

## Construction readiness

for indoor hydraulic unit for CTC heat pumps

## RegulusBOX

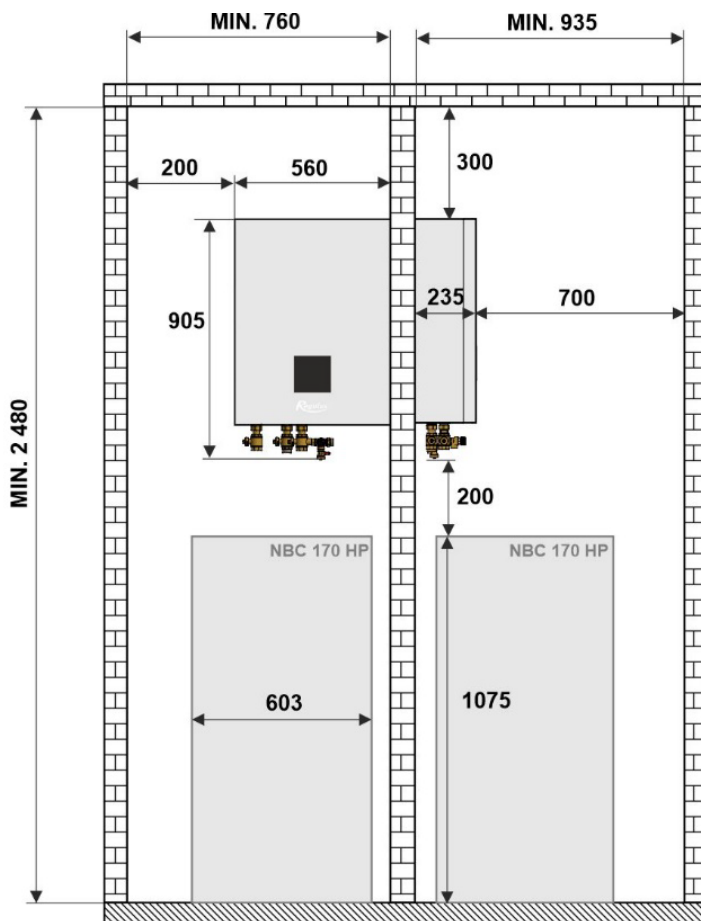
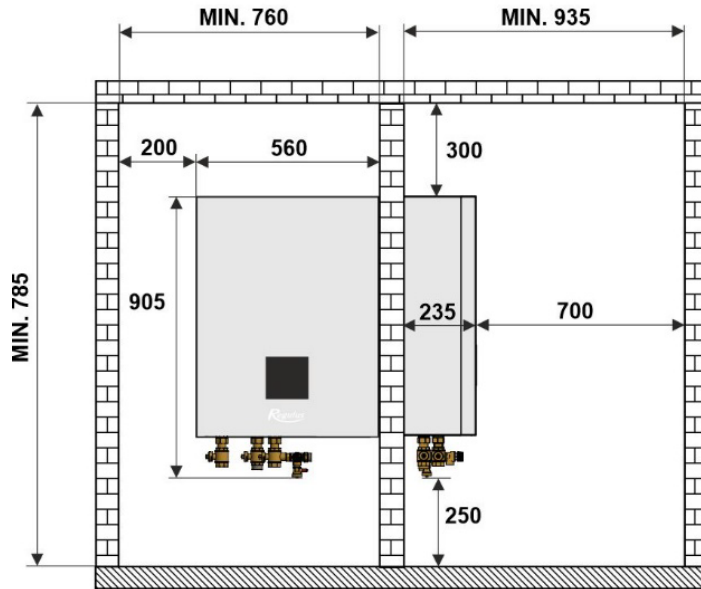


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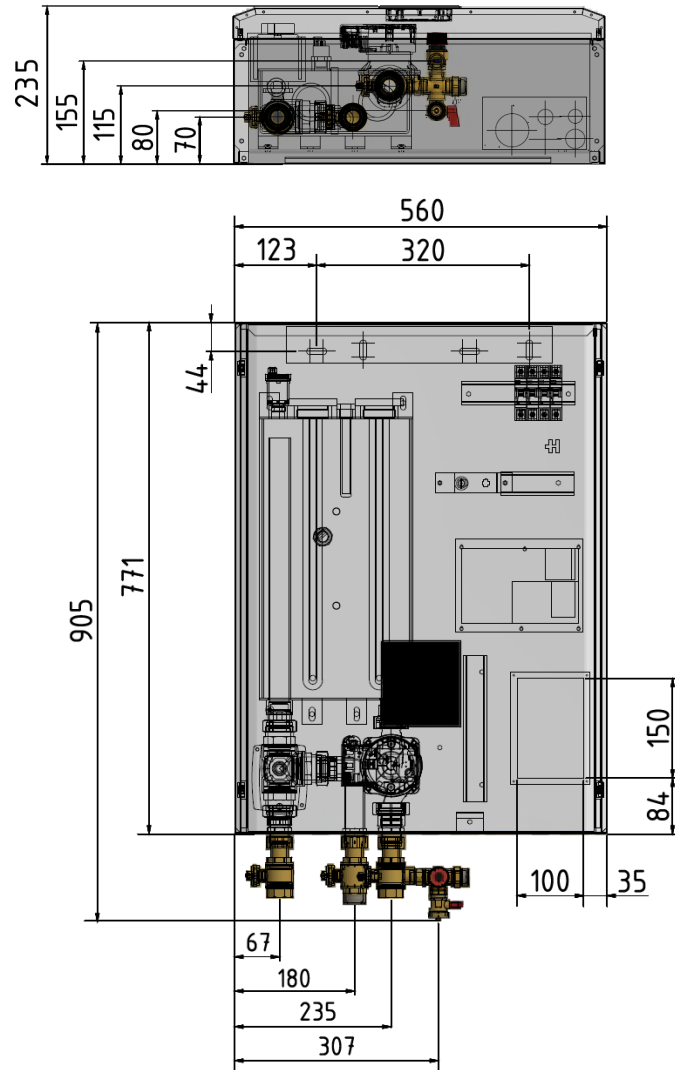
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## ■ Installation Site Requirements

Install the RegulusBOX indoor unit only indoors on a stable wall with sufficient load capacity. The weight of the RegulusBOX including heating water is 44 kg. To ensure safe and trouble-free installation and subsequent servicing, observe the minimum required spacing from structures as shown in the fig.. Do not install the unit in areas with a bath or shower in zones 0, 1 and 2 or in other areas where water may enter the unit. Do not install RegulusBOX in areas with a risk of frost.



## ■ Dimensions



To hang RegulusBOX on the wall, use the included mounting rail and mounting kit that is also included in supply. Holes are already prepared in the wall rail, see the fig.

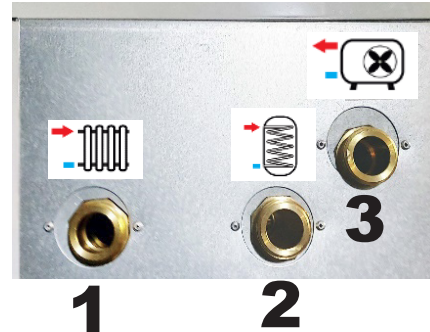


## Hydraulic Connection

The RegulusBOX indoor unit is designed for connection to the heat pump outlet pipe. The dimension of the piping in the heating system shall be designed to ensure the minimum required flow rate through the heat pump, but also not to exceed the maximum flow rate at which there is a significant increase in noise due to the flow of water through the heating system.

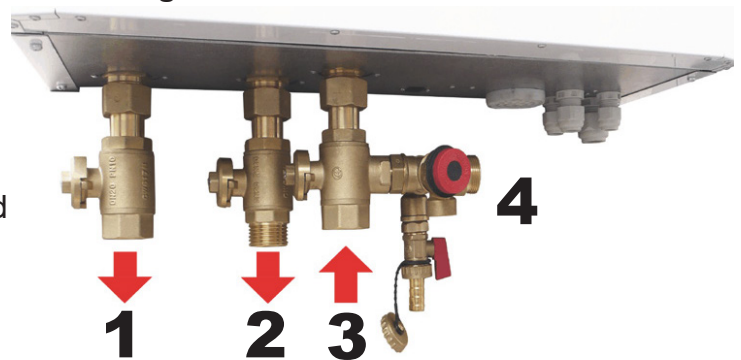
The pipe connection outlets are marked with the respective pictograms on the underside of RegulusBOX.:

- 1 - outlet to heating system
- 2 - outlet to HW storage tank
- 3 - inlet from heat pump



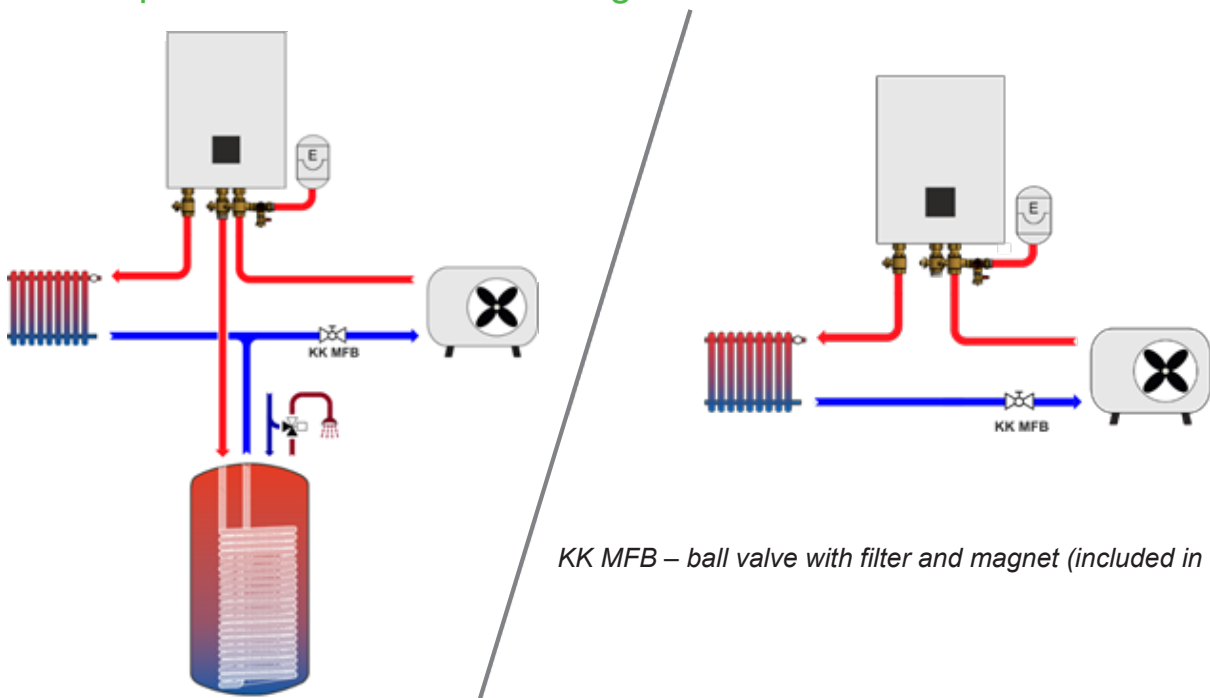
Install the enclosed fittings on the outlet pipe from RegulusBOX

- 1 – G 1" F ball valve on the outlet to the heating system
- 2 – G 1" M ball valve on the outlet to the hot water storage tank (in systems with no hot water heating the outlet shall remain closed and fitted with a plug)
- 3 – G 1" F ball valve with the safety group on the inlet pipe from the heat pump \*



\* the safety group involves a drain and safety valves, permitting connection of an expansion vessel - G 3/4" M connection size, the connection point is marked with number 4.

## Schematic representation of the resulting connection



KK MFB – ball valve with filter and magnet (included in supply)

## ■ Electrical Wiring

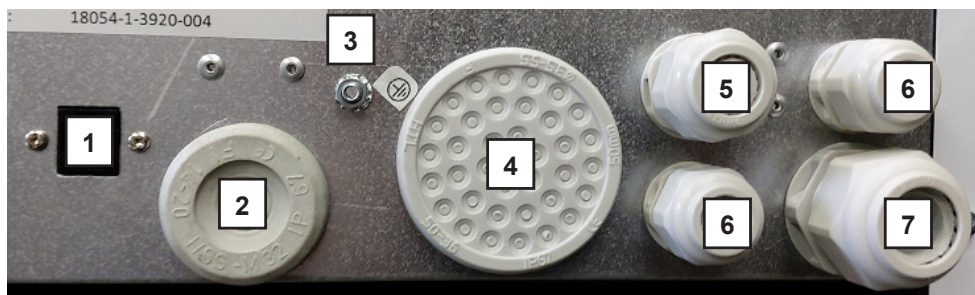
RegulusBOX contains two heating elements with a total output of 12 kW (2x6 kW), switched in 2kW steps.

Electric Data	
Power supply	3/N/PE ~ 400 / 230 V 50 Hz
Nominal power input	12,2 kW (without a heat pump connected)
Min. upstream circuit breaker for RegulusBOX	3 x 20 A char. B
Circuit breaker for heat pump	3 x 16 A char. B (max. current is software limited to 16 A)
Integrated circuit breaker for controller, zone valve, circulation pump	1 x 6 A char. B

### Cable Entry

Cables can be routed into RegulusBOX in two ways: via cable glands on the bottom of RegulusBOX or via a passage in the back plate of RegulusBOX.

#### a) Cable entry through cable glands



#### Marking

- 1 – RJ-45 Ethernet socket
- 2 – Grommet for WiFi cable
- 3 – Protective connection
- 4 – Grommet for sensors
- 5 – Cable gland for heat pump power cable
- 6 – Cable glands for communication cables
- 7 – Cable gland for power supply cable

#### b) Cable entry through the cable passage from a wall



The back plate has dimensions (w x h) 100x150 mm.

The picture shows the back plate as seen from the inside of the RegulusBOX.

On the left side of the plate the connection terminal block is located.

## ■ Wiring Specifications

Application	Cable
Power supply for RegulusBOX	CYKY 5Jx4
Power supply of CTC heat pump from RegulusBOX	CYKY 5Jx2,5
Ripple control signal from the main fuseboard, zone valves or other appliances w. 2+N connection	CYKY 3Dx1,5
Circulation pumps or other appliances with 1+PE+N connection	CYKY 3Jx1,5
Outdoor and room temperature sensors	JYTY 4Dx1 (1 pair as spare)
CIB bus (room unit, electricity meter, modules etc.)	JYSTY 1x2x0,8
Communication with heat pump (15m cable included in HP supply)	LiYCY TP 4x2x0,5
Connection of RegulusBOX to LAN	UTP Cat5e (or higher)

**Warning:** The above wiring is suitable for use in most common installations, but it does not replace a qualified design by an expert who will assess the conditions of the specific installation (such as ambient temperature, length and method of laying cables, etc.).

# Wiring Diagram of M&R Peripherals to RegulusBOX

