

REACTOR SYSTEMS

1. Synthesis Reactors

A. Advanced Systems

a. EasySyn 500 Advanced Reactor System, Cat.No., 0020113434



EasySyn is the reactor system for organic or aqueous syntheses. It ensures safe and reproducible chemical reactions on the way from laboratory to pilot scale. Our EasySyn 500 Advanced package comprises a complete reactor system for use in the laboratory. You can also control it with the IKA lab software labworldsoft® 6 to automate all processes. The high quality of the used materials allows operation at temperatures from -50 to 200 °C and up to a vacuum of 3 mbar.

Scope of Delivery

- SY stand
- SY 500 D Reactor vessel
- SY clamp 100
- SY clamp ring 100
- SY O-ring 100
- SY 100.1 Reactor lid
- R 4011 SY Propeller stirrer
- EUROSTAR 100 control
- SY guide
- R 60 Keyless chuck
- LT 5.40 Draining set

Technical Data

- Volume : 0.5 l
- Flange dimension : DN100
- Vacuum application : yes
- Working temperature : -50 - 200 °C
- Useable volume min. : 30 ml
- Useable volume with temperature probe min. : 260 ml
- Attainable vacuum : 3 mbar
- Torque max. at stirring shaft : 100 Ncm
- Dimensions (W x H x D) : 500 x 950 x 580 mm
- RS 232 interface : yes
- USB interface : Micro-USB

b. EasySyn 1000 Advanced Reactor System, Cat.No., 0020113436



Scope of Delivery

- SY stand
- SY 1000 D Reactor vessel
- SY clamp 100
- SY clamp ring 100
- SY O-ring 100
- SY 100.1 Reactor lid
- R 4011 SY Propeller stirrer
- EUROSTAR 100 control
- SY guide
- R 60 Keyless chuck
- LT 5.40 Draining set

Technical Data

- Volume : 1 l
- Flange dimension : DN100
- Vacuum application : yes
- Working temperature : -50 - 200 °C
- Useable volume min. : 120 ml
- Useable volume with temperature probe min. : 260 ml
- Attainable vacuum : 3 mbar
- Torque max. at stirring shaft : 100 Ncm
- Dimensions (W x H x D) : 500 x 950 x 580 mm
- RS 232 interface : yes
- USB interface : Micro-USB

c. EasySyn 2000 Advanced Reactor System, Cat.No., 0020113440



Scope of Delivery

- SY stand
- SY 2000 D Reactor vessel

- SY clamp 150
- SY clamp ring 150
- SY O-ring 140
- SY 150.1 Reactor lid
- R 4012 SY Propeller stirrer
- EUROSTAR 100 control
- SY guide
- R 60 Keyless chuck
- LT 5.40 Draining set

Technical Data

- Volume : 2 l
- Flange dimension : DN150
- Vacuum application : yes
- Working temperature : -50 - 200 °C
- Useable volume min. : 120 ml
- Useable volume with temperature probe min. : 400 ml
- Attainable vacuum : 3 mbar
- Torque max. at stirring shaft : 100 Ncm
- Dimensions (W x H x D) : 500 x 950 x 580 mm
- RS 232 interface : yes
- USB interface : Micro-USB

d. EasySyn 5000 Advanced Reactor System, Cat.No., 0020113443



Scope of Delivery

- SY stand
- SY 5000 D Reactor vessel
- SY clamp 150
- SY clamp ring 150
- SY O-ring 150
- SY 150.1 Reactor lid
- R 4013 SY Propeller stirrer
- EUROSTAR 100 control
- SY guide
- R 60 Keyless chuck
- LT 5.40 Draining set

Technical Data

- Volume : 5 l
- Flange dimension : DN150
- Vacuum application : yes
- Working temperature : -50 - 200 °C
- Useable volume min. : 1000 ml
- Useable volume with temperature probe min. : 1500 ml

- Attainable vacuum : 3 mbar
- Torque max. at stirring shaft : 100 Ncm
- Dimensions (W x H x D) : 500 x 950 x 580 mm
- RS 232 interface : yes
- USB interface : Micro-USB

B. Starter Systems

a. EasySyn 500 Starter Reactor System, Cat.No., 0020113433



Scope of Delivery

- SY stand
- SY 500 D Reactor vessel
- SY clamp 100
- SY clamp ring 100
- SY O-ring 100
- SY 100.1 Reactor lid
- R 4011 SY Propeller stirrer
- EUROSTAR 60 digital
- SY guide
- R 60 Keyless chuck

Technical Data

- Volume : 0.5 l
- Flange dimension : DN100
- Vacuum application : yes
- Working temperature : -50 - 200 °C
- Useable volume min. : 30 ml
- Useable volume with temperature probe min. : 260 ml
- Attainable vacuum : 3 mbar
- Torque max. at stirring shaft : 60 Ncm
- Dimensions (W x H x D) : 500 x 950 x 580 mm

2. High Viscosity Reactors

A. LR 1000 basic system, Cat.No., 0020119960



The LR 1000 basic 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 temperature of the medium can be as high as 120 °C.

Scope of delivery

- LR 1000 basic base
- LR 1000.1 Laboratory reactor vessel
- LR 1000.61 Sensor receptacle
- PT 100.30 Temperature sensor
- Support rod, for securing accessories
- Hose connectors for cooling hoses (2 pcs.)

Technical Data

- Useable volume max. : 1000 ml
- Useable volume with disperser tool min. : 500 ml
- Useable volume without disperser tool min. : 300 ml
- Working temperature max. : 120 °C
- Attainable vacuum : 25 mbar
- Viscosity max. : 100000 mPas
- Speed range : 10 - 150 rpm
- Support rod diameter (with integrated fastening on stand) : 16 mm
- Material in contact with medium : AISI 316L, 1.4571, borosilicate glass 3.3, PTFE, PEEK, FKM
- Reactor vessel openings (units/standard) : 1/NS 29/32, 3/NS 14/23
- Permissible ON time : 100 %
- Temperature measurement resolution : 0.1 K
- Nominal torque : 3 Nm
- Heat output : 1000 W
- Cooling medium permissible operating pressure : 1 bar
- Speed min (adjustable) : 10 rpm
- Heating temperature max. : 180 °C
- Adjustable safety circuit : 47 - 225 °C
- Adjustable safety circuit, temperature deviation : ± 10 - ± 20 K
- Cooling medium temperature min. : 3 °C
- Set temperature resolution : ± 1 K
- Heat control accuracy of medium with sensor : ± 0.2 K
- Speed deviation : ± 5 rpm
- Speed display : 7 segment LED
- Heat control : LED
- Connection for ext. temperature sensor : PT 100
- Timer : yes
- Timer display : 7 segment LED
- Speed adjustment : 1 RPM steps
- Type of cooling : flow
- Temperature display : yes
- Safety temperature display : LED
- Display for operation with ext. sensor : yes
- Safety cutout : yes
- Dimensions (W x H x D) : 443 x 360 x 295 mm
- Weight : 22 kg
- Permissible ambient temperature : 5 - 40 °C

- Permissible relative humidity : 80 %
- Protection class according to DIN EN 60529 : IP 21
- RS 232 interface : yes
- USB interface : Micro-USB
- Voltage : 230 V
- Frequency : 50/60 Hz
- Power input : 1200 W

B. LR 1000 control system, Cat.No., 0025001991



The LR 1000 control is a cost efficient, modular laboratory reactor designed to optimize chemical reaction processes as well as for mixing, dispersing and homogenization tasks on a lab scale particularly in the cosmetic and pharmaceutical industry.

Scope of delivery

- LR 1000 control base
- LR 1000.3 Laboratory reactor vessel
- LR 1000.10 Sensor receptacle
- LR 1000.62
- PT 100.30 Temperature sensor
- Silentstream
- Support rod
- Hose connectors (2 pcs.)
- USB Cable - USB A to Micro-B, 2 m

Technical Data

- Useable volume max. : 1000 ml
- Useable volume with disperser tool min. : 500 ml
- Useable volume without disperser tool min. : 300 ml
- Working temperature max. : 120 °C
- Attainable vacuum : 25 mbar
- Viscosity max. : 100000 mPas
- Speed range : 10 - 150 rpm
- Support rod diameter (with integrated fastening on stand) : 16 mm
- Material in contact with medium : AISI 316L, 1.4571, borosilicate glass 3.3, PTFE, PEEK, FKM
- Reactor vessel openings (units/standard) : 2x NS 29/32, 2x NS 14/23 & 2x GL 14
- Permissible ON time : 100 %
- Temperature measurement resolution : 0.1 K
- Nominal torque : 3 Nm
- Heat output : 1000 W
- Cooling medium permissible operating pressure : 1 bar
- Weighing range max. : 2000 g
- Weighing resolution : 1 g
- pH measuring range : 0 pH – 14 pH

- pH measurement resolution : 0.1 pH
- Speed min (adjustable) : 10 rpm
- Heating temperature max. : 180 °C
- Adjustable safety circuit : 47 - 225 °C
- Adjustable safety circuit, temperature deviation : ± 10 - ± 20 K
- Cooling medium temperature min. : 3 °C
- Set temperature resolution : ± 1 K
- Heat control accuracy of medium with sensor : ± 0.2 K
- Speed deviation : ± 5 rpm
- Speed display : TFT
- Heat control : TFT
- Connection for ext. temperature sensor : PT 100
- Stirring element fastening : special output shaft
- Torque display : yes
- Torque measurement : trend
- Timer : yes
- Timer display : TFT
- Speed adjustment : 1 RPM steps
- Type of cooling : flow
- Temperature display : yes
- Working temperature sensor : PT 100
- Safety temperature sensor : PT1000
- Working temperature display : TFT
- Safety temperature display : TFT
- Display for operation with ext. sensor : yes
- Safety cutout : yes
- MV1 interface : yes
- pH meter interface : yes / BNC socket female
- pH value display : TFT
- Dimensions (W x H x D) : 443 x 360 x 295 mm
- Weight : 23 kg
- Permissible ambient temperature : 5 - 40 °C
- Permissible relative humidity : 80 %
- Protection class according to DIN EN 60529 : IP 21
- RS 232 interface : yes
- USB interface : Micro-USB
- WPAN interface : yes
- Voltage : 230 V
- Frequency : 50/60 Hz
- Power input : 1200 W