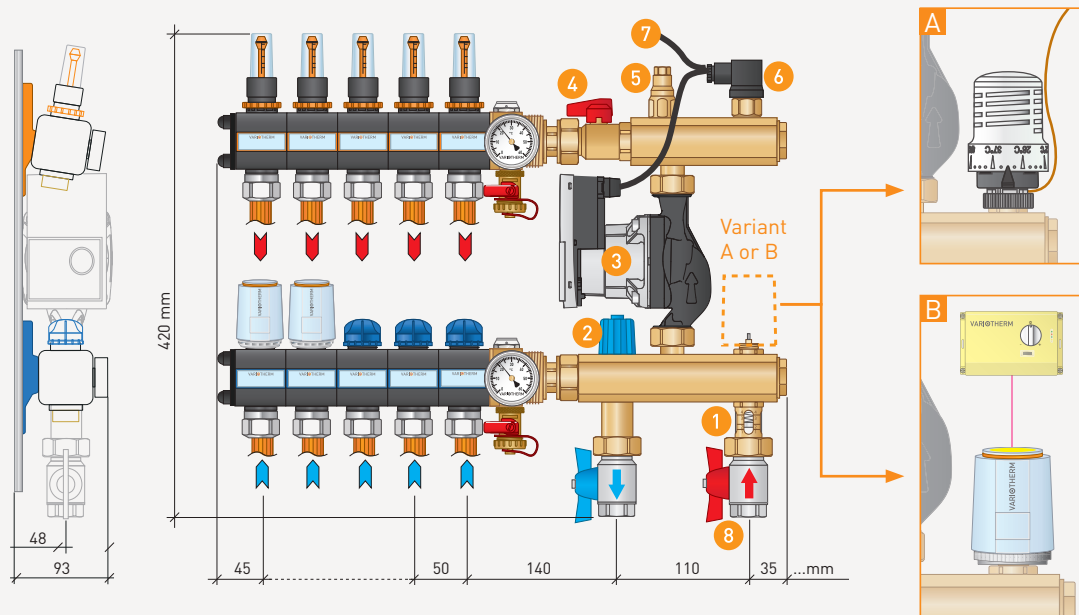


# Pumped VarioManifold 5.0

## Description

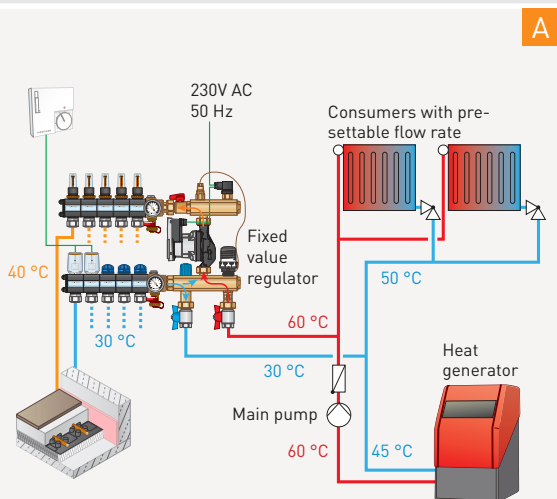
- For installing surface heating systems (2 – 15 heating circuits) in high-temperature heating systems (2-pipe system) with existing circulation pump.
- The flow temperature of the boiler circuit must be at least 10 K higher than the set flow temperature of the surface heating circuit.
- Observe the required pipe diameter (capacity) to the Pumped Manifold. Primary pressure required!



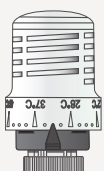
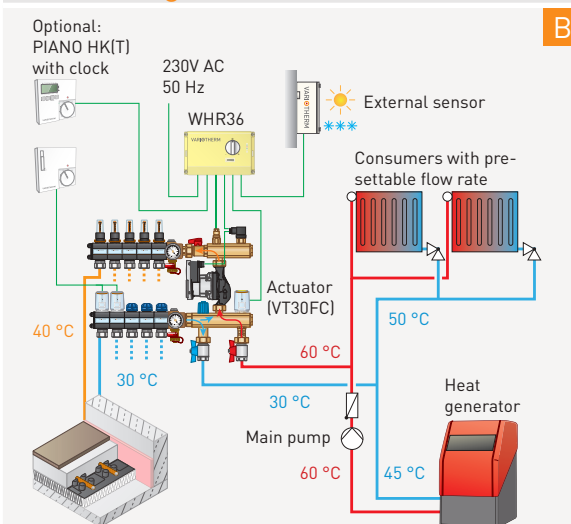
- 1 Flow indicator    2 Regulating valve
- 3 Pump PVS (WIL0 Yonos Para 15/6)    4 Flushing ball valve (close when flushing)
- 5 Immersion sleeve for remote sensor (Fixed value control station **A**) or for flow temperature sensor (weather-guided control station **B**); contains heat transfer paste (Safety data sheet: [www.variotherm.at](http://www.variotherm.at))
- 6 Temperature limiter (Factory setting 60 °C)
- 7 230V AC, 50 Hz (provided connection cable: 3 x 0.5 mm<sup>2</sup> [max. 3 A], please note the electrical protection!)
- 8 Locking ball valve (3/4" female thread)

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 HEATING. COOLING. COMFORT.

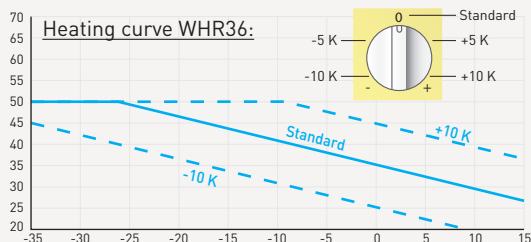
## Fixed value control station



## Weather-guided control station



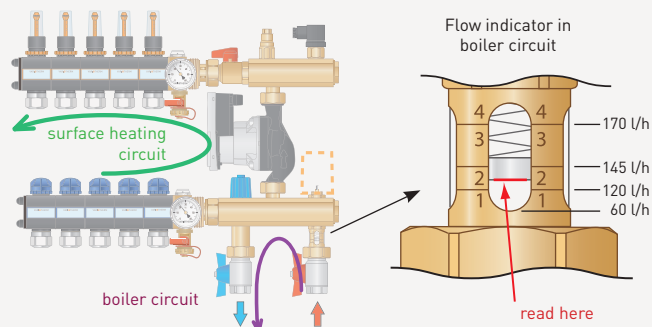
**Fixed value regulator:**  
 The flow temperature of the surface heating circuit can be continuously adjusted between 20 and 70 °C. (Values of temperature scale are reference values for the flow temperature!)



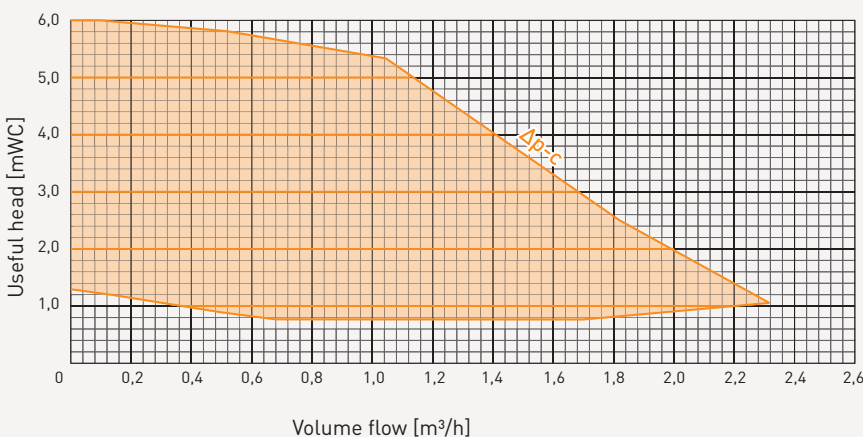
# Pumped VarioManifold 5.0

## Examples for power & volume flow

Temperatures surface circuit	Flow temp. boiler circuit	Power
<b>Volume flow in boiler circuit: 50 l/h</b>		
40/30 °C	50 °C	1163 W
40/30 °C	60 °C	1745 W
40/30 °C	70 °C	2326 W
<b>Volume flow in boiler circuit: 150 l/h</b>		
40/30 °C	50 °C	3489 W
40/30 °C	60 °C	5234 W
40/30 °C	70 °C	6978 W



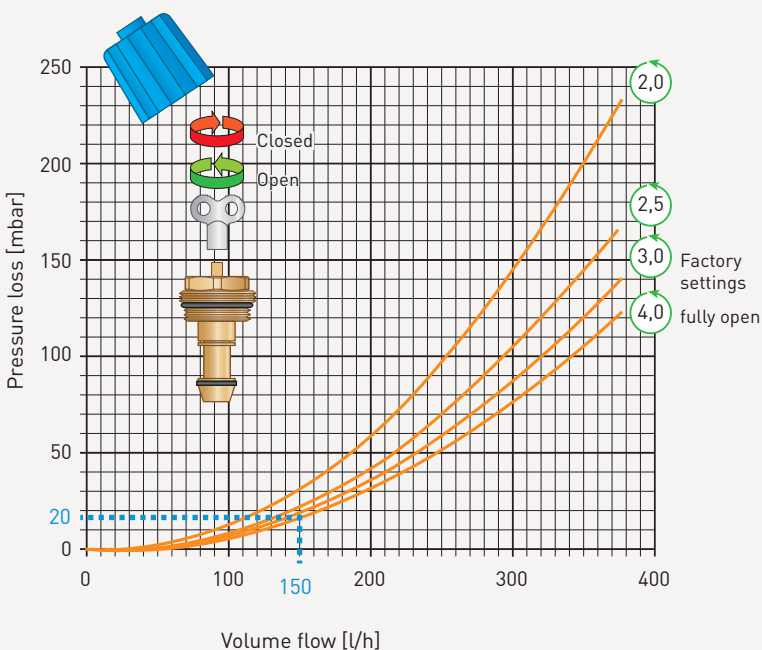
## Pump PVS (WILO Yonos Para 15/6)



- Constant differential pressure ( $\Delta p-c$ ), for surface heating
- Venting function
- Variabel differential pressure ( $\Delta p-v$ )

## Regulating valve – pressure loss in boiler circuit

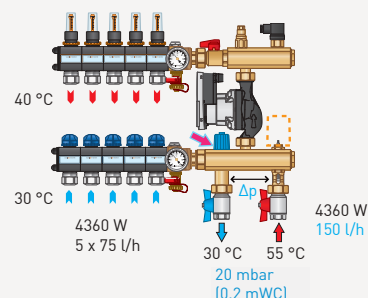
The flow rate in the boiler circuit is adjusted using the regulating valve (🔧) when the fixed-value regulator is fully opened.



### Example 5 heating circuits:

Searching for: pressure loss and volume flow in boiler circuit, if regulating valve is 3 turns open.

Desired:  
 Boiler flow temperature: 55 °C  
 Surface heating temperature: 40/30 °C  
 Required volume flow in surface heating circuit: 5 x 75 l/h



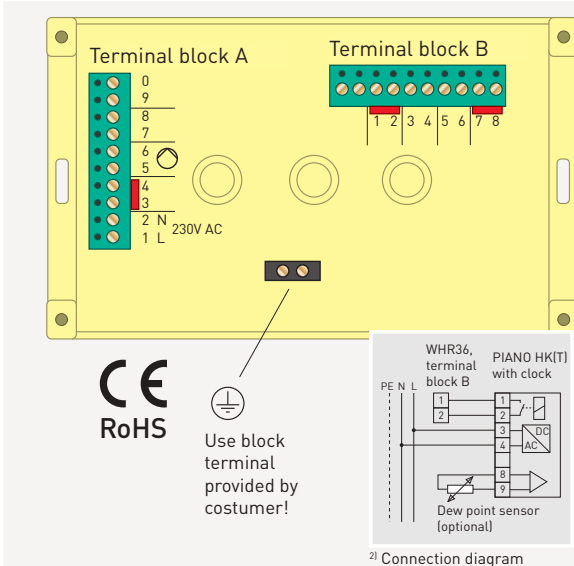
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# Pumped VarioManifold 5.0

General

3/4

## WHR36 – Electrical connection



### Terminal block A, 230V AC

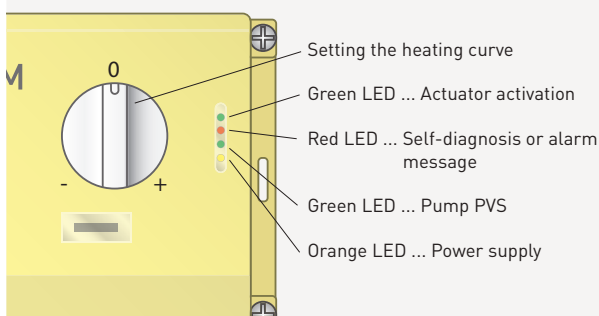
1	Power supply phase
2	Power supply neutral conductor
3-4	Bridge
5-6	Pump PVS incl. safety thermostat Switching current relay max. 8 A
7-8	Actuator (only part no. VT30FC permissible)
9-0	Boiler demand, with contact 5-6 switched (potential-free, max. 0.8 A)

### Terminal block B, safety-low voltage

1-2	Bridge, or optionally: Room thermostat with clock (part no. RT43) (see connection diagram <sup>2)</sup> )
3-4	External sensor <sup>1)</sup> (cable e.g. 2x 0.75 mm <sup>2</sup> , max. 50 m)
5-6	Flow sensor <sup>1)</sup> (cable e.g. 2x 0.75 mm <sup>2</sup> , max. 50 m)
7-8	Bridge

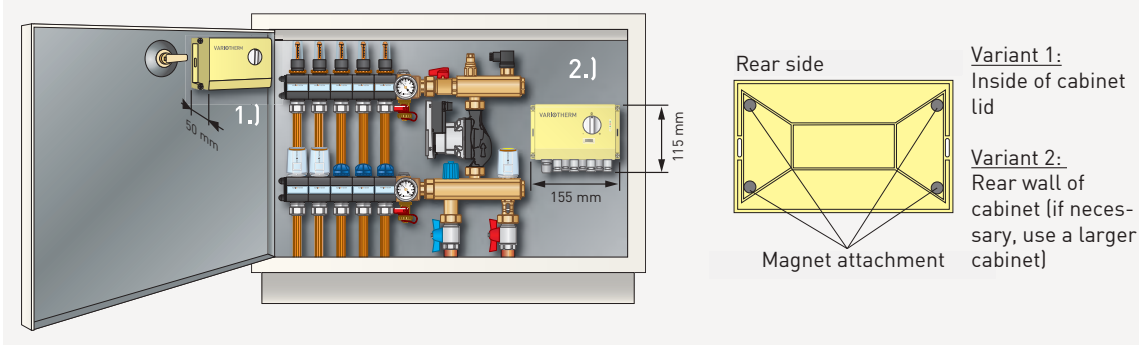
<sup>1)</sup> Use original sensor!

## WHR36 – Commissioning

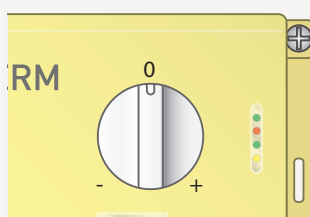


Self-diagnosis is performed when starting for the first time. The red LED flashes for about 5 seconds and goes out. After about 5 minutes the controller begins to adjust the flow temperature to the heating curve. If the red LED is continuously illuminated an alarm is present. In this case the wiring must be checked. An alarm occurs if the flow temperature in the surface heating circuits exceeds 55 °C. The controller returns to normal operation when the flow temperature cools to below 52 °C.

## WHR36 – Attachment possibility



## WHR36 – Dry heating



During the heating-up process the outdoor sensor is disconnected (terminal strip B, 3-4). The controller works as a fixed value regulator from 25 °C (knob turned fully counter-clockwise to -) to 45 °C (knob turned fully clockwise to +). The temperature is adjusted manually every day.

## Sensor resistance values

### Flow temperature sensor (NTC resistor)

+15 °C	+20 °C	+25 °C	+30 °C	+35 °C	+40 °C
18.00 kΩ	14.00 kΩ	10.00 kΩ	7.50 kΩ	5.50 kΩ	4.10 kΩ

### External sensor (NTC resistor)


-20 °C	-10 °C	0 °C	+10 °C	+20 °C	+30 °C
8.23 kΩ	4.90 kΩ	3.00 kΩ	1.90 kΩ	1.25 kΩ	1.00 kΩ

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## Safety information

- The electrical and hydraulic connection and service work on the device may only be provided by authorised specialist personnel.
- The devices are designed for use in dry, closed rooms.
- The electrical installation standards and regulations specified by the local energy supply companies should be observed, together with the locally applicable regulations and standards for heating installations.
- Faults in the connection can cause damage to the device! We bear no liability for damage caused by incorrect connection and/or inappropriate handling of the device.
- If the system components are installed or commissioned incorrectly, all claims on the basis of the manufacturer's warranty and guarantee become void.

## Troubleshooting

<ul style="list-style-type: none"> <li>• Surface heating circuit temperature too low</li> </ul>	<ul style="list-style-type: none"> <li>• Main pump must be available and running</li> <li>• Fixed value control station: Switch on the pump PVS</li> <li>• Weather-guided control station:               <ul style="list-style-type: none"> <li>- Switch on the controller WHR36, orange LED (power on) &amp; green LED (pump on) should glow </li> <li>- Check the heating curve setting</li> </ul> </li> <li>• Adjust the surface heating circuit flow</li> <li>• Check and regulate the flow in the boiler circuit (regulating valve)</li> <li>• Regulate the existing heating system (e.g. radiators)</li> <li>• Switch main pump to a higher setting level</li> <li>• Check if the flow/return in the boiler circuit has been reversed</li> <li>• Air in system, flush again if necessary</li> <li>• Fully open the flushing ball valve</li> <li>• Consider the time for baking out, moisture in surface heating system (wet plaster, screed,...)</li> </ul>
<ul style="list-style-type: none"> <li>• Surface heating circuit temperature too high</li> </ul>	<p><u>Festwert-Regelstation:</u></p> <ul style="list-style-type: none"> <li>• Festwertregler nicht bis zum Anschlag aufgeschraubt</li> </ul> <p><u>Witterungsgeführte Regelstation:</u></p> <ul style="list-style-type: none"> <li>• Adapter für Stellantrieb nicht bis zum Anschlag aufgeschraubt</li> <li>• Einstellung Heizkurve überprüfen</li> </ul>