



designed for scientists



## EUROSTAR 400 control

/// Data Sheet

Powerful laboratory stirrer for high viscous applications and intensive mixing for quantities up to 150 l (H<sub>2</sub>O). It automatically adjusts the speed within the range of 0/6 – 2000 rpm (two speed ranges) through microprocessor controlled technology. The control stirrer comes equipped with a RS 232 and a USB interface to control and document all parameters. An integrated torque trend display is provided for the measurement of viscosity changes, as well as integrated safety circuits ensure automatic cut-off in an anti-stall or overload conditions. Continuous comparison of shaft to desired speed is performed and variations are adjusted automatically. This ensures constant speed even with changes in viscosities of the sample.



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- Multilingual TFT display
- Programmable functions
- Integrated temperature measurement
- Interval operation
- Timer function
- Adjustable safety circuit
- Locked function
- Infinitely adjustable speed
- Push-through agitator shafts
- Overload protection
- Short-term overload operation
- Slim casing
- Quiet operation
- Error code display

### Technical Data

Stirring quantity max. per stirring position (H <sub>2</sub> O) [l]	150
Motor rating input [W]	220
Motor rating output [W]	176
Motor principle	Brushless DC
Speed display	TFT
Speed range [rpm]	0/6 - 2000
Intermittent operation	yes
Viscosity max. [mPas]	100000
Output max. at stirring shaft [W]	167
Permissible ON time [%]	100
Torque max. at stirring shaft [Ncm]	400
torque I max. [Ncm]	400
torque II max. [Ncm]	80
Speed range I (50 Hz) [rpm]	6 - 400
Speed range II (50 Hz) [rpm]	30 - 2000
Speed range I (60 Hz) [rpm]	6 - 400
Speed range II (60 Hz) [rpm]	30 - 2000
Speed control	stepless
Setting accuracy speed [±rpm]	1
Deviation of speed measurement n > 300rpm [±%]	1
Deviation of speed measurement n < 300rpm [±rpm]	3
Stirring element fastening	chuck
Connection for ext. temperature sensor	PT1000
Temperature display	yes
Plug-in coupling (Ø) [mm]	10
Chuck range diameter [mm]	0.5 - 10
Hollow shaft, inner diameter [mm]	10.3
Hollow shaft (push-through - when stopped)	yes
Fastening on stand	extension arm
Extension arm diameter [mm]	16
Extension arm length [mm]	160



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Torque display	yes
Speed control	electronic
Nominal torque [Nm]	4
Torque measurement	trend
deviation of torque measurement I [ $\pm$ Ncm]	40
deviation of torque measurement II [ $\pm$ Ncm]	12
Timer	yes
Timer display	TFT
Time setting range [min]	1 - 6000
Temperature measuring range [°C]	-10 - +350
Temperature measurement resolution [K]	0.1
Accuracy of temperature measurement [K]	$\pm 0.05$ + tolerance PT1000 (DIN IEC 751 Class A)
Limit deviation temperature sensor [K]	$\leq \pm (0.15 + 0.002 \times  T )$
housing material	alu-cast coating / thermoplastic polymer
communication distance (depend on building) max. [m]	150
Dimensions (W x H x D) [mm]	114 x 320 x 268
Weight [kg]	8.2
Permissible ambient temperature [°C]	5 - 40
Permissible relative humidity [%]	80
Protection class according to DIN EN 60529	IP 40
RS 232 interface	yes
USB interface	yes
Voltage [V]	230 / 115 / 100
Frequency [Hz]	50/60
Power input [W]	226