HERZ QUICK FIX sliding sleeve system

Pipes and fittings

Data sheet for HERZ QUICK FIX sliding sleeve system, Issue 1119



Order number	Pipe Ø x wall thickness [mm]	Aluminium thickness [mm]	Sales unit
3 D160 20	16 x 2,0	0,20	Reel 200 meter
3 C200 30	20 x 2,0	0,25	Reel 100 meter
3 C260 40	26 x 3,0	0,35	Reel 50 meter
3 C320 30	32 x 3,0	0,50	Reel 50 meter
3 C160 46	16 x 2,0	0,20	Straight 5 meter
3 C200 38	20 x 2,0	0,25	Straight 5 meter
3 C260 39	26 x 3,0	0,35	Straight 5 meter
3 C320 35	32 x 3,0	0,50	Straight 5 meter
3 C160 42	16 x 2,0	0,20	Reel 50 meter, in black plastic protective conduit 20/25 mm
3 C200 40	20 x 2,0	0,25	Reel 50 meter, in black plastic protective conduit 25/30 mm
3 D160 06	16 x 2,0	0,20	Reel 100 meter, with 6 mm thermal insulation
3 D200 06	20 x 2,0	0,25	Reel 100 meter, with 6 mm thermal insulation
3 D260 06	26 x 3,0	0,35	Reel 50 meter, with 6 mm thermal insulation
3 C320 06	32 x 3,0	0,50	Reel 25 meter, with 6 mm thermal insulation
3 C160 44	16 x 2,0	0,20	Reel 100 meter, with 9 mm thermal insulation
3 D200 09	20 x 2,0	0,25	Reel 50 meter, with 9 mm thermal insulation
3 D260 09	26 x 3,0	0,35	Reel 50 meter, with 9 mm thermal insulation
3 C320 09	32 x 3,0	0,50	Reel 25 meter, with 9 mm thermal insulation
3 D160 13	16x2	0,2	Reel 50 meter, with 13 mm thermal insulation
3 D200 13	20x2	0,25	Reel 50 meter, with 13 mm thermal insulation
3 D260 13	26x3	0,35	Reel 25 meter, with 13 mm thermal insulation



Technical specification

Maximal operation temperature	70°C - $90~^\circ\text{C}$ depending on the application class
Maximal operation termperature (max.1 year)	95 °C
Emergency operation temperature (max. 100 h)	100 °C
Maximal operation pressure	8-10 bar depending on the dimension
Maximal operation pressure (max. 1 year)	12 bar
Thermal conductivity	0,47 W/mK
Internal surface roughness	0,007 mm
Coefficient of linear expansion	0,023 mm/(mK)
Oxygen permeability	<0,1 g/m³d
Isolation LDPE foam with PE casing	
Thermal conductivity at 40 °C	0,040 W/mK
at 10 °C	0,036 W/mK
Reaction to fire, foam EN 13501-1:	Bls1d0
Foam with coating EN 13501-1:	Cls1d0
Fire reaction class acc. DIN 4102	B1
Temperature resistant	until +95 °C
Density	> 30 kg/m³
Water vapor diffusion number DIN 52615	μ ≥ 16000
Outer casing white, black lettering	

Certificates

- ÖNORM EN ISO 21003

the application class 1, Tmax = 80°C, max. permissible operating pressure pD = 10bar
the application class 2, Tmax = 80°C, max. permissible operating pressure pD = 10bar
the application class 4, Tmax = 70°C, max. permissible operating pressure pD = 10bar
the application class 5, Tmax = 90°C, max. permissible operating pressure pD = 10bar (in DN 40 pD = 8bar)
- ÖVGW W 1.379

Material & resistance

The advantages of polyethylene PE are the odor and taste neutrality, long life, high mechanical strength as well as they are foodsafe and recycleable. When using in rooms with a high concentration of chemical gases or moisture (stables, commercial kitchens, etc.), the metallic connecting parts must be protected. The resistance to chemicals and limy drinking water is given by the properties of polyethylene. The medium does not come into contact with the aluminium pipe.

The resistance to UV rays is given by the aluminum pipe. Algae growth requires UV radiation and can therefore be excluded. Shortwave UV rays promote the aging of plastics. The high-density PE outer sheath is sufficiently stabilized for installation in building, eliminating the need for additional protective measures.

The material PE-RT used has a good resistance to antifreeze based on glycol. For applications below 0 °C, the use of antifreeze to prevent damage is even mandatory. The use of ethylene and propylene glycol is permitted in a mixing ratio of 25 - 50 vol. [%].

The use of electrical heating tapes for frost protection of the pipeline is possible. For better distribution of heat, these heating tapes are mounted with an adhesive film. Heating tapes must be technically tested and have a corresponding approval. Heating cables are only suitable as frost protection and not as additional heating.

Processing and application temperature

The lowest operating temperatures of PE-RT are possible at -20 °C, installing temperature down to -40 °C. At tem-

peratures below + 5 °C, the pipes must not be exposed to excessive external mechanical stress. The pipes are stress-free, without bending, tension or torsional stress to install. For small bending radii under a installing temperature of 0°C there is an increased risk of kinking of the pipes. We recommend the use of bending aids or to warm up the corresponding pipe sections to a temperature of over + 5 °C warm. The pressing tool must ensure a sufficient pressing force even at low temperatures. The specifications of the tool manufacturer are to be observed here.

Behavior in case of fire

In the manufacture of the HERZ pipe, in addition to aluminum, only polyolefin-based plastics are used. In a normal combustion, the same vapors occur as when burning a candle. Under unfavorable circumstances (too little oxygen), carbon monoxide or soot may form, resulting in any incomplete combustion of organic matter. Aluminum is non-flammable under normal conditions. The oxidation products are non-toxic and even quite often part of the natural soil composition. When burning HERZ pipes, no halogens, acids or other toxic or environmentally harmful substances are released.

In the crossing of fire compartments appropriate fire protection closures are to be used in accordance with national and international standards for the prevention of the fire spreading. These closures can be soft bulkheads, fire protection cushions or fire cuffs. These foreclosures close the fire after burning off the plastic pipes. HERZ plastic pipes fall into fire class B2 (normal flammable building materials) according to DIN 4102, Part 1.

Thermal expansion

The linear expansion coefficient, independent of the pipe size, totals 0,023 mm/mK. The length change between installation and operating temperature may be calculated using the following

formula.

$$\Delta I = a \times I \times \Delta t$$

- ∆I ... length change
- a ... expansion coefficient [0,023 mm/mK]
- I ... Installed pipe length [m]



Pipe expansion is compensated by professional installation





Pipe friction diagram





Expansion section and fixing intervals

With normally installed pipes or "Pipes in pipe" installations, sufficient flexible sections must be left to compensate the expansion. When installing buried or under screed (underfloor heating) pipes, the expansion is recorded as radi-



Loose laid pipes do not require any supports, such as clips, clamps, etc. due to their stable shape. The support intervals can be found in the table below. Plastic or metal pipe clamps should have a soft lining of rubber or another soft material, in order to avoid damage to the pipe and to reduce noise transmission.

Dimension [mm]	Support Interval B [m]
14	0,8
16	0,8
20	1
26	1,2





The arrangement of fixed points and sliding supports is very important when installing, so that sufficent flexible section are available. Fittings (elbows, 'T's etc.) are recommended for changes in direction, for pipe sizes DN 32 and above they must be utilised. The pipe expansion can be halved by around 50% by pre-stressing the pipes.





Pipe expansion for directional charges, flexible section to be calculated using the diagram

Inclusion of the pipe expansion in long pipes, including expansion through U-bends, flexible sections by calculation or from the diagram

For risers it is advisable to set the fixed point in the middle of the run. The result is smaller intervals for the flexible sections.



Fixed point at the end of the ascending pipe --> flexible sections become increasingly larger



Fixed point in the middle of the riser --> flexible sections remain relatively short

Protective pipes should be used when working through wall or ceilings. To avoid severe damage to the pipes, the pipes should not be bent around sharp angles. For rounding off, sufficiently large openings should be used.









The pipe can be bent using a bending tool such as an inner or outer spring, or the usual bending tools or by hand. The minimum bending radii must always be adhered to. For DN 32 pipes or larger, fittings must always be used.

Pipe DN	Radius with bending tool [mm]	Radius without bending tool [mm]
16 x 2	32	80
20 x 2	40	100
26 x 3	130	260
32 x 3	160	

Furthermore, the processing and laying temperatures must be observed!

Installation

With the HERZ sliding sleeve technology, you can quickly and easily create a reliable connection - without any need for calibration or deburring. Because no additional sealant is used (no O-rings), the connection provides maximum safety. In addition to the time-saving and simple installation, the sliding sleeve connection system also offers long-term advantages for the flow behavior within the pipe:

- · low cross-sectional constriction (low pressure loss)
- No dead space
- No stagnant water



- Cut the pipe to length

The herz pipe to be used with a suitable cutting tool Cut the pipe cutter to a right angle to the centerline of the pipe.





- Push the sliding sleeve onto the pipe end

The sliding sleeve can be pushed onto both sides of the pipe.



- Expand pipe

Push expansion head segments into the pipe until they stop.

The sleeve must be outside the expansion area.

Expand the pipe once, turn it by 30° on the expander head, widen the pipe again. The expansion can be done manually or

electrically. Only the correct widening tools may be used.

- Put the fitting in the pipe

Fitting stuck in the tube when expanded. The penultimate sealing rib must be covered.

- Slide sliding sleeve on and press

Insert unpressed connection into the tool and slide the sliding sleeve up to the fitting collar. Only the correct press tools may be used. The pressing can be done manually or electrically.



- The finished pressed sliding sleeve on the pipe

Notes: use only original expanding and pressing tools; do not use defective expander heads (bent or broken segments); do not tilt the expansion heads completely, do not tilt the tool over the entire surface and fix it at right angles; processing temperature between 0 °C and 45 °C. At temperatures below 0 °C, the pipe end should be heated evenly before expanding and pressing; do not apply any lubricant to the surface of the pipes, fittings, sleeves or expander segments; connection only on straight pipe sections and without tension.

Fittings

Material fitting: all water-carrying parts are made of dezincification-resistant brass (CW725R) and therefore suitable for use in the drinking water sector as well as in the heating and cooling sector.

Sliding sleeve plastic (PVDF) Order number Dimension T200901 16 x 2,0 T200902 20 x 2,0 T200903 26 x 3,0 T200904 32 x 3,0



Wall angle short with female thread

Order number	Dimension	L₁, mm	L ₂ , mm	Z, mm	H, mm	h₁, mm	h ₂ , mm
T201021	16 x 2,0 – Rp 1/2	61	52	22	41	15	17
T201022	20 x 2,0 – Rp 1/2	61	52	24	41	15	17
T201023	20 x 2,0 – Rp 3/4	69	53	32	49	16,5	20

Junction angle with male thread

Order number	Dimension	H₁, mm	H ₂ , mm	Z, mm	h, mm
T201031	16 x 2,0 – R 1/2	45	36	28	15
T201032	20 x 2,0 – R 1/2	45	36	28	15
T201033	20 x 2,0 – R 3/4	45	36	28	15
T201034	26 x 3,0 – R 3/4	48	41	27	16,5
T201035	26 x 3,0 – R 1	50	50	29	20
T201036	32 x 3,0 – R 1	52	50	31	19,5





Junction angle with female thread

Order number	Dimension	H₁, mm	H₂, mm	Z, mm	h, mm
T201041	16 x 2,0 – Rp 1/2	45	36	28	13
T201042	20 x 2,0 – Rp 1/2	45	36	28	13

Dimension

26 x 3,0 - Rp 3/4 - 26 x 3,0

32 x 3,0 - Rp 3/4 - 32 x 3,0

32 x 3,0 - Rp 1 - 32 x 3,0

$\frac{h}{16,5}$

Z₂, mm

33

29

31

Η,

mm

46

45

50

Ζ,,

mm

33

29

31

L,

mm

108

100

104

Wall angle U-shaped

T-piece with female thread

Order

number

T201051

T201052

T201053

Order number	Dimension	L, mm	Z, mm	H, mm
T201161	16 x 2,0– Rp 1/2 – 16 x 2,0	88	38	58
T201162	20 x 2,0– Rp 1/2 – 20 x 2,0	88	41	58

Junction with male thread

Order number	Dimension	L, mm	Z₁, mm	Z ₂ , mm
T201141	16 x 2,0 – R 1/2	47,7	5,3	25,5
T201142	20 x 2,0 – R 1/2	47,7	5,3	25,5
T201143	20 x 2,0 – R 3/4	49	5,3	26,8
T201144	26 x 3,0 – R 3/4	54	5,8	27,4
T201145	26 x 3,0 – R1	54,5	5,8	27,8
T201146	32 x 3,0 – R1	55,2	6,1	28,1
T201147	32 x 3,0 – R 5/4	60,2	6,1	33,1

Junction with female thread

Order number	Dimension	L, mm	Z ₁ , mm	Z ₂ , mm
T201151	16 x 2,0 – R 1/2	48,5	5,3	26,3
T201152	20 x 2,0 – R 1/2	48,5	5,3	26,3
T201153	20 x 2,0 – R 3/4	50,5	5,3	28,3
T201154	26 x 3,0 – R 1/2	53,5	5,8	26,8
T201155	26 x 3,0 – R 3/4	55,5	5,8	28,8
T201156	26 x 3,0 – R 1	55,5	5,8	28,8
T201157	32 x 3,0 – R 1	56,2	6,1	29,1

T-piece with equal branches

Order number	Dimension	L, mm	H, mm	Z ₁₌₂ , mm	Z ₃ , mm
T201061	16 x 2,0	80	40	20	20
T201062	20 x 2,0	80	40	23	23
T201063	26 x 3,0	96	48	27	27
T201064	32 x 3,0	100	50	29	29





T-piece with equal branches

Order number	Dimension D ₁ - D ₃ - D ₂	L, mm	H, mm	Z ₁₌₂ , mm	Z₃, mm
T201071	20 x 2,0 - 16 x 2,0 - 20 x 2,0	80	40	23	23
T201072	26 x 3,0 - 16 x 2,0 - 26 x 3,0	96	46	27	29
T201073	26 x 3,0 - 20 x 2,0 - 26 x 3,0	96	46	27	29
T201074	32 x 3,0 - 16 x 2,0 - 32 x 3,0	100	52,5	29	35,5
T201075	32 x 3,0 - 20 x 2,0 - 32 x 3,0	100	52,5	29	35,5
T201076	32 x 3,0 - 26 x 3,0 - 32 x 3,0	100	52,5	29	31,5



T-piece middle branch reduced

Order number	Dimension D ₁ - D ₃ - D ₂	L, mm	H, mm	Z₁, mm	Z ₃ , mm	Z ₂ , mm
T201081	20 x 2,0 - 16 x 2,0 - 16 x 2,0	80	40	23	23	23
T201082	20 x 2,0 - 20 x 2,0 - 16 x 2,0	80	40	23	23	23
T201083	26 x 3,0 - 16 x 2,0 - 20 x 2,0	94	46	27	29	29
T201084	26 x 3,0 - 20 x 2,0 - 16 x 2,0	94	46	27	29	29
T201085	26 x 3,0 - 20 x 2,0 - 20 x 2,0	94	46	27	29	29
T201086	26 x 3,0 - 26 x 3,0 - 16 x 2,0	94	48	27	27	29
T201087	26 x 3,0 - 26 x 3,0 - 20 x 2,0	94	48	27	27	29
T201088	32 x 3,0 - 20 x 2,0 - 26 x 3,0	102,5	52,5	29	35,5	31,5
T201089	32 x 3,0 - 26 x 3,0 - 26 x 3,0	102,5	52,5	29	31,5	31,5
T201090	32 x 3,0 - 32 x 3,0 - 20 x 2,0	102,5	50	29	29	35,5
T201091	32 x 3,0 - 32 x 3,0 - 26 x 3,0	102,5	50	29	29	31,5
T201101	16 x 2,0 - 20 x 2,0 - 16 x 2,0	80	40	23	23	23
T201102	20 x 2,0 - 26 x 3,0 - 20 x 2,0	92	48	29	29	27



Coupling

Order number	Dimension	L, mm	Z, mm
T201111	16 x 2,0 – 16 x 2,0	44,5	5,3
T201112	20 x 2,0 – 20 x 2,0	44,5	5,3
T201113	26 x 3,0 – 26 x 3,0	53,5	5,8
T201114	32 x 3,0 - 32 x 3,0	54,2	6,1



 H_2

H₁

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Reduction

Order number	Dimension	L, mm	Z ₁ , mm	Z ₂ , mm	H₁, mm	H ₂ , mm
T201121	20 x 2,0 – 16 x 2,0	44,5	5,3	5,3	22,3	22,3
T201122	26 x 3,0 – 16 x 2,0	49,5	5,8	5,8	26,8	22,8
T201123	26 x 3,0 – 20 x 2,0	49,5	5,8	5,8	26,8	22,8
T201124	32 x 3,0 – 26 x 3,0	54,2	6,1	6,1	27,1	27,1

Press fitting end cap

Order number	Dimension	L, mm	Z, mm	
T201131	16 x 2,0	22	5	
T201132	20 x 2,0	22	5	

Radiator connection angle nickel-plated short (300mm)

Order number	Dimension
T201171	16 x 2,0 – 15 mm
T201172	20 x 2,0 – 15 mm







Radiator connection angle nickel-plated long (1100mm)

Order number	Dimension
T201173	16 x 2,0 – 15 mm
T201174	20 x 2,0 – 15 mm

Radiator connection T-piece nickel-plated short (300mm)

Order number	Dimension
T201181	16 x 2,0 – 15 mm
T201182	20 x 2,0 – 15 mm

Radiator connection T-piece nickel-plated long (1100mm)

Order number	Dimension
T201183	16 x 2,0 – 15 mm
T201184	20 x 2,0 – 15 mm



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	Dimension			
Fitting	16x2	20x2	26x3	32x3
Thread	1/2``	1/2``	3/4 ′′	1′′
Junction with male thread	1	0,3	0,2	0,2
Junction with female thread	1,1	0,3	0,2	0,2
T-piece passage	0,9	0,4	0,3	0,3
T-piece junction	3,6	2,8	2,7	2,5
Corner	3,4	3	2,5	2,3
Coupling	0,5	0,3	0,2	0,1
Wall angle	5,9	6	5,8	5,5

Recycling and disposal

Both the pipes and press fittings and the corresponding transport packaging largely consist of raw materials suitable for recycling.

Your pipes and press fittings are not suitable for disposal with household waste. Ensure that your device and any available accessories are submitted for appropriate disposal.

Material

Pursuant to Article 33 of the REACH Regulation (EC No. 1907/2006), we are obliged to point out that the material lead is listed on the SVHC list and that all brass components manufactured in our products exceed 0.1 % (w / w) lead (CAS: 7439-92-1 / EINECS: 231-100-4). Since lead is a component part of an alloy, actual exposure is not possible

and therefore no additional information on safe use is necessary.

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