

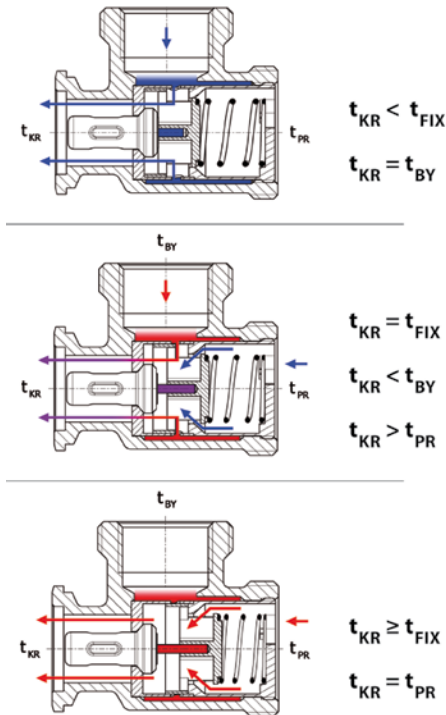
# Return flow temperature maintenance RHT DN 20 | RHT DN 25

Innovative system technology for modern heating and solar thermal systems





# Pump sets for return flow temperature maintenance RHT DN 20 | RHT DN 25



Temperatures

$t_{BY}$  = Bypass

$t_{PR}$  = buffer tank return

$t_{KR}$  = boiler return

$t_{FIX}$  = opening temperature

- Heating systems with return flow temperature maintenance
- Solid fuel boilers, wood firing and stove heating systems

### Thermal control valve with automatic bypass

1. The thermal valve shuts off the connection to the buffer tank, as long as the water in the boiler circuit is colder than the opening temperature of the thermal control valve. The pump circulates the water through the bypass, the small quantity of water in the boiler circuit can now heat up quickly.
2. When the boiler circuit reaches the opening temperature of the control valve, the valve reduces the bypass flow rate and opens the buffer tank circuit. The cold water from the buffer tank return is mixed with the hot boiler circuit water in the control valve. Thus, the return temperature to the boiler circuit is increased to the desired level and condensation in the boiler is prevented.
3. When the buffer tank return temperature is higher than the opening temperature, the control valve completely shuts off the bypass. The water from the buffer tank now flows directly into the boiler circuit.

### Please note:

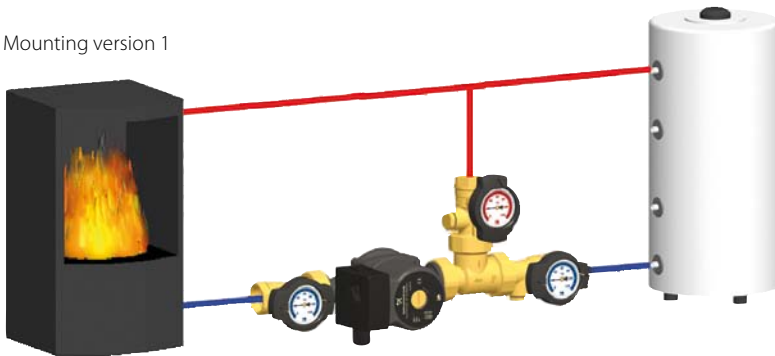
If the boiler output is controlled by the boiler temperature, the boiler must heat up 20 K above the opening temperature of the return flow temperature maintenance! Otherwise the boiler might reduce the output even before the thermal control valve is completely open.

### Mounting versions

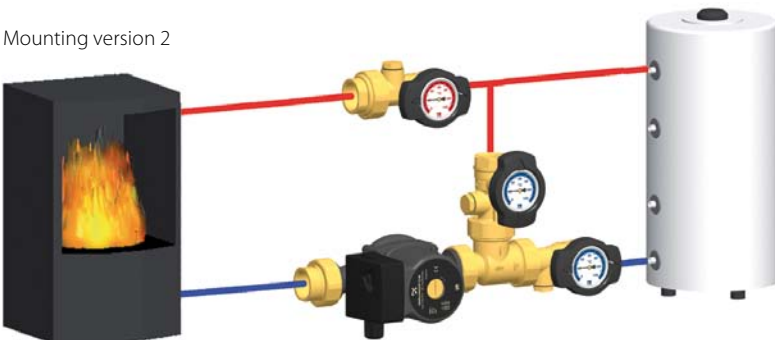
Separate assembly of the fitting group in the flow and return is possible. Mounting version 2 permits to easily isolate the heat generation system without further shutoff valves. Consider the position of the safety group before mounting. Additionally required:

1 x gasket, 1 x fitting and 1 x pump fitting (see table page 3).

Mounting version 1



Mounting version 2



# Technical data



	RHT DN 20	RHT DN 25
<b>Material</b>		
Valves and fittings	Brass	Brass
Gasket	EPDM/NBR	EPDM/NBR
<b>Technical data</b>		
Max. pressure	6 bars	6 bars
Max. temperature	110 °C	110 °C
Kvs value [m³/h]	3.2	7.4
<b>Dimensions</b>		
Connections	¾" internal thread	1" internal thread
Total width	337 mm	428 mm
Installation height	112 mm	128 mm

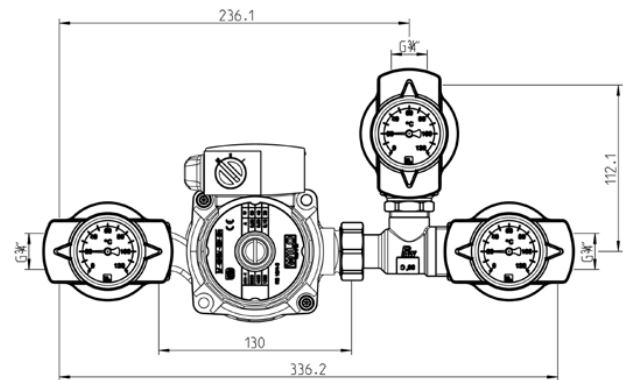
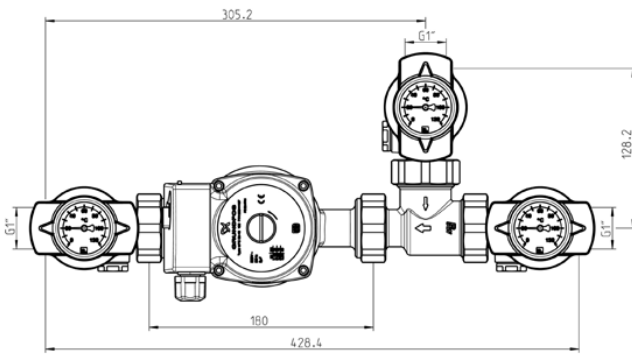
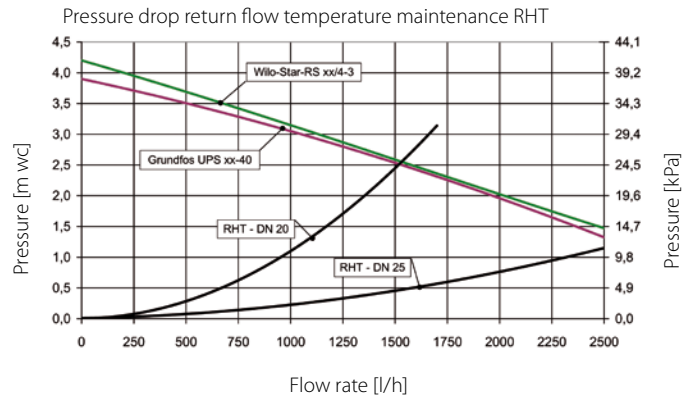


Illustration	Item	Item no.
	<b>Gasket, asbestos-free</b> Nominal diameter	
	<b>DN 20</b>	<b>2057</b>
	<b>DN 25</b>	<b>2157</b>
	<b>Screw-in fitting</b> Nominal diameter    internal thread    external thread	
	<b>DN 20</b> ¾"    1"	<b>2053</b>
	<b>DN 25</b> 1"    1 ½"	<b>2153</b>
	<b>Pump fitting</b> with union nut, insert and gasket Nominal diameter    internal thread	
	<b>DN 20</b> ¾"	<b>2049</b>
	<b>DN 25</b> 1"	<b>2149</b>

# Order data

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Illustration	Item	corresp.	Item no.
	<b>Return flow temperature maintenance RHT - DN 20</b> Pump fitting group, can be isolated, consisting of: <ul style="list-style-type: none"> <li>• Pump</li> <li>• Control valve with fixed opening temperature 50/55/60 °C (± 3 K)</li> <li>• 1 thermometer ball valve with red thermometer integrated in the handle, can be pulled off</li> <li>• 2 thermometer ball valves with blue thermometers integrated in the handles, can be pulled off</li> </ul>		
	<b>Wilo Star-RS 15/4</b> , 3-speed <b>Grundfos UPS 15-40</b> , 3-speed <b>for pumps with 1" external thread x 130 mm</b>	B	960250W14 960250GR4 960250
	<b>Wilo Star-RS 15/4</b> , 3-speed <b>Grundfos UPS 15-40</b> , 3-speed <b>for pumps with 1" external thread x 130 mm</b>	B	960255W14 960255GR4 960255
	<b>Wilo Star-RS 15/4</b> , 3-speed <b>Grundfos UPS 15-40</b> , 3-speed <b>for pumps with 1" external thread x 130 mm</b>	B	960260W14 960260GR4 960260
	<b>Return flow temperature maintenance RHT - DN 25</b> Pump fitting group, can be isolated, consisting of: <ul style="list-style-type: none"> <li>• Pump</li> <li>• Control valve with fixed opening temperature 50/55/60 °C (± 3 K)</li> <li>• 1 thermometer ball valve with red thermometer integrated in the handle, can be pulled off</li> <li>• 2 thermometer ball valves with blue thermometers integrated in the handles, can be pulled off</li> </ul>		
	<b>Wilo Star-RS 25/4-3</b> , 3-speed <b>Grundfos UPS 25-40</b> , 3-speed <b>for pumps with 1½" external thread x 130 mm</b>	B	961250W14 961250GR4 961250
	<b>Wilo Star-RS 25/4-3</b> , 3-speed <b>Grundfos UPS 25-40</b> , 3-speed <b>for pumps with 1½" external thread x 130 mm</b>	B	961255W14 961255GR4 961255
	<b>Wilo Star-RS 25/4-3</b> , 3-speed <b>Grundfos UPS 25-40</b> , 3-speed <b>for pumps with 1½" external thread x 130 mm</b>	B	961260W14 961260GR4 961260
	<b>Cutting-ring compression fittings ¾" DN 20</b> ¾" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C.		
	<b>Cutting-ring compression fitting ¾" x 12 mm</b>		561012
	<b>Cutting-ring compression fitting ¾" x 15 mm</b>		561215
	<b>Cutting-ring compression fitting ¾" x 18 mm</b>		561218
	<b>Cutting-ring compression fittings 1" DN 25</b> 1" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C.		
	<b>Cutting-ring compression fitting 1" x 15 mm</b>		562915
	<b>Cutting-ring compression fitting 1" x 18 mm</b>		562918
	<b>Cutting-ring compression fitting 1" x 22 mm</b>		562922