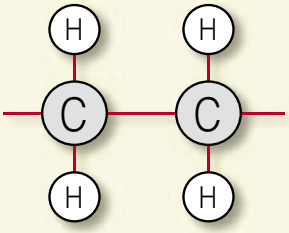
Herz®

PipeFix

HERZ Plastic and aluminium composite pipe

The HERZ composite pipe has been developed for multiple use and complex installation tasks. It is economical to process and is characterised by its high quality, safety and durability. It is also completely recyclable.
This multi-layered pipe is manufactured with the most up-to-date production machines and is backed up by decades of experience and expertise. It consists of a basic pipe made from polyethylene, which is covered by a seam welded aluminium layer and covered by a further layer of polyethylene. This composite material combines the excellent characteristics of plastic with the proven advantages of aluminium. A consistent round pipe profile is achieved using this production process, which guarantees precise accuracy of fit for all connections.
Only polyethylene (PE) is used for the HERZ composite pipe. PE is a polyolefin, consisting of the chemical elements of carbon and hydrogen, which is very similar to the molecular structure of wax, but the molecular chains are very much longer.

Polyethylene is a versatile plastic and can be recycled after being separated from the aluminium, for example, as an oil substitute in combustion plants. This aluminium layer gives the pipe rigidity, 100% watertightness and an oxygen barrier.

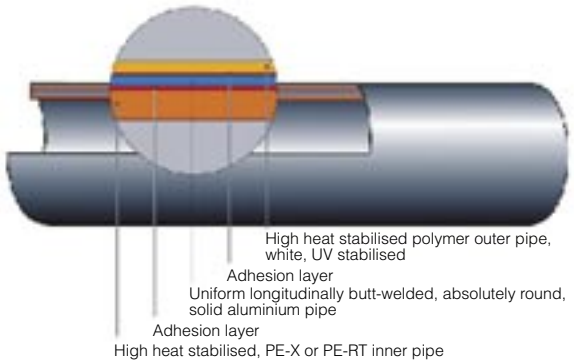


The pipes are supplied in straight lengths or coils and are connected using HERZ press fittings or HERZ screw connections. HERZ pipe and HERZ connection fittings are tested for conformity to standards and accredited by externally recognised testing centres in many European countries. The system is registered as **HERZ PipeFix**.

HERZ pipes have good electrical conductivity due to the **"continuous"** aluminium layer. **"Lateral"** to the pipe shaft, the polyethylene layer works as an electrical insulator up to a voltage of around 35,000 V. It is not possible to earth the piping.

HERZ plastic and aluminium composite pipes are used for under-floor heating, radiator heating and domestic water distribution. All HERZ pipes are printed as follows:

> I < xxx m HERZ-HV pipe PE-xx/Al/PE-xx dimension x wall thickness country of production 95°C/10 bar tested date/time/equipment no./order no. /layer /operative no.



In addition to this there is the HERZ FH plastic and aluminium composite pipe with thinner aluminium layer for installation in floor or surface heating and cooling systems.

HERZ plastic and aluminium composite pipe, PE-RT

Pipe ID: PE-RT / AL / PE-HD

Reference

PE	… Polyethylene
RT	... Raised temperature, Higher temperature
AL	... Aluminium
HD	... High density

Supplied in coils or straight lengths in various thickness of aluminium depending on the pipe size (see table).

Maximum operating temperature	... 95°C
Maximum operating pressure	... 10 bar
Transient temperature and pressure (short-term)	... 110°C, 15 bar
Inner surface roughness	... 0.007mm
Heat conductivity	... 0.5 W / m x °K
Linear expansion coefficient	... 0.024 mm/m°K
Colour	... white
Oxygen diffusion	... <0.005 mg/l d
Minimum bending radius without tools	... 5d
Minimum bending radius with tools	... 3d

HERZ Plastic and aluminium composite pipe

HERZ order number	Outside Diameter (mm)	Wall thickness (mm)	Aluminium thickness (mm)	Coils (m)	Straight Lengths (m)	Weight (kg / 100 m)	Water capacity (L)
Pipe Coil							
3 **C140** 20	14	2	0.4	200	-	11.10	0.075
3 **C160** 20	16	2	0.4	200	-	12.90	0.113
3 **C180** 20	18	2	0.4	200	-	15.20	0.154
3 **C200** 20	20	2	0.4	100	-	17.50	0.201
3 **C260** 30	26	3	0.5	50	-	29.60	0.307
3 **C320** 30	32	3	0.5	50	-	36.60	0.523
3 **C400** 30	40	3.5	0.5	50	-	51.00	0.845
Pipe lengths							
3 **C160** 34	16	2	0.4	-	5	12.90	0.113
3 **C200** 34	20	2	0.4	-	5	17.50	0.154
3 **C260** 35	26	3	0.5	-	5	29.60	0.307
3 **C320** 35	32	3	0.5	-	5	36.60	0.523
3 **C400** 36	40	3.5	0.5	-	5	51.00	0.845
3 **C500** 45	50	4.0	0.6	-	5	87.00	1.385
3 **C630** 45	63	4.5	0.8	-	5	131.50	2.229
FH composite pipe							
3 **C101** 30	10	1.3	0.2	250	-	4.65	0.043
3 **D160** 14	14	2	0.2	200	-	8.80	0.075
3 **D160** 20	16	2	0.2	200	-	10.20	0.113
3 **D160** 18	18	2	0.25	200	-	12.20	0.154

HERZ order number	Outside Diameter (mm)	Wall thickness (mm)	Aluminium thickness (mm)	Coils (m)	Protective pipe (m)	Weight (kg / 100 m)	Water capacity (L)
3 **C160** 31	16	2	0.4	200	4	13.15	0.113
3 **C200** 31	20	2	0.4	100	4	17.78	0.201
3 **C260** 31	26	3	0.5	50	4	30.00	0.307
3 **C160** 32	16	2	0.4	200	9	13.40	0.113

Heating and sanitation pipes with thermal insulation

Heating and domestic water pipes with varying thickness (4 mm and 9 mm) of insulation offer optimum protection against heat loss and also offer protection against mechanical damage.

Pipe in pipe

Heating or domestic water pipes drawn into a corrugated protective sleeve to protect pipes or to facilitate subsequent replacement during building refurbishment.

HERZ order number	Outside Diameter (mm)	Wall thickness (mm)	Aluminium thickness (mm)	Coils (m)	Protective pipe (m)	Weight (kg / 100 m)	Water capacity (L)
3 **C160** 33	16	2	0.4	50	20/25 black	13.80	0.113
3 **C160** 39	16	2	0.4	50	20/25 blue	13.80	0.113
3 **C200** 33	20	2	0.4	50	25/30 black	18.30	0.201
3 **C200** 39	20	2	0.4	50	25/30 blue	18.30	0.201

HERZ plastic composite pipe, PE-Xc

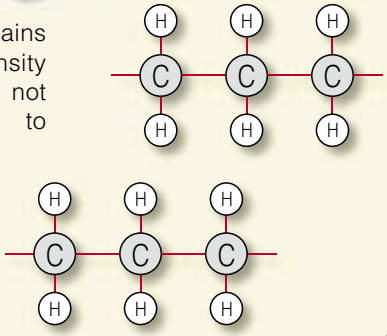
Pipe ID: PE-Xc / AL / PE-Xc
Reference

PE	… Polyethylene
Xc	... X-linked
AL	... Aluminium

The composition of the spatial lattice structure is achieved using energy-rich betatron radiation. The accelerated ß particles provide the energy for the reaction of the molecular chain. Supplied in coils or straight lengths in various thickness of aluminium depending on the pipe size (see table).

Maximum operating temperature	... 95°C
Maximum operating pressure	... 10 bar
Durability under these conditions	... 440,000 h (50 years)
Transient temperature and pressure	... 110°C, 15 bar
Inner surface roughness	... 0.007 mm
Heat conductivity	... 0.39 W / m x°K
Linear expansion coefficient	... 0.024 mm / m°K
Colour	... white
Oxygen diffusion	... < 0.005 mg/l d
Minimum bending radius without tools	... 5d
Minimum bending radius with tools	... 3d

The molecule chains for high density polyethylenes are not directly connected to one another. The structure is held together by two-way forces.



HERZ order number	Outside Diameter (mm)	Wall thickness (mm)	Aluminium thickness (mm)	Coils (m)	Straight Lengths (m)	Weight (kg/100m)	Water capacity (L)
3 **A140** 20	14	2	0.4	100	-	11.10	0.075
3 **A160** 20	16	2	0.4	100	-	12.90	0.113
3 **A180** 20	18	2	0.4	100	-	15.20	0.154
3 **A200** 20	20	2	0.5	100	-	17.50	0.201
3 **A260** 30	26	3	0.5	50	-	29.60	0.307
3 **A320** 30	32	3	0.5	50	-	36.60	0.531
3 **A320** 35	32	3	0.5	-	5	36.60	0.531
3 **A400** 35	40	3.5	0.5	-	5	51.00	0.855
3 **A500** 45	50	4	0.5	-	5	87.00	1.385
3 **A630** 45	63	4.5	0.5	-	5	131.50	2.290

Various methods are used for connecting chains to the network. Through the connection of existing transverse connections between the polyethylene molecular chains. These transverse connections reduce the movements of the molecular chains between themselves.

PE ... Polyethylene

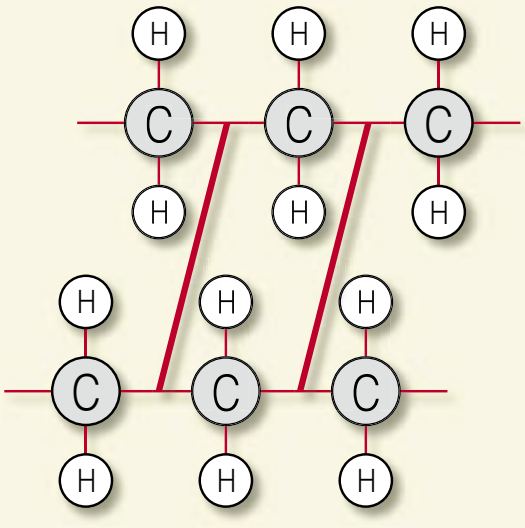
X ... Cross linked

C ... Methods of networking

PE- Xa: Cross linked by organic peroxides (chemical connection) Engel procedure

PE- Xb: Cross linked by silan followed by water treatment (chemical networking)

PE- Xc: electronic connection using bombardment with electrons (physical networking)



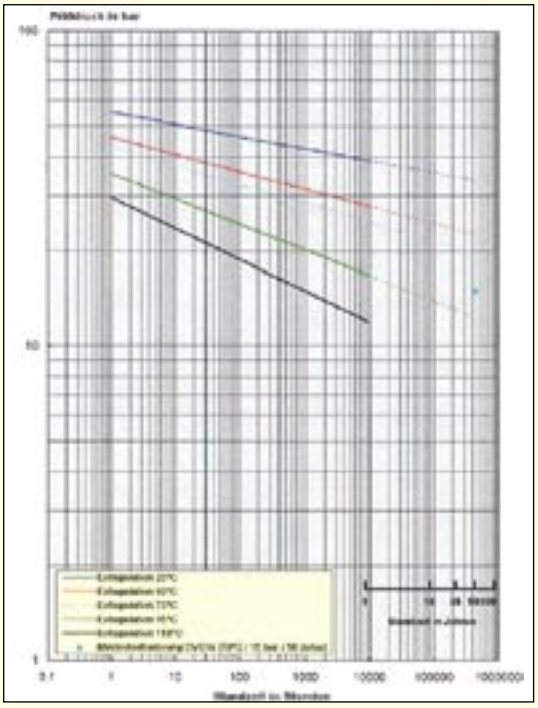
Creep behaviour of HERZ pipe

The creep behaviour indicates what maximum pipe wall stress (pipe inner pressure) is permissible under constant operating temperatures, in order to achieve a certain operating time. The hoop stress resistance, particularly due to the creep strength of the relatively thick aluminium layer, is proven in HERZ pipes.

The creep behaviour of HERZ pipes is far above the temperatures relevant to the housing market for heating and domestic water installations. The HERZ pipe consists of various layers of materials, the individual contributions of which add to the creep strength of the whole pipe. An appropriate creep diagram can therefore be drawn for each individual pipe size.

The creep behaviour is indicated by testing the pipe over 10,000 hours, with a temperature 40°C higher than the maximum operating temperature. Afterwards, these results are extrapolated to 50 years with a safety factor of 1.5. In accordance with the standards, the pipes are dimensioned for 50-year durability. A decrease in the durability must be calculated where higher temperatures or pressures are used.

Inner creep pressure – behaviour according to DIN 16 892 for 16 x 2 mm pipe



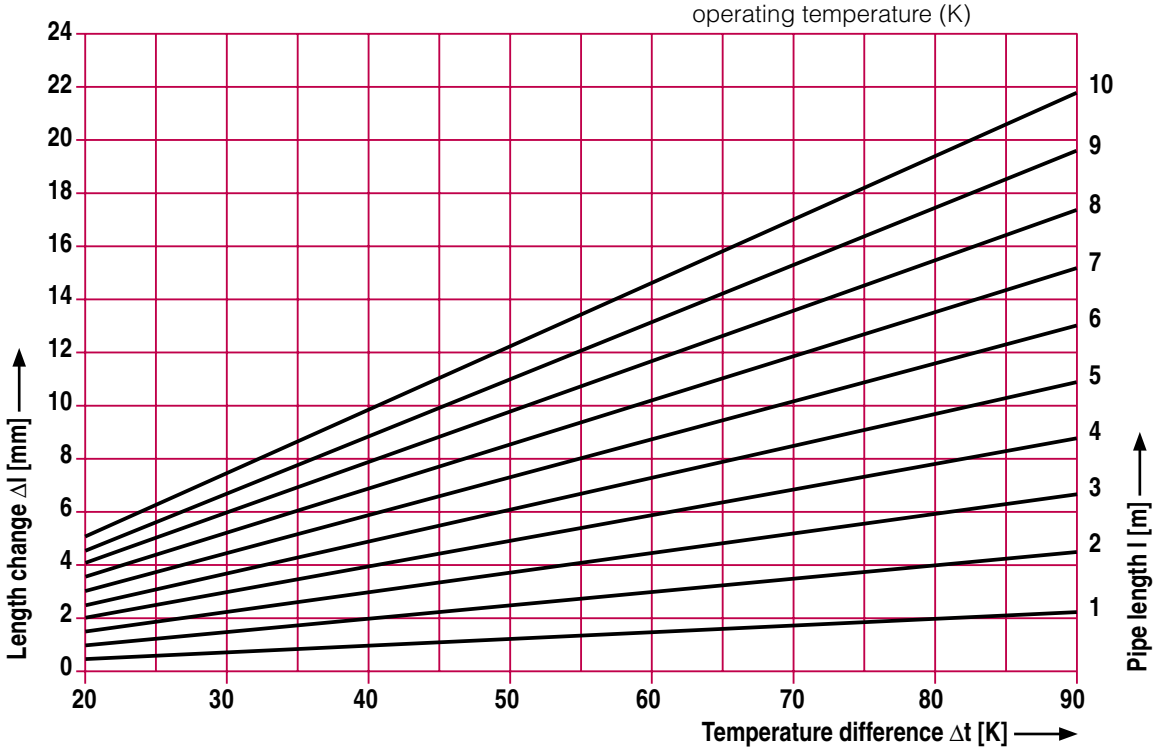
Diagrams are available on request for other sizes or materials

Thermal expansion

The linear expansion coefficient, independent of the pipe size, totals 0.024 mm/m°K.
The length change between installation and operating temperature may be calculated using the following formula.

$$\Delta l = a \cdot l \cdot \Delta t$$

- Δl = length change
- a = Expansion coefficient (0.024 mm/m°K)
- l = installed pipe length (m)
- Δt = temperature difference between installation and operating temperature (K)



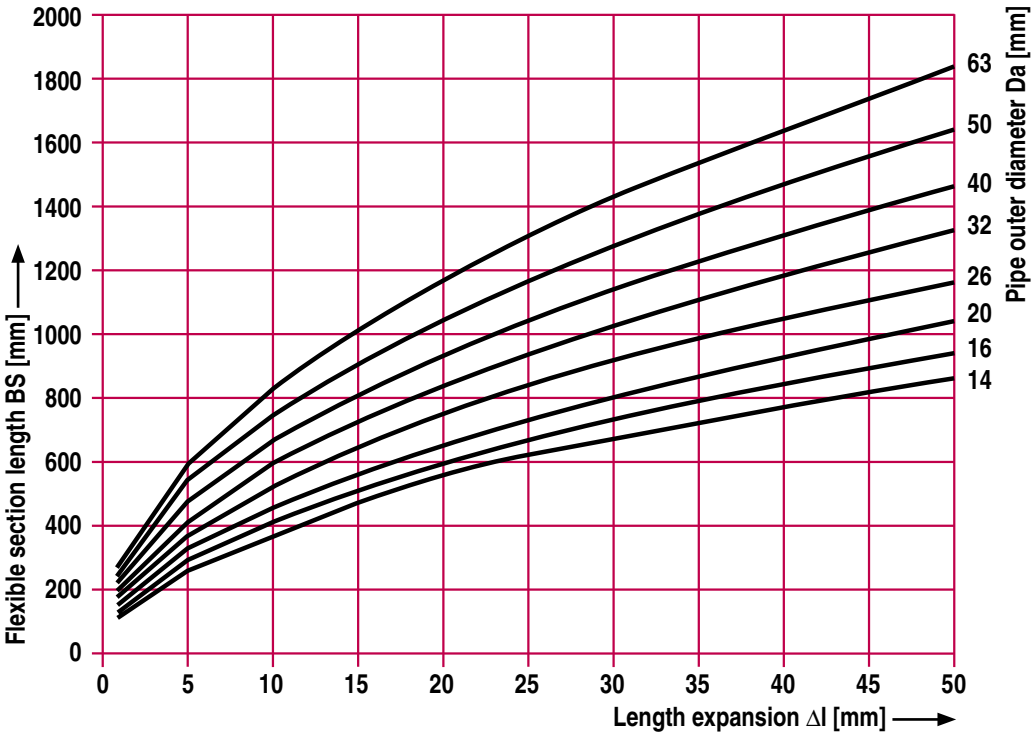
Pipe expansion is compensated by professional installation.

Expansion sections and fixing intervals

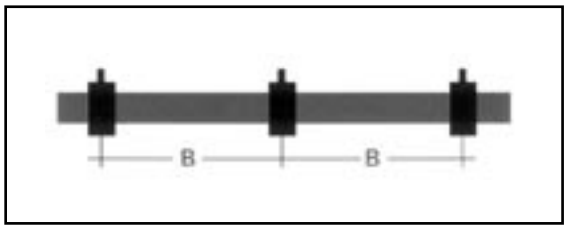
With normally installed pipes or 'pipe in pipe' installations, sufficient flexible sections must be left to compensate for the expansion. When installing buried or under screed (under-floor heating) pipes, the expansion is recorded as radial. The flexible section can calculated as follows:

$$BS = c \cdot \sqrt{Da \cdot \Delta l}$$

c = 33, (dimensionless material constants)
Da = outer diameter of the pipe
Δl = length change

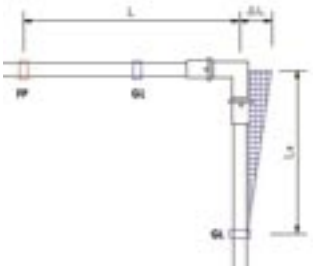


Loose laid pipes do not require any supports, such as clips, clamps, etc. due to their stable shape. The support intervals can be found in the table below. Plastic or metal pipe clamps should have a soft lining, of rubber or another soft material, in order to avoid damage to the pipe and to reduce noise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

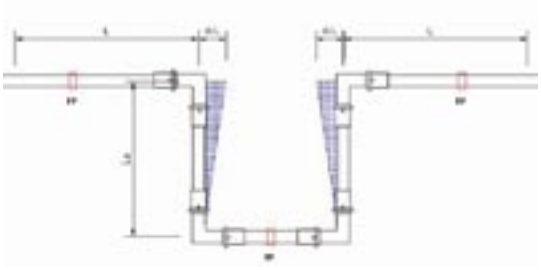


Dimension (mm)	Support Interval B (m)	Dimension (mm)	Support Interval B (m)
14	0.8	32	1.6
16	0.8	40	1.7
20	1	50	1.8
26	1.2	63	2

The arrangement of fixed points and sliding supports is very important when installing, so that sufficient flexible sections 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.

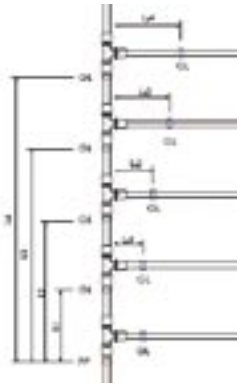


Pipe expansion for directional changes, flexible section to be calculated using the diagram

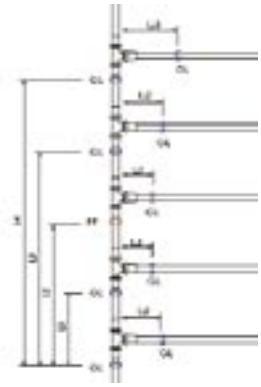


Inclusion of the pipe expansion in long pipes, including expansion through U-bends, flexible sections by calculation or from the diagram

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.

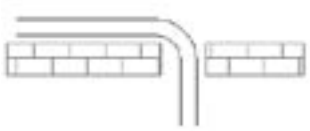


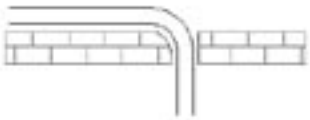
Fixed point at the end of the ascending pipe = flexible sections become increasingly larger



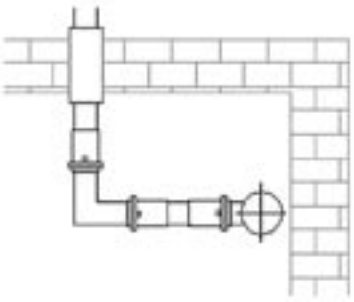
Fixed point in the centre of the ascending pipe = flexible sections remain relatively short

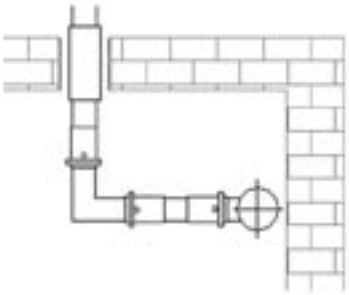
Protective pipes should be used when working through wall or ceilings. To avoid severe damage to the pipes, the pipes should not be bent around sharp angles. For rounding off, sufficiently large openings should be used.





For pipes branching off into ducts, care should be taken that the flexible sections are maintained. If this is not possible, then the duct should be made sufficiently large to allow for the expansion. A protective pipe running through the duct is recommended.





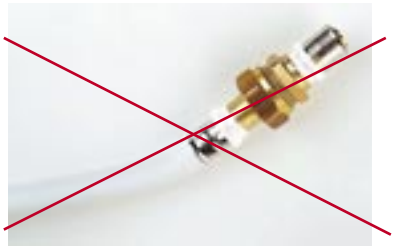
Bending radii

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.

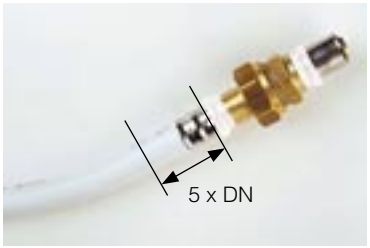
DN	Radius with bending tool (mm)	Radius without bending tool (mm)
10	50	100
14	70	140
16	80	160
18	90	180
20	100	200
26	130	260
32 -63	HERZ PipeFix elbows	HERZ PipeFix elbows

For a working environment temperature less than +5°C there is an increased risk of the pipe snapping or kinking during bending. For bending pipes under +5°C the relevant part of the pipe must be warmed up.

Pipe bends after a press fitting or clip must have a section of pipe 5 x DN between fitting and bend in order to avoid damage to the pipes.



Where there are creases in the piping these sections must always be changed.



Durability

Durability against chemicals, hard drinking water, etc. comes from the characteristics of polyethylene. The medium does not come into contact with the aluminium pipe. The advantages of polyethylene lie in the fact that it is odour and taste-neutral, it is very durable, has a high capacity as well as its validity for food use and is recyclable. Where installing in areas with high concentrations of chemical gases or moisture (stables, large kitchens, etc.) the metallic connection parts must be protected.

The aluminium pipe gives it resistance against UV rays. The growth of algae requires UV rays and is therefore prevented. Short ray UV rays encourage plastics to age. The high density PE outer casing is sufficiently stable for surface installation in buildings, so that further protective measures are superfluous.

The material used, PE, has a good resistance against glycol-based frost protection materials. Where it is used at less than 0°C, the use of anti-freeze is essential.

The use of electrical heating tape to keep the piping free of frost is an option. For better heat distribution the heating tape can be fitted with adhesive foil. Heating tape must be technically tested and have the appropriate accreditation. Heating tape is only suitable for frost protection and not for additional heating. The advice of HERZ engineers is required for any other solutions.

Processing and operating temperatures

The lowest operating temperature for PE is –20°C, and an installation temperature of –40°C is possible.

For temperatures lower than +5°C the pipes must not be subjected to unreasonably harsh external mechanical loads. The pipes are installed free of stress – without stress from bending, pulling or torsion. For tight bending radii under an installation temperature of 0°C there is an increased risk of the pipe snapping off. We recommend the use of bending aids and the corresponding pipe parts being warmed to a temperature of over +5°C. The press tool must also guarantee sufficient press strength at low temperatures. The details from the tool manufacturer must be noted here.

Behaviour in fire

During the manufacture of HERZ pipes only polyolefin-based plastics are used in addition to aluminium. During normal combustion the same fumes are given off as when a candle burns out. Unfavourable conditions (too little oxygen) may produce carbon monoxide or soot, which always occurs during the incomplete combustion of organic matter. Aluminium is incombustible under normal conditions. Oxidation products are non-toxic and are often even an element of natural soil composition. No halogens, acids or other toxic environmentally harmful materials are released during the combustion of HERZ pipes.

Where ventilation zones are crossed, the standards corresponding to fire protection system shutting devices to prevent the spread of fire are to be used. These system shutting devices may be yielding partitions, fire protection pads or fire protection sleeves. These partitions shut down the area of the fire after the plastic pipes are burnt away. HERZ plastic pipes fall into fire category B2 (normal inflammable building materials) according to DIN 4102, Part 1.

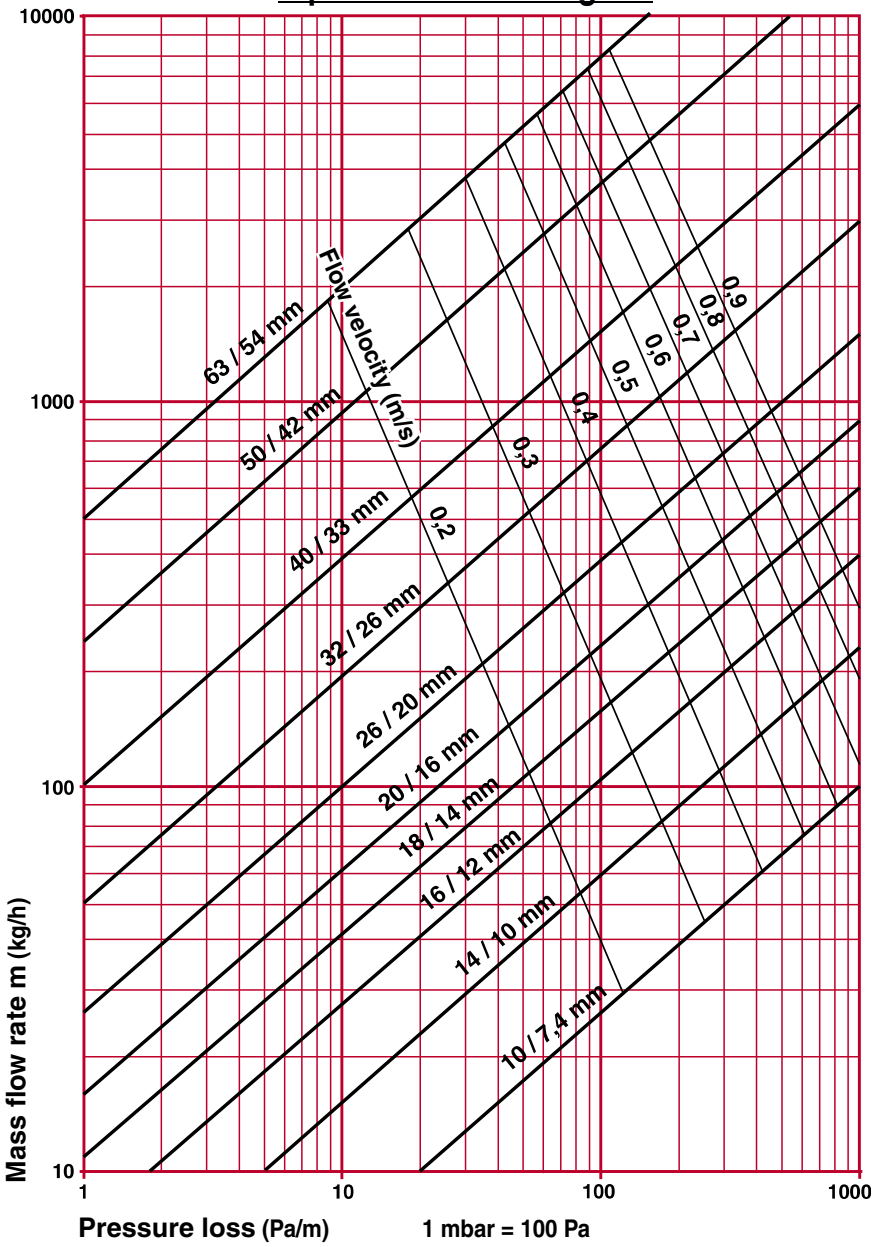
Instances of usage

HERZ pipes can be used in all heating and cooling systems as well as in domestic and service water installations. HERZ pipes are also most suitable for under-floor heating systems or to heat and cool areas in walls, ceilings and floors.

For special requirements such as lawn heating or concrete core cooling HERZ pipes can also be used. Where wall heating or cooling panels are used, HERZ pipes of size 10 x 1.3 mm are used. Where diffusion-tight pipes are used (oxygen and steam diffusion) there is no need for system separation with heat exchangers.

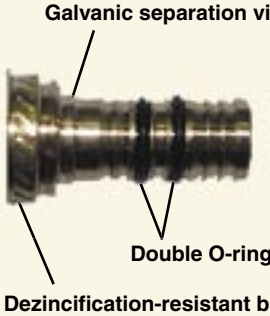
Oxygen diffusion causes bacteria in the water that leads to the accumulation of matter in pipes. This matter can form deposits in the pipe inner wall and lead to reduced flow. The pipe resistance is increased until there is no flow. This then requires very expensive chemical cleaning.

Pipe friction loss diagram



HERZ installation aids and HERZ fittings

HERZ press fittings can be connected quickly and with absolute safety in conjunction with Herz multi-layer pipes. Herz, with its decades of experience in pipe connections, produces radial press fittings of dezincification-resistant brass with stainless steel bushes, of recognised higher quality, based on its own in-house patented developments. These are available in a large range of forms and sizes for the connection of plastic composite pipes for heating and cooling systems. Our experience is your security, with a 10-year guarantee for HERZ PipeFix systems.



Processing of HERZ pipes with HERZ fittings

The pipe is cut perpendicular, with a suitable tool.

The pipe is trimmed and calibrated with the special tool suitable for its diameter. The resulting shavings must be removed from the end of the pipe. If the calibrator is fixed in a drilling machine, the maximum revolutions of 10rpm must not be exceeded.

Placing the fitting on the pipe.
Check the correct pipe engagement through the vision ports on the press sleeve – the pipe must have fully engaged on the fitting and be visible in the ports.

Complete pressure sealing using a press device or manual press pliers. The pipes must be free of stress. The press procedure is complete if the jaws have been closed completely.

Press tools are precision tools and should be handled accordingly. HERZ PipeFix is pressed using the profile “TH”, so that the usual tools (hand press device, accu-press device, etc.)can be used. Small “A” intervals to the wall or floor are possible.

DN	A (mm)	DN	A (mm)	DN	A (mm)
10	25	20	30	40	40
14	25	26	30	50	70
16	25	32	40	63	70

Checking the pressure sealing:
On the side of the press sleeves you can see two parallel, ring-shaped pressed grooves with a bulge between them.

Non-detachable connections such as press fittings can be buried after installation (See local or national legislation for confirmation). Press connections are prohibited from being buried in floors in the Fernwärme Wien (Vienna’s remote heating programme) area. To avoid corrosion to the fittings there must be galvanic separation from the concrete or masonry using moisture insulation. This insulation can, for example, be carried out using heat shrinking materials or corrosion protection tape. In each case, compatibility with the pipe material and fitting must be checked.

It is imperative that the stated pipe diameter and pipe wall thickness are adhered to when processing.

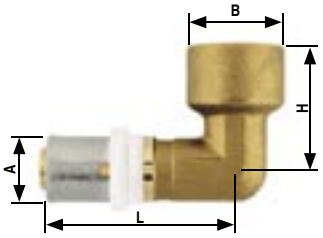
Connection resistances								
Pipe dim.	Pipe bend	Angles	T-piece flow re-director, one-way (1 into 2)	T-piece flow mixer (2 into 1)	T-piece flow re-director two-way (1 into 2)	T-piece flow collection (2 into 1)	Passage piece	wall angles
	Values in equivalent pipe lengths in m							
14	0.70	1.50	1.30	1.60	1.70	1.70	1.00	1.40
16	0.60	1.40	1.20	1.50	1.60	1.60	0.90	1.30
18	0.55	1.20	0.90	1.40	1.50	1.50	0.70	1.20
20	0.50	1.10	0.60	1.30	1.40	1.40	0.50	1.10
26	0.40	1.00	0.50	1.20	1.30	1.30	0.40	
32	0.30	0.80	0.30	1.00	1.10	1.10	0.30	
40	0.26	0.76	0.28	0.95	1.00	1.00	0.26	
50	0.22	0.72	0.26	0.90	0.95	0.95	0.22	
63	0.18	0.70	0.24	0.85	0.90	0.90	0.18	

To simplify the pipe network calculation the resistance values of the fittings are given in equivalent pipe lengths. These pipe lengths are to be found in the above table and are added to the length of the pipe network when calculating the pipe network.

$$\Delta p_g = R \cdot l + Z + \Delta p_v$$

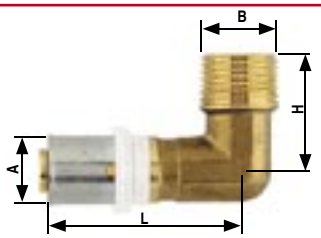
Δp_g	Total pressure loss in the heating circuit
R	Pressure loss per running m of pipe [Pa/m]
l	Pipe length in m
Z	Sum of the individual resistances
Δp_v	Pressure loss of the heating circuit thermostatic valves

HERZ Angle with internal thread



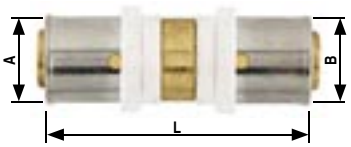
Order number	A	B	L	H
P **7114** 21	14 x 2	1/2	53	34
P **7116** 21	16 x 2	1/2	44	34
P **7118** 21	18 x 2	1/2	53	34
P **7120** 21	20 x 2	1/2	50	34
P **7120** 22	20 x 2	3/4	52	45
P **7126** 22	26 x 3	3/4	56	45
P **7132** 23	32 x 3	1	55	49
P **7140** 24	40 x 3,5	1¼	55	55
P **7150** 24	50 x 4	1¼	76	63
P **7150** 25	50 x 4	1½	76	63
P **7163** 26	63 x 4,5	2	83	70

HERZ Angle with external thread



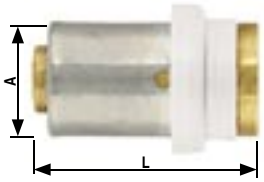
Order number	A	B	L	H
P **7114** 11	14 x 2	1/2	53	34
P **7116** 11	16 x 2	1/2	44	34
P **7118** 11	18 x 2	1/2	53	34
P **7120** 11	20 x 2	1/2	50	34
P **7120** 12	20 x 2	3/4	50	34
P **7126** 12	26 x 3	3/4	56	45
P **7132** 13	32 x 3	1	55	49
P **7140** 14	40 x 3.5	1¼	55	55
P **7150** 14	50 x 4	1¼	76	61
P **7163** 16	63 x 4.5	2	83	70

HERZ Coupling, Reduced Coupling



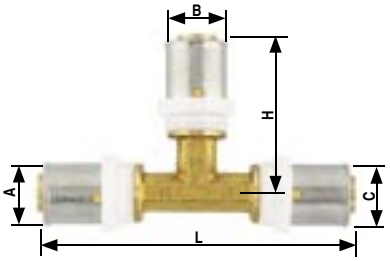
Order number	A	B	L
P **7010** 00	10 x 1.3	10 x 1.3	41
P **7014** 00	14 x 2	14 x 2	65
P **7016** 00	16 x 2	16 x 2	58
P **7016** 01	16 x 2	14 x 2	65
P **7018** 00	18 x 2	18 x 2	65
P **7018** 01	18 x 2	14 x 2	65
P **7018** 02	18 x 2	16 x 2	65
P **7020** 00	20 x 2	20 x 2	58
P **7020** 03	20 x 2	14 x 2	62
P **7020** 01	20 x 2	16 x 2	62
P **7020** 02	20 x 2	18 x 2	65
P **7026** 00	26 x 3	26 x 3	65
P **7026** 01	26 x 3	16 x 2	65
P **7026** 03	26 x 3	17 x 2	65
P **7026** 05	26 x 3	18 x 2	65
P **7026** 02	26 x 3	20 x 2	65
P **7032** 00	32 x 3	32 x 3	65
P **7032** 01	32 x 3	16 x 2	65
P **7032** 07	32 x 3	18 x 2	65
P **7032** 02	32 x 3	20 x 2	65
P **7032** 06	32 x 3	26 x 3	65
P **7040** 00	40 x 3.5	40 x 3.5	65
P **7040** 02	40 x 3.5	26 x 3	65
P **7040** 03	40 x 3.5	32 x 3	65
P **7050** 00	50 x 4	50 x 4	97
P **7050** 01	50 x 4	26 x 3	81
P **7050** 02	50 x 4	32 x 3	81
P **7050** 03	50 x 4	40 x 3.5	81
P **7063** 00	63 x 4.5	63 x 4.5	98
P **7063** 01	63 x 4.5	26 x 3	82
P **7063** 02	63 x 4.5	32 x 3	82
P **7063** 03	63 x 4.5	40 x 3.5	82
P **7063** 04	63 x 4.5	50 x 4	98

HERZ End-stop



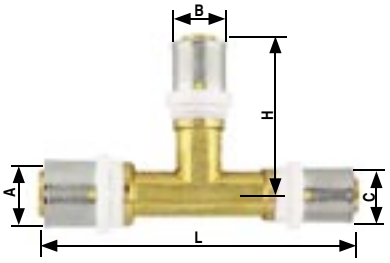
Order number	A	L
P **7014** 10	14 x 2	33
P **7016** 10	16 x 2	31
P **7017** 10	17 x 2	33
P **7018** 10	18 x 2	33
P **7020** 10	20 x 2	31
P **7026** 10	26 x 3	33
P **7032** 10	32 x 3	33
P **7040** 10	40 x 3,5	33
P **7050** 10	50 x 4	49
P **7063** 10	63 x 4,5	49

HERZ T-piece



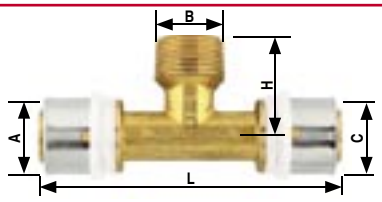
Order number	A	B	C	L	H
P **7214** 00	14 x 2	14 x 2	14 x 2	83	42
P **7214** 01	14 x 2	16 x 2	14 x 2	83	42
P **7216** 00	16 x 2	16 x 2	16 x 2	77	39
P **7216** 01	16 x 2	14 x 2	16 x 2	83	42
P **7216** 05	16 x 2	18 x 2	16 x 2	88	44
P **7216** 03	16 x 2	20 x 2	16 x 2	83	42
P **7217** 00	17 x 2	17 x 2	17 x 2	107	54
P **7218** 00	18 x 2	18 x 2	18 x 2	83	42
P **7218** 01	18 x 2	14 x 2	18 x 2	88	44
P **7218** 02	18 x 2	16 x 2	18 x 2	88	44
P **7220** 00	20 x 2	20 x 2	20 x 2	83	42
P **7210** 00	20 x 2	10 x 1.3	20 x 2	88	33
P **7220** 10	20 x 2	14 x 2	20 x 2	88	44
P **7220** 02	20 x 2	18 x 2	20 x 2	88	44
P **7220** 06	20 x 2	26 x 3	20 x 2	102	51
P **7220** 01	20 x 2	16 x 2	20 x 2	83	42
P **7220** 03	20 x 2	16 x 2	16 x 2	83	42
P **7220** 08	20 x 2	20 x 2	16 x 2	83	42
P **7226** 00	26 x 3	26 x 3	26 x 3	102	51
P **7226** 17	26 x 3	32 x 3	26 x 3	106	53
P **7226** 03	26 x 3	16 x 2	26 x 3	97	49
P **7226** 04	26 x 3	18 x 2	26 x 3	102	51
P **7226** 05	26 x 3	20 x 2	26 x 3	97	49
P **7232** 00	32 x 3	32 x 3	32 x 3	106	53
P **7232** 10	32 x 3	40 x 3.5	32 x 3	106	53
P **7232** 01	32 x 3	16 x 2	32 x 3	106	53
P **7232** 03	32 x 3	18 x 2	32 x 3	106	53
P **7232** 04	32 x 3	20 x 2	32 x 3	106	53
P **7232** 07	32 x 3	26 x 3	32 x 3	106	53
P **7240** 00	40 x 3.5	40 x 3.5	40 x 3.5	110	55
P **7240** 12	40 x 3.5	50 x 4	40 x 3.5	120	76
P **7240** 02	40 x 3.5	26 x 3	40 x 3.5	110	55
P **7240** 03	40 x 3.5	32 x 3	40 x 3.5	110	55
P **7250** 00	50 x 4	50 x 4	50 x 4	152	76
P **7250** 03	50 x 4	26 x 3	50 x 4	152	62
P **7250** 01	50 x 4	32 x 3	50 x 4	152	62
P **7250** 02	50 x 4	40 x 3.5	50 x 4	152	61
P **7263** 00	63 x 4.5	63 x 4.5	63 x 4.5	166	83
P **7263** 01	63 x 4.5	32 x 3	63 x 4.5	166	67
P **7263** 02	63 x 4.5	40 x 3.5	63 x 4.5	153	70
P **7263** 03	63 x 4.5	50 x 4	63 x 4.5	166	83

HERZ T-piece, reduced



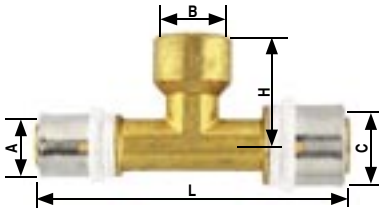
Order number	A	B	C	L	H
P **7216** 02	16 x 2	14 x 2	14 x 2	83	42
P **7218** 04	18 x 2	16 x 2	14 x 2	107	54
P **7218** 03	18 x 2	16 x 2	16 x 2	88	44
P **7220** 11	20 x 2	14 x 2	16 x 2	88	44
P **7220** 03	20 x	16 x 2	16 x 2	83	42
P **7220** 07	20 x 2	16 x 2	18 x 2	88	44
P **7220** 04	20 x 2	18 x 2	18 x 2	88	44
P **7220** 09	20 x 2	20 x 2	14 x 2	88	44
P **7220** 08	20 x 2	20 x 2	16 x 2	88	44
P **7226** 18	26 x 3	18 x 2	18 x 2	102	51
P **7226** 12	26 x 3	18 x 2	20 x 2	102	51
P **7226** 13	26 x 3	20 x 2	16 x 2	102	51
P **7226** 14	26 x 3	20 x 2	20 x 2	102	51
P **7226** 19	26 x 3	20 x 2.5	16 x 2	102	51
P **7226** 16	26 x 3	26 x 3	16 x 2	112	56
P **7226** 15	26 x 3	26 x 3	20 x 2	112	56
P **7232** 11	32 x 3	20 x 2	26 x 3	106	53
P **7232** 09	32 x 3	26 x 3	26 x 3	106	53
P **7232** 15	32 x 3	32 x 3	20 x 2	106	53
P **7232** 14	32 x 3	32 x 3	26 x 3	106	53
P **7240** 06	40 x 3.5	26 x 3	32 x 3	110	55
P **7240** 04	40 x 3.5	32 x 3	32 x 3	110	50
P **7240** 07	40 x 3.5	40 x 3.5	26 x 3	110	55
P **7240** 08	40 x 3.5	40 x 3.5	32 x 3	110	55
P **7250** 06	50 x 4	32 x 3	40 x 3.5	152	62
P **7250** 05	50 x 4	40 x 3.5	40 x 3.5	152	62
P **7250** 07	50 x 4	50 x 4	32 x 3	152	76
P **7250** 08	50 x 4	50 x 4	40 x 3.5	152	76
P **7263** 04	63 x 4.5	40 x 3.5	50 x 4	166	67
P **7263** 05	63 x 4.5	50 x 4	50 x 4	166	83
P **7263** 06	63 x 4.5	63 x 4.5	40 x 3.5	150	83
P **7263** 07	63 x 4.5	63 x 4.5	50 x 4	166	83

HERZ T-piece with external thread



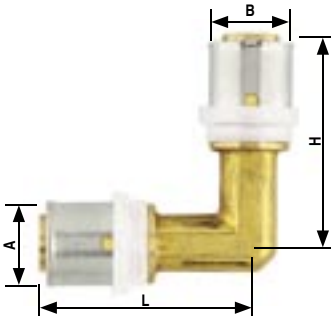
Order number	A	B	C	L	H
P **7216** 51	16 x 2	1/2	16 x 2	90	34
P **7218** 51	18 x 2	1/2	18 x 2	98	34
P **7220** 51	20 x 2	1/2	20 x 2	91	34
P **7226** 51	26 x 3	1/2	26 x 3	112	38
P **7220** 52	20 x 2	3/4	20 x 2	98	34
P **7226** 52	26 x 3	3/4	26 x 3	112	38
P **7232** 51	32 x 3	3/4	32 x 3	110	47
P **7226** 53	26 x 3	1	26 x 3	112	43
P **7232** 52	32 x 3	1	32 x 3	110	47
P **7240** 52	40 x 3.5	1	40 x 3.5	110	55
P **7240** 53	40 x 3.5	1¼	40 x 3.5	110	55
P **7250** 53	50 x 4	1¼	50 x 4	152	61
P **7250** 54	50 x 4	1½	50 x 4	152	61
P **7263** 54	63 x 4.5	1½	63 x 4.5	166	68
P **7263** 55	63 x 4.5	2	63 x 4.5	166	70

HERZ T-piece with internal thread



Order number	A	B	C	L	H
P **7216** 41	16 x 2	1/2	16 x 2	90	34
P **7218** 41	18 x 2	1/2	18 x 2	98	34
P **7220** 41	20 x 2	1/2	20 x 2	91	34
P **7226** 42	26 x 3	1/2	20 x 2	112	38
P **7226** 41	26 x 3	1/2	26 x 3	112	37
P **7232** 43	32 x 3	1/2	32 x 3	110	47
P **7220** 42	20 x 2	3/4	20 x 2	112	43
P **7226** 44	26 x 3	3/4	26 x 3	112	43
P **7232** 41	32 x 3	3/4	32 x 3	110	47
P **7232** 42	32 x 3	1	32 x 3	110	47
P **7240** 41	40 x 3.5	1	40 x 3.5	110	55
P **7232** 44	32 x 3	1¼	32 x 3	125	55
P **7240** 42	40 x 3.5	1¼	40 x 3.5	110	55
P **7250** 42	50 x 4	1¼	50 x 4	152	63
P **7250** 43	50 x 4	1½	50 x 4	152	63
P **7263** 43	63 x 4.5	1½	63 x 4.5	166	68
P **7263** 44	63 x 4.5	2	63 x 4.5	166	70

HERZ 90° angle



Order number	A	B	L	H
P **7114** 00	14 x 2	14 x 2	42	42
P **7116** 00	16 x 2	16 x 2	39	39
P **7118** 00	18 x 2	18 x 2	42	42
P **7120** 00	20 x 2	20 x 2	42	42
P **7110** 00	20 x 2	10 x 1.3	42	33
P **7126** 00	26 x 3	26 x 3	49	49
P **7132** 00	32 x 3	32 x 3	53	53
P **7140** 00	40 x 3.5	40 x 3.5	55	55
P **7150** 00	50 x 4	50 x 4	76	76
P **7163** 00	63 x 4.5	63 x 4.5	83	83

Compression Connections

Compression connections are manufactured using HERZ plastic pipe connectors. The HERZ adapter and screw connections are also used for pipe connections.

The plastic pipe connection represents a completely safe connection between the pipe and valve. This connection can be detached at any time as required. Compression connections must not be used for buried systems. Perfect liquid tightness is only achieved if the installation is carried out in accordance with the HERZ installation instructions.

It is imperative that the stated pipe diameter and pipe wall thickness are adhered to when installing compression connections.

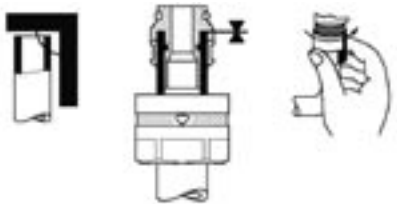
1) Non-detachable connections:

   - Press fittings for heating systems may be buried in the wall or the floor.
   - Press fittings for domestic water systems may be buried in the wall but not in the floor.
   - Press fittings for remote heating systems for Fernwärme Wien may not be buried in the wall or floor.

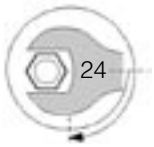
2) Detachable connections must always remain accessible in order for liquid tightness to be checked.

Installation of HERZ plastic screw connections

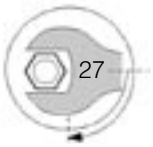
The pipe is cut perpendicular to the pipe axis and calibrated. The plastic screw connections are installed and tightened by hand.
The grommets are fitted with an insulation plate for electrical separation from the aluminium.



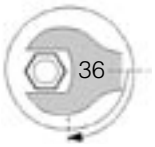
A suitable spanner is used according to the design of the connection.



1¼ (450°)
Plastic screw connection M 22 x 1,5
1 **6066** xx and 1 **6067** xx



1 (360°)
Plastic screw connection G 3/4
1 **6098** xx



1 (360°)
Plastic screw connection G1
1 **6198** xx

Order numbers from the HERZ catalogue, part 3.

HERZ clamp set, 1 **6092** xx for plastic pipe connections, suitable for the connection of PE-X-, PB- and aluminium composite pipes to radiator fittings in the “D” dimension range (with DIN thread lengths).
Consisting of clamp nut, and spigot piece.

Cut off the pipe at a right angle and trim. Slide on the clamp nut, push in the spigot piece.

Place the pipe into the clamping ring.

Connect to the fitting with the clamp nut.

Tighten with a suitable tool.

1 **6092** 01 HERZ compression set for plastic pipe connections, 16 x 2.0 mm
1 **6092** 02 HERZ compression set for plastic pipe connections, 14 x 2.0 mm

For easier tightening, connection pieces (spigot piece and clamp nut) can be lubricated. Silicone or Teflon-based lubricants are perwithted. Lubricants containing mineral oil or hydrocarbon must not be used as they damage sealing elements.

For detachable pipe connections, it can also be combined with HERZ screw fittings made of nickel-plated brass.

Order numbers from the HERZ catalogue, part 3.

Application of HERZ pipes and connections

Nap plate with or without bottom insulating layer

HERZ nap plate for laying pipes for under-floor heating, for pipes of 14 to 17 mm diameter.

HERZ nap plates are particularly flexible and have good pipe holding strength. The advantages are: one-man laying, little cutting, simple correction of pipe laying, moisture protection according to DIN 18560. Particularly suitable for cement, floating screed and environmentally-friendly material suitable for material recycling.

Pipe separation of 50 mm and multiples thereof (100, 150, 200, etc.) Plate size, 1400 x 800 mm, and the plates are laid with an overlap of 50 mm, effective area 1.12 m^2.

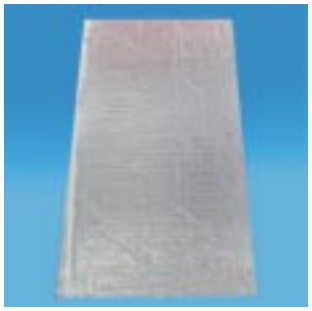
Supplied in two designs:

3 **F030** 01	nap plate with tread noise insulation, 30-2, made of hard polystyrene foam (EPS)
3 **F030** 02	nap plate with heat insulation, 11 mm, made of hard polystyrene foam (EPS)
3 **F030** 03	nap plate for individual heat insulation design

The diagonal retainer, 3 **F030** 04, is also available for the diagonal laying of pipes.

Multi-clamping system plate made from hard polystyrene foam, for increased loads, with pre-prepared laying grids for ease of laying under-floor heating without additional pipe fixing accessories. Can also be used for dry screed.

Even and effective surface heating using comprehensive pure aluminium foil. Turns and re-directions are also made with aluminium re-direction plates. Pipe laying interval, 125 mm or multiples thereof. The plate can subsequently be treated with a knife or a hot cropping device. Plate size, 1,000 x 500 mm for pipe diameters of 16 or 17 mm. Heat conductivity, 0.035 W/mK according to ÖNORM B6015.

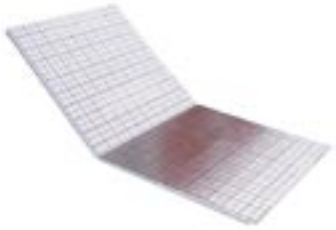


Supplied in two designs with different insulation thickness:

3 **F020** 01	multi-clamping plate, insulation thickness 30 mm
3 **F020** 02	multi-clamping plate, insulation thickness 50 mm
3 **F020** 03	re-direction plate, insulation thickness 30 mm
3 **F020** 04	re-direction plate, insulation thickness 50 mm
3 **F020** 05	plate without laying grids, insulation thickness 30 mm
3 **F020** 06	plate without laying grids, insulation thickness 50 mm

The multi-clamp system plates are most suitable for wall heating. To protect against aggressive screed or wall plaster, the system has to be covered using PE foil.
When using for floor heating, a load distribution layer, e.g. with 2 x 10 mm Fermacell plates or chip-board panels, is required, which can be laid over with the multi-clamping plates.

System rolls or system plates for floor heating, made of alu-metallised highly tear-proof woven film, insulation with tread insulation polystyrene and grids at intervals of 50 mm and with single-sided self-sticking overlaps of 40 mm. Simple laying by rolling out the system rolls or unfolding the folding plates. Pipe fixing with tacking needles. The reinforced film prevents tearing by the tacking needles. The pipe laying distance is selected individually with the help of the printed grid.

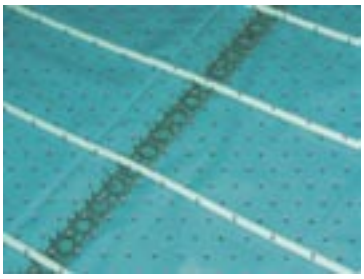
Supplied in two designs with three different insulation thicknesses:

3 **F040** 01	system roll, 1,000 x 10,000 mm, tread noise insulation, 15-2 mm
3 **F040** 02	system roll, 1,000 x 10,000 mm, tread noise insulation, 22/20 mm
3 **F040** 03	system roll, 1,000 x 10,000 mm, tread noise insulation, 32/30 mm
3 **F040** 04	system plate, 1,000 x 2,000 mm, tread noise insulation, 15-2 mm
3 **F040** 05	system plate, 1,000 x 2,000 mm, tread noise insulation, 22/20 mm
3 **F040** 06	system plate, 1,000 x 2,000 mm, tread noise insulation, 32/30 mm

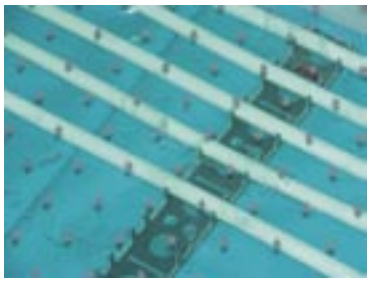
Tacking needles and tacking device from the HERZ accessories catalogue, Part 3

Notched rails made of plastic U-profile for fixing plastic pipes, diameter 16 and 17 mm for wall or under-floor heating. The notched rails are fixed to a heat insulator using double-sided sticking tape or tacking needles. The pipes are fixed at intervals of 50 mm or a multiple thereof, using formed pipe holder clips. The target break line every 100 mm serves to cross-cut the notched rails, or is cut off as required using a saw.

Example version:



Pipe laying for floor heating



Floor heating – edge area

3 **F110** 01	notched rails, length 2.1 m
3 **F110** 02	notched rails, length 3.9 m

All accessories for under-floor heating or cooling, such as screed test points, screed additives, sticking tape, edge insulation strips, expansion joint profiles, covering foil, angle pipe clasps, plate dowels, pipe holder dowels, hot cropping device, etc., are detailed in the HERZ brochure.

Quick selection / summary of HERZ pipes, dimension 16 x 2.0 mm. 10K temperature difference

					Heat load for surface heating W/m²	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
					Surface temperature of surface heating at a room temperature of 20°C	24.3	24.7	25.0	25.2	25.7	26.1	26.5	26.9	27.3	27.8	28.2	28.6	29.0	29.4	29.8	30.2	30.6	31.0	31.4
					Surface temperature of surface heating at a room temperature of 24°C	28.3	28.7	29.0	29.2	29.7	30.1	30.5	30.9	31.3	31.8	32.2	32.6	33.0	33.4	33.8	34.2	34.6	35.0	35.4
Flow temperature 40 °C	Room temperature 20 °C	Rλ.B=0,02	Ceramic tiles	VA in mm		250		200		150		100					70							
		(m²K)/W		Amax in m²		36.7		30.3		22.1		14.3					8.9							
		Rλ.B=0,05	Wood / parquet	VA in mm			200		150		100		70											
		(m²K)/W		Amax in m²			30.2		22.4		15.5		9.75											
		Rλ.B=0,10	Carpet	VA in mm		200		150		100		70												
		(m²K)/W		Amax in m²		28.3		18.9		12.4		9.8												
		Rλ.B=0,15	Deep-pile carpet	VA in mm		200	150		100															
		(m²K)/W		Amax in m²		25	19.7		13.5															
	Room temperature 24 °C	Rλ.B=0,02	Ceramic tiles	VA in mm		200		150		100			70											
		(m²K)/W		Amax in m²		28.3		20.8		14.3			8.5											
Flow temperature 45 °C	Room temperature 20 °C	Rλ.B=0,02	Ceramic tiles	VA in mm			250		200		150		100		70									
		(m²K)/W		Amax in m²			38.1		28.8		20.3		14.5		9									
		Rλ.B=0,05	Wood / parquet	VA in mm					200		150		100		70									
		(m²K)/W		Amax in m²					30		20.6		14.4		8.7									
		Rλ.B=0,10	Carpet	VA in mm		250		200		150		100		70										
		(m²K)/W		Amax in m²		36.5		26.4		17.6		12.6		8.8										
		R?.B=0,15	Deep-pile carpet	VA in mm		250	200		150		100													
		(m²K)/W		Amax in m²		36	28.3		18.5		11.7													
	Room temperature 24 °C	Rλ.B=0,02	Ceramic tiles	VA in mm			200			150		100		70										
		(m²K)/W		Amax in m²			31.2			20.5		14.5		9.5										
Flow temperature 50 °C	Room temperature 20 °C	Rλ.B=0,02	Ceramic tiles	VA in mm						250		200		150			100							
		(m²K)/W		Amax in m²						39.3		32.2		22			11.3							
		Rλ.B=0,05	Wood / parquet	VA in mm							200		150		100		70							
		(m²K)/W		Amax in m²							31.3		21.9		12.1		8.5							
		Rλ.B=0,10	Carpet	VA in mm				250	200		150		100			70								
		(m²K)/W		Amax in m²				40	34.5		24.8		15.4			8.4								
		Rλ.B=0,15	Deep-pile carpet	VA in mm			250	200		150		100		70										
		(m²K)/W		Amax in m²			40	33.4		23.9		23		8.5										
	Room temperature 24 °C	Rλ.B=0,02	Ceramic tiles	VA in mm					200		150			100				70						
		(m²K)/W		Amax in m²					34.5		24.5			16.2				9.7						
Flow temperature 55 °C	Room temperature 20 °C	Rλ.B=0,02	Ceramic tiles	VA in mm								250		200			150							100
		(m²K)/W		Amax in m²								38		29.5			21.6							18
		Rλ.B=0,05	Wood / parquet	VA in mm									200			150			100					
		(m²K)/W		Amax in m²									30.5			21.5			15.5					
		Rλ.B=0,10	Carpet	VA in mm					250		200		150			100			70					
		(m²K)/W		Amax in m²					39.4		32.3		23			15.5			8.5					
		Rλ.B=0,15	Deep-pile carpet	VA in mm				250		200		150		100		70								
		(m²K)/W		Amax in m²				40		32.5		22.5		14		7.9								
	Room temperature 24 °C	Rλ.B=0,02	Ceramic tiles	VA in mm							200			150				100			70			
		(m²K)/W		Amax in m²							32.5			23.7				17.3			15.4			

HERZ pipe and fittings in domestic water installations



Example: Installation in partition walls in domestic areas with HERZ pipes

HERZ pipe and fittings in radiator connection



Example: Connection of HERZ under-floor/surface distributor

HERZ SwitchFix 1 **3030** 01

HERZ pipe and fittings in surface heating and cooling



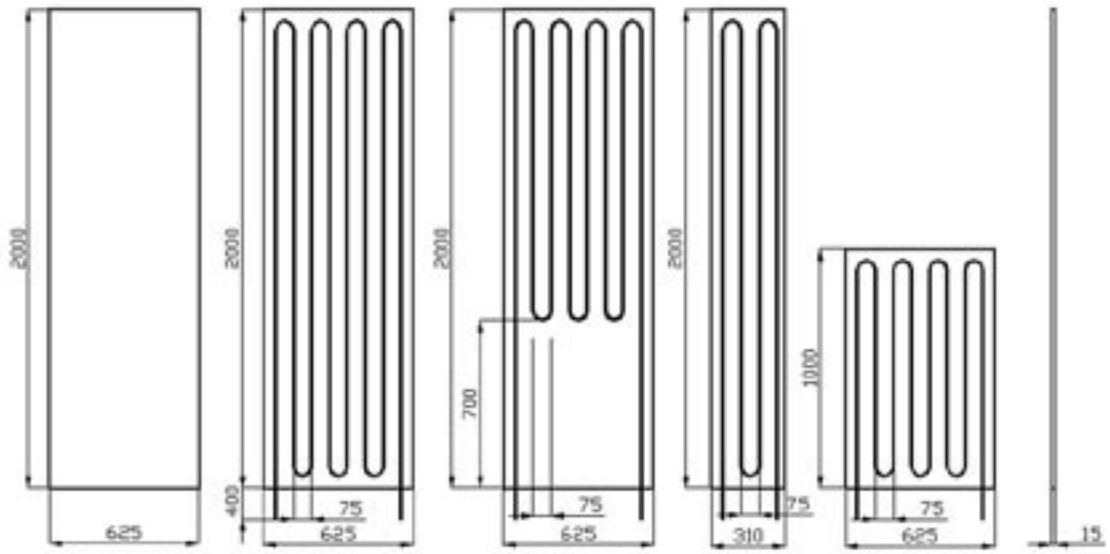
Connection of wall heating

Renovation of apartments

Installation of cooling ceiling

HERZ air-conditioning system

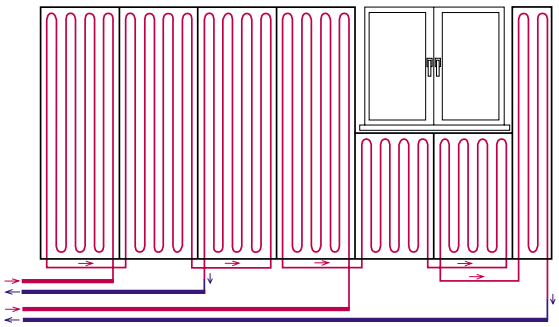
For heating and cooling rooms in buildings, with attention to low energy costs, healthier air circulation without annoying operating noise with “hidden” comfort. Fermacell gypsum-fibre plates, 15 mm, with ex-factory incorporated 10 x 1.3 Herz composite pipe with 75 mm interval from the pipe centre, in four different plate sizes for fast and clean laying in dry build in walls, floors or ceilings. Performance values for cold and hot water operation tested in accordance with EN 14037 at the accredited heating, ventilation and air-conditioning testing centre in Stuttgart.

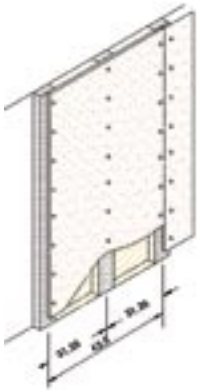


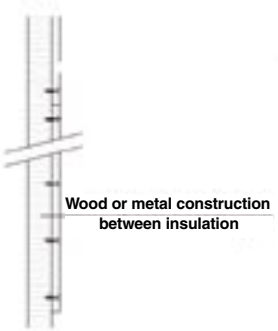
3 **F122** 00 | 3 **F120** 75 | 3 **F120** 76 | 3 **F120** 77 | 3 **F120** 78

The aluminium composite pipes are clamped at the factory in the ready-milled grooves of the gypsum-fibre plate. The panels are suitable for direct installation on a substructure on the wall, ceiling or floor. Panels are available in dimensions 2,000 x 625, 2,000 x 310 und 1,000 x 625. The smooth plate side is the side that is seen and this installed facing out to the room and after the drill holes are puttied it can be painted, carpeted, tiled or covered with thin plaster.

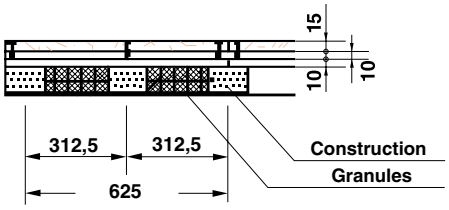
Panel heating plates made of 15 mm thick gypsum-fibre plate, with integrated aluminium composite pipe, 10.0 x 1.3 mm, oxygen-resistant according to DIN 4726, suitable for operating temperatures up to a maximum of 45°C. The panel heating plates have to be fixed on a dry sub-construction, suitable for interiors and with a 31.2 cm interval. The press couplings and the panel heating plates, mounted in series, are connected directly to the distributor by means of coupling adapters. Before installation of the plates on the sub-structure, the pipe ends for connection to the supply circulation are released from the plate and directed into the room. Up to three whole plates are connected together and are connected to the distributors as a heating circuit. The panel heating plates (serial connection up to approximately 55 m pipes) is connected directly to the distributor outflow or a return temperature liwither.







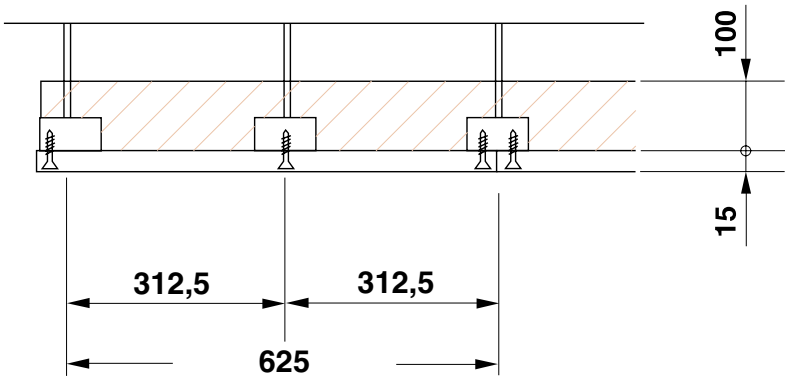
The heating plates can also be used for floor heating. A dry base of 2 x 10 Fermacell plates is installed and the heating plates are then stuck and screwed to this dry base. The top covering is laid directly on the heating plates and may be plastic, carpet, tiles or wood. The floor covering must be suitable for the floor heating. The single or net load is to be adhered to in accordance with DIN 1055-3 (traffic load for ceilings).



Floor construction with 2 x 10 mm Fermacell plates

For suspended ceilings the usual commercially available systems are used. To fix these constructions on solid floors, technically approved dowels must be used, which are suitable for this application and load. The profile of the suspension must be measured so that the static safety of the ceiling to be suspended from it is guaranteed. The intervals on the sub-construction for installing the heating plates is to be selected for the heating plate in accordance with the drilling plan. The construction must be measured so that the approved deflection of 1/500 of the support range is not exceeded.

Where heating plates are used for ceiling heating, an insulation layer made of rock wool or polystyrene with a thickness of at least 100 mm is recommended. The weight of the insulation must be taken into account for calculating the ceiling construction.



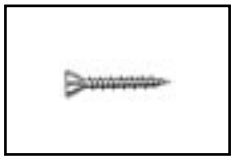
The heating plates are stuck fast together. The glue is applied from the cartridge. The surplus glue is scraped away after drying out (around 24 hours) with a putty knife or wood chisel. The glue is frost-proof but requires moisture from the air to set. Plate customisations must, where possible, be laid with the cut edge in the direction of the expansion joint.

Joint glue

Lining up of the wall heating plates and empty plates as they only in danger of breaking at the edge. Processing of the gypsum-fibre plates > + 5 °C.

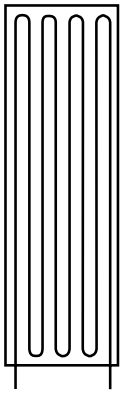
Fixing of the gypsum-fibre plates with quick build screws.
Screw length = plate thickness x 2 for metal frame constructions (30 mm)
Screw length = plate thickness x 3 for wooden frame constructions (45 mm)

The screws are sunk in around 2 mm and puttied in using the joint spatula.
Customised plates under a width of 5 cm should be avoided for fixing because of the risk of fracture.

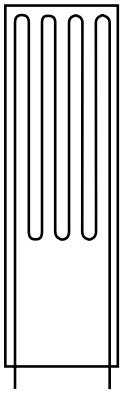


Quick-build screws

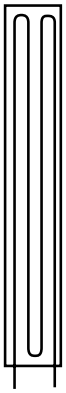
Joint spatula



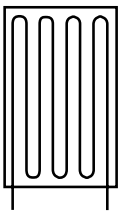
3 **F120** 75



3 **F120** 76



3 **F120** 77

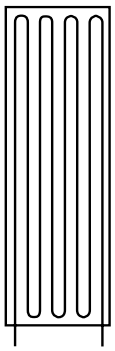


3 **F120** 78

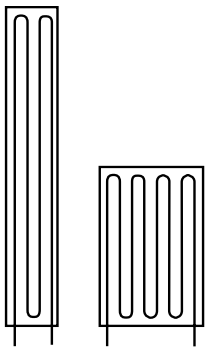
Heating table

Herz panel		WH 75 116-200 **3 F120 75**					WH 75 116-100 **3 F120 76**					WH 75 58-200 **3 F120 77** / WH 75 58-100 **3 F120 78**					**Herz panel**	
VL (°C)	RT (°C)	RL (°C)					RL (°C)					RL (°C)					RT (°C)	VL (°C)
		25	**30**	35	40	45	25	**30**	35	40	45	25	**30**	35	40	45		
45	15	122	144	165	182		78	92	105	116		61	72	82	91		15	45
40		107	128	145			68	81	92			53	64	72				40
35		92	109				58	70				46	55					35
30		76					48					38						30
45	18	101	122	142	160		64	78	91	102		50	91	71	80		18	45
40		86	106	123			55	67	79			43	53	62				40
35		71	88				45	56				35	44					35
30		55					35					28						30
45	**20**	87	108	128	145		55	69	81	92		43	54	64	72		20	45
40		72	**92**	109			46	**58**	70			36	**46**	55				**40**
35		57	76				37	48				29	38					35
30		42					27					21						30
45	22	73	93	113	131		46	60	72	83		36	47	57	65		22	45
40		59	78	95			37	50	61			29	39	48				40
35		44	62				28	40				22	31					35
30		30					19					15						30
45	24	59	80	99	116		38	51	63	74		30	40	49	58		24	45
40		45	64	83			29	41				23	32	41				40
35		32	49				20	31				16	24					35
30		18					11					9						30
45	26	46	66	85	102		29	42	54	65		23	33	42	51		26	45
40		33	51	69			21	32	44			16	25	34				40
35		19	36				12	23				10	18					35
30		7					4					3						30
45	28	33	53	71	88		21	33	45	56		17	26	36	44		28	45
40		21	38	55			13	24	35			10	19	28				40
35		8	24				5	15				4	12					35

Performance values in watts, tested in accordance with EN 14037.



3 **F120** 75



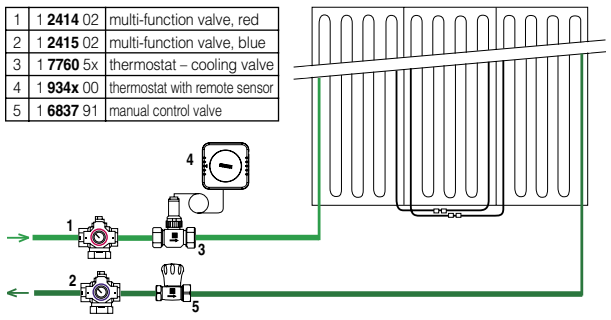
3 **F120** 77 3 **F120** 78

Cooling table

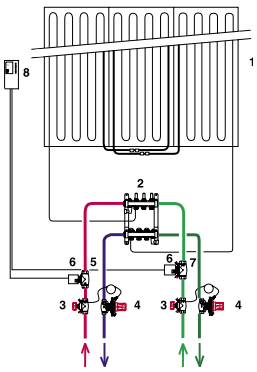
Herz panel		P / 3 F120 75						P / 3 F120 77 - 3 F120 78					
RL	RT	VL						VL					
		16	17	18	19	20	21	16	17	18	19	20	21
19	22	24	21	18				12	11	9,2			
19	23	31	27	24				15	14	12			
19	24	37	34	31				18	17	15			
19	25	43	40	37				22	20	18			
19	26	50	46	43				25	23	22			
19	27	56	53	50				28	27	25			
19	28	63	60	56				32	30	28			
19	29	70	66	63				35	33	32			
20	22	21	18	15	13			11	9	8	6		
20	23	27	24	21	18			14	12	11	9		
20	24	34	31	27	24			17	15	14	12		
20	25	40	37	34	31			20	18	17	15		
20	**26**	46	43	40	37			23	22	20	**18**		
20	**27**	53	50	46	43			27	25	23	**22**		
20	**28**	**60**	56	53	50			30	28	27	**25**		
20	**29**	66	63	60	56			33	32	30	**28**		
21	**22**	18	15	13	10	7		9	8	6	**5**	4	
21	23	24	21	18	15	13		12	11	9	8	6	
21	24	31	27	24	21	18		15	14	12	11	9	
21	25	37	34	31	27	24		18	17	15	14	12	
21	26	43	40	37	34	31		22	20	18	17	15	
21	27	50	46	43	40	37		25	23	22	20	18	
21	28	56	53	50	46	43		28	27	25	23	22	
21	29	63	60	56	53	50		32	30	28	27	25	
22	22	15	13	10	7	5	2	8	6	5	4	2	1
22	23	21	18	15	13	10	7	11	9	8	6	5	4
22	24	27	24	21	18	15	13	14	12	11	9	8	6
22	25	34	31	27	24	21	18	17	15	14	12	11	9
22	26	40	37	34	31	27	24	20	18	17	15	14	12
22	27	46	43	40	37	34	31	23	22	20	18	17	15
22	28	53	50	46	43	40	37	27	25	23	22	20	18
22	29	60	56	53	50	46	43	30	28	27	25	23	22
23	22	13	10	7	5	2	0	6	5	4	2	1	0
23	23	18	15	13	10	7	5	9	8	6	5	4	2
23	24	24	21	18	15	13	10	12	11	9	8	6	5
23	25	31	27	24	21	18	15	15	14	12	11	9	8
23	26	37	34	31	27	24	21	18	17	15	14	12	11
23	27	43	40	37	34	31	27	22	20	18	17	15	14
23	28	50	46	43	40	37	34	25	23	22	20	18	17
23	29	56	53	50	46	43	40	28	27	25	23	22	20

Performance values for cooling per panel in watts, tested in accordance with EN 14037.

1	1 **2414** 02	multi-function valve, red
2	1 **2415** 02	multi-function valve, blue
3	1 **7760** 5x	thermostat – cooling valve
4	1 **934x** 00	thermostat with remote sensor
5	1 **6837** 91	manual control valve



Example: Mechanical control of a cooling circuit

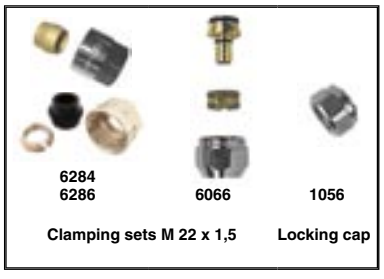


1	3 **F120** 75	wall-heating panel
2	1 **8532** xx	distributors
3	1 **4217** xx	circuit control valve
4	1 **4007** xx	differential pressure control
5	1 **7723** xx	area valve
6	1 **7710** 00	thermomotor
7	1 **7217** xx	area valve
8	1 **7794** 23	Room temperature control

Example: Connection for heating and cooling

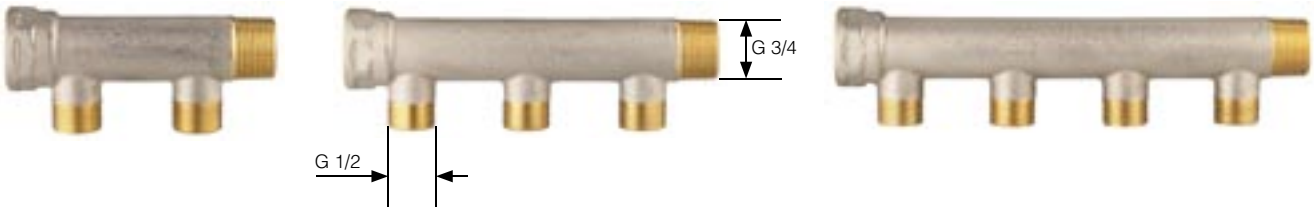
Connection to HERZ distributor

HERZ pipes can be connected to all distributors for drinking water, radiator connection and surface heating and cooling from the HERZ catalogue, using HERZ fittings.
HERZ compact distributors, 1 **8441** xx are supplied as pairs with 3 to 12 outlets with distributor holders, vent valve and end caps.
HERZ compact distributors represent a simple system for the single connection of radiators. They consist of nickel-coated cast distributor components that can be coupled. They are produced as single components. Connection to one another utilises a protected O-ring seal, which remains water-tight and is reliable over time. The distributor assembled at the top is fitted with the ventilation valve.
The distribution outlets are supplied with M 22 x 1.5 external threads. The connection of the distributor outlets to the HERZ pipes is achieved using connectors.



HERZ compact distributors, 1 **8541** xx are supplied as pairs of distributors with 3 to 12 outlets with distributor holders, vent valve and end caps.
HERZ compact distributors represent a simple system for the single connection of radiators. They consist of nickel-coated cast distributor components that can be coupled. They are produced as single components. Connection to one another utilises a protected O-ring seal, which remains water-tight and is reliable over time. The distributor assembled at the top is fitted with the ventilation valve.
The distribution outflows are supplied with G 3/4 external thread. The connection of the distributor outflows to the HERZ pipes is achieved using connectors.

HERZ compact distributors, 2 **8451** xx are supplied as pairs of distributors with 2, 3 or 4 outlets with distributor holders. These distributors are made from dezincification-resistant brass and are suitable for distribution in domestic water systems and conform to DVGW-AB W534.
They consist of nickel-coated cast distributor components that can be coupled. They are produced as single components. Connection to one another utilises a protected O-ring seal, which remains water-tight and is reliable over time. The distribution outflows are supplied with G 1/2 external thread. In the compact distributor 2 **8451** 32, the distributor outlets are designed with G 3/4. The connection of the distributor outflows to the HERZ pipes is achieved using connectors.



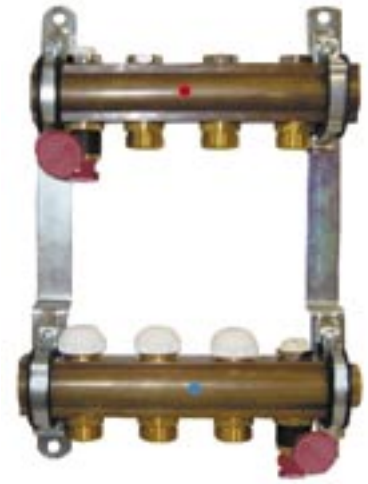
The pipes are connected to the distributor using fittings, G 1/2.
1 **6092** 11 for pipe 12 x 2, 1 **6092** 12 for pipe14 x 2, 1 **6092** 13 for pipe 16 x 2

HERZ distributors, 1 **851x** 93 are supplied as pairs of distributors with 2, 3 or 4 outlets with distributor holders, ventilation valve and end caps.
HERZ distributors can be combined to up 12 outlets. Distributor coupling with O-ring seal. They are produced as single nickel-coated components. Consisting of flow distributor with shut off upper parts and return collector with thermostatic upper parts for fitting manual drives or servo-motor. Venting and draining are included in the end cap. The commissioning of the individual heating circuits with one another is conducted via the controls for the valves on the flow distributor using an internal hex driver.
The distribution outlets are supplied with G 3/4 external thread. The connection of the distributor outlets to the HERZ pipes is achieved using connectors.

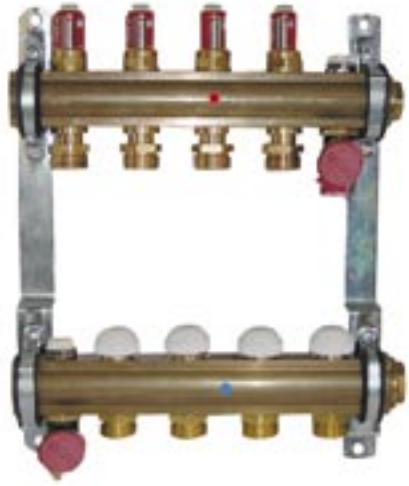
1 **8531** xx

1 **8532** xx

1 **853** xx



HERZ circuit control distributor-set, 8531 with shut-off and thermostatic upper parts for under-floor heating. Flow distributor with shut-off upper parts, and return collector with thermostatic upper parts. Flow and return distributors with offset arranged 3/4 outflows, with vent and drain, end cap and distributor holders. IG 1 distributor connection.



HERZ circuit control distributor-set, 8532 with shut-off and flow meter control upper parts for under-floor heating. Flow distributor with flow meter control upper parts for water capacity up to 2.5 l/min, and return collector with thermostatic upper parts. Flow and return distributors with coffset arranged 3/4 outflows, with vent and drain, end cap and distributor holders. IG 1 distributor connection.

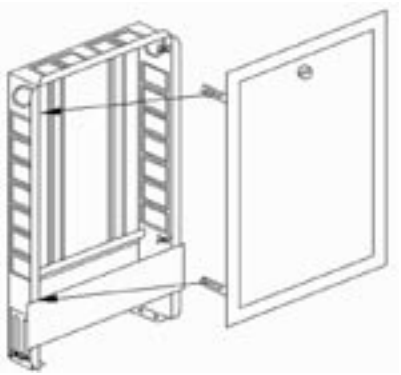
HERZ circuit control distributor-set, 8533 with shut-off and flow meter control upper parts for under-floor heating. Flow distributor with flow meter control upper parts for water capacity up to 6.0 l/min, and return collector with thermostatic upper parts. Flow and return with offset arranged 3/4 outflows, with vent and drain, end cap and distributor holders. IG 1 distributor connection.

HERZ distribution boxes

Distribution boxes are available for HERZ distributors for wall installation.

Distribution boxes are produced from hot-galvanised sheet steel, with front frame and doors fitted with bolts or cylinder lock, and white powder coated according to RAL9003. Fixing rails for distributor holders are provided in the distribution boxes. Height-adjustable feet mean that the box can be adjusted to a height of 705 to 75 mm. The installation depth for distribution box **8569** and **8570** can be adjusted to between 80 mm and 110 mm. For distributor box **8572** the installation depth can be selected between 110 mm and 140 mm. The frame of the distribution box has pre-punched recesses for inserting the pipes. The front panel is for balancing the different installation heights and is removable.

1 **8569** xx distribution box, installation depth 80-110 mm, with bolts
1 **8570** xx distribution box, installation depth 80-110 mm, with cylinder lock
1 **8572** xx distribution box, installation depth 110-140 mm, with bolts



Order number	Nominal width	Cabinet		Front panel	
		Width	Width, interior	Width	Width, interior
1 **8569** 03	300	385	345	409	341
1 **8569** 04	400	435	395	459	391
1 **8569** 05	500	489	449	513	445
1 **8569** 10	600	574	534	598	530
1 **8569** 15	750	724	684	748	680
1 **8569** 20	900	874	834	898	830
1 **8569** 25	1050	1024	984	1048	980
1 **8569** 30	1200	1174	1134	1198	1130
1 **8569** 40	1500	1474	1434	1498	1430

The breadth of the distribution boxes can be selected individually according to the distributors and connection fittings used.

Selection table for Herz compact distributors for sanitation installations, nickel-coated, DN20				
Outflows	Distributor length in mm		Distributor box, order no. 1 8569 ..	
	Outflows in G1/2			
	Shut-off valve – connection with iron pipe connector, 6210		Shut-off valve – connection with iron pipe connector, 6210	
	without	with	without	with
3	110	255	1 **8569** 03	1 **8569** 03
4	160	305	1 **8569** 03	1 **8569** 04
5	210	355	1 **8569** 03	1 **8569** 05
6	260	405	1 **8569** 03	1 **8569** 10
7	310	455	1 **8569** 04	1 **8569** 10
8	360	505	1 **8569** 05	1 **8569** 15
9	410	555	1 **8569** 10	1 **8569** 15
10	460	605	1 **8569** 10	1 **8569** 15
11	510	655	1 **8569** 15	1 **8569** 20
12	560	705	1 **8569** 15	1 **8569** 20

Selection table for Herz compact distributors for domestic water installations, nickel-plated, DN20				
Outflows	Distributor length in mm		Distributor box, order no. 1 8569 ..	
	Outflows in G 3/4			
	Shut-off valve – connection with iron pipe connector, 6210		Shut-off valve – connection with iron pipe connector, 6210	
	without	with	without	with
4	160	305	1 **8569** 03	1 **8569** 04
6	260	405	1 **8569** 03	1 **8569** 10
8	360	505	1 **8569** 05	1 **8569** 15
10	460	605	1 **8569** 10	1 **8569** 15
12	560	705	1 **8569** 15	1 **8569** 20

Selection table for Herz compact distributors, DN20 (3/4) 8441						
Outflows	Distributor length in mm			Distributor box, order no. 1 8569 ..		
	Distributor outlet M 22 x 1,5					
	Shut-off valve, 843X			Shut-off valve, 843X		
	without	Straight model	Angle model	without	Straight model	Angle model
3	140	245	283	1 **8569** 03	1 **8569** 03	1 **8569** 03
4	180	285	323	1 **8569** 03	1 **8569** 03	1 **8569** 04
5	220	325	363	1 **8569** 03	1 **8569** 04	1 **8569** 05
6	260	365	403	1 **8569** 03	1 **8569** 05	1 **8569** 10
7	300	405	443	1 **8569** 04	1 **8569** 10	1 **8569** 10
8	340	445	483	1 **8569** 05	1 **8569** 10	1 **8569** 10
9	380	485	523	1 **8569** 05	1 **8569** 15	1 **8569** 15
10	420	525	563	1 **8569** 10	1 **8569** 15	1 **8569** 15
11	460	565	603	1 **8569** 10	1 **8569** 15	1 **8569** 15
12	500	605	643	1 **8569** 15	1 **8569** 15	1 **8569** 20

Selection table for Herz compact distributors, DN25 (1) 8541						
Outflows	Distributor length mif in mm			Distributor box, order no. 1 8569 ..		
	Distributor outlet G 3/4					
	Shut-off valve, 853X			Shut-off valve, 853X		
	without	Straight model	Angle model	without	Straight model	Angle model
3	170	263	320	1 **8569** 03	1 **8569** 03	1 **8569** 04
4	220	313	370	1 **8569** 03	1 **8569** 04	1 **8569** 05
5	270	363	420	1 **8569** 03	1 **8569** 05	1 **8569** 10
6	320	413	470	1 **8569** 04	1 **8569** 10	1 **8569** 10
7	370	463	520	1 **8569** 05	1 **8569** 10	1 **8569** 15
8	420	513	570	1 **8569** 10	1 **8569** 15	1 **8569** 15
9	470	563	620	1 **8569** 10	1 **8569** 15	1 **8569** 15
10	520	613	670	1 **8569** 15	1 **8569** 15	1 **8569** 20
11	570	663	720	1 **8569** 15	1 **8569** 20	1 **8569** 20
12	620	713	770	1 **8569** 15	1 **8569** 20	1 **8569** 20

Selection table for Herz rod distributors, DN25 (1) 8531, 8532						
Outflows	Distributor with end cap length in mm			Distributor box, order no. 1 8569 ..		
	Distributor outlet G 3/4					
	Shut-off valve			Shut-off valve		
	without	Straight model	Angle model	without	Straight model	Angle model
3	221	306	372	1 **8569** 03	1 **8569** 04	1 **8569** 05
4	271	356	422	1 **8569** 03	1 **8569** 05	1 **8569** 10
5	321	406	472	1 **8569** 04	1 **8569** 10	1 **8569** 10
6	371	456	522	1 **8569** 05	1 **8569** 10	1 **8569** 15
7	421	506	572	1 **8569** 10	1 **8569** 15	1 **8569** 15
8	471	556	622	1 **8569** 10	1 **8569** 15	1 **8569** 15
9	521	606	672	1 **8569** 15	1 **8569** 15	1 **8569** 20
10	571	656	722	1 **8569** 15	1 **8569** 20	1 **8569** 20
11	621	706	772	1 **8569** 15	1 **8569** 20	1 **8569** 20
12	671	756	822	1 **8569** 20	1 **8569** 20	1 **8569** 25
13	721	806	872	1 **8569** 20	1 **8569** 25	1 **8569** 25
14	771	856	922	1 **8569** 20	1 **8569** 25	1 **8569** 25
15	821	906	972	1 **8569** 25	1 **8569** 25	1 **8569** 30
16	871	956	1022	1 **8569** 25	1 **8569** 30	1 **8569** 30

Selection table for Herz floor distributors, DN25 (1) 8512, 8513 and 8514						
Outflows	Distributor with end cap length in mm			Distributor box, order no. 1 8569 ..		
	Distributor outlet G 3/4			**1 8569 03**	**1 8569 03**	**1 8569 04**
	Shut-off valve			Shut-off valve		
	without	Straight model	Angle model	without	Straight model	Angle model
3	111	251	301	1 **8569** 03	1 **8569** 03	1 **8569** 04
4	166	306	356	1 **8569** 03	1 **8569** 04	1 **8569** 05
5	221	361	411	1 **8569** 03	1 **8569** 05	1 **8569** 10
6	276	416	466	1 **8569** 03	1 **8569** 10	1 **8569** 10
7	331	471	521	1 **8569** 04	1 **8569** 10	1 **8569** 15
8	386	526	576	1 **8569** 05	1 **8569** 15	1 **8569** 15
9	441	581	631	1 **8569** 10	1 **8569** 15	1 **8569** 20
10	496	636	686	1 **8569** 15	1 **8569** 20	1 **8569** 20
11	551	691	741	1 **8569** 15	1 **8569** 20	1 **8569** 20
12	606	746	796	1 **8569** 15	1 **8569** 20	1 **8569** 25
13	661	801	851	1 **8569** 20	1 **8569** 25	1 **8569** 25
14	716	856	906	1 **8569** 20	1 **8569** 25	1 **8569** 25
15	771	911	961	1 **8569** 25	1 **8569** 25	1 **8569** 30
16	826	966	1016	1 **8569** 25	1 **8569** 30	1 **8569** 30
17	881	1021	1071	1 **8569** 25	1 **8569** 30	1 **8569** 30
18	936	1076	1126	1 **8569** 25	1 **8569** 30	1 **8569** 40
19	991	1131	1181	1 **8569** 30	1 **8569** 40	1 **8569** 40
20	1046	1186	1236	1 **8569** 30	1 **8569** 40	1 **8569** 40
21	1101	1241	1291	1 **8569** 40	1 **8569** 40	1 **8569** 40
22	1156	1296	1346	1 **8569** 40	1 **8569** 40	1 **8569** 40
23	1211	1351	1401	1 **8569** 40	1 **8569** 40	1 **8569** 40

Distributor stations ready for connection, for radiator heating, floor heating and combinations, are in the HERZ catalogue, Part 3. These distributor stations are ready for connection, and the distributors are pre-assembled in distributor boxes and fitted with shut-offs.
Ready-to-connect control stations for floor heating and combinations of floor and radiator heating are also available in the HERZ catalogue, Part 3.

Selection table for HERZ pipes according to heat performance or flow rate. Values are only given for water 70°C and 20°C temperature difference and the pipe selection. A pipe network calculation is required for piping with press fittings. Grey background fields should not be used.

kW capacity		1	2	3	4	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	150	200
Water capacity l/h		**43**	**86**	**129**	**172**	**215**	**430**	**645**	**860**	**1075**	**1290**	**1505**	**1720**	**1935**	**2150**	**2580**	**3010**	**3440**	**3870**	**4300**	**6045**	**8600**
Pipe 14 x 2	**Pressure loss Pa/m**	46	150	302	499	731	2501	5147														
	Flow rate m/s	0.15	0.3	1.28	0.61	0.76	1.52	2.28														
Pipe 16 x 2	**Pressure loss Pa/m**	17	63	128	210	310	1048	2150														
	Flow rate m/s	0.11	0.21	0.32	0.42	0.53	1.06	1.59														
Pipe 18 x 2	**Pressure loss Pa/m**	7	31	62	101	149	502	1029	1566													
	Flow rate m/s	0.08	0.16	0.23	0.31	0.39	0.78	1.16	1.48													
Pipe 20 x 2	**Pressure loss Pa/m**	3	16	33	54	79	266	544	906													
	Flow rate m/s	0.06	0.12	0.18	0.24	0.3	0.59	0.89	1.19													
Pipe 26 x 3	**Pressure loss Pa/m**					38	92	188	312	464	641											
	Flow rate m/s					0.23	0.38	0.57	0.76	0.95	1.14											
Pipe 32 x 3	**Pressure loss Pa/m**					8	27	54	89	133	183	241	305	376	454							
	Flow rate m/s					0.11	0.23	0.34	0.45	0.56	0.68	0.79	0.9	1.01	1.13							
Pipe 40 x 3.5	**Pressure loss Pa/m**						9	17	29	43	59	77	98	120	145	201	265	336				
	Flow rate m/s						0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63	0.7	0.84	0.98	1.12				
Pipe 50 x 4	**Pressure loss Pa/m**								9	14	19	24	31	28	46	63	83	106	131	158	327	
	Flow rate m/s								0.17	0.22	0.26	0.3	0.35	0.39	0.43	0.52	0.6	0.69	0.78	0.86	1.29	
Pipe 63 x 4.5	**Pressure loss Pa/m**										6	7	9	11	14	19	25	32	39	47	98	146
	Flow rate m/s										0.16	0.18	0.21	0.23	0.26	0.31	0.37	0.42	0.47	0.52	0.78	1.04

Warranty

HERZ guarantees perfect quality for its HERZ pipes, which are manufactured with the greatest care. Only excellent raw materials are used to produce them. HERZ pipes fulfil the requirements of the standards, DIN 4726, DIN 16833 and DIN 16892.

This guarantee applies to all cases of damage, which arise within 10 years of the manufacture of the HERZ pipes.

This guarantee statement loses its validity if HERZ products (pipes as well as fittings) or accessories recommended by us are not exclusively used, and if the installation has not been carried out exclusively using HERZ tools or tools recommended by HERZ.

Any guarantee from HERZ is also null and void if planning, installation and service regulations are not adhered to, and if installation has not been carried out by a registered and expert installation or heating company.

Damage of any kind that is caused by outside interference (e.g. bored cables, etc.) as well as errors or omissions during installation, are excluded from the guarantee.

In the event of damage, HERZ must be informed immediately, but within 3 days at the latest, after occurrence of the damage and before repair measures are undertaken, and must be given the opportunity to examine the damage. If this is neglected then all guarantees are void.

The builder or equipment operator has a duty to limit damage in the event of damage (e.g. where there are leaky pipes, the water supply must be switched off immediately, and this also applies to automatic water feeds, etc.) otherwise all guarantees are void.

Measures taken by HERZ for the purpose of limited damage, do not impact on acknowledgment of the guarantee liability. Negotiations for replacement services do not mean release from the argument that advice was not received been on time, was realistically unfounded or otherwise insufficient.

The HERZ guarantee includes free replacement of the HERZ pipes that have been damaged, which are proven to have been caused by production errors and for which we are obliged to put right other damages that have been cause to items of the builder or other third party.

Moreover, those costs will also be reimbursed that arise from the exposure, removal or taking down of faulty parts, which will be replaced by fault-free HERZ products. This also includes any maintenance works that are required to reinstate the condition prior to the damage occurring. Replacement of usage and production failure, interruptions to operations and hold-ups, decrease of value and other indirect results of damage are excluded from the guarantee.

The liability with regard to this guarantee is liwithed to an amount of €1,000,000 per case of damage and totals a maximum of €10,000,000 per year

HERZ reserves the right to instruct specialist companies of its own choice to carry out any recuperative measures.

Recourse to a guarantee during the guarantee period does not extend the total duration of the guarantee.

Pressure tests

The installer of heating, cooling or sanitation systems is obliged to test the water-tightness of the pipes before they are covered with cement, gypsum or other materials.

Pressure devices should be used for this test, which give a reading of 0.1 bar, which is to be placed at the lowest lying point.

The equipment must be ventilated and protected against frost, if necessary.

Pressure test for radiator installations according to DIN 18380

The heating system must be able to withstand pressure that corresponds to 1.3 times the total pressure of the equipment (= static pressure of the system) and at least 1 bar excess pressure at each point of the system.

The pressure test is tested over 24 hours and the pressure decrease must total 0.2 bar at the highest.
The system must remain water-tight.

Pressure test for floor heating according to DIN 4725

The piping are put under pressure and ventilated.

The water pressure is to be tested directly before and after the covering work.

The test pressure must correspond to 1.3 times the operating pressure of the equipment and may fall by 0.2 bar at the most during the test period. The system must remain water-tight.

During the covering work, the pressure in the pipes must be reduced to the maximum permissible operating pressure.
A pressure test of 6 bar is recommended over a period of 24 hours.

Pressure test for sanitation systems according to DIN 1988

All system parts are ready for installation and uncovered to undergo pressure testing. The pipes must be ventilated.

2 tests are to be conducted.

test 1:

- The pressure test is carried out using the maximum admissible constant operating pressure of 10 bar + 5 bar excess pressure, thus a total of 15 bar over a period of 30 minutes. After a break lasting 10 minutes the pressure test is carried out a second time.
- Then another pressure test is conducted over 30 minutes, in which the pressure may only drop by 0.6 bar every 5 minutes. The system must not display any leaks.

Test 2:

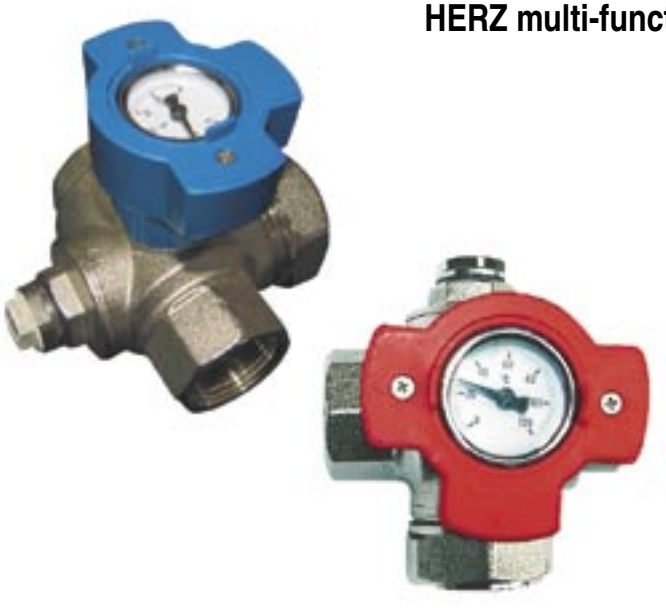
- This pressure test is carried out immediately after the first one and lasts 2 hours.
- The pressure measured in the first pressure test may fall over by no more than 0.2 bar during these 2 hours. The equipment must remain water-tight.

HERZ note:

We recommend that the piping be flushed with warm water at least three times before the system is started up, in order to remove dirt or installation residues from the system. We also recommend the installation of dirt filters.

According to DIN 1822 the flushing must take at least 2 minutes or 15 seconds per running metre of pipe, with a minimum water flow speed of 0.5m/s.

HERZ multi-functional ball valve



A ball valve with 4 connections for installation in cold and hot water equipment as a shut-off, filling and emptying valve, especially for filling, ventilating and emptying surface systems for heating and cooling. Operating pressure 25 bar, operating temperature -10°C to 120°C, material – nickel-coated brass, plastic hand wheel, 360° rotable, with integrated turnable thermometer.

Thread connection 2 x 1 IG, 1 x 1 1/4 AG with cap, 1 x 1/2 IG with stopper

Design:
HERZ 1 **2414** 02 with red hand wheel
HERZ 1 **2415** 02 with blue hand wheel

Zertifikat

über die Verleihung des Rechtes zur Führung der ÖVGW-Qualitätsmarke Wasser

Registriernummer

W 1.279

Gültigkeitsdauer

bis Ende September 2006

HERZ Armaturen Ges.m.b.H.

A-1232 Wien, Richard Strauss Straße 22

Zertifikat über ein DVGW Prüfzeichen

certificate for a DVGW test mark

DW-8501BN0454

Anwendungsbereich	Produkte der Wasserversorgung
Vertreiber	HERZ Armaturen Ges.m.b.H. Richard-Strauss-Straße 22, A-1232 Wien 23
Produktart	Verbinder und Installationssysteme: Trinkwasserinstallationssystem (8001)
Produktbezeichnung	System mit Pressverbindern aus Metall und Verbundrohren PE-HD/Al/PE-RT, PE-HD/Al/PE-Xb bzw. PE-HD/Al/PE-Xc
Modell	Herz pipefix
Prüfberichte	Mechanik: 41020/00-A vom 15.04.2002 (SKZ) Hygiene: vom 01.07.2001 (TZW)
Prüfgrundlagen	DVGW W 534 (01.05.1995) BGA KTW (07.01.1977)
Ablaufdatum / AZ	15.04.2007 / 02-0264-WNB

DVGW

DVGW-Baumusterprüfzertifikat

DVGW type examination certificate

Anwendungsbereich — Produkte der Wasserversorgung

Zertifikatinhaber — IPA Produktions- & Vertriebsgesellschaft m.b.H., Markt 133, A-2572 Kaumberg

Vertreiber — HERZ Armaturen Ges.m.b.H., Richard-Strauss-Straße 22, A-1232 Wien 23

Produktart — Installationssysteme und Systemverbinder Trinkwasserinstallationssystem (8501)

Produktbezeichnung — System aus Verbundrohr PE-Xc/Al/PE-Xb und Press- bzw. Klemmverbindern aus Metall

Modell — Pipefix

Prüfberichte

Prüfgrundlagen — DVGW W 534 (01.05.2004), BGA KTW (07.01.1977)

Ablaufdatum / AZ — 24.02.2009 / 04-0093-WWV

Typ

Zertifizierungspflichtige Bauteile / Werkstoffe

Verwendungshinweise / Bemerkungen

FERN WÄRME WIEN

Fernwärme Wien Gesellschaft m.b.H.

WERKSBESCHEINIGUNG 2.1 nach EN 10204

QM HERZ

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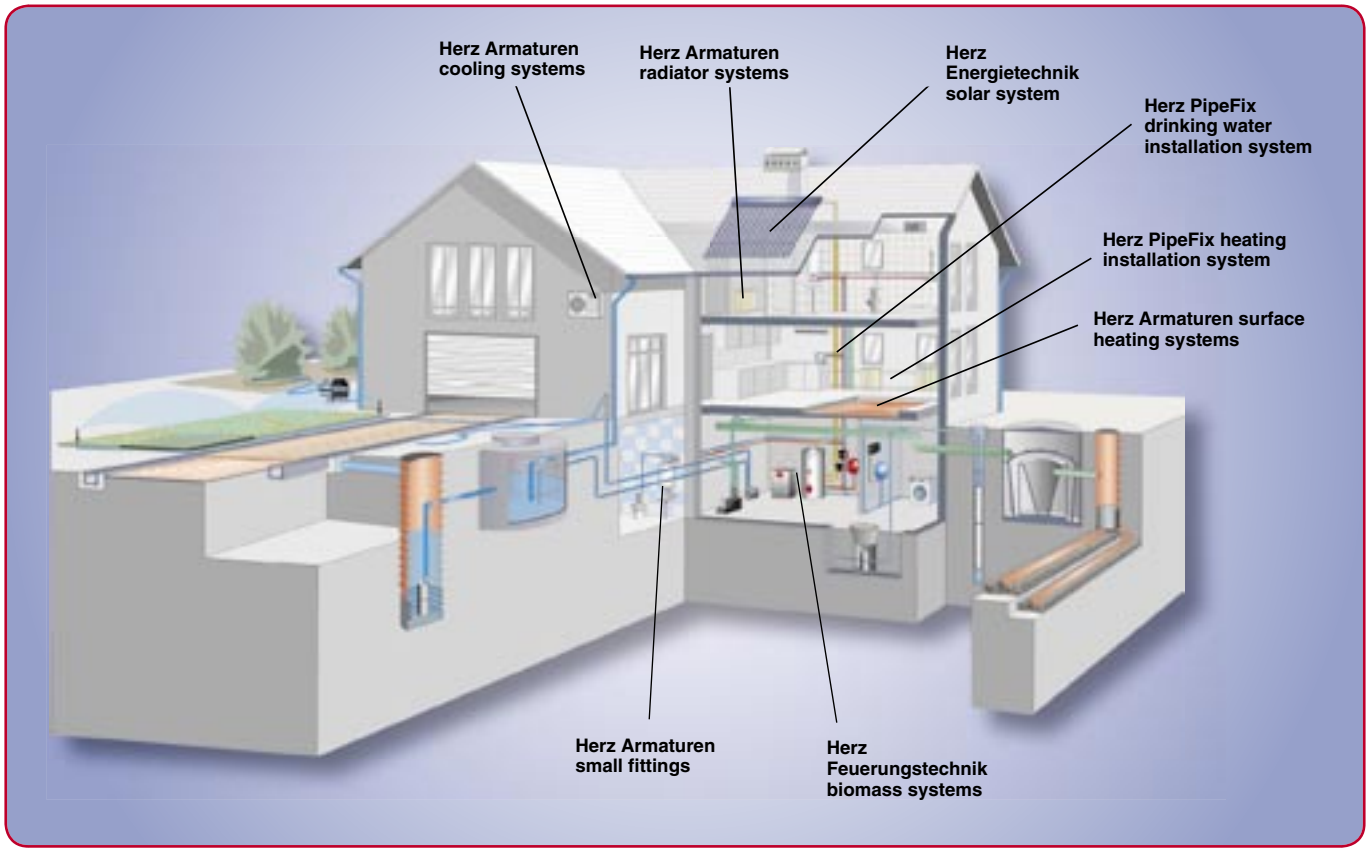
Herz Armaturen cooling systems
Herz Armaturen radiator systems
Herz Energietechnik solar system
Herz PipeFix drinking water installation system
Herz PipeFix heating installation system
Herz Armaturen surface heating systems
Herz Armaturen small fittings
Herz Feuerungstechnik biomass systems


Herz
Wo Heizung. Da Herz.

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