

# ROTARY EVAPORATOR



## BOECO ROTARY EVAPORATOR RVO 400 SD

- With digital display and control
- Water or oil bath
- Motorized lift
- Built in vacuum controller
- function of pressure and temperature gradient
- Variable inclination angle of evaporating flask
- With vertical or diagonal condenser
- fitted and designed for control and communication by PC

### Technical details:

Evaporating flasks: Rotation speed:	20 - 4000 ml 0 - 280 rpm
Bath temperature:	max. 100°C for water filling max. 180°C for oil filling ± 1°C up to 100°C ± 3°C up to 180°C absolute adjustable 1-500 mbar.
Regulation accuracy:	Temperature, rotations, vacuum Temperature, pressure °C, °K hPa, Torr 1200 sq cm output max 650 VA, input max. 2000 VA 230 V ±10%, 50 Hz max. 2000 W (excluding vacuum pump) 650 x 900 x 360 (incl. glass) approx 20 kg
Pressure measurement: Pressure difference:	
Digital settings:	
Gradient settings: Temperature unit selection:	
Pressure units selections:	
Cooler condensation size:	
Switched vaccum pump: Power supply:	
Power input:	
Dimensions in mm (WxHxD): Net weight:	

The RVO 400 SD conforms to the CE mark and all relevant EC standards and DIN norms and has been manufactured under ISO 9001:2000

Code	Description
BOE 8090020	BOECO Rotary Evaporator RVO 400 SD, with heating bath, motorized lift, built-in vacuum controller, digital measuring and control system with vertical condenser, 230 V
BOE 8090021	Idem for 110 V
BOE 8090030	BOECO Rotary Evaporator RVO 400 SD, with heating bath, motorized lift, built-in vacuum controller, digital measuring and control system with diagonal condenser, 230 V
BOE 8090031	Idem for 110 V

### Options:

BOE 8090005	Safety bath cover, Plexiglass
BOE 8090006	Wireless remote controller
BOE 8090007	PC-based evaporation control software



SAFETY  
BATH COVER

## *distillation & filtration & separation & sample preparation*



### **ROTARY EVAPORATOR - "vertical"**

- Featured with motorised quick-action lift that automatically raises the evaporation flask from the bath in case of any power failure.
- Chemical-resistant double PTFE system and patented pressure spring guarantees an excellent sealing during operation.
- Easy to read large digital LCD screen displays heating temperature, rotation speed, time and other parameters.
- Patented condenser design with 1.500 cm<sup>2</sup> effective cooling capacity guarantees excellent cooling effect.
- Unique motor action enabling selective rotation of the evaporation flask as clockwise or anti-clockwise movement guarantees effective results.
- Featured with an adjustable final position recognition system for protection of the glass parts from breakage.
- Timer function with time setting range 1 - 999 minute enables precise control of the operation.
- Featured with an operation control panel that allows remote control of the system and also transfer of all parameters via USB.
- Supplied with a large, stainless steel 5 L water-oil bath with precise temperature control from ambient to 180°C.
- An automatic over-heat protection system automatically stops heating if the bath temperature exceeds 220°C.



*Integrated operating panel for convenient control of the main unit and heating bath.*



*Supplied with a large, stainless steel 5 L water-oil bath with precise temperature control from ambient to 180°C.*

*Unique design of the detachable operating panel enables remote control option and easy use of the panel outside the fume hood.*

*An automatic over-heat protection system automatically stops heating if the bath temperature exceeds 220°C.*

<i>catalogue no</i>	<b>605.01.001</b>
<i>dimensions / weight (mm / kg)</i>	465 x 457 x 563 / 15,0
<i>power (W)</i>	1400
<i>voltage (V)</i>	220
<i>frequency (Hz)</i>	50
<i>heating range (°C)</i>	ambient +5 to 180
<i>heating accuracy (°C)</i>	± 1,0
<i>speed range (rpm)</i>	20 - 280
<i>speed &amp; temp. &amp; time display</i>	LCD
<i>time setting range (min)</i>	1 - 999
<i>rotation direction</i>	reversible
<i>protection class</i>	IP 20
<i>USB interface</i>	yes



*Unique push-off device to release the flask and protect it from breaking.*

*Optimal interval operation offers dual action in clockwise and counter clockwise for the drying process.*

## WYPARKA PRÓŻNIOWA RE100-Pro Niebieska seria CHEMLAND

- \* duży, łatwy do odczytu wyświetlacz LCD wyświetlający temperaturę, prędkość obrotową i czas
- \* zakres prędkości od 20 do 280 rpm
- \* duża 5 l łaźnia wodna / olejowa o regulowanej temperaturze w zakresie temp. otoczenia do 180 °C
- \* łaźnia wodna z precyzyjną kontrolą temperatury i nastawnym obwodem bezpieczeństwa
- \* zdejmowalny panel - umożliwia zdальną kontrolę urządzenia
- \* opatentowana chłodnica (powierzchnia chłodzenia 1500cm<sup>2</sup>) z doskonałym efektem chłodzenia
- \* automatyczne podnoszenie z systemem szybkiej reakcji, automatyczne podnoszenie kolby próżniowej w przypadku awarii zasilania
- \* możliwość ustawienia pozycji ostatecznej, w celu ochrony operatora i próbki
- \* kolba próżniowa z wyrzutnikiem, łatwa do usunięcia
- \* dostępna z funkcją timera, zapewnienie precyzyjnej kontroli procesu
- \* kontrola i dokumentowanie wszystkich parametrów przez USB

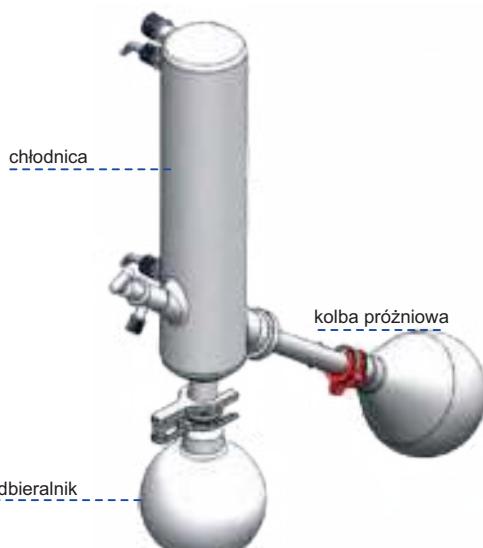
**nr katalogowy 06-611112220000**

chemicznie odporny podwójny system PTFE i opatentowana klamra ciśnieniowa zapewnia doskonałe uszczelnienie



zasilanie	200-240
częstotliwość	50/60
moc	1400
silnik	DC bezszczotkowy
zakres prędkości	20-280
wyświetlacz prędkości temperatury, timer	LCD
zmiana kierunku obrotów	TAK
zakres temperatury grzania [°C]	temp. otoczenia- 180
dokładność kontroli grzania [°C]	±1
moc grzania [W]	1300
podnoszenie	silnik, 150 [mm]
timer	TAK
zakres timera [min]	1-999
wymiary zewnętrzne [mm]	465 x 457 x 583
waga [kg]	15
dopuszczalna temp.	5-40
otoczenia [°C]	
dopuszczalna wilgotność	80%
względna	
klasa ochrony wg DIN EN60529	IP20
USB	TAK

Duża 5l łaźnia wodna / olejowa umożliwiająca ogrzewanie cieczy w zakresie temp. otoczenia do 180°C.



Opatentowana chłodnica o powierzchni chłodzącej 1500 cm<sup>2</sup> automatyczne podnoszenie z systemem szybkiej reakcji, kolby próżniowej w przypadku awarii zasilania.



Duży wyświetlacz LCD wyświetla temperaturę, prędkość obrotową i czas.

## WYPARKA PRÓŻNIOWA 30-RE5250

- \*zastosowano opatentowany system zaworów PTFE, kontrolujący system przepływu powietrza i cieczy
- \*materiał może być dostarczany i odbierany w sposób ciągły, bez konieczności przerw w pracy.
- \*podwójne dno łaźni grzewczej wykonane ze stali nierdzewnej, podnoszenie automatyczne 0-180mm.
- \*łaźnia z pokrywą , łatwa do czyszczenia
- \*przezroczysta pokrywa łaźni zapewniająca ochronę przed stratą ciepła i przed zabrudzeniem
- \*cyfrowy wyświetlacz prędkości obrotowej i temperatury wody

Model	Re5250
Kolba próżniowa	50L (średnica kołnierza: 125mm)
Kolba odbierająca	10L×2
Powierzchnia chłodnicy	2m <sup>2</sup>
Prędkość obrotowa	0 ~ 100rpm (wyświetlacz cyfrowy, płynna)
Prędkość odparowania	do 800L/h
Wyświetlacz próżni	podwójny (próżniometr)
Kontrola próżni	Kontrola zaworu, czujnik wyświetlacz, < 100Pa
Filtracja próżniowa	szkło, φ60×220mm, H <sub>2</sub> O
Moc grzania	4.5KW×2
Kontrola temperatury	inteligentna, cyfrowa
Łaźnia grzewcza	SUS304, 560×300mm
Podnoszenie łaźni grzewczej	0 ~ 320mm (automatyczne)
Zasilanie	380V, 3-fazowe, 25A
Wymiary (mm)	1200×800×2220mm



## WYPARKA PRÓŻNIOWA 30-RE6000

- \* zastosowano opatentowany system zaworów PTFE, kontrolujący system przepływu powietrza i cieczy
- \* materiał może być dostarczany i odbierany w sposób ciągły, bez konieczności przerw w pracy.
- \* podwójne dno łaźni grzewczej wykonane ze stali nierdzewnej, podnoszenie automatyczne 0-180mm.
- \* łaźnia z pokrywą , łatwa do czyszczenia
- \* przezroczysta pokrywa łaźni zapewniająca ochronę przed stratą ciepła i przed zabrudzeniem.
- \* cyfrowy wyświetlacz prędkości obrotowej i temperatury wody.

nr katalogowy RE5250

Model	Re6000
Kolba próżniowa	250ml-6000ml
Kolba odbierająca	3000ml
Chłodnica	Pionowa, podwójna spiralna, reflux
Łaźnia grzewcza	1,8 kW, stal nierdzewna
Podnoszenie łaźni grzewczej	0-180mm automatyczne
Kontrola temperatury	inteligentna, wyświetlacz cyfrowy,
Prędkość obrotowa	10 ~ 150rpm, wyświetlacz cyfrowy
Kontrola prędkości	płynna
Manometr	tak
Zasilanie	220V/50Hz
Wymiary (mm)	530×380×980mm





## WYPARKA PRÓŻNIOWA RE3000B oraz RE3000D

Chłodnice:

RE3000B---pionowa podwójna spirala, reflux, szlif standardowy

RE3000D--- pionowa, na suchy lód, szlif standardowy

Model	RE3000B i RE3000D
Kolba próżniowa	50ml-3000ml
Kolba odbierająca	1000ml,3000ml
Zakres prędkości	0 ~ 200rpm
Kontrola prędkości	płynna
Wyświetlacz prędkości	brak
Podnoszenie	automatyczne 0 ~ 150mm
Moc grzania	1400W
Kontrola temp.	Autokontrola, wyświetlacz cyfrowy
Zakres temp.	Temp. otoczenia do 90°C
Dokładność temperatury	±1°C
Uszczelnienie	Uszczelka PTFE
Zasilanie	Zasilanie 220V/50Hz, 1500W

## WYPARKA PRÓŻNIOWA RE2000B

*Można zamówić opcjonalnie ze szlifami kulowymi RE2000A*

\* Zawór połączony wężem PTFE i pierścieniem

\* Automatyczne podnoszenie 0~150mm;  
przycisk dzielony: naciśnięcie górnej ramy-podnosi się  
silnik i kolba próżniowa, naciśnięcie dolnej części  
powoduje opuszczenie się ramy.

\* Łąźnia wodna pokryta PTFE

\* Nakrętka z pierścieniem: przekręcenie zgodne z ruchem  
wskaźówek zegara powoduje uszczelnienie kolby próżniowej.  
Zwolnienie przycisku umożliwia nastawę, dokręcenie -  
mocuje trwale w pozycji.

\* Przycisk prędkości: płynna nastawa w zakresie 20~200 rpm.

\* Cyfrowy wyświetlacz temperatury zadanej i rzeczywistej.

\* Kontrola temperatury w zakresie: temp. otoczenia do 90°C

Kolba próżniowa	50-2000ml
Kolba odbierająca	1000ml
Chłodnica	pionowa,podwójna spiralna,zwrotna,szlify standard
Łaźnia grzewcza	PTFE, z pokrywą, 1.4KW
Podnoszenie łaźni grzewczej	0~150 mm(automatycznie)
Prędkość obrotów	20~200 rpm(nastawny), 40W
Prędkość odparowania(H <sub>2</sub> O)	>1.5 l/h
Kontrola temperatury	cyfrowa
Zmiana fali± 2°C	tak
Próżniomierz	opcja
Niski poziom hałasu	tak
Powłoka PTFE	tak
Napięcie	220V / 50 Hz



## WYPARKA PRÓŻNIOWA RE5205(5L)

### nr katalogowy RE5205

Kolba próżniowa: 5000ml

Kolba odbierająca: 3000ml

Chłodnica: pionowa, podwójna spiralna, refluks

Prędkość obrotowa: 0 ~ 100rpm (regulacja płynna)

Podnoszenie rotoru: auto podnoszenie 0 ~ 150mm

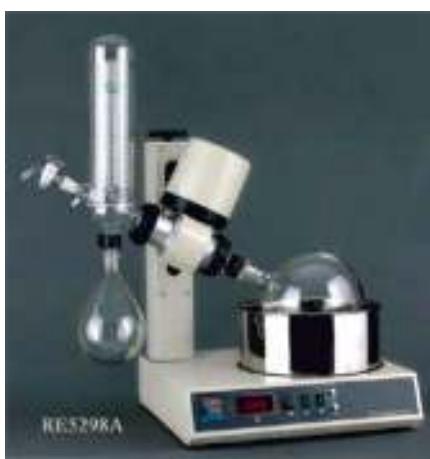
Łaźnia grzewcza : SS, moc grzania 2KW

Temperatura: auto kontrola, wyświetlacz cyfrowy

Zasilanie: 220V/50Hz

Wymiary : 110×60×110cm

Waga: 35kg



## WYPARKA PRÓŻNIOWA RE5298

### nr katalogowy 30-RE5298

Kolba próżniowa:: 50ml ~ 3000ml

Kolba odbierająca: 1000ml

Chłodnica : pionowa, podwójna spirala, szlif standard

Prędkość obrotowa: 0 ~ 100rpm (pływna regulacja)

Podnoszenie rotoru: podnoszenie automatyczne 0 ~ 150mm

Łaźnia grzewcza : SS, z zaworem kontrola, wyświetlacz cyfrowy

Zasilanie: 220V/50Hz, 1KW

Model RE5298A Cena netto 12000,00

W odniesieniu do RE5298

Cyfrowy wyświetlacz prędkości,  
pozostała specyfikacja jak RE5298

## WYPARKA PRÓŻNIOWA RE52A

\* Kolba próżniowa: 50 ml ~ 2000 ml

\* Kolba odbierająca: 500 ml

\* Chłodnica: pionowa, szlif standard, na suchy lód

\* Prędkość obrotowa: 0 ~ 150 rpm, pokrętło, płynna regulacja

\* Podnoszenie rotoru: automatycznie 0 ~150 mm, ręczne

\* Łaźnia grzewcza z pokrywą, stal nierdzewna, PTFE

\* Temperatura: autokontrola, wyświetlacz cyfrowy 0 ~ 90 C °

\* Zasilanie: 220V/50Hz, 1KW

Kolba próżniowa 500-2000ml

Kolba odbierająca 500ml

Chłodnica pionowa, spiralna, duży otwór, szlify

Łaźnia grzewcza łażnia stal nierdzewna, 1.4KW

Podnoszenie łaziń grzewczej 0~150 mm (automatycznie)

Prędkość obrotów 0~150 rpm (nastawny)

Prędkość odparowania(H<sub>2</sub>O) >1,5 l/h

Kontrola temperatury cyfrowa, czujnik programowalny

Manometr opcja

Niski poziom hałasu tak

Powłoka PTFE tak

Napięcie 220V / 50Hz



Model RE52AA

\*podnoszenie automatyczne



## WYPARKA PRÓŻNIOWA RE52CS-2

- \* Kolba próżniowa: 50 ml ~ 2000 ml
- \* Kolba odbierająca: 500 ml
- \* Chłodnica: stopniowa, spiralna, szlif standard
- \* Prędkość obrotowa: 0 ~120 rpm ( płynna regulacja)
- \* Podnoszenie rotoru: ręczne 0 ~150 mm
- \* Łąźnia grzewcza: 260 x 150 mm
- \* Temperatura: autokontrola, wyświetlacz cyfrowy 0 ~ 90°C
- \* Zasilanie: 220V / 50Hz, 1KW

Kolba próżniowa	50-2000 ml
Kolba odbierająca	500 ml
Chłodnica	stopniowa, spiralna, duży otwór, szlify, standard
Łaźnia grzewcza	łaźnia stal nierdzewna, stała temperatua
Podnoszenie łaźni grzewczej	0 ~ 150 mm (ręcznie)
Prędkość obrotów	0 -120 rpm
Wyświetlacz liczby obrotów	cyfrowy
Prędkość odparowania(H <sub>2</sub> O)	>1,5 l/h
Próżniomierz	opcja
Niski poziom hałasu	tak
Powłoka PTFE	tak
Napięcie	220V / 50 Hz



## WYPARKA PRÓŻNIOWA RE52C

### nr katalogowy RE52C

- Kolba próżniowa: 500ml ~ 2000ml
- Kolba odbierająca: 500ml
- Chłodnica : pionowa, szlif standard
- Prędkość obrotowa: 0 ~ 150rpm (bez regulacji)
- Podnoszenie rotoru : ręczne



## WYPARKA PRÓŻNIOWA RE5286A

Kolba próżniowa	500-2000ml
Kolba odbierająca	500ml
Chłodnica	pionowa, spiralna, duży otwór, szlify standard
Łaźnia grzewcza	łaźnia stal nierdzewna, 1.4 kW
Podnoszenie łaźni grzewczej	0~150 mm (automatycznie)
Prędkość obrotów	0~150 rpm (nastawny)
Wyświetlacz liczby obrotów	cyfrowy
Prędkość odparowania(H <sub>2</sub> O)	>1,5l/h
Kontrola temperatury	cyfrowa
Zmiana fali± 2°C	tak
Próżniomierz	opcja
Niski poziom hałasu	tak
Powłoka PTFE	tak
Napięcie	220v / 50 Hz

## **WYPARKA PRÓŻNIOWA RE5285A**

### **nr katalogowy RE5285A**

Kolba próżniowa: 500ml ~ 2000ml

Kolba odbierająca: 500ml

Chłodnica: stopniowa, spiralna, szlif standard

Prędkość obrotowa: 0 ~ 150rpm (pływna regulacja)

Podnoszenie rotoru : ręczne

0 ~ 100mm



łaźnia wodna - opcja B220



## 6. Distillation, separation, filtration

### Rotary evaporators/Instruments

#### Rotary Evaporator Rotavapor® R-300

The rotary evaporator R-300 meets the highest needs in convenience, productivity and versatility. The rotation speed, heating temperature and lift position is shown digitally on the heating bath.

##### Lift System

Option 1: Manual lift

Option 2: Electronic lift

##### Heating Bath

**Option 1: B-301.** Temperature range of 20°C to 95°C (water). Max. evaporating flasks size: 1000mL (3kg). Cordless connection. Digital display of set and actual temperature, rotation speed, lift position. Lock of heating temperature. Fast heat up time.

**Option 2: B-305.** Temperature range of 20°C to 220°C. Max. evaporating flasks size: 5000mL (3kg). Cordless connection. Digital display of set and actual temperature, rotation speed, lift position. Lock of heating temperature.

##### Standard Joint

SJ 29/32

##### Glass Assembly

**Option V: Vertical condenser (V):** Vertical condenser used along with a recirculating chiller or tap water.

**Option C: Cold trap (C):** Cold trap used for low boiling solvents along with e.g. dry ice for cooling.

Other glass assembly configuration on request

##### Protective Coating

Option: Transparent PLASTIC+GLAS (P+G) safety coating. Protect against mechanical damage. In the event of breakage there is no loss of sample.

#### 1 Rotavapor® R-300 with heating bath B-301

Type	Lift	Capacitor	Coating	PK	Cat. No.
R-300	manually	vertical	no	1	<b>6.267 887</b>
R-300	electric	vertical	yes	1	<b>6.267 888</b>
R-300	electric	cold trap	yes	1	<b>6.267 889</b>

#### 2 Rotavapor® R-300 with heating bath B-305

Type	Lift	Capacitor	Coating	PK	Cat. No.
R-300	manually	vertical	no	1	<b>6.267 890</b>
R-300	electric	vertical	yes	1	<b>6.267 891</b>
R-300	electric	cold trap	yes	1	<b>6.267 892</b>



## 6. Distillation, separation, filtration

### Rotary evaporators/Instruments

#### Rotary Evaporator Rotavapor® R-300 Configuration

Every Rotary Evaporator Rotavapor® R-300 will be delivered with a transparent PLASTIC+GLAS (P+G) safety coating, a vertical glass assembly (V), NS29/32, and a vacuum pump V-300. Interface, heating bath and recirculating chiller could be chosen from below options.

#### Interface

**Option S:** I-300, with VacuBox, Woulff bottle. Operation by navigation knob and function keys. Wide range of operating modes (manual, timer, solvent library, automatic distillation, drying). Compatible with BUCHI Rotavapor App for mobile push notifications and remote monitoring.

**Option P:** I-300 Pro, with VacuBox, Woulff bottle. Operation by touch screen or navigation knob. Wide range of operating modes (methods, manual, timer, solvent library, automatic distillation, drying). Charting and recording possibilities (on SD card). Compatible with BUCHI Rotavapor App for mobile push notifications and remote monitoring (including charting).

#### Vacuum pump

V-300 (1.8m<sup>3</sup>/h, 5mbar) is a chemically resistant PTFE diaphragm vacuum pump with transparent front panel to observe the membrane for highest distillation efficiency. Final vacuum: 5 mbar ( $\pm 2$  mbar). Suction capacity: 1.8 m<sup>3</sup>/h. Speed-controlled operation.

#### Recirculating chiller F-305

Ecological recirculating chiller. Cooling capacity: 550 W at 15°C. Temperature range: - 10°C to +25°C. Rotation knob for set temperature in steps of 0.1°C. Lock of cooling temperature. In combination with Interfaces I-300/I-300 Pro: Temperature setting/monitoring via interface, energy-saving eco-mode and automatic ON/OFF.

#### Heating Bath

**Option 1: B-301.** Temperature range of 20°C to 95°C (water). Max. evaporating flasks size: 1000 mL (3 kg). Cordless connection. Digital display of set and actual temperature, rotation speed, lift position. Lock of heating temperature. Fast heat up time.

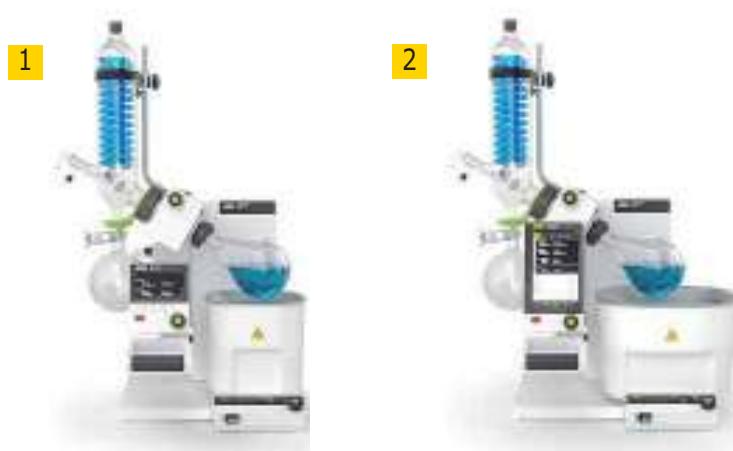
**Option 2: B-305.** Temperature range of 20°C to 220°C. Max. evaporating flasks size: 5000 mL (3 kg). Cordless connection. Digital display of set and actual temperature, rotation speed, lift position. Lock of heating temperature.

#### 1 Rotavapor® R-300 System with Interface I-300 without recirculating chiller F-305

Type	Lift	Capacitor	Coating	Heating bath	PK	Cat. No.
R-300S	manually	vertical	yes	B-301	1	6.267 893
R-300S	electric	vertical	yes	B-301	1	6.267 894
R-300S	electric	vertical	yes	B-305	1	6.267 895

#### 2 Rotavapor® R-300 System with Interface I-300 Pro without recirculating chiller F-305

Type	Lift	Capacitor	Coating	Heating bath	PK	Cat. No.
R-300P	electric	vertical	yes	B-301	1	6.267 896
R-300P	electric	vertical	yes	B-305	1	6.267 897



## 1 Rotavapor® R-300 System with Interface I-300 and recirculating chiller F-305

1



Type	Lift	Capacitor	Coating	Heating bath	PK	Cat. No.
R-300S	electric	vertical	yes	B-301	1	6.267 898
R-300S	electric	vertical	yes	B-305	1	6.267 899

## 2 Rotavapor® R-300 System with Interface I-300 Pro and recirculating chiller F-305

2



## Rotary Evaporator Rotavapor® R-100

The Rotavapor® R-100 is a high-quality rotary evaporator to meet the essential needs in classical laboratory applications. It is capable of a manually adjusting the rotation speed from 20 to 280 rpm and is equipped with an action jack lift for manual lifting of the evaporating flask.

### Heating Bath B-100

Temperature range of 20°C to 95°C. Max. evaporating flask size: 4000mL (3kg). Digital display of set and actual temperature (alternating).

### Standard Joint

SJ 29/32

### Glass Assembly

**Option V: Vertical condenser (V):** Vertical condenser used along with a recirculating chiller or tap water.

**Option C: Cold trap (C):** Cold trap used for low boiling solvents along with e.g. dry ice for cooling.

### Protective Coating

Option 1: Without coating

Option 2: Transparent PLASTIC+GLAS (P+G) safety coating. Protect against mechanical damage. In the event of breakage there is no loss of sample.

## 3 Rotavapor® R-100 with vertical glass assembly

Heating bath B-100, manual lift.

Type	Capacitor	Coating	PK	Cat. No.
R-100	vertical	no	1	6.268 002
R-100	vertical	yes	1	6.268 003



## 6. Distillation, separation, filtration

### Rotary evaporators/Instruments

1



1

#### Rotavapor® R-100 with cold trap

Heating bath B-100, manual lift.

Type	Capacitor	Coating	PK	Cat. No.
R-100	cold trap	no	1	6.268 004
R-100	cold trap	yes	1	6.268 005

#### Rotary evaporator System Rotavapor® R-100

The Rotavapor® R-100 can be completed to a rotary evaporator system including a vacuum pump, interface and recirculating chiller. The Vacuum Pump V-100 and Recirculating Chiller F-105 are ON/OFF regulated by the Interface I-100. Heating bath, glass assembly and coating are similar to the Rotavapor® R-100.

##### Interface

I-100, with Woulff bottle. Operation by function keys. Two operating modes (manual, timer), display of set and actual pressure. ON/OFF regulation of Vacuum Pump V-100 and Recirculating Chiller F-105.

##### Vacuum Pump

V-100 is a chemically resistant PTFE diaphragm vacuum pump. Final vacuum: 10 mbar ( $\pm 2$  mbar). Suction capacity: 1.5 m<sup>3</sup>/h. ON/OFF regulation.

##### Recirculating Chiller

**Option: F-100.** Ecological recirculating chiller. Cooling capacity: 300 W at 10°C. Fix temperature: 10°C.

**Option: F-105.** Ecological recirculating chiller. Cooling capacity: 500 W at 15°C. Temperature range: -10°C to +25°C. Rotation knob for set temperature in steps of 1°C. In combination with Interface I-100: ON/OFF regulation.

2

#### Rotavapor® R-100 system configuration

Heating bath B-100, manual lift, Interface I-100, vacuum pump V-100.

Type	Capacitor	Coating	PK	Cat. No.
R-100	vertical	no	1	6.268 006
R-100	vertical	yes	1	6.268 007
R-100	cold trap	no	1	6.268 008
R-100	cold trap	yes	1	6.268 009

3

#### Rotavapor® R-100 system configuration with recirculating chiller F-105

Heating bath B-100, manual lift, Interface I-100, vacuum pump V-100, recirculating chiller F-105.

Type	Capacitor	Coating	PK	Cat. No.
R-100	vertical	no	1	6.268 010
R-100	vertical	yes	1	6.268 011

2



3



## 6. Distillation, separation, filtration

### Rotary evaporators/Instruments

#### 1 Industrial Rotavapor® R-220 SE

The Rotavapor® R-220 SE is designed for distillation, concentration, drying or solvent recycling in the industrial environment. Key benefits are safety, robustness and easy handling. The integrated vacuum controller and the large display allow for convenient control and supervision, as well as reproduction of the process. Different glass assemblies are available to cover different needs. A wide range of accessories enables different grades of automation.

**R-220 SE R:** 1 x 10 L receiving flask, 20 L evaporating flask and Vacuum Controller V-850.

**R-220 SE DW:** For foaming or low boiling products, two receiving flasks, 20 L evaporating flask and Vacuum Controller V-850.

#### Specification

Glass assemblies:	7 configurations
Evaporating flask:	6 L, 10 L or 20 L
Heating:	3.6 kW heating capacity for up to 180°C
Bath lift:	electronically
Rotation:	electronically, 5-150 rpm
Protective coating:	Safety PLASTIC+GLAS coating
Voltage:	200 V, 230 V (single phase) or 400 V (3 phase)



Type	Description	PK	Cat. No.
R-220 SE R, 20L, V-850, 230V	With reflux assembly	1	6.267 853
R-220 SE DW, 20L, V-850, 230V	With descending assembly	1	6.267 854
R-220 SE R, 20L, V-850, 400V	With reflux assembly	1	6.267 855
R-220 SE DW, 20L, V-850, 400V	With descending assembly	1	6.267 856

#### 2 Rotary Evaporator RV 8

The IKA Rotary Evaporator range gets a new family member - the RV 8. This distilling system completes the existing series by adding a functional basic model. The manual lift, with ambidextrous design, allows for precise positioning of the glassware. Digital displays for rotation speed and heating bath temperature allow for optimal control of all distilling processes. New clamp mechanism to simplify the changing of evaporation flasks.

- Manual lift with integrated safety "lift-out-function"
- Water/oil heating bath with integrated ergonomic carrying handles
- Key-button with locking function for the heating bath temperature
- Adjustable immersion angle
- Digital displays for rotation speed and heating bath temperature
- Single-hand operation; ambidextrous design
- Speed range 5 - 300rpm
- Additional user safety through reduced 24 V power requirements within the unit
- Compatible with the complete range of IKA RV 10 glassware
- New clamp mechanism



#### Specifications

##### Drive

Motor rating input	50W
Speed:	5 to 300rpm
Speed display:	digital
Adjustable head angle:	0 to 45°
Stroke displacement:	130mm, manual

##### Heating bath

Bath volume:	3l
Temperature range:	RT to +180°C
Heating power:	1300W

##### General data

Dimensions (WxDxH):	510 x 345 x 490mm
Protection class according to DIN EN 60529:	IP 20
Power supply	220-240V, 50/60Hz

Type	Description	PK	Cat. No.
RV 8 Flex	with heating bath HB 10 and Woulff bottle	1	9.813 001
RV 8 V	with heating bath HB 10 and vertical glassware, RV 10.1	1	9.813 002
RV 8 V-C	with heating bath HB 10 and vertical glassware, coated RV 10.10	1	9.813 003

## 6. Distillation, separation, filtration

### Rotary evaporators/Instruments

#### Rotary evaporator RV 10 digital

The RV 10 digital is a robust and reliable lab companion. Its optimized bath volume allows for fast heat-up times. The condenser unit has specially designed glass tubes that utilize the 1500 cm<sup>2</sup> surface extremely efficiently. That's why the RV 10 digital delivers reliable and reproducible process results usually seen on much more costly systems. Additional features such as smooth start, left-right interval or timer function capability support the users in their daily lab work. Another important aspect of the RV 10 digital is the sophisticated safety features. The motorized lift has an automated lift-out function in case of power outage to prevent superheating of the solvent. Safety temperature circuits can be set individually. Dry-run protection, adjustable lower end stop and lock function of bath setting complete the line of safety features. Furthermore, IKA offers a choice of coated glassware for increased safety needs.

The RV 10 digital has a RS232 interface which allows for remote control via IKAs "labworldsoft". The heating bath is controlled via the IR interface from the main unit.

- Universal (water/oil) heating bath
- Vertical Glassware as standard
- Motorized lift with "safety-stop" function
- Optimized heating bath volume for fast heat-up
- Highly efficient 1500 cm<sup>2</sup> condenser unit
- Rugged design
- Ergonomically placed handles on heating bath
- Smooth start
- Left-right interval
- Timer function
- Dry-run protection
- Safety temperature circuits
- Lower-end stop
- Choice of coated glassware
- Push-off mechanism to loosen tight fitted glassware
- Easy and safe operation due to ergonomically designed user interface
- RS-232 interface for remote control



#### Specifications

Drive:

Motor rating input: 50W

Speed range: 20 to 280 rpm

Speed display: digital

Head angle adjustable: 0 to 45°

Stroke displacement: 140mm, motorised

Setting of lower end stop: 60mm, contact-free

Heating bath:

Temperature range: Ambient up to 180°C

Heating power: 1.300W

Protection class acc. to DIN EN 60529: IP 20

Power supply: 220-240V/50/60Hz

Type	Description	PK	Cat. No.
RV 10 digital V	with heating bath HB 10, vertical glassware RV 10.1, vapor tube RV 10.70	1	9.813 012 1
RV 10 digital V-C	with heating bath HB 10, vertical glassware, coated RV 10.10, vapor tube RV 10.70	1	9.813 014
RV 10 digital V FLEX	with heating bath HB 10, Woulf bottle, spherical joint clip RV 05.10, clamp, NS 29 RV 10.88, vapor tube RV 10.70	1	9.813 015
RV 10.70	Vapor tube made of borosilicate glass, NS 29/32	1	6.237 535
RV 10.8001	Lip-seal from a PTFE compound with a built-in stainless steel spring	1	4.008 136

## 6. Distillation, separation, filtration

### Rotary evaporators/Instruments

#### Rotary evaporator RV 10 control

The RV 10 control is the flagship of the rotary evaporator series by IKA®. It stands out by virtue of use with color graphic display, integrated vacuum controller, cooling water monitoring and sophisticated safety standards. But the IKA® RV 10 control goes one step further. Like the RV 10 digital, it can be precisely controlled via the RS 232 interface for remote PC operation with IKA®'s labworldsoft® and is thus ideal for automatic operation, but that's not all; the control functions also enable completely automatic distillation both for volume based processes and full drying depending on the area of application. The expandable solvent library also allows you to incorporate new processes.

Same properties as RV 10 digital, with the following additional functions:

Integrated vacuum controller with central display for automatic distilling and ramp programming

- Integrated solvent library, which can be extended by the user
- Distillation specific parameters stored for standard distillations
- Automatic transfer of measurements and distillation type with one key press
- Programmable volume controlled distillation
- Colour graphic display for safe and comfortable operation
- Display of distillation curves
- Multiple languages
- Automatic ventilation at the end of each test
- Cooling water switched off automatically at the end of the test
- Integrated cooling water monitoring
- Heating bath safety management; automatic heating bath monitoring with distillation stop in case of temperature errors
- Heating bath switched off automatically at the end of the test
- USB interface
- 5 years warranty after registration
- New: Now RV 10.4002 Magnetic valve included in delivery

Type	Description	PK	Cat. No.
RV 10 control V	with heating bath HB 10, vertical glassware RV 10.1 and RV 10.4002 Magnetic valve laboratory vacuum	1	9.813 004 1
RV 10 control V-C	with heating bath HB 10, vertical glassware, coated RV 10.10 and RV 10.4002 Magnetic valve laboratory vacuum	1	9.813 005
RV 10 control FLEX	with heating bath HB 10, incl. Woulff bottle and RV 10.4002 Magnetic valve laboratory vacuum, glassware - please order separately	1	9.813 006
RV 10 control V auto	with heating bath HB 10, speed-controlled pump N 920, vertical glassware RV 10.1	1	9.813 007 2
RV 10 control V-C auto	with heating bath HB 10, speed-controlled pump N 920, vertical glassware, coated RV 10.1	1	9.813 008

1



9.813 004

2



9.813 007

#### Accessories for Rotary evaporators RV 8/RV 10 digital/RV 10 control

Type	Description	PK	Cat. No.
MVP 10 basic	Vacuum pump	1	9.813 010
N 920 KT.29.18	Vacuum pump	1	6.229 964
LVS105T-10 ef	Vacuum pump	1	4.008 149
VCV 1	Vacuum control valve	1	9.813 016
RV 10.4001	Magnetic valve in-house vacuum	1	6.237 539
RV 10.4002	Magnetic valve laboratory vacuum	1	6.237 538
RV 10.4003	Pump control incl. magnetic valve	1	6.237 330
RV 10.5001	Choke water valve	1	6.237 540
RV 10.5002	Filter	1	6.237 541
RV 10.5003	Pressure regulating valve	1	6.237 542

## 6. Distillation, separation, filtration

### Rotary evaporators/Instruments

#### 1 Rotary evaporator RC 900

- Sleek design, small footprint
- Whisper quiet for a pleasant working environment
- Versatile use, simple operation

##### Features

- Chilled condenser is straightforward to detach by turning the tension nut. The chilled condenser is also extremely easy to clean.
- Relevant parameters for distillation and for the heating bath are easily set by touching and turning.
- Cordless heating bath with drain for safe bleeding and emptying without spillages.
- Hose guide inside the tower - tidy and safe, with hoses no longer an obstruction.
- Straight-forward flask exchange - glass flask simply locks into place - and can be done with one hand.
- Convenient, fully adjustable flask angle set via a control knob.

##### Specifications

Heating bath: heating bath temperature	20 - 180°C
Coolant supply (chilled condenser)	
Permissible pressure:	3bar
Permissible temperature:	15°C bis +20°C
Cooled surface area:	1230cm <sup>2</sup>
Parameters of evaporation flask	
Size of evaporation flask:	50 - 3000ml
Rotational speed:	25 - 250 min <sup>-1</sup>
Length of stroke:	150mm
Lifting speed:	approx 38mm/s
Dimensions (L x H x W)	
Without glass:	447 x 464 x 431mm
With glass:	447 x 823 x 487mm
Weight:	9.1kg

Type	PK	Cat. No.
Rotary evaporator RC 900	1	7.660 052
Protective cover for heating bath	1	7.660 053



## 6. Distillation, separation, filtration

Rotary evaporators/Accessories

### 1 Bladder for rotary evaporators for venting with inert gas

Football bladder

Type	PK	Cat. No.
Bladder for rotary evaporators	1	9.115 515



### Evaporator flask pear shape, borosilicate glass 3.3

Manufactured from borosilicate glass 3.3, according to DIN 12383

Capacity ml	NS	PK	Cat. No.
100	29/32	1	6.237 167
250	29/32	1	6.237 711
500	29/32	1	6.243 664
1000	29/32	1	6.236 112



6.236 112

### Evaporating flasks with conical ground joint, DURAN®

Especially for rotary evaporators, with center neck and conical joint, pear-shaped, material: DURAN®

Capacity	Socket	Flask diam.	PK	Cat. No.
ml	NS	mm		
50	29/32	56	1	9.196 020
100	29/32	60	1	9.196 024
250	29/32	81	1	9.196 036
500	29/32	101	1	9.196 044
1000	29/32	126	1	9.196 054
2000	29/32	158	1	9.196 063

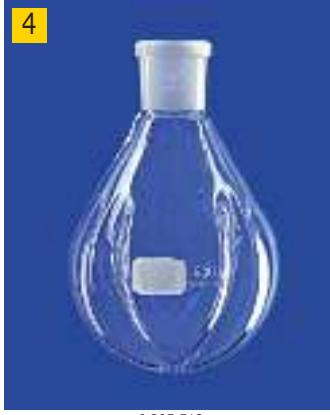


9.196 044

### Powder flasks with conical ground joint, DURAN®

Specially for rotary evaporators. For the drying of powder-like substances . With centre neck and conical joint, with inscription label.

Capacity	Socket	Flask diam.	PK	Cat. No.
ml	NS	mm		
100	29/32	60	1	6.205 965
250	29/32	81	1	6.205 966
500	29/32	101	1	6.205 512
1000	29/32	126	1	6.206 195
2000	29/32	158	1	6.205 692



6.205 512

### Receiving flasks, with spherical ground glass joint, borosilicate glass 3.3

Manufactured from borosilicate glass 3.3 and meeting quality standards according to DIN 12383 standards. *Isolab*

Capacity ml	Socket NS	Flask diam. mm	PK	Cat. No.
100	35	64	1	6.243 665
250	35	85	1	6.243 666
500	35	105	1	6.243 667
1000	35	131	1	6.243 668



6.243 668

## 6. Distillation, separation, filtration

### Rotary evaporators/Accessories

1



9.196 244

#### Receiving flasks, DURAN®

Especially for rotary evaporators, with spherical joint socket S 35, with and without, transparent PUR coating, autoclavable, material: DURAN®.

Capacity ml	Socket NS	Description	Flask diam. mm	PK	Cat. No.
100	35	uncoated	64	1	9.196 224
250	35	uncoated	85	1	9.196 236
500	35	uncoated	105	1	9.196 244 1
500	35	PUR coating	105	1	7.653 714
1000	35	uncoated	131	1	9.196 254
1000	35	PUR coating	131	1	9.812 217
2000	35	uncoated	166	1	9.196 263
2000	35	PUR coating	166	1	6.200 782

2



9.011 698

#### Fork clamps for spherical joints

Material: stainless steel. For spherical ground joint connections. With set screw.

Size	PK	Cat. No.
S 13	1	9.011 693
S 19	1	9.011 694
S 29	1	9.011 695
S 35	1	9.011 698 2
S 40 / 41	1	9.011 696
S 65	1	9.011 697

#### PUR Coating, autoclavable

##### Physical Properties

Autoclavable	121°C/2.05 bar/20 minutes - max. 100 cycles
Transmission	absorption up to 380nm
Long-term heat resistance	up to 140°C
Max. heat resistance	up to 190°C for a short time
Suitable for freezing	-30°C
Suitable for microwave use:	yes

##### Chemical Properties (Resistance)

Water	up to 100°C
Organic solvents	room temperature/5 min. constant exposure
- alcohol	
- acetone	
- tetra	
Inorganic acids, bases	room temperature/5 min. constant exposure
- hydrochloric acid ( up to 20%)	
- nitric acid ( up to 20%)	
- sulphuric acid (up to 20%)	
- caustic soda (up to 20%)	
Cleaning resistance	Standard disinfectants and detergents
- industrial washers/clinic	up to 50 cycles/ max. 95°C
- household dishwashers	up to 50 cycles/ max. 65°C

3



6.246 010

#### Evaporating flasks with conical ground joint, DURAN®, with PUR coating

Especially for rotary evaporators, with center neck and conical joint, with highly transparent PUR coating, autoclavable, pear-shaped, material: DURAN®

Capacity ml	Socket NS	Flask diam. mm	PK	Cat. No.
50	29/32	56	1	6.246 006
100	29/32	60	1	6.246 007
250	29/32	81	1	6.246 008
500	29/32	101	1	6.246 009
1000	29/32	126	1	6.246 010 3
2000	29/32	158	1	6.242 495
3000	29/32	175	1	6.246 011