



Rotavapor® R-250

Best performance at highest safety

We offer highest performance, efficiency and safety. Intuitive operation and handling for reliable and highly productive industrial distillation. By exclusive use of high quality materials, the Rotavapor® R-250 is a long lasting investment.

High performing

Maximized distillation rate with an optimized system



Easy and safe

Intuitive and easy operation at highest safety level



Durable

Enhanced lifetime thanks to proven technology and quality

R-250: Your most important benefits



High performing

- Fast distillation due to high heating capacity
- Large batches in a flask of 50 liters
- Extended functionality with a wide range of accessories
- The best set for every application up due to a wide range of glass configurations



Easy and safe

- Intuitive operation of the Rotavapor® and its vacuum controller
- Excellent handling by large and easy readable display
- Easy flask handling due to the unique flask coupling
- Highest safety by coated glassware
- Safe handling and spring-loaded valves protect the glass



Durable

- Long life time due to exclusive use of corrosion-free stainless steel
- Low maintenance by using highly chemical resistant materials
- Trouble-free operation thanks to robust industrial valves

Complete your portfolio



Vacuum Controller
V-850 / V-855
Achieve best process
performance



Vacuum Pump
V-600
The powerful and silent
vacuum source



Rotavapor®
R-220 Pro
Best performance
production scale



Rotavapor®
R-250 EX
EX-protection fulfilling
highest safety levels

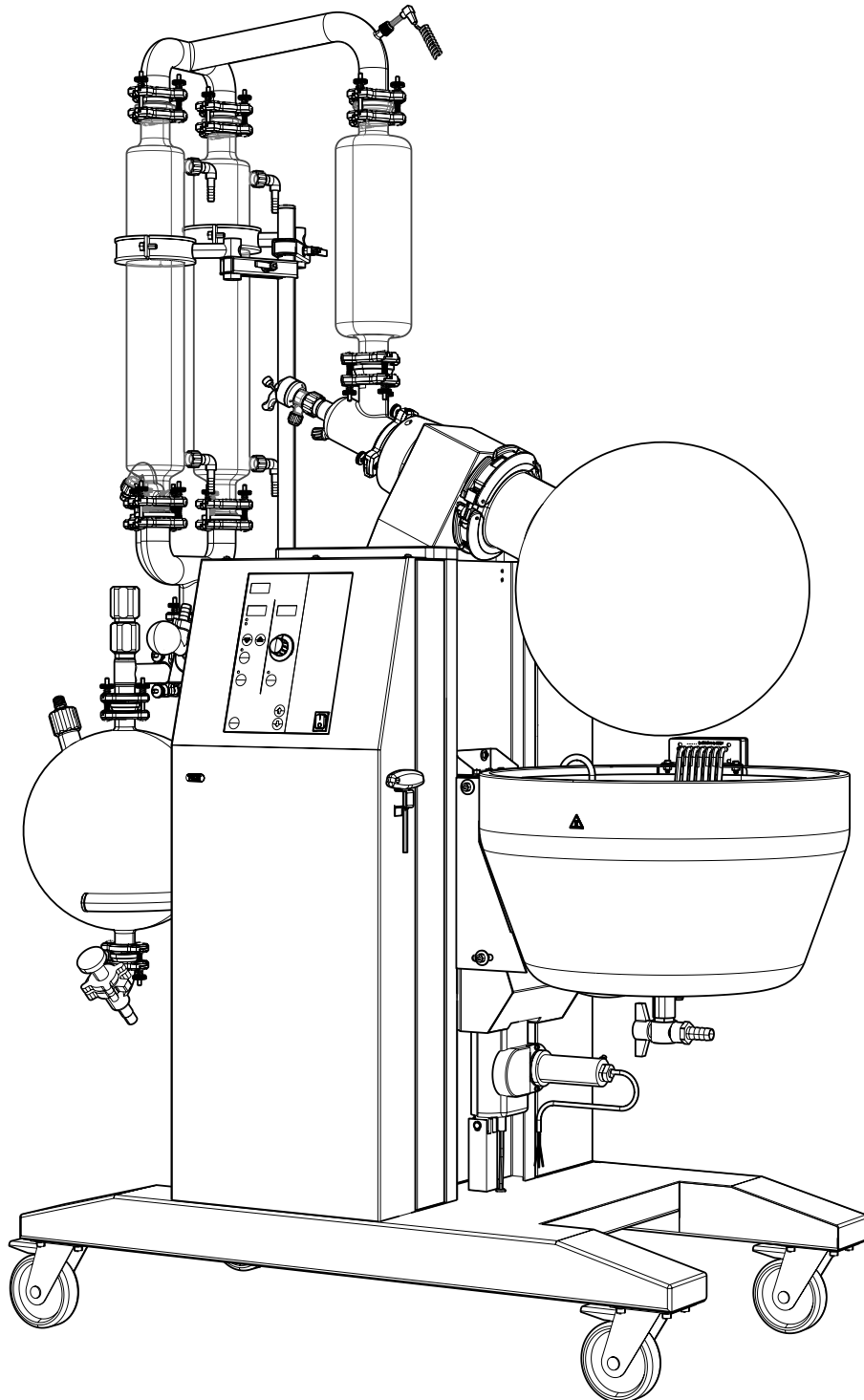




Rotavapor® R-250

Technical data sheet

Batches up to 30 liters can be quickly and safely distilled in the 50-liter evaporating flask of the R-250. The powerful heating bath allows a distillation rate up to 30 liters of acetone per hour. Choose your system out of a wide range of possibilities to get the best for your application.



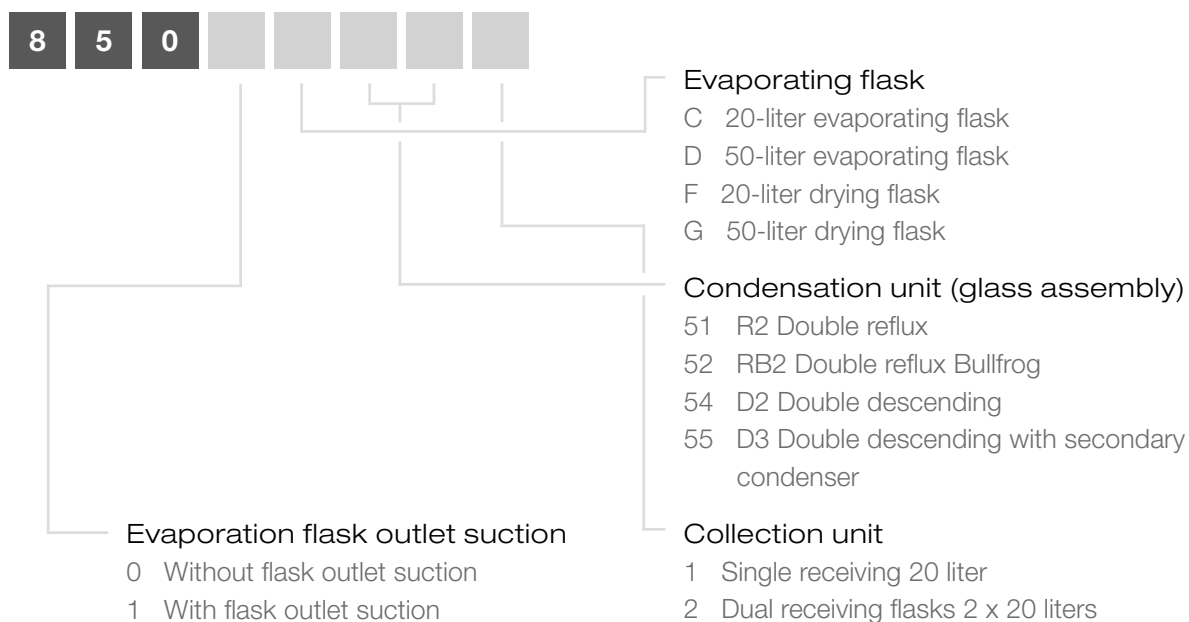
Scope of delivery

All Rotavapor R-250 models are delivered ready to use, including all needed tools and are complete of:

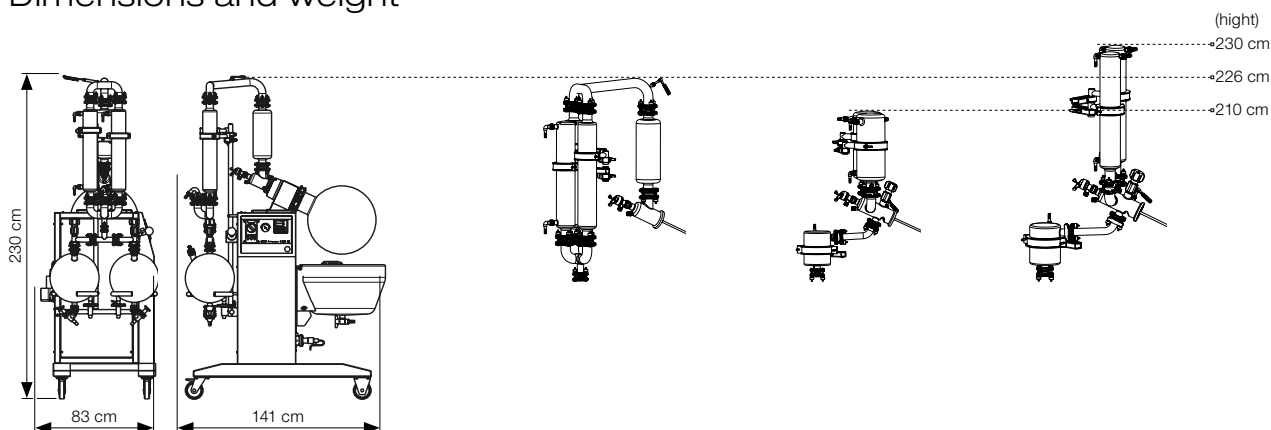
Components	R-250
Glass configuration according to order	1
Evaporating flask according to order	1
Vacuum hose to the vacuum source (PVC), 3.5 m	1
Vacuum hose to the vacuum controller (rubber), 3 m	1
Cooling water hose 19/26 (PVC), 2 m	1
Cooling water hose 14/18 (PVC), 3 m	1
Cooling water hose 10/14 (PVC), 2.2 m	1
Bath replenishment hose (PVC), 2 m	1
Feed hose (PTFE), 2 m	1
Seal removal tool	1
Operation manual	1

Order code

Choose the configuration according to your needs:



Dimensions and weight



D2	D3	RB2	R2
Low boiling points and/or foaming products		High boiling points	
Minimum emissions		Reflux reactions	
		Reduced height	

	Dimensions (W x H x D)	Weight
Assembly R2	1410 x 2300 x 830 mm	195 kg
Assembly RB2	1410 x 2100 x 830 mm	195 kg
Assembly D2	1410 x 2260 x 830 mm	200 kg
Assembly D3	1410 x 2260 x 830 mm	205 kg

Technical data

Electrical

Voltage	400 – 440 V (3Ph, N, G)
Frequency	50 – 60 Hz
Max. power consumption	7500 – 9100 W

Standards

CE marking	Yes
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Safety

Safety coated glassware	Yes, accept the evaporating flask
Over temperature protection of the bath	Separate monitoring circuit with manual reset Error if temperature is 15 °C above set value
Rotation	Soft start
At any Error	Bath lowering, heater off, rotation off Type of error showed on display Reset with main switch

Display

Bath temperature	Yes (1 °C steps)
Vapor temperature	Yes (1 °C steps)
Set rotation speed	Yes (1 rpm steps)
Set bath temperature	Yes (1 °C steps)
Actual vacuum	Optional Vacuum Controller
Set vacuum	Optional Vacuum Controller

Cooling

Consumption	200 – 400 liter/hour (adjustable via integrated needle valve)
Restriction	max. 2.7 bar abs. without pulsation

Heating (bath)

Medium	Water or oil
Temperature range	Ambient to 180 °C
Heating capacity	6600 W (3 W/cm ²)
Accuracy	+/- 2 °C

Rotation

Motor	400 V 3phase; 2 A at 50 Hz
Controlling	Frequency converter
Speed	5 – 100 rpm
Accuracy	+/- 1 rpm at 5 rpm to +/- 5 rpm at 100 rpm

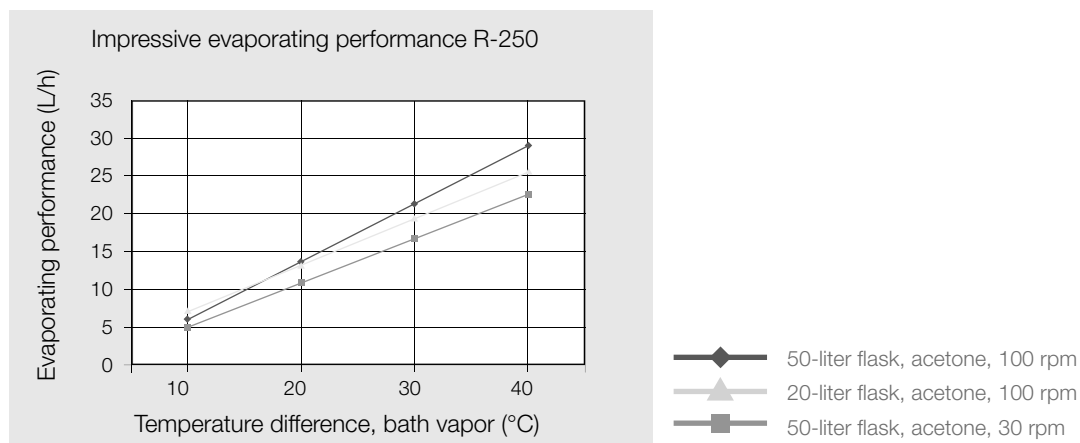
Materials

Housing	Stainless steel 1.4301 (AISI 304)
Gear head	Aluminum cast (3.2373)
Painting	Powder coated with Epoxy (EPX)
Bath pan	Stainless steel 1.4404 (AISI 316L)
Heating element	Stainless steel 1.4404 (AISI 316L)
Glass	Borosilicate 3.3
In contact with product	FDA approved materials
Leakage of the complete system	<1 mbar/min

Sensors

Vapor temperature	PT-1000, 2 wire
Bath temperature	PT-1000, 2 wire
Speed sensor	Hall-sensor
Vacuum	optional vacuum controller

Performance



For other solvents the following maximum general figures apply:

Water	Methanol	Ethanol	Toluene	Ethylacetate	Hexane	Trichlorethane
5.8 L/h	14.0 L/h	19.5 L/h	36.5 L/h	38.0 L/h	55.0 L/h	40.5 L/h

Accessories

	Order number
Vacuum Controller V-850 Display, control and regulation of vacuum.	47293
Vacuum Controller V-855 Display, control and regulation of vacuum, including gradient mode.	47292
Vacuum pump Sogevac SV40 Rotary vane pump with a flow rate of 40 m ³ /h and an ultimate vacuum of < 2 mbar.	34063
Manual flask handler 50L For easy mounting and removal of the flasks along with safe transport.	41414
Manual flask handler 20L For easy mounting and removal of the flasks along with safe transport.	41410
Foam detector Internal sensor detects rising foam and triggers a short aeration pulse, eliminating foam. Only in combination with a descending glass assembly.	40507
Vacuum valve for R-250 for vacuum controller, 24 V, 4 mm For use with a 50 L Rotavapor, hose connection 18 mm	31355

	Order number
Vapor duct with sinter plate With frit P3 protects the condenser assembly against powder and dust during the drying process.	41100
Splash protector A polycarbonate splash protector mounted on the bath, protects against splashing.	41420
Flask crane For the safely secured transport of a 50 liter flask. Incl. the 50 liter manual flask handler.	41494
IQ / OQ	40786



Rotavapor® R-220 EX / R-250 EX

EX-protection fulfilling highest safety levels

Intuitive operation and handling guarantee safe and efficient industrial distillation. Customize your Industrial Rotavapor® to your needs. Meeting the newest EX regulations, you are always on the safe side for distillation with a flask size of up to 50 liters.

Safe

According to ATEX regulation
for maximum protection



Easy

Intuitive and easy operation
at the highest safety level



Long lasting

Proven technology and
quality enhances lifetime



Rotavapor® R-220 EX / R-250 EX

Key features and advantages



Rotavapor® R-220 EX



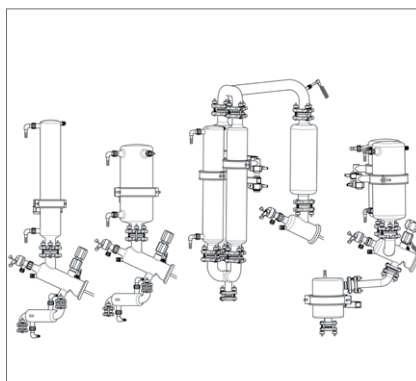
Rotavapor® R-250 EX

Characteristics:



Your partner in Ex protection

An intensive cooperation with external experts ensures that the Rotavapors® comply with the latest regulations.



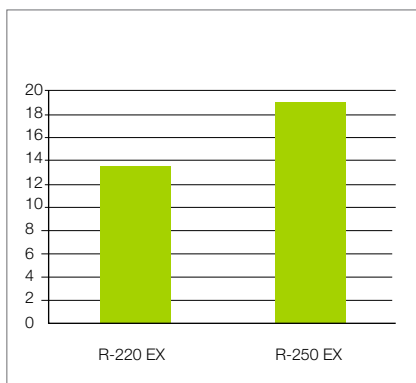
The perfect setup

With a wide range of available glass assemblies, we are able to offer the perfect solution for efficient and gentle distillation of your product.



High quality materials

The use of top quality inert materials guarantees a long lasting operation and protect your substance.



24/7 Operation

The robust design and the use of premium quality materials allow for extensive operation under harsh production conditions and guarantee a for long product lifetime.

High performance

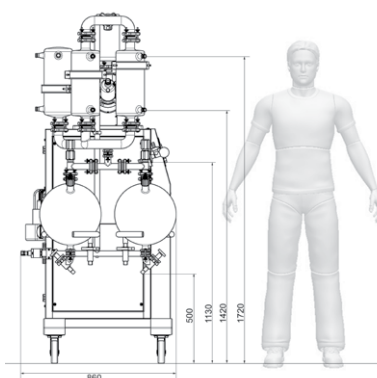
As high-throughput is important, we offer distillation rates up to 19 L ethanol per hour with the R-250 EX and up to 13.5 L of ethanol per hour with the R-220 EX

Simplicity and ease of use

The easy and self-explanatory controls ensure a safe and trouble-free process. The optional flask handler guarantees a safe one person operation, even with a 50 L flask

Customization? - No Problem!

Although we offer a wide range of configurations and solutions, there are still situations where even the standard setups do not fit your requirements completely. Height restrictions or a special application sometimes require modifications. We are able to support you in such cases by offering a customized solution



Height restrictions



Special applications (e.g. cooling coil for the bath)

R-220 EX / R-250 EX: Your most important benefits



Safe

- ATEX approved for highest safety level
- Immediate shut-down due to safety cut-off
- Extend functionality and safety with a wide range of accessories
- Optional Ex-proof vacuum pump
- Designed for safe operation in harsh environment
- Safe handling and spring-loaded valves protect the glass



Easy

- Intuitive operation of the Rotavapor® and its integrated vacuum controller
- Excellent handling by the easy readable display
- Easy flask handling due to the unique flask coupling



Long lasting

- Long life time due to exclusive use of corrosion-free stainless steel
- Low maintenance by using highly chemical resistant materials
- Trouble-free operation by robust industrial valves

Complete your portfolio



Rotavapor®
R-250
Best performance
at highest safety



Rotavapor®
R-220 Pro
Best performance
production scale



Ex proof vacuum
pump
The safe vacuum
source for your Ex-
protected lab.

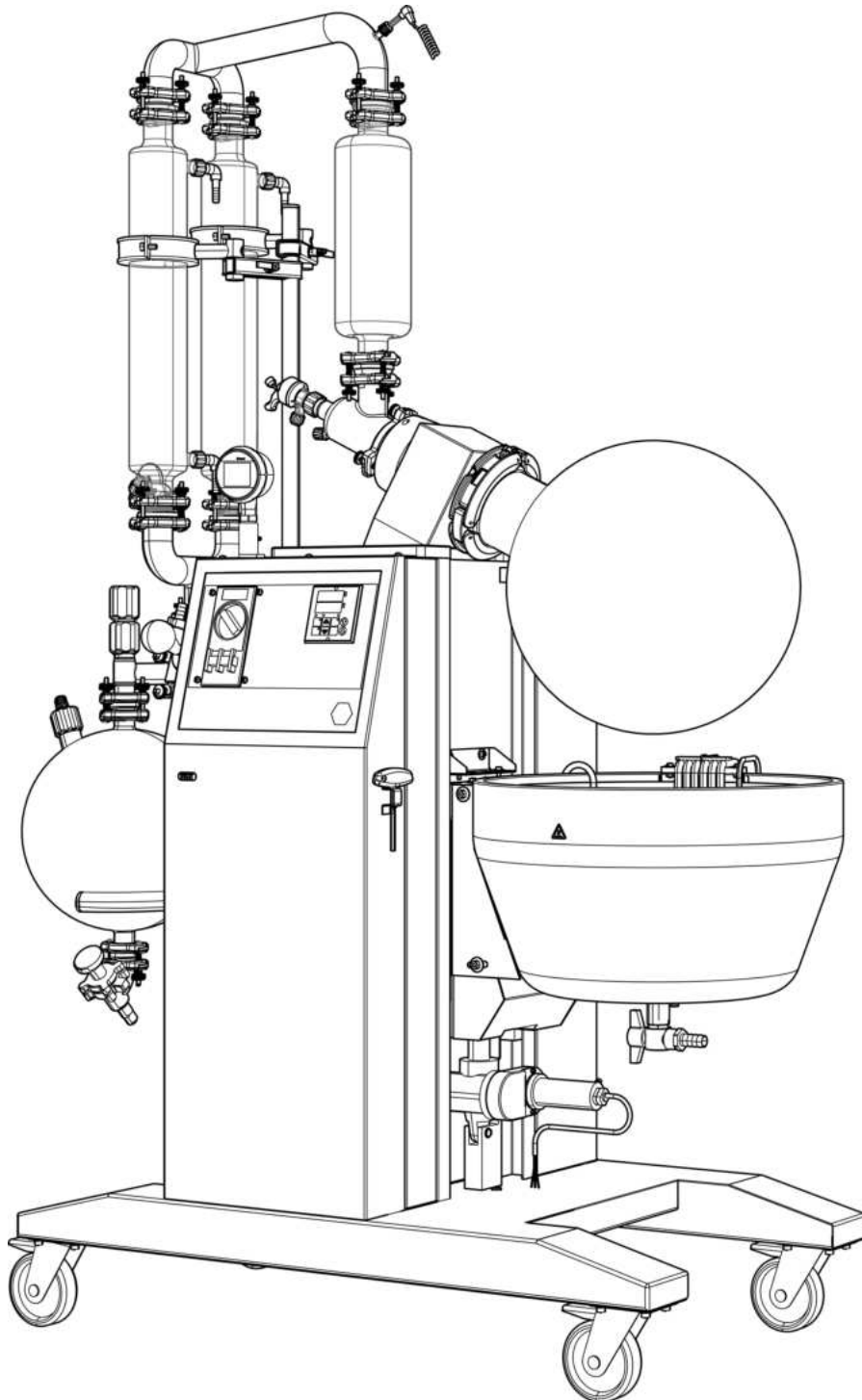




Rotavapor® R-250 EX

Technical data sheet

The Rotavapor R-250 EX is the EX rated version of the Rotavapor R-250. It fulfills the high requirements of the ATEX regulations and fits perfect to your Ex-proof production laboratory. It is designed for easy and safe operation combined with high performance.



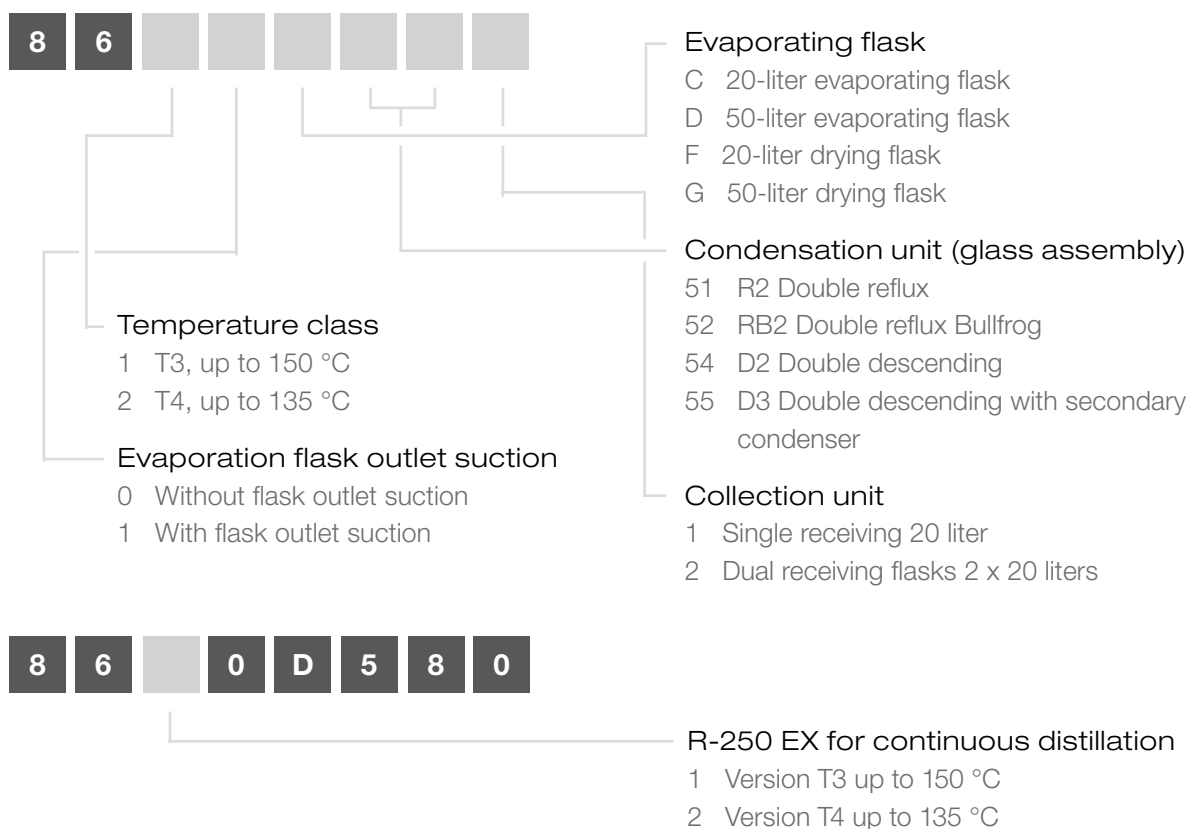
Scope of delivery

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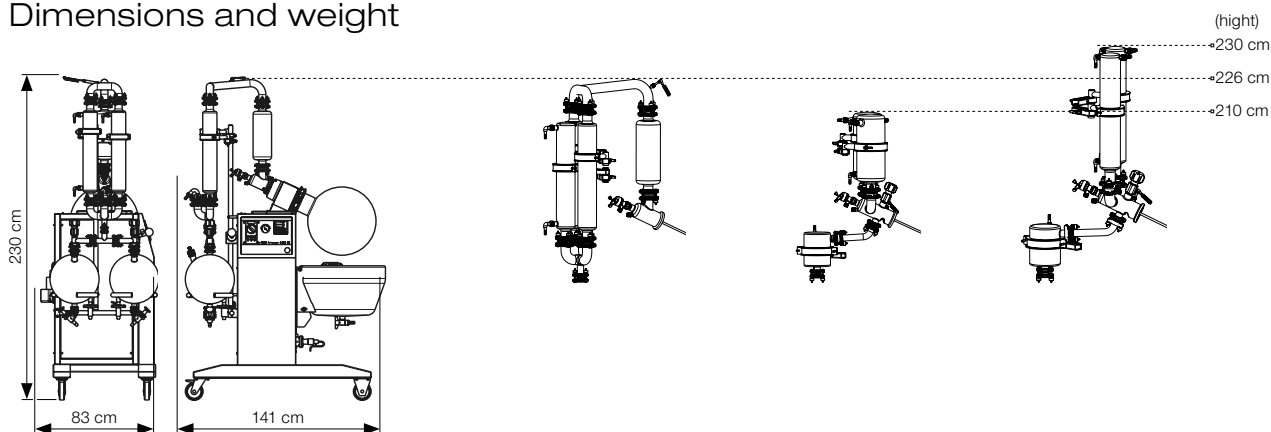
Components	R-250 EX
Vacuum controller UDS7 EX	1
Vacuum valve EX	1
Glass configuration according order	1
Evaporating flask according order	1
Vacuum hose to the vacuum source (PVC), 3.5 m	1
Vacuum hose to the vacuum controller (rubber), 3 m	1
Cooling water hose 19/26 (PVC), 2 m	1
Cooling water hose 14/18 (PVC), 3 m	1
Cooling water hose 10/14 (PVC), 2.2 m	1
Bath replenishment hose (PVC), 2 m	1
Feed hose (PTFE), 2 m	1
Seal removal tool	1
Operation manual	1

Order code

Choose the configuration according to your needs:



Dimensions and weight



D2	D3	RB2	R2
Low boiling points and/or foaming products		High boiling points	
Minimum emissions		Reflux reactions	
		Reduced height	

	Dimensions (W x H x D)	Weight
Assembly R2	1410 x 2300 x 830 mm	285 kg
Assembly RB2	1410 x 2100 x 830 mm	285 kg
Assembly D2	1410 x 2260 x 830 mm	290 kg
Assembly D3	1410 x 2260 x 830 mm	295 kg

Technical data

Electrical

Voltage	400 – 440 V (3Ph, N, G)
Frequency	50 – 60 Hz
Max. power consumption	7500 – 9100 W

Standards

EX label	Ex de ia [ia] IIC T3 and T4
CE marking	Yes

Safety

Safety coated glassware	No, due to the risc of electrostatic charges
Over temperature protection of the bath	Separate monitoring circuit with manual reset Error if temperature is 15 °C above set value
Rotation	Soft start
At any Error	Heater off, rotation off, bath lowers Indication of error

Display

Bath temperature	Yes (1 °C steps)
Vapor temperature	Yes (1 °C steps)
Set rotation speed	Yes (1 rpm steps)
Set bath temperature	Yes (1 °C steps)
Actual vacuum	Yes (1 mbar steps)
Set vacuum	Yes (1 mbar steps)

Cooling

Consumption	200 – 400 liter/hour (adjustable via integrated needle valve)
Restriction	max. 2,7 bar abs. without pulsation

Heating (bath)

Medium	Water or oil
Temperature range	Ambient to 115 °C (T4) or 150 °C (T3)
Heating capacity	6600 W (3 W/cm ²)
Accuracy	+/- 2 °C

Rotation

Motor	400 V (3Ph; 2A at 50 Hz)
Controlling	Frequency inverter
Speed	0 – 100 rpm
Accuracy	+/- 1 rpm at 5 rpm up to +/- 5 rpm at 100 rpm

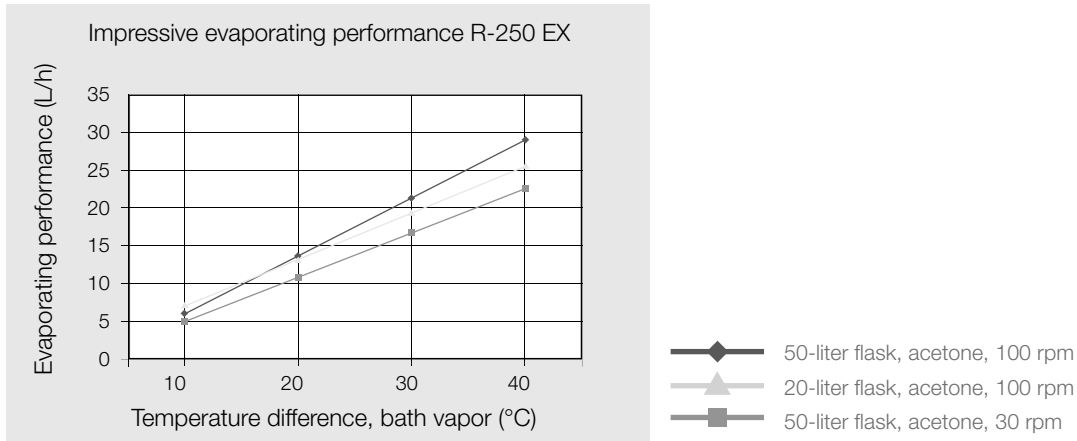
Materials

Housing	Stainless steel 1.4301 (AISI 304)
Gear head	Aluminum cast (3.2373)
Painting	Powder coated with Epoxy (EPX)
Bath pan	Stainless steel 1.4404 (AISI 316L)
Heating element	Stainless steel 1.4404 (AISI 316L)
Glass	Borosilicate 3.3
In contact with product	FDA compliant materials
Leakage of the complete system	< 1 mbar/min

Sensors

Vapor temperature	PT-1000, 2 wire
Bath temperature	PT-1000, 2 wire
Vacuum	Piezoresistive measuring cell; stainless steel 1.4435 (AISI 316L)

Performance



For other solvents the following maximum general figures apply:

Water	Methanol	Ethanol	Toluene	Ethylacetate	Hexane	Trichlorethane
5.8 L/h	14.0 L/h	19.5 L/h	36.5 L/h	38.0 L/h	55.0 L/h	40.5 L/h

Accessories

	Order number
Vacuum pump MD4C EX PTFE membrane pump with a capacity of 3.7m ³ /h and a final vacuum of 3mbar. 230 V / 50 Hz	040197
Manual flask handler 50 liter For easy mounting and removal of the 50 liter evaporating flasks along with safe transport.	041414
Manual flask handler 20 liter For easy mounting and removal of the 20 liter evaporating flasks along with safe transport.	041410
Flask crane (EX version) For the safely secured transport of a 50 liter flask. Incl. the 50 liter manual flask handler	041493
Vapor duct with sinter plate With frit P3 protects the condenser assembly against powder and dust during the drying process.	041100
IQ / OQ	40786