

# R1

Industrial parts cleaning machine with solvents



Fast and economical

# R1 FAST AND ECONOMICAL

Thanks to its highly efficient process technology and low energy consumption, the R1 offers excellent cleaning results combined with high throughput.

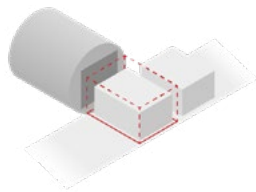
## CHOOSE FROM THREE WORKING CHAMBER SIZES

Choose from a range of chamber sizes in combination with standardised basket systems to achieve the throughput rate you need – our technicians would be delighted to advise you.

### R1

#### Standard chamber

Length of basket holder in working chamber up to 530 mm

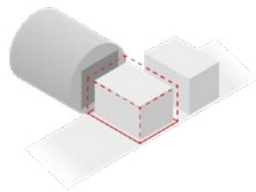


Max. load dimensions (L x W x H):  
1 x 480 x 320 x 200 mm, or  
1 x 530 x 320 x 200 mm

### R1A

#### Large-volume chamber for high throughput

Length of basket holder in working chamber up to 530 mm

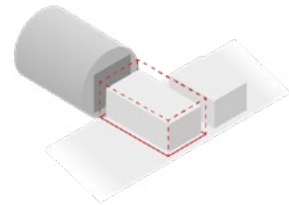


Max. load dimensions (L x W x H):  
1 x 530 x 365 x 250 mm, or  
1 x 530 x 320 x 300 mm

### R1B

#### Large-volume chamber for high throughput

Length of basket holder in working chamber up to 640 mm



Max. load dimensions (L x W x H):  
1 x 640 x 320 x 200 mm, or  
1 x 530 x 320 x 200 mm

## PROVEN QUALITY

The machines of the R1 series make use of the specific properties of solvents for the cleaning, degreasing and/or preserving of parts. Operators can choose from a range of conventional solvents that achieve optimum cleaning results, taking into account the actual level of contamination of the parts.

- **High availability** High availability thanks to top-quality, standardised and tested components from leading manufacturers
- **Perfect media treatment** with permanent full-flow filtration
- **Saving costs** with Pero full vacuum technology with extra low solvent and stabilizer consumption
- **Flexibility** thanks to modular machine extensions
- **Unrivalled operator comfort** thanks to automated, timer-controlled maintenance routines



## ECOLOGICAL & ECONOMICAL

All process steps take place under full vacuum. This supports cleaning in solvents, reduces energy consumption and allows short cycle times with maximum safety.

- High level of technical cleanliness thanks to combined **cleaning, rinsing** and **vapor-degreasing** processes  
Optional: ultrasound cleaning and/or preservation
- **Small footprint**
- **Maximal energy efficiency:** heating output controlled by Energy Manager
- Model "Universal" for exceptional **future security:** allows optional modification from CHC to alternative solvents such as hydrocarbons or modified alcohols
- Redundant process monitoring combined with fire and explosion protection equipment **protects humans and the environment**



Example of cleaning process with a defined technical cleanliness standard



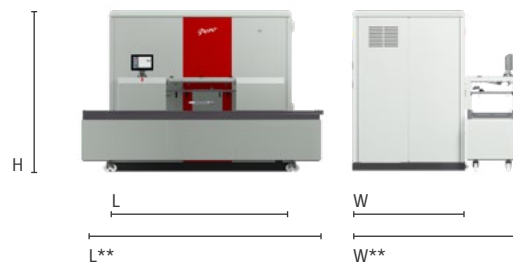
Filter monitoring and drying



User-friendly control interface

## TECHNICAL DETAILS – R1

External machine dimensions



R1	1/2-Bath	3-Bath
H	2,3 m	3,3 m
L / L*	2,6 m	2,6 m
L**	3,4 m	3,4 m
W	1,6 m	2,0 m
W*	2,3 m	2,6 m
W**	2,6 m	2,9 m

\* manual charging unit  
(not illustrated)

\*\* automatic charging unit

### CLEANING MEDIUM

Hydrocarbons or modified alcohols with flashpoint > 55° C;  
halogenated hydrocarbons; further solvents on request

### BATCHES / GOODS CARRIERS

Standard-external dimensions (L × W × H), max.	R1	1 × 480 × 320 × 200 mm or 1 × 530 × 320 × 200 mm
	R1A	1 × 530 × 365 × 250 mm or 1 × 530 × 320 × 300 mm
	R1B	1 × 640 × 320 × 200 mm or 1 × 530 × 320 × 200 mm

further sizes or combinations on request

Batch weight, max. 80 kg

Height of charging unit approx. 750 – 950 mm (depending on height of cleaning batch and charging method)

### THROUGHPUT

Depending on chosen process up to 15 batches / h  
with a max. 35 kg steel

### PERFORMANCE DATA

Connected load	approx. 19 – 28 kW
Heat output	3,3 / 9,9 / 13,2 kW, selectable (energy manager)
Heating-up time of machine	approx. 60 – 80 min
Sound level	< 75 dB (A)
Solvent volume 1-bath	210 l
Solvent volume 2-bath	330 l
Solvent volume 3-bath	450 l

### OPTIONS

e.g. ultrasound, remote maintenance, preservation bath, etc.

*All specifications are approximate values and may vary depending on equipment – errors and omissions excepted*

R1  
SCOPE

## PERO SCOPE – THE NEW BENCHMARK IN PARTS CLEANING

Even in their basic configuration, Pero systems set new standards in terms of efficiency and automation. With revolutionary SCOPE technology, we are taking these standards to a whole new level: an intelligent system that drastically reduces energy consumption and significantly increases efficiency – without compromising on performance.

The result: maximum power, minimum costs. Thanks to considerable savings, the investment pays for itself in no time – and gives you a lasting competitive advantage.



(verified practical values)

### SCOPE: SMART OPTIMIZATION OF THE CLEANING PROCESS

SCOPE automatically monitors the solvent bath and guarantees a consistently optimal condition of the cleaning medium. The heating power and distillation are regulated as needed, which can save a large portion of the energy requirement. This reduces operating costs and improves the ecological balance of your business.

- Solvent-based cleaning system
- Automatic charging unit

#### FIND YOUR CLEANING SYSTEM

We will be happy to advise you on which service package is best suited to your application.



R1 BASIC

**NEW**



**SMART  
CONTROL FOR  
OPTIMIZED  
PERFORMANCE AND  
EFFICIENCY**

- Solvent-based cleaning system
- Automatic charging unit
- **SCOPE technology**
- OPC UA interface + remote maintenance

- Solvent-based cleaning system
- Automatic charging unit
- SCOPE technology
- OPC UA interface + remote maintenance
- Operating data collection
- Mobile barcode scanner with program assignment
- Forming gas welded pipes
- Electropolished working chamber



**R1 SCOPE**



**R1 SCOPE+**



## FOCUSED ON OUTCOMES

**At our Centre of Competence in Königsbrunn, we assist you in finding the best cleaning solution for your specific needs.**

More than 15 water- and solvent-based test machines are available in an area of 1000 m<sup>2</sup>. We design optimised cleaning methods and programs that meet your needs by performing test runs with your own dirty parts.

Even before you have decided about the investment, assessing the profitability of the future process can be carried out. The defined technical cleanliness of the components reliably reached and maintained.



### MAKING USE OF STRONG PERFORMANCE

- Cleaning tests free of charge, using parts provided by the customer; including documentation
- Evaluations and analyses of cleanliness according to VDA 19 in our laboratory

Contact us for advice:  
[en.pero.ag/contact-to-pero](https://en.pero.ag/contact-to-pero)

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## RELIABILITY YOU CAN BANK ON

*pero*



### Safe and reliable

High-precision production and spare parts service



### Quality made in Germany

80% vertical range of manufacture in Germany



### Worldwide sales and service

Global network of certified service partners

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