HERZ-3000

Connection system for radiators with integrated valves

Datasheet for **HERZ-3000 FWW,** Issue 1125

HERZ-3000 – Overview

Bypass bodies and connection elements

Models

Radiator connection	G 3/4 with cone	G 1/2	
Supplied with 2 units	-	1 **3002** 31	
Pipe connection with external thread	G 3/4 with cone	G 3/4 with cone	
Bypass body for one- and two-pipe systems with pre-setting, shut-off, draining and filling function			
Straight model	1 **3066** 01	1 **3066** 02	**RL - 4**
Angle model, left-side draining flow on the right	1 **3066** 11	1 **3066** 12	
Angle model, right-side draining, flow on the left	1 **3066** 21	1 **3066** 22	
Bypass body for one-pipe systems with shut-off, draining and filling function			
Straight model	1 **3166** 01	1 **3166** 02	**RL - 4**
Bypass body for one-pipe systems with shut-off function			
Angle model	1 **3166** 11	1 **3166** 12	**RL - 1**
Connecting components for two-pipe systems with shut-off function, draining and filling function on both sides. Front operation			
Straight model	1 **3466** 01	1 **3466** 02	**RL - 4**
Angle model	1 **3466** 11	1 **3466** 12	**RL - 4**
Connecting components for two-pipe systems, with shut-off function on both sides, Front operation			
Straight model	1 **3766** 01	1 **3766** 02	**RL - 1**
Angle model	1 **3766** 11	1 **3766** 12	**RL - 1**
Connecting components for two-pipe systems, with shut-off function on both sides, Front operation			
Straight model	1 **3766** 31	1 **3766** 32	**ball**
Angle model	1 **3766** 51	1 **3766** 52	**ball**

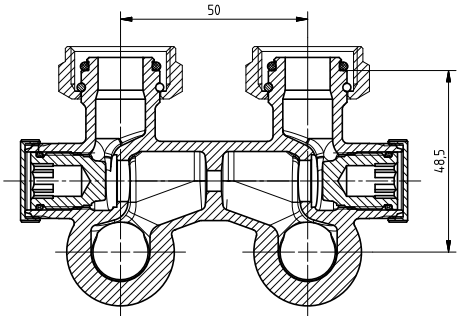
Single shut-off valves

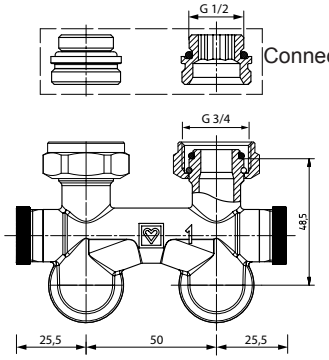
Radiator connection	G 3/4 with cone	R 1/2	G 3/4 with cone	R 1/2
Connection element	-	1 **6210** 21	-	1 **6210** 21
Pipe connection thread	G 3/4 with cone	G 3/4 with cone	Rp 1/2	Rp 1/2
Single shut-off valves with draining and filling function – RL 4				
Straight model	1 **3041** 01	1 **3437** 11	1 **3061** 01	-
Angle model	1 **3042** 01	1 **3448** 11	1 **3062** 01	-
Single shut-off valves with shut-off – RL 1				
Straight model	1 **3741** 01	-	1 **3761** 01	-
Angle model	1 **3742** 01	-	1 **3762** 01	-

☑ Bypass body for one-pipe systems with shut-off

☑ Bypass body in Angle model

Radiator-side free-moving nut, pipe-side external thread, G 3/4 for compression union





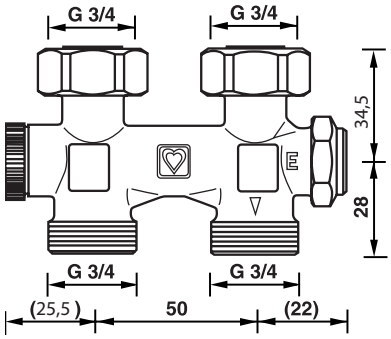
Connection nipples 1 **3002** 31

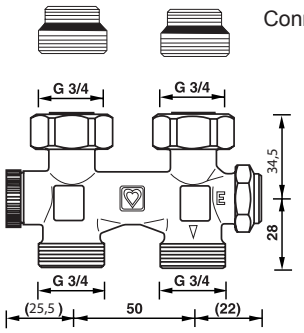
1**3166** 11	Radiator connection G 3/4 with cone	1 **3166** 12	Radiator connection G 1/2 connection nipples 1 **3002** 31 are included

☑ Bypass body for one and two-pipe systems with presetting, shut-off, draining and filling function

Bypass body in Straight model

Radiator-side free-moving nut, pipe-side external thread, G 3/4 for compression union



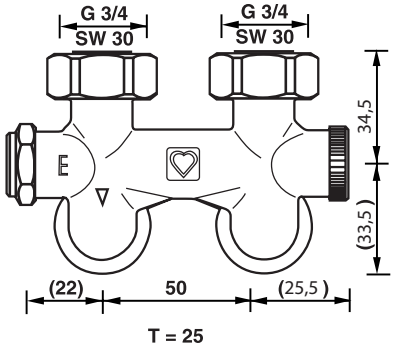


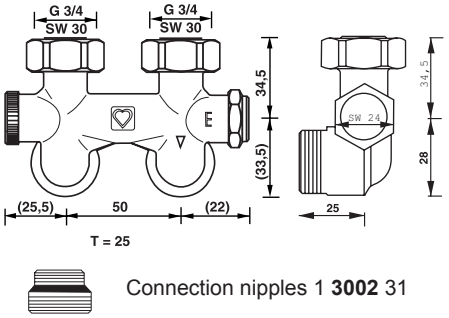
Connection nipples 1 **3002** 31

1 **3066** 01	Radiator connection G 3/4 with cone	1 **3066** 02	Radiator connection G 1/2 connection nipples 1 **3002** 31 are included

Bypass body in Angle model

Radiator-side free-moving nut, pipe-side external thread, G 3/4 for compression union



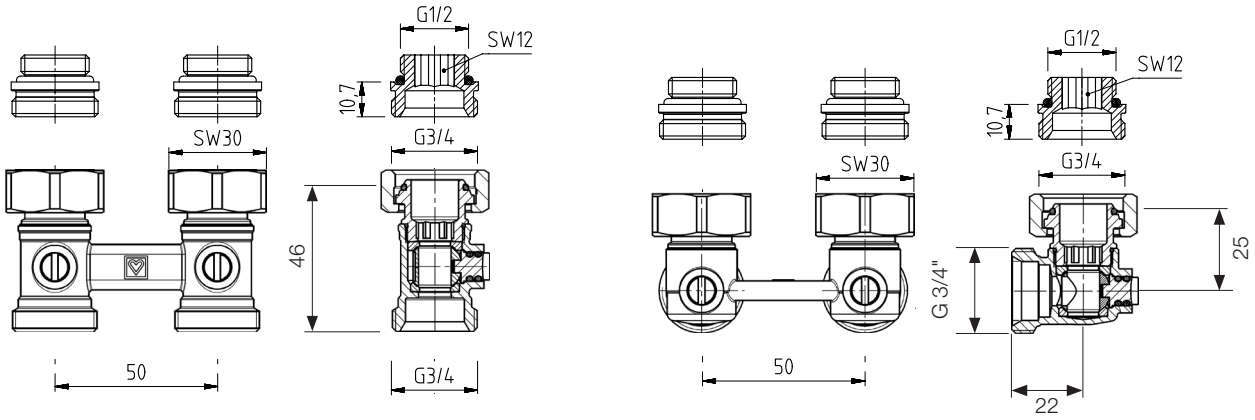


Connection nipples 1 **3002** 31

Left-side draining		Right-side draining	
1 **3066** 11	Radiator connection G 3/4 with cone	1 **3066** 21	Radiator connection G 3/4 with cone
1 **3066** 12	Radiator connection G 1/2; 2 Connection nipples 1 **3002** 31 are included	1 **3066** 22	Radiator connection G 1/2; 2 Connection nipples 1 **3002** 31 are included

Connecting components for two-pipe systems

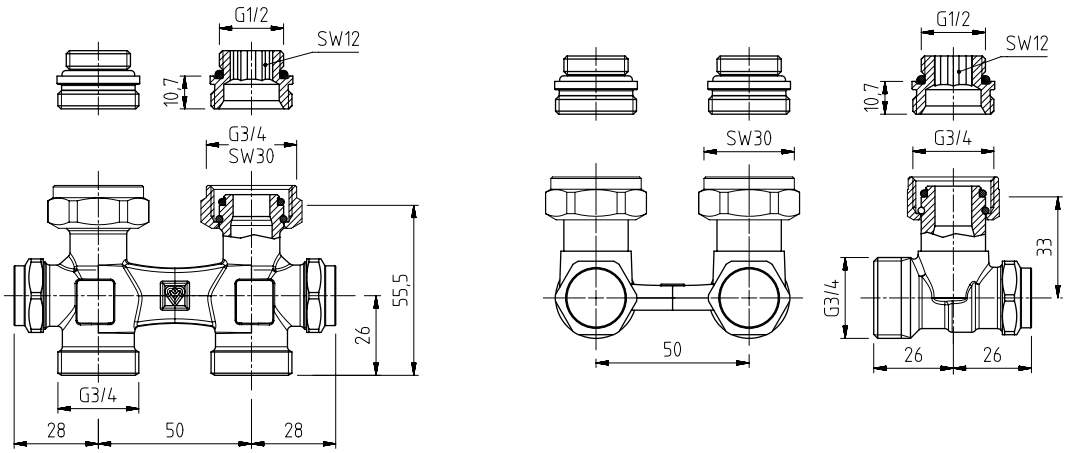
Radiator-side free-moving nut, pipe-side external thread, G 3/4 for compression union



Straight model		Angle model	
1 **3766** 31	Radiator connection G 3/4 with cone	1 **3766** 51	Radiator connection G 3/4 with cone
1 **3766** 32	Radiator connection G 1/2; 2 Connection nipples are included	1 **3766** 52	Radiator connection G 1/2; 2 Connection nipples are included

Connecting components for two-pipe systems, draining and filling function with on both sides

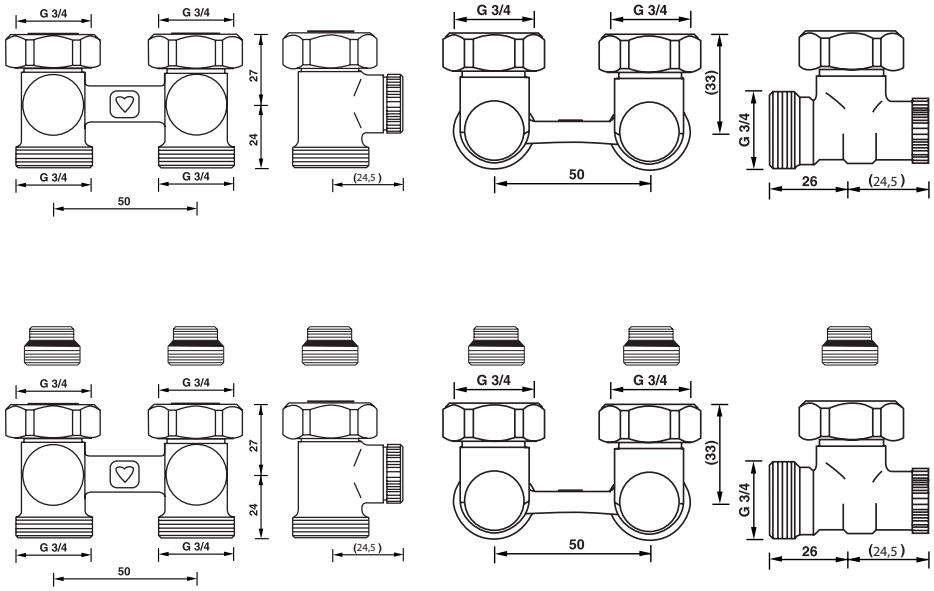
Radiator-side free-moving nut, pipe-side external thread, G 3/4 for compression union



Straight model		Angle model	
1 **3466** 01	Radiator connection G 3/4 with cone	1 **3466** 11	Radiator connection G 3/4 with cone
1 **3466** 02	Radiator connection G 1/2; 2 Connection nipples 1 **3002** 31 are included	1 **3466** 12	Radiator connection G 1/2; 2 Connection nipples 1 **3002** 31 are included

Connecting components for two-pipe systems, with on both sides Shut-off, Front operation

Radiator-side free-moving nut, pipe-side external thread, G 3/4 for compression union



Straight model		Angle model	
1 **3766** 01	Radiator connection G 3/4 with cone	1 **3766** 11	Radiator connection G 3/4 with cone
1 **3766** 02	Radiator connection G 1/2; 2 connection nipples 1 **3002** 31 are included	1 **3766** 12	Radiator connection G 1/2; 2 connection nipples 1 **3002** 31 are included

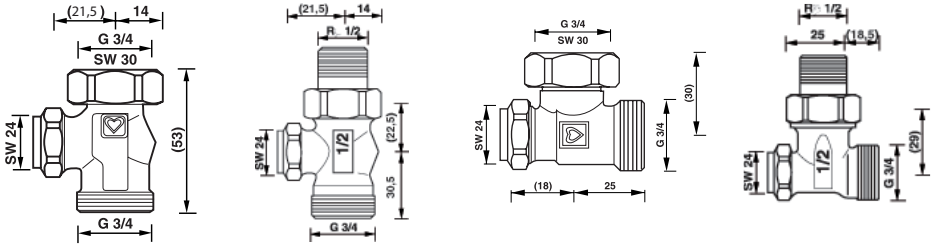
Intersection element, flexible X-shaped

The special connection is used as an adapter between the bypass body and/or connection element and piping to adapt the distance to the pipe or the radiator. Detailed information can be found in the standard specification sheet, “special connection”

Intersection element, flexible X-shaped		Intersection element, flexible X-shaped, with shut-off function for two-pipe systems	
1 **3004** 34	Intersection element, for pipe centre distance 50 mm, connection with cone seal G 3/4, with free-moving nut, radiator connection with G 3/4 external thread, with cone seal, for compression adapter.	1 **3404** 34	Intersection element, for pipe centre distance 50 mm, for shut off, filling and draining. Connection with cone seal G 3/4, with free-moving nut. Radiator connection with G 3/4 external thread, with cone seal, for compression adapter.

Single return valves with draining and filling function – RL 4

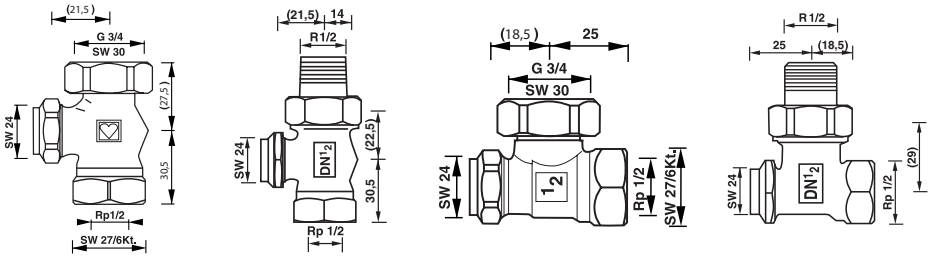
Pipe connection with external thread G 3/4 for compression union



Straight model		Angle model	
1 **3041** 01	Radiator connection G 3/4 with cone	1 **3042** 01	Radiator connection G 3/4 with cone
1 **3437** 11	Radiator connection, Rp 1/2, connection piece, 1 6210 21, mounted	1 **3448** 11	Radiator connection, Rp 1/2, connection piece, 1 6210 21, mounted

Single return valves with draining and filling function – RL 4 / RL 5

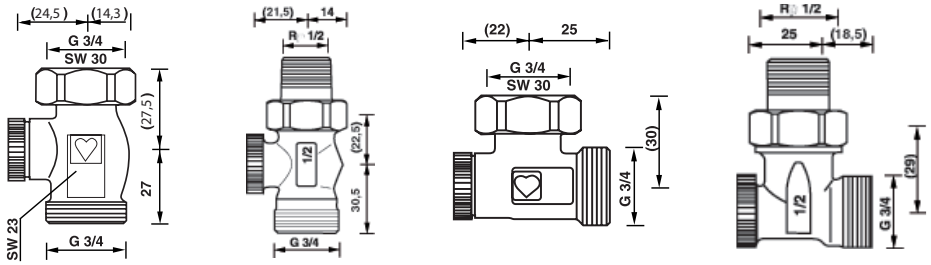
Radiator-side free-moving nut, pipe-side universal model with special sleeve, Rp 1/2



Straight model		Angle model	
1 **3061** 01	Radiator connection G 3/4 with cone	1 **3062** 01	Radiator connection G 3/4 with cone
1 **3923** 01	Radiator connection, Rp 1/2, connection piece, 1 6210 21, mounted	1 **3924** 01	Radiator connection, Rp 1/2, connection piece, 1 6210 21, mounted

Single shut-off valves with Shut-off – RL 1

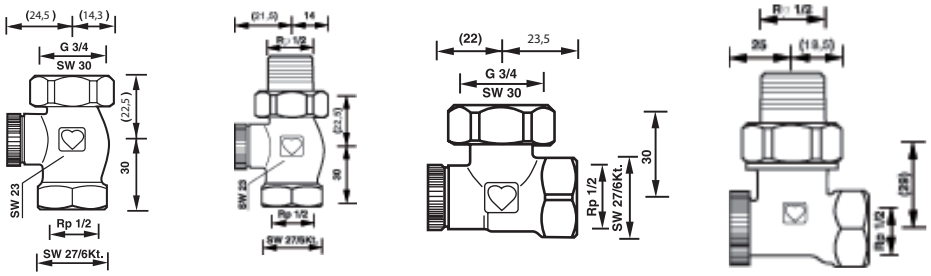
Pipe connection with external thread, G 3/4, for compression union



Straight model		Angle model	
1 **3741** 01	Radiator connection G 3/4	1 **3742** 01	Radiator connection G 3/4
1 3**733** 11	Radiator connection, Rp 1/2, connection piece, 1 6210 21, mounted	1 **3748** 01	Radiator connection, Rp 1/2, connection piece, 1 6210 21, mounted

Single return valves with shut-off function - RL 1

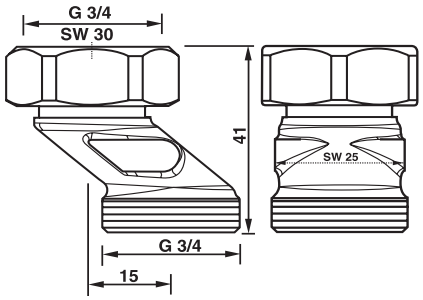
Radiator-side free-moving nut, pipe-side universal model with special sleeve, Rp 1/2

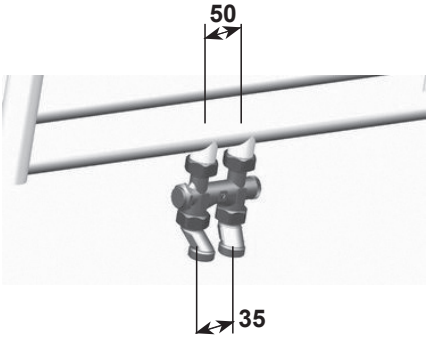


Straight model		Angle model	
1 **3761** 01	Radiator connection G 3/4 with cone	1 **3762** 01	Radiator connection G 3/4 with cone
1 **3723** 41	Radiator connection, Rp 1/2, connection piece, 1 6210 21, mounted	1 **3724** 41	Radiator connection, Rp 1/2, connection piece, 1 6210 21, mounted

Compensation adapter 1 **3004** 15

HERZ 3/4 compensation adapter to balance different pipe connections in 2-piece sets for installing bypass bodies and connection pieces with a pipe diameter of 50mm to pipe connections with a pipe diameter of 35mm or 40mm. 3/4 valve connection with cone, free-moving union nut, pipe connection external thread, 3/4 with cone





Accessories

1 **0256** 01 Hose connection adapter
1 **3003** 50 Spacer block for 50 mm pipe distance
1 **3004** 34 Special connection element, intersection element G 3/4
1 **6206** 01 Hose connection
1 **6615** 00 4 mm Allen key, SW 4
1 **6625** 00 Multi-purpose key
1 **6630** 01 Indicator, setting and checking key for radiator flow values
1 **6630** 02 Shut-off key
1 **6639** 01 Pre-setting key for HERZ-RL-5 return valves
1 **6680** 00 Assembly key for radiator connection, 1 6210 21

Spare parts

1 **3002** 31 2 connection nipples for radiator connection, Rp 1/2
1 **6302** 00 Upper part for bypass body, connection elements with draining function HERZ-RL-4 return valves

Design features

Mode of installation

Nickel-plated bypass bodies and single shutoff valves serve to connect radiators with integrated valves to the pipe with a shutoff function. Straight and angle models are available, permitting radiators to be connected to any pipe whether coming out of the wall or floor. Compression unions for pipe connection have to be ordered separately.

Field of applications

For water heating equipment in one or two pipe systems, used with steel, copper or plastic pipes, and threaded pipes, and have a R1/2 internal thread. The HERZ RL-5 and HERZ RL-1 return valves can be used.

Operating data

Maximum operating temperature 90 °C
Maximum operating pressure 10 bar
Heating water quality according to ÖNORM H 5195 or VDI guideline 2035.
Suitable for fluids in building services - hot water, etc . Ethylene and propylene glycol is to be used in a mixing ratio of 25 - 50 Vol. [%].

Compression unions for metal pipe
When using compression unions for steel and copper pipes the temperature and pressure information according to EN 1254-2:1998 table 5 must be taken into account.

Plastic pipe connections and press fittings
The plastic pipe connections are suitable for application categories 4 and 5 according to ISO 10508 (surface heating and radiator connection) and pipes made of PE-RT (DIN 4721), PE-MDX (DIN 4724), PB and PE-X (DIN 4726) as well as plastic/aluminium composite pipes (ÖNORM B 5157). The maximum temperature for this is 95 °C at 10 bar. The user must select the operating pressure P oper and operating temperature T oper for the given type of pipe by adhering to the standard values and permissible operating data of the pipe manufacturer. Deviations to these details are specially stated in the documents.

Special design features of the bypass bodies

The bypass bodies are factory set for one-pipe system at 40% of the amount of radiator water and can be altered at any time to suit another percentage (two-pipe system = 100%). Radiator-side there are two free-moving union nuts and flat seal connections fitted. There are two connection nipples (1 3002 12) for Rp 1/2 or two cone sleeves (1 3001 01) included.
The closed bypass body can be pre-mounted on the pipe-side, the equipment filled and pressure checked and the radiators put on after interior work is completed (painters, carpet) With the system under pressure the radiators can be emptied and removed.

Special features of the draining function

The straight bypass body can be mounted or turned by 180°. With the angle version there must be differentiation between the left and right model, because the draining function must always be connected to the low ports on the radiator. The radiator connection that can be used for filling and draining are all marked on the casing with the letter “E”. The access to the shut-off or draining is always parallel to the radiator axis.

Constructional special features of the single shut-off valves

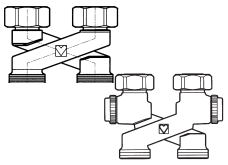
Single shut-off valves are used for two-pipe system if no bypass and/or rigid connection is required between the flow and return pipes or the radiator connection distance is other than 50 mm. With the shut-off valves too, the draining must always be carried out at the low ports of the radiator.

Installation on the radiator

The bypass bodies must be mounted, depending upon the radiator connection by using the 1 3002 12 (Rp 1/2) connection nipples, flat sealed, or with the cone sleeves 1 3001 01 on the radiator. Using the flat seal version of the connection pieces small tolerances can be allowed in the pipe separation. The free-moving nuts must be only moderately tightened using a spanner, SW 30, to protect the rubber seals The single shut-off valves are designed for metallic seals and are fitted for radiator connection G 3/4 with a free-moving hexagonal nut. The radiator connection of the valves for Rp 1/2 has O-ring seals and is easy to install with the assembly key ,1 6680 00. For pre installed bypass bodies and valves, the upper surfaces and union nuts should be protected and/or covered until they are connected to the radiator.
Preliminary standard DIN V3838 “Euro cone”, connecting thread, G 3/4 A with internal cone.
As the preliminary standard issued to date, DIN V3838, until the definitive standard can be altered, and also up to the point when all items offered correspond to the standard, a mix of products from different manufacturers for connecting fittings and compression adapters should be avoided for safety reasons if there is any doubt to their compatibility. HERZ offers a comprehensive range and guarantees that any current and future HERZ connections will always fit precisely, so that combination with other manufacturers’ products is not necessary. As HERZ cannot assume any guarantee for other manufacturers’ products, combining with other such products nullifies the guarantee.

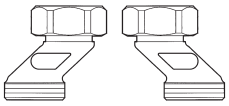
Intersection element, flexible X-shaped 1 **3004** XX, 1 **3404** 34

The special connection is also used as an adapter between bypass bodies and/ or connection piece and piping, to adapt the pipe distance or the distance to the radiators. Detailed information is available in the standard specification sheet “special connection”.



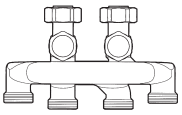
Balancing adapter 1 **3004** 15

HERZ balancing adapter, 3/4, to balance different pipe connections, in sets of 2. Used to connect bypass bodies and connection pieces with an average port separation of 50 mm to piping with a separation measurement of 35 or 40 mm.



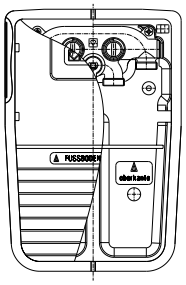
Double connection distributor 1 **3033** 01

HERZ symmetrical double connection distributor, for radiators with bottom connection. Radiator connection, G 3/4, with cone, free-moving nut. Pipe connection with external thread, G 3/4, for compression union connection. With shut-off, draining and filling functions. For pipe connection that avoids crossover.



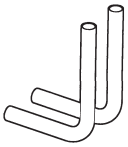
Reversing distributor 1 **3030** 01 **Switch-fix**

HERZ -Switch fix, reversing distributor for two-pipe system for appropriate flow and connection without crossover of radiator and piping. Flow and return of the heating can be reversed by means of adjusting spindle. The radiator connection can be shutoff. Delivery includes flush box and cover. Connection G 3/4 with cone seal to radiator. Radiator connection with external thread G 3/4, with cone seal, for compression adapter. Compression adapters have to be ordered separately. Connection G 3/4 to the radiator, pipe connection with external thread, G 3/4, for compression union connection. Compression unions can be ordered separately. Radiator connection with HERZ connection arch set 1 6333 00 made of copper piping 15 x 1 nickel-plated. Leg length 100 x 100 mm.



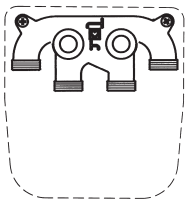
Connection elbow pipe set 1 **6333** 00

HERZ connection elbow pipe set for two-pipe system 100 x 100 mm lengths to connect HERZ connection sets and valve radiators. Copper pipe 15 x 1 nickel-plated, with 90 ° elbow 2 piece sets.
Compression unions for pipe connection can be ordered separately.



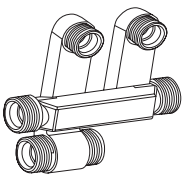
HERZ-Double Connection distributor for two-pipe system 1 **4133** 01

HERZ double connection distributor for two-pipe system for crossover-free radiator connection for flush installation. The radiator connection cannot be shut off. Supplied with flush box and covering plate. Radiator connection G 3/4 with cone. Pipe connection with external thread, G 3/4, for clamp connection. Compression unions can be ordered separately. Radiator connection with HERZ valve connection elbow set, 1 6332 00 made of copper pipe 15 x 1 nickel-plated. Valves can be shut-off and emptied. Leg length 150 x 150 mm.



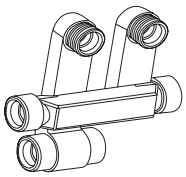
Skirting board connection set 1 **3031** 00

HERZ- skirting board- connection set for compression adapter, brass nickel-plated for valve and compact radiators. Compression union connections radiator-side M 22 x 1.5, pipe-side external thread G 3/4. Compression unions to be ordered separately. Radiator connection with valve connection elbow set, 1 6332 00 made of copper pipe 15 x 1 nickel-plated. Valves have shut off and draining function. Leg length 150 x 150 mm.



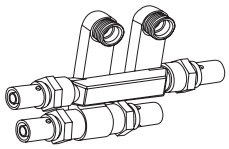
Skirting board connection set 1 **3031** 01 till 1 **3031** 02

HERZ skirting board connection set for soldering connection, brass nickel-plated, for valve and compact radiators. Compression union connections on the radiator-side, M 22 x 1.5, pipe-side soldered sleeve, 18 mm (3 S333 18) or interior / exterior soldered 15/22 x 1 mm (3 S333 20). Compression unions can be ordered separately. Radiator connection with valve connection elbow set, 1 6332 00, made of copper pipe 15 x 1 nickel-plated. Valves have shut off and draining function. Leg length 150 x 150 mm.



Skirting board connection set 1 **3032** 01 till 1 **3032** 06

HERZ skirting board connection set for press connection. Brass nickel-plated, for valves and compact radiators. Compression union connections on the radiator-side, M 22 x 1.5, pipe-side press connection, 14 x 2 - DN 20 x 2.5. Compression unions can be ordered separately. Radiator connection with valve connection elbow set, made of copper pipe 15 x 1 nickel-plated. Valves have shut off and draining function. Leg length 150 x 150 mm.

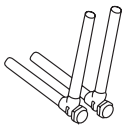


Connection nipples 1 **3002** 39

Connection nipple, cone sealed, in 2-piece sets, direct radiator connection, Rp 1/2, hexagonal self sealing O-ring-seal, valve connection, G 3/4, with cone.

Valve connection elbow set 1 **6332** 00

HERZ valve connection elbow set for connection of HERZ connection set and radiator with integrated valves. Valves have shut off and draining function. Copper pipe 15 x 1 nickel-plated, soldered, compression unions can be ordered separately. 2 piece leg lengths 150 x 150 mm.

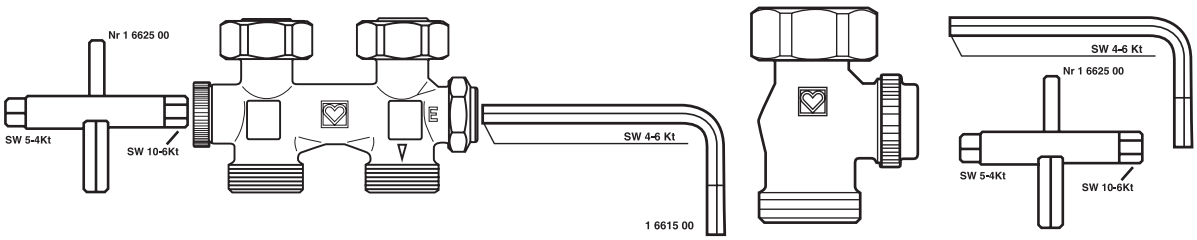


Installation of the compression union to the piping

When installing the compression unions no adjustable wrenches or similar tool should be used as this may lead to distortion of the union nut. Steel and copper pipes must be cleanly calibrated and deburred, and the use of support sleeves is recommended. The thread of the union nut should be oiled with silicone oil during installation, but mineral oils damage the O-ring of the clamping rings. The installation instructions included with the compression unions must be taken into account. Remove the covering caps.

Radiator draining

Turn the shut-off clockwise until it meets resistance as follows:



Fill and drain adapter, 1 0256 01, with hose connection, 1 6206 01, unscrew on the “E” side of the bypass body and place a vessel under the end.

Open the draining function using a multi-purpose key, SW 10/hexagonal (1 6625 00).
Note: Before re-filling with water, shut off the radiator!

Dismantling the radiator

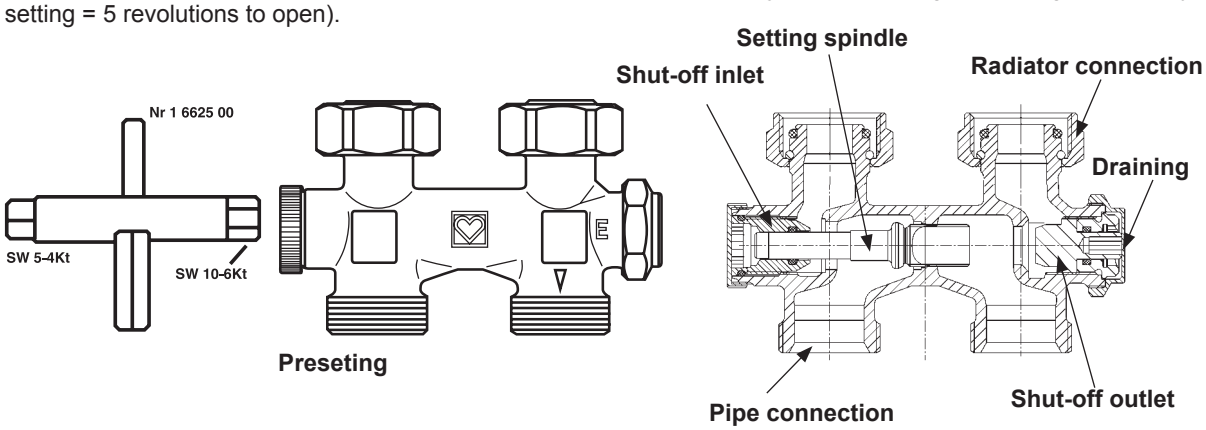
After draining is completed, close the upper part on the “E” side or valve upper part of the shut-off valve and release the union nuts. The radiator can be removed.

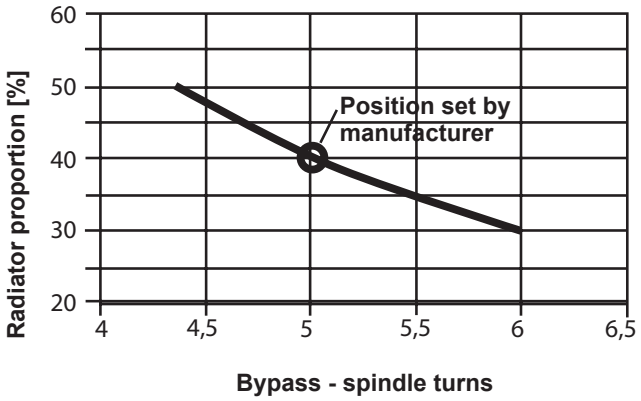
Choice of valve radiators

The bypass bodies can be used for all valve radiators with an average distance of 50 ±1.5 mm with connection threads G 3/4 or Rp 1/2.
Using the single shut-off valves, as well as the above mentioned radiators, all valve radiators with 45 mm average distance for two-pipe equipment can also be connected.

Bypass body – Setting the radiator flow amount

The adjustment of the radiator part and/or changeover to two-pipe operation in the bypass bodies can also be done by removing the covering cap with the interior hexagonal key, SW 4 (1 6615 00) on the access opening opposite the “E” side (no covering cap). Turn the adjustment spindle clockwise until it meets resistance = two-pipe operation. In a anti-clockwise direction the radiator proportion can be adjusted according to the diagram (factory setting = 5 revolutions to open).





Brass

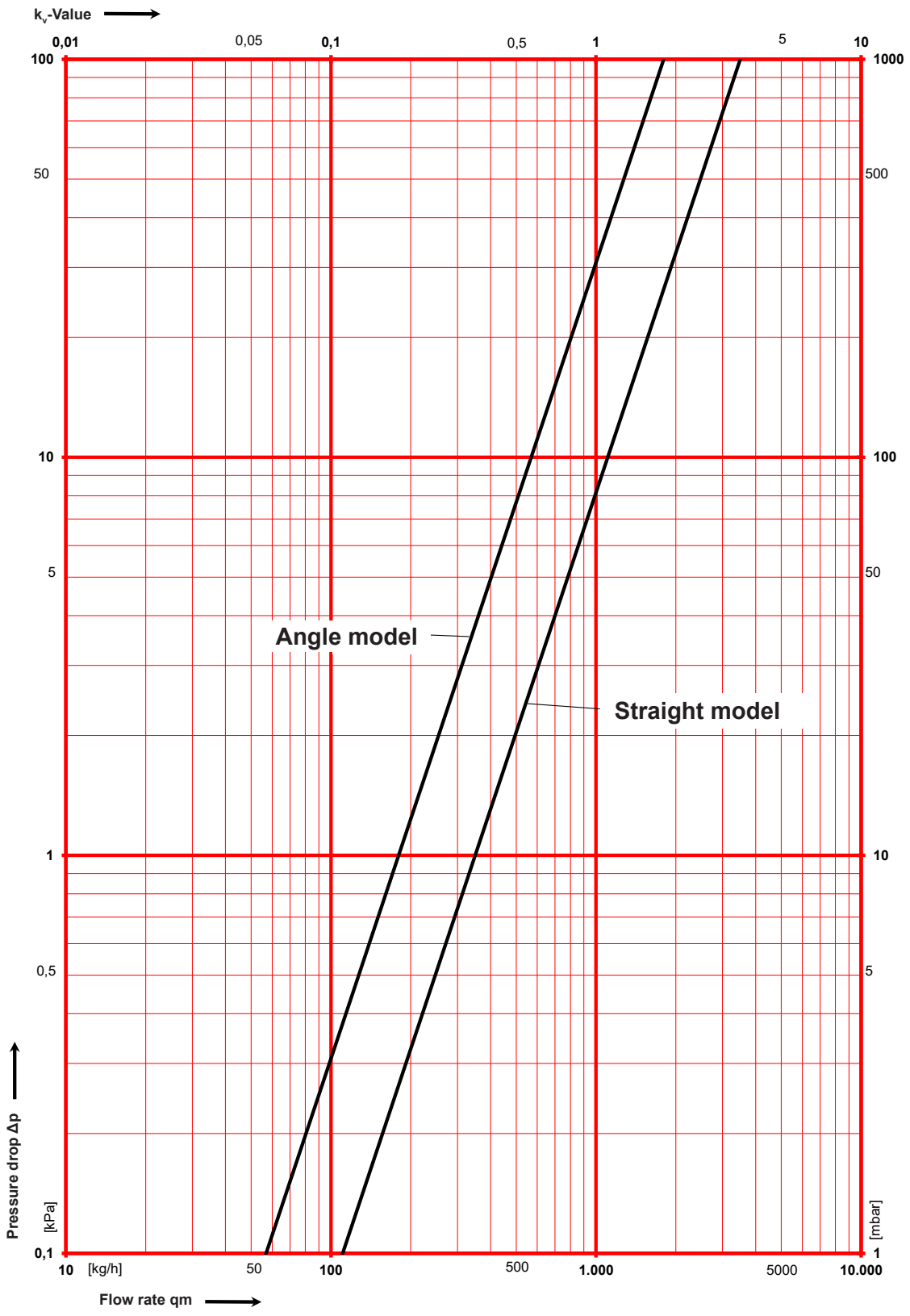
HERZ uses top-quality brass.
Pursuant to Article 33 of the REACH Regulation (EC No. 1907/2006), we are obliged to point out that the material lead is listed on the SVHC list and that all brass components manufactured in our products exceed 0.1% (w / w) lead (CAS: 7439-92-1 / EINECS: 231-100-4). Since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

Disposal instruction

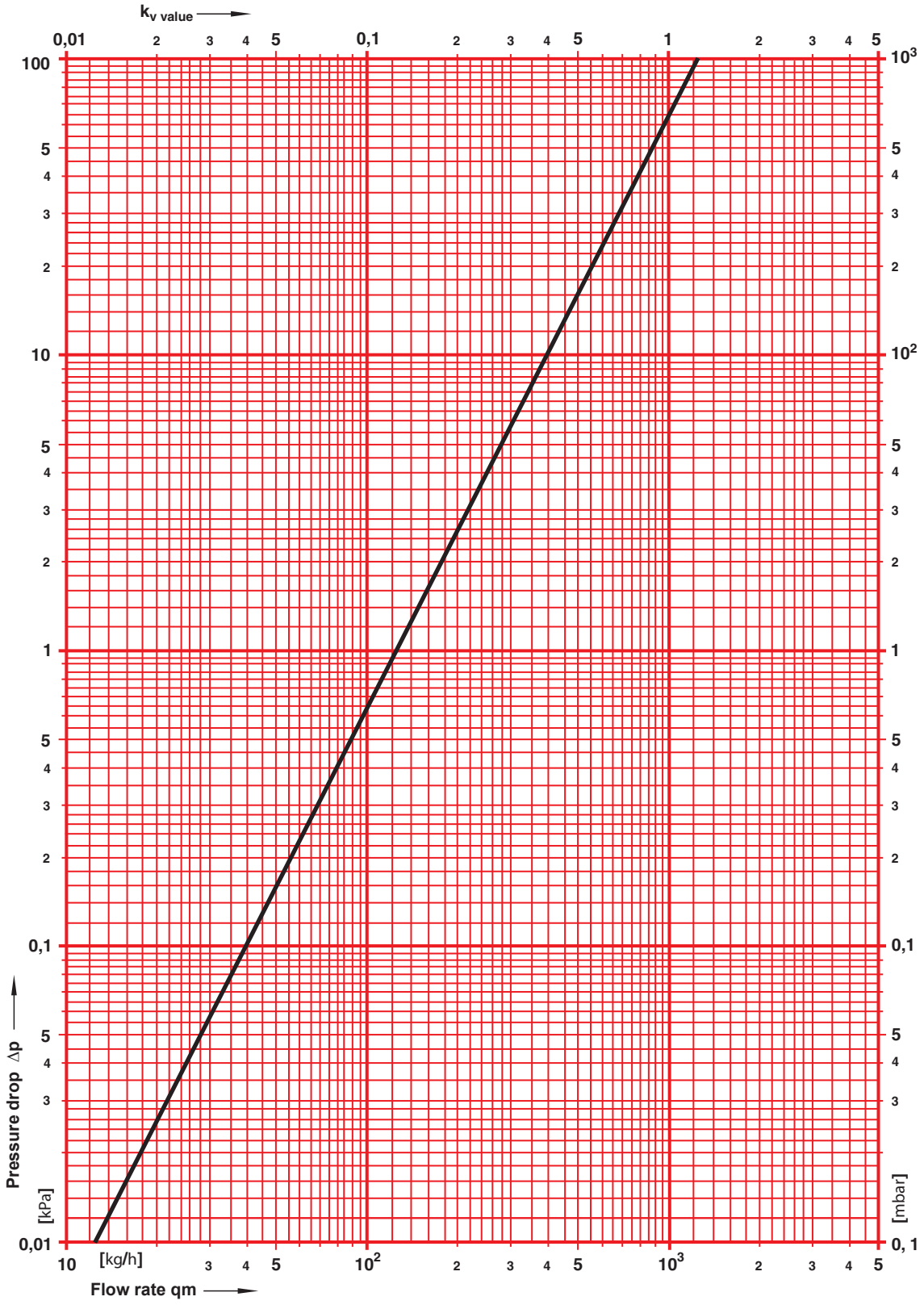
The disposal of HERZ - 3000 connection system for radiators must not endanger the health or the enviroment. National legal regulations for proper disposal of the HERZ - 3000 connection system for radiators have to be followed.

Please note: all diagrams are indicative in nature and do not claim to be complete. All specifications and statements within this document are according to information available at the time of printing and meant for informational purpose only. Herz Armaturen reserves the right to modify and change products as well as its technical specifications and/or it functioning according to technological progress and requirements. It is understood that all images of Herz products are symbolic representations and therefore may visually differ from the actual product. Colours may differ due to printing technology used. In case of any further questions don’t hesitate to contact your closest HERZ Branch-office.

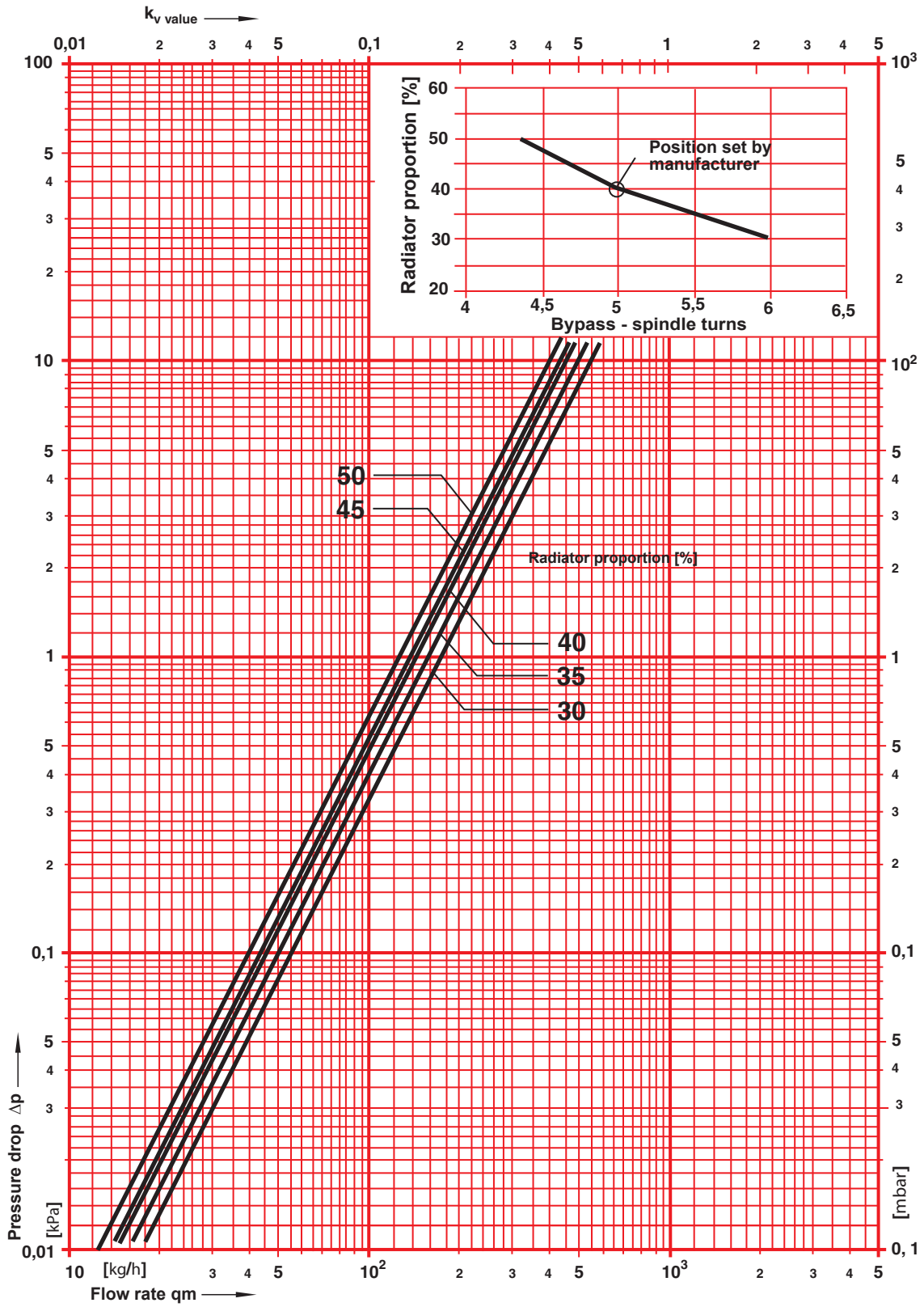
HERZ - Standard diagram	HERZ-3000
Art. Nr.: 1 **3766** 31; 1 **3766** 51; 1 **3766** 32; 1 **3766** 52	



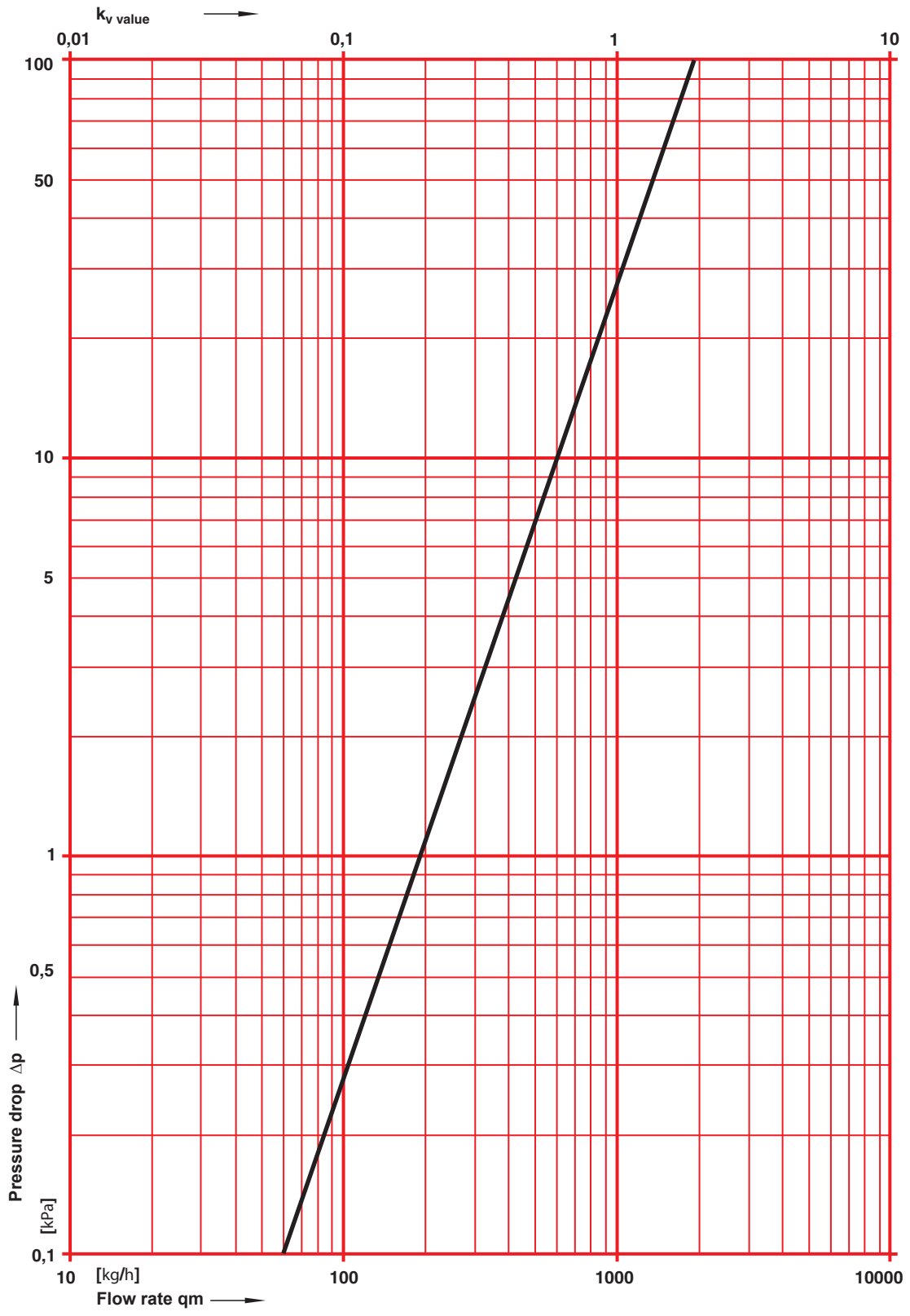
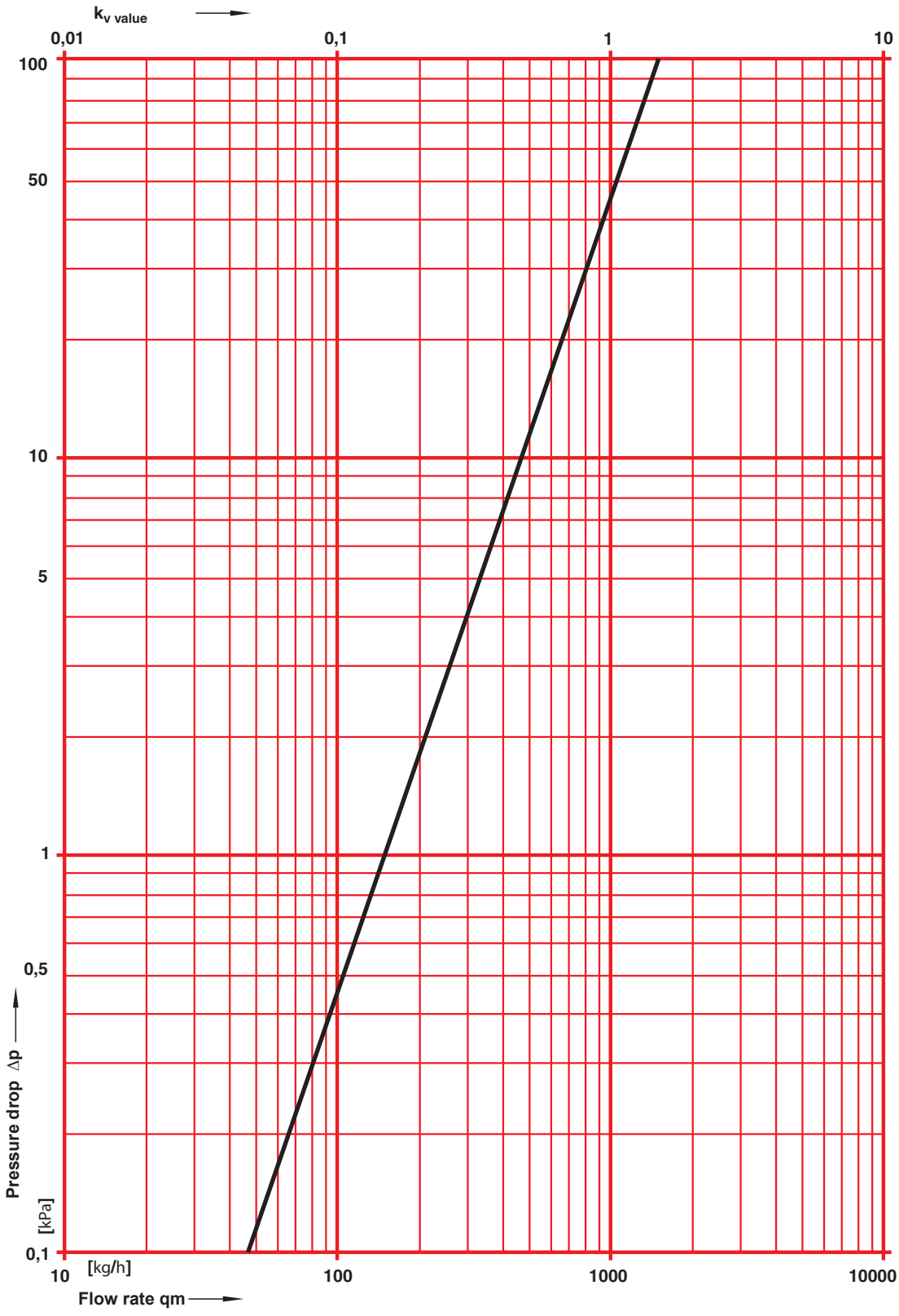
HERZ - Standard diagram	HERZ-3000 Two-pipe systems
Art. Nr.: 1 **3066** 01, 1 **3066** 11, 1 **3066** 21, 1 **3066** 02, 1 **3066** 12, 1 **3066** 22	



HERZ - Standard diagram	HERZ-3000 One-pipe systems
Art. Nr.: 1 **3066** 01, 1 **3066** 11, 1 **3066** 21, 1 **3066** 02, 1 **3066** 12, 1 **3066** 22	



HERZ - Standard diagram	HERZ - RL-1
Art. Nr.: 1 **3766** 01, 1 **3766** 11, 1 **3766** 02, 1 **3766** 12	



HERZ - Standard diagram	HERZ-RL-4
Art. Nr.: 1 **3466** 01, 1 **3466** 11, 1 **3466** 02, 1 **3466** 12