion anchors
- Wooden screws hexagon DIN 571 galvanised
- Washers DIN 125 galvanised



Water-Closet Fixing Covering Caps

- Outer Ø 20 mm
- Inner Ø 18 mm
- Height 8 mm

Article No.	Article Description	QTY
8680 2	WATER-CL. COV. CAPS CHR.-PL.D	100
8680 1	WATER-CL. COV. CAPS WHITE	100



Wash Stand Fixing Kits

Article No.	Article Description	QTY
8675 10 120	WASH ST. FIX.KIT F GAL.10X120	e 25
8675 10 120 1	WASH ST. FIX.KIT GAL.10X120	e 25
8675 10 140	WASH ST. FIX.KIT F GAL.10X140	e 25
8675 10 140 1	WASH ST. FIX.KIT GAL.10X140	e 25
8675 10 160	WASH ST. FIX.KIT F GAL.10X160	e 25
8675 10 160 1	WASH ST. FIX.KIT GAL.10X160	e 25

Contents of kit, 2 pieces each:

- Universal dowel GX Premium, for fixing kit F incl. nylon expansion anchors
- Water-closet collars white for M 10 (36)
- Stair bolts galvanised
- Washers DIN 125 galvanised for M10
- Hexagon nuts 934-8 galvanised 10



Sanitary Wrench Universal

- The multifunctional wrench for quick and individual water closet seat fixing
- Universally processed and usable with both ends:
 - **End A:** wrench fitting more than 11 different wing nuts
 - **End B:** hex nut with 13 mm wrench size
- Rational and time-saving work
- With stable coupling - ideal for „corner solutions“ and every water closet shape



Article No.	Article Description	QTY
8680 10	UNIVERSAL SANITARY WRENCH	1

Control Cabinet Wrench

- Universal key made of zinc diecasting
- With chain, adapter and bit
- For locking systems of the gas, water and electrical supply
- Also for climate and ventilation technology and many others
- Also for common slot and recessed head screws



Article No.	Article Description	QTY
8680 30	CONTROL CAB./DEAERATING WRENCH	1

10-Way Universal Wrench

- Multi-functional wrench for operating closures in the fields of Building Services (heating and sanitary, air-conditioning and ventilation technology, electrics), gas and water supply and shut-off systems
- 8-arm version: 2 cross keys connected together by means of magnets to save space
- Reversible bit: Slotted 1.0 x 7 mm and Philips PH 2
- Wrench and reversible bit are joined by a sturdy stainless steel wire cable
- High quality surface coating
- Weight-optimised die-cast zinc construction



Article No.	Article Description	QTY
8680 10 1	UNIVERSAL 10-FOLD WRENCH	1

Bitting Gauges Universal

- Zinc diecasting
- Universal measuring gauge for versatile fields of application
- Square drive: 6, 7 and 8 mm
- Indicator scale for profile cylinder
- Hexagon head: 3 mm
- External square conical: 7 to 10 mm



Article No.	Article Description	QTY
8680 20	BITTING GAUGE UNIVERSAL	1

Interim Plugs with Brass Thread

- With brass thread and high quality neoprene sealing
- Made of stable plastic material - robust
- fulfilling DIN requirements

Article No.	Article Description	QTY
8692 12	INT. PLUG 1/2" BRASS THR. BLUE	40
8692 12 1	INT. PLUG 1/2" BRASS THR. RED	40
8692 34	INT. PLUG 3/4" BRASS THR. BLUE	40
8692 34 1	INT. PLUG 3/4" BRASS THR. RED	40

(Connection thread inch")



Interim Plugs with Plastic Thread

- With plastic thread and high quality neoprene sealing
- Made of stable plastic material – robust

Article No.	Article Description	QTY
8693 12	INT. PLUG 1/2" PLAST. THR. BLUE	80
8693 12 1	INT. PLUG 1/2" PLAST. THR. RED	80

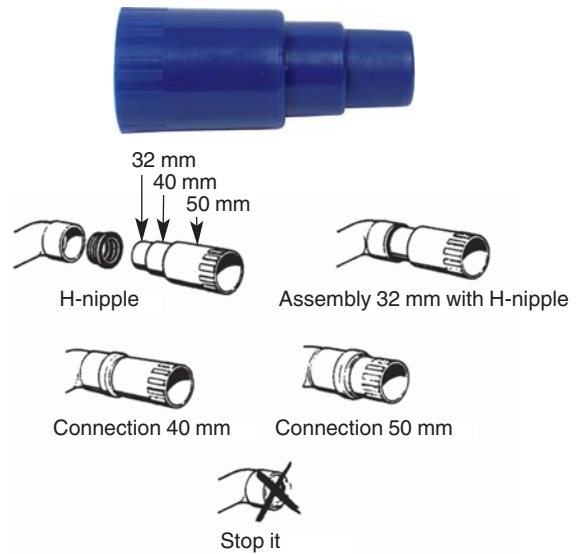
(Connection thread inch")



Interim Plugs Universal

- Universally applicable for discharge pipes NS 32, 40 or 50
- High-quality warp-proof plastic material – gas-tight closure
- No risk of plugging
- Compact type – free space for the assembly of the H nipple without drilling holes

Article No.	Article Description	QTY
8693 1	UNIV. INT. PLUG NS 50/40/32	15



Flexible Ventilation Hose

- **100 % flexible outlet vent connection, hence suitable for all plastic outlet vent models**
- Connection bushing and 100/70 mm reducer made from PVC – impact resistant and break-proof
- Flexible PVC hose with welded-in stainless steel helix – trouble-free production of a double bend
- 100/70 mm reducer – enables all connection variants
- Connection bushing provided with a high quality hose clamp – ensures a secure hold at the outlet vent
- Temperature-resistant from -35 °C to +90 °C
- Waterproof
- Ideal for ventilation and extraction in the air conditioning, sanitary and environmental technology of users such as sanitary and heating fitters, roofers and metal workers
- Length 600 mm
- Extends from 180 to 360 mm

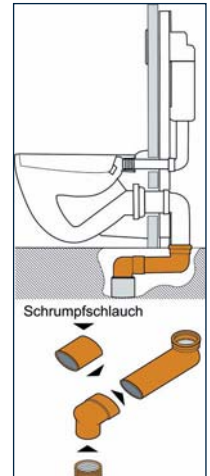
Article No.	Article Description	QTY
8613 180 360	FLEX. VENTILATION HOSE 0,6M	e 8



WC Offset Bend DN 90/110

- For the transition from a floor-standing WC to an on-the-wall installation
- Neat connection between the existing waste water connection and the WC connecting bend of the new wall-mounted WC
- Best for fast modernisation
- Low height of 85 mm – with heat shrink tubing for additional sealing
- With PVC adhesive
- Flexible length – can be set from 15 – 35 cm directly on the building site
- Nap structure for optimum adhesive distribution
- Especially secure hold due to extra deep insertion of 48 mm

Article No.	Article Description	QTY
8705 90 110	WC OFFSET BEND DN 90/110	1



Easy-Fix Pipe Connection System

- Solution for retrospective connection of a waste water pipe to a downpipe
- Can be completely assembled without gluing
- No chiselling and no separating of the downpipe
- Simple installation in just 3 steps
- Also suitable for difficult-to-access assembly locations
- Suitable for PP, PE, PE-HD, cast iron, steel, stainless steel and fibre cement
- For all pipe types up to approx. 5 mm wall thickness
- 57 mm diameter cut-out required
- **Application areas:** Garages, laundries, utility rooms, basements

Article No.	Article Description	QTY
8705 90 40	EASY-FIX 90-40	1
8705 90 50	EASY-FIX 90-50	1
8705 100 40	EASY-FIX 110-40	1
8705 100 50	EASY-FIX 110-50	1
8705 125 40	EASY-FIX 125-40	1
8705 125 50	EASY-FIX 125-50	1

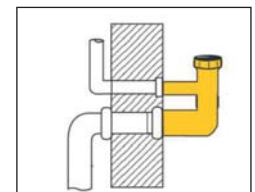
(Ø waste water pipe – Ø Easy-Fix connection)



Prüffix Waste Water Testing System

- Multi-function tool for checking the sealing of on-the-wall systems in accordance with DIN 1986-3
- The Prüffix allows a connection to be made between the cistern outlet pipe and the waste water pipe. The flushing procedure can be initiated through this connection and the sealing of the system can be checked
- A funnel can be placed on the connected Prüffix to discharge the site water and the dirty water
- The distance between the cistern pipe and the waste water pipe can be fixed
- Can be used as a template if there is plasterboard cladding

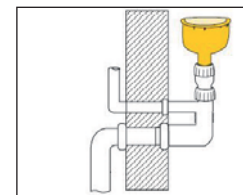
Article No.	Article Description	QTY
8705 1 1	WASTE WATER TEST.SYS. PRÜFFIX	1



Funnel Attachment for Prüffix

- Can be used in conjunction with Prüffix Art. No. 8705 1 1 for drainage purposes, e.g., of site water or dirty water
- With plastic wedge ring

Article No.	Article Description	QTY
8705 1 2	FUNNEL ATTACHMENT FOR PRÜFFIX	1



Strap Vario

- Patented hole system, 3 differently shaped holes
 - Applicable for any pipe system
 - Appropriate for all installation plates with 40 mm offset
- Universally applicable for all applications, e.g. rails to be mounted at the front of the wall, suspension rails, etc. to mount pairs of pipes one beneath another or canted as a console as well as to mount heating circuit distributors, etc.
 - Cost-efficient, safe, easy, rapid
 - Independent and adaptable on-site without expensive special tools
- Hot-dip galvanized – improved corrosion protection

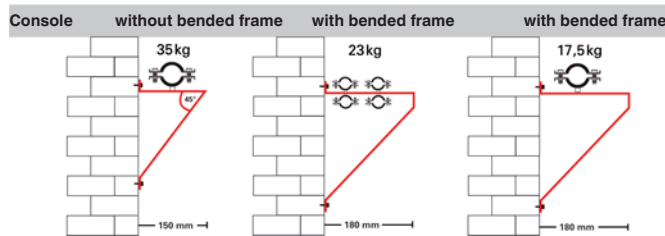


Example of load:

Ceiling mount l = 250 mm of different load distribution



Ceiling mount l = 300 mm of different load distribution



The displayed loads are only exemplary. Due to the universal mounting options deviating dimensions and canting angles are resulting which inevitably lead to other loads.



Article No.	Article Description	QTY
8695 50 3	MTR. STRAP 2000X50X3	w 100

(length x width x thickness in mm)

Installation Basic Equipment

- Complete installation kit – mobile applicable
- In a handy case

Article No.	Article Description	QTY
8695 4	INSTALLATION BASIC EQUIPMENT	1

Delivery volume:

- 1x Metal case
- 1x Bending tongs for rails
- 1x Fixing plate
- 1x Noise separator
- 1x Basic assortment of screws



Sound-Shield

- Sound insulation of ceiling and connection angles on the installation rail or for direct mounting – considerable noise reduction with only one system part
- Tested and approved by the Fraunhofer-Institut für Bauphysik (Fraunhofer Institute for Building physics)

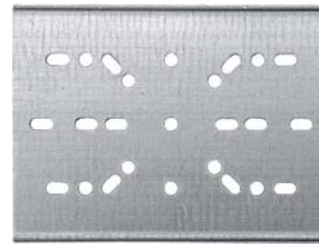
Article No.	Article Description	QTY
8695 3	SOUND-SHIELD	20



Backing Plate

- Fixture of installation plates and fittings of all pipe systems – efficient, torsion-free and centered fixture on the installation strap
- Hot-dip galvanized – improved corrosion protection

Article No.	Article Description	QTY
8695 1	BACKING PL. HOT-DIP GAL.	50



Bending Tongs for Rails

- High-quality bending tongs for rails – manufacturing of any installation rail construction

Article No.	Article Description	QTY
8695 2	BENDING TONGS FOR RAILS	1



Protection and Sound-Cap

- The protection and sound-cap is appropriate for all 1/2" connections, which can be centrally mounted on the sound-shield
- No need to spend time filling gaps

Article No.	Article Description	QTY
8695 5	PROTECTION AND SOUND-CAP	20



Single Rosette, White

- For pipe penetrations in walls, floors and ceilings
- Quick and easy to fit thanks to the safety clip fastener
- **Material:** Polypropylene
- **Colour:** White RAL 9016



Article No.	Article Description	QTY
8681 1 12	SINGLE ROSETTE WHITE 12MM	100
8681 1 15	SINGLE ROSETTE WHITE 15MM	100
8681 1 16	SINGLE ROSETTE WHITE 16MM	100
8681 1 18	SINGLE ROSETTE WHITE 18MM	100
8681 1 22	SINGLE ROSETTE WHITE 22MM	100
8681 1 28	SINGLE ROSETTE WHITE 28MM	50
8681 1 35	SINGLE ROSETTE WHITE 35MM	50

Technical Data		
Art. No.	External Ø mm	Height mm
8681 1 12	40	11
8681 1 15	49	11
8681 1 16	49	11
8681 1 18	49	11
8681 1 22	55	11
8681 1 28	65	11
8681 1 35	70	11

Double Rosette, White

- For pipe penetrations for Ventil Compact radiators in walls, floors and ceilings
- Quick and easy to fit thanks to the safety clip fastener
- **Material:** Polypropylene
- **Colour:** White RAL 9016

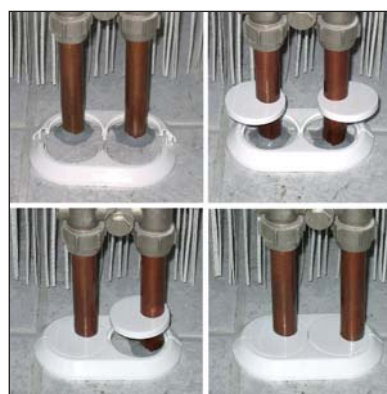


Article No.	Article Description	QTY
8681 2 12	DOUBLE ROSETTE WHITE 12MM	50
8681 2 15	DOUBLE ROSETTE WHITE 15MM	50
8681 2 16	DOUBLE ROSETTE WHITE 16MM	50
8681 2 18	DOUBLE ROSETTE WHITE 18MM	50
8681 2 21	DOUBLE ROSETTE WHITE 21.3MM	50

Technical Data				
Art. No.	Length mm	Width mm	Height mm	Pipe spacing mm
8681 2 12	95	50	7	50
8681 2 15	95	50	7	50
8681 2 16	95	50	7	50
8681 2 18	95	50	7	50
8681 2 21	95	50	7	50

Double Rosette Vario

- Variable double rosette with pipe spacing adjustable from 20–70 mm (centre/centre)
- 2-part for retrospective fitting
- **Material:** Polypropylene
- **Colour:** White RAL 9016

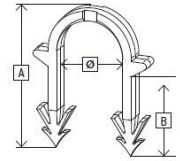


Technical Data			
Art. No.	Length mm	Width mm	Height mm
8681 3 15	113	69	12
8681 3 18	113	69	12
8681 3 22	113	69	12

Article No.	Article Description	QTY
8681 3 15	DOUBLE ROSETTE VARIO WHITE 15MM	50
8681 3 18	DOUBLE ROSETTE VARIO WHITE 18MM	50
8681 3 22	DOUBLE ROSETTE VARIO WHITE 22MM	50

Staples for Fastening Underfloor Heating Pipes

- Staples for Fastening Underfloor Heating Pipes
- Pipe diameters 15 – 20 mm
- Magazine strips held together with adhesive tape: Art. No. 8635 40, Art. No. 8635 50
- Heat-welded version prevents contamination and consequent jamming in the stapler: Art. No. 8635 40 1, Art. No. 8635 50 1



Art. No. 8635 40:

- With adhesive tape
- Height A: 40 mm
- Height B: 32 mm
- Pipe diameter: 15 – 20 mm
- 300 pcs. per carton

Art. No. 8635 50:

- With adhesive tape
- Height A: 50 mm
- Height B: 32 mm
- Pipe diameter: 15 – 20 mm
- 250 pcs. per carton

Art. No. 8635 40 1:

- Heat-welded
- Height A: 40 mm
- Height B: 32 mm
- Pipe diameter: 15 – 20 mm
- 300 pcs. per carton

Art. No. 8635 50 1:

- Heat-welded
- Height A: 50 mm
- Height B: 32 mm
- Pipe diameter: 15 – 20 mm
- 250 pcs. per carton



Article No.	Article Description	QTY
8635 40	CT(300)STAPLE 40MM	1
8635 50	CT(250)STAPLE 50MM	1
8635 40 1	CT(300)STAPLE 40MM HEAT-WELDED	1
8635 50 1	CT(250)STAPLE 50MM HEAT-WELDED	1

Clamping Rail with Mounting Spike

- Clamping rail need only be firmly pressed into the floor
- Installation without staple guns, etc.
- Pipe diameter: 16 – 22 mm
- Length: 1 m
- 100 pcs. per carton

Article No.	Article Description	QTY
8635 100	CT(100)CLA.RAIL W.MOUNT.SPIKE	1



Pipe Guide Bend

- Open diverter pipe for safe and damage-free redirection of heating pipes in the manifold area

Art. No. 8635 1012:

- Pipe diameter: 10 – 12 mm
- 50 pcs. per carton

Art. No. 8635 1418:

- Pipe diameter: 14 – 18 mm
- 25 pcs. per carton

Art. No. 8635 2022:

- Pipe diameter: 20 – 22 mm
- 25 pcs. per carton

Article No.	Article Description	QTY
8635 1012	CT(50)GUIDE BEND 10-12MM	1
8635 1418	CT(25)GUIDE BEND 14-18MM	1
8635 2022	CT(25)GUIDE BEND 20-22MM	1



Aluminium Staple Gun

- Staple gun for fastening underfloor heating pipes
- Convenient operation
- With service flap for easy cleaning and removal of jammed staples
- Additional weight for smooth feeding of the staples
- Optimum height for upright, back-friendly operation
- Smooth-running mechanism
- Can be adapted to the gauge of the staples by means of an Allen screw
- Long-life aluminium housing
- Height: 1,000 mm
- Possible staple sizes: 40 mm / 50 mm / 57 mm
- Min. insulation thickness: 25 mm / 30 mm / 50 mm
- Weight: 2.4 kg

Article No.	Article Description	QTY
8635 1000	METAL STAPLE GUN	1



Plastic Staple Gun

- Staple gun for fastening underfloor pipes
- Convenient operation due to low weight
- Additional weight for smooth feeding of the staples
- Optimum height for upright, back-friendly operation
- Smooth-running mechanism
- Can be adapted to the gauge of the staples by means of an Allen screw
- Height: 920 mm
- Possible staple sizes: 40 mm / 50 mm
- Min. insulation thickness: 25 mm / 30 mm
- Weight: 1.6 kg

Article No.	Article Description	QTY
8635 920	PLASTIC STAPLE GUN	1



Pipe Decoiler, Low, with Telescopic Arms

- For professional uncoiling of underfloor heating pipes
- Especially flexible thanks to extendible telescopic arms
- For a length of pipe with a maximum diameter of 16 mm: 600 m; diameter 18 mm: 400 m; diameter 20 mm: 300 m
- Height from floor to arms: 16 cm
- Outside diameter adjustable from 1,140 – 1,440 mm
- Ring height settable from 38 cm to 63 cm
- Minimum inside diameter of the pipe coil: 36 cm
- Maximum outside diameter of the pipe coil: 112 cm
- **Galvanised steel**
- Weight: 18.3 kg



Article No.	Article Description	QTY
8635 166	PIPE DECOILER LOW	1

Pipe Decoiler, High

- For professional uncoiling of underfloor heating pipes
- Convenient replenishment of the coils thanks to a comfortable working height
- For a length of pipe with a maximum diameter of 16 mm: 600 m; diameter 18 mm: 400 m; diameter 20 mm: 300 m
- Height from floor to arms: 49 cm
- Ring height settable from: 38 cm to 63 cm
- Minimum inside diameter of the pipe coil: 36 cm
- Maximum outside diameter of the pipe coil: 112 cm
- **Galvanised steel**
- Weight: 16.8 kg



Article No.	Article Description	QTY
8635 488	PIPE DECOILER HIGH	1

Product Selection Aid for Fire Protection Products*

All products must be installed according to the proof of usability / approval.

Product illustration	Product / bulkhead type	Art. No.	Cable bulk-heading	Pipe bulk-heading	Combo bulk-heading	Ceiling / concrete	Massive wall	Light partition wall	Verifiability	Individual cable / pipe opening acc. to MLAR
	Fire Protection Foam 2K NE	6990 2 380	yes	yes	yes	yes	yes	yes with jamb	yes	no
	Firestop Foam Block 200 NE	8740 3 200 1	yes	yes	yes	yes	yes	yes with jamb	yes	no
	Firestop Foam Block 120 BDS-N	8740 3 120	yes	no	no	yes	yes	yes with jamb	yes	no
	Firestop Foam Block 170 BDS-N	8740 3 170	yes	yes	yes	yes	yes	yes with jamb	yes	no
	Firestop Foam Block 200 BDS-N	8740 3 200	yes	yes	yes	yes	yes	yes with jamb	yes	no
	Fire Protection Panel BDS-N	8740 625 500	yes	yes	yes	yes	yes	yes	yes	no
	Fire Protection Plug DoBo	8740 2 75 ...	yes	no	no	yes	yes	yes	yes	no
	Fire Protection Plug BDS	8740 1 65 ...	yes	yes	yes	yes	yes	no	yes	no
	Fire Protection Plug NE	8740 1 65 1 ...	yes	no	no	yes	yes	no	yes	no
	Cable Box BDS	8740 8 200	yes	no	no	yes	yes	yes	yes	no
	Fire Barrier Compound 1K	6990 2 310	yes	no	no	yes	yes	yes with jamb	no	yes
	Fire Protection Compound NE	6990 7 310	yes	no	no	yes	yes	yes without jamb	yes	no
	Fire Resistant Silicone NE	8740 7 310	yes	no	no	yes	yes	yes	no	no
	Novasit BM Fire Protection Compound	6990 4 10 ...	yes	yes	yes	yes	yes	yes with jamb	no	no
	Fire Protection Mortar VGM	6990 4 30	no	yes	no	yes	yes	no	no	no
	Cable Tube Set	8740 8 150 ...	yes	no	no	yes	yes	yes without jamb	yes	no
	Fire Protection Cushion Bio Bag	8740 5 1 ...	yes	no	no	yes	yes	yes with jamb	yes	no

Product Selection Aid for Fire Protection Products*

All products must be installed according to the proof of usability / approval.

Product illustration	Product / bulkhead type	Art. No.	Cable bulk-heading	Pipe bulk-heading	Combo bulk-heading	Ceiling / concrete	Massive wall	Light partition wall	Verifiability	Individual cable / pipe opening acc. to MLAR
	Fire Protection Fabric for Cables	8740 6 22 1	encapsulation of cables	no	no	no	no	no	yes	no
	Coated Mineral Fibreboard	6990 10 50 1 ...	yes	yes	yes	yes	yes	yes possibly with jamb	yes	no
	Pipe Bulkheading Konfix Pro	8740 4 50 ...	no	yes	no	partially	no	no	no	no
	DG-Schott Starter Kit	6990 5 122	no	no	no	yes	yes	no	no	yes
	Fire Protection Mat DG-CR SK	6990 5 375	no	no	no	yes	yes	no	no	yes
	Fire Barrier Compound DG-SC	6990 5 310	no	no	no	yes	yes	no	no	yes
	Fire-Stop Filler DX	6990 3 310	yes	no	no	yes	yes	no	no	yes
	Conlit 150u Pipe Clamp	8732 10 250 ...	no	yes	no	yes	yes	yes	no	yes
	Pipe Collar UNIFOX	8734 32 ...	no	yes	no	yes	yes	yes	no	no
	Pipe Collar UNIFOX plus	8734 1 32 ...	no	yes	no	yes	yes	yes	no	no
	Pipe Collar TOPFOX	8734 2 40 ...	no	yes	no	yes	yes	yes	no	no
	ZZ Collar Type ES	8734 3 32 ...	no	yes	no	yes	yes	yes	no	no
	ZZ Collar Type AS	8734 4 032 ...	no	yes	no	yes	yes	yes	no	no
	ZZ Fire Protective Collar NE	8734 3 032 ...	no	yes	no	yes	yes	yes	no	no

*** Disclaimer**

Theo FörcH GmbH & Co. KG accepts no liability for and gives no guarantee of the completeness, correctness and currency of the specifications in this product selection aid. These specifications are for the purpose of general customer information only and do not replace a thorough individual consultation with the customer. In case of ambiguities, the customer must consult the relevant approvals, customer information and a fire protection expert.

Conlit 150u Pipe Clamp

Fire-protection pipe clamp suited for the production of pipe bulkheads for flammable pipes, non-flammable pipes and flammable gas pipes

Properties:

- Non-flammable
- Easy to process
- Vibration isolated
- Thermally insulating
- Steam barrier
- Dimensionally stable
- Recyclable

Certificates of usability:

Bulkheading of non-flammable pipelines

- P-3725/4130 MPA-BS

Bulkheading of flammable pipelines

- P-3726/4140 MPA-BS

Bulkheading of flammable gas lines

- Z-19.17-1964



Sanitary



Article No.	Article Description	QTY
8732 10 250	CONLIT 150U CLAMP 10/25,0	e 42
8732 14 230	CONLIT 150U CLAMP 14/23,0	e 42
8732 15 225	CONLIT 150U CLAMP 15/22,5	e 42
8732 16 220	CONLIT 150U CLAMP 16/22,0	e 42
8732 17 215	CONLIT 150U CLAMP 17/21,5	e 42
8732 18 210	CONLIT 150U CLAMP 18/21,0	e 42
8732 20 200	CONLIT 150U CLAMP 20/20,0	e 42
8732 21 195	CONLIT 150U CLAMP 21/19,5	e 42
8732 22 190	CONLIT 150U CLAMP 22/19,0	e 42
8732 25 175	CONLIT 150U CLAMP 25/17,5	e 42
8732 26 170	CONLIT 150U CLAMP 26/17,0	e 42
8732 27 165	CONLIT 150U CLAMP 27/16,5	e 42
8732 28 260	CONLIT 150U CLAMP 28/26,0	e 20
8732 32 240	CONLIT 150U CLAMP 32/24,0	e 20
8732 35 225	CONLIT 150U CLAMP 35/22,5	e 20
8732 42 190	CONLIT 150U CLAMP 42/19,0	e 20
8732 42 290	CONLIT 150U CLAMP 42/29,0	e 14
8732 48 260	CONLIT 150U CLAMP 48/26,0	e 14
8732 54 380	CONLIT 150U CLAMP 54/38,0	e 9
8732 58 360	CONLIT 150U CLAMP 58/36,0	e 9
8732 60 350	CONLIT 150U CLAMP 60/35,0	e 9
8732 64 330	CONLIT 150U CLAMP 64/33,0	e 9
8732 64 580	CONLIT 150U CLAMP 64/58,0	e 4
8732 75 525	CONLIT 150U CLAMP 75/52,5	e 4
8732 76 370	CONLIT 150U CLAMP 76/37,0	e 5

Article No.	Article Description	QTY
8732 76 520	CONLIT 150U CLAMP 76/52,0	e 4
8732 78 360	CONLIT 150U CLAMP 78/36,0	e 5
8732 83 335	CONLIT 150U CLAMP 83/33,5	e 5
8732 89 305	CONLIT 150U CLAMP 89/30,5	e 5
8732 89 655	CONLIT 150U CLAMP 89/65,5	e 2
8732 102 390	CONLIT 150U CLAMP 102/39,0	e 4
8732 108 360	CONLIT 150U CLAMP 108/36,0	e 4
8732 108 710	CONLIT 150U CLAMP 108/71,0	1
8732 110 350	CONLIT 150U CLAMP 110/35,0	e 4
8732 114 330	CONLIT 150U CLAMP 114/33,0	e 4
8732 114 680	CONLIT 150U CLAMP 114/68,0	1
8732 135 425	CONLIT 150U CLAMP 135/42,5	e 2
8732 159 305	CONLIT 150U CLAMP 159/30,5	e 2
8732 169 405	CONLIT 150U CLAMP 169/40,5	1
8732 169 780	CONLIT 150U CLAMP 169/78,0	1
8732 210 400	CONLIT 150U CLAMP 210/40,0	1
8732 210 600	CONLIT 150U CLAMP 210/60,0	1
8732 219 400	CONLIT 150U CLAMP 219/40,0	1
8732 219 600	CONLIT 150U CLAMP 219/60,0	1
8732 253 400	CONLIT 150U CLAMP 253/40,0	1
8732 273 600	CONLIT 150U CLAMP 273/60,0	1
8732 274 400	CONLIT 150U CLAMP 274/40,0	1
8732 324 400	CONLIT 150U CLAMP 324/40,0	1
8732 326 400	CONLIT 150U CLAMP 326/40,0	1

Internal diameter / insulation thickness in mm

Mineral Wool Pipe Jacket Type Rockwool 800

- Concentrically wound mineral wool
- Provided with high strength, mesh reinforced aluminium foil and self-adhesive overlapping, slit along one side and sawn at the inner wall
- Ideal as an effective moisture barrier in the aluminium clad version
- Resistant to compression and dimensionally stable
- Suitable for solar installations
- Can be used universally for heating insulation and structure-borne sound insulation
- Length supplied: 1 m
- Usage according to approval: Z-23.14-1114



Article No.	Article Description	QTY
8727 4 20 15	MTR.MIN-JACKET 100 1/4" 20/15	48
8727 4 20 18	MTR.MIN-JACKET 100 3/8" 20/18	42
8727 4 20 22	MTR.MIN-JACKET 100 1/2" 20/22	36
8727 4 20 28	MTR.MIN-JACKET 100 3/4" 20/28	30
8727 4 30 22	MTR.MIN-JACKET 100 1/2" 30/22	20
8727 4 30 28	MTR.MIN-JACKET 100 3/4" 30/28	20
8727 4 30 35	MTR.MIN-JACKET 100 1" 30/35	16
8727 4 40 42	MTR.MIN-JACKET 100 1 1/4"40/42	9
8727 4 40 48	MTR.MIN-JACKET 100 1 1/2"40/48	9
8727 4 50 60	MTR.MIN-JACKET 100 2" 50/60	5
8727 4 80 89	MTR.MIN-JACKET 100 80/89	3
8727 4 80 114	MTR.MIN-JACKET 100 80/114	1
8727 4 20 35	MTR.MIN-JACKET 50 1" 20/35	25
8727 4 20 42	MTR.MIN-JACKET 50 20/42	20
8727 4 30 42	MTR.MIN-JACKET 50 1 1/4"30/42	12
8727 4 30 54	MTR.MIN-JACKET 50 30/54	10
8727 4 50 89	MTR.MIN-JACKET 50 50/89	3
8727 4 20 48	MTR.MIN-JACKET 20/48	16
8727 4 20 64	MTR.MIN-JACKET 20/64	12
8727 4 30 89	MTR.MIN-JACKET 30/89	6



(Insulation thickness / pipe Ø
(outer) mm)

Technical Data						
Art. No.	ENEV	Ext. Ø mm (CU)	Nom. size DN (CU)	Nom. size DN (FE)	Ext. Ø mm (FE)	Ext. Ø mm (PP)
8727 4 20 15	100%	15	-	8	13.5	-
8727 4 20 18	100%	18	15	10	17.2	16
8727 4 20 22	100%	22	20	15	21.3	20
8727 4 20 28	100%	28	25	20	26.9	25
8727 4 30 22	100%	22	20	15	21.3	20
8727 4 30 28	100%	28	25	20	26.9	25
8727 4 30 35	100%	35	32	25	33.7	32
8727 4 40 42	100%	42	40	32	42.4	40
8727 4 40 48	100%	-	-	40	48.3	-
8727 4 50 60	100%	-	-	50	60.3	63
8727 4 80 89	100%	89	80	88.9	80	90
8727 4 80 114	100%	-	-	114.3	100	-
8727 4 20 35	50%	35	32	25	33.7	32
8727 4 20 42	50%	42	40	32	42.4	40
8727 4 30 42	50%	42	40	32	42.4	40
8727 4 30 54	50%	54	50	-	54.4	-
8727 4 50 89	50%	89	80	80	88.9	90
8727 4 20 48	-	-	-	40	48.3	-
8727 4 20 64	-	-	-	50	60.3	63
8727 4 30 89	50%	88.9	80	80	88.9	90

- Material: Mineral wool clad with mesh-reinforced aluminium foil
- Thermal conductivity: IR = 0.035 W (m·K) according to ENEV
- Usable temperature range according to ENEV: 250 °C media temperature, surface temperature of the cladding, max. 80 °C
- AS quality: Insulation registration mark in accordance with AGI-Q 135
- Hydrophobic treatment: ≤10 Vol. %; water uptake/hydrophobic according to AGI-Q 136
- Equivalent air layer thickness: d > 100 m
- Fire class: A2 non-flammable according to DIN 4102

Pipe Collar UNIFOX

Universal fire protection collar for walls and ceilings

- Easy to open and close, thanks to toggle fastener
- Universally suitable for the most varied types of pipe
- Can also be attached directly to a pipe sleeve
- Can also be used with synthetic rubber
- The collar can be mounted in two different ways, depending on the local circumstances:
 - Cemented in: The collar is pushed into the opening and then cemented in
 - Fixed with dowels: To fasten, the side anchoring lugs are bent up. The collar is then screwed on to the building element using steel dowels and bolts
- According to the General Building Authority Approval (ABZ), the distance between the fire protection collars can be > 0 mm

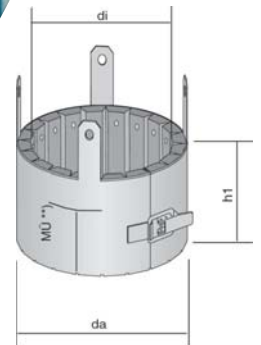
Please note: The UNIFOX 180 and 200 versions may only be installed in walls.

Note on usage:

- Usage according to approval: **Z-19.17-1191**



Sanitary



Article No.	Article Description	QTY
8734 32	PIPE COLLAR UNIFOX 32MM	1
8734 40	PIPE COLLAR UNIFOX 40MM	1
8734 50	PIPE COLLAR UNIFOX 50MM	1
8734 58	PIPE COLLAR UNIFOX 58MM	1
8734 63	PIPE COLLAR UNIFOX 63MM	1
8734 78	PIPE COLLAR UNIFOX 78MM	1
8734 90	PIPE COLLAR UNIFOX 90MM	1
8734 110	PIPE COLLAR UNIFOX 110MM	1
8734 125	PIPE COLLAR UNIFOX 125MM	1
8734 135	PIPE COLLAR UNIFOX 135MM	1
8734 160	PIPE COLLAR UNIFOX 160MM	1
8734 180	PIPE COLLAR UNIFOX 180MM	1
8734 200	PIPE COLLAR UNIFOX 200MM	1

Delivery includes:

- 1x fire protective collar
- 1x identification plate
- 1x installation instructions

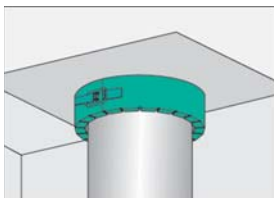
Technical Data

Art. No.	Pipe external			h1	LA*	MÜ*	Pipe external		
	Ø	da	di				Ø in mm (cemented in)	Ø in mm (fixed w. dowels)	Ø in mm KB***
8734 32	32	48	37	50	3	35	0 – 37	0 – 37	80
8734 40	40	53	42	50	3	35	38 – 42	0 – 42	80
8734 50	50	62	51	50	3	35	43 – 51	0 – 51	90
8734 58	58	72	61	50	3	35	52 – 61	38 – 61	100
8734 63	63	77	66	50	3	35	62 – 66	43 – 66	110
8734 78	78	102	81	80	4	55	67 – 81	52 – 81	130
8734 90	90	115	94	80	4	55	82 – 94	62 – 94	140
8734 110	110	134	113	80	4	55	95 – 113	67 – 113	160
8734 125	125	160	128	80	5	60	114 – 125	114 – 125	200
8734 135	135	166	135	80	5	60	126 – 135	114 – 135	210
8734 160	160	191	160	80	6	60	136 – 160	136 – 160	225
8734 180	180	216	185	80	6	60	161 – 180	161 – 180	250
8734 200	200	237	205	80	7	60	181 – 200	161 – 200	270

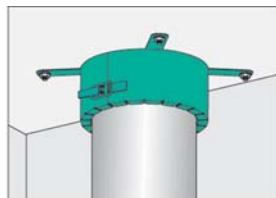
* LA = number of fixing lugs / number of bolt anchors or threaded studs

** MÜ = required overlap

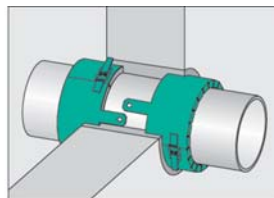
*** KB = recommended diameter for core holes



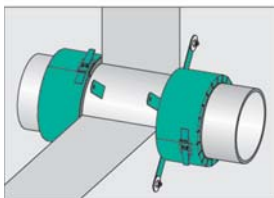
Solid ceiling cemented in



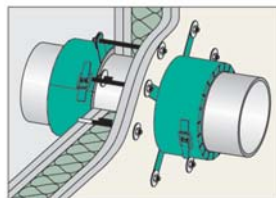
Solid ceiling fixed with dowels



Solid wall cemented in



Solid wall fixed with dowels



Light partition wall screwed on

Pipe Collar UNIFOX plus

Special fire protective collar for soundproofed pipes

- Easy to open and close, thanks to toggle fastener
- Supplied with a 4 mm soundproofing strip
- Can also be attached directly to a pipe sleeve
- The collar can be mounted in two different ways, depending on the local circumstances:
 - Cemented in: The collar is pushed into the opening and then cemented in
 - Fixed with dowels: To fasten, the side anchoring lugs are bent up. The collar is then screwed on to the building element using steel dowels and bolts
- Effective decoupling of structure-borne sound thanks to soundproofing strip between the pipe and the collar
- In addition to fire protection, also takes account of soundproofing (especially necessary for hotels, hospitals and other public buildings)

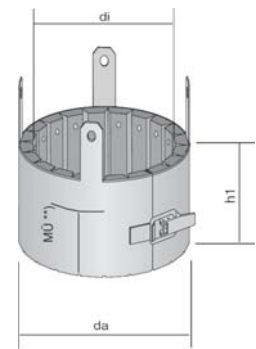
Please note: The UNIFOX plus 180 and 200 versions may only be installed in walls.

Note on usage:

- Usage according to approval: Z-19.17-1191



Sanitary



Article No.	Article Description	QTY
8734 1 32	PIPE COLLAR UNIFOX+ 32MM	1
8734 1 40	PIPE COLLAR UNIFOX+ 40MM	1
8734 1 50	PIPE COLLAR UNIFOX+ 50MM	1
8734 1 58	PIPE COLLAR UNIFOX+ 58MM	1
8734 1 63	PIPE COLLAR UNIFOX+ 63MM	1
8734 1 78	PIPE COLLAR UNIFOX+ 78MM	1
8734 1 90	PIPE COLLAR UNIFOX+ 90MM	1
8734 1 110	PIPE COLLAR UNIFOX+ 110MM	1
8734 1 125	PIPE COLLAR UNIFOX+ 125MM	1
8734 1 135	PIPE COLLAR UNIFOX+ 135MM	1
8734 1 160	PIPE COLLAR UNIFOX+ 160MM	1
8734 1 180	PIPE COLLAR UNIFOX+ 180MM	1
8734 1 200	PIPE COLLAR UNIFOX+ 200MM	1

Delivery includes:

- 1x fire protective collar
- 1x noise-insulating strip
- 1x identification plate
- 1x installation instructions

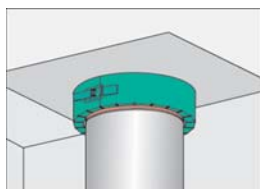
Technical Data

Art. No.	Pipe external			h1	LA*	MÜ*	Pipe external		
	Ø in mm	da in mm	di in mm				Ø in mm (cemented in)	Ø in mm (fixed w. dowels)	Ø in mm KB***
8734 1 32	32	53	42	50	3	35	0 - 37	0 - 37	80
8734 1 40	40	62	51	50	3	35	38 - 42	0 - 42	80
8734 1 50	50	72	61	50	3	35	43 - 51	0 - 51	90
8734 1 58	58	77	66	50	3	35	52 - 61	38 - 61	100
8734 1 63	63	83	72	50	3	35	62 - 66	43 - 66	110
8734 1 78	78	109	87	80	4	55	67 - 81	52 - 81	130
8734 1 90	90	121	100	80	4	55	82 - 94	62 - 94	140
8734 1 110	110	140	119	80	4	55	95 - 113	67 - 113	160
8734 1 125	125	166	134	80	5	60	114 - 125	114 - 125	200
8734 1 135	135	175	144	80	5	60	126 - 135	114 - 135	210
8734 1 160	160	198	167	80	6	60	136 - 160	136 - 160	225
8734 1 180	180	223	192	80	6	60	161 - 180	161 - 180	250
8734 1 200	200	242	210	80	7	60	181 - 200	161 - 200	270

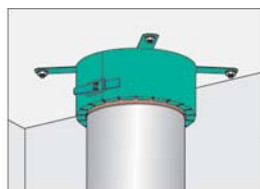
* LA = number of fixing lugs / number of bolt anchors or threaded studs

** MÜ = required overlap

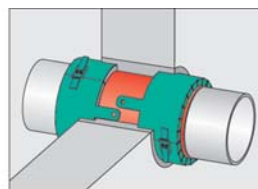
*** KB = recommended diameter for core holes



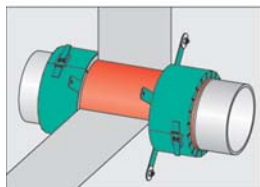
Solid ceiling cemented in



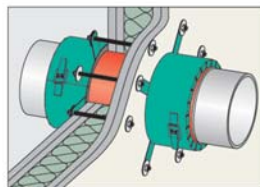
Solid ceiling fixed with dowels



Solid wall cemented in



Solid wall fixed with dowels



Light partition wall screwed on

Pipe Collar TOPFOX

Compact fire protective collar with soundproofing

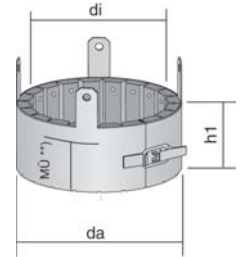
- Designed exclusively for certain soundproofed pipe groups
- Light and compact fire protective collar
- Quick to open and close, thanks to toggle fastener
- The collar can be mounted in two different ways, depending on the local circumstances:
 - Cemented in: The collar is pushed into the opening and then cemented in
 - Fixed with dowels: To fasten, the side anchoring lugs are bent up. The collar is then screwed on to the building element using steel dowels and bolts
- The delivery includes a noise-insulating strip which ensures effective decoupling of structure-borne sound between the collar and the pipe

Note on usage:

- Usage according to approval: **Z-19.17-1364**



Sanitary



Article No.	Article Description	QTY
8734 2 40	PIPE COLLAR TOPFOX 40MM	1
8734 2 50	PIPE COLLAR TOPFOX 50MM	1
8734 2 58	PIPE COLLAR TOPFOX 58MM	1
8734 2 63	PIPE COLLAR TOPFOX 63MM	1
8734 2 78	PIPE COLLAR TOPFOX 78MM	1
8734 2 90	PIPE COLLAR TOPFOX 90MM	1
8734 2 110	PIPE COLLAR TOPFOX 110MM	1
8734 2 125	PIPE COLLAR TOPFOX 125MM	1
8734 2 135	PIPE COLLAR TOPFOX 135MM	1
8734 2 160	PIPE COLLAR TOPFOX 160MM	1

Delivery includes:

- 1x fire protective collar
- 1x noise-insulating strip
- 1x identification plate
- 1x installation instructions

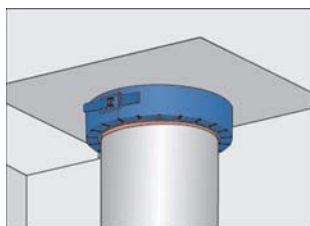
Technical Data

Art. No.	Pipe external			h1	LA*	MÜ**	KB***
	Ø	da	di				
	in mm	in mm	in mm	in mm			
8734 2 40	40	62	61	35	3	10-20	90
8734 2 50	50	72	61	35	3	10-20	100
8734 2 58	58	77	66	35	3	10-20	110
8734 2 63	63	81	70	35	3	10-20	110
8734 2 78	78	108	87	50	4	20-40	140
8734 2 90	90	121	100	50	4	20-40	150
8734 2 110	110	140	118	50	4	10-40	170
8734 2 125	125	166	134	60	5	50	210
8734 2 135	135	175	143	60	5	50	220
8734 2 160	160	199	167	60	6	60	250

* LA = number of fixing lugs / number of bolt anchors or threaded studs

** MÜ = required overlap

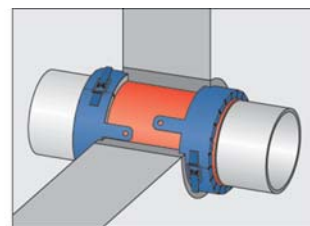
*** KB = recommended diameter for core holes



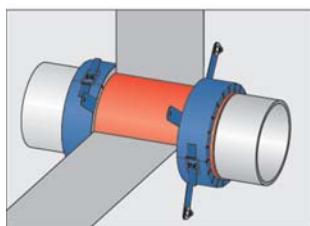
Solid ceiling cemented in



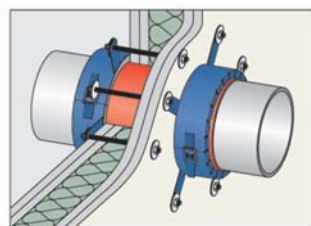
Solid ceiling fixed with dowels



Solid wall cemented in



Solid wall fixed with dowels



Light partition wall screwed on

FOX Identification Plate

Identification plate for all FOX pipe collars

- For approved labelling of pipe bulkheads

Article No.	Article Description	QTY
8734 1	FOX IDENTIFICATION PLATE	e 10



DG-Schott Starter Kit

Innovative starter kit for bulkheading cables, electrical conduits and combustible and non-combustible pipes

- Can be used as individual bulkheading for cables, empty conduits and for combustible and non-combustible pipes
- Simplest assembly
- Clean, easy handling
- Consists of the following 3 components:
 - Fire protection fabric (glass filament fabric) coated on one side with intumescent material, self-adhesive, 0.2 x 1.4 m
 - Fire protection compound in cartridges to be used as a sealant for sealing annular gaps, 2 cartridges
 - Identification plates, 2 pcs.

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete, masonry and plaster walls in building element quality
- Bulkheading for all types of single electrical cable without limits to diameter
- Bulkheading for single plastic electrical conduits and combustible pipes up to a diameter of 32 mm
- Bulkheading for single non-combustible lines up to an outside diameter of 160 mm
- Sufficient for approx. 4 pcs. of DN100 SML pipe

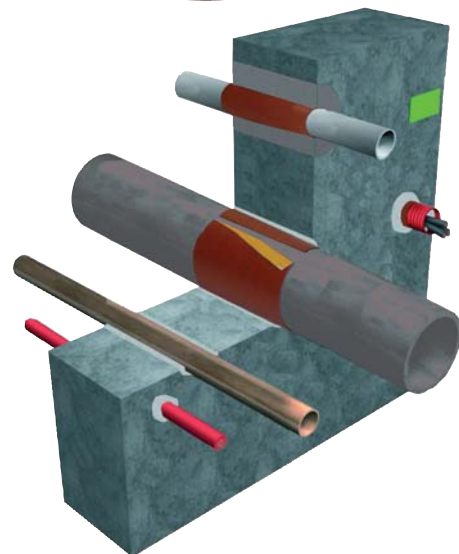
Usage instructions:

- Usage according to approval: **Z-19.11-1917**
- Working temperature: > 5 °C
- Length: 1.40 m

Article No.	Article Description	QTY
6990 5 122	DG-SCHOTT STARTER KIT	1

Delivery includes:

- Fire Protection Mat in roll form, 1.4 x 0.2 m
- 2 x 310 ml cartridges of Fire Protection Compound DG-SC
- 2 identification plates for pipe and cable penetrations



Installation in solid wall

Fire Protection Mat DG-CR SK

Innovative, self-adhesive product for bulkheading cables, electrical conduits and combustible and non-combustible pipes.

- Can be used as individual bulkheading for cables, empty conduits and for combustible and non-combustible pipes.
- Simplest assembly
- Clean, easy handling – fire protection fabric (glass filament fabric) coated on one side with intumescent material

Fields of application:

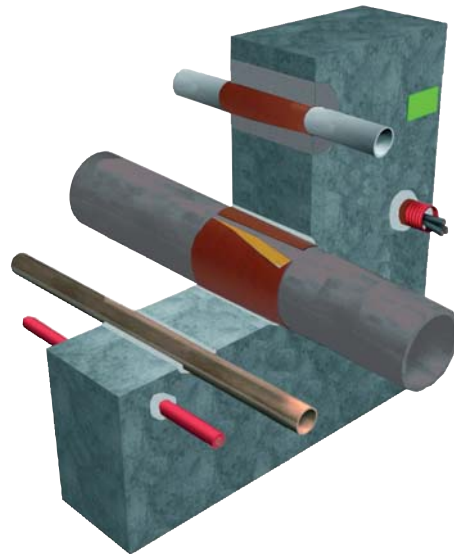
- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete, masonry and plaster walls in building element quality
- Bulkheading for all types of single electrical cable without limits to diameter
- Bulkheading for single plastic electrical conduits, combustible pipes and multilayer composite pipes up to a diameter of 32 mm
- Bulkheading for single non-combustible lines up to a pipe outside diameter of 160 mm
- Dimensions (L x W): 3,750 x 200 mm

Usage instructions:

- Usage according to approval: **Z-19.11-1917**
- Working temperature: > 5 °C



nach MLAR



Installation in a solid wall

Article No.	Article Description	QTY
6990 5 375	DG-CR FIRE PROTECTION MAT	1

Delivery includes:

- Fire Protection Mat in roll form

Fire Barrier Compound DG-SC, Intumescent

Intumescent Fire Barrier Compound for both indoors and outdoors

- Universal
- Dispersion based
- Flexible cartridge material for easy handling
- Very economical due to short assembly times
- Particularly for bulkheads conforming to the Specimen Wiring Systems Directive (MLAR) as well as in the DG-Schott Starter Kit System
- Resistant to moisture, weathering and UV

Fields of application:

- Solid walls and ceilings
- Building authority approved cable, pipe and combination bulkheads

Usage instructions:

- Usage according to approval: **Z-19.11-1917**
- The surface must be dry and free from dust and grease
- To apply, press from the cartridge and fill



6990 5 310

Front side



Rear side



6990 99 3



nach MLAR

Article No.	Article Description	QTY
6990 5 310	DG-SC INTUMESCENT COMPOUND	e 12
6990 99 3	LABEL B	10

ZZ Collar Type ES

Inserted fire protective collar for bulkheading combustible pipes up to a diameter of 160 mm in walls and ceilings

Approved installations:

- Combustible pipe with an outside diameter up to 160 mm and a wall thickness of 1.8 mm to 14.6 mm (see approval for pipe diagrams)
- Combustible pipe for pipe installations for non-combustible or combustible liquids or gases (with the exception of ventilation pipes), for pneumatic tube systems (transmission tubes) or for dust extraction pipes
- Thermoplastic pipes made of PVC-U, PVC-HI, PVC-C, PP, PEHD, LDPE, ABS, ASA, PE-X, PB
- Beverage hoses consisting of bundled PE hoses with synthetic rubber insulation – maximum outside diameter of 70 mm

Note on usage:

- Usage according to approval: **Z-19.17-1659**



Sanitary



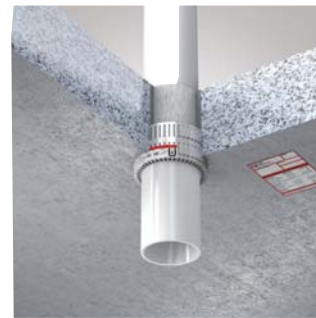
Article No.	Article Description	QTY
8734 3 32	ZZ-COLLAR TYPE ES 0- 32	1
8734 3 40	ZZ-COLLAR TYPE ES 33- 40	1
8734 3 50	ZZ-COLLAR TYPE ES 41- 50	1
8734 3 63	ZZ-COLLAR TYPE ES 51- 63	1
8734 3 75	ZZ-COLLAR TYPE ES 64- 75	1
8734 3 78	ZZ-COLLAR TYPE ES 76- 78	1
8734 3 90	ZZ-COLLAR TYPE ES 79- 90	1
8734 3 110	ZZ-COLLAR TYPE ES 91-110	1
8734 3 125	ZZ-COLLAR TYPE ES 111-125	1
8734 3 135	ZZ-COLLAR TYPE ES 126-135	1
8734 3 140	ZZ-COLLAR TYPE ES 136-140	1
8734 3 160	ZZ-COLLAR TYPE ES 141-160	1



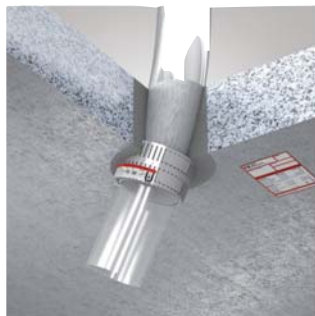
Tilted opening in a solid ceiling



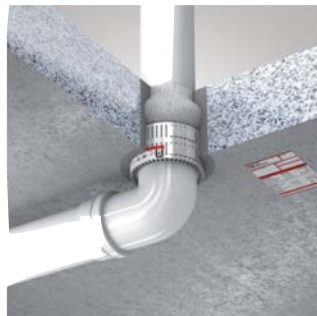
Arrangement with zero distance in a solid ceiling



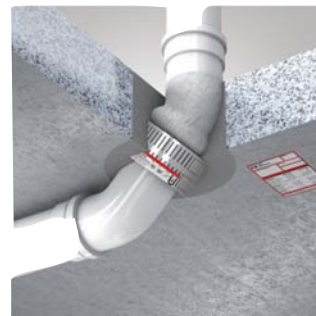
Installation type cemented in a solid ceiling



Opening in a solid ceiling e.g. from pneumatic delivery systems



Installation type cemented in a solid ceiling



Installation type solid ceiling with a 45° tilted opening

ZZ Collar Type AS

Attached fire protective collar for bulkheading combustible pipes up to a diameter of 200 mm in walls and ceilings

Approved installations:

- Combustible pipe with an outside diameter up to 200 mm and a wall thickness of 1.8 mm to 14.6 mm (see approval for pipe diagrams)
- Combustible pipe for pipe installations for non-combustible or combustible liquids or gases (with the exception of ventilation pipes), for pneumatic tube systems (transmission tubes) or for dust extraction pipes.
- Thermoplastic pipes made of PVC-U, PVC-HI, PVC-C, PP, PEHD, LDPE, ABS, ASA, PE-X, PB
- Beverage hoses consisting of bundled PE hoses with synthetic rubber insulation – maximum outside diameter of 70 mm
- Delivery includes fixing material

Note on usage:

- Usage according to approval: **Z-19.17-1659**



Article No.	Article Description	QTY
8734 4 0 32	ZZ-COLLAR TYPE AS 0- 32	1
8734 4 33 40	ZZ-COLLAR TYPE AS 33- 40	1
8734 4 41 50	ZZ-COLLAR TYPE AS 41- 50	1
8734 4 51 63	ZZ-COLLAR TYPE AS 51- 63	1
8734 4 64 75	ZZ-COLLAR TYPE AS 64- 75	1
8734 4 76 78	ZZ-COLLAR TYPE AS 76- 78	1
8734 4 79 90	ZZ-COLLAR TYPE AS 79- 90	1
8734 4 91 110	ZZ-COLLAR TYPE AS 91-110	1
8734 4 126 135	ZZ-COLLAR TYPE AS 126-135	1
8734 4 136 140	ZZ-COLLAR TYPE AS 136-140	1
8734 4 141 160	ZZ-COLLAR TYPE AS 141-160	1
8734 4 161 200	ZZ-COLLAR TYPE AS 161-200	1



Solid ceiling fitted



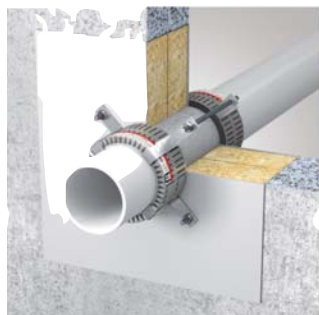
Solid wall fixed with dowels



Solid ceiling cemented in



Solid ceiling fixed with dowels



Light partition wall screwed on



Solid ceiling arranged on a sleeve

ZZ Fire Protective Collar NE

Fire protective collar for bulkheading combustible pipes up to a diameter of 160 mm in walls and ceilings

Approved installations:

- Combustible pipe with an outside diameter up to 160 mm and a wall thickness of 1.8 mm to 14.6 mm (see approval for pipe diagrams)
- Combustible pipe for pipe installations for non-combustible or combustible liquids or gases (with the exception of ventilation pipes), for pneumatic tube systems (transmission tubes) or for dust extraction pipes
- Thermoplastic pipes made of PVC-U, PVC-HI, PVC-C, PP, PEHD, LDPE, ABS, ASA, PE-X, PB

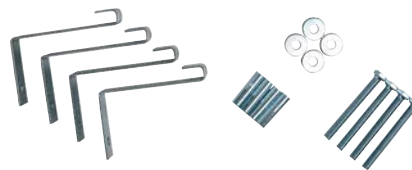
Note on usage:

- Usage according to: **ETA-13/0117**



Sanitary

Article No.	Article Description	QTY
8734 3 0 32	ZZ-FIRE PROT. COLLAR NE 0-32	1
8734 3 33 40	ZZ-FIRE PROT. COLLAR NE 33- 40	1
8734 3 41 110	ZZ-FIRE PROT. COLLAR NE 41-110	1
8734 3 111 160	ZZ-FIRE PROT. COLLAR NE 111-160	1



Solid ceiling fitted



Solid ceiling arrangement with zero distance AS



Solid ceiling arrangement with zero distance AS



Solid ceiling ES on a sleeve



Solid ceiling ES



Solid wall ES

Fire Protection Foam 2K NE



6990 99 380 1

6990 2 380



6990 99 1



6990 2 3801



Electric



Sanitary



Combo

Innovative fire protection foam system with European Technical Approval for cable bulkheads, electrical conduits, combustible and non-combustible pipes – combined use in bulkheads with the Firestop Foam Block 200 NE (Art. No. 8740 3 200 1)

- Fire resistance rating EI90 / EI120
- Can be used as a combination bulkhead and purely as a cable bulkhead
- Easy, economical assembly – no coating necessary
- Clean, easy handling
- High viscosity prevents the material from leaking out
- After curing, the material attains a permanently elastic structure which enables easy rearrangement

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete, masonry and plaster walls, as well as light partition walls, in building element quality
- Bulkheading for all types of electrical cable up to a diameter of 80 mm (including fibre optic cables) apart from waveguide cables
- Bulkheading for individual lines in steel and plastic for control purposes up to a pipe outside diameter of 15 mm
- Bulkheading for electrical conduits up to a pipe outside diameter of 40 mm
- Cable support structures made of steel, aluminium or plastic may be fed through and rest on / against the reveal of the building element
- Combustible pipes with an external diameter up to 50 mm (without additional sleeve)

- Non-combustible pipes made of steel, stainless steel, cast steel or copper with an outside diameter up to 88.9 mm
- Sectional isolation made from mineral fibre matting or jackets can be fed through the bulkhead
- Sectional isolation made from rubber can be fed through the bulkhead

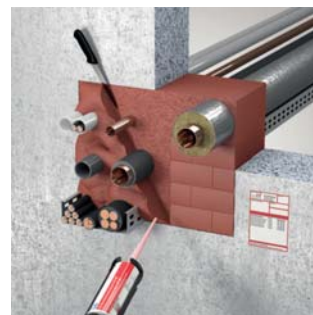
Usage instructions:

- Usage according to: **ETA-11 / 0206**

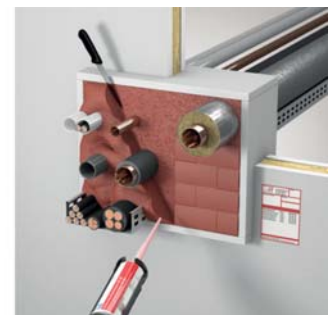
Article No.	Article Description	QTY
6990 2 380	SET 2K-FIRE PROTECT.FOAM 380ML	1
6990 99 1	LABEL FIRE-PROT. FOAM	10
6990 99 380 1	MANUAL CARTRIDGE GUN 380ML	1
6990 2 380 1	2K(380ML)FIRE PROTECT. FOAM NE	1

Contents Art. No. 6990 2 380:

- 6 cartridges of Fire Protection Foam
- 1x formwork tape
- 12x mixing tubes
- 6 pairs of disposable gloves



Installation in a solid wall



Installation in a light partition wall

Cable Tube

Innovative, simple bulkheading system with click fastener for new and existing cable and electrical installation pipe penetrations. The cable tube consists of two half-shells and complies with fire-resistance class EI 30 to EI 120 in accordance with DIN EN 13501-2, depending on the application.

- Simple installation via an opening in the component for cables or electrical installation pipes
- Quick, tidy handling

Fields of application:

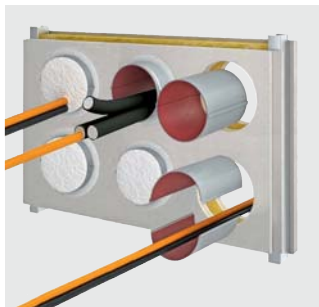
- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete, masonry and plaster walls in building element quality
- Light partition walls
- Bulkheading of plastic electrical installation pipes

Usage instructions:

- Usage according to: ETA-13 / 0821
- Emission rating in accordance with: Z-200.2-43



Electric



Installation in a light partition wall



8740 6 300



8740 6 200



8740 6 150

Article No.	Article Description	QTY
8740 6 150	CABLE TUBE 150	1
8740 6 200	CABLE TUBE 200	1
8740 6 300	CABLE TUBE 300	1

Fire-Stop Filler Flamm A

For universal indoor and outdoor use, with weather-resistant ablation coating for building authority approved cable, pipe and combination bulkheads.

- The endothermic fire protection coating is especially well-suited for sealing large openings and joints, as well as applying extremely thick coatings.
- Suitable for indoor and outdoor use
- Resistant to moisture, UV radiation and various oils and chemicals
- Does not emit any toxic fumes
- Solvent and halogen-free

Article No.	Article Description	QTY
6990 8 310 9	C(310ML)FIRE-STOP FILL.FLAMM A	1



Firestop Foam Block 120 BDS-N

Both temporary and permanent fire bulkheading of electrical cables and lines of all types and diameters

- Soft and flexible moulded foam part
- Very economical due to short assembly times
- Medium and large bulkheads with medium to high occupancy

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete and masonry walls, as well as light partition walls, in building element quality
- Bulkheading for all types and diameters of electrical cable (including fibre optic cables) apart from waveguide cables
- Bulkheading for individual lines in steel and plastic for control purposes up to a pipe outside diameter of 15 mm
- Bulkheading for plastic electrical conduits up to a pipe outside diameter of 20 mm
- Cable support structures in steel, aluminium and plastic may be fed through the bulkheading
- Dimensions (W x H x D): 250 mm x 80 mm x 120 mm

Usage instructions:

- Usage according to approval: **Z-19.15-1743**



8740 3 120

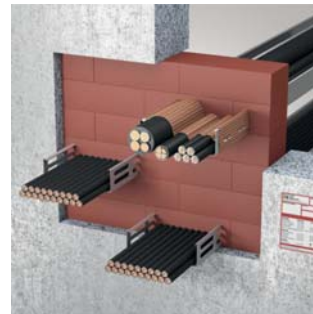


Electric

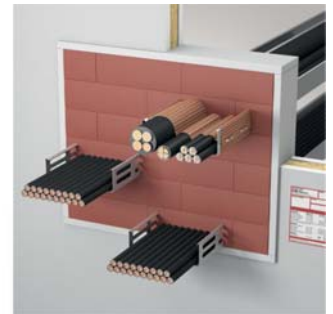
Hersteller der Produkte:		Schott-ID:	
ZAPP ZIMMERMANN GmbH Manswiler 7 B • 82789 Kien Tel. +49 221 87901-0 Fax +49 221 87901-829 www.zapp-zimmermann.de			
Hersteller der Schottung:		Erstellt am:	
Kombischott	DIBt Zul.-Nr.	530 960 990	
ZZ-Platte BDS-N	19.15-1861	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Staene 200 BDS-N	19.15-1182	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Staene 170 BDS-N	19.15-1144	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Stopfen BDS	19.15-1316	<input type="checkbox"/>	<input type="checkbox"/>
<small>Dübel- und einlöcherlöcher ausgeht werden. Die über ausreichende Erhöhung auf System. Diese Verfahren sind in den entsprechenden technischen Parameter werden!</small>			
Kabelschott			
ZZ-Staene 120 BDS-N	19.15-1743	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Doblo BDS	19.15-1318	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Box BDS	19.15-1315	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Brandchutzmasse TK	19.15-1642	<input type="checkbox"/>	<input type="checkbox"/>
Rohrschott		R90	R120
ZZ-Manschette	19.17-1659	<input type="checkbox"/>	<input type="checkbox"/>
<small>Dieses Schott darf nicht beschädigt werden! Beschädigung sind zu machen und müssen fachgerecht ausgebessert werden!</small>			

6990 99 2

Article No.	Article Description	QTY
8740 3 120	FIRESTOP FOAM BLOCK 120 BDS-N	10
6990 99 2	LABEL ZZ	10



Installation in a solid wall



Installation in a light partition wall

Firestop Foam Block 170 BDS-N

Both temporary and permanent fire bulkheading of electrical cables and lines of all types and diameters, as well as combustible and non-combustible pipes

- Soft and flexible moulded foam part
- Very economical due to short assembly times
- Combination with Fire Protection Foam 2K NE for simplified sealing of high occupancy areas, or for contact with the surrounding building element
- Longitudinal (170mm) or transverse (120mm) installation possible (take note of the approval regarding the occupancy) - 42 % more surface area with transverse installation compared with longitudinal installation
- Particularly suitable for:
 - Bulkheads with mixed installations of cables and pipes
 - Bulkheads with frequently changing occupancy
 - Medium and large bulkheads with medium to high occupancy

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete and masonry walls, as well as light partition walls, in building element quality
- Bulkheading for all types and diameters of electrical cable (including fibre optic cables) apart from waveguide cables
- Bulkheading for individual lines in steel and plastic for control purposes up to a pipe outside diameter of 15 mm
- Bulkheading for plastic electrical conduits up to a pipe outside diameter of 20 mm
- Cable support structures in steel, aluminium and plastic
- Combustible pipes made of thermoplastic materials up to 110 mm (with ZZ sleeve AS)
- Non-combustible pipes made of steel, stainless steel or cast steel with an outside diameter up to 168.3 mm
- Non-combustible pipes made of copper with an outside diameter up to 88.9 mm
- Sectional isolation made from mineral fibre matting or jackets can be fed through the bulkhead
- Dimensions (W x H x D): 12 cm x 6 cm x 17 cm

Usage instructions:

- Usage according to approval: **Z-19.15-2158**

Article No.	Article Description	QTY
8740 3 170	FIRESTOP FOAM BLOCK 170 BDS-N	ü 15
6990 99 2	LABEL ZZ	10



8740 3 170



6990 99 2



Electric



Sanitary



Combo



Installation in a solid wall



Installation in a light partition wall

Cable Wrap BDS-N

The BDS-N cable wrap is a butyl sealing tape with a high volume capacity

- Solvent-free
- Self-adhesive
- Intumescent in the event of fire
- Length (mm) x width (mm) x height (mm) = 5000 x 150 x 3

Application

- As a system component for cables with a diameter of more than 18 mm in combination with fireproof bricks 120 BDS-N and 170 BDS-N
- Storage and processing temperature: 5 °C – 30 °C

Article No.	Article Description	QTY
8740 3 170 200	CABLE WRAP BDS-N	1



Firestop Foam Block 200 BDS-N

Both temporary and permanent fire bulkheading of electrical cables and lines of all types and diameters, as well as combustible and non-combustible pipes

- Soft and flexible moulded foam part
- Very economical due to short assembly times
- Particularly suitable for:
 - Bulkheads with mixed installations of cables and combustible and non-combustible pipes
 - Bulkheads with frequently changing occupancy
 - Medium and large bulkheads with medium to high occupancy
 - Pipes with rubber insulation and multi-layer composite pipes

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete, masonry and plaster walls, as well as light partition walls, in building element quality
- Bulkheading for all types and diameters of electrical cable (including fibre optic cables) apart from waveguide cables
- Bulkheading for individual lines in steel and plastic for control purposes up to a pipe outside diameter of 15 mm
- Bulkheading for plastic electrical conduits up to a pipe outside diameter of 20 mm
- Cable support structures in steel, aluminium and plastic
- Combustible pipes with an external diameter up to 110 mm (without additional sleeve)
- Multi-layer composite pipes with an outside diameter up to 63 mm (without additional sleeve or section insulation)
- Non-combustible pipes made of steel, stainless steel or cast steel with an outside diameter up to 168.3 mm
- Non-combustible pipes made of copper with an outside diameter up to 88.9 mm
- Sectional isolation made from mineral fibre matting or jackets can be fed through the bulkhead
- Sectional isolation made from rubber can be fed through the bulkhead
- Dimensions (W x H x D): 12 cm x 6 cm x 20 cm

Usage instructions:

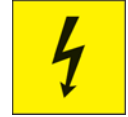
- Usage according to approval: **Z-19.15-1182**



8740 3 200

Hersteller der Produkte: ZAPP ZIMMERMANN GmbH Industriestraße 1 7430 Metzingen		DAPP-ZIMMERMANN GmbH Markstraße 7 & 8 7430 Metzingen Tel. +49 21 87861-0 Fax +49 21 87861-425 www.z-z.de - info@z-z.de	Schott-ID: _____
Hersteller der Schottung: _____	Erstellt am: _____		
Kombischott		DIBt Zul.-Nr.	S30 860 590
ZZ-Platte BDS-N	19.15-1881	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Steine 200 BDS-N	19.15-1182	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Steine 170 BDS-N	19.15-1744	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Stopfen BDS	19.15-1316	<input type="checkbox"/>	<input type="checkbox"/>
Darüber für von Unternehmen ausgetübt werden die über ausreichende Erfahrung auf diesem Gebiet verfügen und entsprechend geschultes Personal einsetzen.			
Kabelschott			
ZZ-Steine 120 BDS-N	19.15-1743	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-DuBo BDS	19.15-1318	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Box BDS	19.15-1315	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Brandschutzmasse 1K	19.15-1642	<input type="checkbox"/>	<input type="checkbox"/>
Rohrschott		R90	R120
ZZ-Manschette	19.17-1659	<input type="checkbox"/>	<input type="checkbox"/>
Dieses Schott darf nicht beschädigt werden! Beschädigung sind zu melden und müssen fachgerecht ausgetauscht werden!			

6990 99 2



Electric



Sanitary



Combo

Article No.	Article Description	QTY
8740 3 200	FIRESTOP FOAM BLOCK 200 BDS-N	ü 20
6990 99 2	LABEL ZZ	10



Installation in a solid wall



Installation in a light partition wall

Firestop Foam Block 200 NE

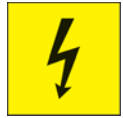
- The Firestop Foam Block 200 NE is a soft, flexible, moulded foam part which can be used as packing for unoccupied areas in a bulkheading system using Fire Protection Foam 2K NE (Art. No. 6990 2 380)
- Bulkheading of cables and electrical conduits, as well as combustible and non-combustible pipes
- Dimensions (W x H x D): 144 mm x 60 mm x 200 mm

Usage instructions:

- Usage according to: **ETA-11/0206**



8740 3 200 1



Electric



Sanitary

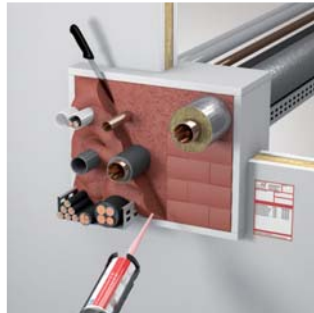


Combo

Article No.	Article Description	QTY
8740 3 200 1	FIRESTOP FOAM BLOCK 200 NE	s 18
6990 99 1	LABEL FIRE-PROT. FOAM	10



Installation in a solid wall



Installation in a light partition wall



6990 99 1

Fire Protection Plug BDS

Both temporary and permanent fire bulkheading of cables, their support systems and non-combustible pipes up to 28 mm in S90 / R90 quality

- Soft and flexible moulded foam part
- Very economical due to short assembly times
- Particularly suitable for bulkheads with frequently changing occupancy

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete and masonry walls, as well as light partition walls, in building element quality

Usage instructions:

- Usage according to approval: **Z-19.15-1316**



Electric



Sanitary



Combo

Article No.	Article Description	QTY
8740 1 65	FIRE PROTECT. PLUG BDS Ø 65MM	v 20
8740 1 78	FIRE PROTECT. PLUG BDS Ø 78MM	v 20
8740 1 107	FIRE PROTECT. PLUG BDS Ø 107MM	2
8740 1 122	FIRE PROTECT. PLUG BDS Ø 122MM	2
8740 1 165	FIRE PROTECT. PLUG BDS Ø 165MM	2
8740 1 200	FIRE PROTECT. PLUG BDS Ø 200MM	2
8740 1 250	FIRE PROTECT. PLUG BDS Ø 250MM	2
6990 99 2	LABEL ZZ	10

Hersteller der Produkte:		Schott-ID:															
ZAPP ZIMMERMANN ZAPP-ZIMMERMANN GmbH Marsenerstr. 7 & 12/13A Köln Tel. +49 221 87081-0 Fax +49 221 87081-629 www.z-z.de + info@z-z.de																	
Hersteller der Schottung:		Erstellt am:															
<table border="1"> <thead> <tr> <th>Kombischott</th> <th>DIBt Zul.-Nr.</th> <th>S30 S60 S90</th> </tr> </thead> <tbody> <tr> <td>ZZ-Platte BDS-N</td> <td>19.15-1861</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Steine 200 BDS-N</td> <td>19.15-1182</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Steine 170 BDS-N</td> <td>19.15-1744</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Stopfen BDS</td> <td>19.15-1316</td> <td><input type="checkbox"/></td> </tr> </tbody> </table> <p><small>Üblich für viele Anwendungen geeignet möglich, die hier wasserrechtlich Erlaubung aufweisen, sind hier verfügbar und entsprechen geschuldeten Personalanforderungen.</small></p>			Kombischott	DIBt Zul.-Nr.	S30 S60 S90	ZZ-Platte BDS-N	19.15-1861	<input type="checkbox"/>	ZZ-Steine 200 BDS-N	19.15-1182	<input type="checkbox"/>	ZZ-Steine 170 BDS-N	19.15-1744	<input type="checkbox"/>	ZZ-Stopfen BDS	19.15-1316	<input type="checkbox"/>
Kombischott	DIBt Zul.-Nr.	S30 S60 S90															
ZZ-Platte BDS-N	19.15-1861	<input type="checkbox"/>															
ZZ-Steine 200 BDS-N	19.15-1182	<input type="checkbox"/>															
ZZ-Steine 170 BDS-N	19.15-1744	<input type="checkbox"/>															
ZZ-Stopfen BDS	19.15-1316	<input type="checkbox"/>															
<table border="1"> <thead> <tr> <th>Kabelschott</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>ZZ-Steine 120 BDS-N</td> <td>19.15-1743</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Dubbo BDS</td> <td>19.15-1318</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Box BDS</td> <td>19.15-1315</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Brandschutzmasse 1K</td> <td>19.15-1642</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>			Kabelschott			ZZ-Steine 120 BDS-N	19.15-1743	<input type="checkbox"/>	ZZ-Dubbo BDS	19.15-1318	<input type="checkbox"/>	ZZ-Box BDS	19.15-1315	<input type="checkbox"/>	ZZ-Brandschutzmasse 1K	19.15-1642	<input type="checkbox"/>
Kabelschott																	
ZZ-Steine 120 BDS-N	19.15-1743	<input type="checkbox"/>															
ZZ-Dubbo BDS	19.15-1318	<input type="checkbox"/>															
ZZ-Box BDS	19.15-1315	<input type="checkbox"/>															
ZZ-Brandschutzmasse 1K	19.15-1642	<input type="checkbox"/>															
<table border="1"> <thead> <tr> <th>Rohrschott</th> <th></th> <th>R90</th> <th>R120</th> </tr> </thead> <tbody> <tr> <td>ZZ-Manschette</td> <td>19.17-1659</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>			Rohrschott		R90	R120	ZZ-Manschette	19.17-1659	<input type="checkbox"/>	<input type="checkbox"/>							
Rohrschott		R90	R120														
ZZ-Manschette	19.17-1659	<input type="checkbox"/>	<input type="checkbox"/>														

Dieses Schott darf nicht beschädigt werden!
Beschädigungen sind zu melden und müssen fachgerecht ausgebessert werden!

6990 99 2



Installation in a solid wall



Installation in a light partition wall

Fire Protection Plug NE

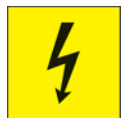
Both temporary and permanent fire bulkheading of cables and their support systems as well as pipes in EI90 quality. EU-wide use possible.

Product features:

- Soft and flexible moulded foam part
- Very economical due to short assembly times
- Particularly suitable for bulkheads with frequently changing occupancy

Usage instructions:

- Usage according to: **ETA-13/0093**



Electric

Article No.	Article Description	QTY
8740 1 65 1	FIRE PROTECT. PLUG NE Ø 65MM	4
8740 1 78 1	FIRE PROTECT. PLUG NE Ø 78MM	4
8740 1 107 1	FIRE PROTECT. PLUG NE Ø 107MM	2
8740 1 122 1	FIRE PROTECT. PLUG NE Ø 122MM	2
8740 1 134 1	FIRE PROTECT. PLUG NE Ø 134MM	2
8740 1 165 1	FIRE PROTECT. PLUG NE Ø 165MM	2
8740 1 200 1	FIRE PROTECT. PLUG NE Ø 200MM	2
8740 1 250 1	FIRE PROTECT. PLUG NE Ø 250MM	2
6990 99 1	LABEL FIRE-PROT. FOAM	10

ZAPP ZIMMERMANN																						
ZAPP-ZIMMERMANN GmbH, Marsenerstr. 7 & 12/13A Köln Tel. +49 221 87081-0, Fax +49 221 87081-629, www.z-z.de, info@z-z.de																						
Hersteller der Schottung:																						
Erstellt am:																						
<table border="1"> <thead> <tr> <th>Abschottungssysteme</th> <th></th> <th>E90 E190 E120</th> </tr> </thead> <tbody> <tr> <td>ZZ-Brandschutzschaum 2K NE</td> <td>13/0206</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Brandschutzstein 200 NE</td> <td>10/0431</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Brandschutzstopfen NE</td> <td>12/0088</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Brandschutzrollen NE</td> <td>13/0123</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Brandschutzmasse NE</td> <td>13/0093</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ZZ-Brandschutzmanschette NE</td> <td>13/0117</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		Abschottungssysteme		E90 E190 E120	ZZ-Brandschutzschaum 2K NE	13/0206	<input type="checkbox"/>	ZZ-Brandschutzstein 200 NE	10/0431	<input type="checkbox"/>	ZZ-Brandschutzstopfen NE	12/0088	<input type="checkbox"/>	ZZ-Brandschutzrollen NE	13/0123	<input type="checkbox"/>	ZZ-Brandschutzmasse NE	13/0093	<input type="checkbox"/>	ZZ-Brandschutzmanschette NE	13/0117	<input type="checkbox"/>
Abschottungssysteme		E90 E190 E120																				
ZZ-Brandschutzschaum 2K NE	13/0206	<input type="checkbox"/>																				
ZZ-Brandschutzstein 200 NE	10/0431	<input type="checkbox"/>																				
ZZ-Brandschutzstopfen NE	12/0088	<input type="checkbox"/>																				
ZZ-Brandschutzrollen NE	13/0123	<input type="checkbox"/>																				
ZZ-Brandschutzmasse NE	13/0093	<input type="checkbox"/>																				
ZZ-Brandschutzmanschette NE	13/0117	<input type="checkbox"/>																				

Dieses Schott darf nicht beschädigt werden!
Beschädigungen sind zu melden und müssen fachgerecht ausgebessert werden!

6990 99 1



Installation in a solid wall



Installation in a light partition wall

Fire Protection Plug DoBo

Both temporary and permanent fire bulkheading of cables in S90 quality

- Soft, flexible moulded foam part and resilient penetration sleeve
- Very economical due to short assembly times
- Particularly suitable for bulkheads with frequently changing occupancy

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete and masonry walls, as well as light partition walls, in building element quality
- Bulkheading for all types and diameters of electrical cable (including fibre optic cables) apart from waveguide cables
- Bulkheading for individual empty conduits in steel and plastic for control purposes up to a pipe outside diameter of 15 mm

Usage instructions:

- Usage according to approval: **Z-19.15-1318**

Article No.	Article Description	QTY
8740 2 75	FIRE PROTECT. PLUG DOBO Ø 75MM	4
8740 2 100	FIRE PROTECT. PLUG DOBO Ø100MM	4
6990 99 2	LABEL ZZ	10



8740 2 75



Electric

Hersteller der Produkte: ZAPP ZIMMERMANN ZAPP-ZIMMERMANN GmbH Mühlentor 19, 10259 Berlin Tel. +49 (0) 30 87081-0 Fax +49 (0) 30 87081-1000 www.z-z.de info@z-z.de		Schutz-ID: 530 969 990
Hersteller der Schötung: _____	Erstellt am: _____	
Kombischott DIBt Zul.-Nr. 530 969 990		
ZZ-Platte BOS-N	19.15-1801	<input type="checkbox"/>
ZZ-Steine 200 BOS-N	19.15-1182	<input type="checkbox"/>
ZZ-Steine 170 BOS-N	19.15-1744	<input type="checkbox"/>
ZZ-Stopfen BOS	19.15-1316	<input type="checkbox"/>
(Dieses Feld nur ausfüllen, wenn die oben angegebene Erklärung bei anderen Vorlagen mit anderen für geschützte Personen anzuwenden ist)		
Kabelschott		
ZZ-Steine 120 BOS-N	19.15-1743	<input type="checkbox"/>
ZZ-Doblo BOS	19.15-1318	<input type="checkbox"/>
ZZ-Box BOS	19.15-1315	<input type="checkbox"/>
ZZ-Steinbohrschuttmasse TK	19.15-1642	<input type="checkbox"/>
Rohrschott R90 R120		
ZZ-Manschette	19.17-1650	<input type="checkbox"/>
Dieses Schott darf nicht beschädigt werden! Beschädigung sind zu melden und müssen fachgerecht ausgebessert werden!		

6990 99 2



Installation in a solid wall



Installation in a light partition wall

Cable Box BDS

S30/S60/S90 cable bulkheading for solid walls, solid ceilings and light partition walls. Both temporary and permanent fire bulkheading of electrical cables and lines of all types and diameters.

Particularly suitable for:

- Small to medium size bulkheads with medium to high occupancy
- Cables of all types and diameters
- Penetrations in light partition walls (additional frames made of non-combustible structural panels are not required)
- Bulkheads with frequently changing occupancy

Note on usage:

- Usage according to approval: **Z-19.15-1315**



8740 8 200



Electric

Article No.	Article Description	QTY
8740 8 200	CABLE BOX BDS	1
6990 99 2	LABEL ZZ	10

Hersteller der Produkte: ZAPP-ZIMMERMANN GmbH ZAPP-ZIMMERMANN Zimmerelektrotechnik		Schott-ID: _____	
Hersteller der Schötung: _____		Erstellt am: _____	
Kombischott		DIBt Zul.-Nr.	
ZZ-Platte BDS-N	19.15-1861	S30	<input type="checkbox"/>
ZZ-Steine 200 BDS-N	19.15-1182	S60	<input type="checkbox"/>
ZZ-Steine 170 BDS-N	19.15-1744	S90	<input type="checkbox"/>
ZZ-Stopfen BDS	19.15-1316		<input type="checkbox"/>
<small>(Stellen nur von Unternehmen ausgefüllt werden, die über ausreichende Erfahrung auf diesem Gebiet verfügen und entsprechend geschultes Personal einsetzen.)</small>			
Kabelschott		R90 R120	
ZZ-Steine 120 BDS-N	19.15-1743		<input type="checkbox"/>
ZZ-Doblo BDS	19.15-1318		<input type="checkbox"/>
ZZ-Box BDS	19.15-1315		<input type="checkbox"/>
ZZ-Brandschutzmasse TK	19.15-1642		<input type="checkbox"/>
Rohrschott		R90 R120	
ZZ-Manschette	19.17-1659		<input type="checkbox"/>
<small>Dieses Schott darf nicht beschädigt werden! Beschädigung sind zu melden und müssen fachgerecht ausgetauscht werden!</small>			

6990 99 2



Installation in a solid wall



Installation in a light partition wall

Fire Protection Panel BDS-N

Combination S90 bulkheading for solid walls, solid ceilings and light partition walls. Fire bulkheading of electrical cables and lines of all types and diameters, as well as combustible and non-combustible pipes

Particularly suitable for:

- Large bulkheads with medium or low occupancy
- Mixed occupancy of cables and combustible and non-combustible pipes
- Repair of mineral wool bulkheads
- Closing off over-occupied bulkheads (certification)
- Dimensions of panel (W x H x D): 625 mm x 500 mm x 30 mm

Note on usage:

- Usage according to approval: **Z-19.15-1861**

Article No.	Article Description	QTY
8740 625 500	FIRE PROTECT. PLATE BDS-N	4
6990 99 2	LABEL ZZ	10



8740 625 500



Electric



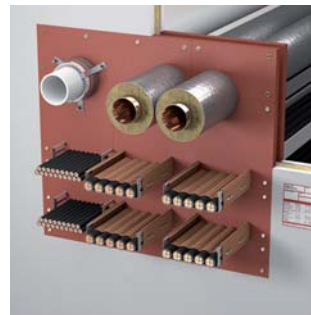
Sanitary



Combo

Hersteller der Produkte:  ZAPP-ZIMMERMANN GmbH Marconist. 7-9 - 50769 Köln Tel. +49 221 97061-0 Fax +49 221 97061-325 www.z.z.de - info@z.z.de		Schott-ID: Z-19.15-1861	
Hersteller der Schottung: _____		Erstellt am: _____	
Kombischott		DIBt Zul.-Nr.	
ZZ-Platte BDS-N	19.15-1861	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Steine 200 BDS-N	19.15-1182	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Steine 170 BDS-N	19.15-1744	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Stopfen BDS	19.15-1316	<input type="checkbox"/>	<input type="checkbox"/>
Erläutern Sie den Übernahmeprozess schriftlich, die über ausreichende Erfahrung auf diesem Gebiet verfügen und entsprechend geschultes Personal einsetzen.			
Kabelschott		S30 S60 S90	
ZZ-Steine 120 BDS-N	19.15-1743	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-DoBo BDS	19.15-1318	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Box BDS	19.15-1315	<input type="checkbox"/>	<input type="checkbox"/>
ZZ-Brandschutzmasse 1K	19.15-1642	<input type="checkbox"/>	<input type="checkbox"/>
Rohrschott		R90 R120	
ZZ-Manschette	19.17-1659	<input type="checkbox"/>	<input type="checkbox"/>
Dieses Schott darf nicht beschädigt werden! Beschädigung sind zu melden und müssen fachgerecht ausgebessert werden!			

6990 99 2



Installation in a light partition wall



Application of the repair bulkhead in case of over-occupancy



Application of the repair bulkhead



Installation in a solid wall

Fire Protection Joint Strip

Fields of application in building elements:

All technical details such as permissible joint widths, wall / ceiling types, fire resistance classes, etc., can be found in the approval

- Brickwork walls from 150 mm
- Concrete ceilings from 150 mm
- For step joints and linear butt joints
- Joint widths from 16 – 80 mm
- Moulding length: 1 m each

Usage instructions:

- Usage according to: **ETA-12/0119**



Article No.	Article Description	QTY
8740 7 16	FIRE PROT.JOINT STRIP BDS Ø 16	e 20
8740 7 24	FIRE PROT.JOINT STRIP BDS Ø 24	eü 20
8740 7 30	FIRE PROT.JOINT STRIP BDS Ø 30	eü 20
8740 7 39	FIRE PROT.JOINT STRIP BDS Ø 39	e 20
8740 7 49	FIRE PROT.JOINT STRIP BDS Ø 49	10
8740 7 60	FIRE PROT.JOINT STRIP BDS Ø 60	1
8740 7 70	FIRE PROT.JOINT STRIP BDS Ø 70	1
8740 7 80	FIRE PROT.JOINT STRIP BDS Ø 80	1



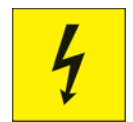
Fire Resistant Silicone NE

Fire Resistant Silicone NE can be used as cable bulkheading or for rigid joints as well as for expansion joints and moving joints with fire protection requirements. It is also tested according to the building construction joint standard EN ISO 11600 (DIN EN ISO 11600-F-20 LM)

Usage instructions:

- Usage as cable bulkhead according to: **ETA-13/0123**
- Usage as joint according to: **ETA-12/0118**

Article No.	Article Description	QTY
8740 7 310	C(310ML)FIRE PROT. SILICONE NE	20



Electric



Fire Barrier Compound 1K

Permanent fire barrier for electric cables up to 18 mm and to close remaining gaps

- flexible cartridge material for easy handling
- very economical due to short assembly times
- particularly suitable for micro penetration seals in the electrical sector

Areas of use:

- für massive walls, ceilings and drywall partitions
- for electrical cables and pipes of all kind up to a diameter of 18 mm (including optical fibres), with the exception of hollow fibre cables
- works as a system with fire barrier sones BDS-N, fire protection plugs BDS, as well as fire protection plugs DoBo for closing remaining gaps and for easy retrofitting of additional cables

Processing instructions:

- processing according to Approval No. Z-19.15-1642

Article No.	Article Description	QTY
6990 2 310	C(310ML)FIRE BARRIER COMPOU.1K	e 12
6990 99 2	LABEL ZZ	10



Installation in a solid wall



6990 2 310



Karl Zimmermann GmbH
Zulassung DBI-Nr.
Z-19.15-1642



Electric

Hersteller der Produkte: ZAPP-ZIMMERMANN GmbH Maxonstr. 7-9 • 50769 Köln Tel. +49 221 97081-0 Fax +49 221 97081-829 www.z-z.de • info@z-z.de		Schott-ID: _____
Hersteller der Schottung: _____		Erstellt am: _____
Kombischott ZZ-Platte BDS-N 19.15-1861 ZZ-Steine 200 BDS-N 19.15-1182 ZZ-Steine 170 BDS-N 19.15-1744 ZZ-Stopfen BDS 19.15-1316	DBI Zul.-Nr. 19.15-1861 19.15-1182 19.15-1744 19.15-1316	S30 S60 S90 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Kabelschott ZZ-Steine 120 BDS-N 19.15-1743 ZZ-DoBo BDS 19.15-1318 ZZ-Box BDS 19.15-1315 ZZ-Brandschutzmasse 1K 19.15-1642	19.15-1743 19.15-1318 19.15-1315 19.15-1642	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Rohrschoth ZZ-Manschette 19.17-1659	19.17-1659	R90 R120 <input type="checkbox"/> <input type="checkbox"/>
Dieses Schott darf nicht beschädigt werden! Beschädigungen sind zu melden und müssen fachgerecht ausgebessert werden!		

6990 99 2

Fire Protection Compound NE

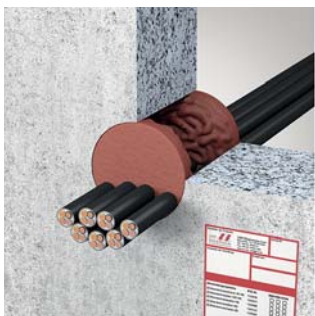
Innovative fire protection compound suitable for bulkheading cables up to 21 mm diameter in walls and ceilings

- No requirement to form a reveal within the light partition wall. Particularly suitable for small bulkheads up to 10 x 10 cm

Usage instructions:

- Usage in accordance with European Technical Approval: ETA-13/0093

Article No.	Article Description	QTY
6990 7 310	FIRE PROTECTION COMPOUND NE	e 12
6990 99 1	LABEL FIRE-PROT. FOAM	10



Installation in a solid wall



Installation in a light partition wall



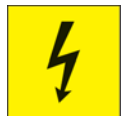
6990 7 310



ETA - 12/0118



Karl Zimmermann GmbH
Werk 3
P-BW003-1-16.3.201



Elektro

Hersteller der Schottung: _____		Erstellt am: _____	
Abschottungssysteme ZZ-Brandschutzschaum 2K NE 11/0206 ZZ-Brandschutzstein 200 NE 10/0431 ZZ-Brandschutzstopfen NE 12/0088 ZZ-Brandschutzsiliken NE 13/0123 ZZ-Brandschutzmasse NE 13/0093 ZZ-Brandschutzmanschette NE 13/0117	11/0206 10/0431 12/0088 13/0123 13/0093 13/0117	E160 E190 E1120 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Dieses Schott darf nicht beschädigt werden! Beschädigungen sind zu melden und müssen fachgerecht ausgebessert werden!			

6990 99 1

Cable Box Combo

The Cable Box Combo for installation in walls (solid walls and plasterboard stud walls from 10 cm) and ceilings (from 15 cm):

The Cable Box Combo is suitable for creating cable and pipe bulkheading of fire resistance class S90 according to DIN 4102.

Approved implementations:

- Cable troughs up to 400 x 60 mm (W x H) (Combo-Box S)
- Electrical cables of all types (including fibre optic cables) with no limit to the outer diameter
- Waveguide cable, made by LEONI, Type Flexline, 1 5/8", OD = 50 mm, 7/8", OD = 27 mm, Flexline, 1/2", OD = 16 mm
- Cable bundles up to Ø 100 mm, running in parallel, tightly packed and firmly lashed together, sewn, heat sealed, max. individual cable diameter 20 mm
- Rigid and flexible corrugated plastic pipes up to OD 63 mm, with and without cable occupation
- Steel conduit up to Ø 63 mm, with and without cable occupation
- Copper pipes up to Ø 3" with end-to-end synthetic rubber insulation Ø = 13 mm, steel pipes up to Ø 60.3 mm (DN 50), with double-sided section insulation comprising mineral fibre pipe jackets (melting point over 1,000 °C) L = 500 mm, Ø = 20 mm
- Combustible pipes up to Ø 110 mm (DN 100)
- High pressure hoses in synthetic rubber up to Ø 46 mm (DN 31)
- Plastic control lines up to Ø 15 mm
- Steel control lines up to Ø 15 mm
- The cable boxes combo S with an outer height of 180 mm are suitable for waste water pipes Ø 110 mm (DN 100)

Usage according to approval: Z-19.15-1042



Cable Box Combo S



Cable Box Combo D



Cable Box Combo R



Article No.	Article Description	QTY
8740 9 240 060	CABLE BOX COMB.D PLUS 240 060	1
8740 9 435 080	CABLE BOX COMB.D PLUS 435 080	1
8740 9 640 080	CABLE BOX COMB.D PLUS 640 080	1
8740 9 160 110	CABLE BOX COMB.S PLUS 160 110	1
8740 9 200 110	CABLE BOX COMB.S PLUS 200 110	1
8740 9 240 110	CABLE BOX COMB.S PLUS 240 110	1
8740 9 280 110	CABLE BOX COMB.S PLUS 280 110	1
8740 9 380 110	CABLE BOX COMB.S PLUS 380 110	1
8740 9 435 110	CABLE BOX COMB.S PLUS 435 110	1
8740 9 280 130	CABLE BOX COMB.S 280 130	1
8740 9 535 130	CABLE BOX COMB.S 535 130	1
8740 9 118 110	CABLE BOX COMB.R6 PLUS 118 100	1
8740 9 200 174	CABLE BOX COMB.R6 PLUS 200 174	1
8740 9 240 180	CABLE BOX COMB.S 240 180	1
8740 9 280 180	CABLE BOX COMB.S 280 180	1
8740 9 335 180	CABLE BOX COMB.S 335 180	1
8740 9 380 180	CABLE BOX COMB.S 380 180	1
8740 9 435 180	CABLE BOX COMB.S 435 180	1
8740 9 480 180	CABLE BOX COMB.S 480 180	1
8740 9 535 180	CABLE BOX COMB.S 535 180	1
8740 9 580 180	CABLE BOX COMB.S 580 180	1
8740 9 640 180	CABLE BOX COMB.S 640 180	1

Technical Data	
Width x Height (inside) mm	Width x Height (outside) mm
210 x 42	240 x 60
400 x 52	435 x 80
575 x 35	635 x 80
124 x 74	172 x 110
174 x 74	212 x 110
204 x 74	252 x 110
244 x 74	292 x 110
344 x 70	392 x 110
401 x 70	447 x 110
244 x 90	292 x 130
491 x 84	547 x 130
70 x 60	118 x 100
155 x 134	200 x 174
204 x 130	252 x 180
244 x 130	292 x 180
301 x 130	347 x 180
336 x 130	392 x 180
401 x 130	447 x 180
436 x 130	492 x 180
501 x 130	547 x 180
540 x 130	580 x 180
600 x 130	640 x 180

Novasit BM Fire Protection Compound

Special mineral-fibre-free mortar for producing cable, pipe and combination bulkheads

- Single-component, hydraulically hardening, mineral-fibre-free fireproof mortar
- Very economical in the creation of large-volume bulkheads
- Particularly suitable for:
 - Bulkheads with mixed installations of cables and combustible and non-combustible pipes
 - Medium and large bulkheads with medium to high occupancy
- Delivery form: 10 kg bucket or in 20 kg sacks

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete and masonry walls in building element quality
- Bulkheading for electrical cables of all types and diameters (including fibre optic cables) and also waveguide cables with diameters up to 61.4 mm
- Bulkheading for empty conduits with a diameter up to 63 mm
- Cable support structures in steel, aluminium and plastic
- Non-combustible pipes made of steel, stainless steel or cast steel with an outside diameter up to 168.3 mm
- Non-combustible pipes made of copper with an outside diameter up to 88.9 mm
- Sectional isolation made from mineral fibre matting or jackets can be fed through the bulkhead

Usage instructions:

- Usage according to approval: Z-19.15-1286

Article No.	Article Description	QTY
6990 4 10	(10KG)NOVASIT BM FI.PRO-COMPO.	1
6990 99 3	LABEL B	10
6990 4 20	BAG(20KG) NOVASIT BM FP-COMPO.	1



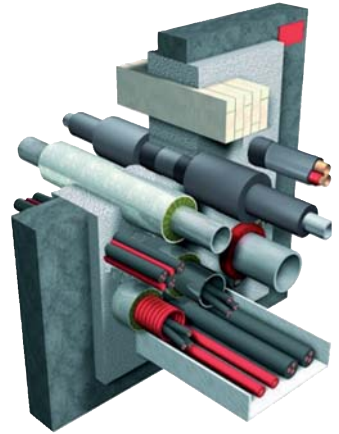
Front side



Rear side
6990 99 3



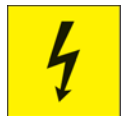
6990 4 10



Installation in a solid wall



6990 4 20



Electric



Sanitary



Combo

Retrofit Wedges (Pair)

For pre-planned retrofitting of cables and / or pipework during the creation of building authority approved bulkheading using PYRO-SAFE NOVASIT BM fire protection compound in solid walls or ceilings

Construction material class:

- A1 in accordance with DIN 4102-A1

Article No.	Article Description	QTY
6990 4 10 16	(PAIR) RETROFIT WEDGES	2



Fire Protection Mortar VGM

Fibre-free dry mortar of mortar class III

- Single component, hydraulically hardening, fibre-free fire protection compound
- Very economical in the creation of large-volume backfill openings
- Particularly suitable for:
 - Universal use in the field of solid ceilings and walls
- Delivery form: 30 kg sack

Fields of application:

- Concrete and reinforced concrete ceilings in building element quality
- Concrete, reinforced concrete and masonry walls in building element quality
- Wall and ceiling penetrations of insulated, metallic pipes
- Fire and smoke-tight sealing of individual lines in accordance with LAR
- For joining air conditioning and ventilation ducts, fire doors and fire dampers
- For filling the cavities during steel frame installation

Usage instructions:

- Usage in accordance with Test Report No. 090968.1-Th MPA BAU Hannover

Article No.	Article Description	QTY
6990 4 30	BAG(30KG)FIRE-PRO.MORTAR VGM	1
6990 99 3	LABEL B	10



6990 4 30



Front side



Rear side



6990 99 3

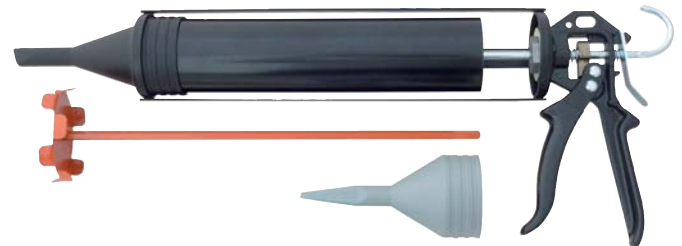
Mortar Cartridge

- Optimum processing of e.g. grout
- Exactly filled seams ensure maximum hold, firmness and stability

Article No.	Article Description	QTY
6010 1000	MORTAR CARTRIDGE FX-1000	1

Scope of delivery:

- 1x filling tube with a volume of approx. 1 liter, 2 nozzles, 1x mixer



Spare Parts for Mortar Press

Article No.	Article Description	QTY
6010 1000 1	FILLING PIPE	1
6010 1000 21	NARROW NIB (OPENING 3X2MM)	1
6010 1000 22	BROAD NIB (OPENING 13X7MM)	1
6010 1000 3	RUBBER SEALANT	1



6010 1000 1



6010 1000 2 2



6010 1000 2 1



6010 1000 3

Fire-Stop Filler DX

Intumescent fire-stop filler

- Flexible cartridge material for easy handling
- Very economical due to short assembly times
- Particularly suitable for the smallest bulkheads

Fields of application:

- For solid walls and ceilings
- Can be used for building authority approved cable, pipe and combination bulkheads

Usage instructions:

- Usage according to approval: **Z-19.11-623**

Article No.	Article Description	QTY
6990 3 310	C(310ML)FIRE-STOP FILLER DX	e 12
6990 99 3	LABEL B	10



6990 3 310



Front side



Rear side



Electric



Sanitary



Combo

Fire Resistant Silicone

- Permanently elastic single component fire protection sealing compound based on silicones
- Very economical due to short assembly times
- Particularly suitable for the smallest bulkheads
- Available in white and grey

Fields of application:

- For solid walls and ceilings
- Preventive, fire protective, elastic and pressure-tight bulkheading for non-combustible pipes in wall and ceiling penetrations, as well as flexible sealing of building element joints both indoors and outdoors

Usage instructions:

- Usage in accordance with general building authority test certificate P-NDS 04-667. To apply, press from the cartridge and fill

Article No.	Article Description	QTY
6990 3 300 1	C(310ML)FIRE-PRO.SILICONE GREY	e 15
6990 3 300 2	C(310ML)FIRE-PRO.SILICO.WHITE	e 15
6990 99 3	LABEL B	10



6990 3 300 1



6990 3 300 2



Front side



Rear side



Bioferm A Fire Control Acrylic

- Flexible fire protective sealing of building element joints both indoors and outdoors, and for sealing connections and joints with moderate expansion and no permanent moisture load: e.g., between concrete, masonry, plaster surfaces, fibre cement, plasterboard, untreated or anodised aluminium, wood or hard PVC
- Also suitable for bonding expanded polystyrene (styrofoam) to absorbent substrates

Proof of usability:

- Usage in accordance with test certificate: **P-NDS04-769**

Article No.	Article Description	QTY
6990 3 310 1	FIRE CONTROL ACRYLIC BIOFERM A	15
6990 99 3	LABEL B	10



6990 3 310 1



Front side



Rear side

6990 99 3



Fire Protection Cushion Bio Bag

Permanent and temporary cable bulkheading

- Reusable fire protection cushion which can be used universally for varied purposes
- Non-combustible, impervious to fire and smoke
- Dimensions of Size 1: 300 × 200 × 40 mm
- Dimensions of Size 2: 300 × 200 × 100 mm

Fields of application:

- For solid walls, ceilings and light partition walls
- Electrical cables and lines of all types (including fibre optic cables) but excluding waveguide cables
- Cable support structures may be fed through the bulkhead
- Post-installation of cables is very simple and less time-consuming

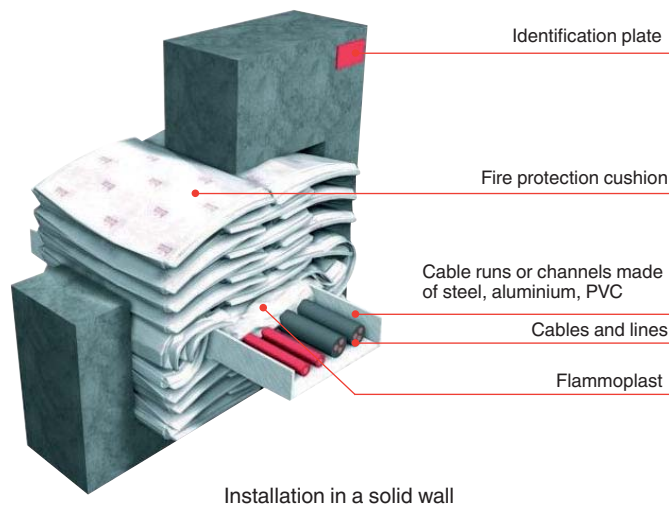
Usage instructions:

- Usage according to approval: **Z-19.15-819, Z-19.15-829**
- Bulkhead size: Wall 150 cm × 106 cm, ceiling 60 cm × ∞ cm



Electric

Article No.	Article Description	QTY
8740 5 1	FIRE-PROT. CUSHION BIO BAG 1	z 80
8740 5 2	FIRE-PROT. CUSHION BIO BAG 2	ü 35
6990 99 3	LABEL B	10



Front side



Rear side



6990 99 3

Fire Protection Fabric for Cables

Fire protection fabric for cables, cable bundles and cable runs

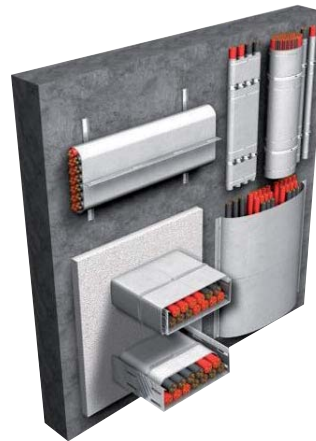
- Prevents the development and propagation of fire in cable systems
- Reduction of the release of energy in the event of a fire from the inside or from the outside
- The fire protection fabric is a flexible composite of glass filament fabric with an outer grey PU coating and an inner white intumescent coating
- In the event of a fire, a microporous thermally insulating layer forms on the inside and fills the free space between the cables and the cable bandage, thus preventing the spread of fire
- Particularly suitable as a „Fire Stop“ in the event of a short circuit in the cable system

Fields of application:

- Sheathing cable systems
- Dimensions (W × H): 1.10 m × 20.0 m

Usage instructions:

- Usage according to approval: **Z-56.217-3548**



Electric



Article No.	Article Description	QTY
8740 6 22 1	RO(22M ²)FIRE PROT.FAB.F.CABLES	1

Fireproof Fabric DG-CR 1.5

Application:

Fireproof fabric for use as a wrap for cables and non-flammable pipes with flammable insulation

Properties

- Suitable for indoor and outdoor use
- Can be painted over with approved paints and coatings with an acrylic dispersion, alkyd resin, polyurethane acrylic or epoxy resin base
- Weather, moisture and UV-resistant
- Tear-resistant

Usage instructions

- Processing temperature $\geq +5^{\circ}\text{C}$
- Use conventional cutting tools such as scissors or utility knife



Electric

Article No.	Article Description	QTY
6990 5 10 125	RO(10M)FIREPR.FABRIC DG-CR 1.5	1

Pipe Bulkheading Konfix Pro

Properties:

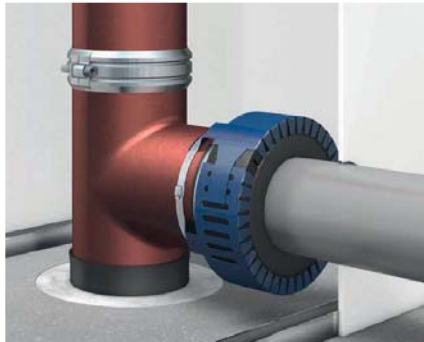
- Fire protection system for bulkheading a mixed installation based on the Konfix connector of metal and plastic drain pipes
- The Konfix Pro is arranged behind the front wall or the front wall installation
- The Konfix Pro can also be retrospectively fitted very easily to existing pipe systems
- The additional assembly is possible at any time without making changes to existing pipe systems
- Complicated, long-lasting work on the ceiling penetration is not necessary; this is a great benefit, particularly in renovation work.

Note on usage:

- Usage according to approval: **Z-19.17-2074**



Sanitary



8740 4 50



8740 4 100



Article No.	Article Description	QTY
8740 4 50	PIPE BULKHEAD. KONFIX PRO 50	1
8740 4 100	PIPE BULKHEAD. KONFIX PRO 100	1

Coated Mineral Fibreboard

Mineral fibreboard pre-coated on one or both sides with **FLAMMOTECT-A**

- Pre-coated mineral fibre boards are used as system panels for building authority approved cable, pipe and combination bulkheads

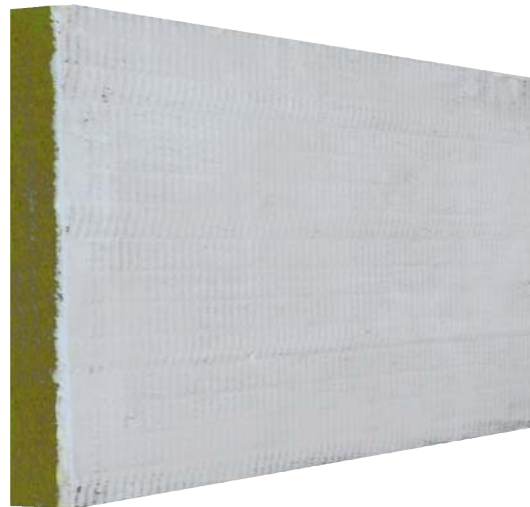
Building material class:

- A1 in accordance with DIN EN 13501-1 (uncoated panel)
- Dimensions (W x H): 100 cm x 60 cm

Proof of usability:

- Usage according to approval: **Z-19.15-1334**

Article No.	Article Description	QTY
6990 10 50 1	MINERAL FIBREB. COAT.50MM	4
6990 10 60 1	MINERAL FIBREB. COAT.60MM	4
6990 10 60 2	MINERAL FIBREB.2LAY-COAT.60MM	4



Electric



Sanitary



Combo

Mineral Fibre Lining Wool

- Loose mineral wool without binder
- Heat and sound insulating
- Non-flammable
- Non-ageing
- High temperature resistant
- Applies to RAL and ÖNORM B5320

Application:

- For any kind of lining insulation e.g. for backfilling of window connecting joints (as per VOB/C DIN 18355), the insulation of hard to reach hollow spaces in machine and industrial construction etc.

Technical Data

Fire behaviour (DIN 4102): A1 (non-flammable)
Temperature resistant: ≥ 1,000°C
Stuffing density: 70 – 150 kg/m³ (depend. on treatment)

Article No.	Article Description	QTY
8801 10	BAG(10KG)MINERALWOOL	1



Fire Protection Filler Flammotect-A

- Weather-resistant ablation coating that can be used everywhere both indoors and outdoors for building authority approved cable, pipe and combination bulkheads, and also as a universal protective coating for cables and cable support structures to impede the propagation of fire in the event of short circuits or when exposed to fire from outside

Building material class

- B2 according to DIN 4102 -1

Usage instructions:

- Usage according to approval: **Z-19.11-1324**

Article No.	Article Description	QTY
6990 6 125	(12.5KG)FILLER FLAMMOTECT A	1



Fixed Colour Fire Protection Coating Flammotect-A

- Weather-resistant ablation coating that can be used everywhere both indoors and outdoors for building authority approved cable, pipe and combination bulkheads, and also as a universal protective coating for cables and cable support structures to impede the propagation of fire in the event of short circuits or when exposed to fire from outside

Proof of usability:

- Usage according to approval: **Z-19.11-1324**

Article No.	Article Description	QTY
6990 7 125	(12.5KG)FIXED COL.FLAMMOTECT A	1



Fire-protection Sockets

- 2 x 14.4 mm line insertion
- Screw clearance: 60 mm
- Socket depth, Art.-No. 8436 45 74: 45 mm
- Socket depth, Art.-No. 8436 54 74: 54 mm
- Socket depth, Art.-No. 8436 54 74 2: 54 mm
- Milled hole Ø: 74 mm (double for 8436 54 74 2)
- Material: high-strength, special temperature-resistant plastic
- Colour: black
- **Halogen-free**
- **Fire-resistance class: EI90**
- **Fire resistance: +960 °C**
- **VDE-tested**
- **ETA approval**

Article No.	Article Description	QTY
8436 45 74	FIRE-PROT.SOCKET FLAT 45X74MM	12
8436 54 74	FIRE-PROT.SOCKET DEEP 54X74MM	12
8436 54 74 2	FIRE-PROT.SO.DEEP.DOUBL45X74MM	6



8436 45 74
8436 54 74



8436 54 74 2

General Information about Smoke Detectors

Interesting facts:

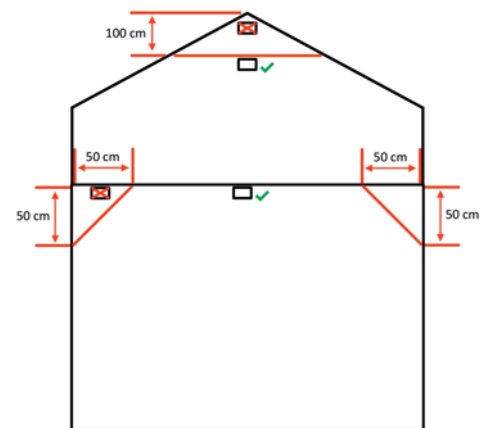
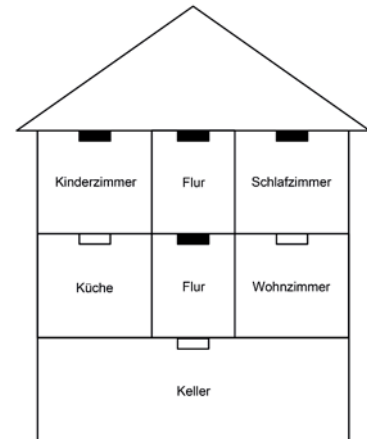
- The human sense of smell does not work while we are asleep, which is why we do not notice smoke
- Technical defects are the most frequent cause of fire
- Breathing in poisonous flue gases will lead to unconsciousness after only three breaths, and usually results in death after ten breaths
- Smoke detectors work almost exclusively with optical sensors, which means they monitor the room for the presence of smoke particles in the air
- Smoke indicates a starting fire early on, as it rises up very quickly, triggering the detector

Place of installation:

- According to all state building regulations published to date, at least one smoke detector must be installed in the following rooms:
 - Bedrooms
 - Children's rooms
 - Hallways and staircases that are used as emergency exits

Positioning:

- Always position them in the centre of the ceiling
- Smoke detectors may not be installed less than 50 cm away from the corners of a room
- In pitched attic rooms, ceiling installation is only permitted at least 100 cm below the highest point (on an arm or roof beam)



Smoke Detector, Standard

- Alarm signal: 85 dB
- For rooms up to 40 m²
- For indoor use only
- Function test switch
- Includes 9 V battery
- Battery life: approx. 1 year
- Only for residential buildings, apartments and rooms with comparable use

Article No.	Article Description	QTY
8439 7	SMOKE DETECTOR STANDARD	1



Smoke Detector with 10-year Battery

- Alarm signal: 85 dB
- For rooms up to 40 m²
- For indoor use only
- Function test switch
- Includes permanently fitted 3 V CR123A lithium battery
- Battery life: approx. 10 years
- Only for residential buildings, apartments and rooms with comparable use
- **VDS and Q quality seals**

Article No.	Article Description	QTY
8439 2	SMOKE DETECTOR 10-YEAR BATTERY	1



Magnetic Fixing

- Quick, neat fitting without drilling
- Fits almost all surfaces with Ø 7 cm
- Holds after approx. 10 seconds
- Magnet holds up to 2.1 kg
- Not suitable for vinyl wallpaper, Styrofoam®, non-stick and silicone coatings

Article No.	Article Description	QTY
8439 6	MAGNETIC FIXING	1



Wireless Smoke Detector

- Alarm signal: 85 dB
- For rooms up to 40 m²
- Wireless connection with a range of up to 20m
- Frequency: 433 MHz
- For indoor use only
- Function test switch
- Includes 2x 1.5 V AA batteries
- Service life of batteries: aprox. 1 year

Article No.	Article Description	QTY
8439 3	WIRELESS SMOKE DETECTOR	1



Carbon Monoxide Detector

- Alarm signal: 85 dB
- For rooms up to 40 m²
- For indoor use only
- Function test switch
- Battery charge indicator
- Includes 3x 1.5 V AA batteries
- Service life of batteries: aprox. 1 year

Article No.	Article Description	QTY
8439 4	CARBON MONOXIDE DETECTOR	1



Gas Detector

- Detects natural gas, butane and propane
- Alarm signal: 85 dB
- For rooms up to 40 m²
- For indoor use only
- Function test switch
- Includes 9V block battery
- Service life of batteries: aprox. 1 year
- With power adapter for 230 V

Article No.	Article Description	QTY
8439 5	GAS DETECTOR	1



