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RCT basic ETS-D5 Solution

/// Data Sheet

The RCT basic ETS-D5 Solution consists of the RCT basic magnetic stirrer and the ETS-D5 electronic contact thermometer making experiments and reactions even safer.

Improved temperature control

By combining the two devices, the internal safety circuit, which is independent of the RCT basic software, can be addressed directly by the contact thermometer. For this purpose, the maximum permissible temperature in the medium is limited independently of the set point temperature. If this value is exceeded, the heating function of the magnetic stirrer switches off via the internal safety circuit - until the device is restarted. At the same time, the stirring function is



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maintained to avoid boiling distortions.

The set safety temperature of the heating plate also remains available. The set temperature limitation of the ETS-D5 and the safety temperature of the hotplate are OR-linked. This means that every potential error leads to the heating being switched off. In addition, the temperature of the heating plate can be set independently of the medium. In this way, you actively influence the heating times.

Improved display

With the ETS-D5, you also enhance the display of your magnetic stirrer. You can see the set and actual value of the medium temperature at a glance with a resolution of 0.1 K on the contact thermometer. The setting accuracy is also refined from 1 K to 0.1 K in this combination. The current hotplate temperature is also displayed on the RCT.

Another plus: The display of the contact thermometer can be placed at eye level. This makes it directly visible where the temperature is measured and controlled.

In addition to the magnetic stirrer and contact thermometer, the complete solution also includes all the necessary mounting elements.

Scope of delivery

- RCT basic
- Magnetic stirring bar Set 30+40
- H 44 Boss head clamp
- Screw driver
- ETS-D5 Electronic contact thermometer
- PT 1000.60 Temperature sensor, stainless steel
- H 38 Holding rod

Technical Data

Number of stirring positions	1
Stirring quantity max. per stirring position (H2O) [l]	20
Maximum load [kg]	25
Motor rating output [W]	9
Motor principle	Brushless DC
Direction of rotation	right
Speed display set-value	LED
Speed display actual-value	LED
Speed adjustment	Control knob (Rotating / Pressing)
Speed range [rpm]	50 - 1500
Setting accuracy speed [rpm]	10
Stirring bar length [mm]	20 - 80
Self-heating of the set-up plate by max. stirring (RT:22°C/duration:1h) [K]	+12
Heat output [W]	800
Temperature display set-value	LED
Temperature display actual-value	LED
Temperature unit	°C
Heating temperature range [°C]	Room temp. + device self heating - 310
Heat control	Control knob (Rotating / Pressing)
Display resolution [K]	0.1
Temperature setting range [°C]	0 - 310
Temperature setting resolution of heating plate [K]	1
Connection for ext. temperature sensor	PT1000, ETS-D5, ETS-D7, PT wireless
Temperature setting resolution of medium [K]	1
Operating temperature min. (with external cooling) [°C]	-20
Adjustable safety circuit [°C]	50 - 360
Set-up plate material	Aluminium alloy
Set-up plate dimensions [mm]	Ø 135
Automatic reverse rotation	optional (with IKA HUB)
Intermittent mode	optional (with IKA HUB)
Timer	yes
Timer display	LED
Time setting min. [s]	1
Time setting max. [min]	5999
pH measurement	optional (with ETS-D7, PT wireless)
Programs	optional (with IKA HUB)
Sensor in medium detection	yes
Temperature measure range PT1000 [°C]	-20 - 310
PT 1000 deviation;DIN EN 60751 Kl. A [K]	≤ ± (0.15 +0.002x t)
Speed deviation (no load,nominal voltage, at 1500rpm + 25 °C) [%]	±2
Heating rate (1l H2O in H1500) [K/min]	9
Heat control accuracy of heating plate centre without vessel (at 100°C) [K]	±5
Heat control accuracy with ext. PT1000 (500ml H2O in 600ml beaker,40mm stirring bar,600rpm,50°C) [K]	±0.5
Heat control accuracy with ETS-D5 (500ml H2O in 600ml beaker,40mm stirring bar,600rpm,50°C) [K]	±0.5
Heat control accuracy with ETS-D7 (500ml H2O in 600ml beaker, 40mm stirring bar, 600rpm, 50°C) [K]	±0.2
Heat control accuracy with PT wireless (500ml H2O in 600ml beaker, 40mm stirring bar, 600rpm, 50°C) [K]	±0.2
Dimensions (W x H x D) [mm]	160 x 100 x 200
Weight [kg]	2.3



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Permissible ambient temperature [°C]	5 - 40
Permissible relative humidity [%]	80
Protection class according to DIN EN 60529	IP 54
RS 232 interface	yes
USB interface	USB-C
WPAN interface	optional (USB WD)
Voltage [V]	220 - 230
Frequency [Hz]	50/60
Power input [W]	820
Power input standby [W]	0.45