

# LK Shunt UHP-6,3 Wilo Yonos Para RS 25/6-RKA,

## DESIGN

The LK Shunt UHP-6.3 is intended for systems without a main pump, and is supplied complete with a thermostat-controlled maximum limit valve for the secondary temperature and a hand actuator on the control valve. The shunt can be assembled for both right and left operation model directly to the LK Manifold. The shunt unit is capable of servicing approximately up to max 240 m<sup>2</sup> floor heating area, depending on variables such as heat demand, floor construction and finish, etc. As an option, LK Shunt can be supplied with LK Control v.3, a complete unit for sensing external temperature to control flow temperature. A set is: control unit, valve actuator, external sensor and flow line sensor (see separate information for LK Control v.3). Where other regulating controls are used, LK can supply 230 V or 0-10 V valve actuators.

### 1. Supply line from primary circuit

Ball valve with female thread ¾".

### 2. Supply line to under floor heating circuit

Male thread 1".

### 3. Return line from under floor heating circuit

Male thread 1".

### 4. Return line to primary circuit

Ball valve with female thread ¾".

### 5. Thermometers

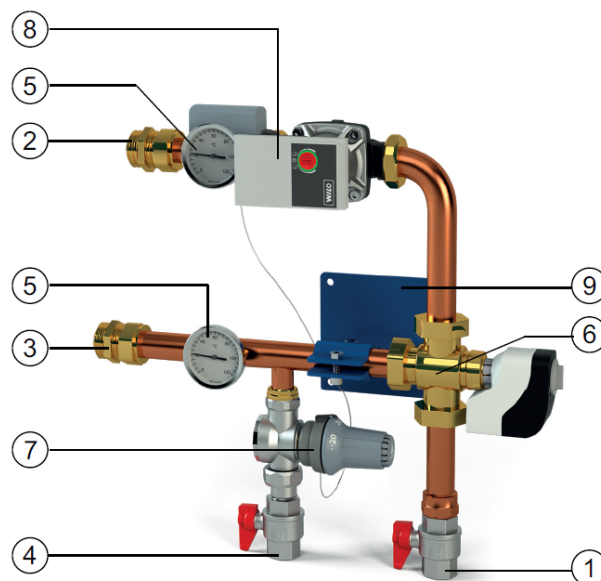
Thermometers of surface contact type for location on the under floor heating circuit's supply and return line.

### 6. Control valve Kvs 6.3 3-way

The control valve is equipped with a hand actuator for manual adjustment of the supply line temperature. Siemens VXP459.25-6.3

### 7. Thermostat valve

Thermostat with immersion sensor connected by capillary pipes for maximum limit of the supply temperature. Setting scale 15 - 50 °C.



### 8. Circulation pump

Wilo Yonos Para RS 25/6-RKA with automatic speed control.

### 9. Wall bracket

## REQUIREMENTS

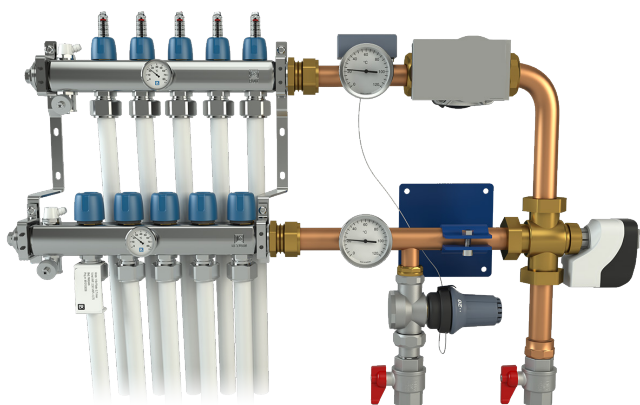
Before assembly, the heating system must be flushed and should not contain any impurities or additives that may damage the LK Shunt. Maximum 50% glycol mixture.

The LK Shunt is to be assembled with the pump's axis/rotor in a horizontal position and that the valve actuator is not positioned below the control valve.

Pay attention to potential structure-borne sound when locating the shunt.

## CONSTRUCTION

Supply line to right or left is optional. The picture above shows the left operation model but the shunt group can be turned for the right operation model. Adjustment of the return line's length must be done on the spot for right assembly directly to the LK Manifold.



### CIRCULATION PUMP

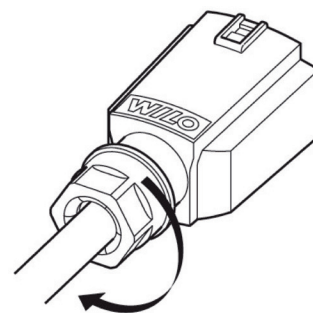
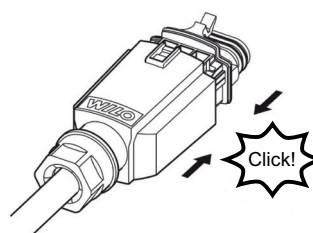
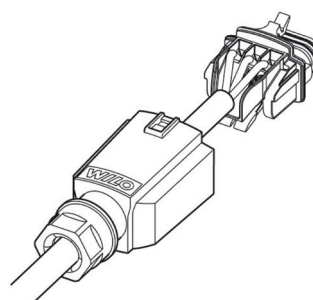
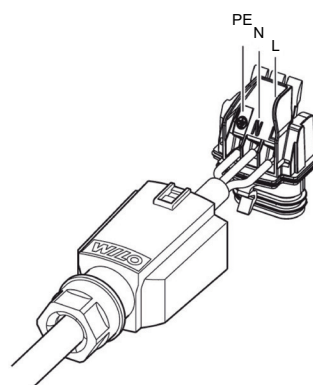
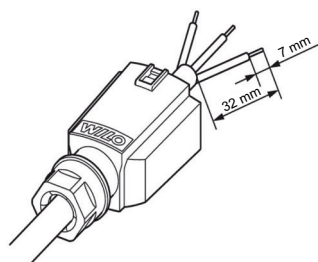
Wilo Yonos Para RS 25/6-RKA, with automatic speed control, 1 phase 230 V AC, 50 Hz, max 45 W, 0,44 A.

The circulation pump has automatic speed control, which reduces power consumption and gives a quieter operation as the pump adjusts the flow according to the requirements of the system. A cast arrow on the pump housing indicates the direction of the flow.

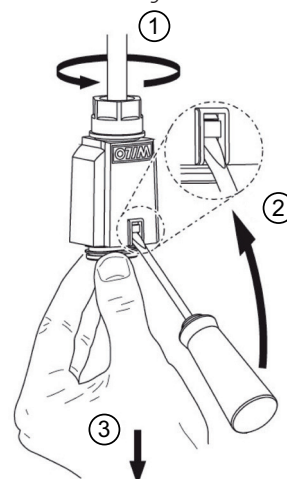
#### Electrical connection of circulation pump

Electrical connection of the pump must be carried out by a qualified electrician in accordance with applicable regulations. The pump is equipped with a fixed 3-core cable and Wilo-connector with integrated strain relief. The Wilo-connector replaces the requirements for 2-pole circuit breaker. Connect the supply cable L, N, PE to the Wilo-connector according to the following sequence. The electrical connection must be fused with Max 10 A slow blow fuse. Note that at any maintenance/repair work the pump power supply must be disconnected. Motor protection for the circulation pump is not required.

#### Assembly

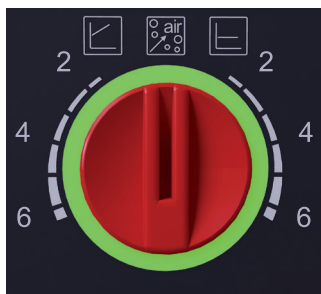


#### Disassembly



### Setting the pump function selector

For under floor heating it is recommended that the pump is set to constant pressure control. Select the desired capacity with the function selector. Ensure that the pump never runs dry and the system is well vented before use. Use the pump's automatic venting routine at start up.



#### Automatic venting routine

When the floor heating system is filled, flushed and vented the circulation pump can be started. At start up, use the pump's automatic venting routine to remove accumulated air in the pump's rotor chamber. The automatic venting routine start after 3 seconds and lasts for 10 minutes. Venting routine indicated by a fast flashing green diode light.

After complete venting, choose the constant pressure curve that best matches the requirements of the system, see pump curve below. If no choice is made, the pump operation automatically switches to constant pressure with max capacity.



#### Constant pressure curve

For under floor heating it is recommended that the pump is set to constant pressure control. Select the constant pressure curve that best matches the needs of the system, see pump curve below.

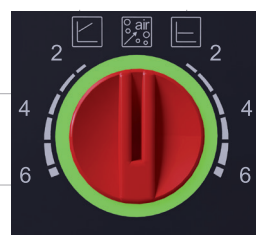
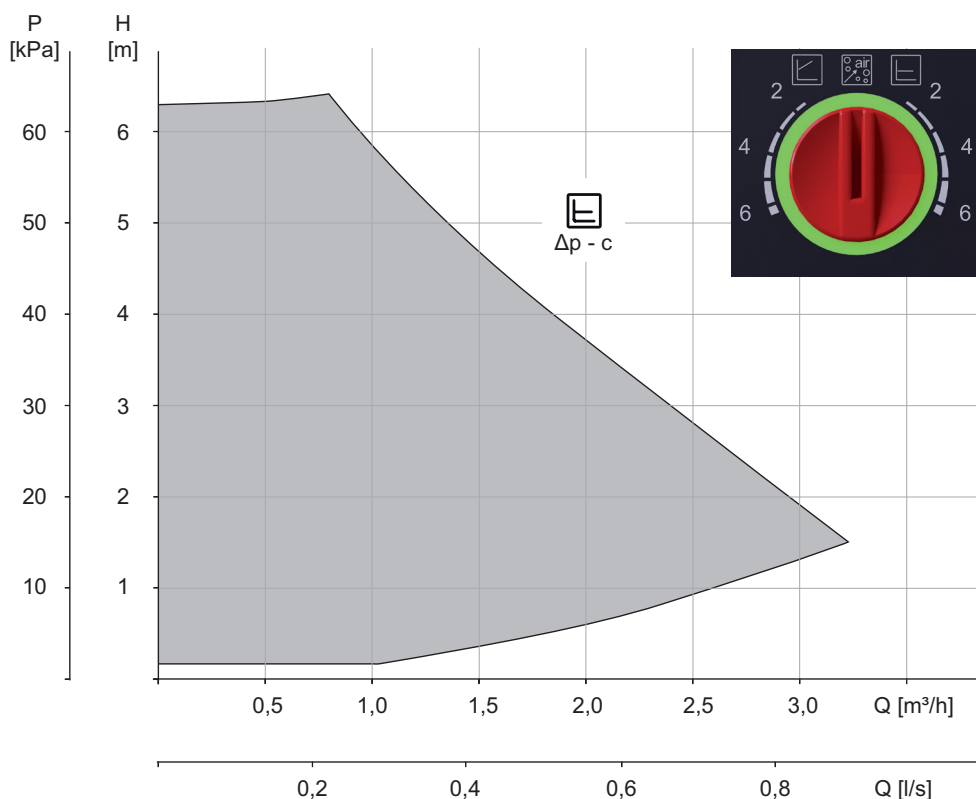


#### Proportional pressure curve

Proportional pressure setting is normally not used for floor heating.



### PUMP CURVE



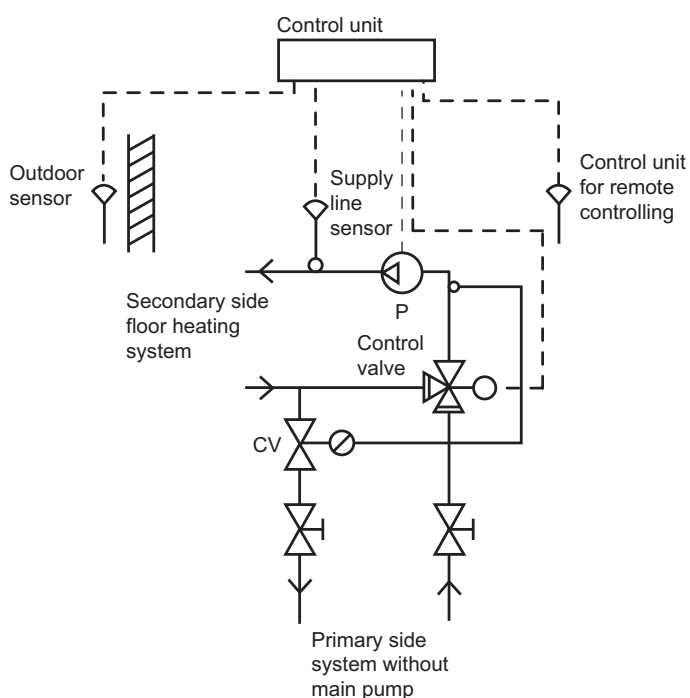
## LK CONTROL v.3 (ACCESSORY)

LK Control v.3 is a complete unit for outdoor temperature (weather) compensated heat regulation, adapted and pre-programmed for LK's floor heating systems. LK Control v.3 consists of a control unit, valve actuator as well as a flow and outdoor temperature sensor. As an option, LK Control v.3 can be supplemented with LK Room Unit v.3 for regulating room temperature to the control unit's heat curve. This function is similar to a room thermostat, but with the possibility of remote control of the control unit. LK Room Unit v.3 is often used in areas with an open floor plan where only one room sensor is needed.



LK Control v.3.

## FLOW DIAGRAM



## DIODE INDICATOR ON THE PUMP\*

Diode	Meaning	Note	Action
Lights green	Pump in operation.	Normal operation.	
Fast flashing green	Pump is running venting routine during 10 min. Then, the required pump capacity must be set.	Venting routine active.	
Flashes red/green	The pump is ready for operation, but will not start. The pump starts automatically as soon as the error is no longer present.	Under- or over-voltage $U < 160$ V, $U > 253$ V.	Check the power supply $> 195$ V / $< 253$ V.
Flashes red	The pump is not working, pump blocked.	The pump does not automatically restart.	Check the pump housing, if necessary replace the pump.
Diode not lit	No power supply or damaged electronics.		Check the power connection, cable connection, if necessary replace the pump.

\* Diodes are placed in a circle around the red function selector.

## TECHNICAL DATA

Article no.	241 78 27
Maximum operating pressure	0,6 Mpa
Operating temperature secondary	+12 - +63 °C
Ambient temperature	Max +35 °C
Circulation pump	Wilo Yonos Para RS 25/6-RKA
Voltage	1 phase 230 V AC +10%/-15% 50/60 Hz, PE
Output	Max 45 W
Current	Max 0,44 A
Protection class	IP X4D
Insulation class	F
Valve capacity	Kvs 2,5

## DIMENSIONS

