

DATA SHEET

TV RegulusHBOX K 106 RTC 3/1S Indoor Unit with DHW Heating



Main Features

Application	Space and DHW heating in an enamelled hot water storage tank by a RTC inverter heat pump (RTC 6i or RTC 13e).
Description	<p>Basic elements of RegulusHBOX K indoor unit</p> <ul style="list-style-type: none"> ■ IR RegulusHBOX K Controller with remote access from a computer or a mobile app. ■ Control unit with display, English menu, that can be used as a room unit (two-wire connection). ■ RGC 170 hot water storage tank with enamelled inner surface, integrated heat exchanger for DHW heating, and electronic anode rod. ■ Wilo Para 25/8 iPWM1 circulation pump for a heat pump circuit and heating circuit. ■ 6 kW heating element, switched in 2 kW steps (max. output can be limited in the controller menu). ■ Output for a second 6 kW heater switched in 2 kW steps. ■ Three-way zone ball valve for heat pump switching between space and DHW heating. ■ Heating system safety valve. ■ Drain valve for heating system and DHW heating system. ■ Electric wiring incl. terminal block for easy connection of a heat pump and other accessories incl. basic element protection. ■ Heating water temperature and pressure sensor, DHW temperature sensor. ■ Outdoor temperature sensor. ■ Communication cable to HP – 15 m. ■ Ball valve w. filter and magnet.
Interface	<p>Integrated web server for remote management, accessible either via LAN, or remotely via Internet over Regulusroute service; website is optimized for mobile devices.</p> <p>Integrated control unit with display and 6 keys, with a temperature&humidity sensor; the unit can be moved to interior and used as a room control unit.</p>
Working fluid	Water, antifreeze fluid for heat pumps and heating systems (heat pump circuit, space and DHW heating circuits), water (hot water tank).
Installation	The unit is designed for installation with a RTC inverter heat pump (RTC 6i or RTC 13e). Regulus HBOX K unit is designed for indoor installation only.
Code	20631

Accessories (not included in supply)

Safety kit for cold water piping, incl. check valve, safety valve, pressure gauge, T-piece for connecting expansion vessel/recirculation and a T-piece for heating water topping up.	for codes see the Catalogue
CSE TV pump station for DHW recirculation	for codes see the Catalogue
Expansion vessel for heating systems	for codes see the Catalogue
DHW expansion vessel	for codes see the Catalogue
Blind plug and frame for RegulusHBOX K, for installations where the control unit is used as a room unit	code 18248

DATA SHEET

TV RegulusHBOX K 106 RTC 3/1S Indoor Unit with DHW Heating

Technical Data	
Total tank volume	173 l
Total fluid volume in tank	166 l
Fluid volume in DHW heat exchanger	7 l
DHW heat exchanger surface area	1.6 m ²
Fluid working temperature	18–90 °C
Max. working pressure – heating system	3 bar
Min. working pressure – heating system	0.5 bar
Max. working pressure – DHW	6 bar
Ambient temperature	5–40 °C
Max. relative humidity	80 % non condensing
Safety valve set pressure – heating system	3 bar
Safety valve seat cross section	132 mm ²
Safety valve discharge coefficient	0.3
3-way valve actuator run time	15 s
Heat loss (tank 60 °C/ambient 20 °C)	87 W
Total weight without water	166 kg
Total weight with water	350 kg
Overall dimensions (W x H x D)	750 x 1222 x 833 mm
Tipping height (without safety valve connected)	1390 mm

Electric Data	
Power supply	3/N/PE ~ 400 / 230 V 50 Hz
Max. cross section of power cable	4 mm ² (stranded) / 6 mm ² (solid)
Nominal power input	6.2 kW (without a heat pump connected)
Heating element	1 x 6 kW (3 x 2 kW – 230 V) – possibility to connect a second heating element 6 kW
IP rating	IP20
Circuit breaker for heat pump	B 20A 1p
Circuit breaker for measurement and control	B 6A 1p

Connectivity, Memory Card	
Ethernet 100 Mbit/s	2x
USB for connecting an optional WiFi USB adapter	1x
RS485 for connecting a heat pump	1x
CIB	1x
TCL2	1x
Micro SD memory card	1x

Inputs & Outputs for Optional Accessories	
1x relay output	230 V/5A (K5)
3x relay output for the second heater	230 V/16A
3x PWM output	24 V DC (AO0, AO1, PWM3)
4x analog output	0–10 V (AO2–AO5)
1x input for Ripple control	230–400 V AC (HDO)
1x input for iPWM return signal from circulators	A/DI16
13x input for Pt1000 temperature sensors*)	measurement range –90 to 400 °C (A/DI0–A/DI13 and A/DI20)

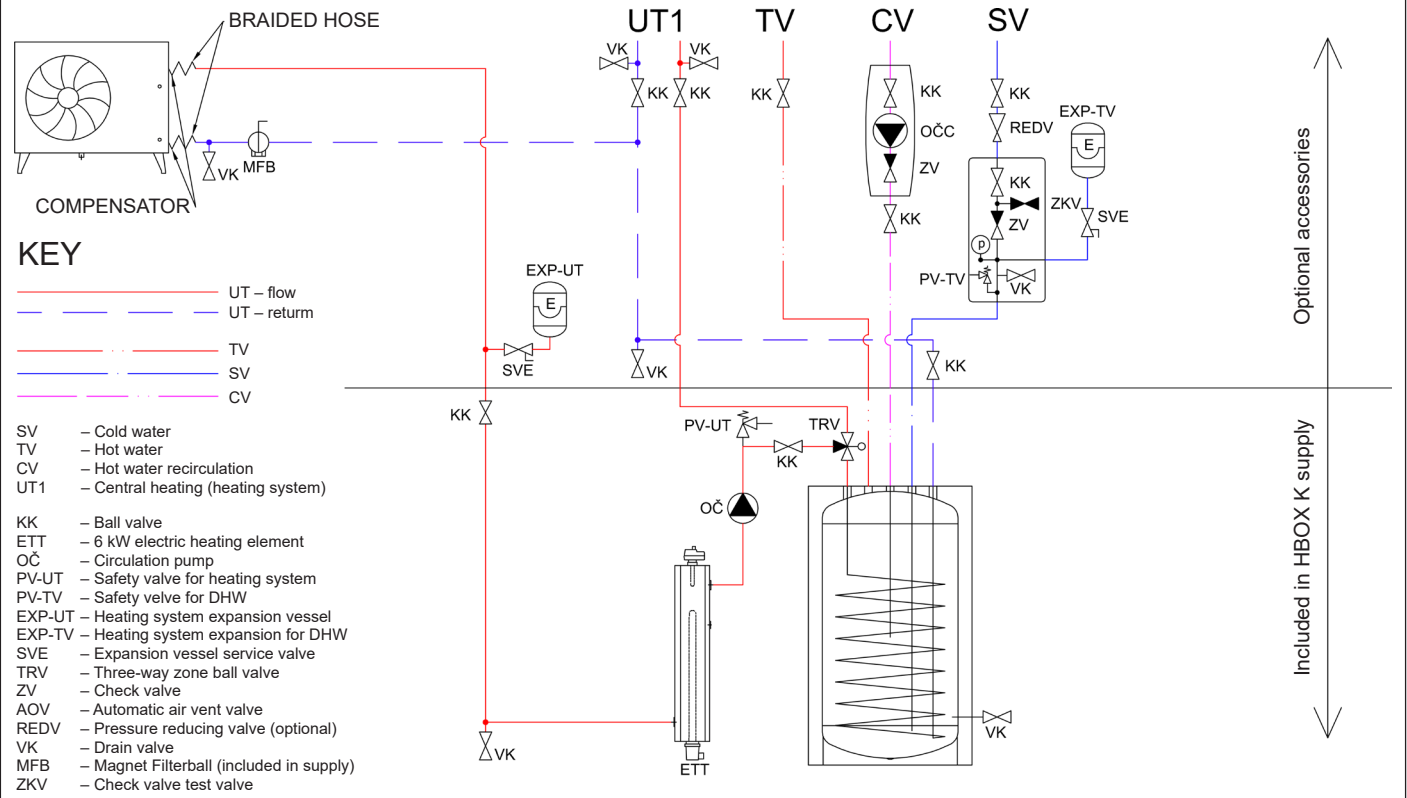
*) The inputs can be also used as binary potential-free inputs for connecting e.g. immediate recirculation switch or a HRV boost switch etc.

Hot water heating from 10 °C to 45 °C with heating water inlet temperature of 60 °C	
Heat exchanger output	24 kW (600 l/h)

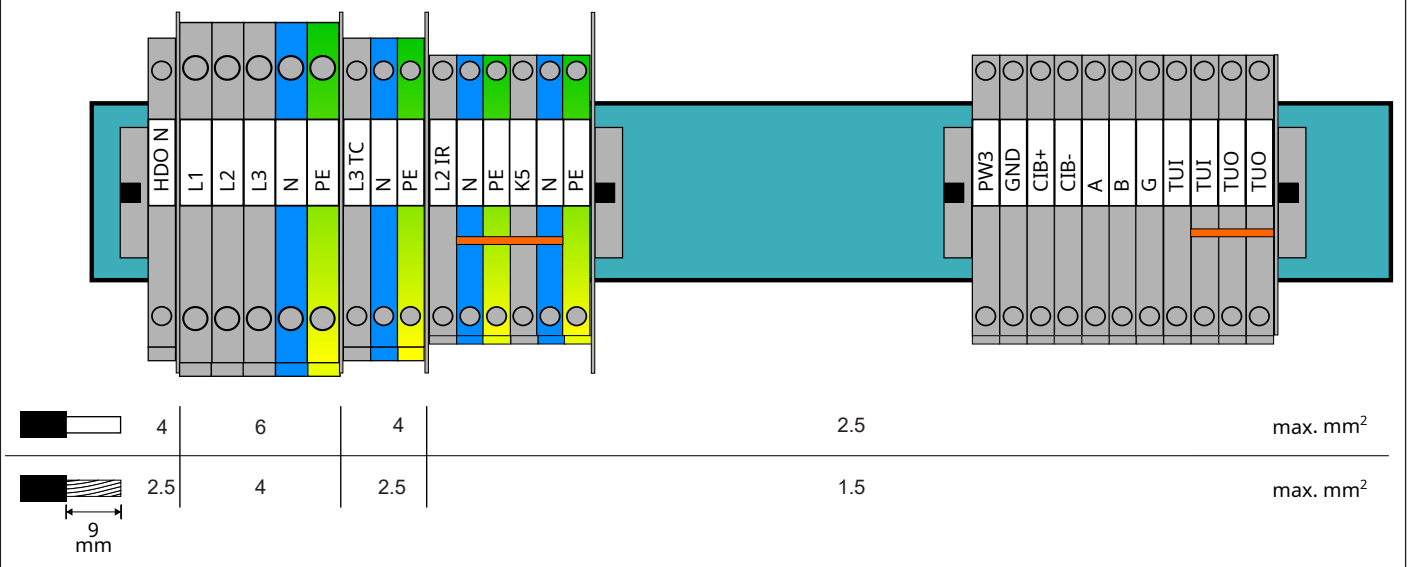
DATA SHEET

TV RegulusHBOX K 106 RTC 3/1S Indoor Unit with DHW Heating

Hydraulic Layout



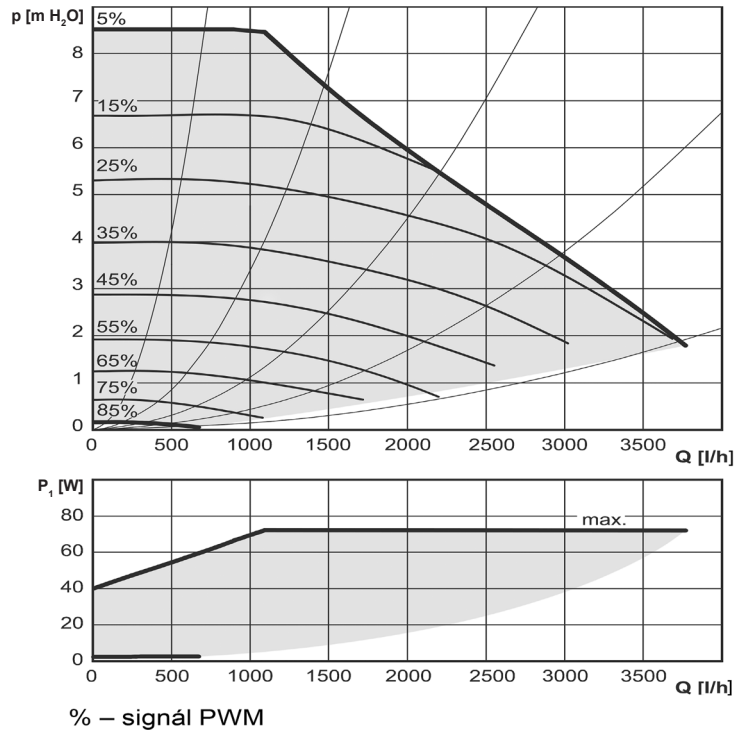
El. wiring



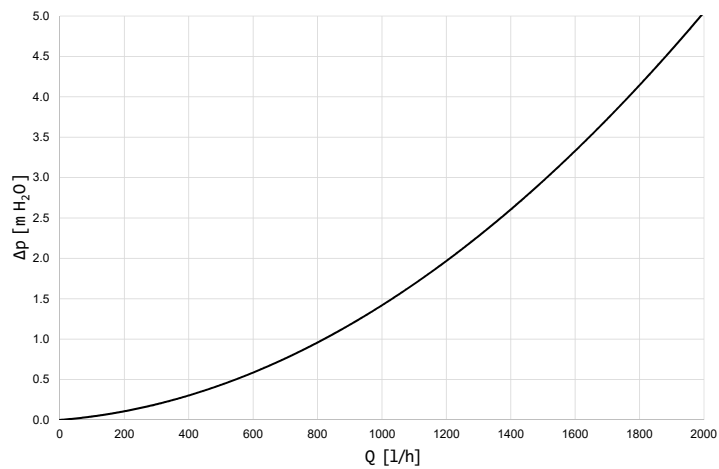
DATA SHEET

TV RegulusHBOX K 106 RTC 3/1S Indoor Unit with DHW Heating

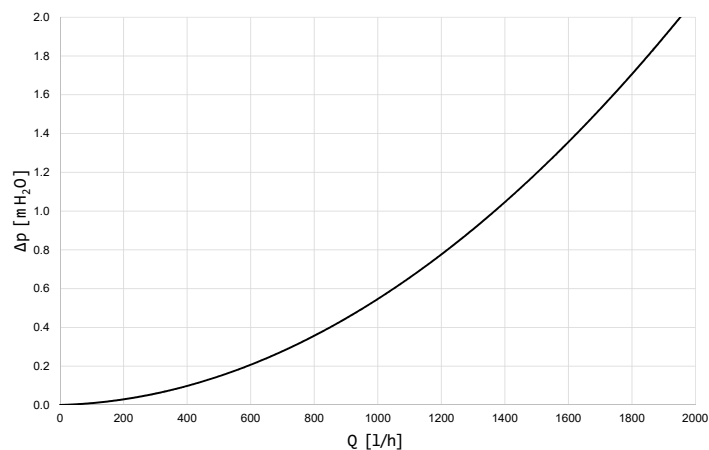
Performance curves for Wilo Para 25/8 iPWM1 pump of the heat pump



Pressure drop diagram of RegulusHBOX K unit – DHW heating



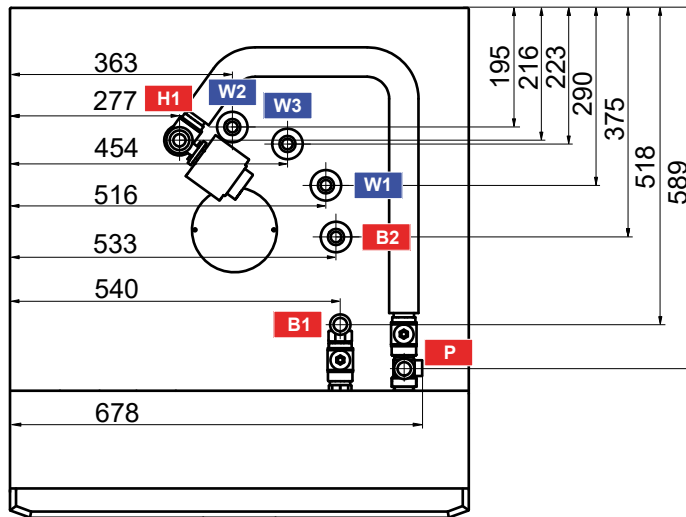
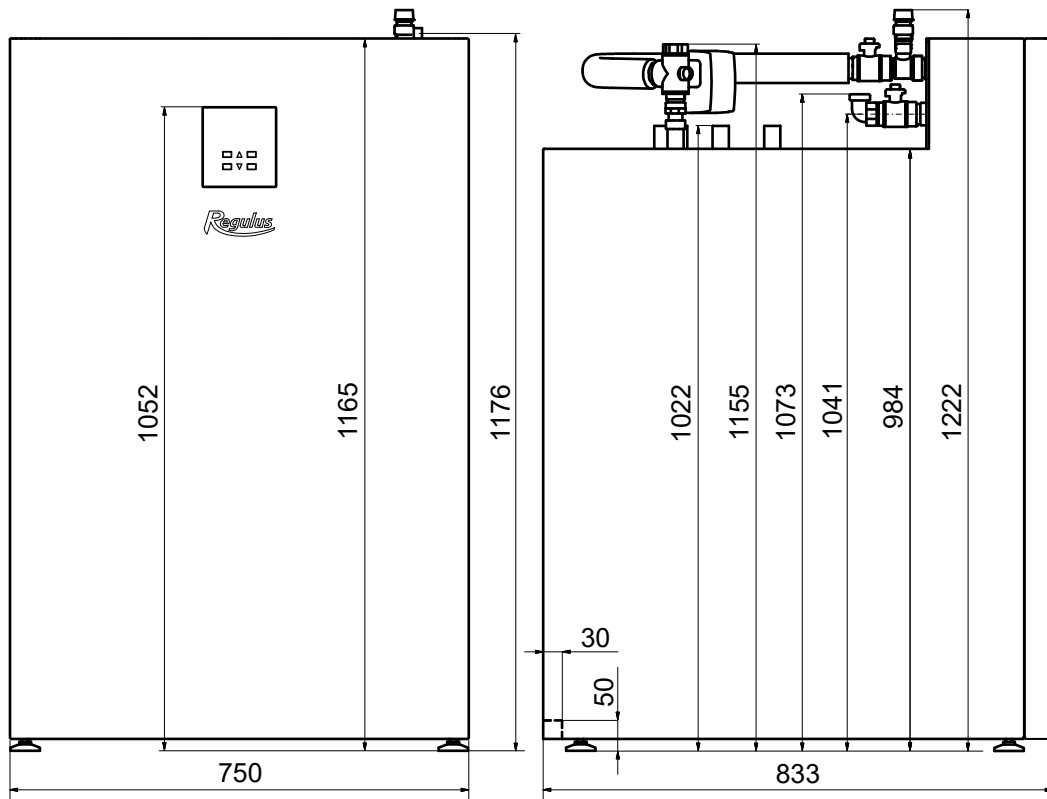
Pressure drop diagram of RegulusHBOX K unit – to heating system



DATA SHEET

TV RegulusHBOX K 106 RTC 3/1S Indoor Unit with DHW Heating

Dimensions



Pos.	Description	Connection	Height [mm]
W1	Cold water	G 3/4" M	1022
W2	Hot water	G 3/4" M	1022
W3	Circulation	G 3/4" M	1022
B1	Incoming from heat pump	G 1" M	1073
B2	Return to heat pump	G 3/4" M	1022
H1	Flow to heating system	G 1" M	1155
P	Safety valve – CH	G 3/4" F	1176