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**Distil up to 20 litres of solvent  
efficiently and gently**



**BÜCHI Rotavapor® R-220**

# Büchi sets the standard in the 20-litre large-scale format with the Rotavapor® R-220

**When Büchi, the leading evaporation system supplier, launches a new large-scale rotary evaporator, users in technical laboratories can be confident it will have excellent functionality and be of the highest quality construction. The new Büchi Rotavapor® R-220 is designed for rapid, efficient evaporation of sample volumes up to 20 litres. Its broad temperature range from +20°C to +180°C opens up a wide range of applications and its modular design makes it possible to fully adapt the Rotavapor® to our customer's individual needs. Its superior cost-to-benefit ratio also makes the R-220 a most attractive economic investment.**

## **Outstanding Design**

The new Rotavapor® has been completely re-designed to increase its functionality. The unit has been made more accessible and even safer and easier to operate. The motor is installed in the chassis and a sturdy support ensures maximum stability. Many other features such as simple assembly and ease of cleaning have also been incorporated.



*The new Rotavapor® R-220: More than forty years of experience in rotary evaporation and the design know-how of the world's market leader.*

## **a wide range of applications**

The new Büchi large-scale rotary evaporator is ideally suited for the widest range of large-scale processes such as

- distillation (continuous and discontinuous)
- stripping down dissolved or suspended products
- removing solvents
- drying powders
- performing reflux reactions
- recrystallising contaminated products
- cleaning contaminated solvents (recycling)
- synthesising and refining fine chemicals



*All process functions can be accessed by push buttons on the self-explanatory control panel.*

# The innovative Snap Flange Coupling – can be opened and closed with one hand



*A Büchi exclusive: the new patented Snap Flange Coupling can be opened and closed with one hand.*

## Easy-to-use

One problem with large-scale rotary evaporators is the handling of large volume glass flasks. Büchi has developed a simple solution with a new type of Snap Flange Coupling system which can be set up, closed and opened again with one hand while the other hand supports the flask. This patented development makes it possible to mount and remove 20-litre flasks unaided and with minimal effort.



*One heating bath for oil or water.*

## One heating bath for oil or water

With the new Rotavapor® R-220, it is possible to use the same bath for oil or water as the temperature range of the bath is from +20°C to +180°C.

## The new Büchi tap

A completely inert shut-off tap is another practical improvement. The novel design means that it is possible to open and close the spring-loaded tap with just a single movement of the hand. The tap's spring mechanism minimises the possibility of damaging the glass by using too much force when turning it off.

## The Emphasis is on Safety

Büchi consistently places safety at the forefront of its design criteria. Eight specific safety features, all exhaustively tested under operational conditions, make it possible to operate the R-220 safely and efficiently:

- dual over-temperature cut-out devices
- manually adjustable maximum temperature control
- protection mechanism immediately shuts off the rotational movement if problems occur
- contact protection for the oil/water bath shields personnel from hot surfaces
- foldable splash protection device available (optional extra)
- «PLASTIC+GLAS» coating of glass parts protects against breakage or splintering of glassware
- bath is automatically switched off and lowered in the event of a power failure
- continuous feed option for the heating bath (optionally) maintains a constant level in the bath

## Outstanding quality features

- stainless steel chassis
- inert system with borosilicate glass and PTFE
- compact housing
- large diameter high performance continuous feed mechanism for product introduction
- abrasion-free sealing system
- high degree of functional safety and legendary Büchi quality



*The protective «PLASTIC+GLAS» layer increases safety by protecting against glass splinters and mechanical damage, whilst providing liquid containment.*

# EasyClamp Coupling – for easy, fast and reliable construction of glass assemblies



You can fasten the glass assemblies quickly and reliably with the EasyClamp Coupling.

## Even more glassware assemblies

You may now choose from seven glassware assembly options for the new Rotavapor® R-220 - catering for an even wider variety of applications.

### EasyClamp Coupling

The flexible glass coupling is also new. You can mount, without using force, the interchangeable glass pieces in a fraction of the time otherwise necessary. Users who have to frequently change glass configurations will especially appreciate this.

**The new Büchi R-220 – a great solution for all your requirements in the fields of**

pharmaceuticals

speciality chemistry

fine chemicals

biotechnology

food technology

manufacturing aromatic odoriferous substances

agrochemistry

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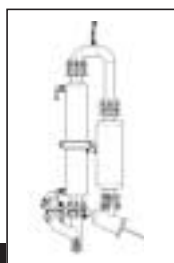


### The right assembly for every application:

#### «Reflux»

This assembly is ideally suited to reflux reactions and for distilling high-boiling solvents such as toluene or water.

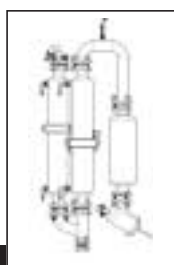
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#### «Descending»

The descending glass assembly is especially suited to distillation of solvents having a low heat of evaporation, solvent recovery, or for use with foaming products. A large expansion vessel prevents the foam or aerosol from getting into the condenser.

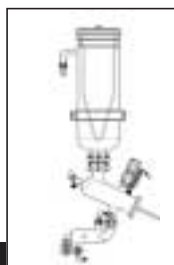
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#### «Descending» with 2 condensers

The D2 is the preferred system when the best condensation and highest recovery rates are demanded. The secondary condenser offers you the highest distillation performance with very volatile solvents and foaming mixtures.

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#### With a cold trap

Operating with the cold trap and dry ice enables condensing temperatures down to  $-70^{\circ}\text{C}$  to be achieved. This makes it possible to completely condense even extremely volatile and low-boiling solvents such as chloroform or methylene chloride.

#### «Bullfrog» condenser

The Bullfrog assembly is designed for use in restricted height fume cupboards as it is only 1.350 mm high.

# Combine the modules for your individual requirements

The new Rotavapor® R-220 options are illustrated in modular format in the table below. Simply select your choice of glass assembly, evaporating flask and modules and enter the appropriate numbers into the green spaces. You will find the information for ordering the accessories on the reverse side.

your order code:

8 1

## cable / voltage

- 1** 230 V
- 2** 200 V
- 6** 400 V
- 7** 400 V cable CH
- 8** 400 V cable D

## bath constant level device

- 0** without constant level
- 1** with constant level

## evaporating flask

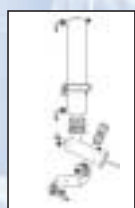
- X** no evaporating flask
- A** 6 lt. evaporating flask (as spare part: no 27470)
- B** 10 lt. evaporating flask (as spare part: no 27469)
- C** 20 lt. evaporating flask (as spare part: no 27468)
- E** 10 lt. powder drying flask (as spare part: no 27592)
- F** 20 lt. powder drying flask (as spare part: no 27593)

## glassware assembly

- 21** R reflux
- 22** RB reflux Bullfrog
- 23** C cold trap
- 24** D descending
- 25** DB descending Bullfrog
- 26** D2 descending with a second condenser
- 27** DB2 descending with 2 Bullfrog condensers
- 28** F fractionating

## receiving flask

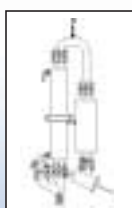
- 1** single receiving flask 10 lt.
- 2** dual receiving flasks 2 x 10 lt.



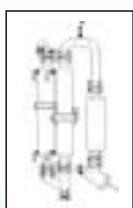
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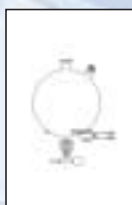
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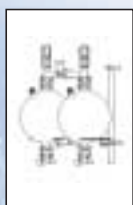
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**26**



**1**



**2**

## Accessories



### Lamella safety curtain

The PVC lamella safety curtain effectively protects you in the unlikely event of an implosion or broken glass. Its protective effect has been scientifically proved.

order number 41256

### Splash protection

May be folded upwards, with a polycarbonate shield that can be unscrewed. Flask rotation is automatically stopped when folded away.

order number 41201



### Vac V-1000

PTFE diaphragm pump with a final vacuum of 10 mbar and a throughput of 3 m<sup>3</sup>/h

order number  
230 V 41831  
120 V 41832



### Vacuum Controller V-800/805

Special package for the R-220. Simple or automatic control of the vacuum for efficient and gentle distillation, with integrated timer function. Basic version is the V-800. For more features like the gradient function, the V-805 will be the right choice.

order number  
V-800 230 V 40721  
V-800 120 V 40722  
V-805 230 V 40723  
V-805 120 V 40724

Vacuum valve for V-800/805 to connect to a diaphragm pump or house vacuum 31354

### Trolley

Trolley in powder coated stainless steel for the Rotavapor® R-220 with 4 lockable wheels. Length 850 mm, width 420 mm, height 560 mm.

order number 41257



### Manual Flask Handler

order number 41400

## Technical data

<b>power consumption</b>	4200 W (max)
<b>electrical requirements</b>	200 V / 230 V / 400 V, 50/60 Hz
<b>evaporator output</b>	up to 4 l/h with water, higher for other solvents (in accordance with the latent heat of evaporation of the solvent); e.g. 20 l/h with acetone
<b>rotation drive</b>	induction motor with external fan, 180 W
<b>speed regulation</b>	electronic, continuous, 5 - 140 rpm
<b>bath power</b>	3600 W (max), heat input 3 W/cm <sup>2</sup>
<b>bath dimensions</b>	Ø 430 mm x 240 mm, bath volume 20 l (without the flask immersed)
<b>bath construction</b>	stainless steel X2CrNiMo 17 13 2, 1.4404 (DIN) or 316L (US)
<b>bath temperature control</b>	electronic, with PT-1000, accuracy ±1°C. Thermal cut-out automatically triggered at 15°C above the set temperature
<b>bath lift (motorised)</b>	linear drive, protection class IP 65
<b>display parameters</b>	vapour temperature, bath temperature, rotation speed integrated
<b>aeration</b>	valve; push-button operation, also activated in the event of power failure. Inert gas connection possible
<b>vacuum pump</b>	recommended throughput capacity 2 - 4 m <sup>3</sup> /h
<b>cooling water consumption</b>	120-200 lt./h, can be regulated with needle valve
<b>weight</b>	approx. 65 kg (without glass)
<b>dimensions</b>	height max. 1.800 mm (Bullfrog design 1.350 mm) width max. 1.250 mm, depth max. 650 mm

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