Product Catalog

2023/24

EasyMax and OptiMax Thermostat Systems
Reactors, Stirrers, and Probes
Accessories and Peripherals
Dosing and pH
Software Advanced Control
Reaction Calorimetry
Data Management
Automated Lab Reactor RX-10

Synthesis Workstations

Beyond the Round Bottom Flask

METTLER TOLEDO

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Glossary of Terms Used

ReactIR = Mid-IR spectroscopy
ETFE = Ethylene tetrafluoroethylene
FEP = Fluorinated ethylene propylene
FFKM = Perfluoro-elastomer
FKM = Fluoro-elastomer
PA = Polyamide
PBT = Polybutylene terephthalate
PE = Polyethylene
PEEK = Polyetheretherketone
POM = Polyoxymethylene
PP = Polypropylene
PPS GF40 = Polyphenylene sulfide, 40% glass
PTFE C25 = Polytetrafluoroethylene, 25% carbon
PTFE GF25 = Polytetrafluoroethylene, 25% glass
PU = Polyurethane
PVC = Polyvinylchloride
PVDF = Polyvinylidene fluoride
SAN = Styrene acrylonitrile
VQM = Silicone rubber

The Modern Synthesis Lab
A New Workplace for Chemists

Smart synthesis workstations, combined with unattended dosing and automated sampling, provide a simple way to control reaction parameters around-the-clock, allowing the chemist to remain focused on improving chemistry.

Unattended Synthesis for Every Scientist
Programmed to 'supervise' experiment while chemist is absent allowing safe overnight experiments.

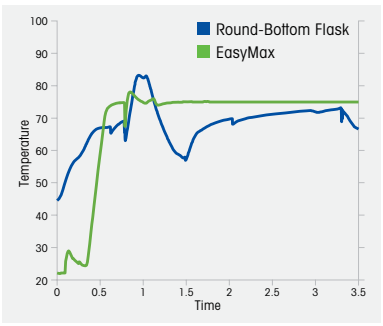
Wide Application Range
The optimization of chemical reactions is enabled by having access to a broad and seamless range of reaction conditions – dosing, sampling, stirring, and temperature control.

A modern synthesis workstation ensures recipe steps, experimental conditions, and analytical data are automatically recorded, making it easy to obtain valuable process knowledge.

EasySampler

EasyMax

Personal Safety is Assured
Safe handling of hazardous and toxic compounds and solvents needs to be assured with remote control, built-in safety operating limits, and in-situ measurements.

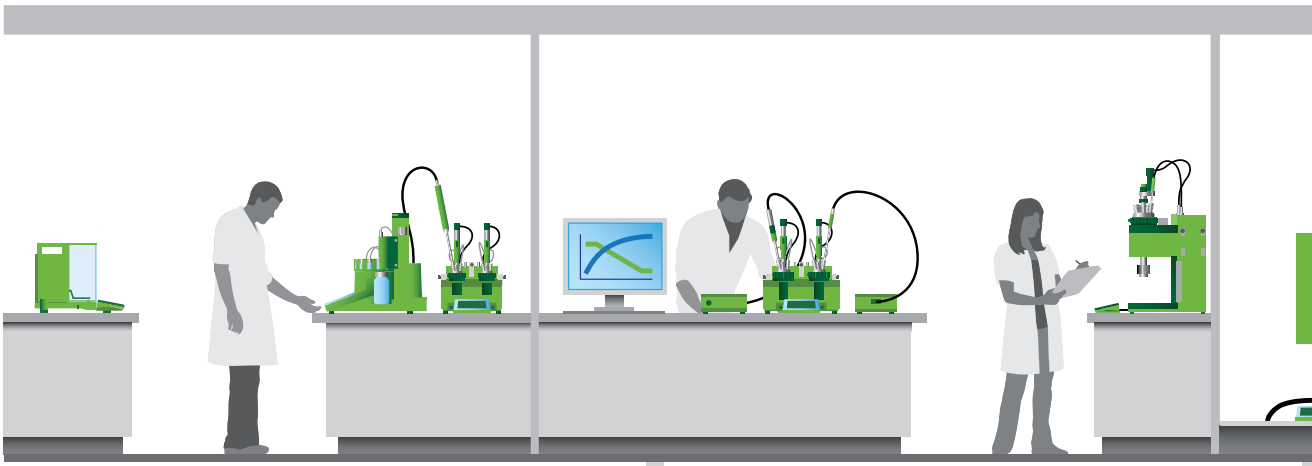


Precise Reaction Control
This ensures results are more reproducible, enables comparison between experiments with less repetition required and allows scale up to have a higher probability of success.

Data Recording and Retrieval
Ensure no data is lost, enhance understanding of the reaction, build institutional knowledge, and share information across organizations.

No Information Gaps
Run and sample experiments overnight – gain process understanding which is vital for good end-point decision at larger scale production.

Innovative Solutions
Along the Customer's Value Chain



Invent the Molecule

a. Create | b. Optimize

Develop the Reaction

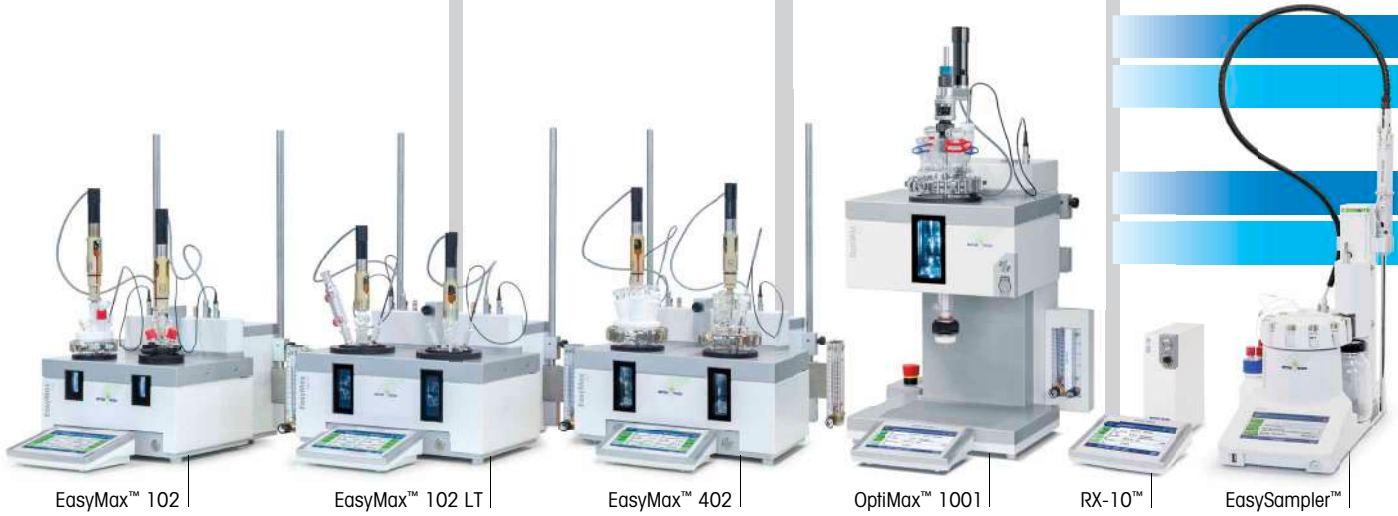
a. Create | b. Optimize

EasyMax 102 Basic

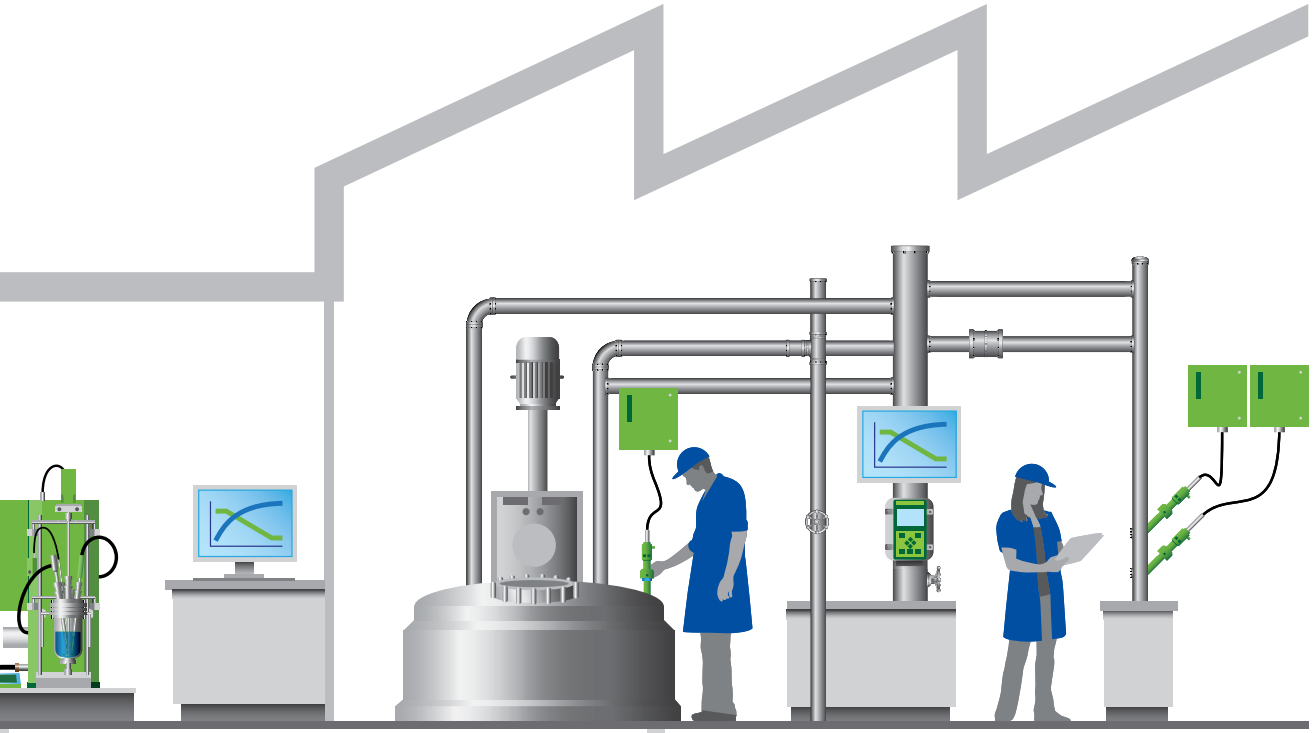
EasyMax 102 LT Basic

EasyMax 102 LT Advanced

EasyMax 402 Basic



EasyMax™ 102 | EasyMax™ 102 LT | EasyMax™ 402 | OptiMax™ 1001 | RX-10™ | EasySampler™



Create the Process

a. Characterize

ampler

02 Advanced

LT Advanced

+ EasyMax iControl

+ EasyMax HFCal

02 Advanced

+ EasyMax iControl

+ EasyMax HFCal

OptiMax

+ OptiMax iControl

+ OptiMax HFCal

RX-10

+ RX-10 iControl

RC1mx

+ RC1mx iControl

+ RC1mx HFCal

b. Optimize

Manufacture the Material

a. Test

EasyMax 402 Advanced

+ EasyMax iControl

OptiMax

+ OptiMax iControl

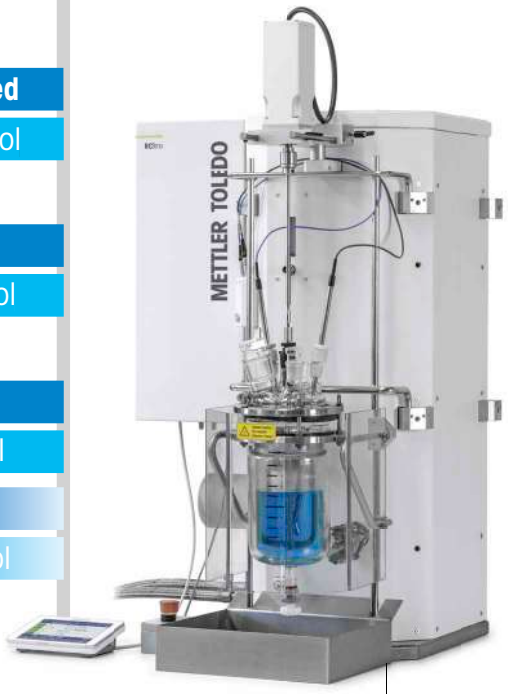
RX-10

+ RX-10 iControl

RC1mx

+ RC1mx iControl

b. Market



RC1mx™

EasySampler probes,
210 mm, 330 mm, 450 mm,
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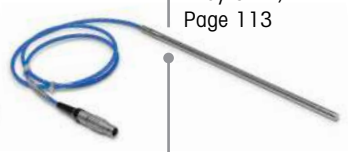

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EasyMax Basic

EasyMax Basic Plus

EasyMax Advanced

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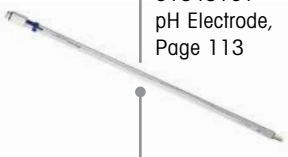

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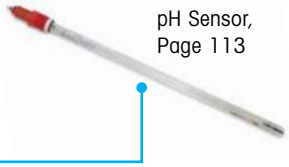

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EasyMax™ 102 LT Thermostat System

	EasyMax 102 LT
Material	Powder-coated stainless steel with FEP-coated cover plate
Power Voltage	100 – 240 VAC
Backlight	2 LEDs per reactor
Heating/Cooling	Solid state thermostat
Temperature Mode	Jacket control, reaction mixture control, distillation/reflux control
Temperature Range	–90 °C to 80 °C, jacket temperature (Tj)
Stirring Type	Built-in magnetic and overhead stirring
Stirring Speed	50 rpm to 1000 rpm
Size	430 mm x 360 mm x 280 mm (w, d, h), 430 mm x 360 mm x 500 mm (w, d, h with overhead stirrer)
Weight	21 kg, including touchscreen
Quantity	1

30548001 EasyMax 102 LT Basic and 30548000 EasyMax 102 LT Advanced thermostat system consisting of

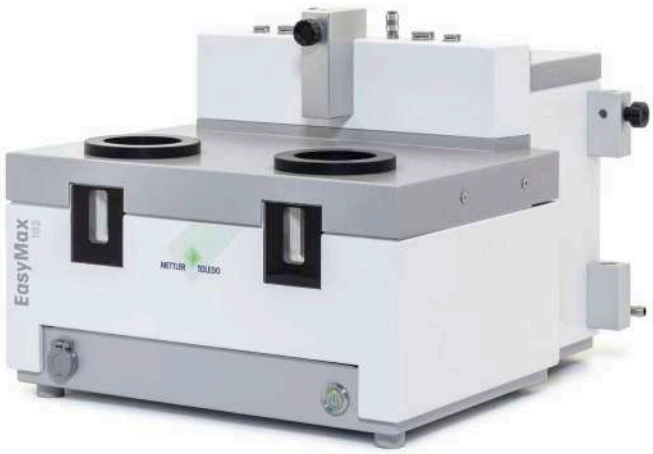
Order number	Product description	Quantity	Page
	EasyMax 102 LT reactor block	1	11
51161883	TFT touchscreen 7", 1 m cable	1	14
30778593	Protective cover for touchscreen	1	14
51191125	PVC hose for reflux condenser, Ø 8/12 mm, length 5 m	1	14
51161187	PVC industrial hose for coolant, 15 bar, Ø 8/14 mm, length 2.5 m	2	14
51192239	PVC industrial hose for purge gas, 18 bar, Ø 4/10 mm, length 2 m	1	15
51161186	PVC hose for purge gas, Ø 4/6 mm, length 2 m	2	15
51191373	Y-piece for purge gas tubing	2	15
51191916	Reducing connector for purge gas tubing	1	15
51161827	Flowmeter set	1	15
51190324	Quick connect coupling for purge gas inlet	4	15
51192126	Hose clamp for PVC tube	8	15
51191914	Knurled screw, M6 x 10 mm	3	16
30565897	Hose connectors, M16 x 1, for coolant	1	16
103298	Antistatic additive for coolant, 250 mL per bottle, 4 bottles in a set	1	16
	Insulation tubing for cooling connectors	1	16

EasyMax 102 LT Upgrade Possibilities

Order Number	Product Description	Quantity	Page
30721088	EasyMax Basic Plus Upgrade	1	19
30721089	EasyMax Advanced Upgrade	1	19

EasyMax™ 102 Thermostat System

	EasyMax 102
Material	Powder-coated stainless steel with FEP-coated cover plate
Power Voltage	100 – 240 VAC
Backlight	2 LEDs per reactor
Heating/Cooling	Solid state thermostat
Temperature Mode	Jacket control, reaction mixture control, distillation/reflux control
Temperature Range	–40 °C to 180 °C, jacket temperature (Tj)
Stirring Type	Built-in magnetic and overhead stirring
Stirring Speed	50 rpm to 1000 rpm
Size	330 mm x 360 mm x 280 mm (w, d, h), 330 mm x 360 mm x 500 mm (w, d, h with overhead stirrer)
Weight	16 kg, including touchscreen
Quantity	1



30133676 EasyMax 102 Basic and 51161711 EasyMax 102 Advanced thermostat system consisting of

Order Number	Product Description	Quantity	Page
	EasyMax 102 reactor block	1	10
51161883	TFT touchscreen 7", 1 m cable	1	14
30778593	Protective cover for touchscreen	1	14
51191125	PVC hose for reflux condenser, Ø 8/12 mm, length 5 m	1	14
51161187	PVC industrial hose for coolant, 15 bar, Ø 8/14 mm, length 2.5 m	2	14
51192239	PVC industrial hose for purge gas, 18 bar, Ø 4/10 mm, length 2 m	1	15
51161186	PVC hose for purge gas, Ø 4/6 mm, length 2 m	2	15
51191373	Y-piece for purge gas tubing	2	15
51191916	Reducing connector for purge gas tubing	1	15
51161827	Flowmeter set	1	15
51190324	Quick connect coupling for purge gas inlet	4	15
51192126	Hose clamp for PVC tube	8	15
51191915	Flow indicator for coolant	1	16
51191914	Knurled screw, M6 x 10 mm	3	16

EasyMax 102 Basic Upgrade Possibilities

Order Number	Product Description	Quantity	Page
30721088	EasyMax Basic Plus Upgrade	1	19
30721089	EasyMax Advanced Upgrade	1	19

EasyMax™ 402 Thermostat System

	EasyMax 402
Material	Powder-coated stainless steel with FEP-coated cover plate
Power Voltage	100 – 240 VAC
Backlight	2 LEDs per reactor
Heating/Cooling	Solid state thermostat
Temperature Mode	Jacket control, reaction mixture control, distillation/reflux control
Temperature Range	–40 °C to 180 °C, jacket temperature (Tj)
Stirring Type	Overhead stirring
Stirring Speed	50 rpm to 1000 rpm
Size	430 mm x 360 mm x 280 mm (w, d, h), 430 mm x 360 mm x 500 mm (w, d, h with overhead stirrer)
Weight	20 kg, including touchscreen
Quantity	1

30133677 EasyMax 402 Basic and 30084210 EasyMax 402 Advanced thermostat system consisting of

Order number	Product description	Quantity	Page
	EasyMax 402 reactor block	1	12
51161883	TFT touchscreen 7", 1 m cable	1	14
30778593	Protective cover for touchscreen	1	14
51191125	PVC hose for reflux condenser, Ø 8/12 mm, length 5 m	1	14
51161187	PVC industrial hose for coolant, 15 bar, Ø 8/14 mm, length 2.5 m	2	14
51192239	PVC industrial hose for purge gas, 18 bar, Ø 4/10 mm, length 2 m	1	15
51161186	PVC hose for purge gas, Ø 4/6 mm, length 2 m	2	15
51191373	Y-piece for purge gas tubing	2	15
51191916	Reducing connector for purge gas tubing	1	15
51161827	Flowmeter set	1	15
51190324	Quick connect coupling for purge gas inlet	4	15
51192126	Hose clamp for PVC tube	8	15
51191915	Flow indicator for coolant	1	15
51191914	Knurled screw, M6 x 10 mm	3	16

EasyMax 402 Basic Upgrade Possibilities

Order Number	Product Description	Quantity	Page
30721088	EasyMax Basic Plus Upgrade	1	19
30721089	EasyMax Advanced Upgrade	1	19

OptiMax™ 1001 Thermostat System

	OptiMax 1001
Material	Powder-coated stainless steel with FEP-coated cover plate
Power Voltage	100 – 240 VAC
Back-/Frontlight	12 LEDs
Heating/Cooling	Solid state thermostat
Temperature Mode	Jacket control, reaction mixture control, distillation/reflux control
Temperature Range	–40 °C to 180 °C, jacket temperature (Tj)
Stirring Type	Overhead stirring
Stirring Speed	30 rpm to 1200 rpm
Size	390 mm x 415 mm x 540 mm (w, d, h), 390 mm x 415 mm x 780 mm (w, d, h with overhead stirrer) Width includes the flowmeter
Weight	35 kg, including touchscreen
Quantity	1

51162701 OptiMax thermostat system set consisting of

Order Number	Product Description	Quantity	Page
	OptiMax 1001 reactor block	1	13
51161883	TFT touchscreen 7", 1 m cable	1	14
30778593	Protective cover for touchscreen	1	14
51191125	PVC hose for reflux condenser, Ø 8/12 mm, length 5 m	1	14
51161187	PVC industrial hose for coolant, 15 bar, Ø 8/14 mm, length 2.5 m	2	14
51192239	PVC industrial hose for purge gas, 18 bar, Ø 4/10 mm, length 2 m	1	15
51161186	PVC hose for purge gas, Ø 4/6 mm, length 2 m	1	15
51191373	Y-piece for purge gas tubing	1	15
51191916	Reducing connector for purge gas tubing	3	15
51190324	Quick connect coupling for purge gas inlet	5	15
51192126	Hose clamp for PVC tube	4	15
51191915	Flow indicator for coolant	1	15
51191914	Knurled screw, M6 x 10 mm	4	16

51162701 OptiMax thermostat system set consisting of (continued)

Order Number	Product Description	Quantity	Page
51162860	Reactor block plug for bottom drain valve opening	1	16
51192209	O-ring for 51162860 plug, Ø 50.39 mm x 3.53 mm	1	16
51161782	Bubble counter	1	17
51161603	Magnetic bubble counter holder	1	17
51162886	Accessories holder set	1	17
51192208	Glass adapter ST19/26-GL14	2	17
51190317	Screw cap GL14, with aperture	2	17
51103947	Sealing ring for screw cap GL14 PTFE/silicone, aperture 6 mm	2	17
30519615	Purge gas regulation valve	1	17
51161099	Lab bar, 600 mm x 14 mm	4	17
	Safeguard button (30260369 Emergency button)	1	17
51162690	Overhead stirrer drive complete	1	87

Thermostat System
Parts

51161883	**TFT touchscreen 7", 1 m cable**
Material	PA, aluminium
Size	195 mm x 135 mm x 60 mm (w, d, h)
Quantity	1

30778593	**Protective cover for touchscreen**
Material	PET
Quantity	1

51191125	**PVC hose for reflux condenser**
Material	PVC
Size	Ø 8/12 mm, length 5 m
Quantity	1

51161187	**PVC industrial hose for coolant**
Material	PVC
Pressure Range	15 bar
Size	Ø 8/14 mm, length 2.5 m
Quantity	1

51192239	**PVC industrial hose for purge gas**
Material	PVC
Pressure Range	18 bar
Size	Ø 4/10 mm, length 2 m
Quantity	1

51161186	**PVC hose for purge gas**
Material	PVC
Size	Ø 4/6 mm, length 2 m
Quantity	1

51191373	**Y-piece for gas tubing**
Material	Acetal resin
Size	For tubes with inner Ø 4 mm
Quantity	2 pcs in a set

51191916	**Reducing connector for purge gas tubing**
Material	PP
Temperature	Max. 30 °C
Size	For tubes with inner Ø 7 mm to 11 mm; 4 mm to 7 mm
Quantity	1

51161827	**Flowmeter set** for water and gas, including lab bar holder and water/gas inlet adapter
Material	Stainless steel, acrylic, brass
Temperature	Max. 65 °C
Quantity	1 gas flowmeter, 1 water flowmeter, 1 adapter for gas inlet Ø 4.8 mm 1/8″ (for tubes inner Ø 4 mm) and 1 adapter for water inlet Ø 9.6 mm 1/4″ (for tubes inner Ø 8/12 mm) in a set

Note: Only available for EasyMax 102 and 402

51190324	**Quick connect coupling for purge gas inlet**
Material	Stainless steel
Size	For tubes with inner Ø 4 mm
Quantity	1

51192126	**Hose clamp for PVC tube**
Material	Stainless steel
Size	Ø 10 mm to 17 mm
Quantity	1

51191915	**Flow indicator for coolant**
Material	SAN
Temperature	Max. 30 °C
Size	For tubes with inner Ø 6 mm to 9 mm
Quantity	1

51191914	**Knurled screw, M6 x 10**
Size	M6 x 10 mm
Quantity	1

51191235	**Identification clips for adhesive labels** to label individual sensors, reactors etc.
Size	For cables with Ø 2 mm to 4.5 mm
Quantity	1

Thermostat System
Additional Parts for EasyMax 102 LT

30565897	**Hose connectors and blind nuts for coolant**
Material	Stainless steel
Size	Hose connector to 8 mm tubing, nut M16 x 1
Quantity	2 of each in a set

	Insulation tubing for cooling connectors
Material	Synthetic rubber
Size	Inner Ø 18 mm, insulation thickness 14 mm, length 300 mm
Quantity	2 pcs in a set

Note: Tubings are not sold separately

103298	**Antistatic additive for coolant**
Volume	250 mL per bottle
Quantity	4 bottles in a set

Thermostat System
Additional Parts for OptiMax

51162860	**Reactor block plug** for bottom drain valve opening
Material	PTFE GF25
Size	Ø 56 mm x 35 mm
Quantity	1

Note: 51192209 O-ring needed

51192209	**O-ring for 51162860 plug**
Material	FKM
Size	Ø 50.39 mm x 3.53 mm, AS No. 226
Quantity	1

51161603	**Magnetic bubble counter holder**
Material	PET
Size	30 mm x 33 mm x 68 mm
Quantity	1

51161782	**Bubble counter**
Material	Borosilicate glass
Size	Ø 30 mm x 150 mm
Quantity	1

51192208	**Glass adapter ST19/26-GL14**
Material	Glass
Size	Height 50 mm
Quantity	1

51162886	**Accessories holder set** to be attached to the lab bar of the EasyMax 402 or OptiMax 1001 systems – for stirrer motor, for Ø 6 mm probes (ST14), for Ø 12 mm probes (ST19), for Ø 19 mm probes (ST24)
Material	Stainless steel, PTFE GF25
Aperture Size	Holder 1: 1 x ST14, 2 x ST19 Holder 2: 1 x ST24, 2 x ST19
Quantity	2 pcs in a set

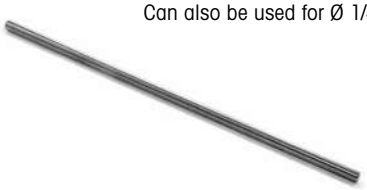
30519615	**Purge gas regulation valve**
Material	PA 6.6, NBR, brass, stainless steel
Size	Tube outer Ø 6 mm
Quantity	1

51190317	**Screw cap GL14, with aperture**
Material	PBT
Temperature	Max. 200 °C
Aperture	Ø 9.5 mm
Quantity	1

51103947	**Sealing ring for screw cap GL14 PTFE/silicone** for screw cap GL14
Material	Silicone rubber VQM, PTFE-coated
Size	Ø 12 mm, aperture 6 mm
Quantity	1

Can also be used for Ø 1/4" 6.35 mm inserts

30260369	**Emergency button**
Size	125 mm x 80 mm x 95 mm (l, w, h) cable length 6.9 m
Quantity	1



51161099	**Lab bar 600 x 14 mm**
Material	Stainless steel, 1.4435
Size	Ø 14 mm x 600 mm
Quantity	1

Optional Accessories
For the Thermostat Systems

51161803	**Accessories holder set for two-piece reactor** to be attached to the lab bar of the EasyMax 102 system – for stirrer motor, for condenser (ST14), for Tr sensor (ST10)
Material	Stainless steel, PTFE GF25
Aperture Size	2 x ST14, 1 x ST10
Quantity	2 pcs in a set

51161804	**Accessories holder set for one-piece reactor** to be attached to the lab bar of the EasyMax 102 system – for stirrer motor, for condenser (ST19), for Tr sensor (ST10)
Material	Stainless steel, PTFE GF25
Aperture Size	2 x ST19, 1 x ST10
Quantity	2 pcs in a set

51162886	**Accessories holder set** to be attached to the lab bar of the EasyMax 402 or OptiMax 1001 systems – for stirrer motor, for Ø 6 mm probes (ST14), for Ø 12 mm probes (ST19), for Ø 19 mm probes (ST24)
Material	Stainless steel, PTFE GF25
Aperture Size	Holder 1: 1 x ST14, 2 x ST19 Holder 2: 1 x ST24, 2 x ST19
Quantity	2 pcs in a set

51161802	**Bubble counter set** Bubble counter glass (for tubes inner Ø 4 mm), magnetic holder, gas regulation valve Ø 6 mm to 1.8″
Material	PET, borosilicate glass, PA
Quantity	2 of each in a set

Needed items to connect to glass reactor (2 of each):
51191267 Glass adapter ST14/23-GL14, Page 96
51190317 Screw cap GL14, with aperture, Page 96
51103947 Sealing ring for screw cap GL14 PTFE/silicone, Page 96

30015271	**Flowmeter for water**
Material	Acrylic, brass
Temperature	Max. 65 °C
Size	100 mm, 0.8 L/min to 9 L/min
Quantity	1

30015272	**Flowmeter for gas**
Material	Acrylic, brass
Temperature	Max. 65 °C
Size	100 mm, 1 L/min to 10 L/min
Quantity	1

103472	**Lab bar 300 x 14 mm**
Material	Stainless steel, 1.4301
Size	Ø 14 mm x 300 mm
Quantity	1

51161099	**Lab bar 600 x 14 mm**
Material	Stainless steel, 1.4435
Size	Ø 14 mm x 600 mm
Quantity	1

51161778	**Purge set SP-50** Quick connect coupling for purge gas inlet (for tubes inner Ø 4 mm), PVC tube for gas inlet (inner Ø 4 mm, length 2 m), reducing connector for purge gas tubing (for tubes inner Ø 7 mm to 11 mm and 4 mm to 7 mm)
Material	Stainless steel, PVC, PP
Temperature	PP max 30 °C
Quantity	1 of each in a set

Note: Available as a set only

30303580	**TFT touchscreen 7", 3 m cable**
Material	PA, aluminium
Size	195 mm x 135 mm x 60 mm (w, d, h)
Quantity	1

51162885	**Touchscreen cable extension, 3 m** Modify existing touchscreen with 1 m cable; to be assembled by a field service engineer
Size	Length 3 m
Quantity	1

30306197	**Cooling connector for EasyMax**
Material	Stainless steel, nickel-plated brass
Size	Hose connector to 8 mm tubing, 8 mm Serto connection female (M12 x 1)
Quantity	2 pcs in a set

30306198	**Cooling connector for OptiMax**
Material	Stainless steel, nickel-plated brass
Size	Hose connector to 8 mm tubing, 10 mm Serto connection female (M14 x 1)
Quantity	2 pcs in a set

30526850	**Cooling adapter 8 mm to M16 x 1 for EasyMax**
Material	Stainless steel, nickel-plated brass
Size	8 mm Serto connection female to M16 x 1 male
Quantity	2 pcs in a set

30526851	**Cooling adapter 10 mm to M16 x 1 for OptiMax**
Material	Stainless steel, nickel-plated brass
Size	10 mm Serto connection female to M16 x 1 male
Quantity	2 pcs in a set

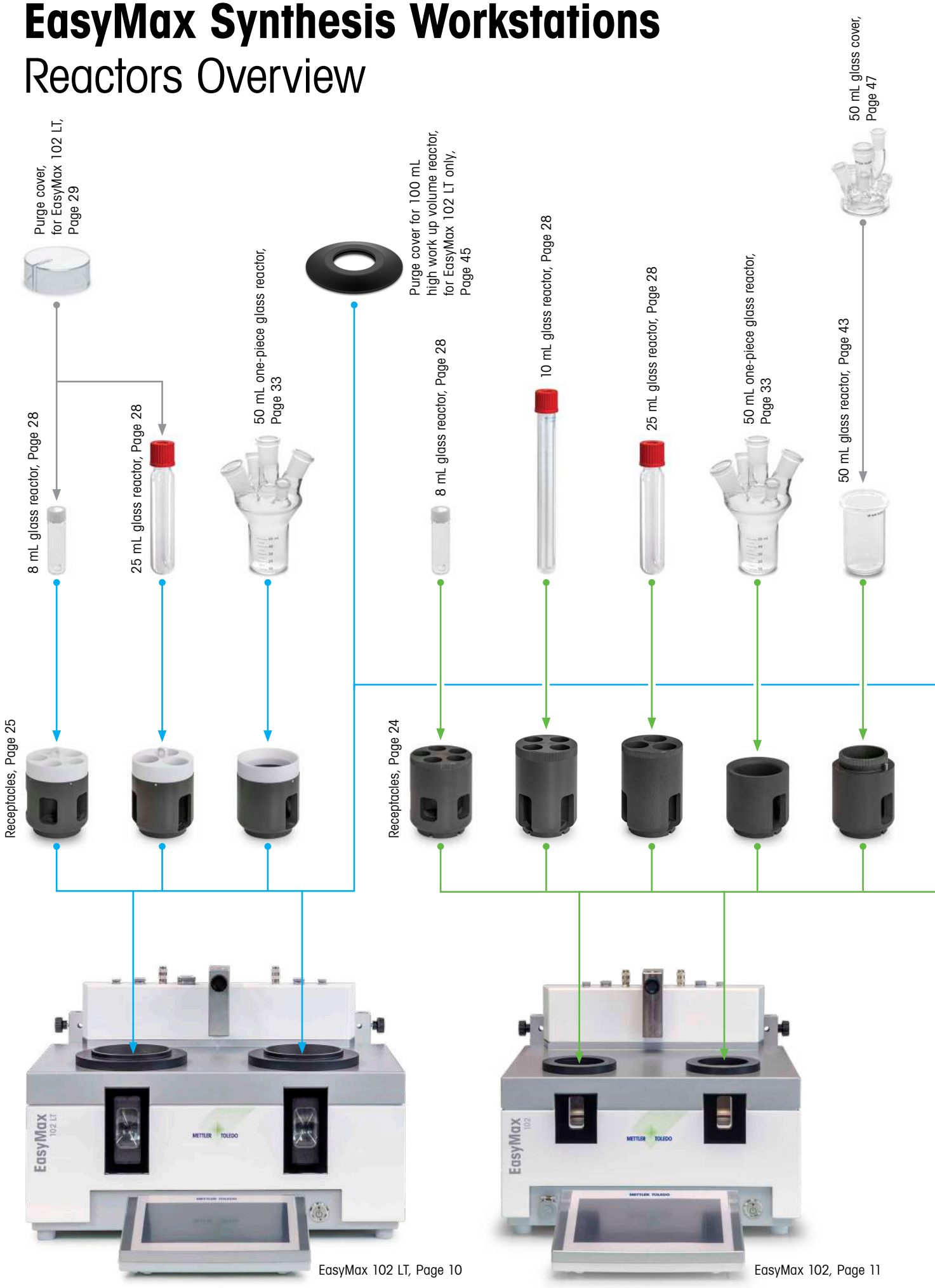
EasyMax 102, 102 LT, and 402 Basic
Upgrade Possibilities

30721088	**EasyMax Basic Plus Upgrade License** for EasyMax 102, 102 LT and 402
Quantity	1

30721089	**EasyMax Advanced Upgrade License** for EasyMax 102, 102 LT and 402
Quantity	1

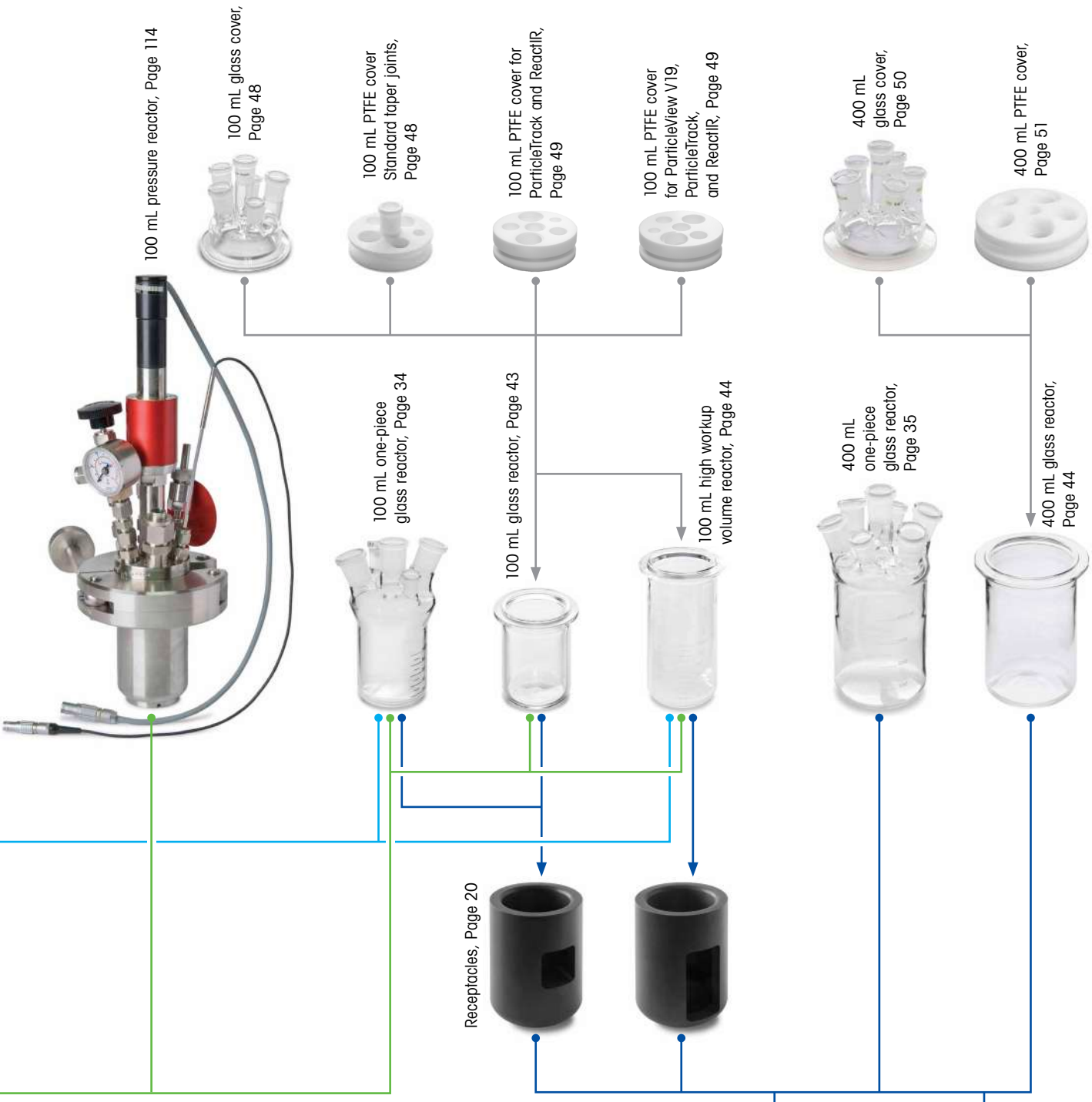
Note: Upgrade first to EasyMax Basic Plus before installing this version.

EasyMax Synthesis Workstations
Reactors Overview



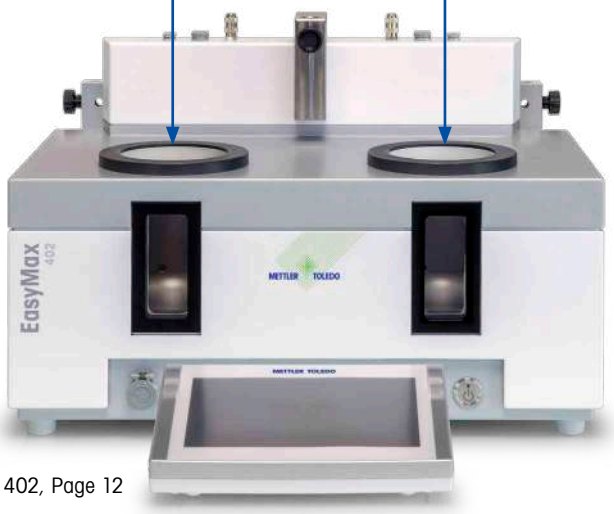
EasyMax 102 LT, Page 10

EasyMax 102, Page 11

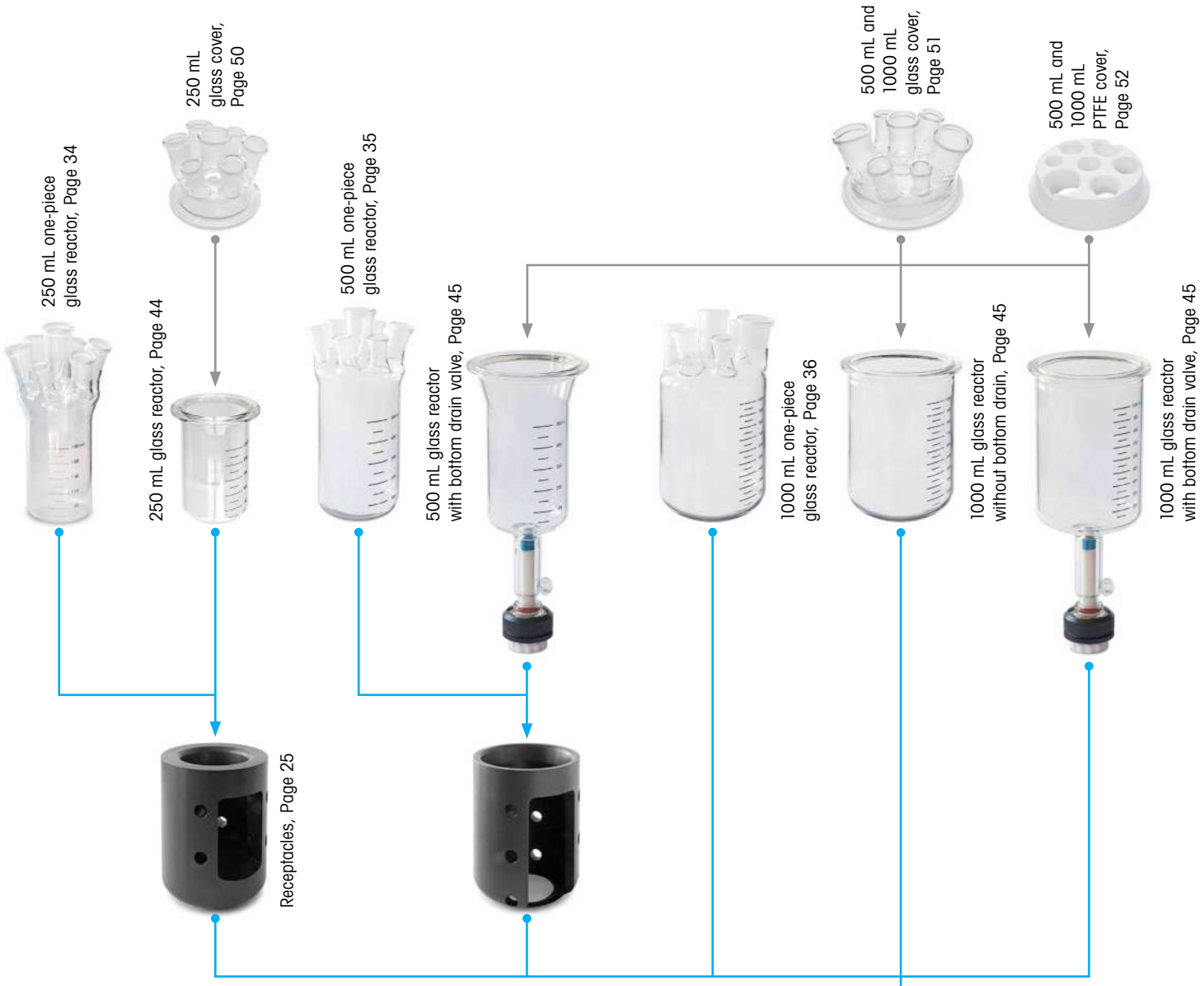


- The EasyMax 102 and 102 LT are designed to hold test tubes and reactors from 8 mL to 100 mL while the EasyMax 402 is designed to hold reactors from 100 mL to 400 mL.
- The EasyMax 102 LT has a temperature range of –90 °C to 80 °C, jacket (Tj) and reactor (Tr) temperatures.
- Both EasyMax 102 and 102 LT have either overhead or built-in magnetic stirring possibilities while the EasyMax 402 only has overhead stirring.

Note: Products shown are not to scale.



EasyMax 402, Page 12



OptiMax Workstation
Reactors Overview

OptiMax 1001, Page 13

OptiMax Starter Kit

The OptiMax starter kit simplifies the part evaluation and ordering process. The starter kit combines all the key items for a 1000 mL two-piece reactor setup in just one part number.

The OptiMax starter kit includes the following key components:

- **OptiMax thermostat system including touchscreen**
- **Stirrer motor and adapter**
- **Tr temperature probe including adapter**
- **1000 mL two-piece glass reactor**
- **Cover and reactor holders**
- **Pitched blade stirrer, downward, Alloy C-22**
- **Bar type baffle, Alloy C-22 including adapter**
- **Stoppers and "Keck" clamps for all open ports**
- **Accessories holder**

The OptiMax starter kit can be combined individually with additional items in this catalog.

51162830

OptiMax starter kit consists of the following items

Order Number	Product Description	Quantity	Page
51162701	OptiMax thermostat system	1	13
51162831	OptiMax 1000 mL two-piece glass reactor set	1	68
51162720	PTFE adapter for Tr, pH and turbidity probe	1	98
51162839	Tr probe, Alloy C-22	1	112
51162886	Accessories holder set	1	17

Receptacles

EasyMax 102

30133675	**Receptacle 5 x 8 mL test tubes** thermostat sleeve for EasyMax 102
Material	Aluminium anodized
Quantity	1

51161635	**Receptacle 4 x 10 mL test tubes** thermostat sleeve for EasyMax 102
Material	Aluminium anodized
Quantity	1

51161634	**Receptacle 3 x 25 mL test tubes** thermostat sleeve for EasyMax 102
Material	Aluminium anodized
Quantity	1

51161716	**Receptacle for 50 mL reactor** thermostat sleeve for EasyMax 102
Material	Aluminium anodized
Quantity	1

51161815	**Receptacle for 50 mL one-piece reactor** thermostat sleeve for EasyMax 102
Material	Aluminium anodized
Quantity	1

EasyMax 102 LT

30549361	**Receptacle 5 x 8 mL test tubes, low temp** thermostat sleeve for EasyMax 102 LT
Material	Aluminium anodized, PTFE GF25
Quantity	1

Note: Use 30565895 tool to easily remove receptacle.

30549362	**Receptacle 3 x 25 mL test tubes, low temp** thermostat sleeve for EasyMax 102 LT
Material	Aluminium anodized, PTFE GF25
Quantity	1

Note: Use 30565895 tool to easily remove receptacle.

30549363	**Receptacle for 50 mL one-piece reactor, low temp** thermostat sleeve for EasyMax 102 LT
Material	Aluminium anodized, PTFE GF25
Quantity	1

30565895	**Tool to remove receptacles** for 30549361 and 30549362 receptacles
Material	Length 162 mm, chrome plated
Quantity	1

EasyMax 402

30086802	**Receptacle for 100 mL reactor** thermostat sleeve for EasyMax 402
Material	Aluminium anodized
Quantity	1

30111635	**Receptacle for 100 mL high workup volume reactor** thermostat sleeve for EasyMax 402
Material	Aluminium anodized
Quantity	1

OptiMax 1001

51162698	**Receptacle for 250 mL reactor** thermostat sleeve for OptiMax 1001
Material	Aluminium anodized
Quantity	1

51162670	**Receptacle for 500 mL reactor** thermostat sleeve for OptiMax 1001
Material	Aluminium anodized
Quantity	1

Guide
Recommended Working Volume Ranges

For optimal temperature measurement and control as well as consistent stirring of the reaction mixture, we recommend the working volume ranges mentioned below.

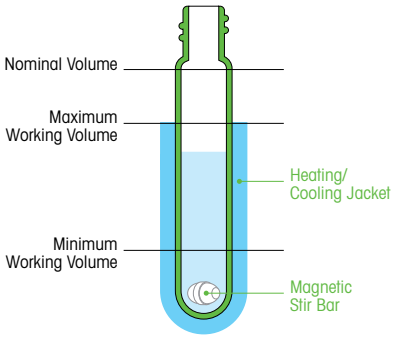
Reactor Volume Definitions:

Minimum Working Volume – Minimum volume for consistent stirring and accurate temperature (Tr) sensor measurement and control capabilities for the one-piece and two-piece reactors.

Maximum Working Volume – Maximum amount of reaction mixture in a reactor for consistent temperature measurement and control capabilities (the reactor is fully inserted in the heating/cooling jacket). The reaction mixture does not reach the glass connection or the seal in a two-piece reactor.

Nominal Volume – Maximum amount of reaction mixture which a vessel can hold without stirring before it overflows. The solvent does not reach the glass connection or the seal in a two-piece reactor.

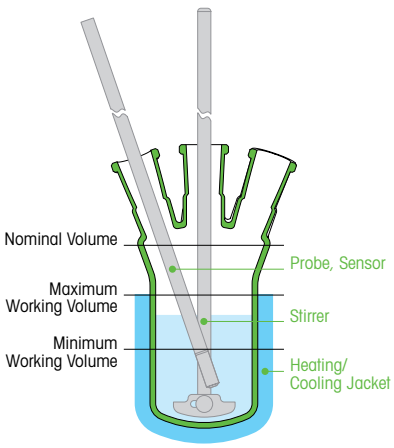
Test Conditions for Working Volumes:
Water at 25 °C as reaction mixture stirred at 300 rpm using a magnetic stir bar, a half-moon stirrer blade or a pitched-blade stirrer for test tubes, one-piece or two-piece reactors, respectively. The immersion depth of the temperature (Tr) sensors is at least 10 mm for the one-piece and two-piece reactors (glass temperature sensors were used, see recommended immersion depths on the next page).



Test Tubes

Test Tube	Minimum Working Volume[1]	Maximum Working Volume	Nominal Volume
30210021 8 mL test tube, Page 28	1 mL	8 mL	8 mL
51161285 10 mL test tube, Page 28	2 mL	5 mL	10 mL
51161853 25 mL test tube, Page 28	2 mL	25 mL	25 mL

[1]With magnetic stir bar



One-Piece Reactors

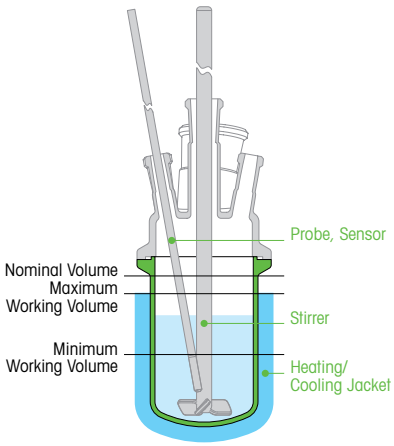
Reactor	Minimum Working Volume[2]	Maximum Working Volume	Nominal Volume
51161792 50 mL one-piece glass reactor, Page 33	15 mL	50 mL	100 mL
51161786 100 mL one-piece glass reactor, Page 34	40 mL	100 mL	180 mL
51162734 250 mL one-piece glass reactor, Page 34	80 mL	250 mL	400 mL
30131163 400 mL one-piece glass reactor, Page 35	80 mL	400 mL	425 mL
51162733 500 mL one-piece glass reactor, Page 35	120 mL	500 mL	700 mL
51162732 1000 mL one-piece glass reactor, Page 36	320 mL	1000 mL	1150 mL

[2]With half-moon stirrer blade

Two-Piece Reactors

Reactor	Minimum Working Volume[3]	Maximum Working Volume	Nominal Volume
51161255 50 mL glass reactor, Page 43	15 mL	50 mL	70 mL
51161620 100 mL glass reactor, Page 43	50 mL	100 mL	150 mL
30111634 100 mL high workup volume glass reactor, Page 44	50 mL	100 mL	200 mL
30030945 EM20-100-HC pressure reactor set, Page 114	30 mL	100 mL	120 mL
30030946 EM60-100-HC pressure reactor set, Page 114	30 mL	100 mL	120 mL
51162635 250 mL glass reactor, Page 44	60 mL (80 mL[4])	250 mL	370 mL
30072099 400 mL glass reactor, Page 44	80 mL	400 mL	425 mL
51162632 500 mL glass reactor, Page 45	80 mL (140 mL[4])	500 mL	830 mL
51162634 1000 mL glass reactor, Page 45	150 mL (320 mL[4])	1000 mL	1310 mL

[3]With pitch-blade stirrer [4]With anchor stirrer



Note: Depending on the following parameters, the minimum working volume can be higher or/and the maximum working volume can be lower than indicated:

- Viscosity of the reaction mixture
- Type of stirrer blade
- Stirrer speed and resulting vortex
- Immersion depths of the temperature sensor for accurate measurements
- Other sensors, e.g. pH, ParticleTrack/View probes, ReactIR probes, EasyViewer probes, EasySampler probes

Immersion Depths of Temperature Sensors

For accurate temperature measurements, the temperature (Tr) sensor needs to be immersed adequately. The immersion depth required depends on the type of temperature sensor as well as on the temperature of the reaction mixture. To ensure that the maximum permissible error of temperature measurement is within the specification of the thermostat, we recommend the following immersion depths:

Temperature Sensors EasyMax	Temperature Range Immersion Depth	Temperature Range Immersion Depth
51161730 Pt100 temperature sensor, length 175 mm, Page 112 Wetted parts: Stainless steel, PTFE/FEP-coated	–90 °C to –10 °C 35 mm	–10 ° to 180 °C 30 mm
30111612 Pt100 temperature sensor, length 250 mm, Page 112 Wetted parts: Stainless steel, FEP-coated	–90 °C to –10 °C 35 mm	–10 ° to 180 °C 30 mm
30099798 Pt100 temperature sensor, length 260 mm, Page 112 Wetted part: Glass	–90 °C to –40 °C 15 mm	–40 ° to 180 °C 10 mm
30090590 Pt100 temperature sensor, length 260 mm, Page 112 Wetted part: Alloy C-22	–90 °C to –40 °C 20 mm	–40 ° to 180 °C 15 mm
OptiMax		
51162827 Temperature sensor including chip, length 300 mm, Page 112 Wetted part: Glass		–40 ° to 180 °C 10 mm
51162839 Temperature sensor including chip, length 300 mm, Page 112 Wetted part: Alloy C-22		–40 ° to 180 °C 15 mm

Test Tubes and Caps
8 mL, 10 mL, and 25 mL

8 mL test tube
EasyMax 102 and 102 LT

30210021	**Test tube 8 mL with 15-425 thread**
Material	Borosilicate glass
Working Volume	8 mL, maximum
Size	Ø 16.2 mm, height 61 mm
Quantity	100 pcs in a set

Needed items:

30210022	**Screw cap, solid top with 15-425 thread**
30133675	**Receptacle 5 x 8 mL test tubes,** Page 24
30549361	**Receptacle 5 x 8 mL test tubes, low temp** Page 25
51191324	**Magnetic stir bar,** Page 84

10 mL test tube
EasyMax 102

51161285	**Test tube 10 mL with GL18 thread** Including GL18 screw cap with PTFE sealing
Material	Borosilicate glass
Working Volume	5 mL, maximum
Size	Ø 18 mm, height 180 mm
Quantity	10 pcs in a set

Needed items:

51191400	**Screw cap GL18, with aperture, PBT**
51191399	**Silicone rubber seal (Septa) GL18** for use with screw cap GL18
51161635	**Receptacle 4 x 10 mL test tubes,** Page 24
51191324	**Magnetic stir bar,** Page 84

25 mL test tube
EasyMax 102 and 102 LT

51161853	**Test tube 25 mL with GL18 thread**
Material	Borosilicate glass
Working Volume	25 mL, maximum
Size	Outer Ø 22 mm, height 120 mm
Quantity	1

Needed items:

51191400	**Screw cap GL18, with aperture, PBT**
51191399	**Silicone rubber seal (Septa) GL18** for use with screw cap GL18
51161634	**Receptacle 3 x 25 mL test tubes,** Page 24
30549362	**Receptacle 3 x 25 mL test tubes, low temp** Page 25
51192096	**Magnetic stir bar,** Page 84

Screw cap for 8 mL test tube

30210022	**Screw cap for the 8 mL test tube** Solid top with 15-425 thread
Material	PP, PTFE/Si
Temperature	Max. 180 °C
Quantity	100 pcs in a set

Screw cap for 10 mL/25 mL test tubes

51191400	**Screw cap GL18, with aperture, PBT** For the 10 mL/25 mL test tubes
Material	PBT
Temperature	Max. 200 °C
Aperture	Ø 11 mm
Quantity	10 pcs in a set

51191399	**Silicone rubber seal (Septa) GL18** For use with screw cap GL18
Material	Silicone rubber VQM
Size	Outer Ø 12 mm, thickness 2 mm
Quantity	20 pcs in a set

Optional Accessories

Working with EasyMax 102 LT

30579921	**Purge gas cover for test tubes** For use with 8 mL and 25 mL test tubes
Material	PMMA
Size	Outer Ø 100 mm, height 40 mm
Quantity	1

8 mL Glass Reactor Set
EasyMax 102

30207789
8 mL glass reactor set
The 8 mL reactor set provides the possibility to screen multiple reactions from 1 mL to 8 mL scale.

EasyMax 8 mL glass reactor set consisting of

Order Number	Product Description	Quantity	Page
30210021	Test tube with 15-425 thread, 8 mL, 100 pcs in a set	1	28
30210022	Screw cap, solid top with 15-425 thread, 100 pcs in a set	1	29
30133675	Receptacle for 5 x 8 mL test tubes	1	24
51191324	Magnetic stir bar	5	84

Note: Large image may not show all parts in the set.

10 mL Glass Reactor Set
EasyMax 102

51161714
10 mL glass reactor set
The 10 mL reactor set provides the possibility to screen multiple reactions from 2 mL to 5 mL scale.

EasyMax 10 mL glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51161285	Test tube, Ø 18 mm x 180 mm with GL18 thread, 10 pcs in a set	1	28
51191400	Screw cap GL18, with aperture, PBT, 10 pcs in a set	1	29
51191399	Silicone rubber seal (Septa) GL18, 20 pcs in a set	1	29
51161635	Receptacle for 4 x 10 mL test tubes	1	24
51191324	Magnetic stir bar	4	84

Note: Large image may not show all parts in the set.

25 mL Glass Reactor Set
EasyMax 102

51161854
25 mL glass reactor set for screening
The 25 mL reactor provides the possibility to screen multiple reactions from 3 mL to 25 mL.

EasyMax 25 mL glass reactor set for screening consisting of

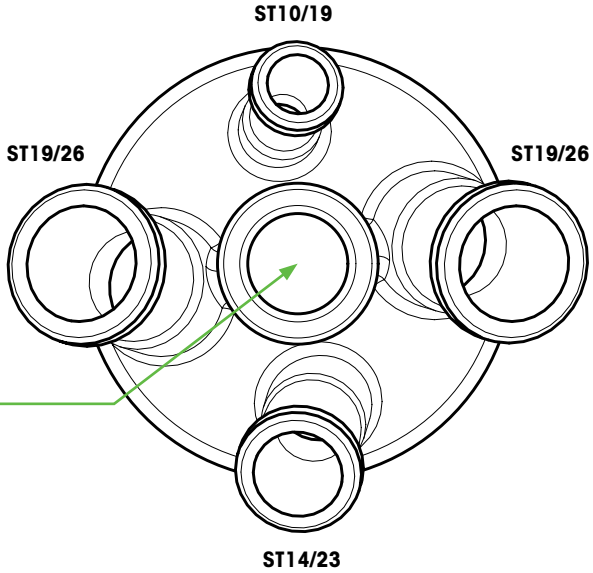
Order Number	Product Description	Quantity	Page
51161853	Test tube 25 mL GL18, borosilicate glass	6	28
51191400	Screw cap GL18, with aperture, PBT, 10 pcs in a set	1	29
51191399	Silicone rubber seal (Septa) GL18, 20 pcs in a set	1	29
51161634	Receptacle for 3 x 25 mL test tubes	1	24
51192096	Magnetic stir bar, 4.5 mm x 15 mm	3	84

Note: Large image may not show all parts in the set.

One-Piece Glass Reactors

50 mL one-piece glass reactor

EasyMax 102 and 102 LT



ST19/26 Overhead stirrer port

51161792	**50 mL one-piece glass reactor, 5-ports** 1 x ST10/19, 1 x ST14/23, 2 x ST19/26, center ST19/26
Material	Borosilicate glass
Working Volume	50 mL, maximum
Nominal Volume	100 mL
Size	Inner Ø 43 mm, height 150 mm, wall 2.5 mm
Quantity	1

Needed items:

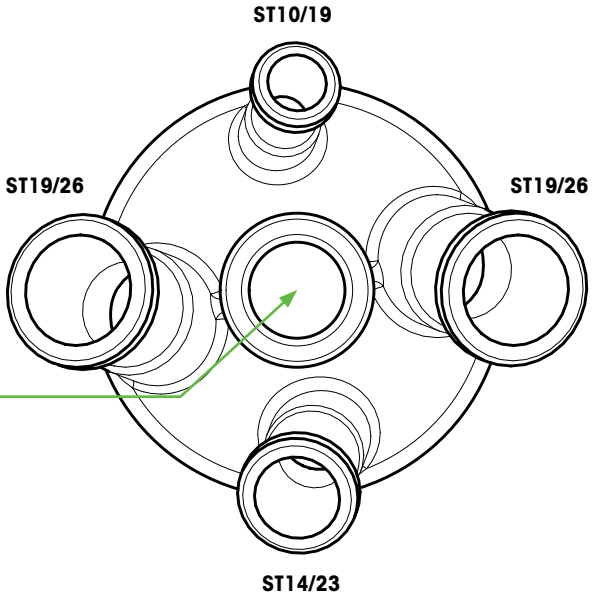
51161816	**Reactor stand for 50 mL one-piece reactor,** Page 71
51161815	**Receptacle for 50 mL reactor,** Page 24
30549363	**Receptacle for 50 mL reactor, low temp,** Page 25
51161813	**Glass stirrer shaft for 50 mL/100 mL one-piece reactor,** Page 82
51161814	**Half-moon stirrer blade,** Page 82

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

100 mL one-piece glass reactor

EasyMax 102, 102 LT, and 402



ST19/26 Overhead stirrer port

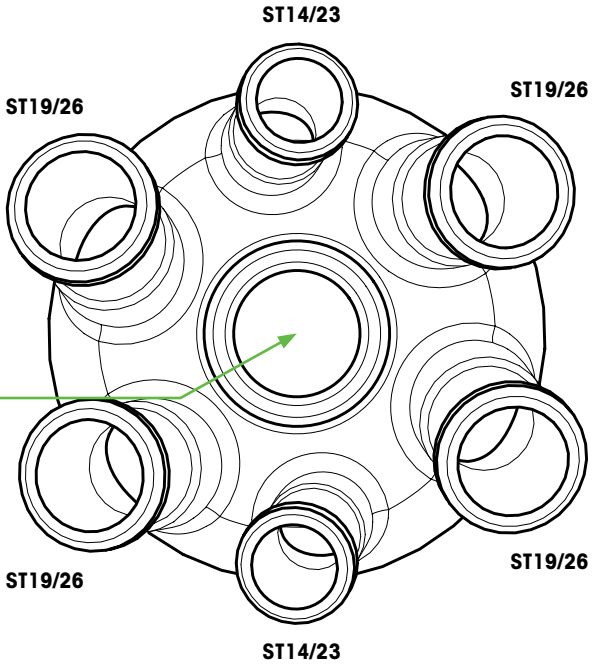
51161786	**100 mL one-piece glass reactor , 5 ports** 1 x ST10/19, 1 x ST14/23, 2 x ST19/26, center ST19/26
Material	Borosilicate glass
Working Volume	100 mL, maximum
Nominal Volume	180 mL
Size	Inner Ø 52 mm, height 150 mm, wall 2.5 mm
Quantity	1

Needed items:

51161676	**Reactor stand for 100 mL one-piece reactor,** Page 71
30086802	**Receptacle for 100 mL reactor,** Working with EasyMax 402, Page 25
51161813	**Glass stirrer shaft for 50 mL/100 mL one-piece reactor,** Page 82
51161749	**Half-moon stirrer blade,** Page 83

250 mL one-piece glass reactor

OptiMax 1001



ST24/29 Overhead stirrer port

51162734	**250 mL one-piece glass reactor, 7 ports** 2 x ST14/23, 4 x ST19/26, center ST24/29
Material	Borosilicate glass
Working Volume	250 mL, maximum
Nominal Volume	400 mL
Size	Inner Ø 62 mm, height 205 mm, wall 2.5 mm
Quantity	1

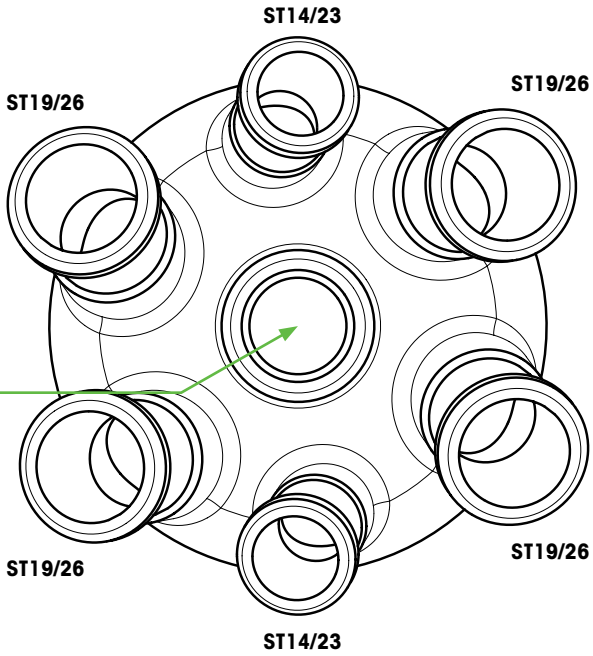
Needed items:

51162758	**Reactor stand for 250 mL one-piece reactor,** Page 71
51162698	**Receptacle for 250 mL reactor,** Page 25
51162681	**Glass stirrer shaft for 250 mL/500 mL/ 1000 mL reactors,** Page 82
51162684	**Half-moon stirrer blade,** Page 83

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

400 mL one-piece glass reactor

EasyMax 402



ST19/26 Overhead stirrer port

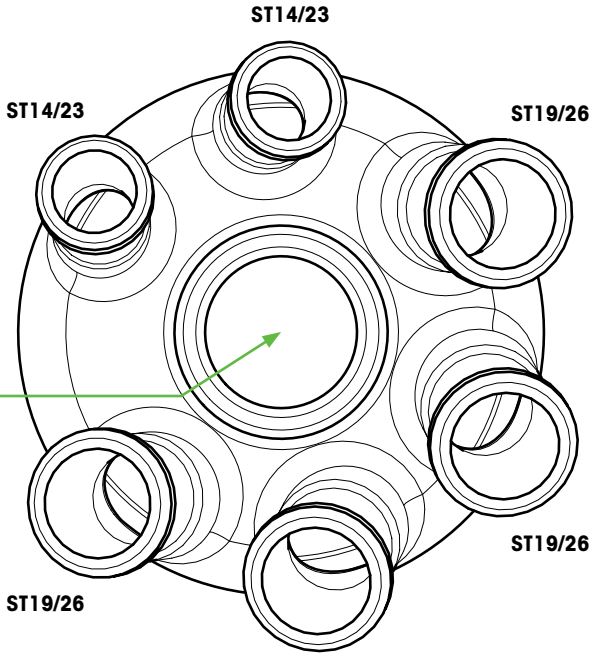
30131163	**400 mL one-piece glass reactor, 7 ports** 2 x ST14/23, 4 x ST19/26, center ST19/26
Material	Borosilicate glass
Working Volume	400 mL, maximum
Nominal Volume	425 mL
Size	Inner Ø 72.6 mm, height 206 mm, wall 2.5 mm
Quantity	1

Needed items:

51162759	**Reactor stand for 400 mL reactor,** Page 71
30111614	**Glass stirrer shaft for 400 mL one-piece reactor,** Page 82
51161749	**Half-moon stirrer blade,** Page 83

500 mL one-piece glass reactor

OptiMax 1001



ST24/29 Overhead stirrer port

51162733	**500 mL one-piece glass reactor, 7 ports** 2 x ST14/23, 4 x ST19/26, center ST24/29
Material	Borosilicate glass
Working Volume	500 mL, maximum
Nominal Volume	700 mL
Size	Inner Ø 77 mm, height 225 mm, wall 2.5 mm
Quantity	1

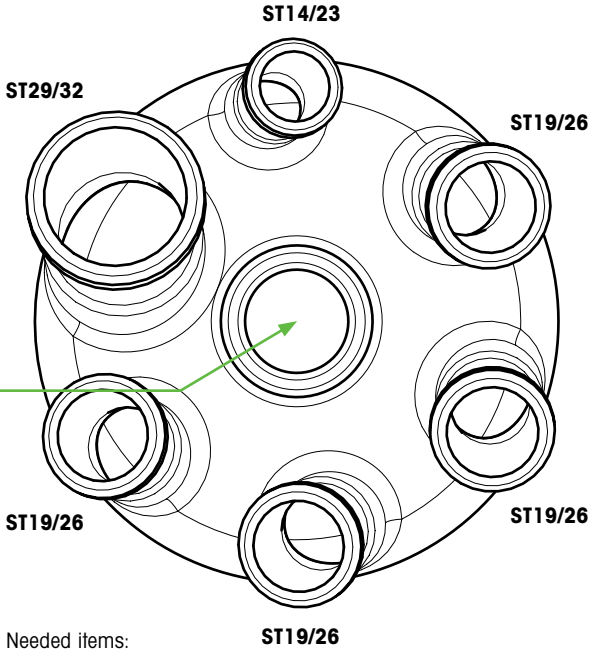
Needed items:

51162759	**Reactor stand for 500 mL one-piece reactor,** Page 71
51162670	**Receptacle for 500 mL reactor,** Page 25
51162681	**Glass stirrer shaft for 250/500/1000 mL reactors,** Page 82
51162683	**Half-moon stirrer blade for 500 mL reactor,** Page 83

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

1000 mL one-piece glass reactor

OptiMax 1001



51162732	**1000 mL one-piece glass reactor, 7 ports** 1 x ST14/23, 4 x ST19/26, 1 x ST29/32, center ST24/29
Material	Borosilicate glass
Working Volume	1000 mL, maximum
Nominal Volume	1150 mL
Size	Inner Ø 101 mm, height 230 mm, wall 3 mm
Quantity	1

Needed items:

51162760	**Reactor stand for 1000 mL one-piece reactor,** Page 71
51162681	**Glass stirrer shaft for 250/500/1000 mL reactors,** Page 82
51162682	**Half-moon stirrer blade for 1000 mL reactor,** Page 83

50 mL One-Piece Glass Reactor Set
EasyMax 102

51161838
5-port 50 mL one-piece glass reactor set

The one piece reactor meets round bottom flask requirements so that standard lab material and handling can be used. The reactor has a maximum working volume of 50 mL and a nominal volume of 100 mL.

Magnetic and overhead stirring (only with dedicated glass stirrer and blade) are available.

EasyMax 50 mL one-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51161792	50 mL one-piece glass reactor, 5 ports	1	33
51161816	Reactor stand for 50 mL reactor	1	71
51161815	Receptacle for 50 mL one-piece reactor	1	24
51161813	Glass stirrer shaft for 50 mL/100 mL one-piece reactor, Ø 8 mm, length 192 mm	1	82
51161814	Half-moon stirrer blade, 15 mm x 26 mm	1	83
51191159	Magnetic stir bar, 7 mm x 30 mm	1	84
51161822	Non-height adjustable stirrer adapter, ST19/26, including sealing ring	1	86
51161728	Adapter ST10/19 with 1 UNF 1/4-28	1	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97
71517	Glass stopper ST19/26	3	110
51190878	Glass stopper ST14/23	1	110
51191167	Glass stopper ST10/19	1	110
51191429	"Keck" clamp ST19	3	111
51191505	"Keck" clamp ST14	1	111
51191504	"Keck" clamp ST10	1	111

Note: Large image may not show all parts in the set.

100 mL One-Piece Glass Reactor Set
EasyMax 102 and 102 LT

51161805
5-port 100 mL one-piece glass reactor set

The one-piece reactor is developed to meet round bottom flask requirements so that standard lab material and handling can be used. The reactor has a maximum working volume of 100 mL and a nominal volume of 180 mL.

Magnetic and overhead stirring (only with dedicated glass stirrer and blade) possibilities are available. Only overhead stirring is possible with EasyMax 402.

The ST14 port can be used for inserting e.g. 9.5 mm analytical probes.

EasyMax 100 mL one-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51161786	100 mL one-piece glass reactor, 5 ports	1	34
51161676	Reactor stand for 100 mL reactor	1	71
51161813	Glass stirrer shaft for 50 mL/100 mL one-piece reactor, Ø 8 mm, length 192 mm	1	82
51161749	Half-moon stirrer blade, 15 mm x 40 mm	1	83
51161822	Non-height adjustable stirrer adapter, ST19/26, including sealing ring	1	86
51191939	Magnetic stir bar, 8 mm x 40 mm	1	84
51161728	Adapter ST10/19 with 1 UNF 1/4-28 port	1	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97
71517	Glass stopper ST19/26	3	110
51190878	Glass stopper ST14/23	1	110
51191167	Glass stopper ST10/19	1	110
51191429	"Keck" clamp ST19	3	111
51191505	"Keck" clamp ST14	1	111
51191504	"Keck" clamp ST10	1	111

Note: Large image may not show all parts in the set.

250 mL One-Piece Glass Reactor Set
OptiMax 1001

51162836
7-port 250 mL one-piece glass reactor set

The different OptiMax reactor sets combine all the available parts for a particular reactor type and volume in just one part number. This simplifies the evaluation and ordering process and makes it error-free.

The 250 mL one-piece glass reactor has a maximum working volume of 250 mL and a nominal volume of 400 mL.

OptiMax 250 mL one-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51162734	250 mL one-piece glass reactor, 7 ports	1	34
51162758	Reactor stand for 250 mL reactor	1	65
51162698	Receptacle for 250 mL reactor	1	25
51162681	Glass stirrer shaft for 250 mL/500 mL/1000 mL one-piece reactor, Ø 10 mm, length 380 mm	1	82
51162684	Half-moon stirrer blade, 19 mm x 43 mm	1	83
71517	Glass stopper ST19/26	4	110
51190878	Glass stopper ST14/23	2	110
51191167	"Keck" clamp ST24	1	111
51191429	"Keck" clamp ST19	4	111
51191505	"Keck" clamp ST14	2	111

Note: Large image may not show all parts in the set.

400 mL One-Piece Glass Reactor Set
EasyMax 402

30138936
7-port 400 mL one-piece glass reactor set
The 400 mL one-piece reactor set has a maximum working volume of 400 mL and nominal volume of 425 mL for work up.

Overhead stirring possibilities are available.

EasyMax 400 mL one-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
30131163	400 mL one-piece glass reactor, 7 ports	1	35
51162759	Reactor stand for 400 mL reactor	1	71
30111614	Glass stirrer shaft for 400 mL one-piece reactor, Ø 8 mm, length 242 mm	1	82
51161749	Half-moon stirrer blade, 15 mm x 40 mm	1	83
51161822	Non-height adjustable stirrer adapter, ST19/26, including sealing ring	1	86
30125685	Adapter ST14/23 with 1 UNF 1/4-28 port	1	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97
71517	Glass stopper ST19/26	5	110
51190878	Glass stopper ST14/23	1	110
51191429	"Keck" clamp ST19	5	111
51191505	"Keck" clamp ST14	2	111

Note: Large image may not show all parts in the set.

500 mL One-Piece Glass Reactor Set
OptiMax 1001

51162835
7-port 500 mL one-piece glass reactor set

The different OptiMax reactor sets combine all the available parts for a particular reactor type and volume in just one part number. This simplifies the evaluation and ordering process and makes it error-free.

The 500 mL one-piece glass reactor has a maximum working volume of 500 mL and a nominal volume of 700 mL.

OptiMax 500 mL one-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51162733	500 mL one-piece glass reactor, 7 ports	1	35
51162759	Reactor stand for 500 mL reactor	1	71
51162670	Receptacle for 500 mL reactor	1	25
51162681	Glass stirrer shaft for 250 mL/500 mL/1000 mL one-piece reactor, Ø 10 mm, length 380 mm	1	82
51162683	Half-moon stirrer blade, 19 mm x 54 mm	1	83
51162638	Bar type baffle for 500 mL reactor, Alloy C-22	1	94
51104154	PTFE adapter for baffle	1	100
71517	Glass stopper ST19/26	4	110
51190878	Glass stopper ST14/23	1	110
51192167	"Keck" clamp ST24	1	111
51191429	"Keck" clamp ST19	4	111
51191505	"Keck" clamp ST14	2	111

Note: Large image may not show all parts in the set.

1000 mL One-Piece Glass Reactor Set
OptiMax 1001

51162834
7-port 1000 mL one-piece glass reactor set

The different OptiMax reactor sets combine all the available parts for a particular reactor type and volume in just one part number. This simplifies the evaluation and ordering process and makes it error-free.

The 1000 mL one-piece glass reactor has a maximum working volume of 1000 mL and a nominal volume of 1150 mL.

OptiMax 1000 mL one-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51162732	1000 mL one-piece glass reactor, 7 ports	1	36
51162760	Reactor stand for 1000 mL reactor	1	71
51162681	Glass stirrer shaft for 250 mL/500 mL/1000 mL one-piece reactor, Ø 10 mm, length 380 mm	1	82
51162682	Half-moon stirrer blade, 19 mm x 71 mm	1	83
51162637	Bar type baffle for 1000 mL reactor, Alloy C-22	1	94
51104154	PTFE adapter for baffle	1	100
71518	Glass stopper ST29/32	1	110
71517	Glass stopper ST19/26	4	110
51190878	Glass stopper ST14/23	1	110
51192168	"Keck" clamp ST29	1	111
51192167	"Keck" clamp ST24	1	111
51191429	"Keck" clamp ST19	4	111
51191505	"Keck" clamp ST14	1	111

Note: Large image may not show all parts in the set.

Two-Piece Glass Reactors

50 mL glass reactor

EasyMax 102

51161255	**50 mL glass reactor**
Material	Borosilicate glass
Working Volume	50 mL, maximum
Nominal Volume	70 mL
Size	Inner Ø 36 mm, height 74.5 mm, wall 1.5 mm
100 mL.	1

Needed items:

51161716	**Receptacle for 50 mL reactor,** Page 24
51161288	**Reactor stand,** Page 71
51160817	**Glass cover for 50 mL reactor, 7 ports** Page 47

100 mL glass reactor

EasyMax 102 and 402

51161620	**100 mL glass reactor**
Material	Borosilicate glass
Working Volume	100 mL, maximum
Nominal Volume	150 mL
Size	Inner Ø 52 mm, height 90 mm, wall 2.5 mm
Quantity	1

Needed items:

51161676	**Reactor stand for 100 mL reactor,** Page 71
30086802	**EasyMax 402 receptacle for 100 mL reactor**, working with EasyMax 402, Page 25
51161619	**Glass cover for 100 mL reactor, 6 ports,** Page 48
51161795	**PTFE cover for 100 mL reactor, 6 ports** With compression fittings and standard tapered joints for 100 mL reactor, Page 48
30090541	**PTFE cover for 100 mL reactor, 6 ports** For ParticleTrack and ReactIR, for 100 mL reactor, Page 49
30090542	**PTFE cover for 100 mL reactor, 6 ports** For ParticleView V19, ParticleTrack and ReactIR, for 100 mL reactor, Page 49

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

100 mL high workup volume glass reactor

EasyMax 102, 102 LT, and 402

30111634	**100 mL high workup volume glass reactor**
Material	Borosilicate glass
Working Volume	100 mL, maximum
Nominal Volume	200 mL
Size	Inner Ø 52 mm, height 130 mm, wall 2.5 mm
Quantity	1

Needed items:

51161676	**Reactor stand for 100 mL reactor,** Page 71
30086802	**EasyMax 402 receptacle for 100 mL reactor**, working with EasyMax 402, Page 25
51161619	**Glass cover for 100 mL reactor, 6 ports,** Page 48
51161795	**PTFE cover for 100 mL reactor, 6 ports** With compression fittings and standard tapered joints for 100 mL reactor, Page 48
30090541	**PTFE cover for 100 mL reactor, 6 ports** For ParticleTrack and ReactIR, for 100 mL reactor, Page 49
30090542	**PTFE cover for 100 mL reactor, 6 ports** For ParticleView V19, ParticleTrack and ReactIR, for 100 mL reactor, Page 49
30593255	**Purge gas cover** Working with EasyMax 102 LT, Page 45

250 mL glass reactor

OptiMax 1001

51162635	**250 mL glass reactor**
Material	Borosilicate glass
Working Volume	250 mL, maximum
Nominal Volume	370 mL
Size	Inner Ø 62 mm, height 127 mm, wall 2.2 mm
Quantity	1

Needed items:

51162758	**Reactor stand for 250 mL reactor,** Page 71
51162698	**Receptacle for 250 mL reactor,** Page 25
51162699	**Glass cover for 250 mL reactor, 7 ports** Page 50

400 mL glass reactor

EasyMax 402

30072099	**400 mL glass reactor**
Material	Borosilicate glass
Working Volume	400 mL, maximum
Nominal Volume	425 mL
Size	Inner Ø 72.6 mm, height 140 mm, wall 2.2 mm
Quantity	1

Needed items:

51162759	**Reactor stand for 400 mL reactor,** Page 65
51161072	**Glass cover for 400 mL reactor, 6 ports** Page 44
30111620	**PTFE cover set for 400 mL reactor, 6 ports** Page 45

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

500 mL glass reactor
OptiMax 1001

51162632	**500 mL glass reactor** With bottom drain valve
Material	Borosilicate glass, PTFE, PEEK, PTFE/Silicone rubber
Working Volume	500 mL, maximum
Nominal Volume	830 mL
Size	Inner Ø 77 mm, height 172 mm, wall 2.5 mm
Quantity	1

Needed items:

51162783	**Reactor holder for 500 mL reactor,** Page 71
51162670	**Receptacle for 500 mL reactor,** Page 25
51162671	**Glass cover for 500 mL/1000 mL reactors, 7 ports,** Page 51
30090540	**PTFE cover set for 500 mL/1000 mL reactors, 7 ports,** Page 52

1000 mL glass reactors
OptiMax 1001

51162634	**1000 mL glass reactor** With bottom drain valve
Material	Borosilicate glass, PTFE, PEEK, PTFE/Silicone rubber
Working Volume	1000 mL, maximum
Nominal Volume	1310 mL
Size	Inner Ø 101 mm, height 172 mm, wall 3 mm
Quantity	1

Needed items:

51162782	**Reactor holder for 1000 mL reactor** Page 71
51162671	**Glass cover for 500 mL/1000 mL reactors, 7 ports,** Page 51
30090540	**PTFE cover set for 500 mL/1000 mL reactors, 7 ports,** Page 52

30230585	**1000 mL glass reactor** Without bottom drain
Material	Borosilicate glass
Working Volume	1000 mL, maximum
Nominal Volume	1310 mL
Size	Inner Ø 101 mm, height 172 mm, wall 3 mm
Quantity	1

Needed items:

51162760	**Reactor stand for 1000 mL reactor** Page 71
51162671	**Glass cover for 500 mL/1000 mL reactors, 7 ports,** Page 51
30090540	**PTFE cover set for 500 mL/1000 mL reactors, 7 ports,** Page 52

Optional Accessories
Working with EasyMax 102 LT

30593255	**Purge gas cover for 100 mL high workup volume glass reactor, 30111634**
Material	PTFE C25, Elastomer core Silicone VQM, PTFE FEP-coated
Size	Inner Ø 58.2 mm, outer Ø 132 mm
Quantity	1

OptiMax Reactor
Spare Parts

51162631	**Glass vessel for two-piece 500 mL reactor** Without parts for bottom drain valve
Material	Borosilicate glass
Working Volume	500 mL, maximum
Nominal Volume	700 mL
Size	Inner Ø 77 mm, height 172 mm, wall 2.5 mm
Quantity	1

51162633	**Glass vessel for two-piece 1000 mL reactor** Without parts for bottom drain valve
Material	Borosilicate glass
Working Volume	1000 mL, maximum
Nominal Volume	1310 mL
Size	Inner Ø 101 mm, height 172 mm, wall 3 mm
Quantity	1

30413310	**Glass vessel for two-piece 1800 mL reactor** Without parts for bottom drain valve
Material	Borosilicate glass
Working Volume	1800 mL, maximum
Nominal Volume	1950 mL
Size	Inner Ø 101 mm, height 252 mm, wall 3 mm
Quantity	1

51162730	**Bottom drain connect set** For bottom drain valve
Material	PEEK, PTFE
Size	Ø 52 mm
Quantity	1

71540	**Sealing ring bottom valve**
Material	PTFE/Silicone rubber
Size	Inner Ø 13 mm, 5 mm
Quantity	1

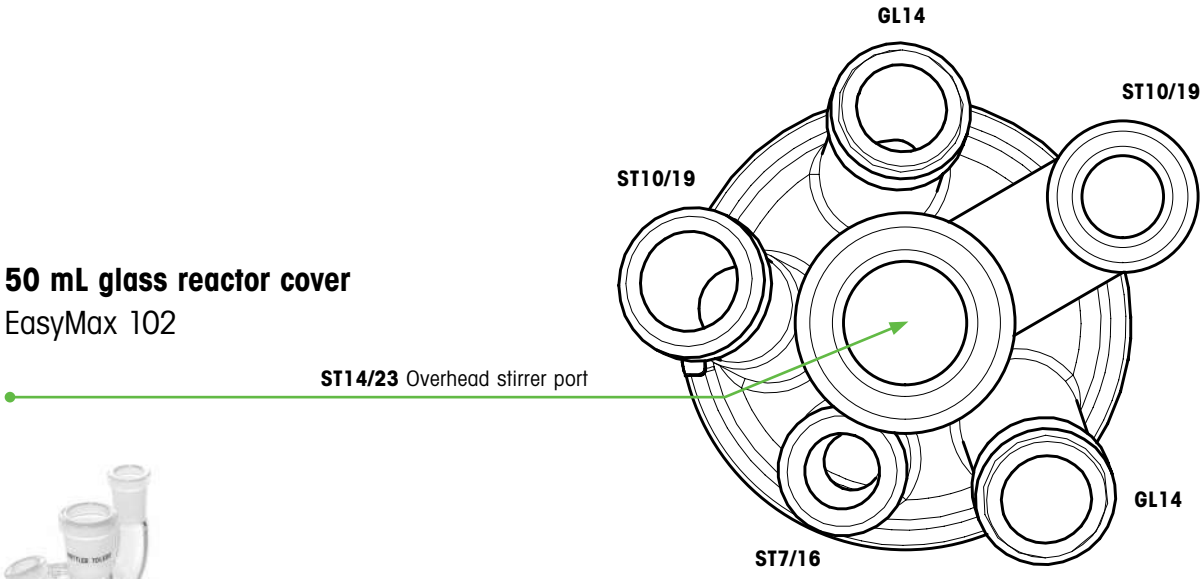
51191774	**Spindle with tip, bottom drain valve** 115 mm, with spring
Material	PTFE
Size	Ø 14 mm x 115 mm
Quantity	1

51190515	**Spindle tip, light blue**
Material	Lubriflon 904-filled PTFE
Quantity	1

Glass and PTFE Reactor Covers

50 mL glass reactor cover

EasyMax 102



51160817	**Glass cover for 50 mL reactor, 6 ports** 1 x ST7/16, 2 x ST10/19, 2 x GL14, center ST14/23
Material	Borosilicate glass
Size	Inner Ø 36 mm
Quantity	1

Needed items:

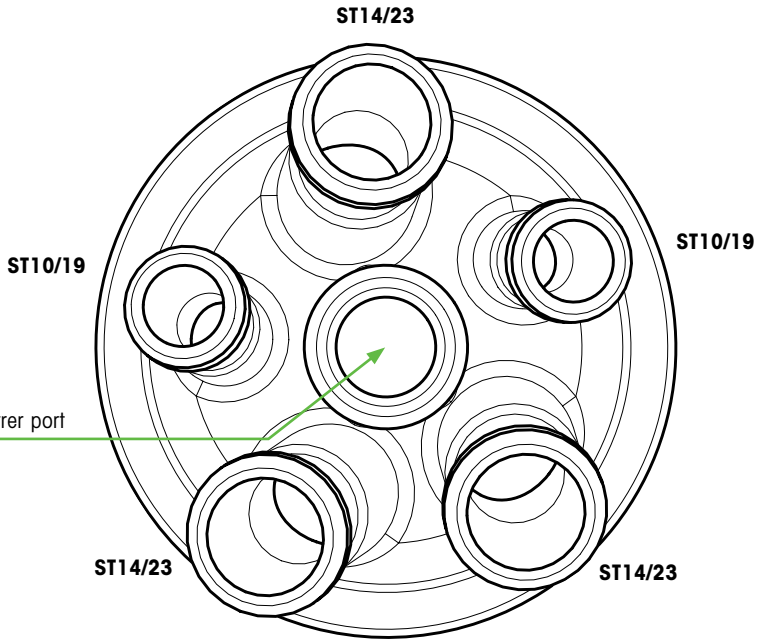
51161255	**50 mL glass reactor,** Page 43
51161288	**Reactor stand,** Page 71
51161716	**Receptacle for 50 mL reactor,** Page 24

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

100 mL glass reactor cover

EasyMax 102, 102 LT, and 402



ST14/23 Overhead stirrer port

51161619	**Glass cover for 100 mL reactor, 6 ports** 2 x ST10/19, 3 x ST14/23, center ST14/23
Material	Borosilicate glass
Size	Inner Ø 52 mm
Quantity	1

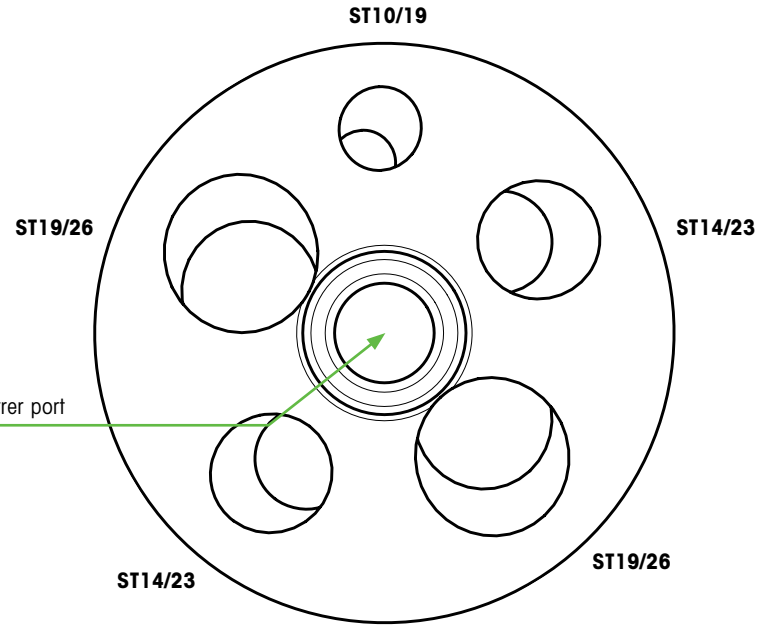
Needed items:

51161620	**100 mL glass reactor,** Page 43
30111634	**100 mL high workup volume glass reactor,** Page 44
51161676	**Reactor stand for 100 mL reactor,** Page 71
30086802	**EasyMax 402 receptacle for 100 mL reactor** Page 25

100 mL PTFE reactor cover –

Standard taper joints

EasyMax 102 and 102 LT



ST14/23 Overhead stirrer port

51161795	**PTFE cover for 100 mL reactor, 6 ports** 1 x ST10/19, 2 x ST14/23, 2 x ST19/26, center ST14/23
Material	PTFE GF25
Size	Inner Ø 52 mm
Quantity	1

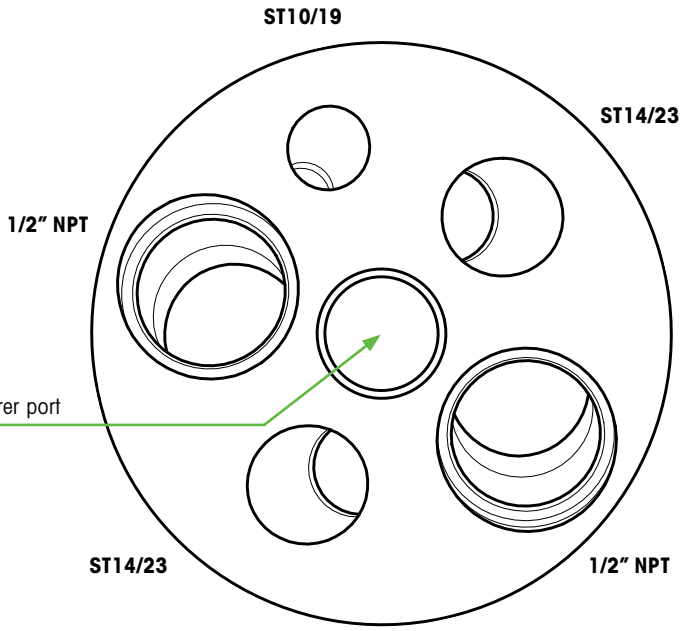
Note: Works only with the 50 mL stirrer shaft 51161756
See 51161800 PTFE cover set, Page 59

Needed items:

51161620	**100 mL glass reactor,** Page 43
30111634	**100 mL high workup volume glass reactor,** Page 44
51161676	**Reactor stand for 100 mL reactor,** Page 71
30086802	**EasyMax 402 receptacle for 100 mL reactor** Page 25

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

100 mL PTFE reactor cover –
ParticleTrack, ReactIR, and EasyViewer
EasyMax 102 and 102 LT



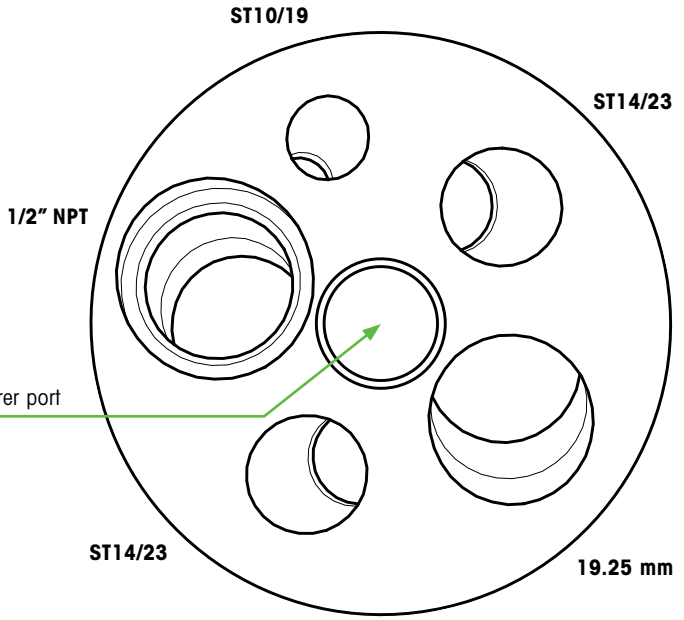
	PTFE cover plate, 6 ports 1 x ST10, 2 x ST14, 2 x 1/2" NPT, center 3/8" NPT
Material	PTFE
Size	Inner Ø 52 mm
Quantity	1

Note: This cover plate is only available as a set including screw-in adapters. See 30090541 PTFE cover set, Page 60

Needed items:

51161620	**100 mL glass reactor,** Page 43
30111634	**100 mL high workup volume glass reactor,** Page 44
51161676	**Reactor stand for 100 mL reactor,** Page 71
30086802	**EasyMax 402 receptacle for 100 mL reactor** Page 25

100 mL PTFE reactor cover –
ParticleView V19, ParticleTrack, ReactIR, and EasyViewer
EasyMax 102 and 102 LT



	PTFE cover plate, 6 ports 1 x ST10, 2 x ST14, 1 x 1/2" NPT, 1 x 19.25 mm, center 3/8" NPT
Material	PTFE
Size	Inner Ø 52 mm
Quantity	1

Note: This cover plate is only available as a set including screw-in adapters. See 30090542 PTFE cover set, Page 61

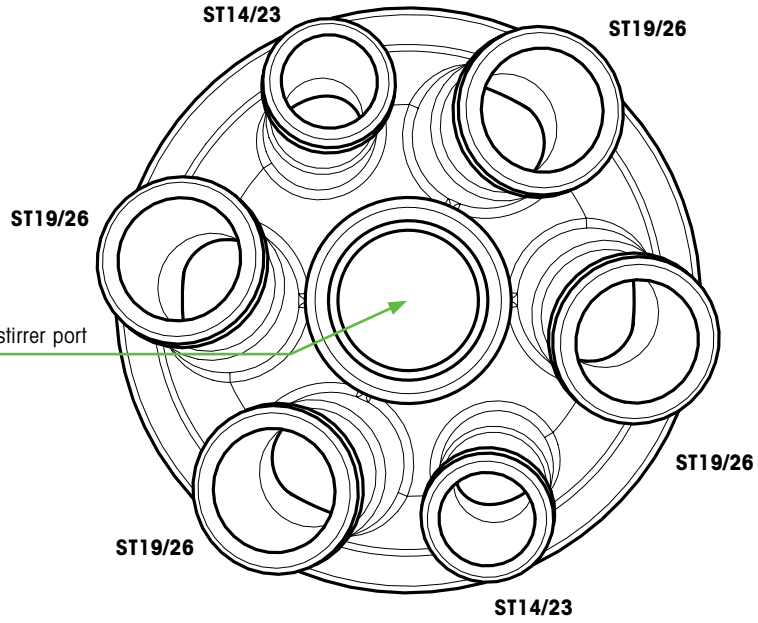
Needed items:

51161620	**100 mL glass reactor,** Page 43
30111634	**100 mL high workup volume glass reactor,** Page 44
51161676	**Reactor stand for 100 mL reactor,** Page 71
30086802	**EasyMax 402 receptacle for 100 mL reactor** Page 25

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

250 mL glass reactor cover

OptiMax 1001



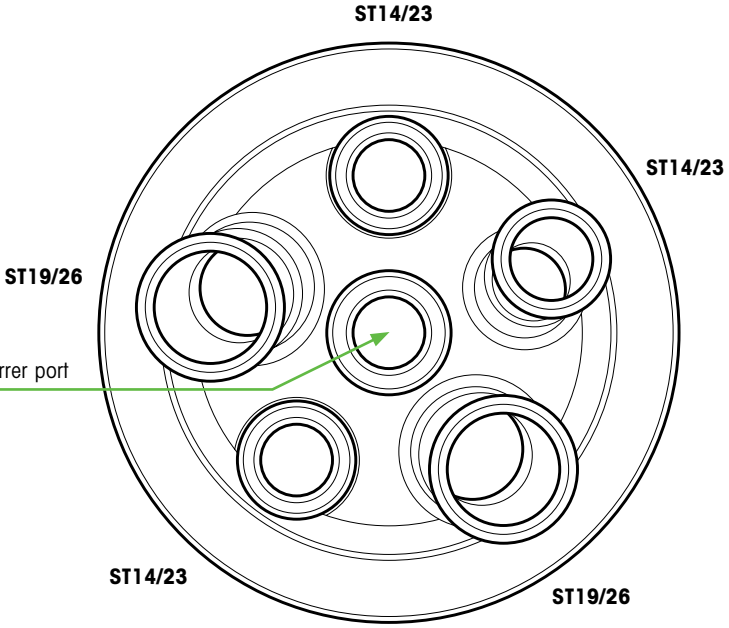
51162699	**Glass cover for 250 mL reactor, seven ports** 2 x ST14/23, 4 x ST19/26, center ST24/29
Material	Borosilicate glass
Size	Inner Ø 68 mm
Quantity	1

Needed items:

51162635	**250 mL glass reactor,** Page 44
51162698	**Receptacle for 250 mL reactor,** Page 25
51162758	**Reactor stand for 250 mL reactor,** Page 71
51162781	**Cover holder for 250 mL reactor cover** Page 71

400 mL glass reactor cover

EasyMax 402



51161072	**Glass cover for 400 mL reactor, 6 ports** 3 x ST14/23, 2 x ST19/26, center ST14/23
Material	Borosilicate glass
Size	Inner Ø 67 mm
Quantity	1

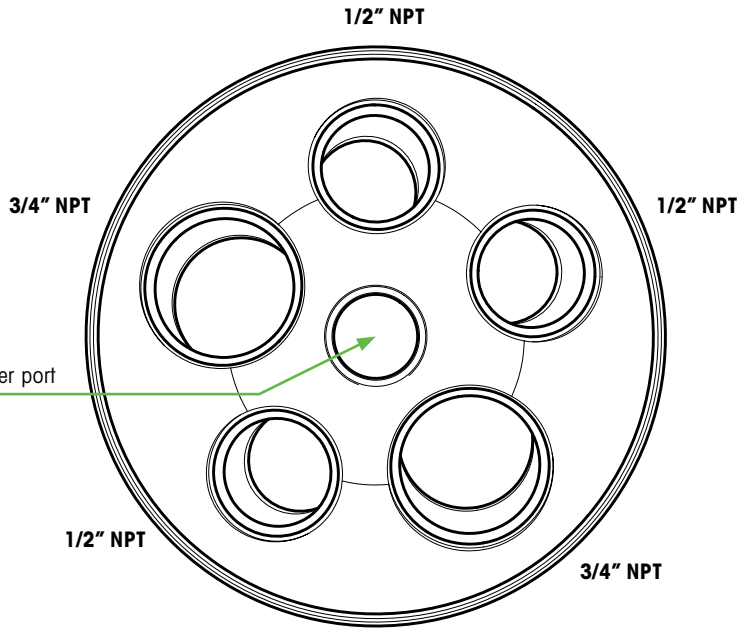
Needed items:

30072099	**400 mL glass reactor,** Page 44
51162759	**Reactor stand for 400 mL reactor,** Page 71

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

400 mL PTFE reactor cover

EasyMax 402



	PTFE cover plate, 6 ports 3 x 1/2" NPT, 2 x 3/4" NPT, center 3/8" NPT
Material	PTFE
Size	Inner Ø 67 mm
Quantity	1

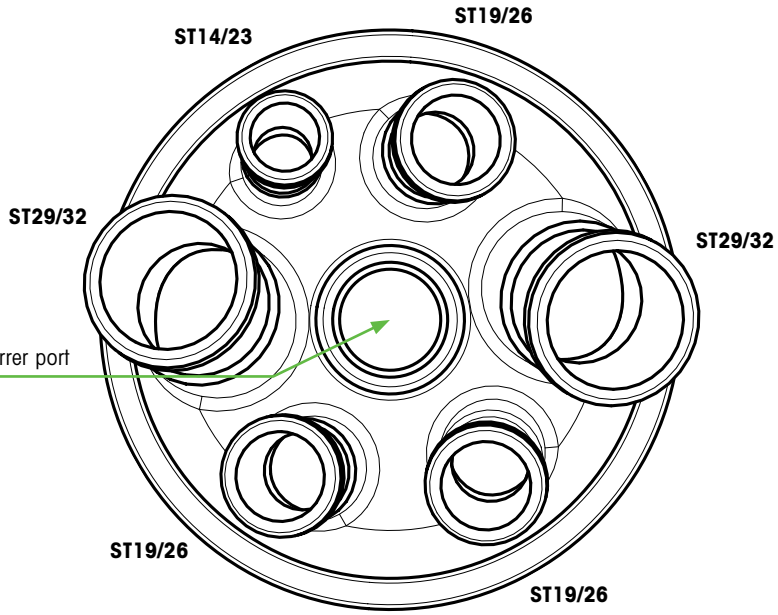
Note: This cover plate is only available as a set including screw-in adapters. See 30111620 PTFE cover set, Page 65

Needed items:

30072099	**400 mL glass reactor,** Page 44
51162759	**Reactor stand for 400 mL reactor,** Page 71

500 mL/1000 mL glass reactor cover

OptiMax 1001



51162671	**Glass cover for 500 mL/1000 mL reactor, 7 ports** 1 x ST14/23, 3 x ST19/26, 2 x ST29/32, center ST24/29
Material	Borosilicate glass
Size	Inner Ø 98 mm
Quantity	1

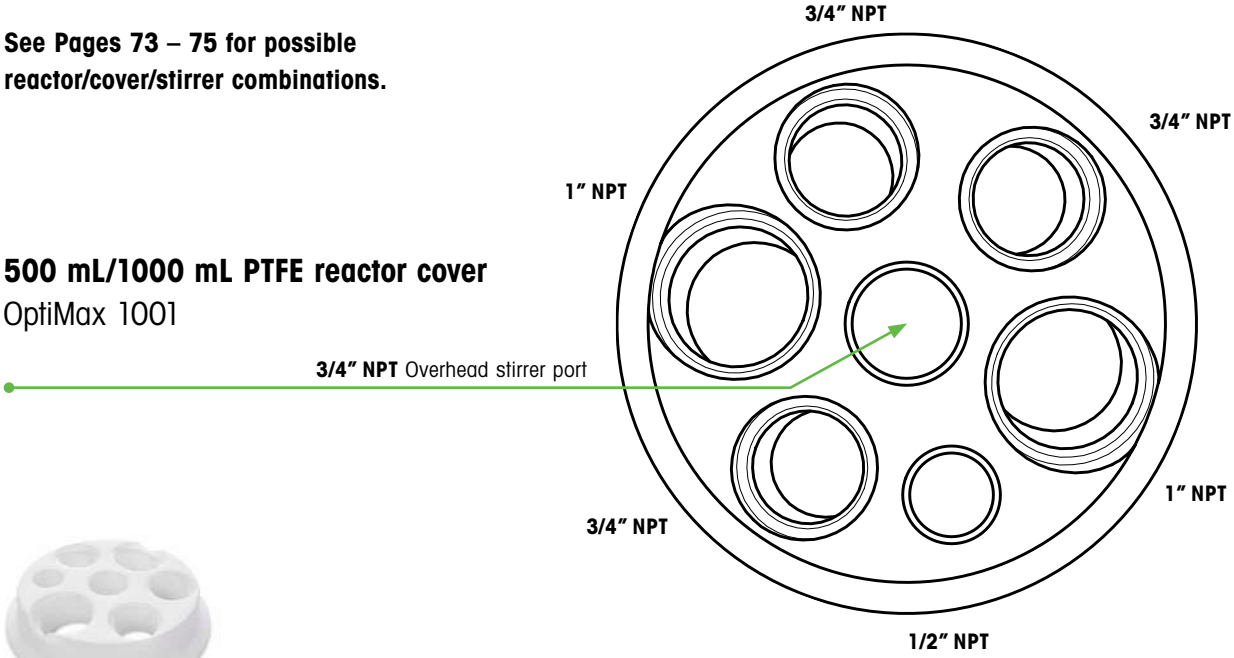
Needed items:

51162632	**500 mL glass reactor,** Page 45
51162783	**Reactor holder for 500 mL reactor,** Page 71
51162670	**Receptacle for 500 mL reactor,** Page 25
51162634	**1000 mL glass reactor,** Page 45
51162782	**Reactor holder for 1000 mL reactor** Page 71
51162780	**Cover holder for 500 mL/1000 mL reactor cover,** Page 71

See Pages 73 – 75 for possible reactor/cover/stirrer combinations.

500 mL/1000 mL PTFE reactor cover

OptiMax 1001



	PTFE cover plate, 7 ports 2 x 1" NPT, 4 x 3/4" NPT, 1 x 1/2" NPT
Material	PTFE
Size	Inner Ø 98 mm
Quantity	1

Note: This cover plate is only available as a set including screw-in adapters. See 30090540 PTFE cover set, Page 67

Needed items:

51162632	**500 mL glass reactor,** Page 45
51162783	**Reactor holder for 500 mL reactor,** Page 71
51162670	**Receptacle for 500 mL reactor,** Page 25
51162634	**1000 mL glass reactor,** Page 45
51162782	**Reactor holder for 1000 mL reactor** Page 71
51162780	**Cover holder for 500 mL/1000 mL reactor cover,** Page 71

50 mL Glass Reactor Set

51161712
50 mL glass reactor set
The 50 mL reactor set has a maximum working volume of 50 mL and nominal volume of 70 mL for work up. Both magnetic and overhead stirring possibilities are available.

A special sleeve with window provides visibility into the mixture.

EasyMax 50 mL glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51161255	50 mL round-bottom reactor	1	43
51161288	Reactor stand for 50 mL reactor	1	71
51161716	Receptacle for 50 mL reactor	1	24
51160675	Reactor clamp for 50 mL reactor	1	69
51161718	Fixing ring for receptacle	1	69
51191416	O-ring for 50 mL glass reactor, Ø 36.14 mm x 2.62 mm	1	70
51191919	Magnetic stir bar, cross-shaped, 10 mm x 25 mm	1	84

50 mL Glass Cover Set
EasyMax 102

51161713
6-port 50 mL glass cover set
The 50 mL glass cover set with six openings is built for multiple applications including dosing, reflux, pH measurement, ReactIR, or turbidity.

EasyMax 50 mL glass cover set consisting of

Order Number	Product Description	Quantity	Page
51160817	Glass cover for 50 mL reactor, 6 ports	1	47
51190318	Screw cap GL14, without aperture, PBT	2	110
51191170	Silicone rubber seal (Septa) GL14	2	110
51190317	Screw cap GL14, with aperture, PBT	3	96
51103947	Sealing ring for screw cap GL14 PTFE/silicone, aperture 6 mm	3	96
51191267	Glass adapter ST14/23-GL14	1	96
51161037	Adapter for GL14, 6 mm – 6.35 mm sensors, PTFE	2	96
51161558	Adapter GL14-UNF with 1 UNF 1/4-28 port, PTFE GL25	2	96
51161728	Adapter ST10/19 with 1 UNF 1/4-28 port	1	97
51160200	Adapter ST 7/16 with 1 UNF 1/4-28 port	1	97
51191514	Ferrule for tubing outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28 threads, 4 pcs in a set	1	97
51190878	Glass stopper ST14/23	1	110
51191167	Glass stopper ST10/19	2	110
51190877	Glass stopper ST7/16	1	110
51191505	"Keck" clamp ST14	1	111
51191504	"Keck" clamp ST10	2	111
51190879	Clamp ST7	1	111

Note: Large image may not show all parts in the set.

100 mL Glass Reactor Set
EasyMax 102

51161708
100 mL glass reactor set
The 100 mL reactor set has a maximum working volume of 100 mL and nominal volume of 150 mL for work up.

Both magnetic and overhead stirring possibilities are available.

EasyMax 100 mL glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51161620	100 mL glass reactor	1	43
51161676	Reactor stand for 100 mL reactor	1	71
51191913	O-ring for 100 mL reactor, Ø 56.82 mm x 2.62 mm	1	69
51161670	Clamp chain for 100 mL reactor	1	69
51191918	Magnetic stir bar, cross-shaped, 15 mm x 38 mm	1	84

100 mL Glass Reactor Set
EasyMax 402

30125690
100 mL glass reactor set
The 100 mL reactor set has a maximum working volume of 100 mL and nominal volume of 150 mL for work up.

Both magnetic and overhead stirring possibilities are available. Only overhead stirring is possible with EasyMax 402.

EasyMax 100 mL glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51161620	100 mL glass reactor	1	43
51161676	Reactor stand for 100 mL reactor	1	71
51191913	O-ring for 100 mL reactor, Ø 56.82 mm x 2.62 mm	1	69
51161670	Clamp chain for 100 mL reactor	1	69
30086802	EasyMax 402 receptacle for 100 mL reactor	1	25

100 mL High Workup Volume Set
EasyMax 402

30111633
100 mL high workup volume glass reactor set
The 100 mL high workup volume reactor set has a maximum working volume of 100 mL and nominal volume of 200 mL for work up.

Both magnetic and overhead stirring possibilities are available. Only overhead stirring is possible with EasyMax 402.

EasyMax 100 mL high workup volume glass reactor set consisting of

Order Number	Product Description	Quantity	Page
30111634	100 mL high workup volume glass reactor	1	44
51161676	Reactor stand for 100 mL reactor	1	71
51191913	O-ring for 100 mL reactor, Ø 56.82 mm x 2.62 mm	1	69
51161670	Clamp chain for 100 mL reactor	1	69
30111635	EasyMax 402 receptacle for 100 mL high workup volume reactor	1	25

100 mL Glass Cover Set
EasyMax 102, 102 LT, and 402

51161709
6-port 100 mL glass cover set

The 100 mL glass cover set with six ports is built for multiple applications without limitations for dosing, reflux, pH measurement, ReactIR, or turbidity.

The set includes all adapters, stoppers and clamps needed for full operation.

EasyMax 100 mL glass cover set consisting of

Order Number	Product Description	Quantity	Page
51161619	Glass cover for 100 mL reactor, 6 ports	1	48
51191428	Hose connection for purge gas tubing with 1 UNF 1/4-28 thread	2	98
51161728	Adapter ST 10/19 with 1 UNF 1/4-28 port	2	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97
51190878	Glass stopper ST14/23	4	110
51191167	Glass stopper ST10/19	2	110
51191505	"Keck" clamp ST14	4	111
51191504	"Keck" clamp ST10	2	111

Note: Large image may not show all parts in the set.

100 mL PTFE Cover Set
EasyMax 102, 102 LT, and 402

51161800
6-port PTFE cover set with standard tapered joints for 100 mL reactor

This version of a PTFE cover is equipped with a series of standard taper joints in order to accommodate standard ST adapters and lab equipment.

The PTFE cover can be used in combination with the standard O-rings and reactor clamp as used for the glass cover.

EasyMax 100 mL PTFE cover set consisting of

Order Number	Product Description	Quantity	Page
51161795	PTFE cover for 100 mL reactor body (works only with the 50 mL stirrer shaft 51161756), 6 ports	1	48
51161821	Adapter PTFE for ParticleTrack probe, ST19/26-14 mm	1	101
51191857	O-ring for adapter, Ø 13.95 mm x 2.62 mm	1	101
51161817	Adapter PTFE for ReactIR probe, ST14/23-9.5 mm	1	99
51192091	O-ring for adapter, Ø 9.19 mm x 2.62 mm	1	99
51161728	Adapter ST10/19 with 1 UNF 1/4-28 port	2	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97
71517	Glass stopper ST19/26	2	110
51190878	Glass stopper ST14/23	3	110
51191167	Glass stopper ST10/19	1	110

Note: Large image may not show all parts in the set.

100 mL PTFE Cover Set
EasyMax 102, 102 LT, and 402

30090541
6-port PTFE cover set with compression fittings and standard tapered joints for 100 mL reactor – for ParticleTrack (14 mm), ReactIR and EasyViewer

This cover is designed to be used in combination with METTLER TOLEDOs ParticleTrack, ReactIR and EasyViewer probes up to 14 mm in diameter.
The adapters with compression fittings are perfectly suited to hold the various probes and insert in an ideal and secure position.

The PTFE cover comes as full set with all the required adapters to accommodate typical combinations of probes and inserts.
The cover can be used in combination with the standard O-rings and reactor clamp as used for the glass cover.

EasyMax 100 mL PTFE cover set consisting of

Order Number	Product Description	Quantity	Page
	PTFE cover for 100 mL reactor, 6 ports	1	49
	Standard stirrer adapter, 3/8″ NPT ST14/-	1	104
30245647	Compression fitting 1/2″ NPT, 14 mm bore	1	101
30245649	Compression fitting 1/2″ NPT, 3/8″ 9.525 mm bore	1	99
30245648	Compression fitting 1/2″ NPT, 1/4″ 6.35 mm bore	1	98
30245707	Taper joint adapter 1/2″ NPT ST19/-	2	104
51161728	Adapter ST 10/19 with 1 UNF 1/4-28 port	1	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97
	Sealing plug for Ø 14 mm compression fitting	1	
	Sealing plug for Ø 3/8″ compression fitting	1	
	Sealing plug for Ø 1/4″ compression fitting	1	

Note: Large image may not show all parts in the set.

100 mL PTFE Cover Set
EasyMax 102, 102 LT, and 402

30090542
6-port PTFE cover set with compression fittings, standard tapered joints and 19 mm bore for 100 mL reactor – for ParticleTrack, ReactIR, ParticleView V19, EasyViewer

This cover is designed to be used in combination with METTLER TOLEDOs ParticleTrack and ReactIR probes up to 14 mm in diameter as well as the ParticleView V19 and EasyViewer 400 probes with 19 mm in diameter. The adapters with compression fittings are perfectly suited to hold the various probes and insert in an ideal and secure position.

The PTFE cover comes as full set with all the required adapters to accommodate typical combinations of probes and inserts. The cover can be used in combination with the standard O-rings and reactor clamp as used for the glass cover.

EasyMax 100 mL PTFE cover set consisting of

Order Number	Product Description	Quantity	Page
	PTFE cover for 100 mL reactor, 6 ports	1	49
	Standard stirrer adapter, 3/8″ NPT ST14/-	1	104
30245647	Compression fitting 1/2″ NPT, 14 mm bore	1	101
51161728	Adapter ST 10/19 with 1 UNF 1/4-28 port	1	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97
	Sealing plug for Ø 14 mm compression fitting	1	
	Number 19 flask stopper for 19.25 mm port	1	
	PTFE sleeves for 19.25 mm port	10	

Note: Large image may not show all parts in the set.

250 mL Two-Piece Glass Reactor Set
OptiMax 1001

51162833
250 mL two-piece glass reactor set

The different OptiMax reactor sets combine all the available parts for a particular reactor type and volume in just one part number. This simplifies the evaluation and ordering process and makes it error-free.

The 250 mL two-piece glass reactor has no bottom drain valve. The reactor has a maximum working volume of 250 mL and a nominal volume of 370 mL.

OptiMax 250 mL two-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51162635	Glass reactor, 250 mL	1	44
51162758	Reactor stand for 250 mL reactor	1	71
51162699	Glass cover for 250 mL reactor, 7 ports	1	50
51162781	Cover holder for 250 mL reactor cover	1	71
51162698	Receptacle for 250 mL reactor	1	25
51162703	Clamp chain for 250 mL reactor	1	69
51192170	O-ring for 250 mL reactor, Ø 69.44 mm x 3.53 mm	1	69
51162417	Stirrer shaft for 250 mL reactor, Alloy C-22	1	79
51162418	Pitched stirrer blade, Alloy C-22, downward, Ø 38 mm	1	80
71517	Glass stopper ST19/26	4	110
51190878	Glass stopper ST14/23	2	110
51192167	"Keck" clamp ST24	1	111
51191429	"Keck" clamp ST19	4	111
51191505	"Keck" clamp ST14	2	111

Note: Large image may not show all parts in the set.

400 mL Glass Reactor Set
EasyMax 402

30111619
400 mL glass reactor set
The 400 mL reactor set has a maximum working volume of 400 mL and nominal volume of 425 mL for work up.

Only overhead stirring is possible with EasyMax 402.

EasyMax 400 mL glass reactor set consisting of

Order Number	Product Description	Quantity	Page
30072099	400 mL glass reactor	1	44
51162759	Reactor stand for 400 mL reactor	1	71
51191335	O-ring for 400 mL reactor, Ø 82.22 mm x 2.62 mm	1	69
30111610	Clamp chain for 400 mL reactor	1	69

400 mL Glass Cover Set
EasyMax 402

30111632
6-port 400 mL glass cover set

The 400 mL glass cover set with 6 ports is built for multiple applications like dosing or pH measurement. The set includes all stoppers and clamps needed for normal operation.

EasyMax 400 mL glass cover set consisting of

Order Number	Product Description	Quantity	Page
51161072	Glass cover for 400 mL reactor, 6 ports	1	50
30125685	Adapter ST14/23 with 1 UNF 1/4-28 port	1	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97
71517	Glass stopper ST19/26	2	110
51190878	Glass stopper ST14/23	4	110
51191429	"Keck" clamp ST19	2	111
51191505	"Keck" clamp ST14	4	111

Note: Large image may not show all parts in the set.

400 mL PTFE Cover Set
EasyMax 402

30111620
6-port PTFE cover set with standard ST19/38 fittings for 400 mL reactor
This cover is designed for normal use and use with probes up to 14 mm in diameter

The PTFE cover set comes with standard ST19 adapters to accommodate typical combinations of probes and inserts. The cover can be used with the same clamp and O-ring as used with the glass cover.

EasyMax 400 mL PTFE cover set consisting of

Order Number	Product Description	Quantity	Page
	PTFE cover for 400 mL reactor, 6 ports	1	51
	Standard stirrer adapter, 3/8″ NPT ST14/-	1	104
30245707	Taper joint adapter 1/2″ NPT ST19/-	3	104
30245672	Taper joint adapter 3/4″ NPT ST19/-	2	104
30125686	Adapter ST19/26 with 1 UNF 1/4-28 port	1	97
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	97
51191515	Nut for UNF 1/4-28, 4 pcs in a set	1	97

Note: Large image may not show all parts in the set.

500 mL Two-Piece Glass Reactor Set
OptiMax 1001

51162832
500 mL two-piece glass reactor set

The different OptiMax reactor sets combine all the available parts for a particular reactor type and volume in just one part number. This simplifies the evaluation and ordering process and makes it error-free.

The 500 mL two-piece glass reactor is equipped with a bottom drain valve and has a maximum working volume of 500 mL and a nominal volume of 830 mL.

Note: Large image may not show all parts in the set.

OptiMax 500 mL two-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51162632	Glass reactor, 500 mL	1	45
51162783	Reactor holder for 500 mL reactor	1	71
51162671	Glass cover, for 500 mL/1000 mL reactor, 7 ports	1	51
51162780	Cover holder for 500 mL/1000 mL reactor cover	1	71
51162670	Receptacle for 500 mL reactor	1	25
51162673	Clamp chain for 500 mL/1000 mL reactor	1	69
51192205	O-ring for 500 mL/1000 mL reactor, Ø 107.5 mm x 3.53 mm	1	60
51162722	Stirrer shaft for 500 mL/1000 mL reactor, Alloy C-22	1	79
103504	Pitched stirrer blade, Alloy C-22, downward, Ø 45 mm	1	80
51162638	Bar type baffle for 500 mL reactor, Alloy C-22	1	94
51104154	PTFE adapter for baffle	1	100
51162685	Drain union, bended	1	94
51192169	Pinch clamp S19, stainless steel	1	111
71518	Glass stopper ST29/32	2	110
71517	Glass stopper ST19/26	3	110
51190878	Glass stopper ST14/23	1	110
51192168	"Keck" clamp ST29	2	111
51192167	"Keck" clamp ST24	1	111
51191429	"Keck" clamp ST19	3	111
51191505	"Keck" clamp ST14	1	111

500 mL/1000 mL PTFE Cover Set
OptiMax 1001

30090540
7-port 500 mL/1000 mL PTFE cover set

This reactor cover is an extremely robust alternative for the standard glass cover 51162671.
It is the perfect choice if the reactor is equipped with heavy inserts and probes which bears the risk to break the glass version of the cover.

The PTFE cover comes as full set with all the required adapters to accommodate typical combinations of probes and inserts.

The cover can be used in combination with the standard O-rings and reactor clamp as used for the glass cover.

OptiMax PTFE cover set consisting of

Order Number	Product Description	Quantity	Page
	PTFE cover for 500 mL/1000 mL reactors, 7 ports	1	52
	OptiMax standard stirrer adapter, 3/4" NPT ST24/-	1	104
30245706	Taper joint adapter 1/2" NPT ST14/-	1	104
30245672	Taper joint adapter 3/4" NPT ST19/-	3	104
30245709	Taper joint adapter 1" NPT ST29/-	2	105
30245704	Compression fitting 1" NPT, 19 mm bore	1	106
30245705	Compression fitting 1" NPT, 5/8" 15.875 mm bore	1	102
30245682	Compression fitting 3/4" NPT, 14 mm bore	1	101
30245681	Compression fitting 3/4" NPT, 12 mm bore	1	100
30245680	Compression fitting 3/4" NPT, 8 mm bore	1	99
30245700	Compression fitting 3/4" NPT, 3/8" 9.525 mm bore	1	99
30245684	Compression fitting 3/4" NPT., 1/4" 6.35 mm bore	1	98
	Compression fitting 1/2" NPT, 6 mm bore	1	98
30245648	Compression fitting 1/2" NPT, 1/4" 6.35 mm bore	1	98

Note: Large image may not show all parts in the set.

1000 mL Two-Piece Glass Reactor Set
OptiMax 1001

51162831
1000 mL two-piece glass reactor set

The different OptiMax reactor sets combine all the available parts for a particular reactor type and volume in just one part number. This simplifies the evaluation and ordering process and makes it error-free.

The 1000 mL two-piece glass reactor is equipped with a bottom drain valve and has a maximum working volume of 1000 mL and a nominal volume of 1310 mL.

Note: Large image may not show all parts in the set.

OptiMax 1000 mL two-piece glass reactor set consisting of

Order Number	Product Description	Quantity	Page
51162634	Glass reactor, 1000 mL	1	45
51162782	Reactor holder for 1000 mL reactor	1	71
51162671	Glass cover, for 500 mL/1000 mL reactor, 7 ports	1	51
51162780	Cover holder for 500 mL/1000 mL reactor cover	1	71
51162673	Clamp chain for 500 mL/1000 mL reactor	1	69
51192205	O-ring for 500 mL/1000 mL reactor, Ø 107.5 mm x 3.53 mm	1	69
51162722	Stirrer shaft for 500 mL/1000 mL reactor, Alloy C-22	1	79
103504	Pitched stirrer blade, Alloy C-22, downward, Ø 45 mm	1	80
51162637	Bar type baffle for 1000 mL reactor, Alloy C-22	1	94
51104154	PTFE adapter for baffle	1	100
51162685	Drain union, bended	1	94
51192169	Pinch clamp S19, stainless steel	1	111
71518	Glass stopper ST29/32	2	110
71517	Glass stopper ST19/26	3	110
51190878	Glass stopper ST14/23	1	110
51192168	"Keck" clamp ST29	2	111
51192167	"Keck" clamp ST24	1	111
51191429	"Keck" clamp ST19	3	111
51191505	"Keck" clamp ST14	1	111

Clamps and Standard O-Rings
For Two-Piece Reactors

51160675	**Reactor clamp for 50 mL reactor** For EasyMax 102
Material	PTFE C25
Quantity	1

51161670	**Clamp chain for 100 mL reactor** For EasyMax 102 and 402
Material	Stainless steel 1.4404, PPS GF40
Quantity	1

51162703	**Clamp chain for 250 mL reactor** For OptiMax 1001
Material	Stainless steel 1.4404, PPS GF40
Quantity	1

30111610	**Clamp chain for 400 mL reactor** For EasyMax 402
Material	Stainless steel 1.4404, PPS GF40
Quantity	1

51162673	**Clamp chain for 500 mL/1000 mL reactors** For OptiMax 1001
Material	Stainless steel 1.4404, PPS GF40
Quantity	1

51161547	**Set of knurled screws with washers** For 50 mL reactor clamp
Material	Stainless steel
Quantity	8 pcs of each

51161718	**Fixing ring for receptacle**
Material	PTFE C25
Quantity	1

VQM, PTFE FEP-coated O-rings

51191913	**O-ring for 100 mL reactor, standard** For EasyMax 102 and 402
Material	Elastomer core Silicone VQM, PTFE FEP-coated
Size	Ø 56.82 mm x 2.62 mm; AS no. 140
Quantity	1

51192170	**O-ring for 250 mL reactor, standard** For OptiMax 1001
Material	Elastomer core Silicone VQM, PTFE FEP-coated
Size	Ø 69.44 mm x 3.53 mm; AS No. 232
Quantity	1

51191335	**O-ring for 400 mL reactor, standard** For EasyMax 402
Material	Elastomer core Silicone VQM, PTFE FEP-coated
Size	Ø 82.22 mm x 2.62 mm; AS no. 152
Quantity	1

51192205	**O-ring for 500 mL/1000 mL reactors, standard** For OptiMax 1001
Material	Elastomer core Silicone VQM, PTFE FEP-coated
Size	Ø 107.5 mm x 3.53 mm; AS No. 244
Quantity	1

Note: See next page for FFKM O-rings

FFKM O-Rings

FFKM O-rings

51191416	**O-ring for 50 mL glass reactor, standard** For EasyMax 102
Material	FFKM
Size	Ø 36.14 mm x 2.62 mm, AS no. 127
Quantity	1

30213715	**O-ring for 100 mL reactor, optional** For EasyMax 102 and 402
Material	FFKM
Size	Ø 56.82 mm x 2.62 mm, AS No. K# 140
Quantity	1

51192219	**O-ring for 250 mL reactor, optional** For OptiMax 1001
Material	FFKM
Size	Ø 69.44 mm x 3.53 mm, AS No. K# 232
Quantity	1

51191738	**O-ring for 400 mL reactor, optional** For EasyMax 402
Material	FFKM
Size	Ø 82.22 mm x 2.62 mm; AS no. K# 152
Quantity	1

51192218	**O-ring for 500 mL/1000 mL reactors, optional** For OptiMax 1001
Material	FFKM
Size	Ø 107.5 mm x 3.53 mm, AS No. K# 244
Quantity	1

FFKM O-rings for pressure reactors

51191452	**O-ring for 50 mL pressure reactor, standard** For EasyMax 102
Material	FFKM
Size	Ø 31.42 mm x 2.62 mm, AS no. 124
Quantity	1

30030952	**O-ring for 100 mL pressure reactor, standard** For EasyMax 102
Material	FFKM
Size	Ø 50.47 mm x 2.62 mm
Quantity	1

Reactor Stands and Holders

51161288	**Reactor stand for 50 mL reactor** For EasyMax 102
Material	PE
Size	Inner Ø 39 mm, height 80 mm
Quantity	1

51161816	**Reactor stand for 50 mL one-piece reactor** For EasyMax 102
Material	PE
Size	Inner Ø 43 mm, height 63 mm
Quantity	1

51161676	**Reactor stand for all 100 mL reactors** For EasyMax 102 and 402
Material	PE
Size	Inner Ø 57.5 mm, height 96 mm
Quantity	1

51162758	**Reactor stand for 250 mL reactor** For OptiMax 1001
Material	PE
Size	Inner Ø 67.5 mm, height 105 mm
Quantity	1

51162759	**Reactor stand for 400 mL/500 mL one-piece reactors** For EasyMax 402 (400 mL) and OptiMax 1001 (500 mL)
Material	PE
Size	Inner Ø 82.5 mm, height 120 mm
Quantity	1

51162760	**Reactor stand for 1000 mL one-piece reactor** For OptiMax 1001
Material	PE
Size	Inner Ø 107.5 mm, height 120 mm
Quantity	1

51162783	**Reactor holder for 500 mL reactor** For OptiMax 1001
Material	Stainless steel 1.4404, PE
Size	Inner Ø 90 mm, height 155 mm
Quantity	1

51162782	**Reactor holder for 1000 mL reactor** For OptiMax 1001
Material	Stainless steel 1.4404, PE
Size	Inner Ø 110 mm, height 155 mm
Quantity	1

51162781	**Cover holder for 250 mL reactor cover** For OptiMax 1001
Material	Stainless steel 1.4404, PTFE GF25
Quantity	1

51162780	**Cover holder for 500 mL/1000 mL reactor cover** For OptiMax 1001
Material	Stainless steel 1.4404, PTFE GF25
Quantity	1

Reflux Condensers and Dropping Funnel

51160813	**Reflux condenser, ST10/19, GL14** With GL14 connectors for coolant and septum
Material	Borosilicate glass
Size	Outer Ø 20 mm, height 101 mm
Quantity	1

51161029	**Reflux condenser, ST14/23, GL14** With 2 GL14 connectors for coolant
Material	Borosilicate glass
Size	Outer Ø 24 mm, height 140 mm
Quantity	1

51162530	**Reflux condenser, ST19/26, GL14**
Material	Borosilicate glass
Size	Outer Ø 50 mm, height 250 mm
Quantity	1

51192166	**Reflux condenser, ST19/26, GL14**
Material	Borosilicate glass
Size	Outer Ø 40 mm, height 250 mm
Quantity	1

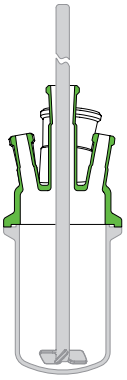
51191952	**50 mL dropping funnel, ST14/23** With PTFE stopcock and pressure equalizing tube
Material	Glass, PTFE
Size	Ø 35 mm, length 250 mm
Quantity	1

51190317	**Screw cap GL14, with aperture**
Material	PBT
Temperature	Max. 200 °C
Aperture	Ø 9.5 mm
Quantity	1

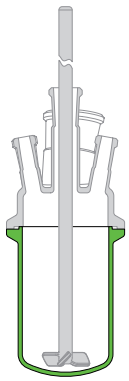
51190319	**Plastic hose, straight** With silicone rubber seal, for screw cap GL14
Material	PP, VQM
Size	For tube inner Ø 6 mm to 9 mm
Quantity	1

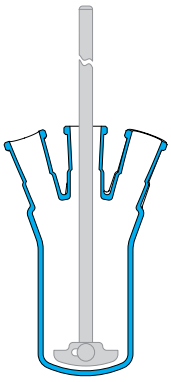
Guide – How to Combine
Reactors, Covers, Stirrers, and Shafts

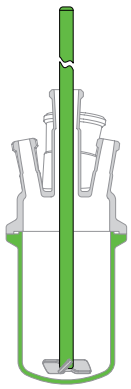
Reactors have dedicated covers which fit the specific reactor diameter and volume. Select the reactor and cover in the table below to determine the stirrer shaft options. See next pages for explanation of A, B, C, ...



Reactor		Cover: No separate cover needed	51160817 Glass cover for 50 mL reactor	51161619 Glass cover for 100 mL reactor	51161795 PTFE cover for 100 mL reactor, standard taper joints	30090541 PTFE cover set for 100 mL reactor for ParticleTrack and ReactIR	30090542 PTFE cover set for 100 mL reactor for ParticleView V19, ParticleTrack and ReactIR	51162699 Glass cover for 250 mL reactor	51161072 Glass cover for 400 mL reactor	30111620 PTFE cover set for 400 mL reactor	51162671 Glass cover for 500 mL/1000 mL reactor	30090540 PTFE cover set for 500 mL/1000 mL reactor
51161255	50 mL glass reactor		A									
51161792	50 mL one-piece glass reactor	B										
51161620	100 mL glass reactor			C	A	C	C					
30111634	100 mL high workup volume glass reactor			D	C	D	D					
51161786	100 mL one-piece glass reactor	E										
51162635	250 mL glass reactor							F				
51162734	250 mL one-piece glass reactor	G										
30072099	400 mL glass reactor								H	H		
30131163	400 mL one-piece glass reactor	I										
51162632	500 mL glass reactor										J	J
51162733	500 mL one-piece glass reactor	K										
51162634	1000 mL glass reactor										J	J
51162732	1000 mL one-piece glass reactor	K										







Combination

A

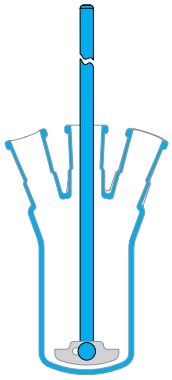
50 mL reactor + glass cover; 100 mL reactor + PTFE cover

B

50 mL one-piece reactor

Stirrers and Stirrer Shaft Options

		Length	Page
51161756	Stirrer shaft, Alloy C-22	218 mm	78
30130412	Stirrer shaft for magnetic drive, Alloy C-22	94 mm	78
51161813	Stirrer shaft for 50 mL/100 mL one-piece reactors, glass	192 mm	82
30138937	Stirrer shaft for 50 mL/100 mL one-piece reactors, PTFE-coated	192 mm	82
30130413	Stirrer shaft for 50 mL/100 mL one-piece reactors, for magnetic drive, Alloy C-22	118 mm	78



C

100 mL reactor + glass/PTFE covers; 100 mL high workup reactor + PTFE cover

51161725	Pitched-blade stirrer, upward, Ø 30 mm, glass	250 mm	76
51161726	Pitched-blade stirrer, downward, Ø 30 mm, glass	250 mm	76
51161727	Anchor stirrer, Ø 48 mm, glass	261 mm	76
51161723	Stirrer shaft, Alloy C-22	258 mm	78
30130575	Stirrer shaft for magnetic drive, Alloy C-22	129 mm	78

D

100 mL high workup volume reactor + glass/ PTFE covers

30111637	Pitched-blade stirrer, upward, Ø 38 mm, for 100 mL high workup volume/400 mL EasyMax reactors, glass	298 mm	77
30111638	Pitched-blade stirrer, downward, Ø 38 mm, for 100 mL high workup volume/400 mL EasyMax reactors, glass	298 mm	77
30111611	Stirrer shaft for 100 mL high workup volume/400 mL reactors, Alloy C-22	298 mm	79
30138114	Stirrer shaft for 100 mL high workup volume/400 mL reactors, for magnetic drive, Alloy C-22	184 mm	79

E

100 mL one-piece reactor

51161813	Stirrer shaft for 50 mL/100 mL one-piece reactors, glass	192 mm	82
30138937	Stirrer shaft for 50 mL/100 mL one-piece reactors, PTFE-coated	192 mm	82
30130413	Stirrer shaft for 50 mL/100 mL one-piece reactors, for magnetic drive, Alloy C-22	118 mm	78

F

250 mL reactor + glass cover

51162424	Pitched-blade stirrer, upward, Ø 38 mm, glass	400 mm	76
51162423	Pitched-blade stirrer, downward, Ø 38 mm, glass	400 mm	76
51162417	Stirrer shaft, Alloy C-22	400 mm	79
30130575	Stirrer shaft for magnetic drive, Alloy C-22 **Note:** Use 30216881 OptiMax magnetic drive and mount stirrer blade upside down.	129 mm	78

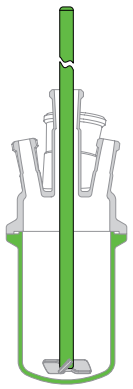
Combination

G

250 mL one-piece reactor

Stirrers and Stirrer Shaft Options

		Length	Page
51162681	Stirrer shaft for 250 mL/500 mL/1000 mL one-piece reactors, glass	400 mm	82



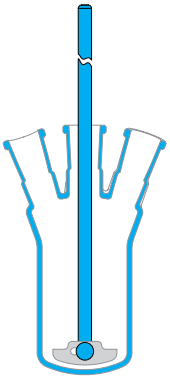
Combination

H

400 mL reactor + glass/PTFE covers

Stirrers and Stirrer Shaft Options

		Length	Page
30111637	Pitched-blade stirrer, upward, Ø 38 mm, for 100 mL high workup volume//400 mL EasyMax reactors, glass	298 mm	77
30111638	Pitched-blade stirrer, downward, Ø 38 mm, for 100 mL high workup volume//400 mL EasyMax reactors, glass	298 mm	77
30111639	Anchor stirrer, Ø 65 mm, glass	298 mm	77
30111611	Stirrer shaft for 100 mL high workup volume/400 mL reactors, Alloy C-22	298 mm	79
30138114	Stirrer shaft for 100 mL high workup volume//400 mL reactors, for magnetic drive, Alloy C-22	184 mm	79



I

400 mL one-piece reactor

30111614	Stirrer shaft for 400 mL one-piece reactor, glass	242 mm	82
30138938	Stirrer shaft for 400 mL one-piece reactor, PTFE-coated	242 mm	82
30138113	Stirrer shaft for 400 mL one-piece reactor, for magnetic drive, Alloy C-22	175 mm	79

J

500 mL reactor + glass/PTFE covers; 1000 mL reactor + glass/PTFE covers

51162826	Pitched-blade stirrer, upward, Ø 45 mm, glass	400 mm	77
51162825	Pitched-blade stirrer, downward, Ø 45 mm, glass	400 mm	77
51162722	Stirrer shaft, Alloy C-22	400 mm	79
30138111	Stirrer shaft for magnetic drive, Alloy C-22	189 mm	79

K

500 mL/1000 mL one-piece reactors

51162681	Stirrer shaft for 250 mL/500 mL/1000 mL one-piece reactors, glass	380 mm	82
30138110	Stirrer shaft for 250 mL/500 mL/1000 mL one-piece reactor, for magnetic drive, Alloy C-22	155 mm	79

Glass Stirrers
For Two-Piece Reactors

100 mL glass stirrers

51161725	**Pitched-blade stirrer** Upward, three impellers, 45°, for 100 mL EasyMax reactor
Material	Borosilicate glass
Size	Outer Ø 30 mm, length 250 mm
Quantity	1

51161726	**Pitched-blade stirrer** Downward, three impellers, 45°, for 100 mL EasyMax reactor
Material	Borosilicate glass
Size	Outer Ø 30 mm, length 250 mm
Quantity	1

51161727	**Anchor stirrer** For 100 mL EasyMax reactor
Material	Borosilicate glass
Size	Outer Ø 48 mm, height 55 mm, length 261 mm
Quantity	1

250 mL glass stirrers

51162424	**Pitched-blade stirrer** Upward, four impellers, 45°, for 250 mL OptiMax reactor
Material	Borosilicate glass
Size	Outer Ø 38 mm, length 400 mm
Quantity	1

51162423	**Pitched-blade stirrer** Downward, four impellers, 45°, for 250 mL OptiMax reactor
Material	Borosilicate glass
Size	Outer Ø 38 mm, length 400 mm
Quantity	1

400 mL glass stirrers

30111637	**Pitched-blade stirrer** Upward, three impellers, 45°, for 100 mL high workup volume/400 mL EasyMax reactors
Material	Borosilicate glass
Size	Outer Ø 38 mm, length 298 mm
Quantity	1

30111638	**Pitched-blade stirrer** Downward, three impellers, 45°, for 100 mL high workup volume/400 mL EasyMax reactors
Material	Borosilicate glass
Size	Outer Ø 38 mm, length 298 mm
Quantity	1

30111639	**Anchor stirrer** For 400 mL EasyMax reactor
Material	Borosilicate glass
Size	Outer Ø 65 mm, height 75 mm, length 298 mm
Quantity	1

500 mL/1000 mL glass stirrers

51162826	**Pitched-blade stirrer** Upward, four impellers, 45°, for 500 mL/1000 mL OptiMax reactors
Material	Borosilicate glass
Size	Outer Ø 45 mm, length 400 mm
Quantity	1

51162825	**Pitched-blade stirrer** Downward, four impellers, 45°, for 500 mL/1000 mL OptiMax reactors
Material	Borosilicate glass
Size	Outer Ø 45 mm, length 400 mm
Quantity	1

Metal Stirrer Shafts
For One-Piece and Two-Piece Reactors

50 mL reactor
EasyMax 102

51161756	**Stirrer shaft, length 218 mm** Two-piece reactor, 50 mL
Material	Alloy C-22
Size	Outer Ø 8/5 mm, length 218 mm, M3 thread
Quantity	1

30130412	**Stirrer shaft for magnetic drive** Two-piece reactor, 50 mL
Material	Alloy C-22
Size	Outer Ø 9.5/6 mm, length 94 mm, M3 thread
Quantity	1

Set includes: 30138089 Grub screw M4 x 3

30130413	**Stirrer shaft for magnetic drive** One-piece reactor, 50 mL/100 mL
Material	Alloy C-22
Size	Outer Ø 9.5/6 mm, length 118 mm
Quantity	1

Set includes: 30138089 Grub screw M4 x 3
30130576 Screw D11-M3 for half-moon blades

100 mL reactors
EasyMax 102 and 402

51161723	**Stirrer shaft, length 258 mm** Two-piece reactor, 100 mL
Material	Alloy C-22
Size	Ø 8 mm, length 258 mm, M3 thread
Quantity	1

30130575	**Stirrer shaft for magnetic drive** Two-piece reactor, 100 mL
Material	Alloy C-22
Size	Outer Ø 9.5/6 mm, length 129 mm, M3 thread
Quantity	1

Set includes: 30138089 Grub screw M4 x 3

30130413	**Stirrer shaft for magnetic drive** One-piece reactor, 50 mL/100 mL
Material	Alloy C-22
Size	Outer Ø 9.5/6 mm, length 118 mm
Quantity	1

Set includes: 30138089 Grub screw M4 x 3
30130576 Screw D11-M3 for half-moon blades

250 mL reactor
OptiMax 1001

51162417	**Stirrer shaft, length 400 mm** Two-piece reactor, 250 mL
Material	Alloy C-22
Size	Ø 10/8 mm, length 400 mm, M3 thread
Quantity	1

Note: Use 30216881 OptiMax magnetic drive and mount stirrer blade upside down.

30130575	**Stirrer shaft for magnetic drive** Two-piece reactor, 100 mL
Material	Alloy C-22
Size	Outer Ø 9.5/6 mm, length 129 mm, M3 thread
Quantity	1

Set includes: 30138089 Grub screw M4 x 3

100 mL high workup volume/400 mL reactors
EasyMax 402

30111611	**Stirrer shaft, length 298 mm** Two-piece reactor, 100 mL high workup volume/400 mL
Material	Alloy C-22
Size	Ø 8 mm, length 298 mm, M3 thread
Quantity	1

30138114	**Stirrer shaft for magnetic drive** Two-piece reactor, 100 mL high workup volume/400 mL
Material	Alloy C-22
Size	Outer Ø 9.5/6 mm, length 184 mm, M3 thread
Quantity	1

Set includes: 30138089 Grub screw M4 x 3

30138113	**Stirrer shaft for magnetic drive** One-piece reactor, 400 mL
Material	Alloy C-22
Size	Outer Ø 9.5/6 mm, length 175 mm
Quantity	1

Set includes: 30138089 Grub screw M4 x 3
30130576 Screw D11-M3 for half-moon blades

500 mL/1000 mL reactors
OptiMax 1001

51162722	**Stirrer shaft, length 400 mm** Two-piece reactor, 500 mL/1000 mL
Material	Alloy C-22
Size	Ø 10 mm, length 400 mm, M8 thread
Quantity	1

30138111	**Stirrer shaft for magnetic drive** Two-piece reactor, 500 mL/1000 mL
Material	Alloy C-22
Size	Outer Ø 9.5 mm, length 189 mm, M8 thread
Quantity	1

Set includes: 30138089 Grub screw M4 x 3

30138110	**Stirrer shaft for magnetic drive** One-piece reactor, 500 mL/1000 mL
Material	Alloy C-22
Size	Outer Ø 9.5 mm, length 155 mm
Quantity	1

Set includes: 30138089 Grub screw M4 x 3
30238893 Screw D13.5-M5 for half-moon blades

Metal Stirrer Blades

Pitch-blade elements

51161356	**Pitched-blade element** Upward, four impellers, 45°, for 50 mL/100 mL reactors, M3 thread
Material	Alloy C-22
Size	Outer Ø 25 mm
Quantity	1

51161549	**Pitched-blade element** Downward, four impellers, 45°, for 50 mL/100 mL reactors, M3 thread
Material	Alloy C-22
Size	Outer Ø 25 mm
Quantity	1

51162442	**Pitched-blade element** Upward, four impellers, 45°, for 100 mL/250 mL/400 mL reactors, M3 thread
Material	Alloy C-22
Size	Outer Ø 38 mm
Quantity	1

51162418	**Pitched-blade element** Downward, four impellers, 45°, for 100 mL/250 mL/400 mL reactors, M3 thread
Material	Alloy C-22
Size	Outer Ø 38 mm
Quantity	1

30111616	**Pitched-blade element** Upward, four impellers, 45°, for 100 mL/250 mL/400 mL reactors, M3 thread
Material	Alloy C-22
Size	Outer Ø 38 mm
Quantity	1

30111615	**Pitched-blade element** Downward, four impellers, 45°, for 100 mL/250 mL/400 mL reactors, M3 thread
Material	Alloy C-22
Size	Outer Ø 38 mm
Quantity	1

51160025	**Pitched-blade element** Upward, four impellers, 60°, for 500 mL/1000 mL reactors, M8 thread
Material	Alloy C-22
Size	Outer Ø 45 mm
Quantity	1

103504	**Pitched-blade element** Downward, four impellers, 60°, for 500 mL/1000 mL reactors, M8 thread
Material	Alloy C-22
Size	Outer Ø 45 mm
Quantity	1

Rushton turbine blade

51161364	**Rushton turbine blade** for 50 mL/100 mL reactors, M3 thread
Material	Alloy C-22
Size	Outer Ø 25 mm
Quantity	1

Anchor blade

51161724	**Anchor blade for 100 mL reactor** M3 thread
Material	Alloy C-22
Size	Outer Ø 48 mm, height 55 mm
Quantity	1

51162678	**Anchor blade for 250 mL reactor** M3 thread
Material	Alloy C-22
Size	Outer Ø 55 mm, height 80 mm
Quantity	1

30111617	**Anchor blade for 400 mL reactor** M3 thread
Material	Alloy C-22
Size	Outer Ø 65 mm, height 75 mm
Quantity	1

51162677	**Anchor blade for 500 mL reactor** M8 thread
Material	Alloy C-22
Size	Outer Ø 69 mm, height 100 mm
Quantity	1

103507	**Anchor blade for 1000 mL reactor** M8 thread
Material	Alloy C-22
Size	Outer Ø 90 mm, height 100 mm
Quantity	1

Glass and PTFE-Coated Stirrer Shafts
For One-Piece Reactors

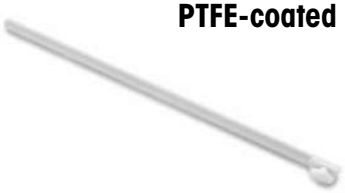
Glass stirrer shafts

51161813	**Glass stirrer shaft** One-piece reactors, 50 mL/100 mL
Material	Borosilicate glass
Size	Ø 8 mm, length 192 mm
Quantity	1

30111614	**Glass stirrer shaft** One-piece reactor, 400 mL
Material	Borosilicate glass
Size	Ø 8 mm, length 242 mm
Quantity	1

51162681	**Glass stirrer shaft** One-piece reactors, 250 mL/500 mL/1000 mL
Material	Borosilicate glass
Size	Ø 10 mm, length 380 mm
Quantity	1

PTFE-coated stirrer shafts



30138937	**PTFE-coated stirrer shaft** One-piece reactors, 50 mL/100 mL
Material	PTFE-coated
Size	Ø 8 mm, length 192 mm
Quantity	1

30138938	**PTFE-coated stirrer shaft** One-piece reactor, 400 mL
Material	PTFE-coated
Size	Ø 8 mm, length 242 mm
Quantity	1

PTFE Stirrer Blades
For One-Piece Reactors

51161814	**Half-moon stirrer blade** One-piece reactor, 50 mL
Material	PTFE
Size	15 mm x 26 mm
Quantity	1

Needed items: 30111614 Glass stirrer shaft
30130413 Stirrer shaft, magnetic drive (50 mL/100 mL)

30208854	**Half-moon stirrer blade for PTFE shaft** One-piece reactor, 50 mL
Material	PTFE
Size	15 mm x 26 mm
Quantity	1

Needed items: 30138937 PTFE-coated stirrer shaft

51161749	**Half-moon stirrer blade** One-piece reactor, 100 mL/400 mL
Material	PTFE
Size	15 mm x 40 mm
Quantity	1

Needed items:
30111614 Glass stirrer shaft
30130413 Stirrer shaft, magnetic drive (50 mL/100 mL)
30138113 Stirrer shaft, magnetic drive (400 mL)

30208853	**Half-moon stirrer blade for PTFE shaft** one-piece reactor, 100 mL/400 mL
Material	PTFE
Size	15 mm x 40 mm
Quantity	1

Needed items:
30138937 PTFE-coated stirrer shaft (100 mL)
30138938 PTFE-coated stirrer shaft (400 mL)

51162684	**Half-moon stirrer blade** One-piece reactor, 250 mL
Material	PTFE
Size	19 mm x 43 mm
Quantity	1

Needed items:
51162681 Glass stirrer shaft

51162683	**Half-moon stirrer blade** one-piece reactor, 500 mL
Material	PTFE
Size	19 mm x 54 mm
Quantity	1

Needed items:
51162681 Glass stirrer shaft
30138110 Stirrer shaft, magnetic drive

51162682	**Half-moon stirrer blade** One-piece reactor, 1000 mL
Material	PTFE
Size	19 mm x 71 mm
Quantity	1

Needed items:
51162681 Glass stirrer shaft
30138110 Stirrer shaft, magnetic drive

Magnetic Stir Bars
PTFE-Coated

51191324	**Magnetic stir bar, 6 mm x 10 mm**
Material	PTFE-coated
Size	Ø 7 mm, length 10 mm
Quantity	1

51192096	**Magnetic stir bar, 4.5 mm x 15 mm**
Material	PTFE-coated
Size	Ø 4.5 mm, length 15 mm
Quantity	1

51191159	**Magnetic stir bar, 7 mm x 30 mm**
Material	PTFE-coated
Size	Ø 7 mm, length 30 mm
Quantity	1

51190791	**Magnetic stir bar, 13 mm x 30 mm**
Material	PTFE-coated
Size	Ø 13 mm, length 30 mm
Quantity	1

51191939	**Magnetic stir bar, 8 mm x 40 mm**
Material	PTFE-coated
Size	Ø 8 mm, length 40 mm
Quantity	1

Note: The magnetic stir bars do not work with EasyMax 402 and OptiMax 1001

51191919	**Magnetic stir bar, cross-shaped 10 mm x 25 mm**
Material	PTFE-coated
Size	Ø 25 mm, height 10 mm
Quantity	1

51191918	**Magnetic stir bar, cross-shaped 15 mm x 38 mm**
Material	PTFE-coated
Size	Ø 38 mm x 15 mm
Quantity	1

Note: The magnetic stir bars do not work with EasyMax 402 and OptiMax 1001

Overhead Stirrer Set and Parts
EasyMax 102, 102 LT, and 402

51161700	**EasyMax overhead stirrer set**
Material	Aluminium anodized (flange), stainless steel (upper coupling), PEEK stirrer adapter
Speed	50 rpm to 1000 rpm
Quantity	1

Set includes:

51161719	EasyMax stirrer motor with coupling
51161654	Height adjustment unit
51161731	Stirrer adapter ST14/23
51191375	Sealing ring for stirrer adapter
51161652	Clamping nut
51161651	Chuck
51191376	Washer for stirrer adapter

51161719	**EasyMax stirrer motor with coupling**
Material	Aluminium anodized (flange), stainless steel (upper coupling)
Speed	50 rpm to 1000 rpm
Quantity	1

For the one-piece reactors a non-height adjustable stirrer adapter is required. See next page.

51161654	**Height adjustment unit for stirrer adapter** Upper part for height adjustment, including 71652 O-ring
Material	PEEK
Quantity	1

51161731	**Stirrer adapter ST14/23, lower part**
Material	PEEK
Quantity	1

51191375	**Sealing ring for stirrer adapter**
Material	PTFE/FKM
Size	Ø 16 mm, thickness 5 mm, aperture 8 mm
Quantity	1

51161652	**Clamping nut**
Material	Aluminium anodized
Quantity	1

51161651	**Chuck, PTFE C25** For stirrer shafts with outer Ø 8 mm
Material	PTFE C25
Quantity	1

51191376	**Washer for stirrer adapter**
Material	PA
Size	Ø 16 mm, aperture 8 mm, thickness 2 mm
Quantity	1

Overhead Stirrer Spare Parts
EasyMax 102 and 402

51161830	**EasyMax stirrer motor without coupling**
Material	Stainless steel
Speed	50 rpm to 1000 rpm
Quantity	1

51161655	**Motor flange**
Material	Aluminium alloy 6026
Quantity	1

Note: Three (3) screws (76692 screw, M2 x 10 mm, 10 pcs in a set) are needed to connect to the 51161830 stirrer motor

71652	**O-ring for stirrer adapter**
Material	FKM
Size	21.89 mm x 2.62 mm, AS no. 118
Quantity	1

51161360	**Set of upper stirrer coupling** Comprising upper coupling and two (2) threaded pins
Material	Stainless steel, 1.4301
Quantity	1

Note: Available on special request only

Non-Height Adjustable Stirrer Adapters
For One-Piece EasyMax Reactors

51161822	**Non-height adjustable stirrer adapter** ST19/26, including 51191375 sealing ring
Material	PEEK adapter, PTFE/FKM sealing ring
Quantity	1

Note: 51161822 adapter and 51161835 adapter are available only as sets with 51191375 sealing ring

51191375	**Sealing ring for stirrer adapter**
Material	PTFE/FKM
Size	Ø 16 mm, thickness 5 mm, aperture 8 mm
Quantity	1

Certain solvents like Methylene-chloride, DMSO and THF may cause swelling in PEEK. We recommend to use the optional 51161835 PTFE stirrer adapter as an alternative to avoid breakage of the glass port.

51161835	**Non-height adjustable PTFE stirrer adapter** With metal brace, ST19/26, including 51191375 sealing ring
Material	Aluminium anodized with PTFE adapter, PTFE/FKM sealing ring
Quantity	1

Spare Parts for OptiMax Stirrer

51162690	OptiMax overhead stirrer drive complete
Material	Aluminium anodized, PTFE
Speed	30 rpm to 1200 rpm
Quantity	1

Set includes: 51162841 Overhead stirrer motor standard
30451755 Stirrer adapter, ST24

51162841	Overhead stirrer motor standard
Material	Aluminium anodized, PTFE
Speed	30 rpm to 1200 rpm
Quantity	1

30451755	Stirrer adapter, ST24
Material	PTFE carbon
Size	Inner Ø 10 mm
Quantity	1

Set includes: 30477337 Stirrer adapter, top
Sealing ring
Stirrer adapter, bottom
51162820 Loosening nut

30477337	Stirrer adapter, top
Material	PTFE carbon
Size	Inner Ø 10 mm
Quantity	1

103547	Sealing ring for 30451755 adapter
Material	PTFE cord
Size	Inner Ø 10 mm
Quantity	5 pcs in a set

51162820	Loosening nut for 30451755 stirrer adapter
Material	PEEK
Size	Inner Ø M26
Quantity	1

51162763	Security ring to hold stirrer shaft
Material	PEEK
Speed	Inner Ø 10 mm
Quantity	1

Overhead Stirrer Magnetic Drive Sets
EasyMax and OptiMax

50 mL reactors

30213866	**Magnetic drive set for two-piece reactor** For 50 mL, EasyMax
Material of Wetted Parts	Alloy C-22, FFKM, PTFE C25
Size	Stirrer shaft length 94 mm, pitch-blade element, downward, outer Ø 25 mm
Speed	50 rpm to 1000 rpm
Quantity	1

Set includes:
51161830 EasyMax stirrer motor
30130412 Stirrer shaft for magnetic drive
51161549 Pitched-blade element, downward

100 mL reactors

30113925	**Magnetic drive set for two-piece reactor** For 100 mL, EasyMax
Material of Wetted Parts	Alloy C-22, FFKM, PTFE C25
Size	Stirrer shaft length 129 mm, pitch-blade element, downward, outer Ø 25 mm
Speed	50 rpm to 1000 rpm
Quantity	1

Set includes:
51161830 EasyMax stirrer motor
30130575 Stirrer shaft for magnetic drive
51161549 Pitched-blade element, downward

50 mL/100 mL reactors

30113924	**Magnetic drive set for one-piece reactors** For 50 mL/100 mL, EasyMax
Material of Wetted Parts	Alloy C-22, FFKM, PTFE, PTFE C25, PTFE GF25 (adapter)
Size	Stirrer shaft length 118 mm, half-moon stirrer blade 15 mm x 26 mm, half-moon stirrer blade 15 mm x 40 mm, adapter ST19/ST14
Speed	50 rpm to 1000 rpm
Quantity	1

Set includes:
51161830 EasyMax stirrer motor
30130413 Stirrer shaft for magnetic drive
51161814 Half-moon stirrer blade
51161749 Half-moon stirrer blade
51161509 Reducing adapter ST19/26 to ST14/23

100 mL high workup volume/400 mL reactors

30130319	**Magnetic drive set for two-piece reactor** For 100 mL high workup volume/400 mL, EasyMax
Material of Wetted Parts	Alloy C-22, FFKM, PTFE C25
Size	Stirrer shaft length 184 mm, pitch-blade element, downward, outer Ø 38 mm
Speed	50 rpm to 1000 rpm
Quantity	1

Set includes:
51161830 EasyMax stirrer motor
30138114 Stirrer shaft for magnetic drive
30111615 Pitched-blade element, downward

400 mL reactors

30125692	**Magnetic drive set for one-piece reactor** For 400 mL, EasyMax
Material of Wetted Parts	Alloy C-22, FFKM, PTFE, PTFE C25, PTFE GF25 (adapter)
Size	Stirrer shaft length 175 mm, half-moon stirrer blade 15 mm x 40 mm, adapter ST19/ST14
Speed	50 rpm to 1000 rpm
Quantity	1

Set includes:
51161830 EasyMax stirrer motor
30138113 Stirrer shaft for magnetic drive
51161749 Half-moon stirrer blade
51161509 Reducing adapter ST19/26 to ST14/23

500 mL/1000 mL reactors

30111285	**Magnetic drive set for two-piece reactor** For 500 mL/1000 mL, OptiMax
Material of Wetted Parts	Alloy C-22, FFKM, PTFE C25
Size	Stirrer shaft length 189 mm pitch-blade element, downward, outer Ø 45 mm
Speed	30 rpm to 1200 rpm
Quantity	1

Set includes:
51162841 OptiMax stirrer motor
30138111 Stirrer shaft for magnetic drive
103504 Pitched-blade element, downward

30113923	**Magnetic drive set for one-piece reactor** For 500 mL/1000 mL, OptiMax
Material of Wetted Parts	Alloy C-22, FFKM, PTFE, PTFE C25
Size	Stirrer shaft length 155 mm, half-moon stirrer blade 19 mm x 71 mm
Speed	30 rpm to 1200 rpm
Quantity	1

Set includes:
51162841 OptiMax stirrer motor
30138110 Stirrer shaft for magnetic drive
51162682 Half-moon stirrer blade

Magnetic Drive Upgrade Sets
EasyMax and OptiMax

30092602	**EasyMax magnetic drive upgrade set** Magnetic coupling 20 Ncm ST14
Material of Wetted Parts	Alloy C-22, FFKM, PTFE C25
Speed	50 rpm to 1000 rpm
Quantity	1

Note: To upgrade an existing stirrer motor set-up. Stirrer motor (51161830) is not included. Stirrer shafts must be purchased separately.

30216881	**OptiMax magnetic drive upgrade set** Magnetic coupling 50 Ncm ST24
Material of Wetted Parts	Alloy C-22, FFKM, PTFE C25
Speed	30 rpm to 1200 rpm
Quantity	1

Note: To upgrade an existing stirrer motor set-up. Stirrer motor (51162841) is not included. Stirrer shafts must be purchased separately.

Magnetic Drive Spare Parts
EasyMax and OptiMax

30130411	**Driven shaft for the magnetic drive** EasyMax
Material	Alloy C-22
Size	Ø 6 mm x 125 mm
Quantity	1

30238894	**Driven shaft for the magnetic drive** OptiMax
Material	Alloy C-22
Size	Ø 6 mm x 100 mm
Quantity	1

30238892	**Closure screw** OptiMax
Material	Alloy C-22
Size	Inner Ø 6.4 mm x 14 mm
Quantity	1

30138112	**Inner magnet 20 Ncm without 30138089 grub screw** EasyMax
Material	Alloy C-22
Size	Ø 11.6 mm x 33.5 mm
Quantity	1

30092479	**O-ring for ST14 part, lower** EasyMax
Material	FFKM
Size	Ø 9.25 mm x 1.78 mm
Quantity	1

30092600	**O-ring for ST14 part, upper** EasyMax
Material	FFKM
Size	Ø 10.82 mm x 1.78 mm
Quantity	1

51191214	**O-ring** (inside housing) EasyMax
Material	FFKM
Size	Ø 23.4 mm x 3.53 mm
Quantity	1

30238897	**O-ring** OptiMax
Material	FFKM
Size	Ø 17.13 mm x 2.62 mm
Quantity	1

30138107	**Outer magnet 20 Ncm without 30238895 set screw M5 x 6** EasyMax
Material	Stainless steel
Size	Ø 28 mm x 40.5 mm
Quantity	1

30238898	**Inner magnet 50 Ncm without 30138089 grub screw** OptiMax
Material	Alloy C-22
Size	Ø 11.6 mm x 52 mm
Quantity	1

30238896	**Outer magnet 50 Ncm without 30238895 set screw M5 x 6** OptiMax
Material	Stainless steel
Size	Ø 28 mm x 60.5 mm
Quantity	1

30130576	**Screw D11-M3 for half-moon blades** EasyMax
Material	Alloy C-22
Size	Ø 11 mm x M3 thread
Quantity	1

30138089	**Grub screw M4 x 3** EasyMax and OptiMax
Material	Alloy C-22
Size	M4 x 3 mm
Quantity	1

30238893	**Screw D13.5-M5 for half-moon blades** OptiMax
Material	Alloy C-22
Size	Ø 13.5 mm x M5 thread
Quantity	1

30238895	**Set screw M5 x 6** EasyMax and OptiMax
Material	Stainless steel
Size	M5 x 6 mm
Quantity	1

51191388	**Thrust disk for driven shaft** EasyMax and OptiMax
Material	PTFE/carbon
Size	Ø 11.5 mm x 1.2 mm
Quantity	2 pcs in a set

51191343	**Friction bearing for driven shaft** EasyMax and OptiMax
Material	PTFE C25
Size	Ø 12 mm x 6 mm
Quantity	4 pcs in a set

Maintenance Set
For EasyMax Magnetic Drive

30113920	**Maintenance set** Thrust disc, friction bearings, distance sleeve
Material	PTFE C25, PTFE/carbon, Alloy C-22
Size	Ø 8 mm x 3 mm
Quantity	1

Optional Bearing for Driven Shaft
For EasyMax and OptiMax Magnetic Drives

51191344	**Ball bearing for driven shaft**
Material	Stainless steel
Size	Ø 12 mm x 3 mm
Quantity	4 pcs in a set

51191390	**Spacer sleeve for driven shaft**
Material	Alloy C-22
Size	Ø 8 mm x 3 mm
Quantity	4 pcs in a set

These items replace the standard 51191343 friction bearing for driven shaft.

Bar Type Baffles and Drain Union
OptiMax 500 mL and 1000 mL Reactors

51162638	Bar type baffle for 500 mL reactor
Material	Alloy C-22
Size	Ø 10 mm, width 15 mm, length 237 mm
Quantity	1

Adapter needed: 51104154 PTFE adapter ST19/26, eccentric

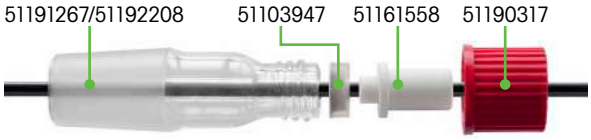
51162637	Bar type baffle for 1000 mL reactor
Material	Alloy C-22
Size	Ø 10 mm, width 15 mm, length 249 mm
Quantity	1

Adapter needed: 51104154 PTFE adapter ST19/26, eccentric

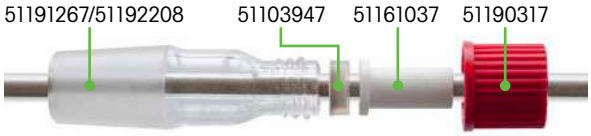
51162685	Drain union, bended
Material	Borosilicate glass
Size	Inner Ø 9 mm, spherical joint S19
Quantity	1

Clamp needed: 51192169 Pinch clamp S19, stainless steel

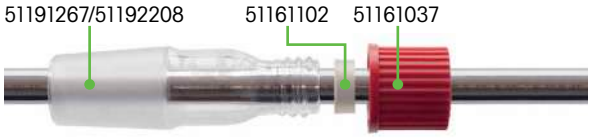
Adapters, Sealing Rings, and Screw Caps
Setup Examples



For tubings (Ø 1.6 mm and 3.2 mm) and sensors (Ø 3.2 mm)



For Ø 6 mm and 6.35 mm sensors

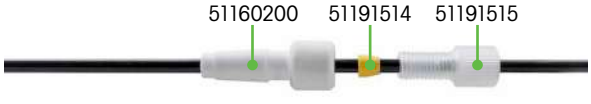


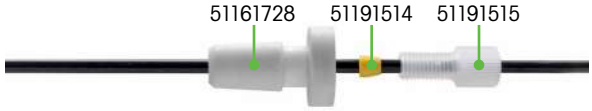
For Ø 8 mm sensors

Note: PTFE-coated layer of all O-rings facing the glass

Adapters, Ferrules, and Nuts
Setup Examples

Use the ferrules and nuts to hold tubings (Ø 1.6 mm and 3.2 mm) and sensors (Ø 3.2 mm) in place.





Adapters, Sealing Rings, Ferrules, and Nuts

51191267	Glass adapter ST14/23-GL14
Material	Borosilicate glass
Size	Height 54 mm
Quantity	1

51192208	Glass adapter ST19/26-GL14
Material	Borosilicate glass
Size	Height 50 mm
Quantity	1

51190317	Screw cap GL14, with aperture
Material	PBT
Temperature	Max. 200 °C
Aperture	Ø 9.5 mm
Quantity	1

51161102	Silicone rubber sealing ring with vulcanized-on PTFE washers For GL14 caps and sensors with outer Ø 8 mm
Material	Silicone rubber VQM, PTFE-coated
Size	Ø 12 mm x 5 mm, aperture 8 mm
Quantity	1

51161037	Adapter for GL14, 6 mm – 6.35 mm sensors
Material	PTFE
Size	Inner Ø 6.4 mm, outer Ø 12 mm,
Quantity	1

Sealing ring needed 51161102

51103947	Sealing ring for screw cap GL14 PTFE/silicone For screw cap GL14
Material	Silicone rubber VQM, PTFE-coated
Size	Ø 12 mm, aperture 6 mm
Quantity	1

Can also be used for Ø 1/4" 6.35 mm inserts

51161558	Adapter GL14-UNF with 1 UNF 1/4-28 port For screw cap GL14
Material	PTFE GF25
Size	Inner Ø 3.4 mm, outer Ø 9 mm
Quantity	1

Inner Ø 3.2 mm – Temperature sensors, dosing tubings

51160200	**Adapter ST7/16 with 1 UNF 1/4-28 port**
Material	PTFE GF25
Port size	ST7/16
Size	Inner Ø 3.2 mm, UNF 1/4″
Quantity	1

51161728	**Adapter ST10/19 with 1 UNF 1/4-28 port**
Material	PTFE GF25
Port size	ST10/19
Size	Inner Ø 3.2 mm, UNF 1/4″
Quantity	1

30125685	**Adapter ST14/23 with 1 UNF 1/4-28 port**
Material	PTFE
Port size	ST14/23
Size	Inner Ø 3.2 mm, UNF 1/4″
Quantity	1

30125686	**Adapter ST19/26 with 1 UNF 1/4-28 port**
Material	PTFE
Port size	ST19/26
Size	Inner Ø 3.2 mm, UNF 1/4″
Quantity	1

Ferrules and nuts – Tubings and sensors

51191202	**Ferrule for tubing of outer Ø 1.6 mm**
Material	ETFE
Size	Inner Ø max. 1.6 mm
Quantity	4 pcs in a set

51191203	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 1.6 mm
Quantity	4 pcs in a set

51191514	**Ferrule for tubing and sensors of outer Ø 3.2 mm**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191515	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

Inner Ø 4 mm – Purge gas tubing

51191428	**Hose connection for purge gas tubing with UNF 1/4-28 thread**
Material	PP
Size	For tube inner Ø 4 mm
Quantity	1

Inner Ø 6 mm – 1/4" 6.35 mm – ReactIR probe, sensors, EasyMax calibration heater

51162720	**PTFE adapter ST14/23, eccentric** Including 51162716 sealing ring
Material	PTFE GF25
Port size	ST14/23
Size	Inner Ø 6 mm
Quantity	1

Note: Can also be used for Ø 1/4" 6.35 mm inserts

51162716	**Sealing ring for 51162720 and 51162713 PTFE adapters**
Material	PTFE
Size	Inner Ø 6 mm
Quantity	1

Note: Can also be used for Ø 1/4" 6.35 mm inserts

51162713	**PTFE adapter ST19/26, eccentric** Including 51162716 sealing ring
Material	PTFE GF25
Port size	ST19/26
Size	Inner Ø 6 mm
Quantity	1

Note: Can also be used for Ø 1/4" 6.35 mm inserts

30245645	**Compression fitting 1/2" NPT, 6 mm bore**
Material	PTFE, PEEK
Port size	1/2" NPT
Size	Inner Ø 6 mm
Quantity	1

30245648	**Compression fitting 1/2" NPT, 1/4" bore**
Material	PTFE, PEEK
Port size	1/2" NPT
Size	Inner Ø 1/4" 6.35 mm
Quantity	1

30245684	**Compression fitting 3/4" NPT, 1/4" bore**
Material	PTFE, PEEK
Port size	3/4" NPT
Size	Inner Ø 1/4" 6.35 mm
Quantity	1

Inner Ø 8 mm – OptiMax calibration heater

30064131	**PTFE adapter ST19/26, eccentric** For calibration heater, including 30064134 sealing ring
Material	PTFE GF25
Port size	ST19/26
Size	Inner Ø 8 mm
Quantity	1

30064134	**Sealing ring for 30064131 PTFE adapter**
Material	PTFE
Size	Inner Ø 8 mm
Quantity	1

30245680	**Compression fitting 3/4" NPT, 8 mm bore**
Material	PTFE, PEEK
Port size	3/4" NPT
Size	Inner Ø 8 mm
Quantity	1

Inner Ø 3/8" 9.525 mm – ReactIR, ReactRaman, ParticleTrack, EasyViewer, EasySampler probes

51161817	**PTFE adapter for ReactIR probe, ST14/23-9.5 mm,** without 51192091 O-ring
Material	PTFE
Port size	ST14/23
Size	Ø 3/8" 9.525 mm
Quantity	1

51192091	**O-ring for 51161817 ReactIR probe adapter**
Material	FFKM
Size	Ø 9.19 mm x 2.62 mm, AS no. 110
Quantity	1

30245649	**Compression fitting 1/2" NPT, 3/8" bore**
Material	PTFE, PEEK
Port size	1/2" NPT
Size	Inner Ø 3/8" 9.525 mm
Quantity	1

30245700	**Compression fitting 3/4" NPT, 3/8" bore**
Material	PTFE, PEEK
Port size	3/4" NPT
Size	Inner Ø 3/8" 9.525 mm
Quantity	1

14104089	**PTFE adapter 14/20, 3/8" bore**
Material	PTFE
Port size	ST14/20
Size	Inner Ø 3/8" 9.525 mm
Quantity	1

14104090	**PTFE adapter 19/22, 3/8" bore**
Material	PTFE
Port size	ST19/22
Size	Inner Ø 3/8" 9.525 mm
Quantity	1

14202569	PTFE adapter 24/40, 3/8″ bore
Material	PTFE
Port size	ST24/40
Size	Inner Ø 3/8″ 9.525 mm
Quantity	1

14104091	PTFE adapter 29/26, 3/8″ bore
Material	PTFE
Port size	ST29/26
Size	Inner Ø 3/8″ 9.525 mm
Quantity	1

Inner Ø 10 mm – Baffle

51104154	PTFE adapter ST19/26, eccentric For baffle, including sealing ring
Material	PTFE GF25
Port size	ST19/26
Size	Inner Ø 10 mm
Quantity	1

103547	Sealing ring for 51104154 PTFE adapter
Material	PTFE cord
Size	Inner Ø 10 mm
Quantity	5 pcs in a set

Inner Ø 12 mm – pH probe, turbidity probe

51162717	PTFE adapter ST19/26, eccentric For pH and turbidity probe, including sealing ring
Material	PTFE GF25
Port size	ST19/26
Size	Inner Ø 12 mm
Quantity	1

51162765	Sealing ring for 51162717 PTFE adapter
Material	PTFE
Size	Inner Ø 12 mm
Quantity	1

30245646	Compression fitting 1/2″ NPT, 12 mm bore
Material	PTFE, PEEK
Port size	1/2″ NPT
Size	Inner Ø 12 mm
Quantity	1

30245681	Compression fitting 3/4″ NPT, 12 mm bore
Material	PTFE, PEEK
Port size	3/4″ NPT
Size	Inner Ø 12 mm
Quantity	1

30245702	Compression fitting 1″ NPT, 12 mm bore
Material	PTFE, PEEK
Port size	1″ NPT
Size	Inner Ø 12 mm
Quantity	1

Inner Ø 1/2" 12.7 mm – ReactRaman probe

30476003	**PTFE adapter 19/26, 1/2″ 12.7 mm bore**
Material	PTFE
Port size	ST19/26
Size	Inner Ø 1/2" 12.7 mm
Quantity	1

30476004	**PTFE adapter 24/40, 1/2″ 12.7 mm bore**
Port size	ST24/40
Size	Inner Ø 1/2" 12.7 mm
Quantity	1

30476005	**PTFE adapter 29/32, 1/2″ 12.7 mm bore**
Port size	ST29/32
Size	Inner Ø 1/2" 12.7 mm
Quantity	1

30476006	**Compression fitting 1/2″ NPT, 1/2″ 12.7 mm bore**
Material	PTFE, PEEK
Port size	1/2″ NPT
Size	Inner Ø 1/2" 12.7 mm
Quantity	1

30476007	**Compression fitting 3/4″ NPT, 1/2″ 12.7 mm bore**
Material	PTFE, PEEK
Port size	3/4″ NPT
Size	Inner Ø 1/2" 12.7 mm
Quantity	1

Inner Ø 14 mm – ParticleTrack G400 probe

51161821	**PTFE adapter ST19/26-14 mm** For ParticleTrack probe, without 51191857 O-ring
Material	PTFE
Port size	ST19/26
Size	Ø 14 mm
Quantity	1

51162880	**PTFE adapter ST19/26** For G400, including sealing ring
Material	PTFE GF25
Port size	ST19/26
Size	Inner Ø 14 mm
Quantity	1

30245647	**Compression fitting 1/2″ NPT, 14 mm bore**
Material	PTFE, PEEK
Port size	1/2″ NPT
Size	Inner Ø 14 mm
Quantity	1

51191857	**O-ring for 51161821 PTFE adapter**
Material	FFKM
Size	Ø 13.95 mm x 2.62 mm, AS no. 113
Quantity	1

51162879	**Sealing ring for 51162880 PTFE adapter**
Material	PTFE
Size	Inner Ø 14 mm
Quantity	1

30245682	**Compression fitting 3/4″ NPT, 14 mm bore**
Material	PTFE, PEEK
Port size	3/4″ NPT
Size	Inner Ø 14 mm
Quantity	1

30245703	**Compression fitting 1″ NPT, 14 mm bore**
Material	PTFE, PEEK
Port size	1″ NPT
Size	Inner Ø 14 mm
Quantity	1

Inner Ø 5/8" 15.875 mm – ReactIR probe

30245701	**Compression fitting 3/4" NPT, 5/8" bore**
Material	PTFE, PEEK
Port size	3/4" NPT
Size	Inner Ø 5/8" 15.875 mm
Quantity	1

30245705	**Compression fitting 1" NPT, 5/8" bore**
Material	PTFE, PEEK
Port size	1" NPT
Size	Inner Ø 5/8" 15.875 mm
Quantity	1

Inner Ø 19 mm – pH, turbidity, ParticleView V19, EasyViewer probes

30131166	**PTFE adapter ST24/29, eccentric** For ParticleView probe, including O-ring
Material	PTFE GF25
Port size	ST24/29
Size	Inner Ø 19 mm
Quantity	1

51191859	**O-ring for 30131166 PTFE adapter**
Material	FFKM
Size	Ø 18.72 mm x 2.62 mm, AS no. 110
Quantity	1

51160970	**PTFE adapter ST29/32, eccentric** For ParticleView probe, including sealing ring
Material	PTFE GF25
Port size	ST29/32
Size	Inner Ø 19 mm
Quantity	1

51160973	**Sealing ring for 51160970 PTFE adapter**
Material	PTFE cord
Size	Inner Ø 19 mm
Quantity	5 pcs in a set

30245683	**Compression fitting 3/4" NPT, 19 mm bore**
Material	PTFE
Port size	3/4" NPT
Size	Inner Ø 19 mm
Quantity	1

30245704	**Compression fitting 1" NPT, 19 mm bore**
Material	PTFE
Port size	1" NPT
Size	Inner Ø 19 mm
Quantity	1

30208795	**PTFE adapter set 19 mm for ParticleView** Including 30131166 PTFE adapter with 51191859 O-ring and 30215733 customized ST24/29 fitting x 3/4" NPT
Material	PTFE, PTFE GF25
Port sizes	3/4" NPT, ST24/29
Size	Inner Ø 19 mm
Quantity	1 of each in a set

51191859	**O-ring for 30131166 PTFE adapter**
Material	FFKM
Size	Ø 18.72 mm x 2.62 mm, AS no. 110
Quantity	1

PTFE Lid Adapter Set

For EasyMax 102 and 402 PTFE Covers

30138934

Adapter set for PTFE covers

The adapter set contains adapters that can be used with the EasyMax PTFE covers (30111620, 30090542) for various applications like ReactIR, ParticleTrack, EasyViewer, pH, dosing and temperature measurement.

Adapter set consisting of

Order Number	Product Description	Quantity	Page
30245645	Compression fitting 1/2″ NPT, 6 mm bore	1	98
30245648	Compression fitting 1/2″ NPT, 1/4″ 6.35 mm bore	1	98
30245649	Compression fitting 1/2″ NPT, 3/8″ 9.525 mm bore	1	99
30245647	Compression fitting 1/2″ NPT, 14 mm bore	1	101
	Sealing plug for Ø 6 mm compression fitting	1	
	Sealing plug for Ø 1/4″ compression fitting	1	
	Sealing plug for Ø 3/8″ compression fitting	1	
	Sealing plug for Ø 14 mm compression fitting	1	

Standard Taper Joint Adapters
For PTFE Covers and Reducing Adapters

3/8″ NPT port

	Joint adapter for stirrer, EasyMax ST14/35 with 3/8″ NPT, part of PTFE cover set
Material	PTFE
Size	Inner Ø ST14/35, height 62 mm
Quantity	1

1/2″ NPT port

30245706	**Taper joint adapter 1/2″ NPT ST14/-**
Material	PTFE
Size	Inner Ø ST14/-, height 45 mm
Quantity	1

30245707	**Taper joint adapter 1/2″ NPT ST19/-**
Material	PTFE
Size	Inner Ø ST19/-, height 50 mm
Quantity	1

30245708	**Taper joint adapter 1/2″ NPT ST29/-**
Material	PTFE
Size	Inner Ø ST29/-, height 68 mm
Quantity	1

3/4″ NPT port

30245672	**Taper joint adapter 3/4″ NPT ST19/-**
Material	PTFE
Size	Inner Ø ST19/-, height 55 mm
Quantity	1

	Joint adapter for stirrer, OptiMax ST24/32 x 3/4″ NPT, part of PTFE cover set
Material	PTFE
Size	Inner Ø ST24/32, height 61 mm
Quantity	1

30215733	**Taper joint adapter 3/4" NPT ST24/-**
Material	PTFE
Size	Inner Ø ST24/-, height 55 mm
Quantity	1

30245674	**Taper joint adapter 3/4" NPT ST29/-**
Material	PTFE
Size	Inner Ø ST29/-, height 68 mm
Quantity	1

1" NPT port

30245709	**Taper joint adapter 1" NPT ST29/-**
Material	PTFE
Size	Inner Ø ST29/-, height 60 mm
Quantity	1

Reducing Adapters
Glass and PTFE Reactor Covers

51160825	**Reducing adapter ST10/19 to ST7/16**
Material	PTFE GF25
Port size	ST10/19
Size	Inner Ø ST7/16
Quantity	1

51160827	**Reducing adapter ST14/23 to ST10/19**
Material	PTFE GF25
Port size	ST14/23
Size	Inner Ø ST10/19
Quantity	1

51161509	**Reducing adapter ST19/26 to ST14/23**
Material	PTFE GF25
Port size	ST19/26
Size	Inner Ø ST14/23
Quantity	1

3-Way Dosing Adapter Set

51161834

3-way dosing adapter set

This adapter set allows the connection of three dosing channels to the reactor.

3-way dosing adapter set consisting of

Order Number	Product Description	Quantity	Page
51162615	3-way glass adapter ST14/23-GL14	1	107
51161558	Adapter GL14-UNF with 1 UNF 1/4-28 port	2	107
51190317	Screw cap GL14, with aperture	3	107
51103947	Sealing ring for screw cap GL14 PTFE/silicone, aperture 6 mm	3	107
51190318	Screw cap GL14, without aperture, PBT	2	107
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	107
51191515	Nut for UNF 1/4-28 threads, outer Ø max. 3.2 mm , 4 pcs in a set	1	107
51191202	Ferrule for tubing and sensors of outer Ø 1.6 mm, 4 pcs in a set	1	107
51191203	Nut for UNF 1/4-28 threads, outer Ø max. 1.6 mm, 4 pcs in a set	1	107

Note: Large image may not show all parts in the set.

51162615	**3-way glass adapter, ST14/23-GL14**
Material	Borosilicate glass
Size	Height 80 mm
Quantity	1

51161558	**Adapter GL14-UNF with 1 UNF 1/4-28 port** for screw cap GL14
Material	PTFE GF25
Size	Inner Ø 3.4 mm, 20 mm
Quantity	1

51190317	**Screw cap GL14, with aperture**
Material	PBT
Temperature	Max. 200 °C
Aperture	Ø 9.5 mm
Quantity	1

51103947	**Sealing ring for screw cap GL14 PTFE/silicone** For screw cap GL14
Material	Silicone rubber VQM, PTFE-coated
Size	Ø 12 mm, aperture 6 mm
Quantity	1

Can also be used for Ø 1/4" 6.35 mm inserts

51190318	**Screw cap GL14, without aperture, PBT** with PTFE sealing
Material	PBT
Temperature	Max. 200 °C
Quantity	1

51191514	**Ferrule for tubing and sensors of outer Ø 3.2 mm**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191515	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191202	**Ferrule for tubing and sensors of outer Ø 1.6 mm**
Material	ETFE
Size	Inner Ø max. 1.6 mm
Quantity	4 pcs in a set

51191203	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 1.6 mm
Quantity	4 pcs in a set

ST14 Adapter Set for Probes

51161852
ST14 adapter set for probes, Ø 1.6 mm to 8 mm
This adapter allows the connection of 1/4" ReactIR probes, 6 mm pH probes, 1.6 mm and 3.2 mm tubes to the reactor.

ST14 adapter set for probes consisting of

Order Number	Product Description	Quantity	Page
51191267	Glass adapter ST14/23-GL14	1	109
51190317	Screw cap GL14, with aperture	1	109
51161558	Adapter GL14-UNF with 1 UNF 1/4-28 port	1	109
51103947	Sealing ring for screw cap GL14 PTFE/silicone, aperture 6 mm	1	109
51161037	Adapter for GL14, 6 mm – 6.35 mm sensors	1	109
51161102	Silicone rubber sealing, outer Ø 12 mm, aperture 8 mm	1	109
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	109
51191515	Nut for UNF 1/4-28 threads, outer Ø max. 3.2 mm , 4 pcs in a set	1	109
51191202	Ferrule for tubing and sensors of outer Ø 1.6 mm, 4 pcs in a set	1	109
51191203	Nut for UNF 1/4-28 threads, outer Ø max. 1.6 mm, 4 pcs in a set	1	109

51191267	**Glass adapter ST14/23-GL14**
Material	Borosilicate glass
Size	Height 54 mm
Quantity	1

51190317	**Screw cap GL14, with aperture**
Material	PBT
Temperature	Max. 200 °C
Aperture	Ø 9.5 mm
Quantity	1

51161037	**Adapter for GL14, 6 mm – 6.35 mm sensors**
Material	PTFE
Size	Inner Ø 6.4 mm, outer Ø 12 mm,
Quantity	1

Sealing ring needed 51161102

51191514	**Ferrule for tubing and sensors of outer Ø 3.2 mm**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191202	**Ferrule for tubing and sensors of outer Ø 1.6 mm**
Material	ETFE
Size	Inner Ø max. 1.6 mm
Quantity	4 pcs in a set

51161558	**Adapter GL14-UNF with 1 UNF 1/4-28 port** for screw cap GL14
Material	PTFE GF25
Size	Inner Ø 3.4 mm, 20 mm
Quantity	1

51103947	**Sealing ring for screw cap GL14 PTFE/silicone** For screw cap GL14
Material	Silicone rubber VQM, PTFE-coated
Size	Ø 12 mm, aperture 6 mm
Quantity	1

Can also be used for Ø 1/4" 6.35 mm inserts

51161102	**Silicone rubber sealing ring with vulcanized-on PTFE washers** For GL14 caps and sensors with outer Ø 8 mm
Material	Silicone rubber VQM, PTFE-coated
Size	Ø 12 mm x 5 mm, aperture 8 mm
Quantity	1

51191515	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191203	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 1.6 mm
Quantity	4 pcs in a set

Caps, Stoppers, Blanking Nuts, and Claps
For Reactor Covers

51190318	**Screw cap GL14, without aperture, PBT** With PTFE sealing
Material	PBT
Temperature	Max. 200 °C
Quantity	1

51191170	**Silicone rubber seal (Septa) GL14** For screw cap GL14
Material	Silicone rubber VQM
Size	Ø 12 mm, thickness 2 mm
Quantity	1

51190877	**Glass stopper ST7/16**
Material	Borosilicate glass
Quantity	1

51191167	**Glass stopper ST10/19**
Material	Borosilicate glass
Quantity	1

51190878	**Glass stopper ST14/23**
Material	Borosilicate glass
Quantity	1

71517	**Glass stopper ST19/26**
Material	Glass
Quantity	1

71518	**Glass stopper ST29/32**
Material	Borosilicate glass
Quantity	1

30245712	**Blanking nut for 1″ NPT port**
Material	PTFE
Port	1″ NPT
Quantity	1

30245711	**Blanking nut for 3/4″ NPT port**
Material	PTFE
Port	3/4″ NPT
Quantity	1

30245710	**Blanking nut for 1/2″ NPT port**
Material	PTFE
Port	1/2″ NPT
Quantity	1

51192169	**Pinch clamp S19, stainess steel** Drain union clamp
Material	Stainless steel
Quantity	1

51190879	**Clamp ST7**
Material	Stainless steel
Quantity	1

51191504	**"Keck" clamp ST10**
Material	POM
Quantity	1

51191505	**"Keck" clamp ST14**
Material	POM
Quantity	1

51191429	**"Keck" clamp ST19**
Material	POM
Quantity	1

51192167	**"Keck" clamp ST24**
Material	POM
Quantity	1

51192168	**"Keck" clamp ST29**
Material	POM
Quantity	1

Sensors, Electrodes, and Calibration Heaters

51161730	Pt100 temperature sensor, EasyMax
Material	Wetted parts: stainless steel, PTFE/FEP-coated
Temperature	Max. 200 °C
Size	Sensor Ø 3.2 mm, length 175 mm
Quantity	1

30111612	Pt100 temperature sensor, EasyMax
Material	Wetted parts: stainless steel, FEP-coated
Temperature	Max. 200 °C
Size	Sensor Ø 3.2 mm, length 250 mm
Quantity	1

Find the minimum immersion depth of sensors for accurate temperature measurement on Page 27

30099798	Pt100 temperature sensor, EasyMax
Material	Wetted part: Glass
Size	Sensor Ø 6 mm, length 260 mm
Quantity	1

30090590	Pt100 temperature sensor, EasyMax
Material	Wetted part: Alloy C-22
Size	Sensor Ø 6.35 mm, length 260 mm
Quantity	1

51162827	Temperature sensor including chip, OptiMax
Material	Wetted part: Glass
Size	Sensor Ø 6 mm, length 300 mm
Quantity	1

51162839	Temperature sensor including chip, OptiMax
Material	Wetted part: Alloy C-22
Size	Sensor Ø 1/4″ 6.35 mm, length 300 mm
Quantity	1

30090579	**EasyMax calibration heater**
Material	Wetted part: Alloy C-22
Size	Sensor Ø 6.35 mm, length 260 mm
Quantity	1

30050155	**OptiMax calibration heater**
Material	Wetted part: Alloy C-22
Size	Sensor Ø 8 mm, length 300 mm
Quantity	1

30303786	**OptiMax calibration heater**
Material	Wetted part: Glass
Size	Sensor Ø 8 mm, length 300 mm
Quantity	1

51191332	**InLab 1022 pH electrode** for 50 mL two-piece reactor
Temperature	0 °C to 80 °C
Size	Sensor Ø 6 mm, length 140 mm, electrode head S7
Quantity	1

Note: 30281915, 30281916 or 30281917 BNC cables are needed to connect pH electrode to SevenExcellence pH Meter

51343161	**InLab Semi-Micro-L pH electrode** for 50 mL, 100 mL and 400 mL reactors
Temperature	0 °C to 100 °C
Size	Sensor Ø 6 mm, length 230 mm, electrode head S7
Quantity	1

Note: 30281915, 30281916 or 30281917 BNC cables are needed to connect pH electrode to SevenExcellence pH Meter

52005375	**pH sensor OptiMax, including chip** without cable
Material	Lead-free glass (shaft), high alkaline glass (membrane)
Size	Sensor Ø 12 mm, length 325 mm
Quantity	1

Note: 51162888 cable needed to connect to pH sensor

30281915	**BNC cable, 1.2 m** to connect pH electrode with S7 head to SevenExcellence pH Meter
Size	Length 1.2 m
Quantity	1

30281916	**BNC cable, 3.0 m**
Size	Length 3.0 m
Quantity	1

30281917	**BNC cable, 5.0 m**
Size	Length 5.0 m
Quantity	1

51162888	**Cable for pH sensor**
Size	Length 1 m
Quantity	1

100 mL Pressure Reactor Sets
EM20-100-HC and EM60-100-HC

30030945
EM20-100-HC pressure reactor set

The pressure reactor is for applications which need pressures from 0 bar to 20 bar abs.

30030946
EM60-100-HC pressure reactor set

The pressure reactor is for applications which need pressures from 0 bar to 60 bar abs.

Both reactors have a minimum working volume of 30 mL, maximum working volume of 100 mL and a nominal working volume of 150 mL. Temperature range is –20 °C to 200 °C. All parts in contact with the reaction mixture are made of Alloy C-22 resp. C-276 (rupture disc, IR-port) and allow working with aggressive media. Swagelok® parts, venting valve and pressure gauge are made of stainless steel. These parts can easily be replaced if required.

EasyMax 100 mL pressure reactor sets consisting of

Order Number	EM20-100-HC pressure reactor set	EM60-100-HC pressure reactor set	Quantity	Page
	Pressure reactor complete		1	114
51161830	EasyMax stirrer motor without coupling		1	115
51161875	Tr sensor for pressure reactor		1	115
30030952	O-ring for 100 mL reactor, Ø 50.47 mm x 2.62 mm		1	115
30030950	Gassing stirrer, Ø 30 mm, Alloy C-22		1	115
30030947	Rupture disc, 25 bar, Alloy C-276		1	115
30219090	Analog pressure gauge, 40 bar		1	115
30030948		Rupture disc, 65 bar, Alloy C-276	1	115
30219091		Analog pressure gauge, 100 bar	1	115

Note: Large image may not show all parts in the set.

51161830	**EasyMax stirrer motor without coupling**
Material	Stainless steel
Speed	50 rpm to 1000 rpm
Quantity	1

51161875	**Tr sensor for pressure reactor**
Material	Stainless steel – no direct contact with the reaction media
Size	Outer Ø 2.2 mm
Quantity	1

30030952	**O-ring for 100 mL reactor**
Material	FFKM
Size	Ø 50.47 mm x 2.62 mm
Quantity	1

30030950	**Gassing stirrer** with 4 grooves at gas entrainment impeller
Material	Alloy C-22
Size	Ø 30 mm
Quantity	1

30219090	**Analog pressure gauge, 40 bar**
Material	Stainless steel
Pressure Range	0 bar to 40 bar
Quantity	1

30219091	**Analog pressure gauge, 100 bar**
Material	Stainless steel
Pressure Range	0 bar to 100 bar
Quantity	1

30030947	**Rupture disc, 25 bar** standard for the EM20-100-HC reactor
Material	Alloy C-276
Pressure Range	0 bar to 25 bar abs. ± 10%
Quantity	1

30030948	**Rupture disc, 65 bar** standard for the EM60-100-HC reactor
Material	Alloy C-276
Pressure Range	0 bar to 65 bar abs. ± 10%
Quantity	1

Note: All the external connectors and fittings are Swagelok® compatible.

100 mL Pressure Reactor
Optional Accessories

14474703	**HP reactor fiber probe adapter kit** for 1/4″ 6.35 mm fiber probe, includes extension tube 14474701 and adapter 14474406
Material	Alloy C-22
Pressure Range	0 bar to 60 bar abs. ± 10%
Quantity	1

14474704	**HP reactor fiber probe adapter kit** for 3/8″ 9.525 mm fiber probe, includes extension tube 14474701 and adapter 14474404
Material	Alloy C-22
Pressure Range	0 bar to 60 bar abs. ± 10%
Quantity	1

30132810	**Baffle for the 100 mL pressure reactor**
Material	Alloy C-22
Size	Outer Ø 45 mm, height 70 mm
Quantity	1

30030950	**Gassing stirrer** with 4 grooves at gas entrainment impeller
Material	Alloy C-22
Size	Ø 30 mm
Quantity	1

14474700	**HP reactor port extension tube** allows connection of a 1/4″ or 3/8″ high pressure adapter
Material	Stainless steel
Pressure Range	0 bar to 60 bar abs. ± 10%
Quantity	1

14474701	**HP reactor port extension tube** allows connection of a 1/4″ or 3/8″ high pressure adapter
Material	Alloy C-22
Pressure Range	0 bar to 60 bar abs. ± 10%
Quantity	1

14474406	**HP reactor fiber probe adapter** for 1/4″ 6.35 mm fiber probe
Material	Alloy C-22
Pressure Range	0 bar to 60 bar abs. ± 10%
Quantity	1

14474404	**HP reactor fiber probe adapter** for 3/8″ 9.525 mm fiber probe
Material	Alloy C-22
Pressure Range	0 bar to 60 bar abs. ± 10%
Quantity	1

30030951	**Pitched-blade stirrer** downwards, four impellers
Material	Alloy C-22
Size	Ø 30 mm
Quantity	1

51192161	**Rupture disc, 15 bar**
Material	Alloy C-276
Pressure Range	0 bar to 15 bar abs. ± 10%
Quantity	1

30030949	**Rupture disc, 110 bar**
Material	Alloy C-276
Pressure Range	0 bar to 110 bar abs. ± 10%
Quantity	1

30219090	**Analog pressure gauge, 40 bar**
Material	Stainless steel
Pressure Range	0 bar to 40 bar
Quantity	1

30219091	**Analog pressure gauge, 100 bar**
Material	Stainless steel
Pressure Range	0 bar to 100 bar
Quantity	1

51191349	**Digital pressure gauge LEO3, 300 bar**
Material	Alloy C-276
Pressure Range	0 bar to 300 bar abs. ± 10%
Resolution	100 mbar
Quantity	1

Note: To connect the digital manometer to the pressure reactor, the Swagelok® spare parts set 51191707 is required.

30215735	**Dip tube for Tr sensor**
Material	Alloy C-22
Size	Inner Ø 4 mm, height 130 mm
Quantity	1

30138105	**Dip tube for gas, open tip**
Material	Alloy C-22
Size	Outer Ø 6 mm, inner Ø 2 mm, height 75 mm
Quantity	1

30838235	**Digital pressure gauge LEO3 AT 30 bar set**
Material	Alloy C-276
Pressure Range	0 bar to 30 bar rel. or abs. ± 10%
Resolution	10 mbar
Quantity	1

Note: To connect the digital manometer to the pressure reactor, the Swagelok® adapters are included in the set.

30838236	**Digital pressure gauge LEO3 AT 100 bar set**
Material	Alloy C-276
Pressure Range	0 bar to 100 bar abs. ± 10%
Resolution	100 mbar
Quantity	1

Note: To connect the digital manometer to the pressure reactor, the Swagelok® adapters are included in the set.

Note: All the external connectors and fittings are Swagelok® compatible.

51161310	**Analog cable to connect digital manometer to the UCB**
Position	"In" inputs of the Universal Control Box, UCB
Size	Length 3 m
Quantity	1

51161586	**Analog cable to connect digital manometer to the UCB**
Position	"C In" inputs of the Universal Control Box, UCB
Size	Length 3 m
Quantity	1

30254779	**SmartConnect LEO3/EV-120 cable** for pressure measurement, see Page 111 for suitable manometers
Size	Length 2 m
Quantity	1

30113921	**Driven shaft for the pressure magnetic drive** EasyMax
Material	Alloy C-22
Size	Ø 8 mm x 125.5 mm
Quantity	1

51161410

Toolbox

Toolbox for the EasyMax pressure reactors. It contains a 12 mm hexagonal socket wrench and replacement parts.

Toolbox consisting of

Order Number	Product Description	Quantity
	Toolbox, including a 12 mm hexagonal socket wrench	1
51191343	Friction bearing, PTFE C25, set of 4 pcs	1
51191344	Ball bearing, stainless steel, set of 4 pcs	1
51191347	Replacement cone 1/8" for needle valve, Alloy C-22, set of 2 pcs	1
51191388	Thrust disk, PTFE C25, set of 2 pcs	1
51191389	Grub screw M4 x 4 for stirrer, Alloy C-22, set of 2 pcs	1
51191390	Spacer sleeve for driven shaft, Alloy C-22, Ø 8/6 mm x 3 mm, set of 4 pcs	1
30030952	O-ring, FFKM, Ø 50.47 mm x 2.62 mm	1
	Front ferrule 2 mm, Swagelok®, stainless steel, set of 4 pcs	1
	Rear ferrule 2 mm, Swagelok®, stainless steel, set of 4 pcs	1

Note: Image may not show all parts in the set.

ECB™ – Easy Control Box
Sensors and Controlled Dosing

30212440
ECB
Adds capabilities for additional sensors (pH, pressure, turbidity, massflow, etc.) and controlled dosing to EasyMax, OptiMax, and RX-10. Usage either through local touchscreen or iControl PC software.

ECB set consisting of

Order Number	Product Description	Quantity	Page
	ECB main unit	1	121
51191988	CAN cable, 100 cm	1	121
30281496	Lab bar holder	1	121

	ECB main unit
Required main reactor device to operate the ECB	EasyMax, OptiMax or RX-10 through local touchscreen or iControl PC software
Size	210 mm x 152 mm x 297 mm (w, d, h)
Weight	3.4 kg
Quantity	1

30281496	**Lab bar holder**
Material	Aluminium, stainless steel
Size	134.75 mm x 35.5 mm x 30 mm (l, w, h)
Quantity	1

51191988	**CAN cable, 100 cm**
Size	Length 100 cm
Quantity	1

Optional Accessories

30090591	**Power supply for CAN bus devices** Required if additional CAN devices are connected
Quantity	1

30264936	**CAN cable, 3 m**
Size	Length 3 m
Quantity	1

pH Measurement
EasyMax 102 and 402

30034472	**SevenExcellence pH/mV module** For analog sensors only (no ISM)
Quantity	1

51191332	**InLab 1022 pH electrode** for 50 mL two-piece reactor
Temperature	0 °C to 80 °C
Size	Sensor Ø 6 mm, length 140 mm, electrode head S7
Quantity	1

Note: 30281915, 30281916 or 30281917 BNC cables are needed to connect pH electrode to SevenExcellence pH Meter

51343161	**InLab Semi-Micro-L pH electrode** For 50 mL, 100 mL and 400 mL reactors
Temperature	0 °C to 100 °C
Size	Sensor Ø 6 mm, length 230 mm, electrode head S7
Quantity	1

Note: 30281915, 30281916 or 30281917 BNC cables are needed to connect pH electrode to SevenExcellence pH Meter

51161852	**ST14 adapter set for Ø 1.6 mm to 8 mm** To suit pH electrodes into reactor covers
Material	Glass, PBT, PTFE, silicone rubber
Quantity	1 of each in a set

Note: See Page 102 for details.

30281915	**BNC cable, 1.2 m** tTo connect pH electrode with S7 head to SevenExcellence pH Meter
Size	Length 1.2 m
Quantity	1

30281916	**BNC cable, 3.0 m**
Size	Length 3.0 m
Quantity	1

30281917	**BNC cable, 5.0 m**
Size	Length 5.0 m
Quantity	1

Measurements
With Additional Sensors

Temperature, Turbidity, Massflow, Pressure, …

All SmartConnect™ sensor cables are compatible with the SmartConnect sensor port at the RX-10 and ECB.

30267163	**SmartConnect Pt100 cable with loose ends** For Pt100 sensors
Size	Length 2 m
Quantity	1

30267165	**SmartConnect sensor cable with loose ends** For Pt100 sensors and any sensor with voltage (0 V – 10 V) or current (0 mA – 20 mA) output
Size	Length 2 m
Quantity	1

30254779	**SmartConnect LEO3/EV-120 cable** For pressure measurement, see Page 111 for suitable manometers
Size	Length 2 m
Quantity	1

Controlled Dosing
With the Easy Control Box (ECB)

30335504	**KNF SIMDOS 02 FT.18 RC-X** 30 µL/min to 20 mL/min, max pressure 6 bar
Material	Pump head: PTFE, Diaphragm: PTFE covered Valves: FFKM Kalrez, Filter: PEEK
Quantity	1

30335503	**KNF SIMDOS 10 FT.18 RC-X** 1 mL/min to 100 mL/min, max pressure 6 bar
Material	Pump head: PTFE, Diaphragm: PTFE covered Valves: FFKM Kalrez, Filter: PEEK
Quantity	1

51190994	**ProMinent pump BT4b 1601 TTT** Capacity at 16 bar, max. backpressure: rate 1.1 L/h; suction/discharge valves: PTFE with carbon
Material	Seals: PTFE, diaphragm: PTFE valve balls: ceramic
Quantity	1

51191739	**ProMinent pump BT4b 1601 SST** Capacity at 16 bar, max. backpressure: rate 1.1 L/h; suction/discharge valves: stainless steel 1.4404
Material	Seals: PTFE, diaphragm: PTFE valve balls: ceramic
Quantity	1

30254805	**SmartConnect KNF SIMDOS control cable**
Size	Length 2 m
Quantity	1

30254804	**SmartConnect ProMinent control cable**
Size	Length 2 m
Quantity	1

30254806	**SmartConnect Watson-Marlow control cable** To control Watson-Marlow 120U peristaltic pumps with 4 mA – 20 mA signal
Size	Length 2 m
Quantity	1

30254800	**SmartConnect KDS/Harvard TTL cable (15-pin)** To trigger start/stop of dosing on KDS/Harvard syringe pump with 15-pin TTL interface
Size	Length 2 m
Quantity	1

30406051	**SmartConnect Harvard TTL cable (9-pin)** To trigger start/stop of dosing on Harvard syringe pump with 9-pin TTL interface
Size	Length 2 m
Quantity	1

30254801	**SmartConnect KDS TTL cable (legacy, 9-pin)** To trigger start/stop of dosing on KDS syringe pump with 9-pin TTL interface
Size	Length 2 m
Quantity	1

30267164	**SmartConnect control cable with loose ends** To control any pump supporting one of the following signals: current (4 mA – 20 mA), voltage (0 V – 10 V), frequency (0 Hz – 3 Hz), PWM (24V)
Size	Length 2 m
Quantity	1

51190589	**RS-232 connection cable** To connect the ECB with METTLER TOLEDO balances with support for the MT-SICS protocol
Size	Length 1.8 m
Quantity	1

30576241	**USB to RS-232 converter cable for XPR/XSR balances** To connect the ECB with METTLER TOLEDO XPR/XSR balances
Size	Length 1.8 m
Quantity	1

Dosing Unit SP-50 Set

51161770
Dosing unit SP-50 set
This unit allows the dosing of one reagent in two reactors completely independent and in parallel via touchscreen or PC software.

Only available in the set.

Dosing unit SP-50 set consisting of

Order Number	Product Description	Quantity	Page
	Dosing Unit SP-50, only available in the set	1	127
51191988	CAN cable, 100 cm	1	127
51191306	PTFE dosing tube Ø 3.2 mm	3	127
51191304	PTFE dosing tube Ø 1.6 mm	2	127
51191514	Ferrule for tubing and sensors of outer Ø 3.2 mm, 4 pcs in a set	1	127
51191515	Nut for UNF 1/4-28 threads, outer Ø max. 3.2 mm , 4 pcs in a set	1	127
51191202	Ferrule for tubing and sensors of outer Ø 1.6 mm, 4 pcs in a set	1	127
51191203	Nut for UNF 1/4-28 threads, outer Ø max. 1.6 mm, 4 pcs in a set	1	127
51191204	Plug for UNF 1/4-28 threads, 4 pcs in a set	1	127
51191267	Glass adapter ST14/23-GL14	2	128
51192208	Glass adapter ST19/26-GL14	1	128
51190318	Screw cap GL14, without aperture, PBT	3	128
51191170	Silicone rubber seal (Septa) GL14	10	128
51190317	Screw cap GL14, with aperture	3	128
51103947	Sealing ring for screw cap GL14 PTFE/silicone, aperture 6 mm	6	128
	Bottle GL45 250 mL with cap	1	128
51191972	Distributor cap GL45 2 x GL14	1	128
51161558	Adapter GL14-UNF with 1 UNF 1/4-28 port	3	128
51191687	Assorted heat-shrink tubings, 8 pcs in a set	1	128

Note: Large image may not show all parts in the set. Syringe to be ordered separely.

	Dosing unit SP-50
Size	100 mm x 150 mm x 296 mm (w, d, h)
Quantity	1

Note: Only available in the set

51191988	**CAN cable, 100 cm**
Size	Length 100 cm
Quantity	1

51191306	**PTFE dosing tube Ø 3.2 mm**
Material	PTFE
Size	Ø 3.2 mm, length 2.5 m
Quantity	1

51191304	**PTFE dosing tube Ø 1.6 mm**
Material	PTFE
Size	Ø 1.6 mm, length 2.5 m
Quantity	1

51191514	**Ferrule for tubing and sensors of outer Ø 3.2 mm**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191515	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191202	**Ferrule for tubing and sensors of outer Ø 1.6 mm**
Material	ETFE
Size	Inner Ø max. 1.6 mm
Quantity	4 pcs in a set

51191203	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 1.6 mm
Quantity	4 pcs in a set

51191204	**Plug for UNF 1/4-28 threads**
Material	ETFE
Size	Outer Ø max. 1.6 mm
Quantity	4 pcs in a set

51191267	**Glass adapter ST14/23-GL14**
Material	Borosilicate glass
Size	Height 54 mm
Quantity	1

51192208	**Glass adapter ST19/26-GL14**
Material	Borosilicate glass
Size	Height 50 mm
Quantity	1

51190318	**Screw cap GL14, without aperture, PBT** With PTFE sealing
Material	PBT
Temperature	Max. 200 °C
Quantity	1

51191170	**Silicone rubber seal (Septa) GL14** For screw cap GL14
Material	Silicone rubber VQM
Size	Ø 12 mm, thickness 2 mm
Quantity	1

51190317	**Screw cap GL14, with aperture**
Material	PBT
Temperature	Max. 200 °C
Aperture	Ø 9.5 mm
Quantity	1

51103947	**Sealing ring for screw cap GL14 PTFE/silicone** For screw cap GL14
Material	Silicone rubber VQM, PTFE-coated
Size	Ø 12 mm, aperture 6 mm
Quantity	1

Can also be used for Ø 1/4" 6.35 mm inserts

51191591	**Bottle GL45 250 mL with cap**
Material	Glass, PP
Quantity	1

51191972	**Distributor cap GL45 2 x GL14**
Material	PP
Quantity	1

51161558	**Adapter GL14-UNF with 1 UNF 1/4-28 port** For screw cap GL14
Material	PTFE GF25
Size	Inner Ø 3.4 mm, 20 mm
Quantity	1

51191687	**Assorted heat-shrink tubings** 8 pcs in a set
Material	Polyolefin
Quantity	1

Dosing Unit SP-50 Syringes
1 mL, 10 mL, 25 mL, and 50 mL

51191793	**Syringe 1 mL**
Material	Glass, PTFE, metal
Volume	1 mL
Quantity	1

51191792	**Syringe 10 mL**
Material	Glass, PTFE, metal
Volume	10 mL
Quantity	1

51191794	**Syringe 25 mL**
Material	Glass, PTFE, metal
Volume	25 mL
Quantity	1

51191987	**Syringe 50 mL**
Material	Glass, PTFE, metal
Volume	50 mL
Quantity	1

Optional Accessories

30090591	**Power supply for CAN bus devices** required if additional CAN devices are connected
Quantity	1

30264936	**CAN cable, 3 m**
Size	Length 300 cm
Quantity	1

Universal Dosing Starter Set

30345210
Universal Dosing Starter Set, UDSS

The Universal Dosing Starter Set allows you to dose substances easily and well targeted to the reactor of an EasyMax, OptiMax or RX-10 controlled lab system.

It is, hereby, important to note that this Universal Dosing Starter Set is only to be used for 'non-pressure' linked applications.

Universal Dosing Starter Set consisting of

Order Number	Product Description	Quantity	Page
51191591	Bottle GL45 250 mL with cap	1	131
51191971	Bottle GL45 1000 mL with cap	1	131
51191972	Distributor cap GL 45 2 X GL14	1	131
51191267	Glass adapter ST14/23-GL14	1	131
51192208	Glass adapter ST19/26-GL14	1	131
51190318	Screw cap GL14, without aperture, PBT	3	131
51190317	Screw cap GL14, with aperture	3	131
51103947	Sealing ring for screw cap GL14 PTFE/silicone, aperture 6 mm	2	131
51161558	Adapter GL14-UNF with 1 UNF 1/4-28 port	2	131
51161037	Adapter GL14, 6 mm - 6.35 mm sensors	2	131
51160200	Adapter ST7/16 with 1 UNF 1/4-28 port	1	132
51191593	Adapter UNF 1/4-28 port, 1.5 mm	2	132
51161590	Adapter ProMinent pump UNF 1/4-28 port	2	132
51191514	Ferrule for tubing and sensors (4 pcs in a set)	1	132
51191515	Nut for UNF 1/4-28 threads (4 pcs in a set)	1	132
51191306	PTFE dosing tube, 3.2mm, 2.5 m	2	132
	PFA tubing 3.2 mm, 4 m	1	132

Note: Large image may not show all parts in the set.

51191591	**Bottle GL45 250 mL with cap**
Material	Glass, PP
Quantity	1

51191971	**Bottle GL45 1000 mL with cap**
Material	Glass
Quantity	1

51191972	**Distributor cap GL45 2 x GL14**
Material	PP
Quantity	1

51191267	**Glass adapter ST14/23-GL14**
Material	Borosilicate glass
Size	Height 54 mm
Quantity	1

51192208	**Glass adapter ST19/26-GL14**
Material	Borosilicate glass
Size	Height 50 mm
Quantity	1

51190318	**Screw cap GL14, without aperture, PBT** with PTFE sealing
Material	PBT
Temperature	Max. 200 °C
Quantity	1

51190317	**Screw cap GL14, with aperture**
Material	PBT
Temperature	Max. 200 °C
Aperture	Ø 9.5 mm
Quantity	1

51103947	**Sealing ring for screw cap GL14 PTFE/silicone** For screw cap GL14
Material	Silicone rubber VQM, PTFE-coated
Size	Ø 12 mm, aperture 6 mm
Quantity	1

Can also be used for Ø 1/4" 6.35 mm inserts

51161558	**Adapter GL14-UNF with 1 UNF 1/4-28 port** For screw cap GL14
Material	PTFE GF25
Size	Inner Ø 3.4 mm, 20 mm
Quantity	1

51161037	**Adapter for GL14, 6 mm – 6.35 mm sensors**
Material	PTFE
Size	Inner Ø 6.4 mm, outer Ø 12 mm,
Quantity	1

51160200	**Adapter ST7/16 with 1 UNF 1/4-28 port**
Material	PTFE GF25
Port size	ST7/16
Size	Inner Ø 3.2 mm, UNF 1/4"
Quantity	1

51191593	**Adapter UNF 1/4-28 port, 1.5 mm**
Material	PEEK
Size	Inner Ø 3.4 mm
Quantity	1

51161590	**Adapter ProMinent pump UNF 1/4-28 port**
Material	PTFE GF25
Size	Inner Ø max.3.2 mm
Quantity	1

51191514	**Ferrule for tubing and sensors of outer Ø 3.2 mm**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191515	**Nut for UNF 1/4-28 threads**
Material	ETFE
Size	Inner Ø max. 3.2 mm
Quantity	4 pcs in a set

51191306	**PTFE dosing tube Ø 3.2 mm**
Material	PTFE
Size	Ø 3.2 mm, length 2.5 m
Quantity	1

	PFA tubing Ø 3.2 mm, 4 m
Material	PFA
Size	Ø 3.2 mm, length 4 m
Quantity	1

SevenExcellence™ for EasyMax or RX-10
pH/mV Measurement Equipment

SevenExcellence pH/mV meter system for EasyMax or RX-10
pH measurement without any additional control box. Just connect the SevenExcellence to the EasyMax/ RX-10 instrument. EasyMax/RX-10 will log pH data and show them online on the touchscreen.

SevenExcellence pH measurement recommended items

Order Number	Product Description	Quantity	Page
30046240	SevenExcellence S400-Basic including one pH/mV module	1	134
30034472	SevenExcellence pH/mV module	1	134
51191332	InLab 1022 pH electrode for EasyMax 50/100 mL reactors (Ø 6 mm, length 140 mm)	1	134
51343161	InLab Semi-Micro-L electrode for EasyMax 400 mL reactor (Ø 6 mm, length 230 mm)	1	134
51191926	USB A-B cable (connection cable to EasyMax/RX-10)	1	134
30281915	BNC to S7 connector cable, 1.2 m	1	134
30281916	BNC to S7 connector cable, 3.0 m	1	134
30281917	BNC to S7 connector cable, 5.0 m	1	134
51161852	ST14 adapter set for probes, Ø 1.6 mm to 8 mm	1	134

Note: Large image may not show all parts of the SevenExcellence S400-Basic instrument.

30046240	**SevenExcellence S400-Basic** With one pH/mV expansion module
Size	235 mm x 188 mm x 75 mm (w, d, h)
Quantity	1

30034472	**SevenExcellence pH/mV module** For analog sensors only (no ISM)
Quantity	1

51191332	**InLab 1022 pH electrode** for 50 mL two-piece reactor
Temperature	0 °C to 80 °C
Size	Sensor Ø 6 mm, length 140 mm, electrode head S7
Quantity	1

Note: 30281915, 30281916 or 30281917 BNC cables are needed to connect pH electrode to SevenExcellence pH Meter

51343161	**InLab Semi-Micro-L pH electrode** For 50 mL, 100 mL and 400 mL reactors
Temperature	0 °C to 100 °C
Size	Sensor Ø 6 mm, length 230 mm, electrode head S7
Quantity	1

Note: 30281915, 30281916 or 30281917 BNC cables are needed to connect pH electrode to SevenExcellence pH Meter

51191926	**USB A-B cable** For data transfer from SevenExcellence to EasyMax/RX-10
Size	Length 3 m
Quantity	1

51161852	**ST14 adapter set for Ø 1.6 mm to 8 mm** To suit pH electrodes into reactor covers
Material	Glass, PBT, PTFE, silicone rubber
Quantity	1 of each in a set

Note: See Page 102 for details

30281915	**BNC cable, 1.2 m** To connect pH electrode with S7 head to SevenExcellence pH Meter
Size	Length 1.2 m
Quantity	1

30281916	**BNC cable, 3.0 m**
Size	Length 3.0 m
Quantity	1

30281917	**BNC cable, 5.0 m**
Size	Length 5.0 m
Quantity	1

iControl™ Software

For EasyMax, OptiMax, RX-10, and RC1mx

iControl enhances the user experience running advanced procedures including complex reactions, automated sampling, calorimetric investigations or the determination of the reaction kinetics or critical process parameters.

iControl software enable to seamlessly integrate the synthesis workstations EasyMax, OptiMax, RX-10, and RC1mx with Real-Time Analytical tools such as EasyViewer, ReactIR or ReactRaman. iControl enables scientists to:

- **Display, process, and analyze experimental data**
- **Import, overlay, and compare data from different experiments**
- **Copy and paste trends between iControl and other iC products**
- **Customize reports with experiment specific text and images.**

▶ WATCH

iControl Software for EasyMax, OptiMax, RX-10, and RC1mx

Order Number	License type	Description
30721094	Software iControl Single Instrument	Software license for experiment preparation, control and data evaluation for one instrument
30721096	Software iControl Multiple Instrument Option	Software option to connect up to four (4) synthesis workstations to an existing iControl installation
30721119	Software iControl Office	Software license for experiment preparation and experiment evaluation
30721090	Software iC Safety Option for iControl	Software license for EasyMax, OptiMax or RC1mx. iCSafety automates the calculation of thermal safety parameters

EasyMax HFCal Kit
Calorimetry

To perform calorimetric studies, the 30090576 Upgrade Kit, the 30720937 Software Option as well as 30721094 iControl software are required.

30090576
Upgrade Kit EasyMax HFCal

A calorimetry Upgrade Kit for EasyMax contains all necessary parts to convert the workstation into a fully functional calorimeter (needs software).

30720937
Software EasyMax HFCal Option for iControl

Software option enabling calorimetric experiments and heat flow evaluations in iControl.

iControl software is not included.

Upgrade Kit EasyMax HFCal consisting of

Order Number	Product Description	Quantity	Page
30090577	Module EasyMax HFCal	1	138
30099798	Temperature sensor, glass, 260 mm	2	138
30090579	Calibration heater, Alloy C-22, 260 mm	2	138
51162720	Adapter ST14, PTFE, with sealing ring	4	138
51191988	CAN cable, 100 cm	1	138
	HFCal Quick Start Guide	1	

Software EasyMax HFCal Option iControl

Order Number	Product Description	Quantity	Page
30720937	Software EasyMax HFCal Option iControl	1	

Note: Large image may not show all parts in the set.

OptiMax HFCal Kit
Calorimetry

To perform calorimetric studies, the 30050150 Upgrade Kit, the 30720936 Software Option as well as 30721094 iControl software are required.

30050150
Upgrade Kit OptiMax HFCal

A calorimetry Upgrade Kit for OptiMax. It is plug-and-play and contains all necessary parts to convert the workstation into a fully functional calorimeter (needs software).

30720936
Software OptiMax HFCal Option for iControl

Software option enabling calorimetric experiments and heat flow evaluations in iControl.

iControl software is not included.

Upgrade Kit OptiMax HFCal consisting of

Order Number	Product Description	Quantity	Page
30050151	OptiMax HFCal box	1	138
30050155	Calibration heater, 300 mm	1	138
30064131	Adapter ST19, PTFE, with sealing ring	1	138
51191988	CAN cable, 100 cm	1	138
	HFCal Quick Start Guide	1	

Software OptiMax HFCal Option iControl

Order Number	Product Description	Quantity	Page
30720936	Software OptiMax HFCal Option iControl	1	

Note: Large image may not show all parts in the set.

30090577	**Module EasyMax HFCal** Can be attached on the left or right side of the EasyMax
Size	120 mm x 40 mm x 170 mm (w, d, h)
Quantity	1

30050151	**OptiMax HFCal box** Can be attached on the left or right side of the OptiMax
Size	120 mm x 40 mm x 170 mm (w, d, h)
Quantity	1

51191988	**CAN cable, 100 cm**
Size	Length 100 cm
Quantity	1

30099798	**Pt100 temperature sensor, EasyMax**
Material	Wetted part: Glass
Size	Sensor Ø 6 mm, length 260 mm
Quantity	1

Note: Find out more about the immersion depth on Page 27

30090579	**EasyMax calibration heater**
Material	Wetted part: Alloy C-22
Size	Sensor Ø 6.35 mm, length 260 mm
Quantity	1

30050155	**OptiMax calibration heater**
Material	Wetted part: Alloy C-22
Size	Sensor Ø 8 mm, length 300 mm
Quantity	1

51162720	**PTFE adapter ST14/23, eccentric** Including 51162716 sealing ring
Material	PTFE GF25
Port size	ST14/23
Size	Inner Ø 6 mm
Quantity	1

Note: Can also be used for Ø 1/4″ 6.35 mm inserts

30064131	**PTFE adapter ST19/26, eccentric** For calibration heater, including 30064134 sealing ring
Material	PTFE GF25
Port size	ST19/26
Size	Inner Ø 8 mm
Quantity	1

51162716	**Sealing ring for 51162720 PTFE adapters**
Material	PTFE
Size	Inner Ø 6 mm
Quantity	1

Note: Can also be used for Ø 1/4″ 6.35 mm inserts

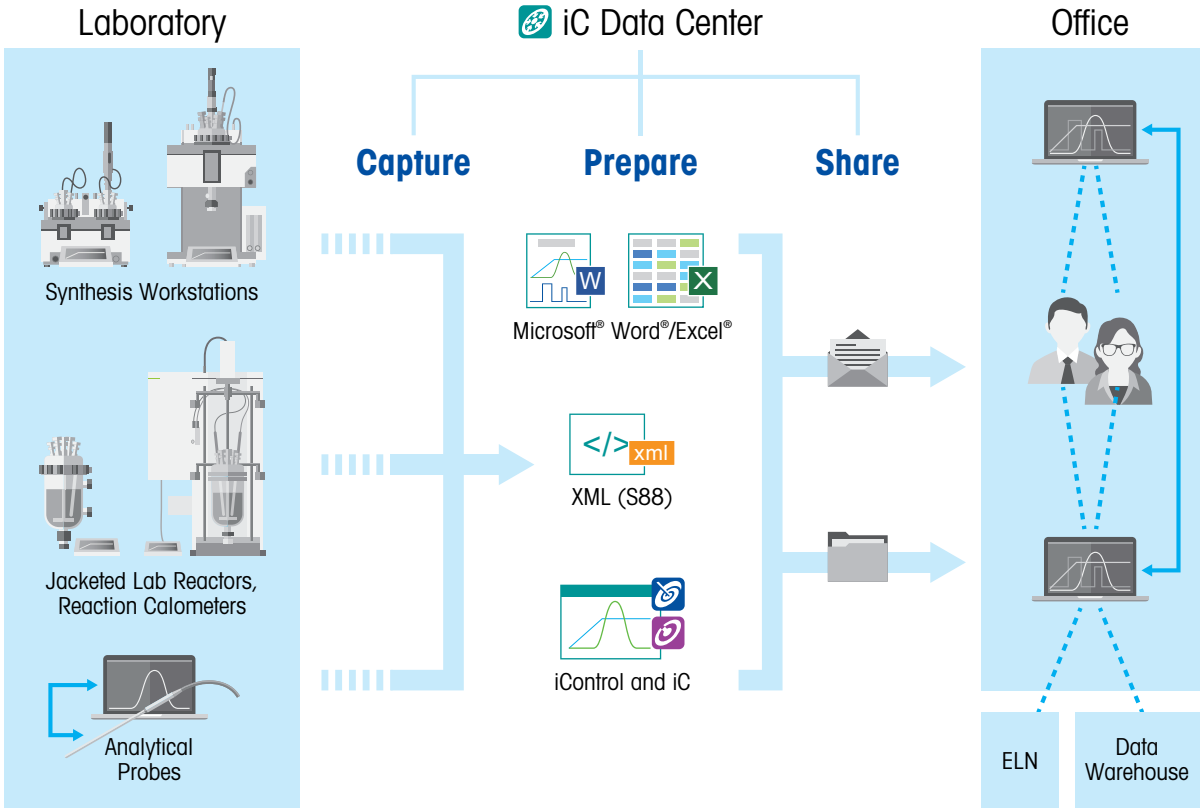
30064134	**Sealing ring for 30064131 PTFE adapter**
Material	PTFE
Size	Inner Ø 8 mm
Quantity	1

iC Data Center™
Capture, Prepare, Share

An estimated 85% of lab data is lost because it is not transferred from lab instruments or is not recorded at all.

iC Data Center ensures all experiment data is automatically captured, prepared into useful formats, and shared on a central file store. It allow scientist to focus on the science while taking care of:

- **Collecting experiment data automatically of all AutoChem instruments**
- **Preparing standardized reports and distribute these centrally**
- **Emailing users with links to the files after the experiment completion**



iC Data Center is a powerful tool that improves productivity for the researcher while facilitating knowledge management for the organization. For further details please contact your local METTLER TOLEDO organization.

▶ WATCH

RX-10™
Reactor Control and Capture

30208790
RX-10 with 1 m touchscreen cable
Touchscreen-based control unit to automate and monitor jacketed lab reactors. Third-party thermostats, stirrers and sensors can be connected via plug-and-play interfaces.

30217050
RX-10 with 3 m touchscreen cable

30208790 RX-10 unit with 1 m touchscreen cable consisting of

Order Number	30208790 RX-10 Unit	Quantity	Page
30303438	RX-10 main unit	1	141
51161883	Touchscreen 7", 1 m cable	1	141
30281496	Lab bar holder	1	141
30090591	Power supply	1	141
30281497	Thermostat/stirrer RS232 cable set, 6 cables	1	141
	RX-10 Quick Start Guide	1	

30217050 RX-10 unit with 3 m touchscreen cable consisting of

Order Number	Product Description	Quantity	Page
30303438	RX-10 main unit	1	141
30303580	Touchscreen 7", 3 m cable	1	141
30281496	Lab bar holder	1	141
30090591	Power supply	1	141
30281497	Thermostat/stirrer RS232 cable set, 6 cables	1	141
	RX-10 Quick Start Guide	1	

Note: Large image may not show all parts in the sets.

30303438	**RX-10 main unit**
Size	70 mm x 152 mm x 215 mm (w, d, h)
Weight	2.88 kg, including touchscreen
Quantity	1

30281496	**Lab bar holder**
Material	Aluminium, stainless steel
Size	134.75 mm x 35.5 mm x 30 mm (l, w, h)
Quantity	1

30090591	**Power supply for CAN bus devices** Required if additional CAN devices are connected
Quantity	1

51161883	**TFT touchscreen 7", 1 m cable**
Material	PA, aluminium
Size	195 mm x 135 mm x 60 mm (w, d, h)
Quantity	1

30303580	**TFT touchscreen 7", 3 m cable**
Material	PA, aluminium
Size	195 mm x 135 mm x 60 mm (w, d, h)
Quantity	1

30281497	**Thermostat/stirrer RS232 cable set** Dedicated and color coded
Size	Length 2.9 m each
Quantity	6 pcs per set

Optional Accessories
For RX-10

30260369	**Emergency button**
Size	125 mm x 80 mm x 95 mm (l, w, h) cable length 6.9 m
Quantity	1

30267163	**SmartConnect Pt100 cable with loose ends** For Pt100 sensors, Page 123
Quantity	1

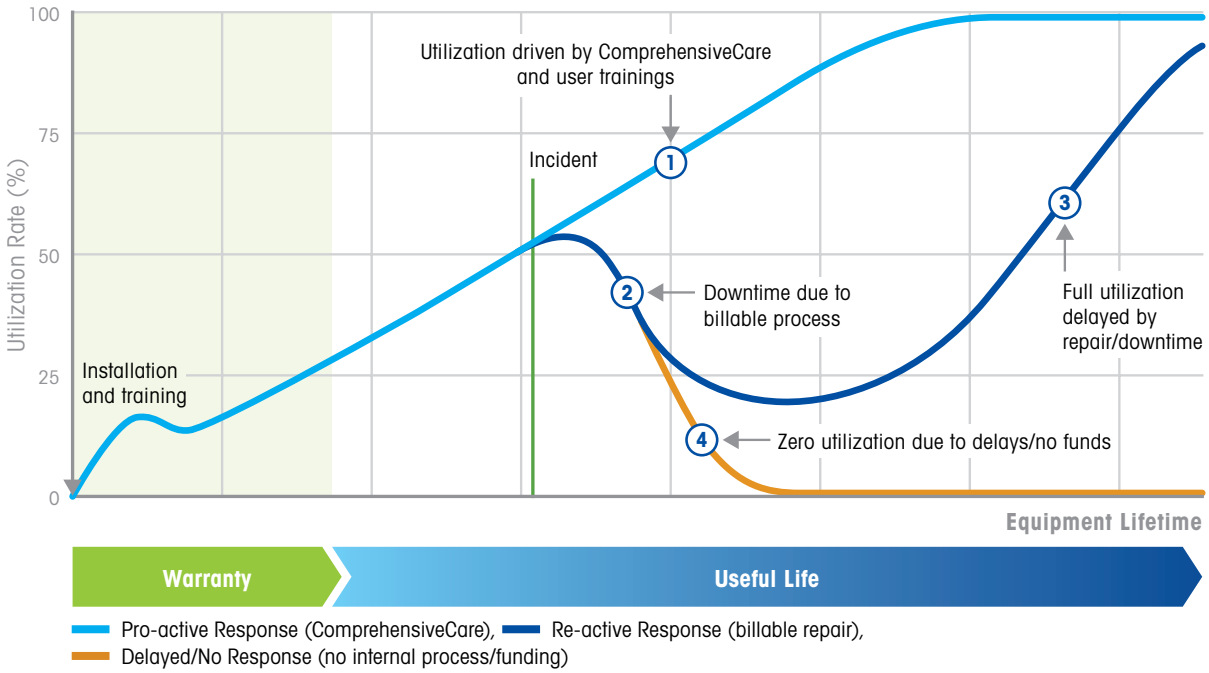
30267165	**SmartConnect sensor cable with loose ends** For Pt100 and other sensors, Page 123
Quantity	1

30254779	**SmartConnect LEO3/EV-120 cable** For pressure measurement, Page 123
Quantity	1

Post-Warranty Maintenance
Ensuring Performance and Repeatability

Implementing a maintenance plan before the warranty period ends, is the most effective way to commit to your team's success.

Impact of Downtime on Utilization



View these videos for the best way to learn about the proper care of your instruments.

Six Components of a Long-Term Instrument Maintenance Strategy (2:08)

▶ WATCH

Selecting a Maintenance & Support Plan (2:37)

▶ WATCH

Understanding Scheduled Maintenance (3:11)

▶ WATCH

Preventive Maintenance Service Includes:

One on-site Preventive Maintenance and Calibration Validation service of a METTLER TOLEDO automated reactor system.

- **Travel and Labor for Preventive Maintenance**
- **Verification of Installation Qualification (IQ)**
  To ensure performance and stability is unaffected by environmental challenges
- **Performance of Operational Qualifications (OQ)**
  To ensure accurate and reproducible data collection
- **Support of Performance Qualification (PQ) Against METTLER TOLEDO Factory Specifications**
  To show objective evidence and records to satisfy Quality requirements of documented compliance to internal and external standards
- **Performance of Annual Maintenance Qualifications (MQ)**
  To mitigate risk of unexpected part failure over the life of the instrument

Activities Performed During Preventive Maintenance Service:

- **Verification of Cooling and Purge**
- **Verification of Stirrer and Replacement of Sealing Ring (EasyMax)/Stirrer Internals (OptiMax)**
- **Calibration of Tr and Tj Sensors**
- **Specification Test (Heat/Cool, Speed and Stability)**
- **Electronic Asset Management and Maintenance Documentation (MPAC – Maintenance Qualification Package)**

EasyMax & OptiMax Lifecycle Maintenance Checklist	Annual	Scheduled
Temperature Calibration, Heat/Cool, Stability and Speed Verification To ensure temperature accuracy, repeatability, and response time	☐	–
Replace Sealing Ring (EasyMax)/Stirrer Internals (OptiMax) To prevent solvent loss	☐	–
Replace Touchscreen Cover To preserve LCD surface	☐	–
Replace Battery To ensure diagnostic logging	–	☐ (2 years)
Replace Cooling Fan To maintain operating conditions	–	☐ (5 years)
Replace Thermostat Blocks To ensure heating/cooling, speed, and stability	–	☐ (6 years)

☐ Replaced at annual Preventive Maintenance (PM)
☐ Replaced based on age/utilization (Scheduled Maintenance, SM); no additional labor charge when done during PM

Contact your local METTLER TOLEDO representative for pricing and more information.

Interactive Web-based Seminars

METTLER TOLEDO offers on-demand webinars.
Presented by industry and academic experts as well as our technology and applications consulting team. They provide an opportunity to learn more about specific areas of interest, including:

- Process development
- Crystallization
- Safety
- Particle processing
- Fermentation
- Catalysis
- Process Analytical Technology (PAT)
- Synthesis
- Pressure chemistry
- Kinetics
- Reaction analysis
- Advanced data analysis
- And much more

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