

Heating pump assembly

PrimoTherm® 180-3 DN 25 RTA



- For increased return temperature with solid fuel boilers
- With temperature-controlled condensation protection valve
- For reduced amounts of condensate in the combustion process
- Avoids deposits in the boiler and in the smoke vent



Application Heating pump assembly for automatically controlling the return temperature of the system water to the heat generator to the value adjusted in the valve. An integrated, temperature-controlled condensation protection valve is the connection between the solid fuel heating system or the hot water storage tank. Using PrimoTherm® 180-3 RTA keeps the temperature in the heating boiler above the condensation point in all operating states. This avoids deposits in the boiler and in the smoke vent and increases the service life of the system; corrosion damage of the heating boiler and chimney fires caused by soot deposits are avoided.

Description Complete, pre-assembled and tightness-tested heating pump assembly with all required functional components, form-fit insulation and wall mounting unit. With an additional mounting bracket, the unit can be mounted in any position (vertically/horizontally).

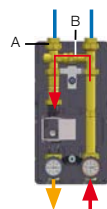
The pump line (return) consists of:

- Combination valve with thermometer in the hand wheel (blue mark, range 0/120 °C)
 - Ball valve above the pump
 - 3-way mixing valve with fixed mixing temperature 60 °C
 - System connection G1 female (boiler), G1 female (storage)
- Suitable for pumps DN 25 with G1½ x 180 mm.

The flow line (hot) consists of:

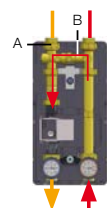
- Combination valve with gravity brake, thermometer in the handle (red mark, range 0/120 °C)
- Pipe for length compensation with screw connection
- System connection G1 female (boiler), G1 female (storage)

Function principle



Start mode (heating up of boiler):

When the boiler heats up, the condensation protection valve is fully closed in the direction of the consumer. The liquid coming from the boiler is recirculated in the small circuit via the bypass, which causes the boiler temperature to increase more rapidly.



Transition phase:

When the opening temperature is reached (60 °C), the circuit to the consumer is opened proportionally and the bypass is reduced accordingly. However, the boiler temperature will not drop below the set temperature.



Regular operation:

During further operation, the temperature increases until the condensation protection valve is fully open (return storage A). The bypass (B) is closed correspondingly. If the inlet temperature (return storage A) drops to approx 10 °C above the set opening temperature, the admixture via the bypass (B) is increased proportionally and outlet A is closed proportionally.

Heating pump assembly

PrimoTherm® 180-3 DN 25 RTA

Technical specifications

Axis distance

125 mm

System connections

G1 female thread at both ends

Operating temperature range

Medium: T_{max} 100 °C

System pressure

Max. 10 bar

Opening temperatures

60 °C (fixed values)

Nominal size

DN 25

System capacity

Max. 32 kW at a flow rate of 1,400 l/h and a temperature spread of Δt 20 K

Leak rate

Water-tight between connections A->AB, 3 % leak rate of flow coefficient NS between B->AB
PN 10. A-AB = Flow coefficient NS: 2.94;
B-AB = 2.12

Insulation

Polypropylene EPP

Energy efficiency class

A

Power input

3–45 W

Pumping head/rate

Max. 6.2 m / max. volume flow 3.3 m³/h

Technical specifications circulation pump

WILO YONOS PARA 25/6 RKC

Length

180 mm

Supply voltage

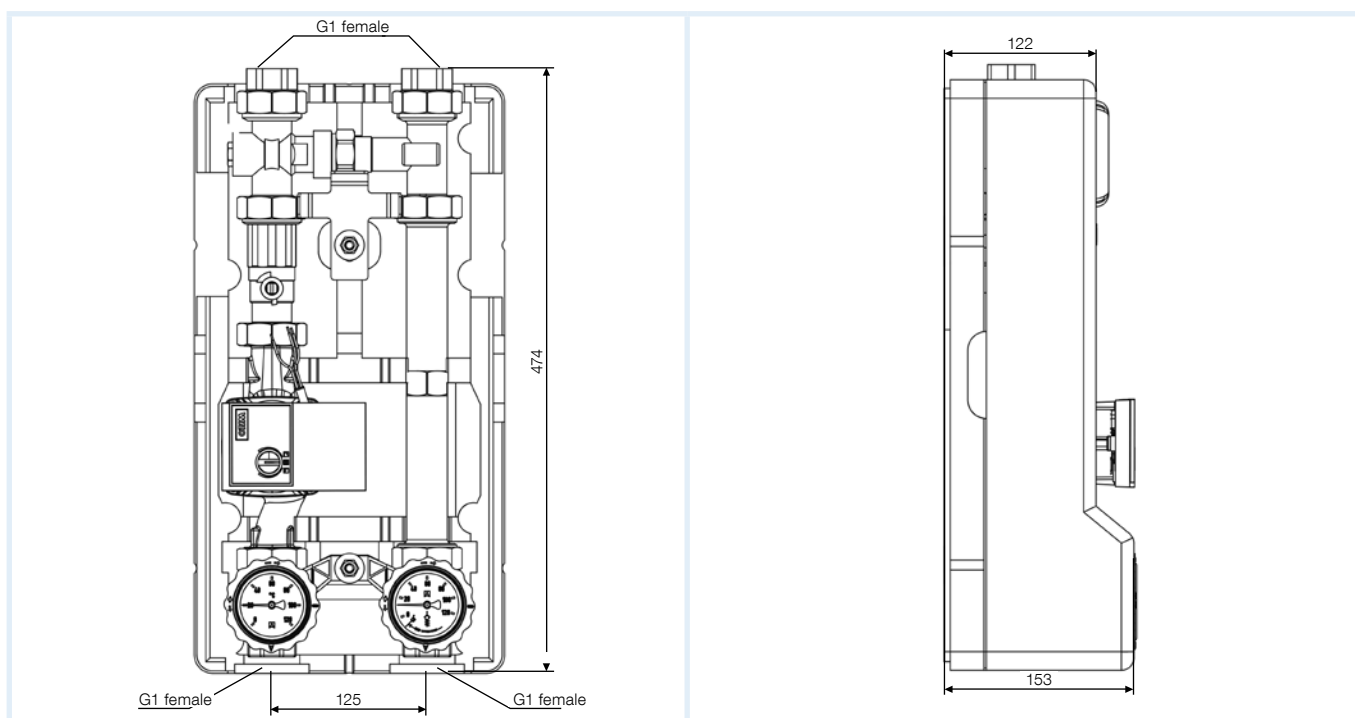
AC 230 V, 50 Hz

Options

- Other opening temperatures
- Other circulation pumps

7

Dimensions (mm)



DG: G, PG: 2	Opening temperature	Pump	Part no.	Price €
PrimoTherm® 180-3 DN 25 RTA 60 OP G1 female x G1 female	60 °C	Without pump	77576	
PrimoTherm® 180-3 DN 25 RTA 45 OP G1 female x G1 female	45 °C	Without pump	77577	
PrimoTherm® 180-3 DN 25 RTA 55 OP G1 female x G1 female	55 °C	Without pump	77578	
PrimoTherm® 180-3 DN 25 RTA 60 WPO1 G1 female x G1 female	60 °C	WILO YONOS PARA 25/6 RKC	77570	
PrimoTherm® 180-3 DN 25 RTA 45 WPO1 G1 female x G1 female	45 °C	WILO YONOS PARA 25/6 RKC	77571	
PrimoTherm® 180-3 DN 25 RTA 55 WPO1 G1 female x G1 female	55 °C	WILO YONOS PARA 25/6 RKC	77572	