



LR 1000 control Package

The LR 1000 control is a cost efficient, modular laboratory reactor designed for optimizing chemical reaction processes as well as for mixing, dispersing and homogenization applications at the laboratory scale. The system can be adapted quickly and easily for a wide range of applications and specific requirements. The reactor is especially designed for the unique applications requirements that define the cosmetic and pharmaceutical industries. The temperature of the medium can be as high as 120 °C. The temperature of the heating source, which is located at the bottom of the vessel, is controlled accordingly to reach the set temperature inside the medium. A PT 100.5 temperature sensor and the corresponding receptacle LR 1000.61 for the lid are included with this package. Prominent features of the LR 1000 control system are the integrated pH sensor connection and the display interface. The latter allows for the display of all process-relevant data onto a PC, save data storage and control of the reactor. The software (accessory) allows for further adaptation of the overall system and processes.

- Large easy to read TFT display for better image quality and easy navigation
- Torque trend measurement indicates changes in product viscosity
- Integrated pH sensor connection
- RS 232 and USB interface to operate the unit with the laboratory software labworldsoft

Información Técnica	
Volumen utilizable min. [ml]	500
Volumen utilizable max. [ml]	1000
Funcionamiento de temperatura max. [°C]	120
Vacío alcanzable [mbar]	25
Max. viscosidad [mPas]	100000
Rango de velocidad [rpm]	10 - 150
Diámetro de la varilla de soporte (cerradura integrada al soporte) [mm]	16
Material en contacto con producto	AISI 316L, 1.4571, vidrio de borosilicate 3.3, PTFE, FKM
Aberturas del recipiente del reactor (unidades/estándar)	1/NS 29/32, 3/NS 14/23
Dimensiones (An x Al x Pr) [mm]	443 x 360 x 295
Peso [kg]	16
Temperatura ambiental permitida [°C]	5 - 40
Humedad relativa permitida [%]	80
Clase de protección de acuerdo al DIN EN 60529	IP 21
Interfaz de RS 232	sí
Interfaz de USB	sí
Potencia análoga	no
Voltaje [V]	230 / 115
Frecuencia [Hz]	50/60
Consumo de energía [W]	1200
Contador de tiempo	sí
Control de calentamiento	TFT
Control de calentamiento preciso [±K]	1
Control de velocidad	pasos de 1 RPM
Control preciso con sensor [±K]	0.2
Esfuerzo de torsión nominal [Nm]	3
Ext. para conectar el sensor de temperatura	PT 100
Indicador de seguridad de temperatura	TFT
Indicador de temperatura	sí
Indicador de velocidad	TFT
Indicador del contador del tiempo	TFT
Indicador del esfuerzo de torsión	sí
Indicador para operar con sensor ext.	sí
Interruptor de seguridad	sí
Max. circuito de seguridad regulable [°C]	210
Max. temperatura de calentamiento [°C]	180
Medida del esfuerzo de torsión	tendencia
Min. circuito de seguridad regulable [°C]	50
Potencia de calefacción [W]	1000
Presión de funcionamiento permitida del medio refrigerante [bar]	1
Resolución de medida de temperatura [K]	0.1
Temperatura min. del medio refrigerante [°C]	3
Tiempo permitido encendido [%]	100
Tipo de enfriamiento	flujo
Velocidad min. (ajustable) [rpm]	10
[g]	1
[g]	2000
	TFT
	sí
No. ref.	0008040200

- Expandable for use with the ULTRA-TURRAX® T 25 digital (Accessory)
- Standard joint fittings on the lid: 1x NS 29, 3x NS 14 for flexible adaptation of further equipment
- Vacuum valve included with delivery
- Anchor stirrer with PTFE-scrapers available (Accessory)
- Connections to attach a cooling source to the back of the unit
- Manual adjustable safety circuit
- Integrated safety shutdown when vessel or lid is removed from the base

Accesorios: LR 1000.1 Laboratory reactor vessel, LR 1000.11 Anchor stirrer, LR 1000.10 Anchor stirrer with PTFE scrapers, LR 1000.20 Flow breaker / baffle, T 25 digital ULTRA-TURRAX®, LR 1000.41 Shaft receptacle, S 25 KV - 25 F Util de dispersión, S 25 KV - 25 G Util de dispersión, S 25 KV - 18 G Util de dispersión, PT 100.5, LR 1000.61 Sensor receptacle, LR 1000.64 pH Electrode, LR 1000.65 pH Electrode receptacle, KV 600 Suministro de enfriamiento de agua, SC 920 Vacuum pump, labworldsoft®, USB Cable - USB A to Micro-B, 2 m, PCI 8.2 Targeta Plug-in , PC 2.3 Cable, PC 1.5 Cable