



## **Industrial Evaporation Solutions** Reliable performance for large volumes

BUCHI offers dedicated solutions for industrial rotary evaporation whether you operate in R&D or production. Profit from highly performant, convenient and tailor-made solutions from the market leader to cover your distinct needs.



"Quality in your hands" is the guiding principle that shapes our philosophy and our actions. It challenges us to provide outstanding services that are precisely tailored to your needs. This means that we must stay in close contact with our customers. That is why we keep in touch and continue to work very hard to understand you and your business even better.

We help you by providing high-quality products, systems, solutions, applications and services that offer you added value. This allows you to focus entirely on your processes and your work.



#### Easy

You handle complex processes, do challenging work and want to focus on what is essential. We support you by providing carefully designed solutions as well as instruments and systems that are easy to operate.



#### Competent

You need products, systems, solutions, applications and services that are precisely tailored to your needs. We have the technological expertise and decades of experience needed to provide competent support and work with you to continually improve our market services.



#### Reliable

You want to be able to rely completely on your partner for products, systems, solutions, applications and services. We guarantee the quality and functionality of our equipment and will continue to help you quickly and efficiently whenever something does not operate to your satisfaction.



## Cost-effective

You want to achieve the best possible results using efficient solutions. We help you to handle your jobs and processes economically. We strive to create a high level of economic benefit and maximum added value for you.



#### Safe

You are working in an environment in which safety is a high priority. By collaborating closely with you, we do everything in our power to make our products, systems, solutions, applications and services as safe as possible for people and the environment.



#### Global

You value personalized service and short communication channels. As an international family-owned business with our own subsidiaries and qualified distributors, we have a presence wherever our customers are located. Our local staff and the large number of satisfied customers around the world give you the assurance that you are working with the right partner.



#### Sustainable

You prefer a partner who acts responsibly when it comes to current environmental challenges. We support environmentally friendly processes and manufacture products that have a long service life. We utilize advanced technologies in order to conserve energy and water and leave the smallest environmental footprint possible.



#### Solutions for large scale evaporation Benefits from decades of expert knowledge

In 1957 BUCHI introduced the first commercial rotary evaporator. With our technological expertise and profound customer interaction, we have continuously developed the Rotavapor<sup>®</sup> to an ever smarter and fully integrated system. Our carefully conceived solutions meet the needs of a wide range of industries, whether you operate in R&D or production.

### Pharmaceutical



The pharmaceutical industry has a need for an evaporation solution that covers a wide range of applications. The rotary evaporator is the best choice for gentle evaporation.

- Concentration
- Drying
- · Re-crystallization
- · Synthesis
- · Solvent purification

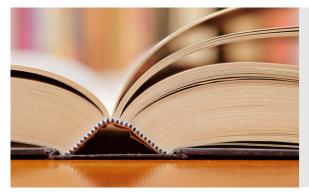
#### Chemical



In the chemical industry a wide range of applications can be performed with an industrial Rotavapor<sup>®</sup>.

- $\cdot$  Concentration
- $\cdot \text{ Drying}$
- · Solvent Recycling
- · Solvent purification

## Academia



Solvent reuse plays an important role in Academia. The Rotavapor<sup>®</sup> is the best choice for this and many other applications.

- $\cdot$  Concentration
- $\cdot$  Solvent recycling
- $\cdot$  Distillation
- · Solvent purification

From concentration or solvent recycling to drying or continuous evaporation of large volumes, our solutions cover the widest variety of specific demands. They consist of a set of fitting products combined to a complete system with comprehensive services to meet your distinct needs.

	Sample volume < 10 liter	ContinuousProductionindustrialscaleevaporationevaporation		Evaporation in Ex proof environment	
Concentration	•	•	•	•	
Solvent recycling	0	•			
Distillation	۰		٠	۰	
Drying	۰		٠	۰	
Re-crystallization	۰		٠	۰	
Characteristics					
EX protection				•	
Sample volume	Low : up to 10 L	High: unlimited	Medium: up to 30 L	Medium: up to 30 L	
Degree of automation	Medium	High	Low	Low	
Expandability	High	Low	Medium	Low	
Solutions by BUCHI	<ul><li>«Industrial p. 6</li><li>Evaporation</li><li>Scale up»</li></ul>	<ul><li>«Industrial</li><li>Evaporation</li><li>Continuous»</li></ul>	«Industrial p.10 Evaporation Production»	«Industrial p.12 Evaporation Ex zone»	

Find detailed information at: www.buchi.com/industrial-evaporation/solutions





# Solution «Industrial Evaporation Scale up» Easy and flexible evaporation

You look for a versatile and convenient configuration for a wide range of application and sample volumes of up to 10 liters. The «Industrial Evaporation Scale up» solution matches various distillation needs and combines quality, comfort and safety.

Integrated Interface I-300 Pro



with P+G coated glassware



**Recirculating Chiller** F-325



Option: Foam sensor

Vacuum Pump V-600

## Your most important benefits

#### Easy and safe

- · Maximum usability
  - $\cdot$  Unattended automatic distillation functionality (AutoDest) and foam detection
  - · Programmable standard operating procedures (SOPs)
  - $\cdot$  Remote monitoring and push notifications on mobile devices
- $\cdot$  Convenient flask handling with patented BUCHI flask coupling and unique flask handler
- · Maximum safety guaranteed by plastic coated glassware (P+G) and additional protection shields and grids

#### Tailored to your needs

- $\cdot$  Seven different glass assemblies available for dedicated applications, samples and solvents
- $\cdot$  Various extension options or customisations for individual requirements

#### Made to last

- $\cdot$  Enhanced lifetime due to exclusive use of corrosion-free stainless-steel
- $\cdot$  Seamless 24/7 operation thanks to robust industrial design

## Your solution «Industrial Evaporation Scale up»



- · Rotavapor® R-220 Pro with P+G coated glass
- · Recirculating Chiller F-325
- · Vacuum Pump V-600
- · Central Interface I-300 Pro
- · Unique flask coupling
- Options: Different glass configurations, various sensors for more automation, flask handler, safety shields



- · Dedicated application support
- Workshop trainings
- · Service hotline
- $\cdot$  Preventive maintenance
- $\cdot$  FDA compliant components
- $\cdot$  Service and documentation (IQ/OQ)



Download at App Store www.buchi.com/rotavaporapp



## Solution «Industrial Evaporation Continuous» Concentration of large sample volumes

You want to distill large volumes with a minimized effort. The «Industrial Evaporation Continuous» solution is the most efficient way to perform unattended distillations of unlimited amounts of solvents.



## Your most important benefits

#### Unattended and safe

- · Continuous and unattended distillation of large amounts of solvents
- · Safe operation through process control by various sensors
- · Remote monitoring on mobile phone with push notifications
- · Maximum safety guaranteed by safety coated glassware (P+G)

#### Efficient

- · Time-saving thanks to minimum manual interaction during distillation
- · Space-saving solution for large volumes
- $\cdot$  Money-saving compared to multiple stand-alone distillation systems

#### Easy to use

- $\cdot$  Easy to use with touchscreen display of all process parameters
- · Centrally controlled vacuum pump and recirculating chiller by integrated Interface I-300 Pro
- $\cdot$  Easy flask handling with patented BUCHI flask coupling and unique flask handler



## Your solution «Industrial Evaporation Continuous»

- · Rotavapor<sup>®</sup> R-220 Pro Continuous
- · Recirculation Chiller F-325
- · Vacuum Pump V-600
- · Integrated Interface I-300 Pro
- $\cdot$  Option: flask handler



- · Dedicated application support
- · Workshop trainings
- · Service hotline
- · Preventive maintenance
- · FDA compliant components
- $\cdot$  Service and documentation (IQ/OQ)

"With 20 liter evaporator from BUCHI, it is very easy to purify slightly contaminated solvents. This reduces the costs for solvents considerably." Customer statement, Germany



## **Solution «Industrial Evaporation Production»** Large volumes and high throughput

You perform distillations and concentrations of large batches in a fast yet careful way. The «Industrial Evaporation Production» solution allows you to evaporate sample volumes of up to 30 liter at once in a comfortable way while achieving high performance.

IIIII





Rotavapor® R-250



## Your most important benefits

#### Highest performance

- · Large batches of up to 30 liter in a 50 liter evaporating flask
- · Fast distillation due to the powerful heating bath (6.6 kW)

#### Convenient

- · Easy and safe handling of large flasks with patented BUCHI flask coupling and unique flask handler
- $\cdot$  Unattended operation in combination with Vacuum Controller
- $\cdot$  Automatic foam detection with optional foam sensor

#### Made to last

- · Enhanced lifetime due to exclusive use of corrosion-free stainless-steel
- · Maximum safety guaranteed by safety coated glassware (P+G)
- $\cdot$  No risk of product contamination thanks to highly chemical resistant materials
- $\cdot$  Seamless 24/7 operation thanks to robust industrial design

## Your solution «Industrial Evaporation Production»



- · Rotavapor® R-250
- · Vacuum Pump V-600 with Vacuum Controller
- Options: Different glass configurations for different needs, accessories for more automation, flask handler and 20 liter evaporating flask



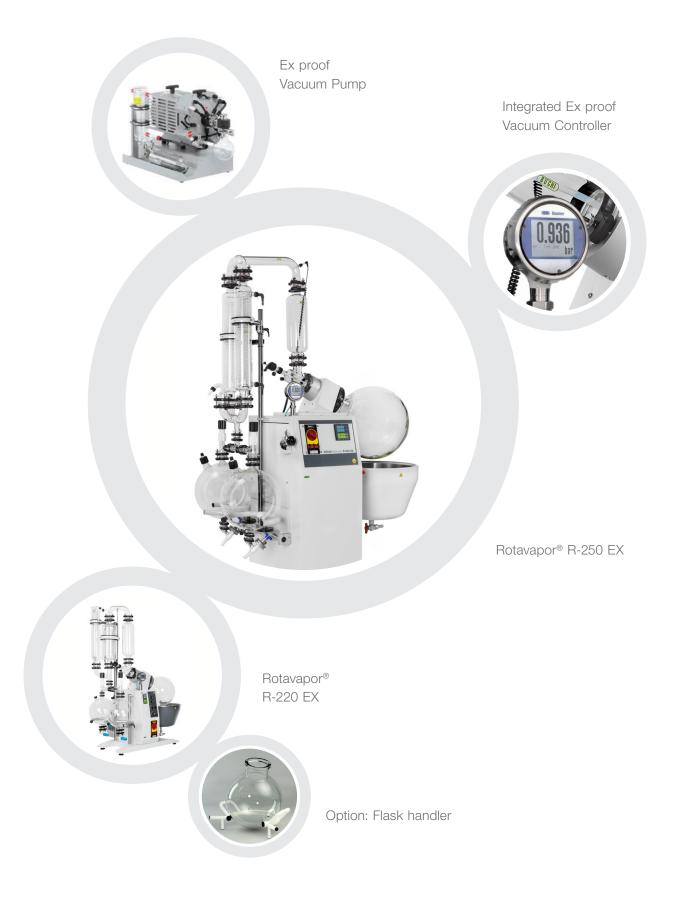
- · Distillation Record Software
- · Qualification IQ/OQ
- · FDA compliant components
- $\cdot$  Customization
- · Workshops trainings
- · Minimize downtime thanks to our service hotline
- · Preventive maintenance

"BUCHI industrial rotary evaporators enable environmentally responsible and safe removal of toluene used in adhesives manufacturing" Customer statement, USA



## Solution «Industrial Evaporation Ex Zone» Explosion protection at highest level

You have to operate your Rotavapor<sup>®</sup> in an explosion protected environment. The «Industrial Evaporation Ex Zone» solution offers both, the 20 liter and 50 liter Rotavapor<sup>®</sup> in explosion-proof version with ATEX approval which guarantee a safe operation.



## Your most important benefits

#### Safe and compliant

- · ATEX approved (Ex) for highest safety level
- · Fulfills highest standards by the usage of FDA compliant and highly chemical resistant materials
- $\cdot$  Safe and easy handling of the 50 liter flask due to unique flask coupling

#### Highest performance

- · Large batches in a 50 liter evaporating flask
- · Fast distillation due to the powerful heating bath (6.6 kW)
- · Highest efficiency thanks to powerful chemical resistant explosion proof Vacuum Pump

#### Made to last

- · Enhanced lifetime due to exclusive use of corrosion-free stainless-steel
- $\cdot$  No risk of product contamination thanks to highly chemical resistant materials
- · Seamless 24/7 operation thanks to robust industrial design

### Your solution «Industrial Evaporation Ex Zone»



- Rotavapor<sup>®</sup> R-250 EX (50 liter; also available as continuous version) or R-220 EX (20 liter version)
- $\cdot$  Ex proof vacuum pump
- · Ex proof vacuum controller
- Options: Different glass configurations for different needs and continuous version for large quantities



- · Customized application support
- · Workshops trainings
- $\cdot$  Minimize downtime thanks to our service hotline
- · Preventive maintenance
- · FDA compliant components
- · Qualification IQ/OQ

"A Rotary evaporator is a basic requirement of any chemistry laboratory. The name BUCHI is synonymous with this application mainly because of their quality product and ruggedness of these equipments. Various models are available for special applications/requirements. These are very useful not only in laboratory but also in production activity particularly on pilot scale/kilo lab scale."

Dr. K.S.Bhide, Director R&D, AstraZeneca Pharma India Ltd., India



The best solution for your need Comparison by customer needs, application and characteristics



Rotavapor<sup>®</sup> 20 Liter

			•		
Needs/Solutions	Page	R-220 Pro Essential	R-220 Pro	R-220 Pro HP	
«Industrial Evaporation Scale up»	-	۲	•	•	
«Industrial Evaporation Continuous»	8				
«Industrial Evaporation Production	אר 10 «ר				
«Industrial Evaporation Ex Zone»	12				
Characteristics					
I-300 Pro features (remote control/monitoring, programmabl methods, automatic distillation, data recording and more)	е		٠	۰	
EX Protection					
Distillation rate of ethanol [L/h]		13.5	16.0	18.0	
Temperature range [°C]		20 - 180	20 - 180	20 - 180	
Display type		Segment	Graphical	Graphical	
Flexibility					
Evaporating flask size [L]		20	6, 10, 20	20	
Available glass configurations		1	7	1	
System expandability with option	S	High	High	Moderate	

## Configuration options

Pump	V-600	V-600	V-600
Vacuum controller	Optional	1-300	I-300
Recirculation chiller	F-325	F-325	
Available voltage [V]	200 / 230 / 4	00	400

 Rotavap	or® 20 Liter		Rotavapor <sup>®</sup> 50 Lite	ər
R-220 Cont	R-220 EX	R-250	R-250 Cont EX	R-250 EX
٠				
		•		
	٠		٠	٠

۰				
	٠		٠	٠
16.0	13.5	19.5	19.5	19.5
20 - 180	20 - 150	20 - 180	20 - 150	20 - 150
Graphical	Segment	Segment	Segment	Segment

20	6, 10, 20	20, 50	50	20, 50
1	7	4	4	4
High	Moderate	Moderate	Moderate	Moderate

V-600	MD4C EX	V-600	MD4C EX	MD4C EX
I-300	Built-in	Optional	Built-in	Built-in
F-325				
200 / 2	230 / 400	400	400	400



#### The best solution for your needs Expert advice to select the ideal configuration

The following guide helps you to configurate your Industrial Rotavapor<sup>®</sup> according to your specific needs. First, the guide leads you through the condenser configuration, and then assists you in compiling the full setup. Note down the condenser part codes (in brackets) and insert them in the order number configurator on page 18.

## Application challenges: Reflux applications

You run syntheses, extractions or recrystallizations typically under reflux.

We recommend the Reflux dedicated glass assembly available in two versions:

- · Standard reflux (R)
- · Cold trap (C)

### Sample challenges: Bumping or foaming samples

Some of your samples (e.g. extracts of natural products, water or alcohol mixtures) tend to bump or foam when vacuum is applied.



We recommend the descending glass assembly to extend the void between sample and condenser coil:

- · standard descending (D)
- $\cdot$  with additional condenser for highly volatile solvents (D2 or D3)

#### Solvent challenges: Boiling points and volatility

You use high boiling solvents that tend to condense in the expansion vessel already and flow back into the evaporation flask.

Vapor exhaust of highly volatile solvents must be minimized to avoid contamination of the lab atmosphere and environment.

We recommend the following setup for the different solvent types:

- · High boiling solvents: Reflux assemblies (except for bumping or foaming samples)
- Low boiling solvents: Descending assemblies, and an additional condenser for highly volatile solvents

#### Size challenges: Height limitations

Your fume hood or cabinet is limited in height. An Industrial Evapoartor R-220 Pro with standard assembly on a trolley (0.5 m) reaches 2.3 m.



We can customize the configuration and reduce the height yet guarantee the same efficiency. Reduced height is available for reflux (RB) or descending versions (DB) (see table).

## Available glass configurations

#### Condenser assemblies

	à <u>ș</u>	*3*

Glass type	Descending (D)		Reflux		Essential (V)
		W/ additional condenser	Cooling coil (R)	Cold trap (C)	
Application	Standard distillation, drying		Extractions, reactions under reflux, recrystallization, distillation		Basic distillation
Sample	Bumping and foaming samples drying		Non-critical samples		Non-critical samples
Solvent	Low boiling solvents		High boiling solvents		S
	Very volatile solvents			Very volatile solvents	
Height	Available als	so in reduced heig	ht (RB, DB)		

#### Available with

0	Essential					•
R-220	Pro/EX	•	•	•	•	
	HP/Cont	•				
R-2	50/250 EX	•	•	•		

## Receiving flasks: Distillation of different solvent types

You want to distill difficult mixtures of solvent of different boiling points? Once, the low boiling component is distilled, the pressure is lowered to evaporate the rest which results in re-evaporation of the previously condensated fraction.

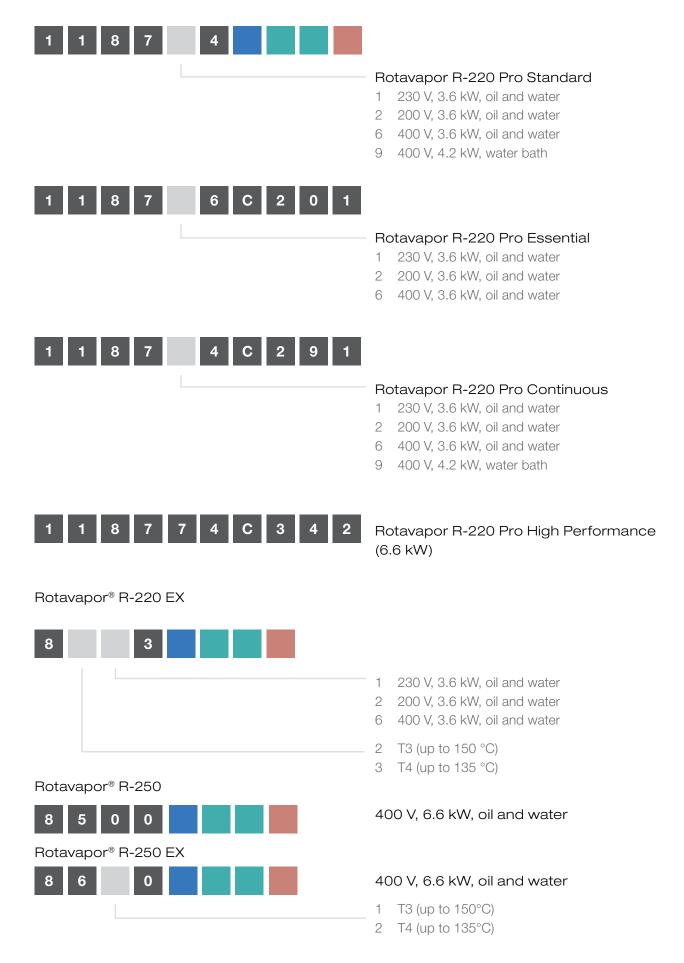
We recommend you to use two receiving flasks; the first fraction can be drained while the distillation process will continue in the second receiving flask



#### Your configuration guide

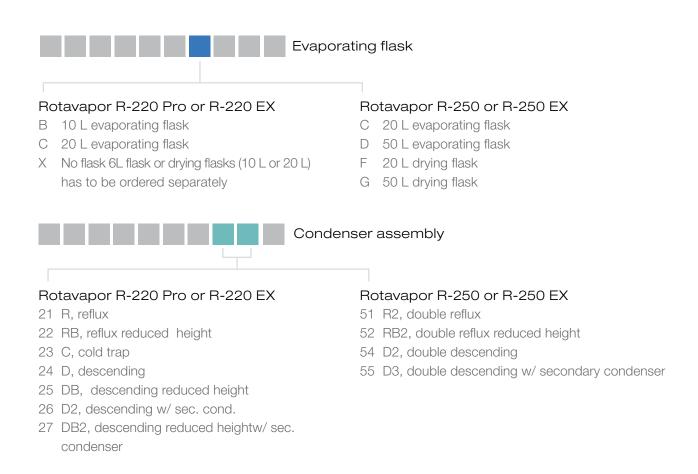
Select the right type of Rotavapor®

Rotavapor® R-220 Pro



## Your configuration guide

Select the right glass assembly



1 One receiving flask

2 Two receiving flasks

#### Example:

Needed: Industrial evaporator for scale-up purposes (sample volume: 10 L). Foaming and highly volatile samples are an issue. Drainage of condensate without interruption is a must. Solution:

Receiver assembly

1. Type of Rotavapor®: R-220 Pro Standard in 230 V (scale-up purposes)



2. Evaporating flask: 20 L flask (max. flask size)



3. Glass assembly: descending with secondary condenser (foaming and volatile samples)



4. Receiver assembly: two receiving flasks (drainage w/o interruption)





#### **Benefit from the market leader** Reduce your time in front of the Rotavapor<sup>®</sup>

#### Push notifications - Supervise your process remotely

The Rotavapor<sup>®</sup> App for iOS, Android and Windows offers live views of all process parameters. It shows settings, current readings and even progression graphs of temperatures (heating, cooling, vapor), pressure and rotation. Push notifications on the smartphone directly alert if manual interaction should be required or in an unexpected event



## Methods - Program your SOPs

Until recently, the distillation process required regular supervision to guarantee smooth and safe operation. The R-220 Pro now offers programmable methods that automatically guide the operator through standard operating procedures (SOPs). Push notifications alert the user if required.

#### Example for a typical method:

#### Distillation

Draining

Aeration

gradient, AutoDest or fixed pressure



## Save time by using methods



# drained

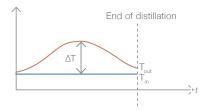
alert user when distillation needs to be



alert user when process is finished

## AutoDest - Distill automatically without supervision

The AutoDest sensor combined with the Interface I-300 Pro enables unattended automatic distillation by automatic vacuum adjustment according to the required cooling capacity of the condenser. Solvent emissions into the laboratory atmosphere are thus minimal as condenser overload is avoided.





## Sensors and valves - Define your degree of automation

Different automation levels are possible depending on the accessories chosen:

- · Foam sensor: automatic detection of foam formation
- Temperature sensors: detection of vapor and/or coolant temperatures for process monitoring purposes
- Flow sensor: automatic coolant flow control (interrupts when capacity is insufficient)
- Level sensors: condensate level detection for safety reasons, for defined concentration levels, or to prevent the sample from drying
- Suction device: to remove sample from evaporating flask without detaching the flask
- Valves: feed, shut-off, drain and aeration valves allow distillate drainage without interrupting the distillation process.



## Remote control - Operate from outside the fume hood

The Rotavapor<sup>®</sup> R-220 Pro includes the detachable Interface I-300 Pro, a user-friendly and convenient combination of a capacitive 8.7" touchscreen and additional navigation elements. The interface gives a comprehensive overview of settings, current readings and progression graphs of relevant process parameters at any time. The optional 15 m communication cable allows for remote control outside a fume hood or clean room.

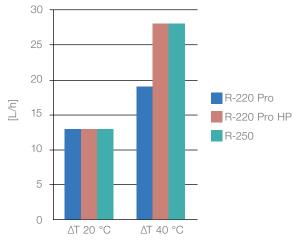




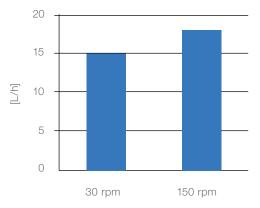
#### How can I optimize the distillation rate?

Various factors influence the distillation rate of a Rotavapor<sup>®</sup>. The following tips help you to improve the efficiency of your distillation process, to conserve energy and to reduce the environmental impact.

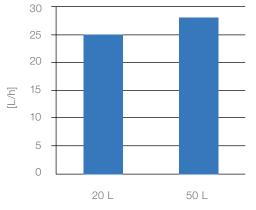
The following charts show the distillation rate of acetone as a function of temperature, rotation speed and flask size, respectively.



Distillation of 10 L acetone at max. rotation speed



Distillation of 10 L acetone at different rotation speeds with the R-220  $\mbox{Pro}.$ 



Distillation of 10 L acetone on a R-250 using two different flask sizes.

#### Heating bath temperature:

A high heating performance (i.e. > 3.6 kW) only affects the distillation rate at high heating bath temperatures. For a difference of 20 °C or less between the vapor and bath temperature, distillation rates of a R-220 Pro, R-220 Pro High Performance or R-250 are identical.

To make use of the high heating power of a R-220 Pro High Performance or a R-250, set the bath temperature as high as possible

#### Rotation speed:

High rotation speed produces maximum turbulence inside the flask resulting in higher evaporation rates. However, for highly viscos samples, some foaming products, or spillage of heating media (e.g. when a drying flask is used), high rotation speed is not applicable.

Recommendation: The higher the rotation speed, the faster the distillation.

#### Flask size:

The larger the surface of the sample inside the flask, the higher the evaporation performance. On the other hand, large flasks are more difficult to handle and the sample is distributed over a larger area when evaporating to dryness.

Recommendation:

The sample volume ideally fills 1/3 to  $\frac{1}{2}$  of the flask size.

### How is operator safety guaranteed and the environmental impact minimized?

BUCHI's Industrial Rotavapor® features various safety measures:

- P+G coating: All glass parts of R-220 Pro / R-250 are coated with transparent and highly robust plastic (except evaporating flask)
- Protection shields/grids: Optional accessories to protect glass assemblies from potential damages by external influences
- Additional condensers: Volatile solvents are trapped using glass assemblies with additional condensers (see glass assemblies)
- Safety cut-off: Overtemperature switch to protect operator and sample
- System failure: Automatic system shut down into safe mode in case of major failure

## What kind of customization is available?

Despite the wide range of glass assemblies and accessories, customerspecific needs often require customization of standard items such as:

- $\cdot$  Additional sensor port on the condenser
- $\cdot$  Overall height reduction to fit Rotavapor^  $\!\!^{\scriptscriptstyle (\! 8\!)}$  into a small fume hood
- · Additional coil for active cooling of the heating bath
- $\cdot$  Electroconductive glass coating for Ex zones

• Connection joint for burst disc and non-reclosing pressure relief BUCHI's vast experience and profound knowledge make us the ideal and competent partner in advising customers.

We develop and produce our instruments ourselves, which allows us to modify certain instruments or even manufacture a special part according specific customers need.

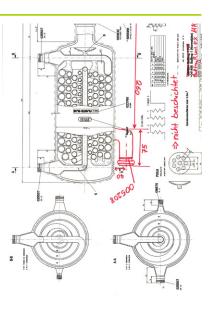
## When is an Ex proof Rotavapor® recommended?

Some laboratories and production facilities are defined as "explosion proof areas". In such areas it is mandatory to operate only Ex proof instruments. The BUCHI Rotavapor® R-220 EX and R-250 EX are approved instruments for EX zone operation.

The Rotavapor<sup>®</sup> R-220 EX and the R-250 EX comply according international standards (IEC and CENELEC) as well as the EC directive 94/9 (ATEX 95). Both instruments are designed for Zone 1, group IIC and available in Temperature class T3 and T4











#### **Complete your industrial evaporation portfolio** Complementary and related products

#### Vacuum Pump



The Vacuum Pump V-600 is an integral component of the Industrial evaporation solution. Its quiet operation is conveniently controlled directly from the Rotavapor's interface.

## ATEX Vacuum Pump

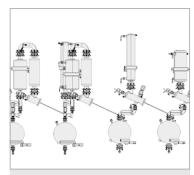
The Ex proved vacuum pump MD4C EX is designed to operate in areas where an explosive mixture is likely to occur. It is complementary to our "Ex zone" solutions.

## **Recirculation Chiller**



The Recirculation Chiller F-325 can be directly controlled from the Interface of the R-220 Pro. Located below the Rotavapor<sup>®</sup>, it offers a very space-saving design.

## Glass assemblies



BUCHI offers the widest range of glass assemblies for various application needs. Find the full range on p. 17.

## Bath Shield



A dedicated heating bath protection shield in combination with a protection grid ensures maximum safety whilst operation.

## Condenser Shield



Robust and transparent PMMA plastic shield to protect Rotavapor® R-220 Pro glass assemblies from potential damages caused by external influences.

### Foam Detector



Foam generation is automatically detected and subsequently suppressed by a short aeration pulse. The foam detector is compatible with descending glass assemblies.

#### Sensors



Various sensors monitor crucial process parameters automatically such as: temperature, coolant flow, distillate level. Only for Rotavapor<sup>®</sup> R-220 Pro.

#### Flask Handler



This plastic coated stainless steel tool is designed for the convenient and safe handling of even 50 L flask.

## Trolley



The trolley offers easy transportation and a space-saving location for the Vacuum Pump V-600, with four safety retainers each at one corner.

## NIR-Online



NIR-Online industrial spectrometers provide fully integrated process control by continuous, real-time measurements of key parameters such as moisture, fat or protein.

## Spray Drying



The Mini Spray Dryer B-290 is the instrument of choice for the quick and gentle drying to powder of liquid solutions.



## **Support and customer service** From feasibility to preventive maintenance

You value an efficient and personalized service. Our network of professional application specialists and service technicians as well as a large number of satisfied customers around the world give you the assurance that you are working with the right partner.



## Solvent calculator increases efficiency

Have the best possible adjustment for your evaporation process in using the BUCHI solvent library. Download the file and benefit from the long-term experience of the sample preparation specialists.

Discover our calculator at: www.buchi.com/solvent-calculator





## Learn about evaporation and concentration

Over more than 30 years of experience in the development of official and customized applications is summarized in practical guides. In addition, the Laboratory Assistant provides the theoretical background of essential sample preparation step as well as practical tips. Profit from a myriad of information.

Discover our literature at: www.buchi.com/literature





#### Discover our numerous case studies

BUCHI offers over 130 different case studies. By using real information, the online case studies bring to life the complexities of business and give you an understanding of the wide range of the applications supported by our products, systems, solutions and services.

Discover our case studies at: www.buchi.com/casestudies





## Profit from workshops, trainings and seminars

We regularly offer practical seminars and workshops, often in cooperation with other partners in the field of sample preparation and analysis. Customer contributions thereby underline how our solutions facilitate the daily routine. We also attend many local and international scientific and industrial congresses.

Find an overview of our activities: www.buchi.com/events



## Use your product most effectively

We help you to set your product properly into operation. We provide thorough Installation/Operation Qualification (IQ/OQ) services to ensure compliance with FDA, GLP/GMP standards or GAMP guidelines. Whether it is because of an initial installation, requalification or relocation, we provide professional compliance verification.

Find out more about our services: www.buchi.com/service-support



### Minimize downtimes

Avoid products' downtimes with preventative maintenance and tailored service packages. We offer a product warranty of one year and guarantee ten years of spare parts availability.

Get in touch with us: www.buchi.com/warranty



#### **Global Network**

Our subsidiaries and qualified distribution partners ensure proximity where ever you are. Since we are familiar with your requirements, we use our experience and knowledge to provide first-rate solutions.

Get in touch with us: www.buchi.com/worldwide

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