

Pero

Advanced metal cleaning



THE **FASTEST** IN ITS CLASS

SOLVENT CLEANING UNIT TYPE

for all popular hydrocarbon, chlorinated hydrocarbon and modified alcohol solvents

R1

“TIME IS MONEY”

That’s the foundation on which we’ve developed the R1, the most productive vacuum degreasing unit on the market today – suitable for all popular cleaning agents, including hydrocarbons, chlorinated hydrocarbons and modified alcohols.

But don’t just take our word for it.

With ultra short cycle times, outstanding throughput and the highest standards of surface cleaning, PERO’s R1 sets a new benchmark in component cleaning performance.

The R1 is suitable for any type of machined or formed metal components that can be fitted into a standard 530 x 320 x 200 mm basket. (Other sizes can be supplied to special order).

R1

PERO’S INNOVATIVE AND COST-EFFECTIVE
CLEANING TECHNOLOGY IS IDEAL FOR:

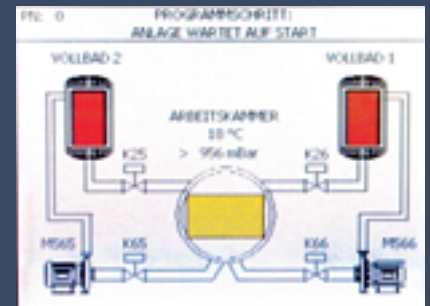
- Machined components
- Punched, drawn and extruded parts
- Precision ground products
- Close tolerance electro-mechanical items
- Aerospace components
- Engine and motor industry parts
- Heat exchangers
- Special purpose units

Prove Out

- Prior to shipping, each PERO cleaning machine is rigorously tested under simulated production conditions. In addition, all workholding equipment is thoroughly tested as part of the prove out procedure, which also includes the measurement and recording of emissions values..

Key User Benefits:

- The R1’s ultra fast cycle times ensure maximum productivity – delivering the same throughput as many competitors’ much larger machines.
- Extremely high contaminant separation rates ensure maximum solvent life and cleaning performance.
- Automatic drainage of contaminants into SafeTainers within the R1’s short maintenance cycle ensures minimum equipment downtime.
- Optional, retrofittable distillation units will maintain indefinite, round-the-clock parts processing.
- The R1 incorporates state-of-the-art vacuum degreasing technology – eliminating emissions and providing maximum solvent utilisation throughout an extended operating life.



All PERO units feature intuitive operation with familiar touch screen controls



Tailored Solutions

Stainless steel work baskets and self-sealing filter bags are supplied as standard. A series of ancillary items – such as magnetic filter cartridges – enable users to easily tailor installations to their individual requirements.



Picture above: tidy technology clearly arranged saves time and money in cases of maintenance and service.

Only the R1 provides all these benefits:

Cleaning:

- Full range of user-definable component agitation and orientation options
- Bath, flooding, wave flooding.
- High performance vapour degreasing
- Optional ultrasonic unit is easily retrofitted to base machine

Drying:

- Complete workpiece drying, using low temperature vacuum technology

Maintenance:

- Continuous vacuum distillation achieves maximum contaminant removal
- Machine downtime is minimised through rapid maintenance cycle with automatic contaminant drainage

Filtration:

- In line filtration units ensure maximum separation of solids
- Each wash unit is equipped with a dedicated filter
- Integrated filter drying removes all moisture from filter residue

Safety:

- Integral fire and explosion safety equipment for organic solvents with flashpoints above 55°C
- 3 mm stainless steel banded tray eliminates solvent seepage – and ensuring compliance with safety regulations
- Wash basket rotation monitoring
- Integral Acid sensor

Optional equipment:

- Batch pre-selection
- Timer switches to initiate machine pre-heating, ready for start of shift
- Ethernet interface for remote monitoring and diagnostics
- Central lubrication system, providing continuous oil feed to the drive motor.
- Three colour, machine 'traffic light' indicators

→ Developed from its highly successful V1 model, PERO's R1 incorporates the company's innovative vacuum degreasing technology, high precision components and proven controls – to provide unrivalled cleaning performance over a long service life.

→ On-board condition monitoring and simple text displays give up-to-the-moment feedback on the unit's operation. In addition, an intuitive diagnostic programme provides fault finding and suggested corrective actions – ensuring maximum equipment availability and minimum downtime costs.

→ All PERO units must pass rigorous pre-delivery trials – running at normal operating temperatures and cycle conditions. As a result, installation and commissioning at the customer's site are completed quickly and effectively – enabling the unit to be brought into service with the minimum of delay.



TECHNICAL DATA¹⁾

DESCRIPTION	DATA	
External Dimensions:	Width	2.600 mm
	Depth (without charging unit)	1.600 mm
	Height	2.550 mm
	Loading height	830 mm
Max. basket dimensions*:	Length x Width x Height 530 x 320 x 200 mm	
Max. basket weight :	80 kg	
Solvent type:	Universal machine suitable for chlorinated hydrocarbons, such as Perchloroethylene, Trichloroethylene and Methylene Chloride, hydrocarbons and specially modified alcohols, all with flashpoints above 55 °C	
Performance Data:	Typical cleaning time for 35 kg steel Cleaning > vapour degreasing > drying	single bath unit: 3 min twin bath unit: 4 min
	Equipment warm-up time	60 min
	Noise level	< 75 db(A)
	Ultrasonic unit (optional) – power rating	2 x 600 W, 25 kHz, 17 W/l or 2 x 1.000 W, 25 kHz, 21,5 W/l
	Solvent capacity	single bath unit: 217 l twin bath unit: 338 l
	Heating output	13,2 kW
	Maximum electrical load, subject to machine configuration	CKW unit: 20–24/23–25 kW KW unit: 19–23/21–24 kW
	Waste oil capacity (nominal)	up to 18 l
Transport dimensions:	Transport weight – Machine	single bath unit: 3.000 kg twin bath unit: 3.300 kg
	Transport weight – Automatic charging unit	600 kg

* other basket or pallet sizes available to special order
¹⁾ All information contained in this document is provided without warranty.
 Through our policy of continuous product development, equipment specifications may be amended at any time without notice.

PERO R1: Safeguarding the environment; Minimising operating costs; Ensuring compliance with all emissions legislation

- Extreme thermal efficiency guarantees low energy consumption and running costs
- Dry parts and filter residue ensures negligible solvent usage
- Proven vacuum degreasing technology provides low stabilising agent consumption
- Compliance with all relevant safety and emissions legislation, including EU Solvent Emissions Directive (SED) and more stringent German 31 BImSchV and 2 BImSchV standards.



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