

Building Services



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Installation Accessory

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Recommended fixing distances for pipes using hammer-head catches/HakoFix quick-action catchers

Steel pipes DIN 2448

Ø NS	Outer-Ø mm	Pipe weights			Max. distance for profile 27/18 in (m)	Max. distance for profile 28/30 in (m)
		Empty kg/m	Water-filled kg/m	Water-filled and insulated kg/m		
10	17,2	0,68	0,83	1,5	2	3
15	21,3	0,95	1,19	2,0	2	3
20	26,9	1,40	1,79	2,7	2	3
25	33,7	1,99	2,64	3,7	2	3
32	44,5	2,69	3,90	5,2	2	3
40	48,3	2,93	4,39	6,3	2	3
46	51,0	3,10	4,76	6,8	2	3
50	57,0	3,87	5,93	8,1	2	3
50	60,3	4,11	6,44	8,8	2	3
57	63,5	4,33	6,95	9,4	2	3
65	76,1	5,24	9,12	12,0	2	3
76	82,5	6,26	10,81	14,7	2	3
80	88,9	6,76	12,11	16,3	2	3
94	101,6	8,70	15,70	20,5	2	3
100	108,0	9,27	17,25	22,3	2	2,5
100	114,3	9,83	18,84	24,2	2	2,5
	127,0	12,13	23,26	29,3	2	2,5
125	133,0	12,73	25,00	31,4	2	2,5
125	139,7	13,39	27,01	33,8	2	2,5
	152,4	16,41	32,57	40,0	2	2,5
150	159,0	17,15	34,82	42,7	2	2,5
150	168,3	18,18	38,11	46,6	2	2,5
	177,8	21,31	43,43	52,5	1,5	2
	193,7	25,08	51,35	61,4	1,5	2
200	219,1	31,02	64,78	76,7	1,5	2
	267,0	40,50	91,34	107,0	1	1,5
250	273,0	41,44	94,70	110,9	1	1,5

Copper pipes DIN 1786 and 1754 blank

Ø NS	Outer-Ø mm	Pipe weights			Max. distance for profile 27/18 in (m)	Max. distance for profile 28/30 in (m)
		Empty kg/m	Water-filled kg/m	Water-filled and insulated kg/m		
10	10	0,25	0,30	0,4	2	3
12	12	0,30	0,39	0,5	2	3
15	15	0,39	0,52	0,8	2	3
18	18	0,47	0,68	1,0	2	3
22	22	0,58	0,90	1,3	2	3
28	28	1,10	1,59	2,4	2	3
35	35	1,39	2,20	3,1	2	3
42	42	1,68	2,88	4,4	2	3
54	54	2,88	4,84	7,3	2	3
64	64	3,43	6,26	9,8	2	3
70	70	3,76	7,19	12,9	2	3
74	74	3,98	7,83	13,5	2	3
80	80	4,31	8,85	14,7	2	3
104	104	5,64	13,50	25,5	2	2,5
125	125	10,12	21,25	33,5	2	2,5
131	131	10,62	22,89	35,0	2	2,5

Pipe bendings are not considered.

The corresponding indications of the pipe suppliers need to be taken into consideration.

Recommended fixing distances for pipes using hammer-head catches/HakoFix quick-action catcher

Threaded pipes DIN 2440

Ø Inch	Outer-Ø mm	Empty kg/m	Pipe weights		Max. distances for profile 27/18 in (m)	Max. distances for profile 28/30 in (m)
			water-filled kg/m	water-filled and insulated kg/m		
3/8"	13,5	0,65	0,71	1,3	2	3
1/4"	17,2	0,86	0,99	1,7	2	3
1/2"	21,3	1,22	1,42	2,2	2	3
3/4"	26,9	1,58	1,96	2,8	2	3
1"	33,7	2,44	3,03	4,1	2	3
1 1/4"	42,4	3,14	4,16	5,4	2	3
1 1/2"	48,3	3,61	4,99	6,9	2	3
2"	60,3	5,10	7,31	9,6	2	3
2 1/2"	76,1	6,52	10,24	13,1	2	3
3"	88,9	8,47	13,61	17,8	2	3
4"	114,3	12,19	20,90	26,3	2	2,5
5"	139,7	16,13	29,41	36,1	2	2,5
6"	165,1	19,17	38,14	46,4	2	2,5

Composite pipes crosslinked polyethylene (PE-X) pipes, PB pipes

Outer-Ø in (mm)	Reference values of the distances in (m)	DIN 16892 Reference values of the distances in (m)	DIN 19968 Reference values of the distances in (mm)	Max. distances for profile 27/18 in (m)	Max. distances for profile 28/30 in (m)
14	1,2				
16	1,2	0,8	0,5	2	3
18	1,5				
20	1,5	0,9	0,6	2	3
25	1,5	1,0	0,7	2	3
26	1,5				
32	1,5	1,0	0,8	2	3
40	1,5	1,2	1,0	2	3
50	1,5	1,2	1,2	2	3
63	1,5	1,2	1,4	2	3

Pressure pipes PP pipes DIN 8077, PE pipes DIN 8072

Ø NS	Outer-Ø mm	Pipe weights		Max. distances for profile 27/18 in (m)	Max. distances for profile 28/30 in (m)
		Empty kg/m	wassergefüllt kg/m		
12	16	0,10	0,20	2	3
15	20	0,16	0,30	2	3
20	25	0,25	0,47	2	3
25	32	0,42	0,77	2	3
32	40	0,64	1,21	2	3
40	50	1,01	1,88	2	3
50	63	1,59	2,98	2	3
63	75	2,26	4,23	2	3
80	90	3,25	6,08	2	3
90	110	4,87	9,08	2	3
100	125	6,29	11,73	2	3

Pressure pipes PVC hard DIN 8062

Ø NS	Outer-Ø mm	Pipe weights		Max. distances for profile 27/18 in (m)	Max. distances for profile 28/30 in (m)
		Empty kg/m	water-filled kg/m		
40	50	0,42	2,12	2	3
50	63	0,56	3,32	2	3
70	75	0,78	4,77	2	3
100	110	1,64	10,24	2	3
125	125	2,13	13,22	2	3
150	160	3,44	21,64	2	3

Pipe bendings are not considered.

The corresponding indications of the pipe suppliers need to be taken into consideration.

Recommended fixing distances for pipes using hammer-head catches/HakoFix quick-action catchers

Drain pipes cast iron SML DIN 19522

Ø NS	Outer-Ø mm	Pipe weights		Max. distances for profile 27/18 in (m)	Max. distances for profile 28/30 in (m)
		Empty kg/m	water-filled kg/m		
50	58	4,70	6,75	2	3
70	78	6,43	10,39	2	3
100	110	9,19	17,53	2	3
125	135	12,92	25,60	2	2,5
150	160	15,39	33,54	2	2,5
200	210	25,28	56,70	1,5	2,5
250	274	36,42	90,75	1	1,5
300	326	47,35	124,79	1	1,5

Drain pipes GA DIN 19500

Ø NS	Außen-Ø mm	Pipe weights		Max. distances for profile 27/18 in (m)	Max. distances for profile 28/30 in (m)
		Empty kg/m	water-filled kg/m		
50	60	5,30	7,51	2	3
70	80	7,10	11,29	2	3
100	112	10,30	18,80	2	3
125	137	13,70	26,77	2	2,5
150	162	17,30	35,45	2	2,5
200	212	32,70	64,12	1,5	2

Drain pipes PE (GEBERIT)

Ø NS	Outer-Ø mm	Pipe weights		Max. distances for profile 27/18 in (m)	Max. distances for profile 28/30 in (m)
		Empty kg/m	water-filled kg/m		
25	32	0,27	0,81	2	3
32	40	0,35	1,26	2	3
40	50	0,45	1,97	2	3
50	56	0,50	2,47	2	3
57	63	0,57	3,13	2	3
70	75	0,68	4,43	2	3
80	90	0,96	6,37	2	3
100	110	1,44	9,52	2	3
125	125	1,86	12,29	2	3
125	140	2,09	15,41	2	3
150	160	3,01	20,13	2	3
200	200	3,79	31,44	2	2,5
250	250	5,96	49,12	2	2,5
300	315	9,44	77,98	1,5	2

Drain pipes PP DIN 8077 (HT pipes)

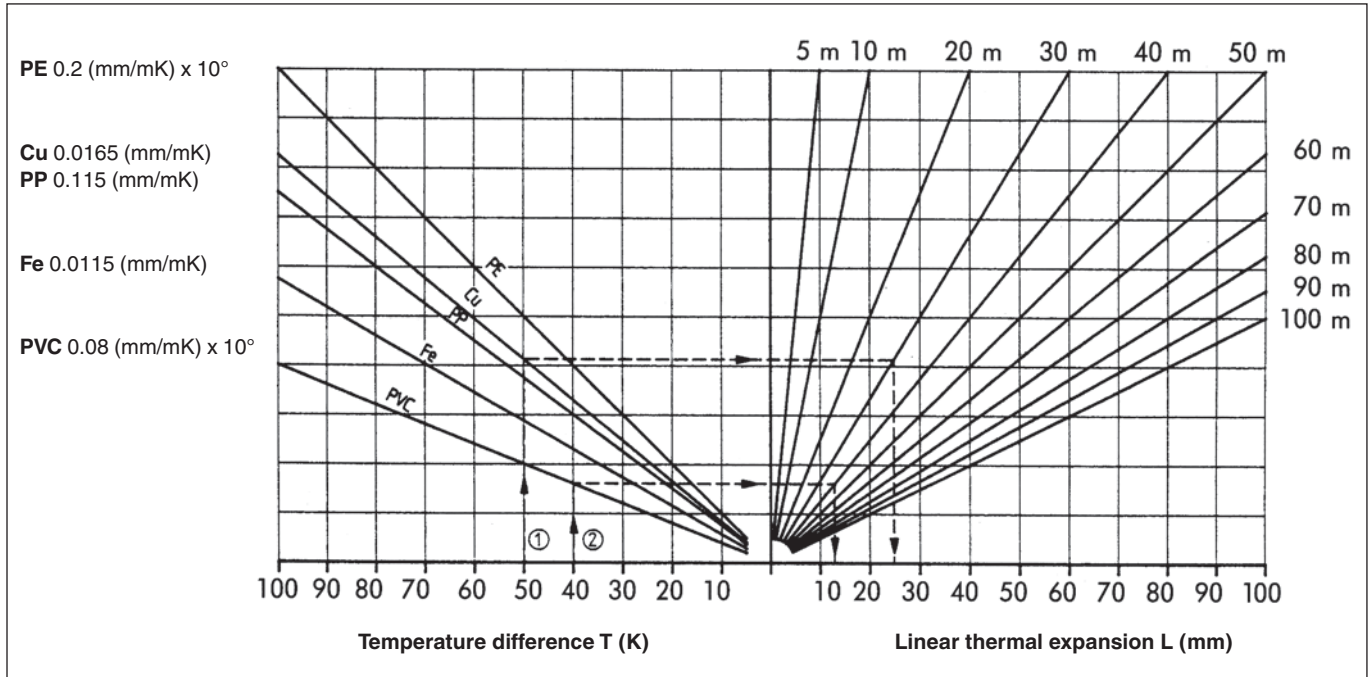
Ø NS	Outer-Ø mm	Pipe weights		Max. distances for profile 27/18 in (m)	Max. distances for profile 28/30 in (m)
		Empty kg/m	water-filled kg/m		
40	40	0,23	1,26	2	3
50	50	0,29	1,91	2	3
70	75	0,49	4,37	2	3
100	110	0,97	9,48	2	3
125	125	1,30	12,37	2	3
150	160	2,16	20,34	2	3

Pipe bendings are not considered.

The corresponding indications of the pipe suppliers need to be taken into consideration.

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.



Example:

- ① Copper pipe, Cu length of the pipeline 30 m
Temperature difference $\Delta T = 50^\circ \text{ K}$
Linear thermal expansion $\Delta L = 24.75 \text{ mm}$
- ② PVC pipe, length of the pipeline $L = 40 \text{ m}$
Temperature difference $\Delta T = 40^\circ \text{ K}$
Linear thermal expansion $\Delta L = 128 \text{ mm}$

Calculation formula for linear thermal expansion

$$\Delta L = L \cdot \Delta T \cdot \alpha$$

(mm) (m) (mm/mK)

- ΔL = Linear thermal expansion
- L = Length of the pipeline /pipe section
- ΔT = Temperature difference
- α = Coefficient of linear thermal expansion

Attention!

For pipes made of plastic material (PE, PP, PVC) the read linear thermal expansion of the diagram needs to be multiplied by 10.

Maximum support widths of different pipes depending on the admissible bending

Copper pipe

Size (mm)	Distances copper pipe in (m)	WICU
10 x 1	1,00	0,9
12 x 1	1,10	1,0
15 x 1	1,20	1,1
18 x 1	1,30	1,3
22 x 1	1,40	1,3
28 x 1,5	1,70	1,5
35 x 1,5	1,80	1,6
42 x 1,5	1,90	1,7
54 x 2	2,20	2,0

PVC pipe, hard

Size (mm)	Distances in meters, water-filled at a temperature of	
	20°	40°
40	0,75	0,8
50	1,1	0,7
70	1,3	0,8
100	1,6	1,0
125	1,8	1,1
150	2,2	1,2

Steel and threaded pipe

Size (inch)	Pipe outer-Ø (mm)	Distances in (m)
3/8"	17,2	1,4
1/2"	21,4	1,6
3/4"	26,9	1,8
1"	33,7	2,2
1 1/4"	42,4	2,6
1 1/2"	48,3	2,8
2"	60,3	3,4
2 1/2"	76,1	4,0
3"	88,9	4,5
4"	114,3	5,0
5"	139,7	6,0
6"	165,1	7,0

PP/PE pipe

Size (mm)	Distances in meters, water-filled at a temperature of	
	20°	40°
32	0,8	0,6
40	0,9	0,7
50	1,0	0,7
56	1,0	0,8
63	1,6	0,9
75	1,2	0,9
90	1,2	1,0
110	1,4	1,1
125	1,4	1,1
160	1,5	1,2
200	1,7	1,3
250	1,8	1,5

These values are based on the admissible bending of the pipes and the corresponding recommendations of the manufacturers of the pipes. The admissible loads of the pipe fixtures and clamps are not taken into consideration.

Conversion table SI units

According to the law applicable from January 1st 1978 on, the most common, legally prescribed SI units (System International) and their conversions for the sanitary area, heating systems, ventilation systems and climate systems.

1. Basic units

m meter	basic size length
kg kilogram	basic size bulk
s second	basic size time
K Kelvin	basic size temperature (former designation °C)
A Ampere	basic size electrical current

2. Derived units

Physical size	old designation	new designation
a) Force	kp	N (Newton)
b) Energy, work heat quantity	cal, mkp	J (Joule)
c) Energy- heat flow and performance	cal/s, kcal/h, PS	kW
d) Pressure	kp/m ²	Pa (Pascal)
e) Surface	m ²	m ²
f) Volume	m ³	m ³
g) Density	kg/m ³	kg/m ³
h) Frequency	Hz	Hz (Hertz)

3. Formula for conversion

a) Kilopond - (Newton)*

$$1 \text{ kp} = 9.80665 \text{ kgm/s}^2 = 9.80665 \text{ N} = 9.81 \text{ N}$$

$$1 \text{ N} = \frac{1}{9.80665} \text{ kp} = 0.102 \text{ kp} = 0.1 \text{ kp}$$

b) Calorie - (Joule)*

$$1 \text{ cal.} = 4.1868 \text{ Ws} = 4.1868 \text{ J} = 4.19 \text{ J}$$

$$1 \text{ J} = 1 \text{ Ws} \frac{1}{4.1868} \text{ cal} = 0.234 \text{ cal.}$$

c) Horsepower - (Kilowatt)* according to DIN 66035

$$1 \text{ HP} = 75 \text{ kpm/s} = 75 \times 9.80665 \text{ N/ms} = 0.736 \text{ kW}$$

$$1 \text{ kW} = \frac{1}{0.736} \text{ HP} = 1.36 \text{ HP (from 1978 no more HP)}$$

d) Kilogram calorie - (Watt-hour)* according to DIN 66039

$$1 \text{ kcal} = \frac{4186.8 \text{ Wh}}{3600} = 1.163 \text{ Wh}$$

$$1 \text{ Wh} = \frac{1}{1.163} \text{ kcal} = 0.86 \text{ kcal}$$

e) Kilopond per square centimeter - (bar)* according to DIN 66037

$$1 \text{ kp/cm}^2 = 1 \text{ at (techn. Atmosph.)} = 0.981 \text{ bar}$$

$$1 \text{ bar} = \frac{1}{0.981} \text{ kp/cm}^2 = 1.02 \text{ kp/cm}^2 = 1.02 \text{ at}$$

$$1 \text{ bar} = 10^5 \text{ N/m}^2 = 10/\text{cm}^2$$

f) Newton per square centimeter (Pascal)* - Kilopond per square meter - (Pascal)*

$$1 \text{ N/m}^2 = 1 \text{ Pa}$$

$$1 \text{ atm} = 101325 \text{ N/m}^2 = 101325 \text{ Pa}$$

$$1 \text{ mm WS} = 1 \text{ kp/m}^2 = 10 \text{ Pa} = 0.1 \text{ mbar}$$

* (new designation)

Torr - (Millibar)* according to DIN 66038

$$1 \text{ Torr} = \frac{1.01325 \text{ m bar}}{0.760} = 1.333 \text{ m bar}$$

$$1 \text{ m bar} = \frac{0.760}{1.01325} \text{ Torr} = 0.75 \text{ Torr}$$

Degree centigrade - (Kelvin)*

$$0^\circ\text{C} = 273 \text{ K}$$

$$-273^\circ\text{C} = 0 \text{ K (absolute zero point)}$$

4. Formula symbols and its designation

Symbol	Designation	Unit
VV	volume flow	m ³ /h or m ³ /h x m
X _s	horizontal flow (ceiling throw)	m
Y _H	vertical throw (perpendicular on the ground)	m
X _s + Y _H	sum throw horizontal and vertical	m
V _o	discharge velocity	m/s
V _M	maximum end velocity of jet after throw X _s or X _s + Y _H	m/s
Δp	total pressure difference	Pa
Δt _o	temperature difference (intake air temperature/outlet air temperature)	K (Kelvin)
Δt _R	room temperature difference between ceiling and floor	
Δt	temperature difference between jet after throw X _s (X _s + Y _H) and room air temperature	K (Kelvin)
Δt/Δt _o	temperature ratio between beam temperature differences Δt after throw X _s or (X _s + Y _H) and intake air temperature difference Δt _o	
i	induction ratio	-
L _W	sound power level	dB
L _A	A-rated sound power level (calculated value)	
ΔL	correction value of the sound power level at size change or throttling	

* (new designation)

Hinge Pipe Clamps M8, M8/M10

- Wide latch type hinge clamp
- Handy for preassembly
- Sound-proofing insert for DIN 4109
- Temperature-resistant from -50°C up to +120°C
- Aging stability and weathering resistance according to DIN 53508/9
- Weld nut M8 or M8/M10 for high solidity under torsional forces (nut welded at 4 points)
- Locking screw with recessed head



Article No.	Article Description	QTY
8605 1 11 15	HINGE PIPE CL. 1/4" 11-15 M8	140
8605 1 15 19	HINGE PIPE CL. 3/8" 15-19 M8	200
8605 1 21 23	HINGE PIPE CL. 1/2" 21-23 M8	160
8605 1 26 28	HINGE PIPE CL. 3/4" 26-28 M8	120
8605 1 32 35	HINGE PIPE CL. 1" 32-35 M8	100
8605 1 40 43	HINGE PIPE CL. 1 1/4" 40-43 M8	65
8605 1 48 51	HINGE PIPE CL. 1 1/2" 48-51 M8	60
8605 1 52 56	HINGE PIPE CL. 52-56 M8	30
8605 1 57 60	HINGE PIPE CL. 2" 57-60 M8	20
8605 1 62 65	HINGE PIPE CL. 62-65 M8	20
8605 1 74 80	HINGE PIPE CL. 2 1/2" 74-80 M8	30
8605 1 83 91	HINGE PIPE CL. 3" 83-91 M8	15
8605 2 108 114	HINGE PL.CL. 4" 108-114 M8/10	18
8605 2 108 116	HINGE PL.CL. S 4"108-114 M8/10	12

Technical Data	
Item No	max. load N
8605 1 11 15	800
8605 1 15 19	800
8605 1 21 23	800
8605 1 26 28	800
8605 1 32 35	800
8605 1 40 43	800
8605 1 48 51	1.200
8605 1 52 56	1.200
8605 1 57 60	1.200
8605 1 62 65	1.200
8605 1 74 80	1.200
8605 1 83 91	1.200
8605 2 108 114	1.800
8605 2 108 116	1.800

Plastic Pipe Clamp Easy-Click M8

- Sound-proofing insert made of high-quality EPDM
- Sound level improvement at an average of 15 dB (A)
- Locking screw with cross recessed head
- Electro-galvanized

Fields of application:

- As fixed point or sliding pipe clamp
- For plastic pipes and multi-layer composite pipes



Article No.	Article Description	QTY
8604 16 19	EASY-CL PL.PIPE CL. 15-19MM M8	150
8604 20 23	EASY-CL PL.PIPE CL. 20-23MM M8	100
8604 25 28	EASY-CL PL.PIPE CL. 25-28MM M8	100
8604 32 35	EASY-CL PL.PIPE CL. 32-35MM M8	75
8604 40 43	EASY-CL PL.PIPE CL. 40-43MM M8	50
8604 44 49	EASY-CL PL.PIPE CL. 44-49MM M8	50
8604 50 55	EASY-CL PL.PIPE CL. 50-55MM M8	50
8604 63 67	EASY-CL PL.PIPE CL. 63-67MM M8	50

Technical Data			
Clamping range	Nominal size	Connection- thread	Material cross section
in mm			in mm
15 - 19	16	M8	20 x 1,25
20 - 23	20	M8	20 x 1,25
25 - 28	25	M8	20 x 1,25
32 - 35	32	M8	20 x 1,25
40 - 43	40	M8	20 x 1,25
44 - 49		M8	20 x 1,25
50 - 55	50	M8	20 x 1,25
63 - 67	63	M8	20 x 1,25

Pipe Clamps Easy-Click M8

- Easy-to-install hinge fitting seal
- Sound-proofing insert EPDM for DIN 4109
- Cylinder head bolt M6 with cross recessed head
- Electro-galvanized surface
- Strong clamping strap 20 x 1.5 mm (W x T)
- For pipe diameter s from 12 to 61 mm
- Temperature-resistant from -50°C to +110°C
- Fulfills fire protection classification B2 according to DIN 4102
- With terminal nut M8

Article No.	Article Description	QTY
8611 12 14	EASY-CL PI. CL. 1/4" 12-14 M8	130
8611 15 19	EASY-CL PI. CL. 3/8" 15-19 M8	230
8611 21 23	EASY-CL PI. CL. 1/2" 21-23 M8	200
8611 26 28	EASY-CL PI. CL. 3/4" 26-28 M8	130
8611 32 35	EASY-CL PI. CL. 1" 32-35 M8	130
8611 40 43	EASY-CL PI. CL. 1 1/4" 40-43 M8	100
8611 44 49	EASY-CL PI. CL. 44-49 M8	100
8611 48 52	EASY-CL PI. CL. 1 1/2" 48-52 M8	90
8611 54 58	EASY-CL PIPE CL. 54-58 M8	75
8611 57 61	EASY-CL PIPE CL. 2" 57-61 M8	65



Pipe Clamp Box

- Robust box
- Optimum to transport pipe clamps
- Also available completely equipped (item No 8611 580 3)
- Dimensions LxWxH: 58,0 x 40,5 x 12,5 cm

Article No.	Article Description	QTY
8611 580	PIPE CL. BOX	1
8611 580 3	PIPE CL. BOX EASY-CLICK	1



Art. No. 8611 580 3:

Art. No.	Art. Description	Quantity
8611 15 19	EASY-CL PI. CL. 3/8" 15-19 M8	150
8611 21 23	EASY-CL PI. CL. 1/2" 21-23 M8	120
8611 26 28	EASY-CL PI. CL. 3/4" 26-28 M8	90
8611 580	PIPE CL. BOX	1

Pipe Clamps Easy-Click M8/M10

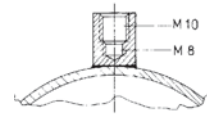
- Easy-to-install hinge fitting seal
- Sound-proofing insert EPDM for DIN 4109
- Cylinder head bolt M6 with cross recessed head
- Electro-galvanized surface
- Strong clamping strap 20 x 1.5 mm (W x T)
- For pipe diameter s from 12 to 114 mm
- Temperature-resistant from -50°C to +110°C
- Fulfills fire protection classification B2 according to DIN 4102
- With terminal nut M8/M10

Article No.	Article Description	QTY
8612 12 14	EASY-CL PI. CL. 1/4" 12-14M8/10	130
8612 15 19	EASY-CL PI. CL. 3/8" 15-19M8/10	200
8612 21 23	EASY-CL PI. CL. 1/2" 21-23M8/10	200
8612 26 28	EASY-CL PI. CL. 3/4" 26-28M8/10	130
8612 32 35	EASY-CL PIPE CL. 1" 32-35M8/10	130
8612 40 43	EASY-CL PI. CL. 1 1/4" 40-43M8/10	100
8612 44 49	EASY-CL PIPE CL. 44-49M8/10	100
8612 48 52	EASY-CL PI. CL. 1 1/2" 48-52M8/10	90
8612 54 58	EASY-CL PIPE CL. 54-58M8/10	75
8612 57 61	EASY-CL PIPE CL. 2" 57-61M8/10	65
8612 63 67	EASY-CL PIPE CL. 63-67M8/10	60
8612 70 73	EASY-CL PIPE CL. 70-73M8/10	40
8612 74 80	EASY-CL PI. CL. 2 1/2" 74-80M8/10	30
8612 83 91	EASY-CL PIPE CL. 3" 83-91M8/10	25
8612 101 106	EASY-CL PIPE CL. 101-106M8/10	25
8612 108 114	EASY-CL PI. CL. 4" 108-114M8/10	20



Double-Bolt Pipe Clamps Type S

- Robust type
- Bright galvanized with terminal nut M8 ≤ 2"; M8/10 · 2"
- With alround protection against corrosion
- Two-part type with undetachable multifunction screw
 - refixable with longitudinal slot as well as with cross recess
 - fixable also with opening of spanner 10 due to multifunctional head
 - the screw is secured against unintentional unscrewing
- Structural-physical tested and approved
 - fulfills building material class B2 according to DIN 4102
 - for assembly according to DIN 4109 sound insulation
 - continuously temperature-resistant from -50°C to +110°C
- Material thickness up to incl. 2": 20 x 1.5 mm having a bearing capacity of up to 1.000 N per pipe clamp
- Material thickness 64 mm to 4": 25 x 2.0 mm having a bearing capacity of up to 1.500 N per pipe clamp
- Material thickness 121 mm up to 6": 25 x 2.5 mm and 198 to 220 mm: 30 x 3.0 mm having a bearing capacity of up to 2.000 N per pipe clamp



Article No.	Article Description	QTY
8606 12 15	DB PIPE CL. 1/4" 12-15 M8	100
8606 15 19	DB PIPE CL. 3/8" 15-19 M8	100
8606 20 24	DB PIPE CL. 1/2" 20-24 M8	100
8606 25 30	DB PIPE CL. 3/4" 25-30 M8	100
8606 32 37	DB PIPE CL. 1" 32-37 M8	100
8606 40 45	DB PIPE CL. 1 1/4" 40-43 M8	75
8606 48 53	DB PIPE CL. 1 1/2" 48-53 M8	75
8606 54 57	DB PIPE CL. 54-58 M8	50
8606 58 61	DB PIPE CL. 2" 59-63 M8	50
8606 62 64	DB PIPE CL. 62-64 M8/10	40
8606 68 73	DB PIPE CL. 68-73 M8/10	30
8606 75 80	DB PIPE CL. 2 1/2" 75-80 M8/10	30
8606 82 86	DB PIPE CL. 82-86 M8/10	30
8606 89 91	DB PIPE CL. 3" 89-91 M8/10	25
8606 95 103	DB PIPE CL. 95-103 M8/10	25
8606 108 116	DB PIPE CL. 4" 108-116 M8/10	25
8606 121 127	DB PIPE CL. 121-127 M8/10	25
8606 129 135	DB PIPE CL. 129-135 M8/10	25
8606 133 141	DB PIPE CL. 5" 135-141 M8/10	25
8606 159 162	DB PIPE CL. 159-162 M8/10	25
8606 165 168	DB PIPE CL. 6" 165-168 M8/10	25
8606 198 202	DB PIPE CL. 198-202 M8/10	10
8606 210 215	DB PIPE CL. 210-215 M8/10	10
8606 216 220	DB PIPE CL. 8" 216-220 M8/10	10

(Threaded pipe DIN 2440/41 / clamping range mm)

Technical Data			
Item No	Ø cop. pipe DIN 1786 mm	HT pipe DIN 19531/560	SML/sound-ins. drain pipe
8606 12 15	12		
8606 15 19	15/18		
8606 20 24	22		
8606 25 30	28		
8606 32 37	35		
8606 40 45	42	DN 40	
8606 48 53	48	DN 50	
8606 54 57	54/57		
8606 58 61			DN 50
8606 62 64	64		
8606 68 73	70		
8606 75 80		DN 70	DN 70
8606 82 86			
8606 89 91	88,9		
8606 95 103			
8606 108 116	114	DN 100	DN 100
8606 121 127	125	DN 125	
8606 129 135			
8606 133 141			DN 125
8606 159 162	159	DN 150	DN 150
8606 165 168			
8606 198 202			
8606 210 215			
8606 216 220			DN 200

Vent Pipe Clamp

- Light-weighted type
- Perfect to assemble ventilation and climate pipes
- Two-part pipe incl. undetachable cross recessed screw
 - Mountable with longitudinal slot as well as with cross recess
 - The screw is secured against unintentional unscrewing
- Pipe clamp made of high-quality hot-galvanized steel strips – Improved corrosion protection
- Structural-physical tested and approved
 - Fulfills building material class B2 according to DIN 4102
 - For assemblies according to DIN 4109 sound insulation
 - Continuously temperature-resistant from -50°C to +110°C
- Terminal nut M8/M10
- Improvement of sound control at an average of 18 dB (A)
- Max. admissible load 600 N

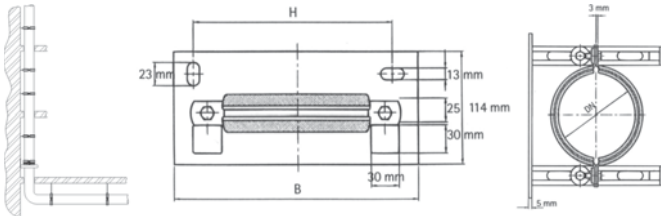


Article No.	Article Description	QTY
8609 80	VENT PIPE CL. 80MM M8/M10	50
8609 90	VENT PIPE CL. 90MM M8/M10	50
8609 100	VENT PIPE CL. 100MM M8/M10	25
8609 112	VENT PIPE CL. 112MM M8/M10	25
8609 125	VENT PIPE CL. 125MM M8/M10	25
8609 140	VENT PIPE CL. 140MM M8/M10	25
8609 150	VENT PIPE CL. 150MM M8/M10	25
8609 160	VENT PIPE CL. 160MM M8/M10	25
8609 180	VENT PIPE CL. 180MM M8/M10	25
8609 200	VENT PIPE CL. 200MM M8/M10	15
8609 224	VENT PIPE CL. 224MM M8/M10	15
8609 250	VENT PIPE CL. 250MM M8/M10	10
8609 280	VENT PIPE CL. 280MM M8/M10	10
8609 300	VENT PIPE CL. 300MM M8/M10	10
8609 315	VENT PIPE CL. 315MM M8/M10	10
8609 355	VENT PIPE CL. 355MM M8/M10	10
8609 400	VENT PIPE CL. 400MM M8/M10	10

(Nominal width mm)

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
- Strainless assembly due to optimum adjustability
- Optimum sound insulation profile according to DIN 4109



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

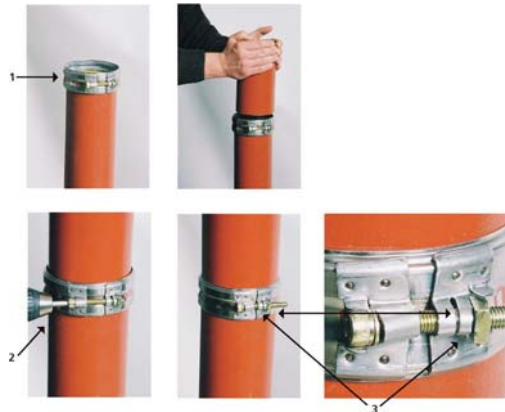
Technical Data						
Item No	ID	Height mm	Length mm	Width mm	Admissible load Fy (N)	
8627 70	70	167	210	212	3000	
8627 80	80	167	210	212	3000	
8627 100	100	199	210	244	3000	
8627 125	125	224	210	269	3000	
8627 150	150	248	210	293	3000	
8627 200	200	298	250	343	3000	

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, galvanized, 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 50
8608 9 70	SML COUPLING ID 70	e 50
8608 9 100	SML COUPLING ID100	e 20
8608 9 125	SML COUPLING ID125	e 20
8608 9 150	SML COUPLING ID150	e 10

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	e 5



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 10
8608 2 125	FIX COUPLING ID 125	e 5

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

Seals IS/AS

- Seals according to DIN 4060/EN 681-1
- To connect SML pipe systems with other materials (e.g. HT pipes)

Article No.	Article Description	QTY
8608 3 50	SEAL IS ID 50	e 50
8608 3 70	SEAL IS ID 70	z 50
8608 3 125	SEAL IS ID 125	e 20
8608 4 50	SEAL AS ID 50	e 50
8608 4 70	SEAL AS ID 70	e 50
8608 4 125	SEAL AS ID 125	e 20



Seals I/A

Article No.	Article Description	QTY
8608 5 50	SEAL I ID 50	e 50
8608 5 70	SEAL I ID 70	e 50
8608 5 100	SEAL I ID 100	e 50
8608 5 125	SEAL I ID 125	ü 20
8608 5 150	SEAL I ID 150	ü 20
8608 5 200	SEAL I ID 200	e 10
8608 6 50	SEAL A ID 50	e 50
8608 6 70	SEAL A ID 70	e 50
8608 6 100	SEAL A ID 100	e 50
8608 6 125	SEAL A ID 125	ü 20
8608 6 150	SEAL A ID 150	ü 20
8608 6 200	SEAL A ID 200	e 10



Mounting Rail Type 27/18

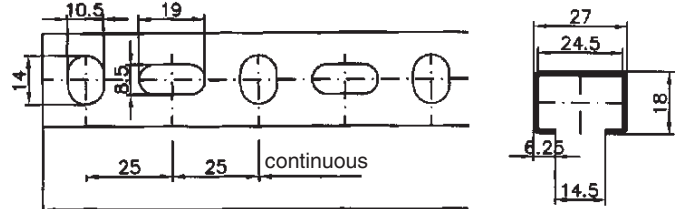
- Cold-formed, perforated mounting rail made of galvanized steel – improved corrosion protection and highest stability
- To manufacture traverses, wall consoles and supporting frames on site at the construction site
- In the shop as preassembly to fix pipeline conduits and piping alignments in the trades sanitary, heating, conditioning, climate and electrical installations

Advantages:

- Versatile fixing options due to different hole geometries
- Neat, optically perfect assembly compared to single fixtures
- High resistance to bending and ultimate strength due to optimized profile cross sections
- The rails are particularly adjusted to all connecting parts (accessories) of the FÖRCH fixing system and therefore allow numerous different constructions and connections without drilling or welding

Fields of application:

- Domestic building
- Fixing of rising pipelines
- Substructures
- Light-weighted suspensions



Technical Data

Item No	Slot width in mm	Material thickness in mm
8640 27 18	14,5	1,25
8640 27 18 3	14,5	1,25

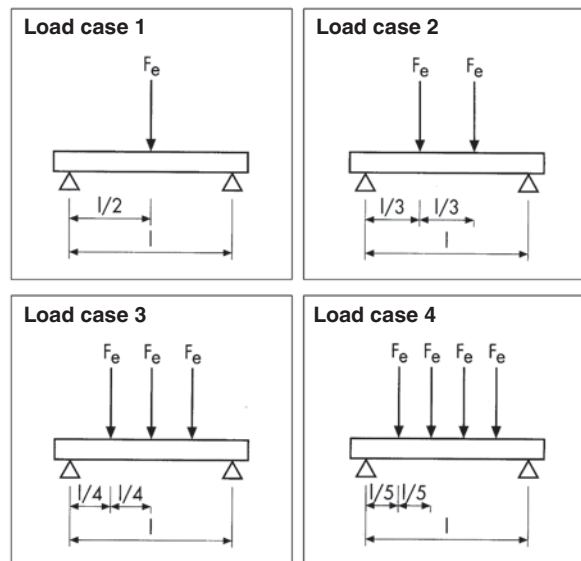
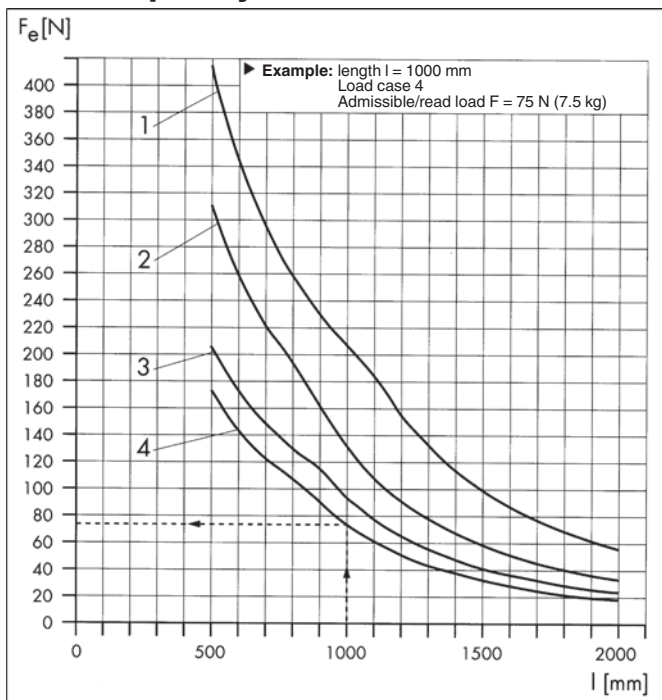
Article No.	Article Description	QTY
8640 27 18	MTR MOUNT. RAIL 2M GAL. 27/18	j 50
8640 27 18 3	MTR MOUNT. RAIL 3M GAL. 27/18	30

[rail length/rail width/height (outer) mm]

Bending and admissible load of the FÖRCH mounting rail 27/18

Length of rail in cm	L = 50	L = 75	L = 100	L = 150
Max. admissible concentrated load	0.43 kN	0.29 kN	0.22 kN	0.14 kN
Bending at a concentrated load of:	mm	mm	mm	mm
0,25 kN	0,80	2,90	6,90	-
0,50 kN	1,70	5,80	13,80	-
0,75 kN	2,60	8,70	20,70	-
1,00 kN	3,40	11,60	27,50	-
1,25 kN	4,30	14,50	-	-
1,50 kN	5,10	17,40	-	-

Load capacity of the FÖRCH mounting rail 27/18



Fe = Single-load

For load curves the admissible steel strain $\sigma = 140 \text{ N/mm}^2$, as well as the maximum bending $L_{/150}$ is not being exceeded.

Mounting Rail Type 28/30

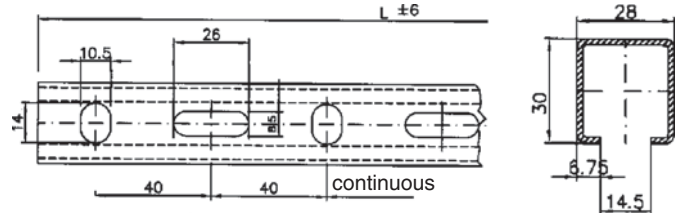
- Cold-formed, perforated mounting rail made of galvanized steel – improved corrosion protection and highest stability
- To manufacture traverses, wall consoles and supporting frames on the construction site on site
- In the shop as preassembly to fix pipeline conduits and piping alignments in the trades sanitary, heating, conditioning, climate and electrical installations

Advantages:

- Versatile fixing options due to different hole geometries
- Neat, optically perfect assembly compared to single fixtures
- High resistance to bending and ultimate strength due to optimized profile cross sections
- The rails are particularly adjusted to all connecting parts (accessories) of the FÖRCH fixing system and therefore allow numerous different constructions and connections without drilling or welding

Fields of application:

- Domestic building
- Fixing of rising pipelines
- Substructures
- Light-weighted suspensions



Technical Data		
Item No	Slot width in mm	Material thickness in mm
8640 28 30	14,5	1,75
8640 28 30 3	14,5	1,75

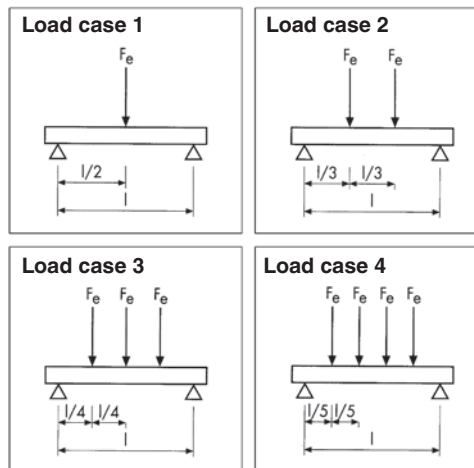
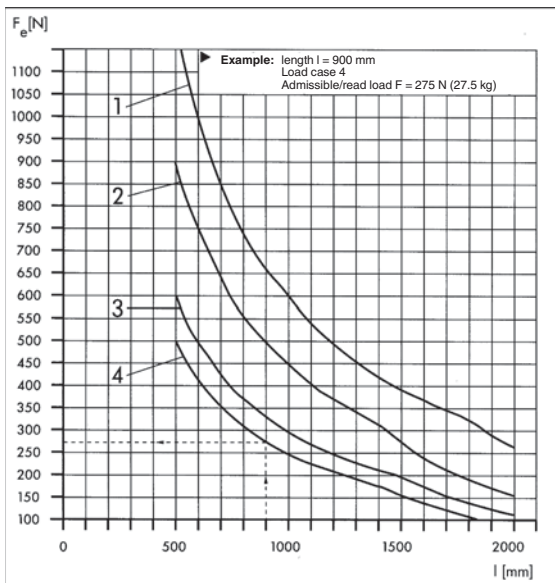
Article No.	Article Description	QTY
8640 28 30	MTR MOUNT. RAIL 2M GAL. 28/30	16
8640 28 30 3	MTR MOUNT. RAIL 3M GAL. 28/30	30

[rail length/rail width/height (outer) mm]

Bending and admissible load of the FÖRCH mounting rail 28/30

Length of rail in cm	L = 50	L = 75	L = 100	L = 150	L = 200
Max. admissible concentrated load	1.31 kN	0.87 kN	0.66 kN	0.44 kN	0.33 kN
Bending at a concentrated load of:	mm	mm	mm	mm	mm
0,25 kN	0,20	0,60	1,50	5,20	12,40
0,50 kN	0,40	1,30	3,10	10,50	24,80
0,75 kN	0,60	1,90	4,60	15,70	37,30
1,00 kN	0,80	2,60	6,20	21,00	-
1,25 kN	1,00	3,20	7,80	26,20	-
1,50 kN	1,20	3,90	9,30	-	-
1,75 kN	1,40	4,60	10,90	-	-
2,00 kN	1,60	5,20	12,40	-	-
2,50 kN	1,90	6,50	15,50	-	-
3,00 kN	2,30	7,80	18,60	-	-

Load capacity of the FÖRCH mounting rail 28/30



F_e = Single-load

For load curves the admissible steel strain $\sigma = 140 \text{ N/mm}^2$, as well as the maximum bending $L_{/150}$ is not being exceeded.

Mounting Rail Type 38/40

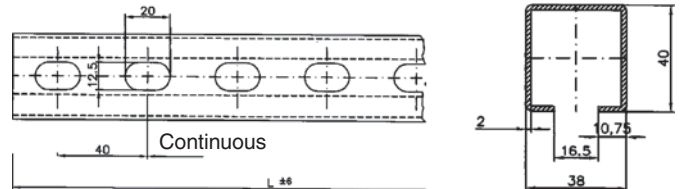
- Cold-formed, perforated mounting rail made of galvanized steel – improved corrosion protection and highest stability
- To manufacture traverses, wall consoles and supporting frames on the construction site on site
- In the shop as preassembly to fix pipeline conduits and piping alignments in the trades sanitary, heating, conditioning, climate and electrical installations

Advantages:

- Versatile fixing options due to different hole geometries
- Neat, optically perfect assembly compared to single fixtures
- High resistance to bending and ultimate strength due to optimized profile cross sections
- The rails are particularly adjusted to all connecting parts (accessories) of the FÖRCH fixing system and therefore allow numerous different constructions and connections without drilling or welding

Fields of application:

- Duct fixtures in the ventilation construction
- Substructures
- Platform construction
- Embankment fixtures in supply ducts
- Suspensions for fan heaters and air conditioning appliances



Technical Data		
Item NO	Slot width in mm	Material thickness in mm
8640 38 40	16,5	2,00
8640 38 40 3	16,5	2,00
8640 38 40 6	16,5	2,00

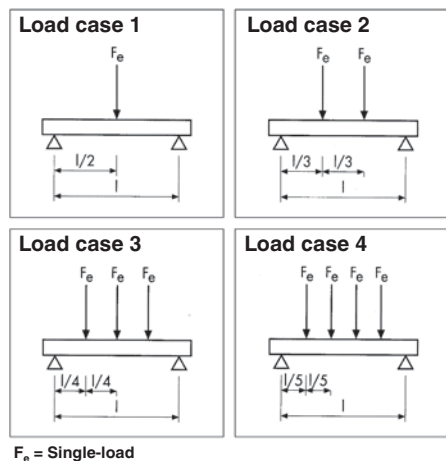
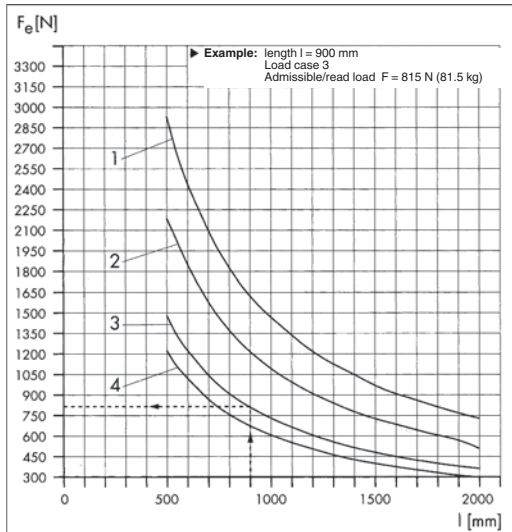
Article No.	Article Description	QTY
8640 38 40	MTR MOUNT. RAIL 2M GAL. 38/40	i 10
8640 38 40 3	MTR MOUNT. RAIL 3M GAL. 38/40	24
8640 38 40 6	MTR MOUNT. RAIL 6M GAL. 38/40	24

[rail length/rail width/height (outer) mm]

Bending and admissible load of the FÖRCH mounting rail 38/40

Length of rail in cm	L = 50	L = 75	L = 100	L = 150	L = 200
Max. admissible concentrated load	2.91 kN	1.94 kN	1.45 kN	0.97 kN	0.72 kN
Bending at a concentrated load of:	mm	mm	mm	mm	mm
0,25 kN	0,00	0,20	0,50	1,60	3,80
0,50 kN	0,10	0,40	0,90	3,20	7,60
0,75 kN	0,20	0,60	1,40	4,80	11,30
1,00 kN	0,22	0,80	1,90	6,40	15,10
1,25 kN	0,30	1,00	2,30	8,00	18,90
1,50 kN	0,35	1,20	2,80	9,60	22,70
1,75 kN	0,40	1,40	3,30	11,20	26,50
2,00 kN	0,50	1,60	3,80	12,80	30,30
2,50 kN	0,60	2,00	4,70	15,90	37,80
3,00 kN	0,70	2,40	5,60	19,20	-
3,50 kN	0,80	2,80	6,60	22,30	-

Load capacity of the FÖRCH mounting rail 38/40



For load curves the admissible steel strain $\sigma = 140 \text{ N/mm}^2$, as well as the maximum bending $L_{/150}$ is not being exceeded.

Mounting Rail Type 40/60

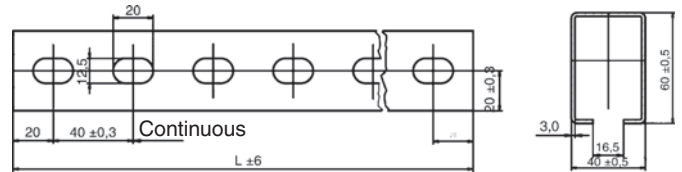
- Cold-formed, perforated mounting rail made of galvanized steel – improved corrosion protection and highest stability
- To manufacture traverses, wall consoles and supporting frames on the construction site on site
- In the shop as preassembly to fix pipeline conduits and piping alignments in the trades sanitary, heating, conditioning, climate and electrical installations

Advantages:

- Versatile fixing options due to different hole geometries
- Neat, optically nice assembly compared to single fixtures
- High resistance to bending and ultimate strength due to optimized profile cross sections
- The rails are particularly adjusted to all connecting parts (accessories) of the FÖRCH fixing system and therefore allow numerous different constructions and connections without drilling or welding

Fields of applications:

- Duct fixtures in the ventilation construction
- Substructures
- Platform construction
- Embankment fixtures in supply ducts
- Suspensions for fan heaters and air conditioning appliances



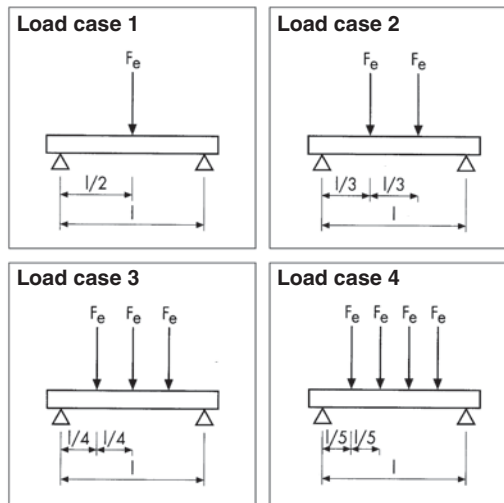
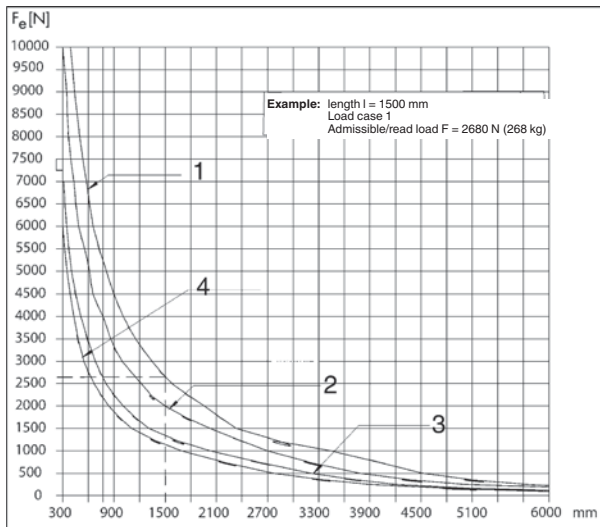
Technical Data

Item No	Slot width in mm	Material thickness in mm
8640 40 60	16,5	3,00
8640 40 60 3	16,5	3,00
8640 40 60 6	16,5	3,00

Article No.	Article Description	QTY
8640 40 60	MTR MOUNT. RAIL 2M GAL. 40/60	4
8640 40 60 3	MTR MOUNT. RAIL 3M GAL. 40/60	12
8640 40 60 6	MTR MOUNT. RAIL 6M GAL. 40/60	12

[rail length/rail width/height (outer) mm]

Load capacity of the FÖRCH mounting rail 40/60



F_e = Single-load

For load curves the admissible steel strain $\sigma = 140 \text{ N/mm}^2$, as well as the maximum bending $L_{/150}$ is not being exceeded.

Technical data for FÖRCH mounting rails

Profile	Profile weight cm ²	Profile cross section cm ²	Moment of inertia		Resisting torque		Max. admissible Point load bearing capacity	
			I _y cm ⁴	J _z cm ⁴	W _y cm ³	W _z cm ³	F (kN)	cm
27/18	0,64	0,75	0,33	1,01	0,37	0,75	1,70	7
28/30	1,28	1,45	1,59	2,17	1,06	1,55	2,50	12
38/40	2,04	2,46	5,24	6,43	2,62	3,38	5,00	15
40/60	3,64	4,62	19,18	13,67	6,24	6,84	8,30	23

Console Tpe 27/18

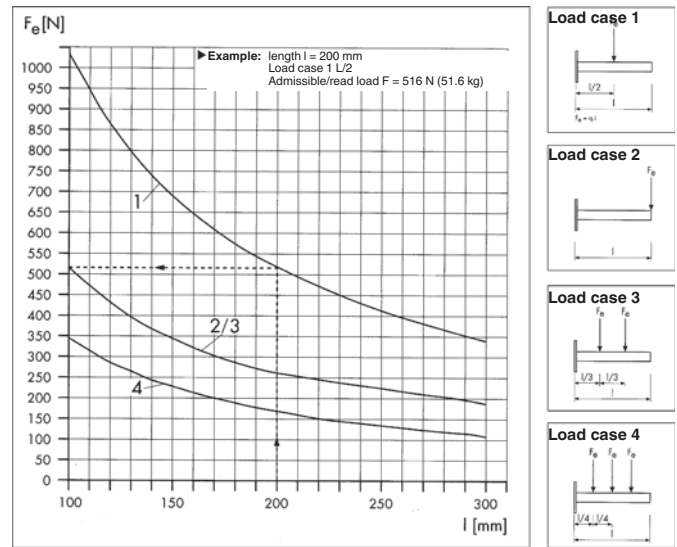
- Ready-for-assembly suspension bracket
- Cold-worked, perforated mounting rail is welded flush to profile - highest stability
- Robot-controlled precision welding – highest safety and quality
- Electro-galvanized – corrosion-protected
- Oblong holes allow adjusting the console in two directions during assembly
- Good adaptation to constructural requirements due to graduated lengths
- Dimensions base plate LxWxH: 120 x 40 x 4 mm
- Fitting to mounting rail type 27/18

Fields of application:

- Protruding supporting structure for piping alignments, fittings, cable racks, pumps, ventilation ducts, air conditioning appliances and air conditioning systems
- Consoles can be mounted on the floor, wall and ceiling and extended by means of rail connectors



Load capacity of the FÖRCH rail console type 27/18



Article No.	Article Description	QTY
8645 200	CONSOLE GAL. TYPE 27/18 200MM	e 25
8645 300	CONSOLE GAL. TYPE 27/18 300MM	e 25

Console Type 28/30

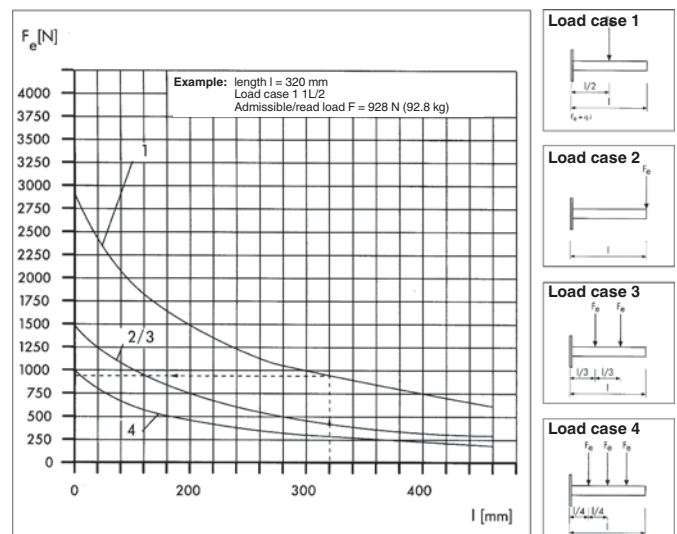
- Ready-for-assembly suspension bracket
- Cold-worked, perforated mounting rail is welded flush to profile - highest stability
- Robot-controlled precision welding – highest safety and quality
- Electro-galvanized – corrosion-protected
- Oblong holes allow adjusting the console in two directions during assembly
- Good adaptation to constructural requirements due to graduated lengths
- Dimensions base plate LxWxH: 120 x 40 x 4 mm
- Fitting to mounting rail type 28/30

Fields of application:

- Protruding supporting structure for piping alignments, fittings, cable racks, pumps, ventilation ducts, air conditioning appliances and air conditioning systems
- Consoles can be mounted on the floor, wall and ceiling and extended by means of rail connectors
- In combination with rail support saddles and rail fixture applicable as traverse for pipe fixtures in pits and ducts



Load capacity of the FÖRCH rail consolt type 28/30



Article No.	Article Description	QTY
8646 200	CONSOLE GAL. TYPE 28/30 200MM	e 25
8646 240	CONSOLE GAL. TYPE 28/30 240MM	ü 25
8646 320	CONSOLE GAL. TYPE 28/30 320MM	e 25
8646 400	CONSOLE GAL. TYPE 28/30 400MM	e 25
8646 500	CONSOLE GAL. TYPE 28/30 500MM	e 25
8646 680	CONSOLE GAL. TYPE 28/30 680MM	1

For load curves the admissible steel strain $\sigma = 140 \text{ N/mm}^2$, as well as the maximum bending $L/150$ is not being exceeded. Load bearing values refer to the consoles. The fixtures such as plugs, screws need to be designed according to the load.

Console Type 38/40

- Ready-for-assembly suspension bracket
- Cold-worked, perforated mounting rail is welded flush to profile - highest stability
- Robot-controlled precision welding – highest safety and quality
- Electro-galvanized – corrosion-protected
- Oblong holes allow adjusting the console in two directions during assembly
- Good adaptation to constructural requirements due to graduated lengths
- Dimensions base plate LxWxH: 120 x 40 x 6 mm
- Fitting to mounting rail type 38/40

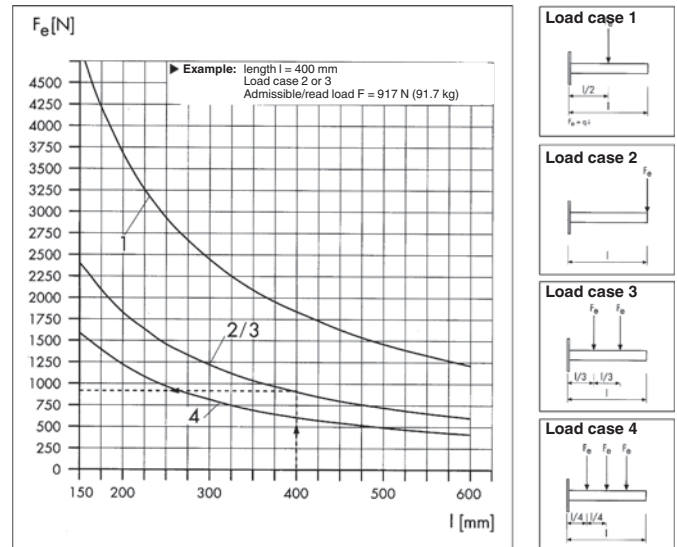
Fields of application:

- Protruding supporting structure for piping alignments, fittings, cable racks, pumps, ventilation ducts, air conditioning appliances and air conditioning systems
- Consoles can be mounted on the floor, wall and ceiling and extended by means of rail connectors
- In combination with rail support saddles and rail fixture applicable as traverse for pipe fixtures in pits and ducts

Article No.	Article Description	QTY
8647 200	CONSOLE GAL. TYPE 38/40 200MM	e 25
8647 300	CONSOLE GAL. TYPE 38/40 300MM	ü 25
8647 360	CONSOLE GAL. TYPE 38/40 360MM	e 20
8647 440	CONSOLE GAL. TYPE 38/40 440MM	e 20
8647 520	CONSOLE GAL. TYPE 38/40 520MM	e 20
8647 600	CONSOLE GAL. TYPE 38/40 600MM	e 10
8647 700	CONSOLE GAL. TYPE 38/40 700MM	1



Load capacity of the FÖRCH rail console type 38/40



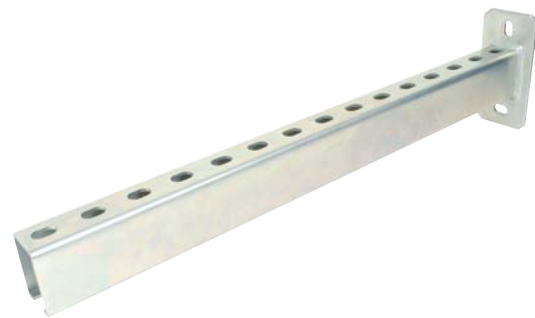
Console Type 40/60

- Ready-for-assembly suspension bracket
- Cold-worked, perforated mounting rail is welded flush to profile - highest stability
- Robot-controlled precision welding – highest safety and quality
- Electro-galvanized – corrosion-protected
- Oblong holes allow adjusting the console in two directions during assembly
- Good adaptation to constructural requirements due to graduated lengths
- Dimensions base plate LxWxH: 144 x 70 x 6 mm
- Fitting to mounting rail type 40/60

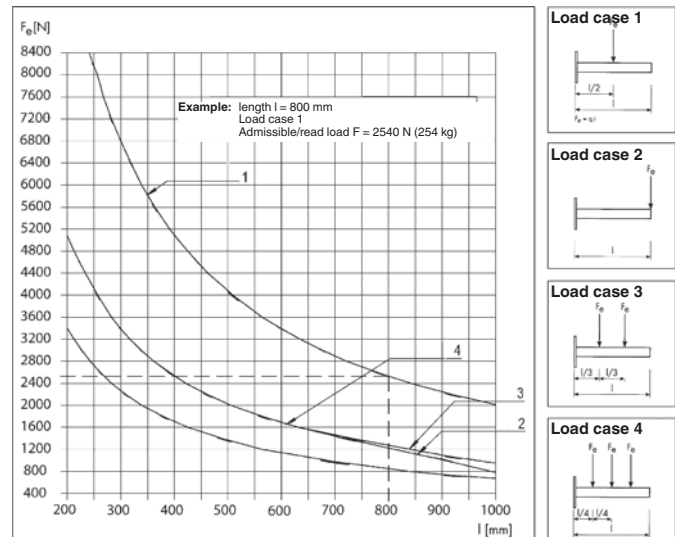
Fields of application:

- Protruding supporting structure for piping alignments, fittings, cable racks, pumps, ventilation ducts, air conditioning appliances and air conditioning systems
- Consoles can be mounted on the floor, wall and ceiling and extended by means of rail connectors
- In combination with rail support saddles and rail fixture applicable as traverse for pipe fixtures in pits and ducts

Article No.	Article Description	QTY
8644 600	CONSOLE GAL. TYPE 40/60 600MM	1
8644 800	CONSOLE GAL. TYPE 40/60 800MM	1
8644 1000	CONSOLE GAL. TYPE 40/60 1000MM	1



Load capacity of the FÖRCH rail console type 40/60



For load curves the admissible steel strain $\sigma = 140 \text{ N/mm}^2$, as well as the maximum bending $L/150$ is not being exceeded. Load bearing values refer to the consoles. The fixtures such as plugs, screws need to designed according to the loads.

Console Support

- To increase the load capacity of rail consoles and console kits
- Time- and cost-saving assembly due to preassembled parts
- The consoles type 28/30 achieve a **triple load capacity value** thanks to this support
- The consoles type 38/40 achieve the **double load capacity value** thanks to this support
- The consoles type 40/60 achieve a **50% higher load capacity value** thanks to this support

Item No 8648 285:

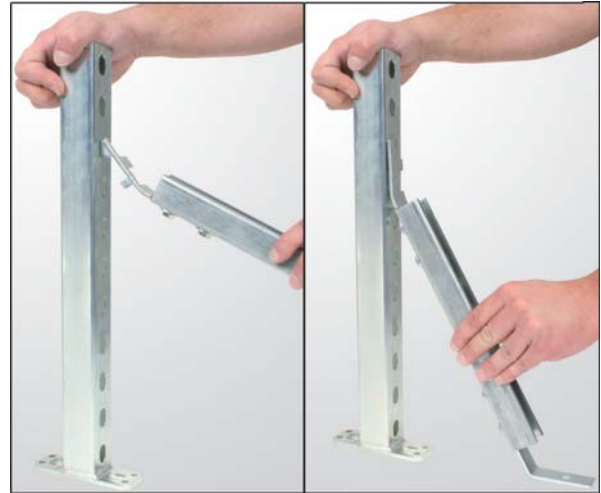
- For all rail consoles 28/30 and 38/40 from a length of 360 mm on

Item No 8648 485:

- For all rail consoles 28/30, 38/40 and 40/60 from a length of 520 mm on

Processing advices:

- Fix the console to the substructure by means of appropriate dowels and screws
- Insert the console support into the oblong hole of the console
- Fix the support to the substructure by means of appropriate dowels and screws



Article No.	Article Description	QTY
8648 285	CONSOLE SUPP. GAL. 285MM	1
8648 485	CONSOLE SUPP. GAL. 485MM	1

Heavy-Duty Consoles Type 38/40, Hot-Dip Galvanized

- Hot-dip galvanized console welded to the support for heavy pipe fixtures
- Appropriate to be used outdoors (except for highly corrosive environments)
- Fixing of heavy aggregates, pumps and air conditioning appliances
- Profile thickness: 2 mm
- Slot width: 17 mm

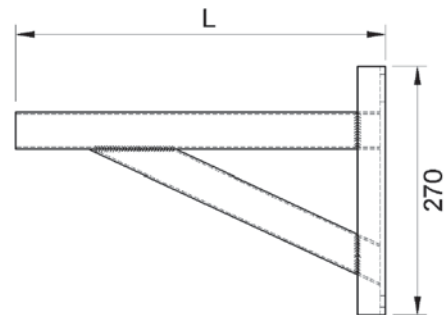


Article No.	Length L mm	Loading case				Weight kg/pc
		kg	kg	kg	kg	
8647 2 400	400	773	448	183	183	2,30
8647 2 500	500	407	216	112	102	2,50
8647 2 600	600	489	336	203	183	2,80
8647 2 700	700	392	214	102	92	2,90

¹⁾ The indicated values are the maximum load values with a static security of 25 to 30%. The following values form the basis for the static calculation of the overall system including the top plate:

Max. steel stress $\sigma_{max} = 240 \text{ N/mm}^2$
 Modulus of elasticity $E = 210.000 \text{ N/mm}^2$
 Max. bending $f_{max} = 1/300$

Article No.	Article Description	QTY
8647 2 400	CONS.HEA.38/40 H.-DIP G. 400MM	1
8647 2 500	CONS.HEA.38/40 H.-DIP G. 500MM	1
8647 2 600	CONS.HEA.38/40 H.-DIP G. 600MM	1
8647 2 700	CONS.HEA.38/40 H.-DIP G. 700MM	1



Console Kit, Sound-Insulated

- Completely preassembled fixture kit for immediate efficient assembly
- For sound-insulated fixing [reduction -17 db (A)] of air conditioning appliances and air conditioning systems, pumps, domestic waterwork, etc.
- FÖRCH mounting rail type 38/40 cut to size and perforated at the rear side including cover plates
- Different projections (sepending on the site of the device)
- Easy height adjustment of the consoles due to displaceable hammer-head screws
- Variable adjustment of the fixing distances on the console due to sliding nuts
- **Maximum recommended load per kit: 1500 N**
- **By means of console support item No 8648 485: 3000 N**



Article No.	Article Description	QTY
8647 1 480	CONS.KIT 38/40 S.-INS. 480MM	1
8647 1 560	CONS.KIT 38/40 S.-INS. 560MM	1
8647 1 640	CONS.KIT 38/40 S.-INS. 640MM	1

Delivery volume per kit:

- 2x FÖRCH mounting rails type 38/40, length 520 mm
- 2x FÖRCH rail consoles type 38/40
- 4x sound-insulating buffer
- 4x sound-insulating disks
- 4x washers
- 6x rail end caps for profile 38/40
- 4x hammer-head screws M 10/30
- 4x holding clamps M10 for profile 38/40
- 4x sliding nuts type 38 M 8
- 4x hexagon socket screws M 8/55
- 1x assembly instructions



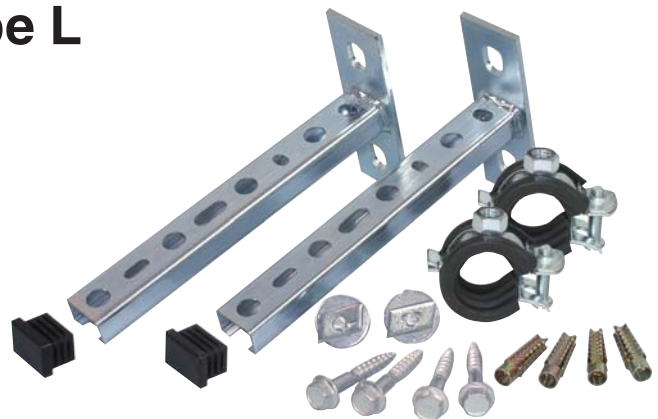
Fixing Kit for Gas Meter Type L

- Assembly kit to fix assembly rails, consoles, rail support saddles
- Complete kit composition for the gas fixture – rapid, cost-efficient and commercial

Article No.	Article Description	QTY
8641 1	GAS METER FIX.KIT / L	1

Contents:

- 2x consoles galvanized type 27/18L 200 mm
- 2x pipe clamps 1" 32-37 mm
- 2x hammer-head fixtures galvanized 8 x 20 type 27
- 2x rail end caps type 27/18L
- 4x wooden screws hexagon with disk galvanized 8 x 50 mm
- 4x metal spike grid 8 mm



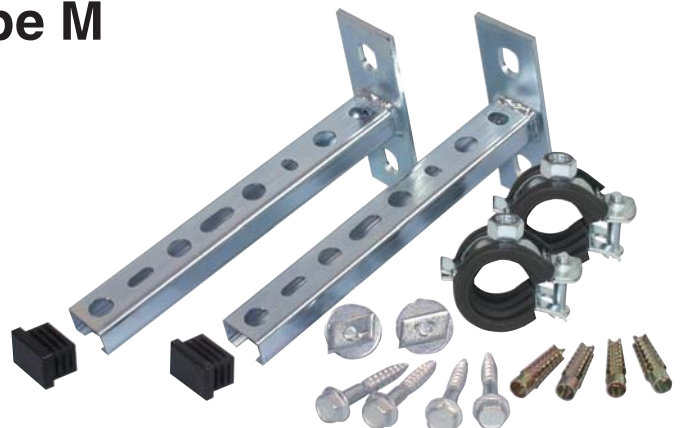
Fixing Kit for Gas Meter Type M

- Assembly kit to fix assembly rails, consoles, rail support saddles
- Complete kit composition for the gas fixture – rapid, cost-efficient and commercial

Article No.	Article Description	QTY
8641 2	GAS METER FIX.KIT / M	1 z

Contents:

- 2x consoles galvanized type 28/30M 200 mm
- 2x pipe clamps 1" 32-37 mm
- 2x hammer-head fixtures galvanized 8 x 20 type 27
- 2x rail end caps type 28/30M
- 4x wooden screws hexagon with disk galvanized 8 x 50 mm
- 4x metal spike grid 8 mm



Rail Insulation Profile

- High sound insulation due to little contact surface and large absorption compound
- Rapid assembly

Fields of application:

- To avoid acoustic bridges when constructing traverses and consoles in the air conditioning construction

Fields of processing:

- Is shifted into the mounting rail profile
- Is shifted onto the threaded rod

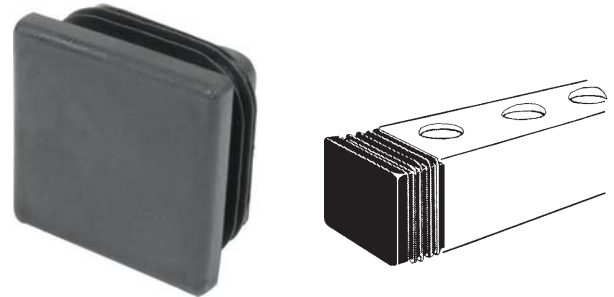


Technical Data		
For profile	For slot widths mm	For threaded rods
27/18, 28/30	10 - 15	M8
38/40, 40/60	12 - 17	M8/M10

Article No.	Article Description	QTY
8659 27	RO(30M)RAIL INSUL.PROFI.TYPE27	1
8659 38 1	RO(30M)RAIL INSUL.PROFI.TYPE38	1

Rail End Caps

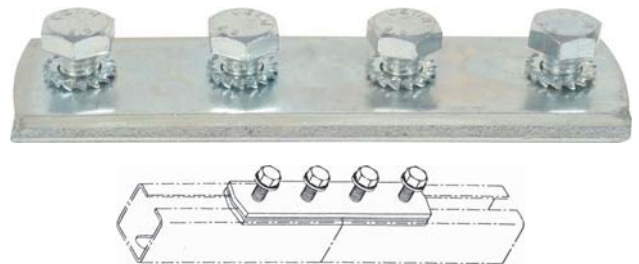
- For safe and neat covering of the front side of the mounting rails and consoles
- Made of high-quality black polyethylene



Article No.	Article Description	QTY
8661 27 18	RAIL END CAPS TYPE 27/18	f 100
8661 27 30	RAIL END CAPS TYPE 28/30	f 100
8661 38 40	RAIL END CAPS TYPE 38/40	f 100
8661 40 60	RAIL END CAPS TYPE 40/60	f 100

Rail Couplings

- Mounting rails can be joined on site by easy screwing without drilling or welding
- Electrogalvanized – corrosion-resistant
- Preassembled ready-for-assembly – time-saving and efficient
- Screwed in the oblong holes on the back of the rail, the tensile strength for ascending pipe assemblies is being increased
- Type 27 – appropriate for mounting rails type 27/18 and type 28/30
- Type 38 – appropriate for mounting rails type 38/40 and type 40/60



Technical Data	
Item No	Length
8654 27	148 mm
8654 38	152 mm

Article No.	Article Description	QTY
8654 27	RAIL COUPLING GAL. TYPE 27	1
8654 38	RAIL COUPLING GAL. TYPE 38	1

Rail Clamp Square

- Easy-to-assemble and flexible connecting element to assembly statically correctly dimensioned constructions with mounting rails (fixture on the solidium stable of rotation)
- The perforation of the bracket allows the orientation of the rail slot in 4 directions
- For cross connections for pre-wall installations and racks made of mounting rails



Article No.	Article Description	QTY
8654 1 28 30	RAIL CLAMP GAL. 28/30	25
8654 1 38 40	RAIL CLAMP GAL. 38/40	25
8654 1 40 60	RAIL CLAMP GAL. 40/60	5

Mounting Angle Type 27

- To produce and reinforce carrier systems without drilling or welding
- Appropriate for mounting rails type 27/18 28/30
- Appropriate for consoles type 27/18 and type 28/30
- Electrogalvanized – corrosion-resistant
- Angle width: 25 mm
- Angle thickness: 4 mm

Preassembled type:

- Easy-to-assemble
- Lots of time saving

Article No.	Article Description	QTY
8655 45 45	45°MOUNT. ANG. GAL.45MM TYPE27	e 10
8655 90 45	90°MOUNT. ANG. GAL.45MM TYPE27	e 10
8655 45 90	45°MOUNT. ANG. GAL.90MM TYPE27	e 10
8655 90 90	90°MOUNT. ANG. GAL.90MM TYPE27	e 10
8655 45 90 1	45°MOUNT.ANG.PRE-ASSEMB.TYPE27	e 10
8655 90 90 1	90°MOUNT.ANG.PRE-ASSEMB.TYPE27	e 10

Delivery volume preassembled type:

- 2x double sliding nuts type 27, M8
- 4x hexagon screws M8
- 4x washers M8

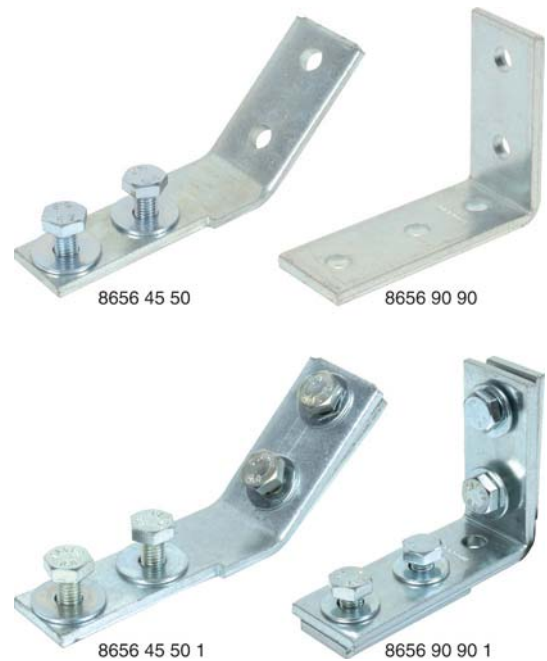


Mounting Angle Type 38

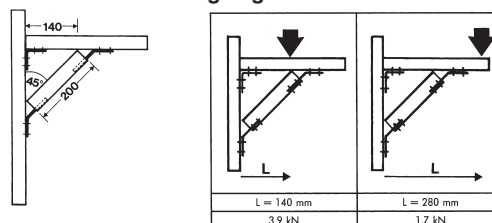
- To produce and reinforce carrier systems without drilling or welding
- Appropriate for mounting rails type 38/40 and type 40/60
- Appropriate for consoles type 38/40 and type 40/60
- Electrogalvanized – corrosion-resistant
- Angle width: 40 mm (40/32 mm for 45° angles)
- Angle thickness: 6 mm
- Round hole: 10,5 mm
- Angle 38/40: 45° preassembled including screw and washer

Preassembled type:

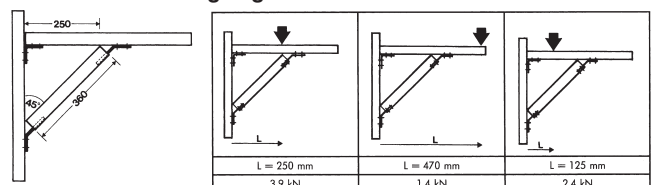
- Easy-to-assemble
- Lots of time saving



Console construction made of FÖRCH mounting rails type 38/40 and FÖRCH mounting angles



Console construction made of FÖRCH mounting rails type 38/40 and FÖRCH mounting angles



Article No.	Article Description	QTY
8656 45 50	45°MOUNT. ANG. GAL. TYPE38	e 10
8656 45 50 1	45°MOUNT.ANG.PRE-ASSEMB.TYPE38	e 10
8656 90 90	90°MOUNT. ANG. GAL. TYPE38	e 10
8656 90 90 1	90°MOUNT.ANG.PRE-ASSEMB.TYPE38	e 10

Delivery volume preassembled type

- 2x double sliding nuts type 38, M10 (45° angle 1x double sliding nuts type 38, M10)
- 4x hexagon screws M10
- 4x washers M10

Mounting Corners

- Galvanized steel
- Available of light-weighted and heavy type
- Ready-for-assembly and versatilely applicable
- Screwed to one another, considerably higher bending and load values are resulting

Fields of application:

- Support angle for mounting rails
- Base support or connecting element
- Fixed point for traverses
- Construction elements on wall, ceiling, in the pit or directly on the mounting rail
- Carrier console as seating for water meters, pumps, etc.



Article No.	Article Description	QTY
8647 1 1	MOUNT. CORNER 38/40 207X165X04	1
8647 1 2	MOUNT. CORNER 38/40 200X200X04	1
8647 1 3	MOUNT. CORNER 38/40 200X200X06	1

Load capacity of the FÖRCH mounting corners and console constructions (Considering the fixing screws)

FÖRCH mounting corners, 200 x 200 x 4 und 200 x 200 x 6

		L = 180 mm	L = 140 mm	L = 100 mm	L = 60 mm
		2,0 kN	3,5 kN	5,0 kN	7,0 kN
4 mm					
6 mm		3,3 kN			

FÖRCH mounting corners, double mounted

		L = 180 mm	L = 100 mm
		4,4 kN	5,5 kN
4 mm			
6 mm		6,7 kN	7,0 kN

FÖRCH mounting corners, double mounted with a FÖRCH mounting rail type 38/40

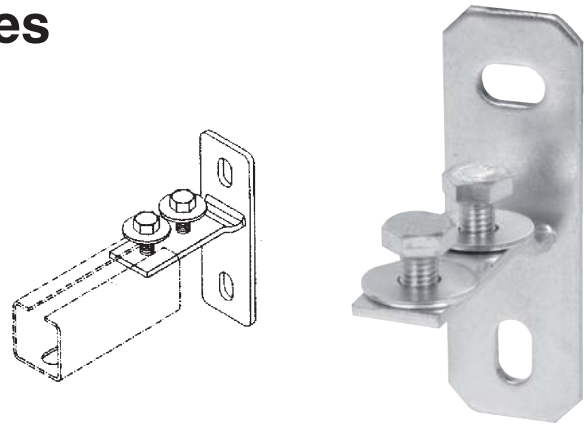
		L = 180 mm	L = 350 mm	L = 470 mm
		4,4 kN	1,5 kN	1,2 kN
4 mm				

FÖRCH mounting corners with a FÖRCH mounting rail type 38/40

		L = 330 mm
		1,35 kN
4 mm		

Upright Rail Support Flanges

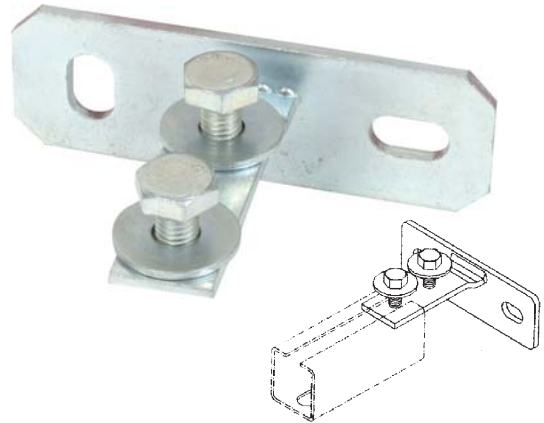
- To produce individually adapted support constructions linked to mounting rails
- Ready-for-assembly preassembled including hexagon screw M10 and washer
- Electrogalvanized – corrosion-resistant
- Dimensions base plate: 120 x 40 x 4 mm
- 2 oblong holes: 11 x 19 mm
- With upright base plate
- Appropriate mounting rails
 - Item No 8649 27: type 27/18 and type 28/30
 - Item No 8649 38: type 38/40 and type 40/60



Article No.	Article Description	QTY
8649 27	UPR. RAIL SUPP.FL. GAL. TYPE27	10
8649 38	UPR. RAIL SUPP.FL. GAL. TYPE38	5

Transversal Rail Support Flanges

- To produce individually adapted support constructions linked to mounting rails
- Ready-for-assembly preassembled including hexagon screw M10 and washer
- Electrogalvanized – corrosion-resistant
- Dimensions base plate: 120 x 40 x 4 mm
- 2 oblong holes: 11 x 19 mm
- With upright base plate
- Appropriate mounting rails
 - Item No 8650 27: type 27/18 and type 28/30
 - Item No 8650 38: type 38/40 and type 40/60



Article No.	Article Description	QTY
8650 27	TR. RAIL SUPP.FL. GAL. TYPE 27	10
8650 38	TR. RAIL SUPP.FL. GAL. TYPE 38	10

Upright Rail Support Saddles

- Versatile options to produce individual consoles and support systems for wall, floor and ceiling assembly using mounting rails
- System component in order to be able to assemble stable traverses
- Electrogalvanized – corrosion-resistant
- Robot-controlled profile-fitting precision welding – exact fit as well as highest stability and safety
- With upright base plate
- Appropriate mounting rails
 - Item No 8652 27: type 27/18 and type 28/30
 - Item No 8652 38: type 38/40 and type 40/60



8652 27
8652 38

8652 27 1
8652 38 1

Article No.	Article Description	QTY
8652 27	UPR. RAIL SUPP.SA.GAL. TYPE 27	20
8652 27 1	UPR.R.SUPP.SA.F.MO. RAIL T 27	20
8652 38	UPR. RAIL SUPP. SADDLE GAL. 38	10
8652 38 1	UPR.R.SUPP.SA.F.MO. RAIL T 38	10

Technical Data		
Type	Dimensions base plate	Oblong hole
27	114 x 50 x 5 mm	11 x 19 mm
38	144 x 70 x 6 mm	11 x 21 mm

Transversal Rail Support Saddles

- Versatile options to produce individual consoles and support systems for wall, floor and ceiling assembly using mounting rails
- System component in order to be able to assemble stable traverses
- Electrogalvanized – corrosion-resistant
- Robot-controlled profile-fitting precision welding – exact fit as well as highest stability and safety
- With upright base plate
- Appropriate mounting rails
 - Item No 8653 27: type 27/18 and type 28/30
 - Item No 8653 38: type 38/40 and type 40/60



8653 27
8653 38

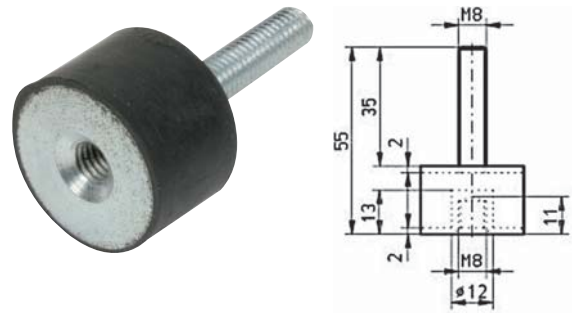
8653 27 1
8653 38 1

Article No.	Article Description	QTY
8653 27	TR. RAIL SUPP.SADDLE GAL. T 27	20
8653 27 1	TR.RAIL SUP.CROSSW.MOUN.TYPE27	20
8653 38	TR. RAIL SUPP.SADDLE GAL. T 38	10
8653 38 1	TR. R.SUPP. SA.F.MO. RAIL T 38	10

Technical Data		
Type	Dimensions base plate	Oblong hole
27	124 x 40 x 5 mm	11 x 19 mm
38	138 x 50 x 6 mm	11 x 21 mm

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

Type 27

- Appropriate for mounting rails type 27/18 and type 28/30
- Appropriate for consoles type 27/18 and type 28/30
- Material thickness: 2 mm
- Disk diameter: 24 mm

Type 38

- Appropriate for mounting rails type 38/40 and type 40/60
- Appropriate for consoles type 38/40 and type 40/60
- Material thickness: 2 mm
- Disk diameter: 36 mm



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

(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

Hexagon Socket Screws similar DIN912 Wooden Thread

- Drive: 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 6 40	HEX. SOCK.WOOD SCR.GAL. 6X40	200
8641 6 70	HEX. SOCK.WOOD SCR.GAL. 6X70	150

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



Fixing Kit for Rails Type BSS-N

- 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 8 3	FIX.KIT TYPE BSS-N 8	25

Contents:

- 2x washers DIN 125 for M 6
- 2x wooden screws hexagon, galvanized 6 x 70 mm
- 2x nylon expansion anchor F8



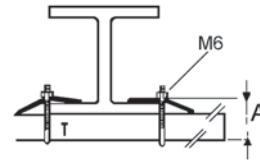
Support Clamping Claws Type 27

- To fix mounting rails on steel beam constructions
 - Assembly without drilling or welding
 - Allows subsequent shifting and aligning
- Perfect fixing of manifold fasteners and air ducts
- **Completely preassembled** - no time-consuming assembling of parts; easily shift on the steel beam and brace
- Completely electrogalvanized – corrosion-resistant
- Special construction of the clamping claws – appropriate for all steel beams
- Appropriate for mounting rails type 27/18 and type 28/30
- Maximum recommended **static load** at centric tension: **2,8 kN**

Article No.	Article Description	QTY
8642 27	SUPP. CLAMP. CLAW TYPE 27 M6	20

Delivery volume:

- 1x Support plate
- 1x U-bolt pipe hanger M6
- 2x hexagon nuts DIN 934 M6



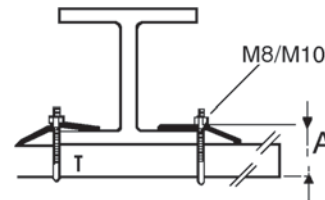
Support Clamping Claws Type 38

- To fix mounting rails on steel beam constructions
 - Assembly without drilling or welding
 - Allows subsequent shifting and aligning
- Perfect fixing of manifold fasteners and air ducts
- **Completely preassembled** - no time-consuming assembling of parts; easily shift on the steel beam and brace
- Completely electrogalvanized – corrosion-resistant
- Special construction of the clamping claws – appropriate for all steel beams
- Appropriate for mounting rails type 38/40 and type 40/60
- Maximum recommended **static load** at centric tension:
 - Item No 8642 38: **5,4 kN**
 - Item No 8642 38 1: **10,5 kN**

Article No.	Article Description	QTY
8642 38	SUPP. CLAMP. CLAW TYPE 38 M8	20
8642 38 1	SUPP. CLAMP. CLAW TYPE 38 M10	ü 20

Delivery volume:

- 1x Support plate
- 1x U-bolt pipe hanger M8 or M10
- 2x hexagon nuts DIN 934 M8 or M10

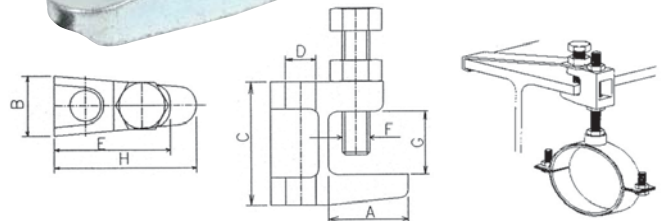


Profile Clamps

- To make fixtures in the heating, climate, air condition and sprinkler system construction directly on steel beams without drilling or welding
- Heavy annealed cast iron body including hexagon retaining screw M10 with cup point according to DIN 78 RS - FM and VdS approved and certified and this way approved for sprinkler systems
- Electrogalvanized – corrosion-resistant

Item No 8682 9, 8682 11, 8682 13:

- Infinitely variable height adjustment when the assembly part is mounted is possible by releasing the counter nut



Article No.	Article Description	QTY
8682 8	PROFILE CLAMP GAL. M8	75
8682 9	PROFILE CLAMP GAL. 9MM	75
8682 10	PROFILE CLAMP GAL. M10	75
8682 11	PROFILE CLAMP GAL. 11MM	75
8682 13	PROFILE CLAMP GAL. 13MM	50

(M = metric thread / MM = through hole in mm)

Technical Data							
A mm	B mm	C mm	E mm	F mm	G mm	H mm	BLW kN*
29	21	45	41	M 10	23	50	2,5
29	21	45	41	M 10	23	50	2,5
29	21	45	41	M 10	23	50	2,5
29	21	45	41	M 10	23	50	2,5
35	23,5	54	48	M 10	26	58	3,5

Assembly Strips for Profile Clamps

- According to VdS approval a locking strap is imperatively prescribed to fix pipes > DN 65
- Compatible for all girder clamps
- Electrogalvanized – corrosion-resistant
- Dimensions WxH: 25 x 2,5 mm
- Ø mounting hole: 10,5 mm



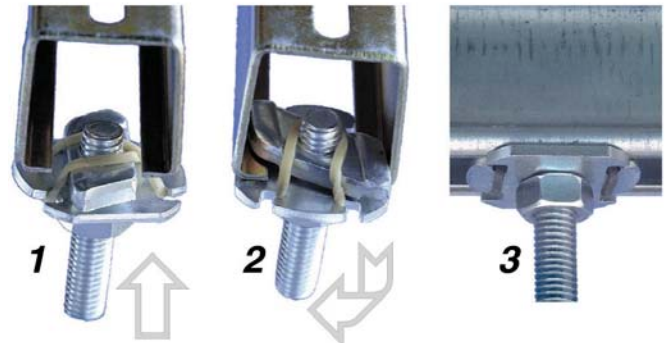
Article No.	Article Description	QTY
8682 350	ASS. STRIPS F: PROF. CL. GAL.	25

Mounting System HakoFix

- Completely mounted hammer-head screws
- The universal rail fixing element with height adjustment allows saving assembly time of up to 80 %
- For all commercial rails with a slot width of 13 to 15 mm, height-adjustable, depending on the rail, - universal fields of application
- No piece parts – no laborious assembling
- Completely assembled: inserting, turning, ready – saving assembly time of about 80 %
- Snaps in hearable – control safety
- Rotary protection – no slipping of the threaded plate
- Height adjustment when built-in – it is possible to subsequently adjust a slope/rise

Assembly instructions:

- Insert HakoFix mounting system into the rail (1.)
- Turn assembly plate by 90° (2.)
- The assembly plate catches and HakoFix is ready for further assembly
- Adjust
- Secure
- Assembly is completed (3.)



Article No.	Article Description	QTY
8668 8 30	HAKO FIX HAM.-HE. SCR.GAL.8X30	100
8668 8 40	HAKO FIX HAM.-HE. SCR.GAL.8X40	100
8668 8 60	HAKO FIX HAM.-HE. SCR.GAL.8X60	100
8668 8 80	HAKO FIX HAM.-HE. SCR.GAL.8X80	100
8668 8 100	HAKO FIX HAM.-HE.SCR.GAL.8X100	50
8668 8 120	HAKO FIX HAM.-HE.SCR.GAL.8X120	50
8668 8 150	HAKO FIX HAM.-HE.SCR.GAL.8X150	50
8668 10 40	HAKO FIX HAM.-HE.SCR.GAL.10X40	100
8668 10 60	HAKO FIX HAM.-HE.SCR.GAL.10X60	100
8668 10 80	HAKO FIX HAM.-HE.SCR.GAL.10X80	100
8668 10 100	HAKO FIX HAM.-HE.SC.GAL.10X100	50

Assembly Plates HakoFix, Galvanized Steel

- Consisting of base plate and disk
- Individual for assembly with threaded rods, threaded pins or screws

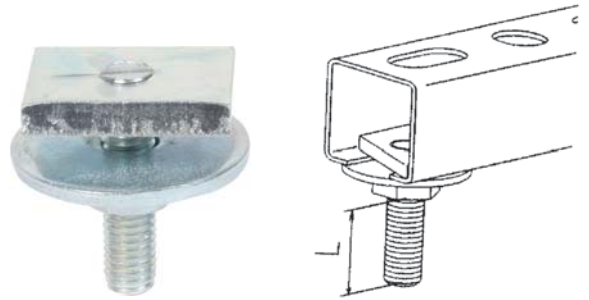


Article No.	Article Description	QTY
8668 8	HAKO FIX ASSEMBLY PL.S GAL. M8	200
8668 10	HAKO FIX ASSEMBLY PL.S GAL.M10	200

Technical Data		
Item No	Thickness base plate	Thickness disk
8668 8	5 mm	2 mm
8668 10	5 mm	2 mm

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

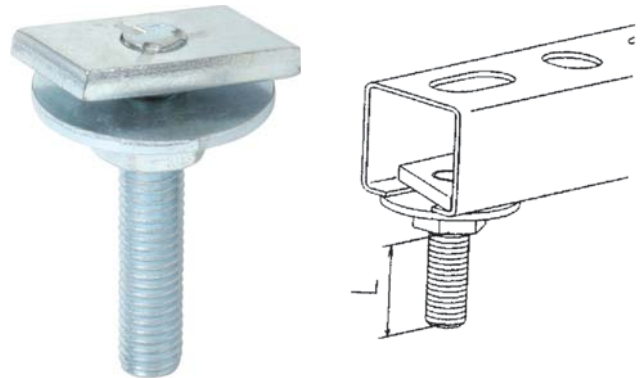


Technical Data		
Item No	for profile	Useable thread length L in mm
8666 8 20	27/18 - 28/30	7
8666 8 30	27/18 - 28/30	15
8666 8 40	27/18 - 28/30	25
8666 8 50	27/18 - 28/30	35
8666 8 60	27/18 - 28/30	45
8666 8 80	27/18 - 28/30	65
8666 8 100	27/18 - 28/30	85

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
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

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

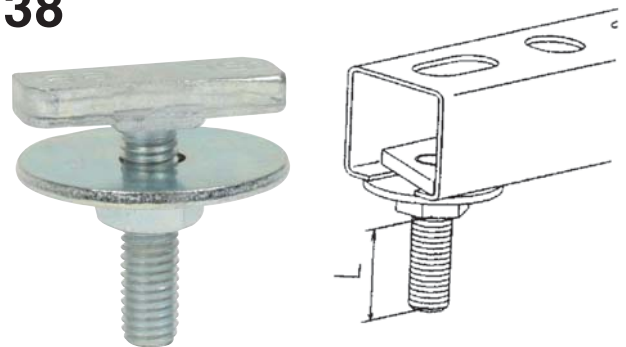


Technical Data		
Item No	For profile	Useable thread length L in mm
8667 8 25	38/40 - 40/60	7
8667 8 35	38/40 - 40/60	20
8667 8 40	38/40 - 40/60	25
8667 8 50	38/40 - 40/60	34
8667 8 80	38/40 - 40/60	64
8667 10 35	38/40 - 40/60	18
8667 10 55	38/40 - 40/60	35
8667 10 80	38/40 - 40/60	60
8667 10 100	38/40 - 40/60	80

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
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

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



Technical Data		
Item No	For profile	Useable thread length L in mm
8672 8 30	38/40 - 40/60	20
8672 10 30	38/40 - 40/60	19
8672 12 40	38/40 - 40/60	17

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
8672 12 40	HAM.-HE.SCR.GAL. TYPE38 M12/40	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
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

Article No.	Article Description	QTY
8664 8	SLIDING NUT GAL. M8 TYPE38	125
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



Clamping Plates

- Avoids spreading of the mounting rails or console in case of heavy loads
- Electrogalvanized – corrosion-resistant
- **Type 27:**
 - Appropriate for mounting rail type 27/18 and type 28/30
 - Appropriate for consoles type 27/18 and type 28/30
- **Type 38:**
 - Appropriate for mounting rail type 38/40
 - Appropriate for consoles type 38/40
- **Type 40:**
 - Appropriate for mounting rail type 40/60
 - Appropriate for consoles type 40/60



Article No.	Article Description	QTY
8657 27 84	CLAMP. PL. GAL. 8.4MM TYPE 27	50
8657 27 105	CLAMP. PL. GAL. 10.5MM TYPE 27	50
8657 38 84	CLAMP. PL. GAL. 8.4MM TYPE 38	50
8657 38 105	CLAMP. PL. GAL. 10.5MM TYPE 38	50
8657 40 91	CLAMP. PL. GAL. 9.1MM TYPE 40	50
8657 40 115	CLAMP. PL. GAL. 11.5MM TYPE 40	50

(Ø hole mm)

Technical Data		
For profile	Clamp thickness in mm	Clamp width in mm
27/18 - 28/30	3	25
27/18 - 28/30	3	25
38/40	3	25
38/40	3	25
40/60	3	30
40/60	3	30

Parallel Connectors

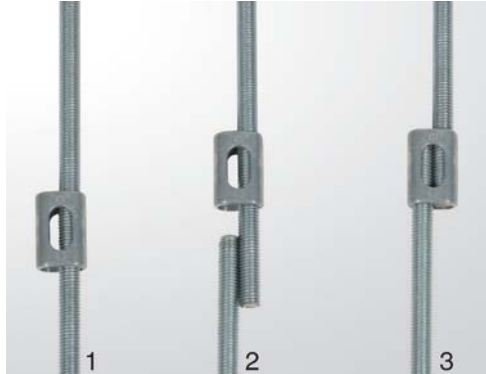
- Rapid extension of direct suspensions by means of threaded rods and pins
- Cost-efficient, infinitely variable height adjustment and adjustment
- Max. admissible load M 8 and M 10: 3000 N

Fields of application:

- Bridging larger differences in height in particular for heavy pipe and air conditioning suspensions
- For ceiling suspensions

Processing advices:

- Shift parallel coupling over the threaded road coming from above
- Hold threaded ends against each other
- Shift the connector downward
- The thread flanks which are pressed to each other offer safe hold



Article No.	Article Description	QTY
8671 8	PARALLEL CONNECTOR M8	100
8671 10	PARALLEL CONNECTOR M10	100

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

Universal Threaded Cube

- Universal assembly element for pipe fixture to the ceiling or on ascending pipes
- Also appropriate for suspension on a mounting rail (screw cube on hammer-head bolt and into the rail slot)



Article No.	Article Description	QTY
8670 8	UNIVERSAL THR. CUBE M8	10
8670 10	UNIVERSAL THR. CUBE M10	10

Pendulum Hanger/Ball and Hinge Joints

- Freely adjustable height adjustment
- To suspend pipes and components with thread distances
- Avoid uncontrolled strain forces on the fixture
- Particularly appropriate for large ceiling distances
- Degree of freedom: 360°
- Short type for restricted head room
- Avoids jamming of pipe clamps
- Inspection opening for safe assembly
- Deflection in each direction 20°



Article No.	Article Description	QTY
8662 2 8	PENDULUM HANGER SHORT M8	50
8662 2 10	PENDULUM HANGER SHORT M10	50
8662 3 8	PENDULUM HANGER LONG M8	50
8662 3 10	PENDULUM HANGER LONG M10	50
8662 3 12	PENDULUM HANGER LONG M12	25

Technical Data			
Connect. thread	Height-adjust. in mm	Install. height in mm	Admiss. load in °
M8	-	34	2400
M10	-	35	3000
M8	25	60	2400
M10	25	61	3000
M12	25	70	3500

Sliding Bail

- Compensates linear thermal expansions of plastic pipes due to temperature
- Cost-efficient, rapid assembly directly in the ceiling or in a mounting rail (by means of sliding nut)
- Uniform carrying away of slide forces without jerk and without noise
- Allows unresisted sliding movements in each direction



Article No.	Article Description	QTY
8662 1 8	SLIDING BAIL M8	25
8662 1 10	SLIDING BAIL M10	25

Technical Data			
Installation height in mm	Sliding displacement in mm	Admissible load in N	
42	30	400	
60	30	650	

Slider

- Easily sliding non-abrasive sliding body
- For light-weighted pipes of large linear thermal expansion (in particular plastic pipes)
- Efficient fixture in connection with mounting rails
- For horizontal (suspended and upright) as well as vertical assemblies

Processing advices:

- In order to guarantee safe hold, it is recommended to reinforce the mounting rail with holding clamps AGR 8657



Article No.	Article Description	QTY
8660 1 27 18	SLIDER TYPE 27	10
8660 1 38 40	SLIDER TYPE 38	5

Technical Data				
For profile	Connect.- thread	Length mm	Sliding displace. mm	Admiss. load in N
27/18, 28/30	M8	60	arbitrary	1000
38/40, 40/60	M10	150	arbitrary	1000

Sliding Carriages

- For light-weighted pipes of large linear thermal expansion (in particular plastic pipes)
- For horizontal (suspended and upright) as well as vertical assemblies
- Absorbs linear thermal expansion and avoids unresited strain forces on pipe clamps
- Little installation height

Application:

- Direct assembly in the ceiling on the flooring and on the wall due to lateral fixing attachments
- Mobile fixing point for very long and light-weighted pipeline conduits made of plastic pipes



Article No.	Article Description	QTY
8660 2 8	SLIDING CARRIAGE M8	1
8660 2 10	SLIDING CARRIAGE M10	1

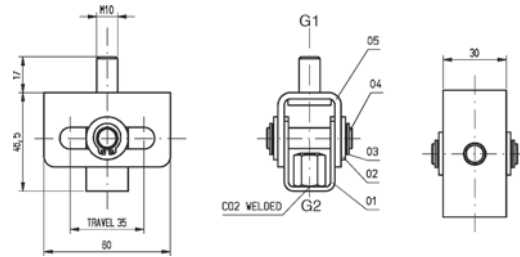
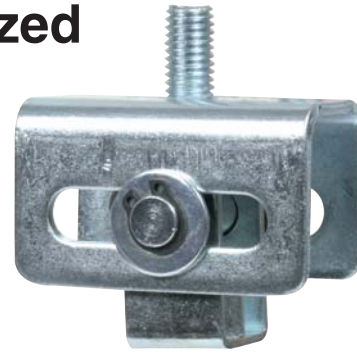
Technical Data			
Length mm	Install. height mm	Sliding displace. mm	Admiss. load in N
210	28	118	1000
280	54	95	1000

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



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

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

Sliding Carriages

- Smoothly running moving Support plate for the ceiling, ascending pipe or floor assembly
- Large sliding displacement of up to 60 mm
- Little installation height allows the use also for cramped assembly conditions
- Safe against tilting and jamming due to pipe support by two pipe clamps

Application:

- Upright assembly on a mounting rail
- Assembly suspended on an angle console
- Assembly in ceiling or wall

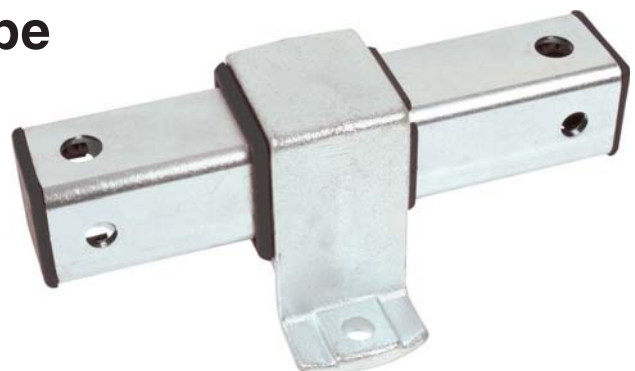


Article No.	Article Description	QTY
8660 3 8	SLIDING CARRIAGE M8	1
8660 3 10	SLIDING CARRIAGE M10	1
8660 3 12	SLIDING CARRIAGE M12	1

Technical Data				
Connect. thread	Length mm	Install. height mm	Sliding displace. mm	Admiss. load in N
M8	180	25	60	1500
M10	180	25	55	1500
M12	180	25	53	1500

Sliding Carriages, Heavy Type

- Large sliding displacement of up to 125 mm
- Max. load 7.800 N (upon tension, pressure and bending)
- Smoothly running moving Support plate for heavy loads
- For horizontal (suspended and upright) as well as vertical assemblies
- Connection options for M12 and M16 threaded pins
- Canting-safe pipe conduct due to two pipe clamps



Article No.	Article Description	QTY
8660 3 16	SLIDING CARRIAGE M12/M16	1

Trapezoidal Sheet Metal Hangers Type RK

- To fix installation constructions directly on trapezoidal sheet metals
- Electrogalvanized – corrosion-resistant
- Different types – optimum application options
- Material: 25 x 2,5 mm
- Side length: 90 mm

Item No 8683 8, 8683 10:

- Welded-in nut

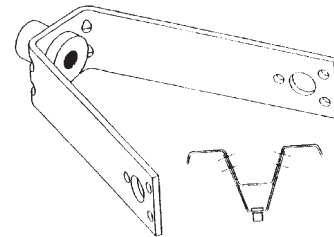
Item No 8683 8 1, 8683 10 1:

- Subsequent infinitely variable height adjustment due to turning threaded part



8683 8
8683 10

8683 8 1
8683 10 1



Article No.	Article Description	QTY
8683 8	TRAP. SHEET MET. HANG. GAL. M8	80
8683 10	TRAP. SHEET MET. HANG. VZ M10	80
8683 8 1	TRAP. SHEET MET. HA. H.-AD. M8	80
8683 10 1	TRAP. SHEET MET.HA. H.-AD. M10	80

Trapezoidal Sheet Metal Hanger L

- Perfect to suspend pipe clamps on trapezoidal steel sheets
- Electrogalvanized – corrosion-resistant
- Type including sound insulation element for assembly according to DIN 4109 sound insulation
- Sound insulation element fulfills building material class B2 according to DIN 4102
- With predetermined bending perforation – easy bending and adapting to the required forms of trapezoidal steel sheet profiles
- The through hole of the sound insulation element is dimensioned in a way that it is possible to mount it on the construction body using threaded rods up to max. M8 as well as directly using heavy-duty anchors
- Universal fixing options
 - Bucket rivets up to max. Ø 4.2 mm
 - Sheet metal screws Ø 3.9 bis 4.2 mm
 - Thread screw M8
- Material: 40 mm x 2 mm
- Side length: 105 mm



8621 1

8621 2

Article No.	Article Description	QTY
8621 1	TRAP. SH.MET.HANG.TYPE L GA+SD	50
8621 2	TRAP.SH.MET.HANG.TYPE L GA	50

(VZ=galvanized / SD= including sound insulation element)

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



8625 1

8625 2

Ventilation Pipe Catch

- Electrogalvanized – corrosion-resistant
- Type with sound insulation element for assembly according to DIN 4109 sound insulation
- Sound insulation element fulfills building material class B2 according to DIN 4102
- Included predetermined bending perforation – easy bending and adaptation to the required pipe diameter
- The through hole of the sound insulation element is dimensioned in a way that it is possible to assemble using threaded rods up to max. M8
- Universal fixture options
 - Bucket rivets up to max. Ø 4.2 mm
 - Sheet metal screws Ø 3.9 to 4.2 mm
 - Thread screws M8
- Material: 40 mm x 2 mm
- Side length: 105 mm



Article No.	Article Description	QTY
8621 3	VENT.PIPE CATCH TYPE L GA+SD	50
8621 4	VENTILAT.PIPE CATCH TYPE L GA	50

(VZ=galvanized / SD= with sound insulation element)

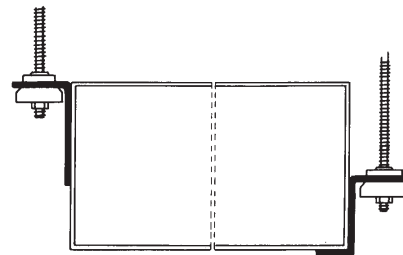
Air Duct Angle

- To fix air ducts in the ventilation and climate construction
 - Including sound insulation element for damping of solid-borne sound
 - Fulfills the requirement for assemblies according to DIN 4109 sound insulation
 - Fulfills building material class B2 according to DIN 4102
 - Electrogalvanized – corrosion-resistant
 - Specially designed through hole of the sound insulation element allows assembly by means of threaded rods up to max. M8
 - Universal fixing options
 - Bucket rivets up to max. Ø 4.2 mm
 - Sheet metal screws Ø 3.9 to 4.2 mm
 - Thread screws M8
 - Angle width: 35 mm
 - Angle thickness: 2 mm
- Item No 8622 40 60:**
- Angle base 30 mm



Article No.	Article Description	QTY
8622 40 50	AIR DUCT ANG. SHAPE L40X 50MM	100
8622 40 60	AIR DUCT ANG. SHAPE Z40X 60MM	75
8622 40 85	AIR DUCT ANG. SHAPE L40X 80MM	75
8622 40 130	AIR DUCT ANG. SHAPE L40X130MM	50

(shape / base (insulation part) x angle height mm)



Air Duct Angle Type L, Heavy

- Air duct angle L-shape including bonded insulation element
- Heavy type thickness 4 mm
- For maximum load of up to 1600 N
- To fix air ducts in the ventilation and climate construction
- Including sound insulation element for the damping of solid-borne sound
 - Fulfills the requirements for assemblies according to DIN 4109 sound insulation
 - Fulfills building material class B2 according to DIN 4102
- Electro-galvanized – corrosion-resistant



Article No.	Article Description	QTY
8622 1 40 80	AIR DUCT ANG. HEAVY 40X80MM	50

Air Duct Clamp M8 x 20, Galvanized

- Electro-galvanized
- Connection element for duct flanges
- Appropriate for all duct cross sections
- Easy-to-assemble



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

Air Duct Clamp M8 x 20, A4

- Stainless steel A4, 1.4571
- Connection element for duct flanges made of stainless steel
- Appropriate for all duct cross sections
- Easy-to-assemble

Application:

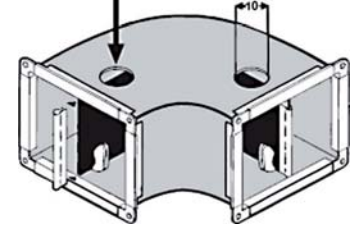
- Imperatively required for all ventilation ducts made of stainless steel



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

Air Deflector Dowel

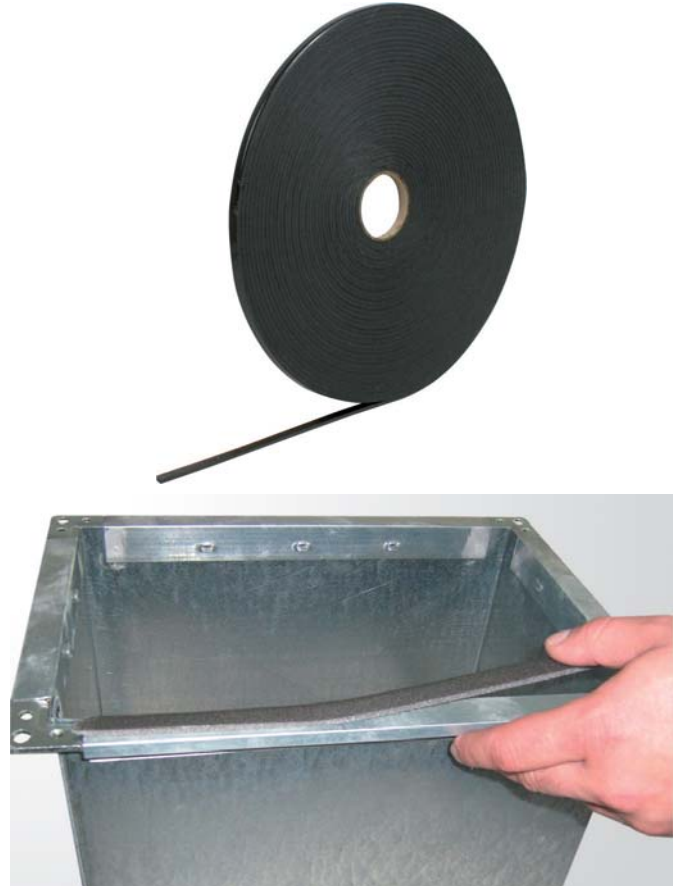
- For air deflector fixing in air ducts
- Wider dowel shape allows "suctioning" of the air deflector when driving in
- Easy and rapid to fix by hammer stroke
- Neither welding nor riveting, nor canting the steel sheets
- Increased take-off strength due to parallel running S-shape steel sheet insert
- Including attacheable, eleastic sealing shim
- Corrosion-resistant due to electrogalvanizing
- For different steel sheet thicknesses and materials
- Also to fix lamella profiles in weather protection grids and anywhere where T-shaped connections of fine steel sheets are required
- Delivered loosely (dowels and sealing shims are not stuck together)



Article No.	Article Description	QTY
8622 2 75 90	AIR DEFLECT. DOWEL 0.75-0.90MM	1000
8622 2 90 120	AIR DEFLECT. DOWEL 0.90-1.20MM	1000

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

Light-weighted Base Plates

- For wall, ceiling and flooring fixtures for fasteners and building equipment of installation construction
- Electrogalvanized – corrosion-resistant
- Connection thread, welded shear-proof
- Dimensions base plate: 80 x 30 x 3 mm
- 2 slot holes: 18 x 9 mm
- Spacing of hole: 50 mm

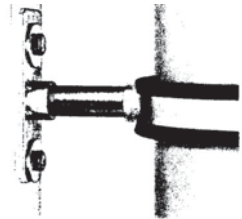


Article No.	Article Description	QTY
8643 1 8	BASE PL. GAL. TYPE 1 M8	25
8643 1 10	BASE PL. GAL. TYPE 1 M10	25
8643 1 810	BASE PL. GAL. TYPE 1 M8/M10	25
8643 1 12	BASE PL. GAL. TYPE 1 1/2"	25

(Connection thread M / inch")

Medium Base Plates

- For wall, ceiling and flooring fixtures for fasteners and building equipment of installation construction
- Electrogalvanized – corrosion-resistant
- Connection thread, welded shear-proof
- Dimensions base plate: 120 x 40 x 4 mm
- 2 slot holes: 18 x 11 mm
- Spacing of hole: 82 mm



Article No.	Article Description	QTY
8643 2 8	BASE PL. GAL. TYPE 2 M8	12
8643 2 10	BASE PL. GAL. TYPE 2 M10	25
8643 2 810	BASE PL. GAL. TYPE 2 M8/M10	12
8643 2 16	BASE PL. GAL. TYPE 2 M16	12
8643 2 12	BASE PL. GAL. TYPE 2 1/2"	12
8643 2 34	BASE PL. GAL. TYPE 2 3/4"	12

(Connection thread M / inch")

Assembly Plates/Double Support

- For parallel quick-action assembly of flow and return pipes
- Flexibly applicable due to variable distance setting
- Made of galvanized 1.5 mm steel with dimensionally stable edge – corrosion-resistant
- Including oblong mounting hole 24 x 8.2 mm
- Thread move in M8 (item No 8617 50) or weld nut M8 (item No 8617 60)



Article No.	Article Description	QTY
8617 50	DOUBLE SUPP. GAL. 50-95MM	50
8617 60	DOUBLE SUPP. GAL. 60-90MM	50

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 thickness (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 thickness (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	30

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 146X46X5	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 53	ANCH. RAIL SCR.28/15 A2 8X53	100
8669 8 60	ANCH. RAIL SCR.28/15 A2 8X60	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

Insulation PE Rohrflex

- Made of flexible, stable, closed-cell soft polyethylene foam (extruded)
- Universal for insulation in the sanitary, heating, refrigeration and air conditioning technology in the field of wall, ceiling and ducts
- Colour: grey
- Slotted at the side – no slitting necessary
- Also appropriate for pipes made of chrome nickel steel according to DIN 53 110
- Non-ageing, recyclable
- CFC-free
- Delivered with 2 m length

*Insulation for heating pipes in the flooring installation according 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	72
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	84
8710 20 18	MTR.PE ROHRFLEX 3/8" 20/ 18	78
8710 20 22	MTR.PE ROHRFLEX 1/2" 20/ 22	72
8710 20 28	MTR.PE ROHRFLEX50 3/4" 20/ 28	60
8710 20 35	MTR.PE ROHRFLEX50 1" 20/ 35	46
8710 20 42	MTR.PE ROHRFLEX50 1 1/4"20/ 42	40
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 Ø pipe (outer) mm)

Technical Data					
ENEV	Outs. Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outs. Ø mm (FE)	Outs. 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 tube (PP)

- Material: closed-cell, round extruded soft polyethylene foam
- Thermal conductivity: 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

Wrapping Tape PE

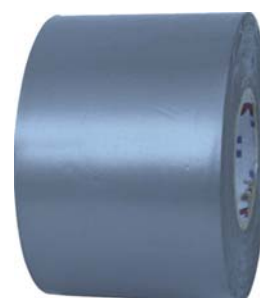
- To glue joints
- Type: self-adhesive
- Length 15 m
- Width 50 mm
- Thickness 3 mm

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

Adhesive Tapes 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	1 A



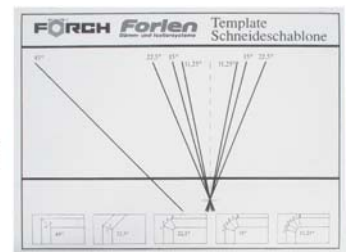
Miter Box

- 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



Fiber Adhesive Ribbons PE

- Textile adhesive ribbons including built in fiber – high quality
- Tear-resistant under tension – hard-wearing
- Can be torn down manually from the side

Fields of application:

- Gluing on stone, plaster, brickwork or foam
- Gluing of pipe insulations, films etc.
- Universally applicable as repair tape
 - Universally applicable
 - Water-repellent

Item No 3745 50 4 (premium quality):

- In addition to glue and bundle cables as well as to fix carpet borders and exhibition stand constructions

Article No.	Article Description	QTY
3745 50 1	R.(50M)F.AD.RIB.PE 50MM SILV.	e 24
3745 50 2	R.(50M)FIB.ADH.RIB.PE 50MM RED	e 24
3745 50 3	R.(50M)FIB.ADH.RIB.PE 50MM WH.	e 24
3745 50 4	R.(25M)F.AD.H.RIB.PE 50MM P.WH.	e 24



3745 50 3

3745 50 2

3745 50 1

Non-Woven Hose

- Hose made of PE-coated polyester non-woven, highly flexible
- To insulate drinking water pipes of moderate-energy according to DIN 1988 part 2 for cold water pipes and fields without requirements according to ENEV (German regulations for energy saving in buildings and building systems)
- CFC-free
- Delivery length: 25 m
- **Item No 8712 ...:** white skin and grey non-woven at the inside
- **Item No 8712 1 ...:** silver-grey skin and grey non-woven at the inside



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

Copperpipe (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

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

(Zoll" / Isolierdicke x Rohr-Ø (außen) mm)

Non-Woven Hose for Sewage Water

- Hose made of PE-coated polyester non-woven, highly flexible
- To insulate drinking water pipes of moderate-energy according to DIN 1988 part 2 for cold water pipes and fields without requirements in the ENEV (German regulations for energy saving in buildings and building systems)
- CFC-free
- For damping of solid-borne sound of sewage water pipes
- Avoids condensation water formation for HT, PE and SML sewage water pipes
- Delivery length: 25 m



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 material 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

Item No 8712:

- white skin and white non-woven at the inside

Item 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)

Non-Woven Wire Wound Former

- 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

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

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



8712 70 36 1

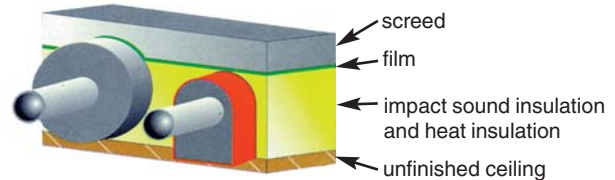
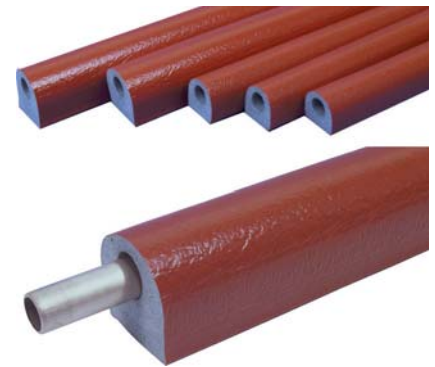
8712 70 36 2
8712 100 36 2

8712 1 70 361
8712 1 100 361

8712 1 70 362
8712 1 100 362

Insulating Sleeves

- The insulating sleeve insulates downward towards the unfinished floor and allows residual heat dissipation to the top
- Excentrically extruded pipe insulation made of dimensionally stable, closed-cell foam polyethylene – less installation height compared to round extruded insulation and this way considerably reduced crack formation in the screed
- Coextruded hard-wearing, moisture-barrier skin – non-crushing and tear-resistant
- Also appropriate for pipes made of chrome nickel steel according to DIN 53110
- Color: red
- Non-ageing and recyclable
- CFC-free
- Delivery length: 2 m



Article No.	Article Description	QTY
8713 13 15	MTR.INS. SLEEVE 50 1/4" 13/15	180
8713 13 18	MTR.INS. SLEEVE 50 3/8" 13/18	140
8713 13 22	MTR.INS. SLEEVE 50 1/2" 13/22	130
8713 13 28	MTR.INS. SLEEVE 50 3/4" 13/28	110
8713 27 15	MTR.INS. SLEEVE100 1/4" 25/15	80
8713 26 18	MTR.INS. SLEEVE100 3/8" 26/18	70
8713 26 22	MTR.INS. SLEEVE100 1/2" 26/22	64
8713 25 28	MTR.INS. SLEEVE100 3/4" 25/28	60

(insulation thickness x Ø pipe (outer) mm)

Technical Data					
ENEV	Outs. Ø mm (CU)	Nom. size ID (CU)	Nom. size ID (FE)	Outs. Ø mm (FE)	Max. install. height mm
50%	12/15	-	8	13,5	38
50%	18	15	10	17,2	41
50%	22	20	15	21,3	45
50%	28	25	20	26,9	51
100%	12/15	-	8	13,5	52
100%	18	15	10	17,2	54
100%	22	20	15	21,3	58
100%	28	25	20	26,9	63

Copper pipe (CU) / Steel pipe (FE)

- 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, according to DIN 4102
- Volume weight: ~ 30 kg/m³
- Damping of soild-borne sound up to 23 dB (A) reduction according to DIN 52218
- Increased impact sound insulation: EN ISO 717-2 35 dB according to DIN 4109

Protective Hose for Cold Water Pipes

- 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 ENEV (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				
Outside Ø mm (CU)	Nominal size ID (CU)	Nominal size ID (FE)	Outside Ø mm (FE)	Outside 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

Protective Hose "S" for Sewage Water Pipes

- 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
- 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 ENEV (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 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 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 Sewage Water Pipes

- 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
- 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 ENEV (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 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

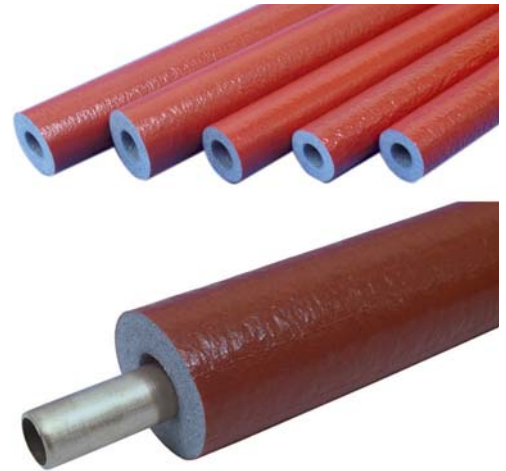
Nom. size ID (SML)	Outs. Ø mm (SML)	Nom. size ID (HT)	Outs. Ø mm (HT) pipe	Outs. Ø mm (HT) bush.
50	58	50	50	53,5
70	78	70	75	78,8
-	-	90	90	110,0
100	110	100	100	115,2
125	135	125	125	131,0

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

Insulating Hose

- 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	232
8715 9 18	MTR.INS.HOSE3/8" 9/18	190
8715 9 22	MTR.INS.HOSE1/2" 9/22	162
8715 9 28	MTR.INS.HOSE3/4" 9/28	126
8715 9 35	MTR.INS.HOSE1" 9/35	92
8715 9 42	MTR.INS.HOSE1 1/4" 9/42	72
8715 13 15	MTR.INS.HOSE 50 1/4" 13/15	162
8715 13 18	MTR.INS.HOSE 50 3/8" 13/18	136
8715 13 22	MTR.INS.HOSE 50 1/2" 13/22	120
8715 13 28	MTR.INS.HOSE 50 3/4" 13/28	98
8715 13 35	MTR.INS.HOSE1" 13/35	96
8715 20 28	MTR.INS.HOSE 50 3/4" 20/28	60
8715 20 35	MTR.INS.HOSE 50 1" 20/35	46
8715 20 42	MTR.INS.HOSE50 1 1/4"20/42	40
8715 25 15	MTR.INS.HOSE100 1/4" 27/15	56
8715 25 18	MTR.INS.HOSE100 3/8" 26/18	56
8715 25 22	MTR.INS.HOSE100 1/2" 26/22	50
8715 25 28	MTR.INS.HOSE100 3/4" 25/28	46
8715 25 35	MTR.INS.HOSE1" 25/35	28
8715 25 42	MTR.INS.HOSE50 1 1/4"25/42	28

(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
50%	15	-	8	13,5
50%	18	15	10	17,2
50%	22	20	15	21,3
50% (FE)	28	25	20	26,9
35%	35	32	25	33,7
50% (CU)	28	25	20	26,9
50%	35	32	25	33,7
50% (FE)	42	40	32	42,4
100%	15	-	8	13,5
100%	18	15	10	17,2
100%	22	20	15	21,3
100% (FE)	28	25	20	26,9
50%	35	32	25	33,7
50% (CU)	42	40	32	42,4

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
- Length 25 m
- Width 38 mm
- Thickness 0.3 mm

Article No.	Article Description	QTY
8716 30	REEL(10)PVC ADH. TAPE RED 30MM	e 5
8716 38	REEL(25)PVC ADH. TAPE RED 38MM	1 D
8716 50	REEL(10)PVC ADH. TAPE RED 50MM	e 36



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	eg 200
8716 100 36	REEL(3.6)PE WIND. TAPE RED 100	eg 200
8716 70 36 1	R.(3.6)PE WIND.T.RED S.-ADH.70	e 25
8716 100 36 1	R.(3.6)PE WI. T.RED S.-ADH.100 (SK = self-adhesive)	e 25



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
8721 1 50	REEL(10M)LAM.END.TAPE SIL.50MM	5

(Width = suitable for insulation thickness)



Adhesive Tapes PVC Clear Grey

- Color: clear grey

Article No.	Article Description	QTY
8721 25 25	R.(25M)PVC ADH.TAPE25MM CL.GR.	eb 36
8721 30 10	R.(10M)PVC ADH.TAPE30MM CL.GR.	1 ü
8721 30 25	R.(25M)PVC ADH.TAPE30MM CL.GR.	e 12
8721 50 10	R.(10M)PVC ADH.TAPE50MM CL.GR.	e 36



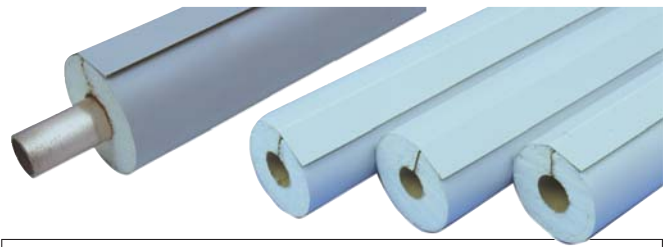
Insulation Accessories

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



Pipe Insulation PUR 035

- Complies 100% with ENEV (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	72
8718 20 18	MTR.THERMFLEX PUR 100 20/18	72
8718 20 22	MTR.THERMFLEX PUR 100 20/22	72
8718 30 28	MTR.THERMFLEX PUR 100 30/28	30
8718 30 35	MTR.THERMFLEX PUR 100 30/35	25
8718 40 42	MTR.THERMFLEX PUR 100 40/42	16
8718 40 48	MTR.THERMFLEX PUR 100 40/48	16
8718 50 60	MTR.THERMFLEX PUR 100 50/60	9

(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

- Complies 50% with ENEV (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	72
8719 20 18	MTR.THERMFLEX PUR 50 20/18	72
8719 20 22	MTR.THERMFLEX PUR 50 20/22	72
8719 20 35	MTR.THERMFLEX PUR 50 20/35	42
8719 25 48	MTR.THERMFLEX PUR 50 25/48	25
8719 30 60	MTR.THERMFLEX PUR 50 30/60	16

(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

- 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	30
8720 20 18	THERMFLEX PUR ARC 20/18	30
8720 20 28	THERMFLEX PUR ARC 20/28	30
8720 30 28	THERMFLEX PUR ARC 30/28	20
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
8720 50 60	THERMFLEX PUR ARC 50/60	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
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
-	-	50	60,3	63
76,1	65	65	76,1	75

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

Cold Rubber - Insulation Tube *Forlen*

- 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
- Excellent sliding properties
- 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	352
8730 9 08	MTR.COLD RUBBER 9/08	300
8730 9 10	MTR.COLD RUBBER 9/10	266
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	166
8730 9 22	MTR.COLD RUBBER 1/2" 9/22	136
8730 9 28	MTR.COLD RUBBER 3/4" 9/28	98
8730 9 35	MTR.COLD RUBBER 1" 9/35	76
8730 9 42	MTR.COLD RUBBER 1 1/4" 9/42	60
8730 13 10	MTR.COLD RUBBER 13/10	172
8730 13 12	MTR.COLD RUBBER 13/12	162
8730 13 15	MTR.COLD RUBBER 1/4" 13/15	136
8730 13 18	MTR.COLD RUBBER 3/8" 13/18	118
8730 13 22	MTR.COLD RUBBER FOAM1/2" 13/22	98
8730 13 28	MTR.COLD RUBBER FOAM3/4" 13/28	78
8730 13 35	MTR.COLD RUBBER 1" 13/35	60
8730 13 42	MTR.COLD RUBBER 1 1/4" 13/42	48
8730 13 48	MTR.COLD RUBBER 1 1/2" 13/48	40
8730 13 54	MTR.COLD RUBBER 13/54	34
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	48
8730 19 35	MTR.COLD RUBBER 1" 19/35	36
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	18
8730 19 64	MTR.COLD RUBBER 19/64	18
8730 19 76	MTR.COLD RUBBER 19/76	12
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	10
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	14
8730 32 54	MTR.COLD RUBBER 32/54	12

Technical Data

Ins. thickness	Outside-Ø	Nom. width	Inch	Outside-Ø	Nom. width
mm	mm (CU)	DN (CU)	(FE)	mm (FE)	DN (FE)
9,5	6	4	-	-	-
9,5	8	6	-	-	-
9,5	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
10,5	35	32	1	33,7	25
11,0	42	40	1 1/4	42,4	32
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
13,5	35	32	1	33,7	25
14,0	42	40	1 1/4	42,4	32
14,0	-	-	1 1/2	48,3	40
14,0	54	50	-	54,0	-
19,5	18	15	3/8	17,2	10
19,5	22	20	1/2	21,3	15
20,0	28	25	3/4	26,9	20
20,0	35	32	1	33,7	25
21,5	42	40	1 1/4	42,4	32
21,5	-	-	1 1/2	48,3	40
21,5	54	50	-	54,0	-
22,0	-	-	2	60,3	50
22,0	64	-	-	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	100	-	108,0	-
22,5	114	100	4	114,3	100
25,0	18	15	3/8	17,2	10
25,0	22	20	1/2	21,3	15
25,0	28	25	3/4	26,9	20
27,0	35	32	1	33,7	25
27,0	42	40	1 1/4	42,4	32
27,5	-	-	1 1/2	48,3	40
28,5	54	50	-	54,0	-
33,5	28	25	3/4	26,9	20
35,0	35	32	1	33,7	25
36,5	42	40	1 1/4	42,4	32
37,5	-	-	1 1/2	48,3	40
38,0	54	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 6 06	RO(50M)ENDL.COLD RUBBER 6X06	1
8730 5 6 08	RO(48M)ENDL.COLD RUBBER 6X08	1
8730 5 6 10	RO(46M)ENDL.COLD RUBBER 6X10	1
8730 5 6 12	RO(40M)ENDL.COLD RUBBER 6X12	1
8730 5 6 15	RO(38M)ENDL.COLD RUBBER 6X15	1
8730 5 6 18	RO(30M)ENDL.COLD RUBBER 6X18	1
8730 5 6 22	RO(23M)ENDL.COLD RUBBER 6X22	1
8730 5 6 28	RO(20M)ENDL.COLD RUBBER 6X28	1
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. thickn.	Outside-Ø	Nom. width	Inch	Outside-Ø	Nom. width
mm	mm (CU)	DN (CU)	(FE)	mm (FE)	DN (FE)
6,0	6	4	-	-	-
6,5	8	6	-	-	-
6,5	10	8	1/8	10,2	6
7,0	12	10	-	-	-
7,0	15	-	1/4	13,5	8
7,0	18	15	3/8	17,2	10
7,5	22	20	1/2	21,3	15
7,5	28	25	3/4	26,9	20
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.	Width	Length
in mm	in m	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*

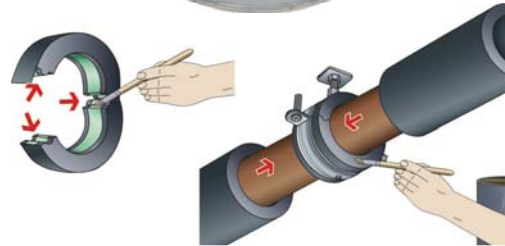
- Self-adhesive
- Length: 15 m
- Width: 50 mm
- Material thickness: 3 mm



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

Adhesive for Cold Rubber *Forlen*

- Special adhesive for bonding surfaces and connectors
- Adapted to the cold rubber system of Forlen
- For bonding cold rubber and pipes
- Temperature resistant up to +105°C
- Resistant against ageing
- Contents: 220 g



Article No.	Article Description	QTY
8730 9 220	CAN(220G)COLD RUBBER ADHESIVE	1

Necessary thickness for condensation prevention:

Even surfaces/sheet material

Outside temperature	+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%	
Rel. air humidity	Thickness					Thickness					Thickness					Thickness					
Medium-temperature	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
+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	

Pipes/Hose material

Outside temperature	+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%	
Rel. Luftf.	Thickness					Thickness					Thickness					Thickness					
Medium-temperature	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
+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	

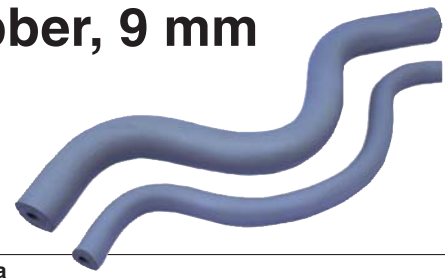
Pipe-Ø from 6 mm to 160 mm

Numbers refer to pipe material with increasing thickness.

This information is valid for normal environment and ventilation conditions; when using cold rubber Forlen do not use additional sheathing and/or paintings.

Pipe Insulation Unvulcanized Rubber, 9 mm

- According to DIN 1988 part 2 for cold water pipes
- Made of highly flexible, closed-cell elastomeric foam on building-up unvulcanized rubber basis – time-saving assembly
- Color: grey
- CFC-free
- Delivery length: 2 m
- Endless unvulcanized rubber rolled on a coil



Article No.	Article Description	QTY
8723 9 12	MTR.UNV.RUB 9/12	200
8723 9 15	MTR.UNV.RUB 1/4" 9/15	176
8723 9 18	MTR.UNV.RUB 3/8" 9/18	144
8723 9 22	MTR.UNV.RUB 1/2" 9/22	126
8723 9 28	MTR.UNV.RUB 3/4" 9/28	102
8723 9 35	MTR.UNV.RUB 1" 9/35	80
8723 9 42	MTR.UNV.RUB 1 1/4" 9/42	70
8723 5 9 15	REEL(40M)ENDL. UNV.RUB 9X15	e 5
8723 5 9 18	REEL(38M)ENDL. UNV.RUB 9X18	e 5
8723 5 9 22	REEL(30M)ENDL. UNV.RUB 9X22	e 5
8723 5 9 28	REEL(26M)ENDL. UNV.RUB 9X28	e 5

(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)
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

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

- Coefficient of thermal conductivity: R = 0.040 W (m·K) according to DIN 52613
- Operating temperature range: from -8°C to +105°C
- Fire behavior: B1, hardly inflammable according to DIN 4102
- Fire resistance: R classification R 90/120 DIN 4102 part 11
- HCFC-free-, formaldehyde-, CFC-, cadmium-free

Pipe Insulation Unvulcanized Rubber, Compl.50 %ENEV

- Made of highly flexible, closed-cell elastomeric foam on building-up unvulcanized rubber basis – time-saving assembly
- Color: grey
- CFC-free
- Delivery length: 2 m
- Complies 50 % with HeizanIV (Heating Equipment Ordinance)
- Endless unvulcanized rubber rolled on a coil

Article No.	Article Description	QTY
8723 13 15	MTR.UNV.RUB 50 1/4"13/15	112
8723 13 18	MTR.UNV.RUB 50 3/8"13/18	108
8723 13 22	MTR.UNV.RUB 50 1/2"13/22	84
8723 13 28	MTR.UNV.RUB 50 3/4"13/28	72
8723 19 28	MTR.UNV.RUB 50 3/4"19/28	48
8723 19 35	MTR.UNV.RUB 50 1" 19/35	32
8723 19 42	MTR.UNV.RUB 50 1 1/4"19/42	32
8723 25 42	MTR.UNV.RUB 50 1 1/4"25/42	24
8723 25 48	MTR.UNV.RUB 50 1 1/2"25/48	24
8723 5 13 15	REEL(40M)ENDL. UNV.RUB 13X15	e 5
8723 5 13 18	REEL(30M)ENDL. UNV.RUB 13X18	e 5
8723 5 13 22	REEL(26M)ENDL. UNV.RUB 13X22	e 5
8723 5 13 28	REEL(20M)ENDL. UNV.RUB 13X28	e 5

(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
28	25	20	26,9	25
35	32	25	33,7	32
42	40	32	42,4	40
42	40	32	42,4	40
-	-	40	48,3	-

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

- Coefficient of thermal conductivity: R = 0,040 W (m·K) according to DIN 52613
- Operating temperature range: from -8°C to +105°C
- Fire behavior: B1, hardly inflammable according to DIN 4102
- Fire resistance: R classification R 90/120 DIN 4102 part 11
- HCFC-free-, formaldehyde-, CFC-, cadmium-free

Pipe Insulation Unvulcanized Rubber, Comp.100 %ENEV

- Made of highly flexible, closed-cell soft foam on building-up unvulcanized rubber basis – time-saving assembly
- Color: grey
- CFC-free
- Delivery length: 2 m
- Complies 100 % with HeizanIV (Heating Equipment Ordinance)

Article No.	Article Description	QTY
8723 25 15	MTR.UNV.RUB 100 1/4"25/15	40
8723 25 18	MTR.UNV.RUB 100 3/8"25/18	40
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 36 35	MTR.UNV.RUB 100 1" 36/35	16
8723 36 42	MTR.UNV.RUB 100 1 1/4"36/42	12

(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

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

- Coefficient of thermal conductivity: R = 0,040 W (m·K) according to DIN 52613
- Operating temperature range: from -8°C to +105°C
- Fire behavior: B1, hardly inflammable according to DIN 4102
- Fire resistance: R classification R 90/120 DIN 4102 part 11
- HCFC-free-, formaldehyde-, CFC-, cadmium-free

Insulation Unvulcanized Rubber/SK

- Slotted with self-adhesive strap – allows an efficient and time-saving subsequent assembly
- Made of high-flexible closed-cell elastomer foam on synthesis unvulcanized rubber basis – time-saving assembly
- Color: gray
- CFC-free
- Delivery length: 2 m



Article No.	Article Description	QTY
8723 2 9 15	MTR.UNV.RUB/SK 1/4" 9/15	176
8723 2 9 18	MTR.UNV.RUB/SK 3/8" 9/18	144
8723 2 9 22	MTR.UNV.RUB/SK 1/2" 9/22	126
8723 2 9 28	MTR.UNV.RUB/SK 3/4" 9/28	102
8723 2 9 35	MTR.UNV.RUB/SK 1" 9/35	76 90
8723 2 13 15	MTR.UNV.RUB/SK 50 1/4"13/15	112
8723 2 13 18	MTR.UNV.RUB/SK 50 3/8"13/18	108
8723 2 13 22	MTR.UNV.RUB/SK 50 1/2"13/22	84
8723 2 13 28	MTR.UNV.RUB/SK 50 3/4"13/28	72
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	32
8723 2 19 42	MTR.UNV.RUB/SK 50 1 1/4"19/42	34 44
8723 2 25 15	MTR.UNV.RUB/SK100 1/4"25/15	40
8723 2 25 18	MTR.UNV.RUB/SK100 3/8"25/18	40
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

(insulation thickness - pipe Ø (outer) mm)

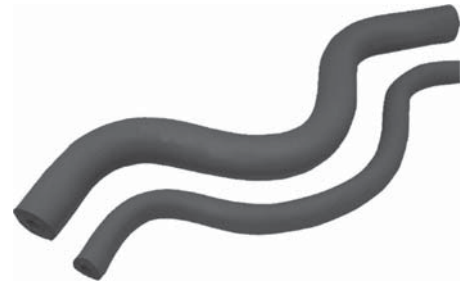
Technical Data				
ENEV acc. to DIN	Outer Ø mm (CU)	Nom. size DN (CU)	Nom. size DN (FE)	Outer Ø mm (FE)
1988	15	-	8	13,5
1988	18	15	10	17,2
1988	22	20	15	21,3
1988	28	25	20	26,9
1988	35	32	25	33,7
50%	15	-	8	13,5
50%	18	15	10	17,2
50%	22	20	15	21,3
50%	28	25	20	26,9
50%	28	25	20	26,9
50%	35	32	25	33,7
50%	42	40	32	42,4
100%	15	-	8	13,5
100%	18	15	10	17,2
100%	22	20	15	21,3
100%	28	25	20	26,9

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

- Coefficient of heat conductivity: R = 0.040W/(m.K) according to DIN 52613
- Operate in temperature range: from -8°C to +105°C
- Fire behavior: B1, hardly inflammable according to DIN 4102

Insulation Unvulcanized Rubber/HT

- Type 1
- Made of high-flexible closed-cell elastomer foam on synthesis unvulcanized rubber basis – time-saving assembly
- Color: black
- CFC-free
- Delivery length: 2 m
- Temperature-resistant from -40°C to +150°C, short term permanent load up to +175°C – appropriate for solar systems



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	40
8723 1 19 35	MTR.UNV.RUB/HT 1" 19/35	32
8723 1 25 15	MTR.UNV.RUB/HT 1/4" 25/15	50
8723 1 25 18	MTR.UNV.RUB/HT 3/8" 25/18	42
8723 1 25 22	MTR.UNV.RUB/HT 1/2" 25/22	36
8723 1 25 28	MTR.UNV.RUB/HT 3/4" 25/28	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
15	-	8	13,5	-
18	15	10	17,2	16
22	20	15	21,3	20
28	25	20	26,9	25

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

- Coefficient of thermal conductivity: 0,040 W(m.K) according to DIN 52613
- Operation in temperature range: from -40°C to +150°C permanent load, short term up to +175°C, according to UNI ISO 188, Cerisise Milan
- Fire behavior: B2, non dropping in case of fire test according to DIN4102, part 1
- steam-diffusion-resistance-number μ value: >3000 in-shop tested according to DIN 52615
- Ozone resistance: excellent according toISO 7326
- UV resistance: good according to UNI ISO 4892
- In order to guarantee a UV resistance the hose needs to be protected against general environmental influences (e.g. steel sheet envelope or paint coating)

High Temperature 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	136
8723 6 13 18	MTR.UNV.RUB HTK UV 3/8"13/18	118
8723 6 13 22	MTR.UNV.RUB HTK UV 1/2"13/22	98
8723 6 13 28	MTR.UNV.RUB HTK UV 3/4"13/28	78
8723 6 13 35	MTR.UNV.RUB HTK UV 1" 13/35	58
8723 6 19 15	MTR.UNV.RUB HTK UV 1/4"19/15	78
8723 6 19 18	MTR.UNV.RUB HTK UV 3/8"19/18	72
8723 6 19 22	MTR.UNV.RUB HTK UV 1/2"19/22	64
8723 6 19 28	MTR.UNV.RUB HTK UV 3/4"19/28	48
8723 6 19 35	MTR.UNV.RUB HTK UV 1" 19/35	36
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

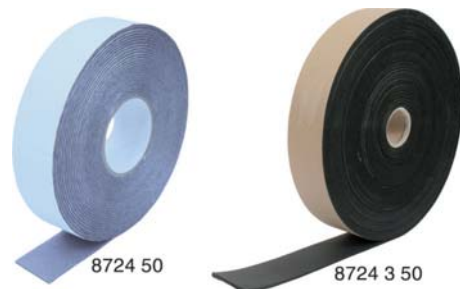
Outer Ø mm (CU)	Nom. size ID (CU)	Outer Ø mm (FE)	Nom. size ID (FE)	Outer Ø mm (VA)	Nom. size ID (VA)
15	-	13,5	8	14,2	10
18	15	17,2	10	16,7	12
22	20	21,3	15	21,4	16
28	25	26,9	20	26,7	20
35	32	33,7	25	33,0	25

- 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

Unvulcanized 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	10



Glue for Tube Insulation Unvulcanized Rubber

- Neoprene special glue

Article No.	Article Description	QTY
8724 425	TIN(450G) UNV.RUB GLUE	ew 24



Corrugated 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 20 15	MTR.SOLAR COMP. ID20 15M	15
8722 1 20 25	MTR.SOLAR COMP. ID20 25M	25
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 20 15	MTR.SOLAR COMP. 13MM ID20 15M	15
8722 2 20 25	MTR.SOLAR COMP. 13MM ID20 25M	25

(ID mm / Length of each bunch mm)

ID mm	Insulating Ø mm	Dimensions L x B	PN at 250° bar	Bending degree m
16	19	122 x 60	11	0,15
16	19	122x60	11	0,15
20	19	134x66	6,9	0,15
20	19	134x66	6,9	0,15
25	19	148x73	6,9	0,20
25	19	148x73	6,9	0,20
16	13	98x48	11	0,15
16	13	98x48	11	0,15
20	13	110x54	6,9	0,15
20	13	110x54	6,9	0,15

- Medium pipe: high-flexible corrugated stainless steel tube (material 1.4404 = V4A)
- Insulation: closed-cell, synthetic high temperature unvulcanized rubber up to +150°C, short term up to +175°C
- Heat conductivity: R = 0,042 W/m*K
- Lagging: tear-proof PE lagging, black
- Length of each bunch: 15 m or 25 m

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 = V4A**
- Application and solar thermal and heating systems
- Optimum for collector connections and boiler connections



Article No.	Article Description	QTY
8722 3 12 50	MTR.CORR. STAINL.ST TUBE ID12	50
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

ID mm	Dimension inch	Length m
12	3/8	50
16	1/2	50
20	3/4	50
25	1	50
32	1 1/4	50
40	1 1/2	50

Screw Connection Kit

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

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



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

Technical Data			
Connection	ID	Cap nut Inch	reduced inch
Outside thread	16	3/4	1/2
Outside thread	20	1	3/4
Outside thread	25	1 1/4	1
Outside thread	32	1 1/2	1 1/4
Outside thread	40	2	1 1/2

Coupling Kit

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

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



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

Technical Data			
Connection	ID	Cap nut inch	AG reduced inch
Outside thread	16	3/4	3/4
Outside thread	20	1	1
Outside thread	25	1 1/4	1 1/4
Outside thread	32	1 1/2	1 1/2
Outside thread	40	2	2

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



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 ID16	10
8722 4 20	OVAL MOUNT. CLAMP ID20	10
8722 4 25	OVAL MOUNT. CLAMP ID25	10



Impact Tool

- Impact kit to manufacture flange connections for flexible corrugated stainless steel tubes
- Impact tool with clamping jaws and flanged rod
- **Up to the dimension DN32 it is possible to perform the screwed joint/coupling also without using an impact tool**

Article No.	Article Description	QTY
8722 7 12	IMPACT TOOL ID12	1
8722 7 16	IMPACT TOOL ID16	1
8722 7 20	IMPACT TOOL ID20	1
8722 7 25	IMPACT TOOL ID25	1
8722 7 32	IMPACT TOOL ID32	1
8722 7 40	IMPACT TOOL ID40	1



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	e 24



Tube Shell Made of Rock Wool SW 50 *Forlen*

Tube shell made of rock wool alu-laminated according 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 $\geq 1.000^{\circ}\text{C}$
- 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 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 54	MTR.TUBE SHELL.R.WO50 30/54	9
8725 30 60	MTR.TUBE SHELL R.WO50 2"30/60	9
8725 40 76	MTR.TUBE SH.R.WO50 2 1/2"40/76	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 - pipe Ø (outer) mm)



Technical Data

Outer Ø mm (CU)	Nom. size ID (CU)	Outer Ø mm (FE)	Nom. size ID (FE)	Outer 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
35	32	33,7	25	32
42	40	42,4	32	40
42	40	42,4	32	40
-	-	48,3	40	-
54	50	54	-	-
-	-	60,3	50	63
76	65	76,1	65	75
89	80	88,9	80	90
-	-	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)**

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 $\geq 1.000\text{ }^{\circ}\text{C}$
- 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
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	5
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	2
8727 94 89	MTR.TUBE SH.R.WO100 3"94/89	2
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

ExteriorØ mm (CU)	Nominal size ID (CU)	ExteriorØ mm (FE)	Nominal size ID (FE)	ExteriorØ 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	-100	-
-	-	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

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

Adhesive Tapes Aluminum

- On paper carrier – allows easy tearing off
- To glue the alu-laminated tube shells made of mineral fiber
- Length: 100 m

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)

Adhesive Tapes Alu-Fix

- Highly elastic and vapor barrier; perfect to connect hems and to repair roof insulation materials with vapor barrier
- Aluminum coated adhesive tape without release paper
- Roll length: 50 m

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
8843 100	REEL(50M)AL. FIX ADH.TAPE100MM	e 18

(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(10.0 M)ROCK W.MAT20X500MM	2
8727 30	REEL(8.0 M)ROCK W.MAT30X500MM	2
8727 40	REEL(6.0 M)ROCK W.MAT40X500MM	2
8727 50	REEL(5.0 M)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 thickness 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, un laminated 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)



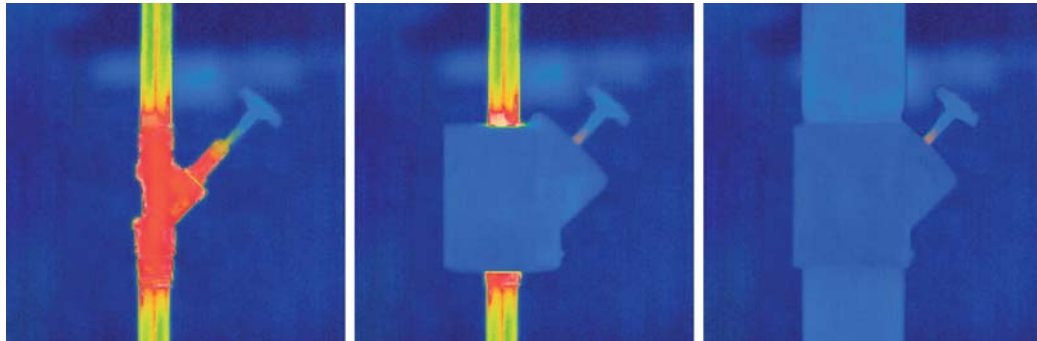
Valve Insulation Universal *Forlen*

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.

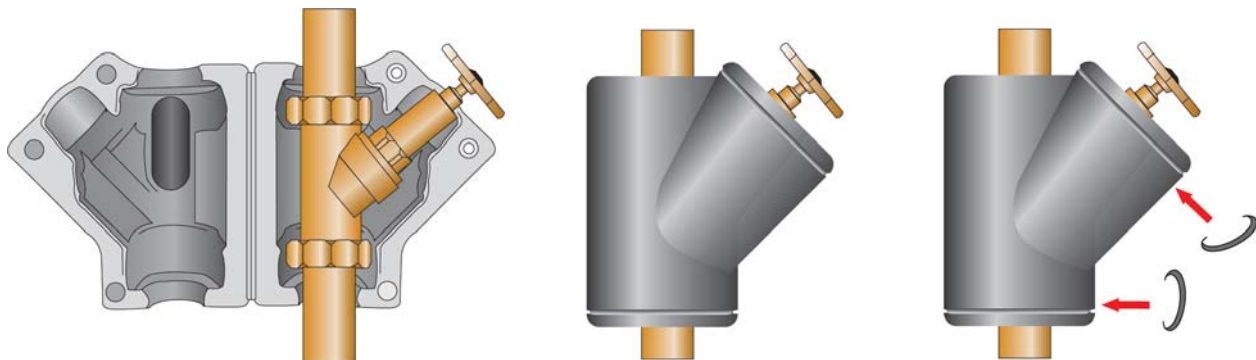
Article No.	Article Description	QTY
8729 1 15	VALVE INSULATION 1/2" DN15	e 10
8729 1 20	VALVE INSULATION 3/4" DN20	e 10
8729 1 25	VALVE INSULATION 1" DN25	e 10
8729 1 32	VALVE INSULATION 1 1/4" DN32	e 10
8729 1 40	VALVE INSULATION 1 1/2" DN40	e 5
8729 1 50	VALVE INSULATION 2" DN50	e 5

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/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

Assembly 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	e 5

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



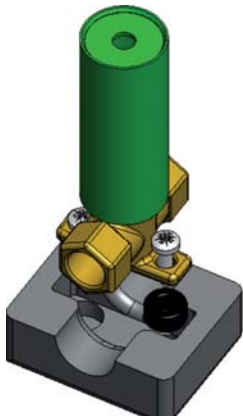
Article No.	Article Description	QTY
8729 4 12	UP-VALVE INSULATION 1/2"	e 20
8729 4 16	UP-VALVE INSULATION Ø16-20MM	e 20
8729 4 32	UP-VALVE INSULATION Ø32MM	e 10
8729 4 34	UP-VALVE INSULATION 3/4"	e 10

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

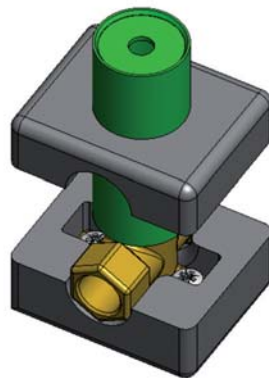
Included in delivery:

- 2x Closing clips
- 1x Valve insulation

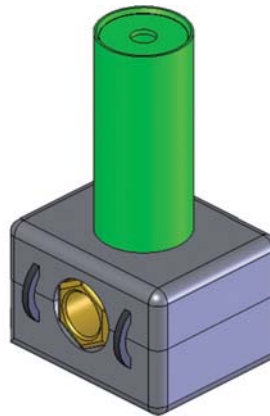
Assembly instructions:



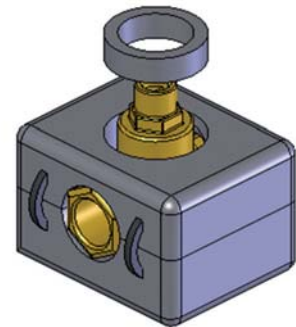
1. The valve has to be mounted with the lower part. If rubber punch rings are delivered valve-sided, insert and fix them into the insulation.



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

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

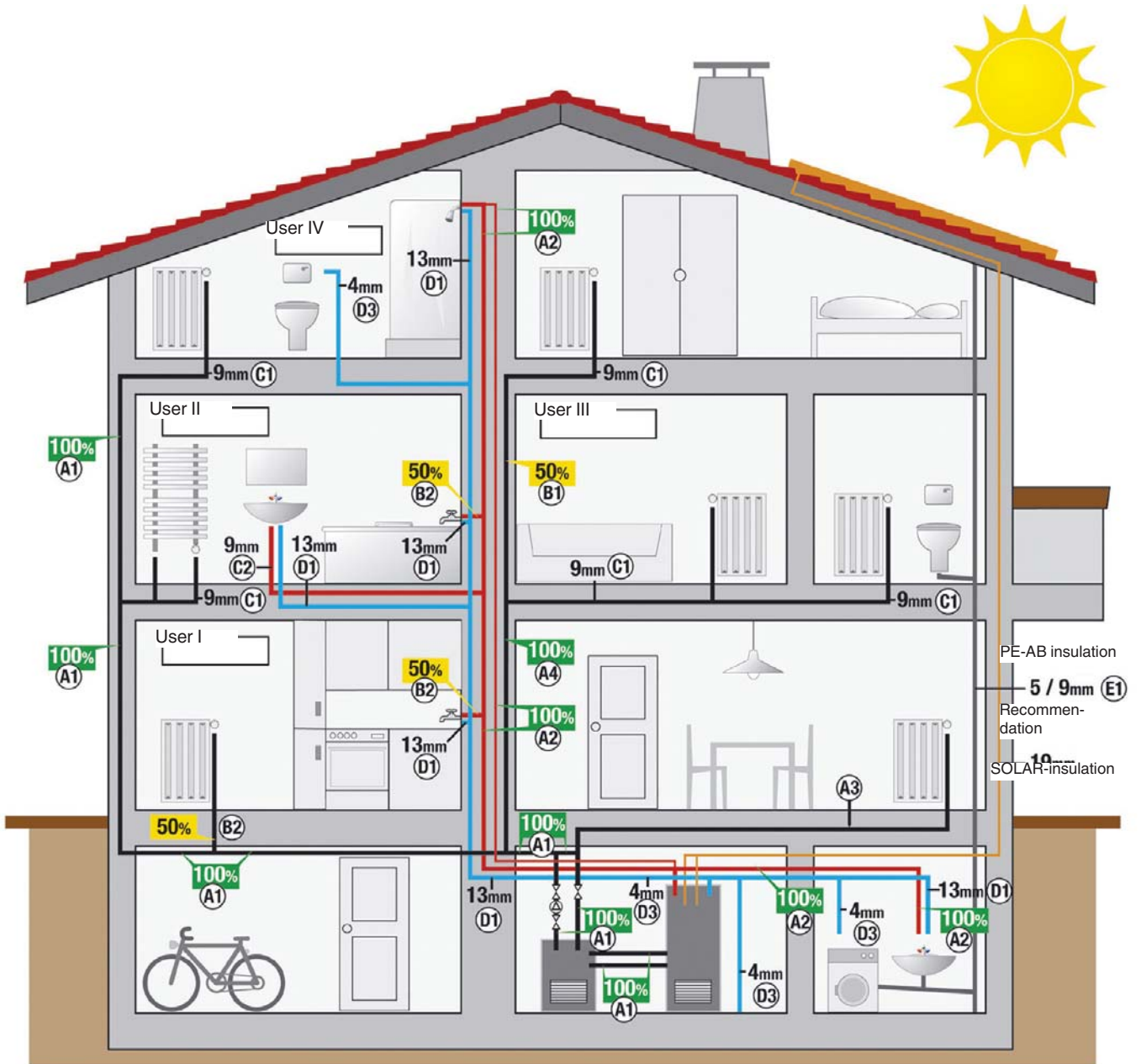


Article No.	Article Description	QTY
8720 57	PVC EMPTY BENDS 57MM	1
8720 61	PVC EMPTY BENDS 61MM	1
8720 67	PVC EMPTY BENDS 67MM	ez 30
8720 71	PVC EMPTY BENDS 71MM	e 40
8720 73	PVC EMPTY BENDS 73MM	e 30
8720 77	PVC EMPTY BENDS 77MM	e 40
8720 81	PVC EMPTY BENDS 81MM	e 30
8720 82	PVC EMPTY BENDS 82MM	e 30
8720 83	PVC EMPTY BENDS 83MM	e 30
8720 87	PVC EMPTY BENDS 87MM	e 30
8720 88	PVC EMPTY BENDS 88MM	e 30
8720 92	PVC EMPTY BENDS 92MM	e 30
8720 93	PVC EMPTY BENDS 93MM	e 30
8720 97	PVC EMPTY BENDS 97MM	e 30
8720 98	PVC EMPTY BENDS 98MM	e 30
8720 101	PVC EMPTY BENDS 101MM	e 30
8720 102	PVC EMPTY BENDS 102MM	e 30
8720 104	PVC EMPTY BENDS 104MM	e 30
8720 107	PVC EMPTY BENDS 107MM	e 30
8720 108	PVC EMPTY BENDS 108MM	e 30
8720 110	PVC EMPTY BENDS 110MM	e 30
8720 113	PVC EMPTY BENDS 113MM	e 30
8720 114	PVC EMPTY BENDS 114MM	e 30
8720 116	PVC EMPTY BENDS 116MM	e 30
8720 117	PVC EMPTY BENDS 117MM	e 30
8720 121	PVC EMPTY BENDS 121MM	e 30
8720 122	PVC EMPTY BENDS 122MM	e 30
8720 124	PVC EMPTY BENDS 124MM	e 30
8720 126	PVC EMPTY BENDS 126MM	e 30
8720 127	PVC EMPTY BENDS 127MM	e 30
8720 128	PVC EMPTY BENDS 128MM	e 30
8720 129	PVC EMPTY BENDS 129MM	e 30
8720 130	PVC EMPTY BENDS 130MM	e 30
8720 133	PVC EMPTY BENDS 133MM	e 30
8720 136	PVC EMPTY BENDS 136MM	e 30
8720 139	PVC EMPTY BENDS 139MM	e 30
8720 142	PVC EMPTY BENDS 142MM	e 30
8720 144	PVC EMPTY BENDS 144MM	e 30
8720 148	PVC EMPTY BENDS 148MM	e 30
8720 149	PVC EMPTY BENDS 149MM	e 30
8720 150	PVC EMPTY BENDS 150MM	e 30
8720 152	PVC EMPTY BENDS 152MM	e 30
8720 154	PVC EMPTY BENDS 154MM	e 30
8720 156	PVC EMPTY BENDS 156MM	e 30
8720 157	PVC EMPTY BENDS 157MM	e 30
8720 158	PVC EMPTY BENDS 158MM	e 30
8720 162	PVC EMPTY BENDS 162MM	e 30
8720 164	PVC EMPTY BENDS 164MM	e 10
8720 168	PVC EMPTY BENDS 168MM	e 30
8720 169	PVC EMPTY BENDS 169MM	e 30
8720 170	PVC EMPTY BENDS 170MM	e 30
8720 174	PVC EMPTY BENDS 174MM	e 30
8720 176	PVC EMPTY BENDS 176MM	e 30
8720 182	PVC EMPTY BENDS 182MM	e 30
8720 183	PVC EMPTY BENDS 183MM	e 30
8720 187	PVC EMPTY BENDS 187MM	e 30
8720 188	PVC EMPTY BENDS 188MM	e 30
8720 189	PVC EMPTY BENDS 189MM	e 30
8720 190	PVC EMPTY BENDS 190MM	e 30
8720 193	PVC EMPTY BENDS 193MM	e 30
8720 194	PVC EMPTY BENDS 194MM	e 30
8720 200	PVC EMPTY BENDS 200MM	e 30
8720 202	PVC EMPTY BENDS 202MM	e 30
8720 208	PVC EMPTY BENDS 208MM	e 30
8720 209	PVC EMPTY BENDS 209MM	e 30
8720 213	PVC EMPTY BENDS 213MM	e 30

Article No.	Article Description	QTY
8720 214	PVC EMPTY BENDS 214MM	e 30
8720 219	PVC EMPTY BENDS 219MM	e 30
8720 220	PVC EMPTY BENDS 220MM	e 30
8720 225	PVC EMPTY BENDS 225MM	e 30
8720 227	PVC EMPTY BENDS 227MM	e 30
8720 233	PVC EMPTY BENDS 233MM	e 30
8720 239	PVC EMPTY BENDS 239MM	e 30
8720 240	PVC EMPTY BENDS 240MM	e 30
8720 245	PVC EMPTY BENDS 245MM	e 30
8720 259	PVC EMPTY BENDS 259MM	e 30
8720 265	PVC EMPTY BENDS 265MM	e 30
8720 269	PVC EMPTY BENDS 269MM	e 30
8720 274	PVC EMPTY BENDS 274MM	e 30
8720 279	PVC EMPTY BENDS 279MM	e 30
8720 294	PVC EMPTY BENDS 294MM	e 30
8720 299	PVC EMPTY BENDS 299MM	e 30
8720 307	PVC EMPTY BENDS 307MM	e 30
8720 319	PVC EMPTY BENDS 319MM	e 30
8720 349	PVC EMPTY BENDS 349MM	e 30
8720 357	PVC EMPTY BENDS 357MM	e 30

(inner Ø bend / mm)

Measurement table for checking the corresponding PVC bends with regard to the pipe-Ø + insulation thickness					
Pipe-Ø mm incl. + 2 mm	Insulation thickness / mm				
	20	25	30	40	50
Total inner-Ø Empty PVC Bend /mm					
17	57	67	77	97	117
21	61	71	81	101	121
27	67	77	87	107	127
33	73	83	93	113	133
42	82	92	102	122	142
48	88	98	108	128	148
57	97		117		157
64	104	114	124	144	164
70	110		130	150	170
76	116	126	136	156	176
89	129	139	149	169	189
102	142	152	162	182	202
108	148	158	168	188	208
114	154	164	174	194	214
127			187		227
133		183	193	213	233
140		190	200	220	240
159		209	219	239	259
165		215	225	245	265
194				274	294
219		269	279	299	319
249					349
257		307			357



- 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 (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
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G	- Free laid pipes, in heated rooms	9 mm
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H	- Free laid pipes, in non-heated rooms	6 mm
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K	- Pipes in key way, ascending pipe	6 mm
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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 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*K)
1	Internal diameter up to 22 mm	20 mm
2	Internal diameter of more than 22 mm to 35 mm	30 mm
3	Internal diameter of more than 35 mm to 100 mm	equal to internal diameter
4	Internal diameter 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	1/2 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	1/2 of the requirements of the 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

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 12	PLASTIC CLIP DUO M6 12MM	55
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

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 12	8	-	12
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

(Nominal size mm)

Mounting Clamps Fix



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

(Nominal size mm)

Technical Data		
Item No	For pipe Ø mm	For armor steel tube
8700 16	15 - 16	PG 9,0
8700 18	17 - 18	PG 11,0
8700 20	19 - 20	PG 13,5
8700 22	21 - 22	PG 16
8700 24	23 - 24	
8700 28	27 - 28	PG 21
8700 35	34 - 35	
8700 40	39 - 40	

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



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

(Nominal size mm)

Technical Data		
Item No	for pipe Ø mm	For armor steel tube
8701 16	15 - 16	PG 9,0
8701 18	17 - 18	PG 11,0
8701 20	19 - 20	PG 13,5
8701 22	21 - 22	PG 16
8701 24	23 - 24	
8701 28	27 - 28	PG 21
8701 35	34 - 35	
8701 40	39 - 40	

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



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)

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

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



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

(length mm)

Technical Data	
Item No	max. mounting thickness mm
8703 14	2
8703 18	6

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)

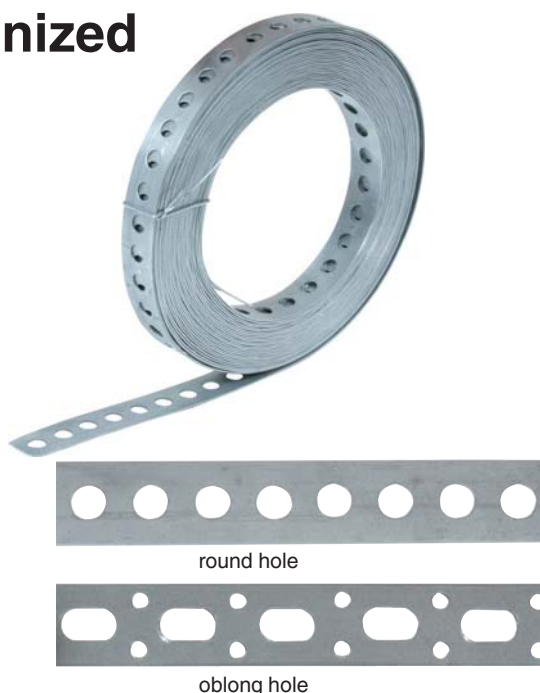


Mounting Perforated Tape Galvanized

- Tape thickness 0.75 mm
- for:
 - Ø 5.0 mm: Fix set nails
 - Ø 6.3 mm: M6
 - Ø 8.3 mm: M8

Article No.	Article Description	QTY
8900 0 10	MTR10 ROU.PERF.TAPE12MM 5MM GA	100
8900 1 10	MTR10 OBL.H.PER.T.17MM 6.3MMGA	100
8900 1 25	MTR25 OBL.H.PER.T.17MM 6.3MMGA	25
8900 3 10	MTR10 ROU.PERF.TAPE17MM6.3MMGA	100
8900 3 25	MTR25 ROU.PERF.TAPE17MM6.3MMGA	25
8900 5 10	MTR10 OBL.H.PER.TA.25MM8.3MMGA	100
8900 5 25	MTR 25 OB.H.PE.T.25MM8.3MMGA	g 125
8900 7 10	MTR10 ROU.PERF.T.25MM8.3MM GA	50
8900 7 25	MTR25 ROU.PER.TAPE25MM8.3MM GA	150

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



Mounting Perforated Tape Plastic-coated

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

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

(RD = Round hole / LG = Oblong hole / Tape thickness / Hole size / VPE = 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



Fitting Solder Number 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	10 f

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

Delivery volume:

- 1x brush holder
- 1x brush

Antifriction Paste for Plug-In Sleeves

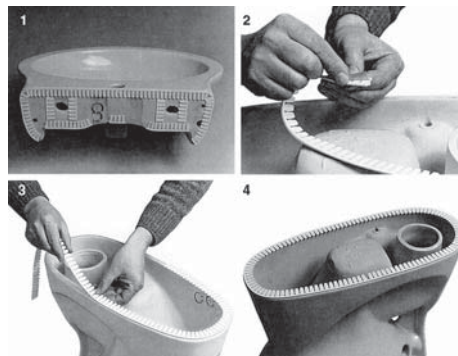
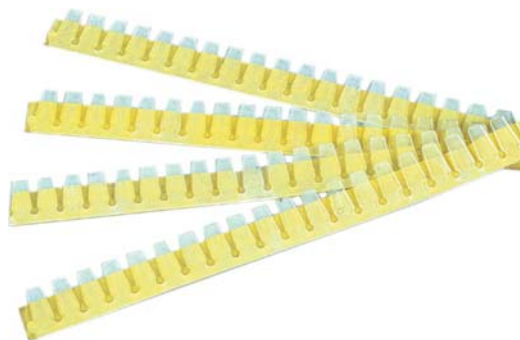
- Facilitates the mounting and pulling over of plug-in sleeves on plastic pipes
- Tested and approved by the DVGW research center at Karlsruhe – approved for all plastic pipes and drinking water pipes
- Free from greases, oils or solvents – sealings do not get rough and will not be destroyed
- Soluble 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.WHITE250G	e 5



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:

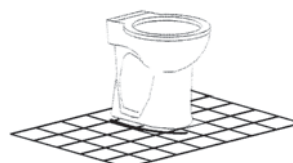
- Thickness 5 mm



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

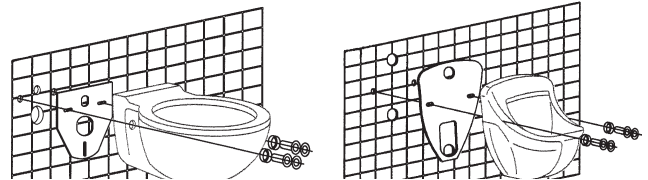
- To interrupt acoustical bridges between floor tiles and ceramic objects
- PE strip, one-side self-adhesive
- Universally applicable
- Thickness: 2 mm
- Length: 0,5 m
- PU: 2 pcs mounting tapes per strip, 150 strips of 2 mounting tapes



Article No.	Article Description	QTY
8691 22	HYDROSTRIP MOUNT. TAPE	b 300

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)



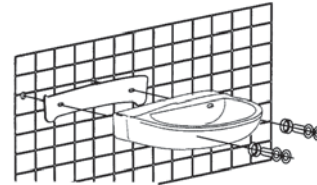
Article No.	Article Description	QTY
8691 1	WATER-CL./BIDET S.- INSUL. KIT	1
8691 2	URINAL SOUND INSULATION KIT	1

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



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

Technical Data	
Item No	Use for
8691 550	wash hand basins
8691 750	wash stands
8691 840	double wash stands

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.-PL.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



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 galvanized
- Washers DIN 125 vz



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 galvanized
- Washers DIN 125 galvanized for M10
- Hexagon nuts 934-8 galvanized 10



Sanitary Wrench Universal



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

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

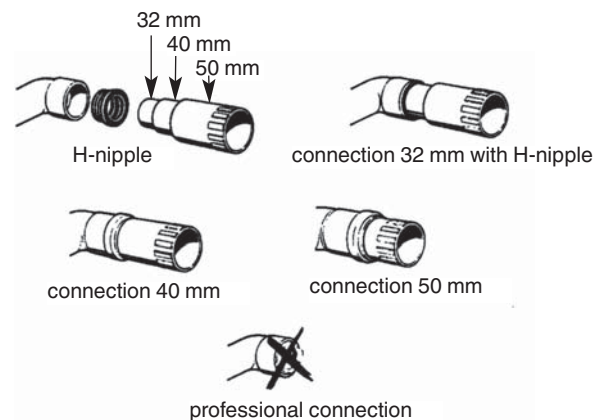
Article No.	Article Description	QTY
8693 12	INT. PLUG 1/2" PLAST. THR. BLUE	80
8693 12 1	INT. PLUG 1/2" PLAST. THR. RED	80

(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

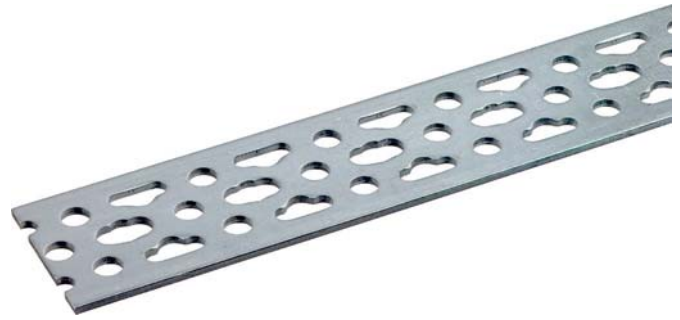
- 100 % flexible outlet vent connection and thus appropriate for all outlet vent models made of plastic material
- Connection bushing and reduction piece 100/70 mm made of PVC – impact resistant and break-proof
- Flexible PVC hose with welded-in stainless steel helix – trouble-free manufacturing of an double arc
- Reducing piece 100/70 mm – allows all connection variants
- Connection bushing provided with a high-quality hose clamp - Guarantees safe hold at the outlet vent
- Temperature resistant from -35°C to +90°C
- Water tight
- Perfect for the ventilation and exhaust in the climate, sanitary and environmental technology of users such as sanitary and heating fitters, roofers and metal workersbauer
- Length 600 mm
- Extension from 180 to 360 mm



Article No.	Article Description	QTY
8613 180 360	FLEX. VENTILATION HOSE 0,6M	e 8

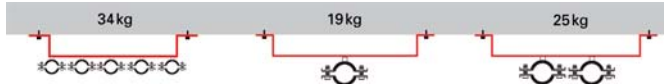
Strap Vario

- 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

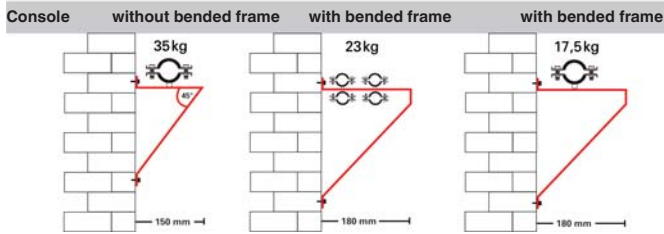


Example of load:

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 (length x width x thickness in mm)	w 100

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

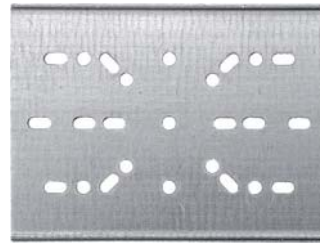
- Sound insulation of ceiling and connection angles on the installation rail or for direct mounting – considerable noise reduction with only one system part
- Tested and approved by the Fraunhofer-Institut für Bauphysik (Fraunhofer Institute for Building physics)



Article No.	Article Description	QTY
8695 3	SOUND-SHIELD	20

Backing Plate

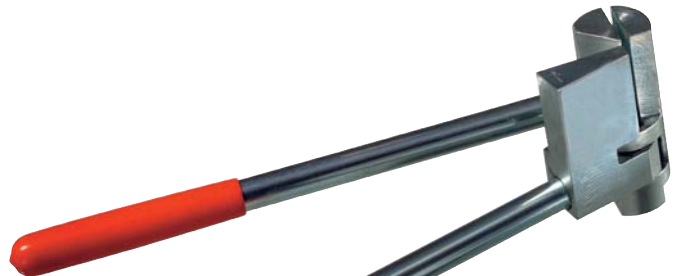
- Fixture of installation plates and fittings of all pipe systems – efficient, torsion-free and centered fixture on the installation strap
- Hot-dip galvanized – improved corrosion protection



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

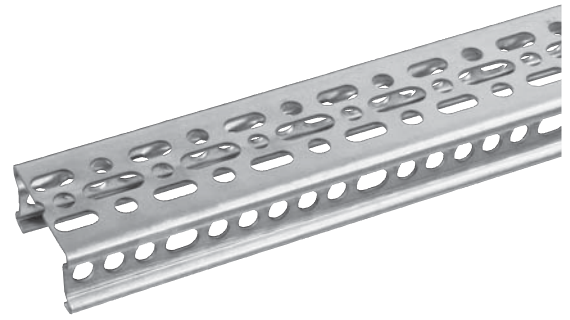
- The protection and sound-cap is appropriate for all 1/2" connections, which can be centrally mounted on the sound-shield
- No need to spend time filling gaps



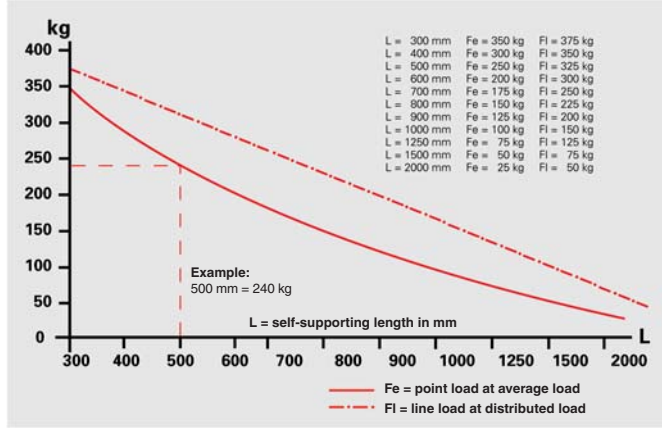
Article No.	Article Description	QTY
8695 5	PROTECTION AND SOUND-CAP	20

C-Profile

- Versatile constructions are enabling by combining with the strap Vario
- Pipe clamps are fixed on the C profile using standard threaded rod or screws without using any special parts (cage nuts, hammer-head screws)



Load diagram für L = 300 mm - 2000 mm



The represented loads are reference values and assume a professional fixture of the structural elements!



Article No.	Article Description	QTY
8695 50 2	MTR.C-PROFILE 2000X50X2 (length x width x thickness in mm)	10

C-Brackets

- Useful add-ons for C-profiles
- They are just inserted into the C profile or screwed or clamped
- It is possible to manufacture stable fixtures e.g. in ducts and shafts without lots of efforts by combining the parts
- Higher stability for self-supporting wall mountings



Article No.	Article Description	QTY
8695 6	C-BRACKET H	10
8695 7	C-BRACKET V	10