



R4 / R5 CLEANING PLANT

EFFICIENT PARTS CLEANING FOR LARGE VOLUMES



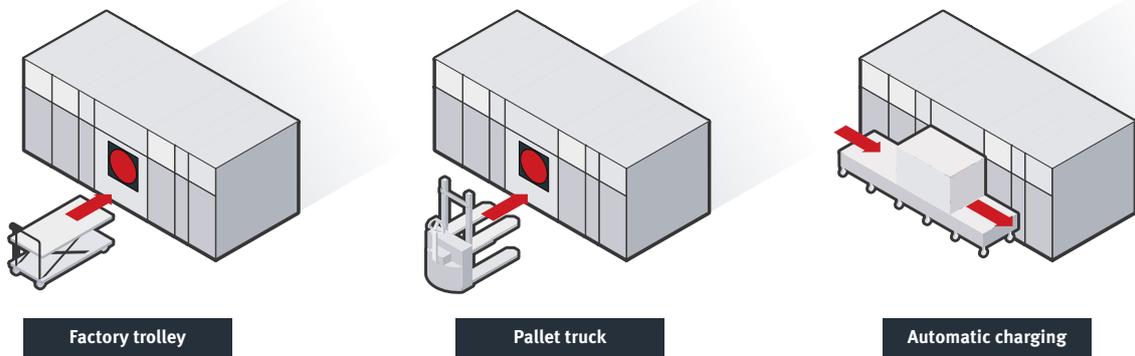
MASS AND CLASS

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The cleaning plants of the R4 and R5 series clean large quantities of components and voluminous workpieces particularly fast and efficiently.

Due to large-volume work chambers, companies especially in the sectors of forming technology, automotive, aviation and hardening plants, as well as contract cleaners, benefit from the large cleaning capacity.

The choice of the ideal goods carriers brings advantages for throughput, flexibility, cleaning results and profitability



Different types of loading provide flexibility in logistics: factory trolley, fork-lift trucks, automatic loading enable a suitable integration and linking of the plant into the production landscape.

EFFICIENT & FAST

The universal process technology offers a strong cleaning performance for all users, who need a compact design. The media care is thorough and safe. This results in a high availability of the cleaning system.

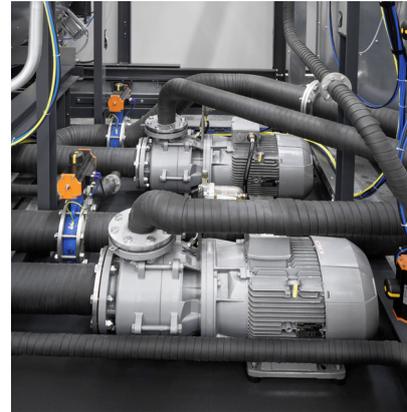
- + Operation under full vacuum protects the cleaning medium and minimizes solvent consumption
- + The cleaning medium is filtrated in full-flow when filling and emptying the work chamber. Additional bypass filtration can be activated
- + The efficiently heated distillation unit ensures a consistently high quality of the cleaning medium
- + Well-matched tank volumes ensure a high degreasing and cleaning quality in single-shift and multiple-shift operation; even at high throughput



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 degree of technical cleanliness by combining the processes of cleaning, rinsing, vapour degreasing and optional ultrasound cleaning and/or preservation against corrosion
- + Integrated maintenance programs automatically maintain the cleaning medium and filter and thus ensure high cleaning quality and availability
- + Heat output is adjustable as needed via energy manager – maximum energy efficiency
- + Future proof reliability for the Universal model: can optionally be modified easily to alternative solvents
- + Protection of staff and environment due to redundant process monitoring. Benefits of solvent used in a circuit



Optimized pipe geometry and high pump performance



Cleaning in the mesh boxes with a payload of 1,000 kg



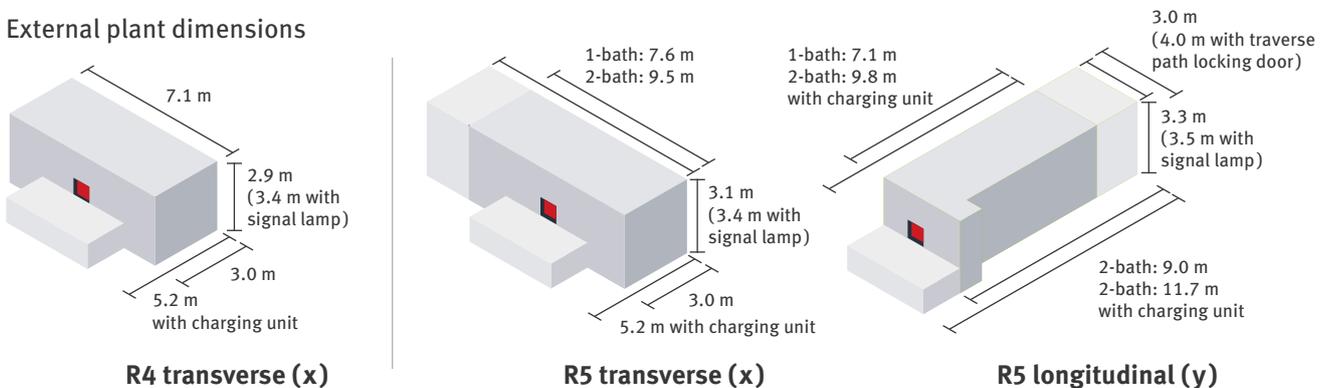
Producing and cleaning in the same goods carriers



Permanent full-flow filtration of medium

TECHNICAL DETAILS

External plant dimensions



Cleaning medium	
Hydrocarbons or modified alcohols with flashpoint > 55° C; halogenated hydrocarbons; further solvents on request	
Batches / Goods carriers	
Standard external dimensions (LxWxH), max.	R4: 1,250 x 850 x 500 mm R5: 1,250 x 850 x 970 mm (Euro pallet cage)
Batch weight, max.	R4: 650 kg R5: 1,000 kg
Height of charging unit	R4: 850 mm R5: 920 / 1,010 mm
Throughput	
Depending on process chosen	R4: Up to 7 batches / h R5: Up to 4 batches / h

Performance data	
Connected load	R4: approx. 98 – 130 kW R5: approx. 98 – 130 kW
Heat output	36 / 54 kW, selectable (energy manager)
Heating-up time of plant	approx. 120 min
Sound level	< 75 dB(A)
Solvent volume 1-bath (R4/R5)	2,400 / 3,780 l
Solvent volume 2-bath (R4/R5)	4,200 / 7,200 l
Options	
e.g. ultrasound, remote maintenance, preservation bath, etc.	

All the data are approximate figures - Errors and omissions reserved

COMPETENCE CENTRE

FOR THE TECHNICAL CLEANLINESS OF COMPONENTS

More than **15 demonstration machines** available in our 1,100 square meter Competence Centre, allowing you together with our Pero engineers to develop the optimum cleaning process for your company.

Cleaning process with

Water based media

- + Batch facilities for quality carriers up to 660 x 480 x 300 mm
- + Tunnel cleaning plants
- + Cleaning systems for large components up to a width of 2,100 mm and a weight of 1,500 kg

Solvents

- + Comparing different media
- + Testing alternative cleaning processes
- + Seeing the appropriate handling of parts

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MAKING USE OF STRONG PERFORMANCE

- + Free cleaning tests on original dirty parts including documentation
- + Evaluations and analyses of cleanliness according to VDA 19 in **our laboratory**
- + Technological insight and valuable data for your company

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.

PERO AG
Hunnenstraße 18
D-86343 Königsbrunn

Fon: +49 (0)8231 6011-0
Fax: +49 (0)8231 6011-810
pero.info@pero.ag
www.pero.ag

