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RH basic Magnetic Stirrer

/// Data Sheet

Compact. Powerful. Precisely controlled.

The new RH basic is the ideal solution for anyone looking for a compact, powerful magnetic stirrer for entry-level or basic laboratory use—without compromising on professional temperature control. Based on the RH lite, the RH basic offers all the advantages of its sister model and goes one step further: Thanks to the integrated contact thermometer interface and the ETS-D5 included in the scope of delivery, it enables precise, external temperature control directly in the medium.

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The highlights of the RH basic
• External temperature control with ETS-D5: The ETS-D5 interface and the included contact thermometer measure and control the temperature not only at the heating plate, but directly in the medium – for maximum precision and process reliability.
• Adjustable temperature safety circuit for the heating plate in accordance with laboratory equipment standard EN IEC 61010-2-010 for heated devices.
• Two rotary and push buttons for independent setpoint adjustment and start/stop of the heating and stirring function.
• 600 W heating power and 135 mm aluminum heating plate with increased surface strength – for a wide range of applications and a long service life.
• Maximum temperature: 310°C and maximum speed: 1,500 rpm – powerful, homogeneous stirring and efficient heating.
• Energy-efficient EC motor for powerful stirring with minimal energy consumption.
• Extremely compact design: only 168 × 217 mm – ideal for small work surfaces.
• Low self-heating of the heating plate – perfect for mixing temperature-sensitive samples.
• Two stand mounting points for flexible use and secure test setup.

The advantages of the ETS-D5 contact thermometer
With the ETS-D5 included in the scope of delivery, the RH basic becomes a fully-fledged heating and stirring system for safe temperature control directly in the sample.
The ETS-D5 offers:
• Display of setpoint and actual temperature with a resolution of 0.1 K and high control accuracy of (±0.2 K + PT1000 sensor tolerance, class A)
• Optimized PID control for stable temperature control without overshoot
• Automatic shutdown of the magnetic stirrer in case of sensor error or exceeding the defined safety temperature
• Replaceable temperature sensor (optionally with special coating or made of glass)

Integrated safety features:
o Sensor timeout (detects when the sensor is not in the medium, adjustable)
o Temperature drop detection (reacts to unexpected temperature drops, adjustable)
o Setpoint monitoring (Delta T) – switches off temperature control when the setpoint is exceeded
o Setpoint limitation – limits the maximum adjustable temperature
o Safe temp – switches off temperature control when the value is exceeded
o In case of error, the stirrer remains off – for maximum safety

• Three temperature control modes: Fast (rapid heating), Precise (highest accuracy), Synthesis block optimized (perfect for chemical syntheses)
• Adjustable heating speed in percent for sensitive samples
• Convenient touch display for intuitive operation
• USB-C interface for fast and easy data transfer to a PC

What makes the RH basic special?
Unlike the RH lite, which deliberately does without external temperature control and is therefore optimized for simple

applications and price-conscious entry-level users, the RH basic offers professional temperature control directly in the medium with the ETS-D5 interface and the included contact thermometer. This allows you to benefit from all the advantages of precise external temperature control: higher process reliability, better reproducibility, and the ability to reliably control even more demanding applications.

The RH basic combines compact design, high performance, and professional temperature control in one device—making it the perfect choice for anyone who wants more control and safety in their everyday laboratory work. RH basic — the entry point into professional magnetic stirring technology with external temperature control.

Scope of delivery
•RH basic Magnetic Stirrer
•IKAFLON® 20 Magnetic stirring bar
•IKAFLON® 30 Magnetic stirring bar
•IKAFLON® 40 Magnetic stirring bar
•H 102 Cover for RH basic
•H 102.1 Protection handle
•Screwdriver (use for safety circuit)

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Technical Data

Number of stirring positions	1
Stirring quantity max. per stirring position (H2O) [l]	15
Maximum load [kg]	20
Motor rating output [W]	7
Motor principle	Brushless DC
Direction of rotation	right
Speed display set-value	scale
Speed display actual-value	scale
Speed adjustment	Turning knob
Speed range [rpm]	100 - 1500
Stirring bar length [mm]	20 - 80
Self-heating of the set-up plate by max. stirring (RT:22°C/duration:1h) [K]	+6
Heat output [W]	600
Temperature display set-value	scale
Temperature display actual-value	scale
Temperature unit	°C
Heating temperature range [°C]	Room temp. + device self heating - 310
Heat control	Turning knob
Temperature setting range [°C]	0 - 310
Connection for ext. temperature sensor	ETS-D5
Adjustable safety circuit [°C]	50 - 360
Set-up plate material	Aluminium alloy
Set-up plate dimensions [mm]	Ø 135
Speed deviation (no load,nominal voltage, at 1500rpm + 25 °C) [%]	±5
Heating rate (1l H2O in H1500) [K/min]	5.5
Heat control accuracy of heating plate centre without vessel (at 100°C) [K]	±5
Heat control accuracy of heating plate centre without vessel (at 300°C) [K]	±15
Heat control accuracy with ETS-D5 (500ml H2O in 600ml beaker,40mm stirring bar,600rpm,50°C) [K]	±0.5
Dimensions (W x H x D) [mm]	168 x 100 x 217
Weight [kg]	2.1
Permissible ambient temperature [°C]	5 - 40
Permissible relative humidity [%]	80
Protection class according to DIN EN 60529	IP 22
Voltage [V]	220 - 230
Frequency [Hz]	50/60
Power input [W]	620