

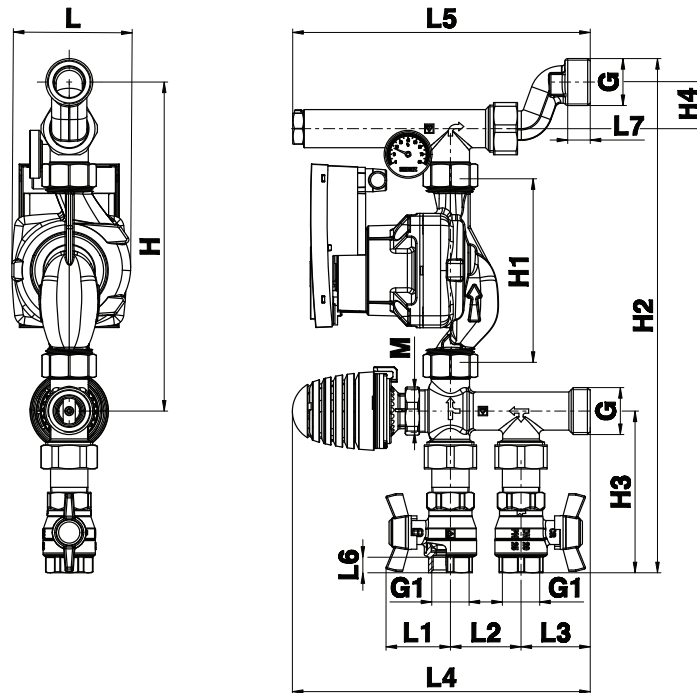
HERZ - Pump group for radiant heating systems

Datasheet for 3 F532 3X
Issue 0322

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Dimensions in mm


Order number	M* [mm]	G* [in]	G1** [in]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	Weight [kg]	Model	Set point range
3 F532 34	M30 x 1.5	1	3/4	233 ⁰ _{.66}	130	364	117	33	84	45.6	50	49	210	210	11	20	4.8	with pump	20-50 °C
3 F532 36	M30 x 1.5	1	3/4	/	/	/	117	33	/	45.6	50	49	210	210	11	20	3.2	without pump	20-50 °C
3 F532 37	M30 x 1.5	1	3/4	233 ⁰ _{.66}	130	364	117	33	84	45.6	50	49	210	210	11	20	4.8	with pump	40-70 °C

*External thread **Internal thread

Material and construction

Mixing valve body:	forged brass acc. to EN 12165
Spacer body:	forged brass acc. to EN 12165
Holland connector:	forged brass acc. to EN 12165
Eccentric piece:	casted brass acc. to EN 1982
Gaskets:	EPDM
Non-return valve body:	POM
Measuring range of thermometers:	0 - 80 °C
External threads:	acc. to ISO 228-1
Internal thread:	acc. to ISO 7-1
Contact thermostat:	Afriso GAT/7HC
Thermostatic head:	1 9420 88 (20 °C - 50 °C) / 1 9421 98 (40 °C - 70 °C)
Pump:	3 F532 34 / 3 F532 37 - WILO PARA 15-130/6-43/SC 3 F532 36 - without pump

Field of application

Pump group is used in high-temperature heating systems when there is a need to warm up low-temperature heating system - radiant heating (floor / wall heating). The set consists of mixing valve with thermostatic head, non-return valve, spacer, immersion sleeve, contact control thermostat, two holland connectors and two ball valves with holland connectors. Mixing set controls secondary heating circuit by which it controls the temperature in room (depending on the needs). Supply flow temperature can be regulated to a constant value or according to the needs of the user.

Assembly

Pump group for underfloor heating can be mounted directly on high – temperature heating system. The mounting position is arbitrary. By using the connectors with free moving nut we can mount the mixing set directly to the distributors for floor heating systems. Connections on the pump are not completely screwed in, as the installer can adjust the position of the pump to its needs. After assembly, the installer must check connections on the pump for water tightness. In case there are impurities in the medium (hard water, dust, etc.) it must be installed a filter, otherwise impurities may damage the valve seals. Included contact thermostat Afriso GAT / 7HC protects the system from overheating. Authorized installer set the max. temperature on the outlet and mounts the contact thermostat on the upper mixing unit (position 6 on components picture, page 3).

Brass

HERZ use top-quality brass that responds to the latest European norms DIN EN 12164 and DIN EN 12165. Parts of the pump group Simple are made from brass due to its good strength and excellent corrosion resistance.

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.

☑ Maintenance

According to EN 806-5 (point 6. Operation) valves must always be in their fully opened or closed position and actuated at regular intervals to ensure they remain operational. Therefore HERZ Ball valves should be closed and opened periodically at least twice a year. This prevents the ball valve from blocking, reduces sediment deposition and reduces the possibility of corrosion inside the valve.

☑ Disposal instructions

The disposal of HERZ - Pump group must not endanger the health or the environment. National legal regulations for proper disposal of the HERZ - Pump group have to be followed.

☑ Operating data

Nominal pressure: 6 bar
 Max. operating temperature: 110 °C (suggested max. 50 °C)
 Min. operating temperature: 2 °C
 kvs -AB-A: 5.0
 kvs -AB-B: 3.8
 Stroke of the mixing valve: 3.7 mm
 Pressure difference between circuits: $\Delta p_{\text{primary c}} > p_{\text{secondary c}}$

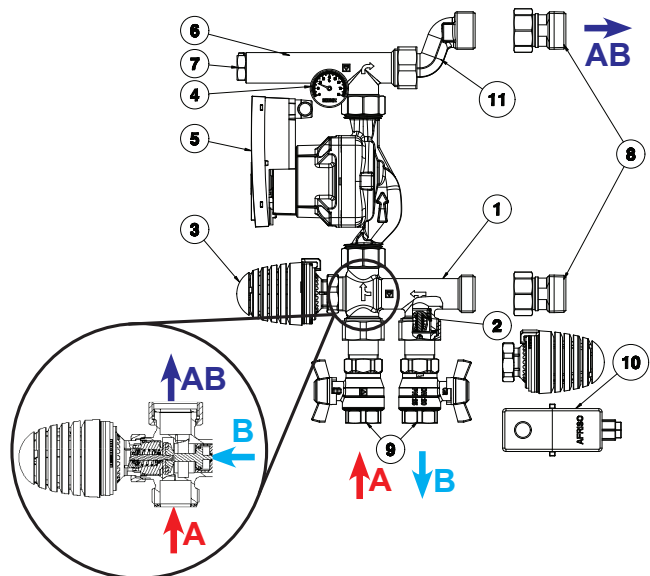
Medium:

Heating water according to ÖNORM H5195 or VDI- Standard 2035. The use of ethylene, or propylene glycol in a mixing ratio 25- 50% is allowed. EPDM gaskets can be affected by Mineral oils lubricants and thus lead to failure of the EPDM seals. Please refer to manufacturers documentation when using ethylene glycol products for frost and corrosion protection.

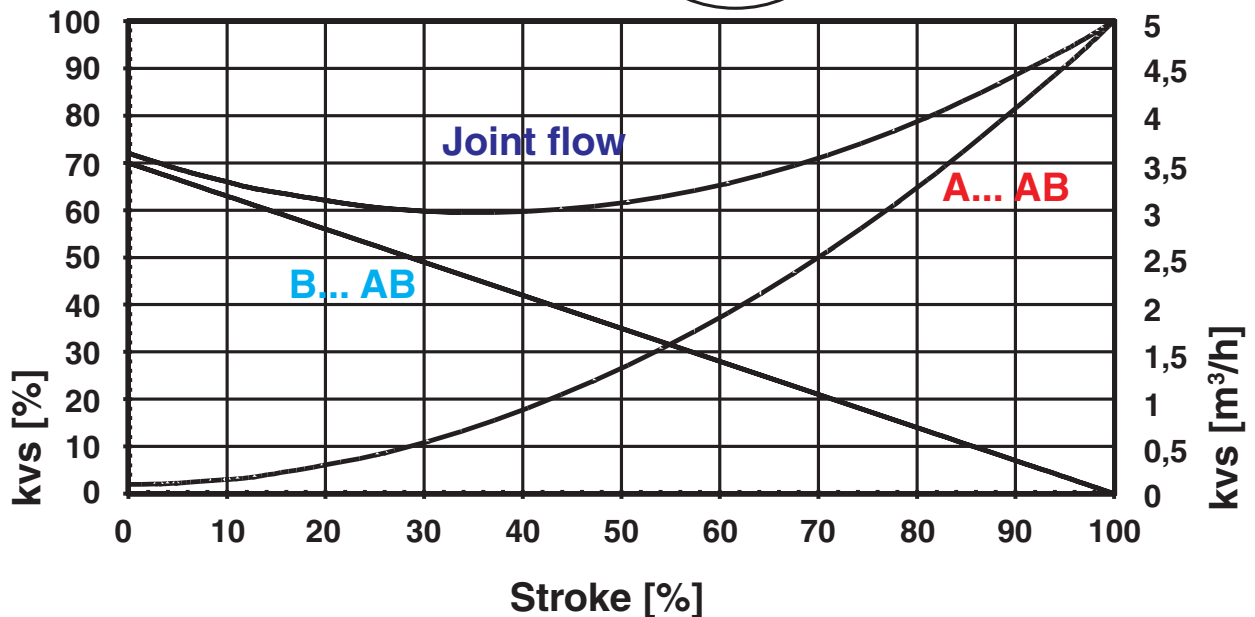
☑ Components and labels of HERZ Pump group

1. Mixing valve
2. Non-return valve
3. Thermostatic head 1 9420 88 / 1 9421 98
4. Termometer of inlet flow
5. Circulation pump Wilo PARA 15-130/6-43/SC (3 F532 36 - space for pump)
6. Spacer
7. Immersion sleeve
8. Connectors with free moving nut
9. Ball valves
10. Contact control thermostat
11. Eccentric connector

*each set contains 4 additional pcs of EPDM gaskets for flat sealing, 2 connectors with free moving nut.



☑ Mixing valve characteristic

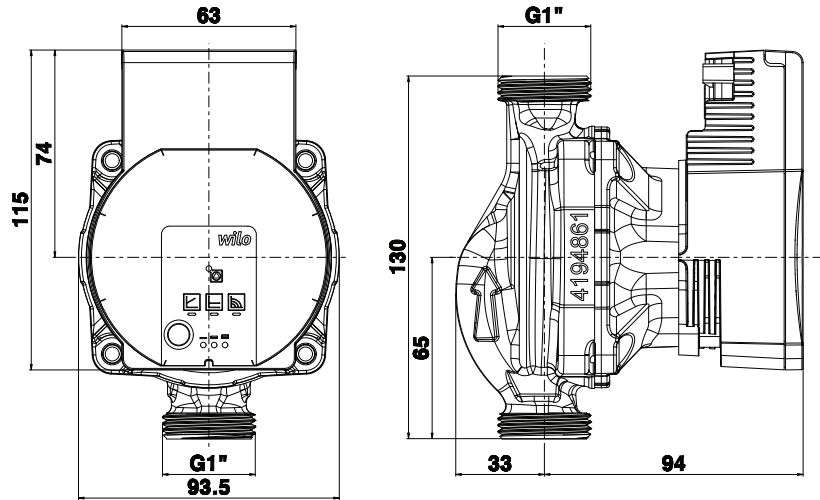


HERZ - Pump group

Circulation pump used in HERZ - Pump group

General information

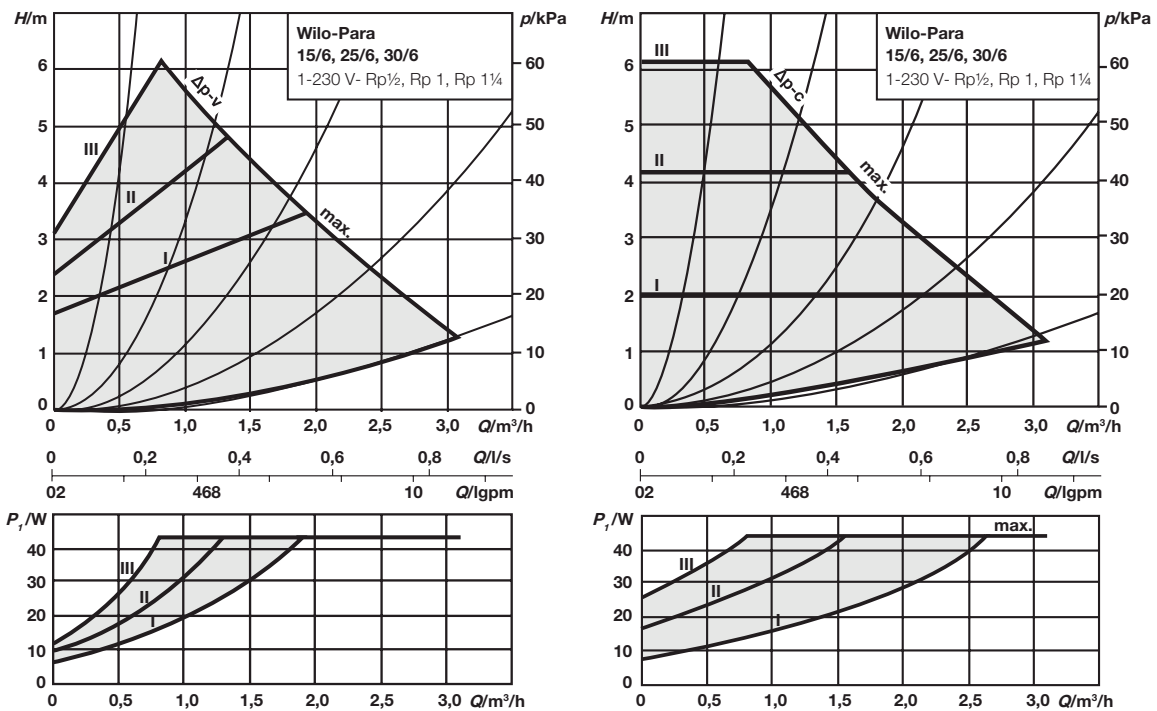
☑ Pump dimensions



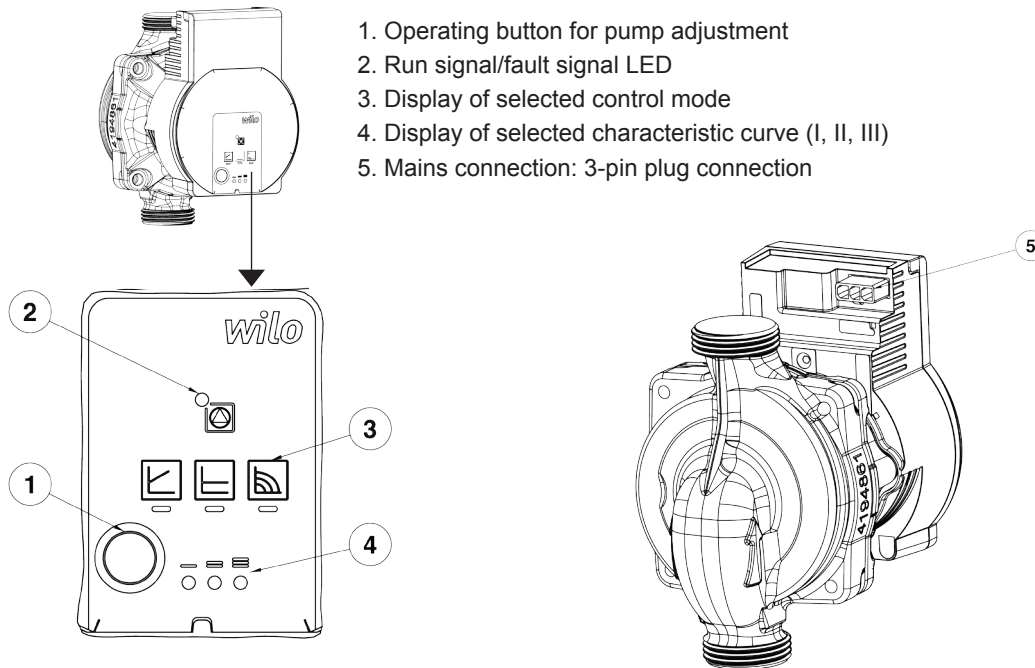
☑ Pump data

Type:	WILO PARA 15-130/6-43/SC
Thread:	G 1"
Overall length:	130 mm
Energy Efficiency Index (EEI):	≤ 0,20
Max. delivery head:	6.7 m
Max. volume flow:	3.2 m³/h
Max. operating temperature:	100 °C
Maxi. operating pressure:	10 bar
Mains connection:	1~230 V +10%/-15%, 50/60 Hz (IEC 8 standard voltage)
Protection class:	IPx4D
Insulation class:	F
Minimum suction head at suction port to avoid cavitation at water pumping temperature	
Minimum suction head at 50/95 °C: 0.5 / 4.5 m	

☑ Pump hydraulic operation area



Product description



1. Operating button for pump adjustment
2. Run signal/fault signal LED
3. Display of selected control mode
4. Display of selected characteristic curve (I, II, III)
5. Mains connection: 3-pin plug connection

Indicator lights - LEDs



- Signal display
 - LED is lit up in green in normal operation
 - LED lights up/flashes in case of a fault
- Display of selected control mode $\Delta p-v$, $\Delta p-c$ and constant speed
- Display of selected pump curve (I, II, III) within the control mode
- LED indicator combinations during the pump venting function, manual restart and key lock

Commissioning

Commissioning only by qualified technicians.



The pump attempts an automatic restart upon detecting a blockage. If the pump does not restart automatically:

- Activate manual restart via the operating button: press and hold for 5 seconds, then release.
- The restart function is initiated, and lasts max. 10 minutes.
- The LEDs flash in succession clockwise.
- To cancel, press and hold the operating button for 5 seconds.

NOTICE
After the restart, the LED displays shows the previously set values of the pump.

☑ Venting



Fill and vent the system correctly. If the pump does not vent automatically:

- Activate the pump venting function via the operating button: press and hold for 3 seconds, then release.
 - The pump venting function is initiated and lasts 10 minutes.
 - The top and bottom LED rows flash in turn at 1 second intervals.
- To cancel, press and hold the operating button for 3 seconds.



NOTICE

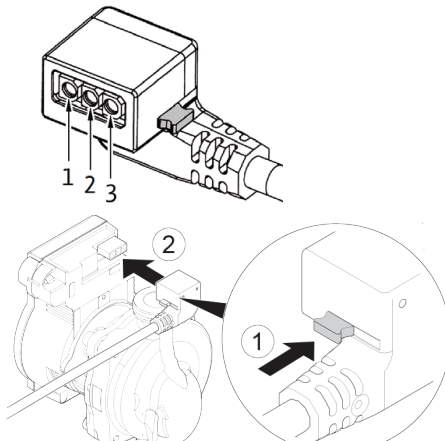
After the restart, the LED displays shows the previously set values of the pump.

☑ Electrical connection

May only be installed by qualified technicians.

- The current type and voltage must correspond to the specifications on the rating plate.
- Maximum back-up fuse: 10 A, slow-blow.
- Only operate the pump with sinusoidal AC voltage.
- Note the switching frequency:
 - On/off switching operations via mains voltage $\leq 100/24$ h.
 - $\leq 20/h$ for a switching frequency of 1 min. between switching on/off via mains voltage.
- The electrical connection must be made via a fixed connecting cable equipped with a connector device or an all-pole switch with a contact opening width of at least 3 mm.
- Use a connecting cable with sufficient outer diameter (e.g. H05VV-F3G1.5) to protect against leaking water and to ensure strain relief on the threaded cable connection.
- Use a heat-resistant connecting cable where fluid temperatures exceed 90 °C.
- Ensure that the connecting cable does not make contact with either the pipes or the pump.

☑ Connecting the mains cable



- Cable assignment:
 - 1 yellow/green: PE
 - 2 blue: N
 - 3 brown: L

- Press down the locking button of the 3-pin pump plug and connect the plug to the plug connection of the control module until it snaps into place.

☑ Intended use

High-efficiency circulators in the Wilo-Para series are exclusively intended for circulating fluids in hot-water heating systems and similar systems with constantly changing volume flows.

Permitted fluids:

- Heating water according to VDI 2035 (CH: SWKI BT 102-01) or ÖNORM H 5195.
- Water-glycol mixtures* with a maximum of 50% glycol.

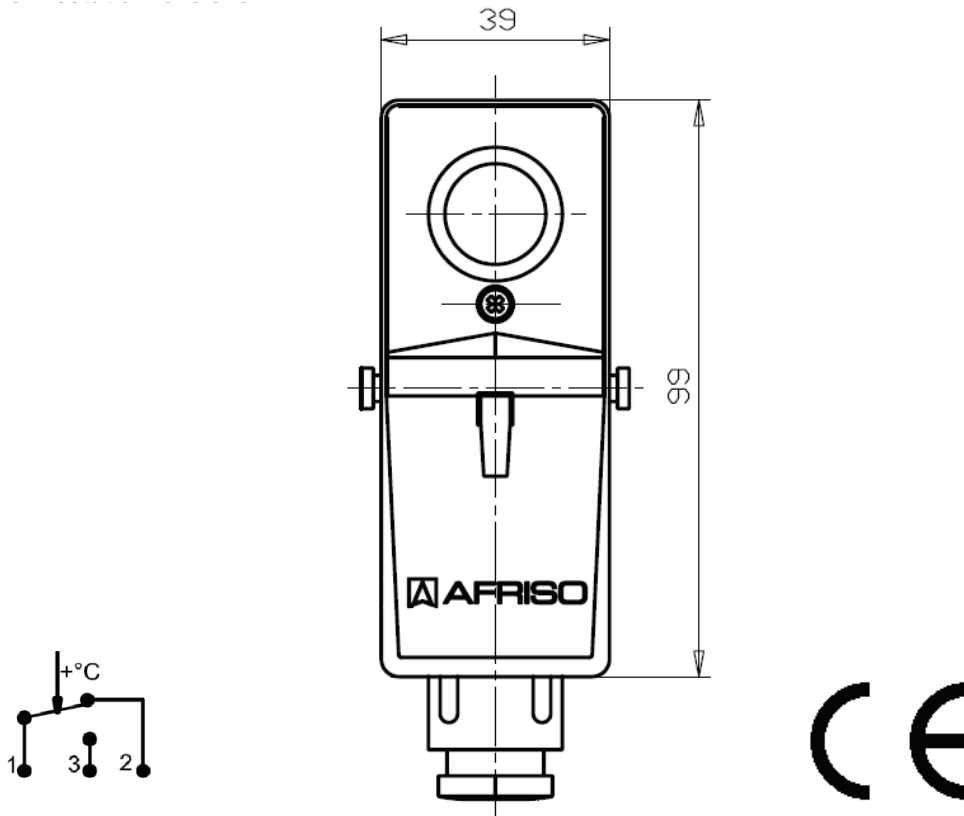
*Glycol has a higher viscosity than water. If admixtures of glycol are used, the pumping data of the pump must be corrected to match the mixing ratio. Intended use includes observing these instructions and the specifications and markings on the pump.

HERZ - Pump group

Contact thermostat used in HERZ - Pump group

General information

☑ Contact thermostat dimensions



☑ Contact thermostat data

Type:	Afriso GAT / 7HC
Application:	contact thermostat for use in heating, air conditioning, ventilation, with clamping tape for mounting on pipes from 16 mm to max. 100 mm diameter
Setting range:	20/90 ° C - temperature adjustable from inside the housing
Switching differential:	Δt 8 K \pm 2 K
Sensor element:	bimetal
Switching contact:	changeover contact, NC16 (2,5) A 250V AC, NO 2,5A 250 V AC V
Housing:	base plate galvanized steel, upper part gray plastic
Max. Temperature:	85 ° C on the housing
Protection class:	IP 20
Cable entry:	screw connection M20x1.5
Conformity:	CE marking, EU directives 2014/35 / EU (LVD), 2014/30 / EU (EMC), 2011/65 / EU (RoHS)

☑ Safety instructions:

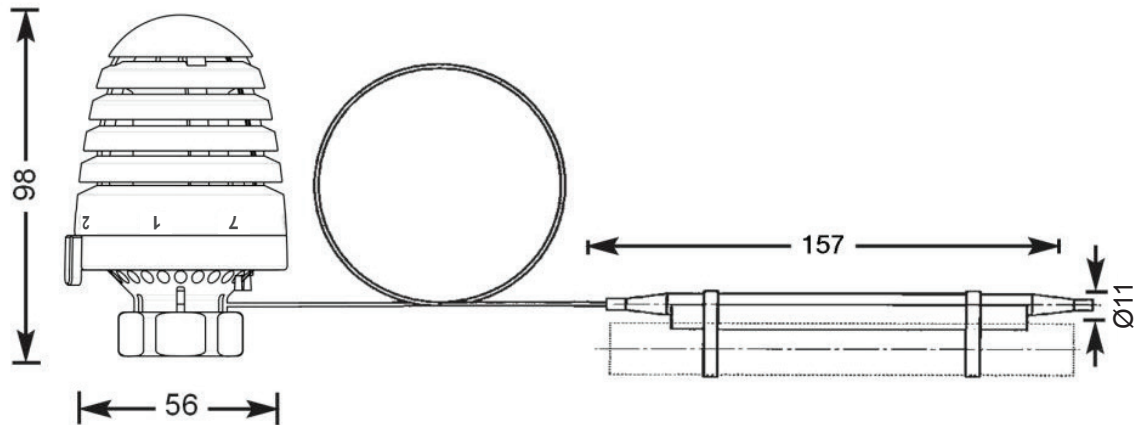
There is a risk of electric shock, injury or death. Installation, commissioning, repair and decommissioning are carried out by qualified persons in accordance with the statutory provisions. Work on electrical parts may be carried out only by a qualified electrician. From the power supply disconnect device before removing the cover of the unit or if the cover is damaged. Never touch live parts! Check the heat resistance of the pipes. Dispose of the appliance in the household waste. Device disposal according to local regulations (electrical equipment).

HERZ - Pump group

Thermostats with Contact Sensor used in HERZ - Pump group

General information for 9420 / 9421

☑ Contact thermostat dimensions



☑ Operating Data

Order numbers	1 9420 88	1 9421 98
Handwheel colour	white	white
Set point range	20 - 50 °C	40 - 70 °C, blocked at 45 °C
Capillary tube length	~ 2000 mm	~ 500 mm
Max. differential pressure	0.75 bar for low-noise operation should not exceed 0.2 bar	
Hysteresis	0.3 K	
Heating medium temperature influence	0.15 K / 10 K	
Over-temperature protection	10 K over full scale value	

☑ Field of application:

HERZ-Thermostat with floor thermostat, consisting of thermostat with liquid sensor (hydrosensor), capillary tube and tube probe (M30 x 1.5). It can be mounted on all HERZ valves, which are designed for thermostatic operation.

☑ Installation instructions:

1. Unscrew the screw cap or hand drive from the thermostatic valve lower part.
2. Fully open the thermostatic head, place the union nut on the valve. Turn the thermostatic head so that the handwheel scale is easy to read.
3. Tighten the union nut moderately with the SW 30 wrench.
4. Check operation by turning the handwheel and adjust the thermostat to the desired temperature.

☑ Contact sensor

The contact sensor is plugged into a diving sleeve of the Pump group. Proper heat transfer must be ensured.

☑ Setting of the thermostats with Contact Sensor

The desired temperature limitation can be achieved by following temperature values. Some deviations of temperature (K) can occur depending on the type of installation and the system design.


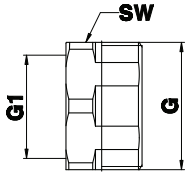
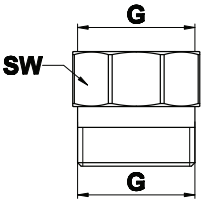
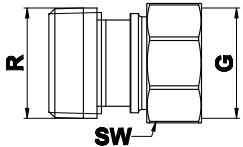
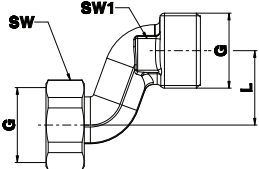
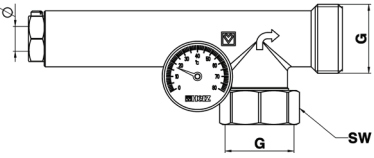
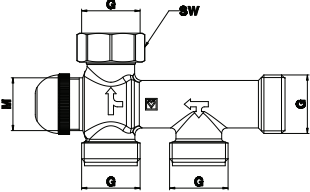
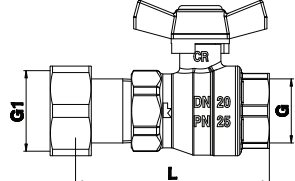
1 9420 88

Skale	1	2	3	4	5	6	7
~ °C	20	25	30	35	40	45	50

1 9421 98

Skale	1	2	3	4	5	6	7
~ °C	40	45	50	55	60	65	70

Spare parts

Sketch	Description	Article Nr.	Pcs.
	<p>Thermometer</p> <p>0 - 80 °C</p>	1 6383 01	1
	<p>Adapter 1" - G1-1/4"</p> <p>It is used for connecting the Pump group with the floor heating distributor.</p> <p>G = 1" G1 = 1- 1/4" SW = 41</p>	1 6383 08	2
	<p>Adapter G 1"</p> <p>It is used for floor heating manifolds where the wheelbase is (H) 220 mm.</p> <p>G = 1" SW = 36</p>	1 6383 04	1
	<p>Connector with free moving nut G1" - R1"</p> <p>It is used for connecting the Pump group with the floor heating distributor.</p> <p>G = 1" R = 1" SW = 36</p>	1 6383 06	2
	<p>Eccentric connector G1"</p> <p>It is used for connecting the Pump group with the floor heating distributor.</p> <p>G = 1" G1 = 1" SW = 36 SW1 = 26 L = 33</p>	1 6383 09	1
	<p>Upper mixing unit</p> <p>G = 1" SW = 36 Ø = 12</p>	1 6383 10	1
	<p>Lower mixing unit</p> <p>G = 1" SW = 36 M = 30x1,5</p>	1 6383 11	1
	<p>Ball valve with free moving nut</p> <p>G = 3/4" G1 = G1" L = 80</p>	1 6383 12	1

Example of system with HERZ products

