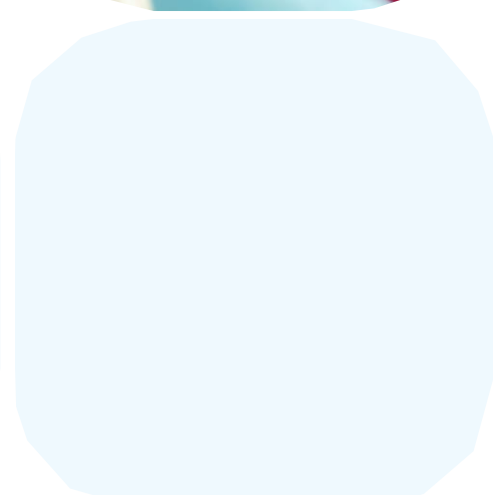
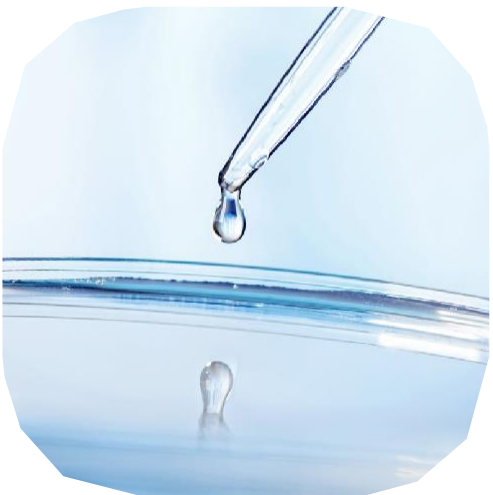




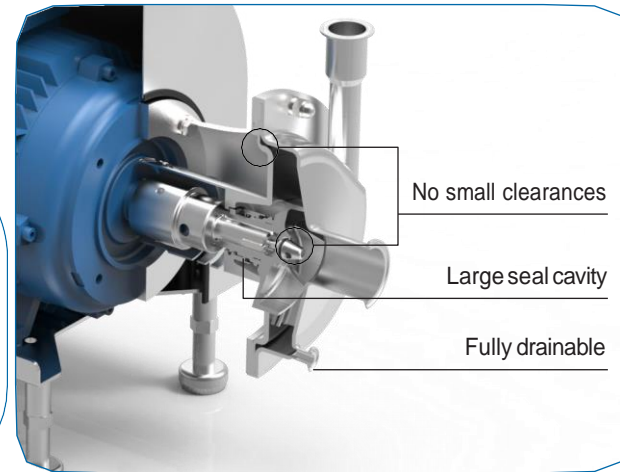
Pharmaceutical Pumps

Pumps for the biotech and pharmaceutical industries.





Perfectly cleanable construction. All pharmaceutical pumps, including the CIP return pumps, are EHEDG and 3A certified. Construction is in line with ASME BPE guidelines.

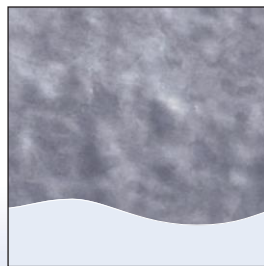


Hydraulic high quality product with the highest pump efficiencies and lowest NPSH values.

High pump efficiency, resulting in lower energy bills.

Easy, modular, maintenance friendly and robust concept.

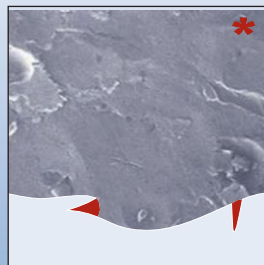
Electropolished design (for wetted & non-wetted parts);



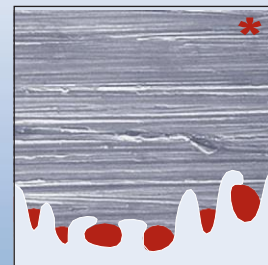
Electropolished

All pumps are electropolished. Compared to other techniques, this has the following advantages:

- easy to clean
- increased corrosion resistance
- better resistance against rouging
- no bacteria traps



Glass bead blasted



Mechanical polishing 240 grit

* Higher risk of bacteria traps with other pumpbrand.

Designed for pharma

Even if the requirements are driven to extremes, like in the pharmaceutical industry, we offer a solution. With their unparalleled hygienic and robust design, our pumps rank among the most efficient pumps in the sector.

Discover some of Packo pumps characteristics and find out why we are the perfect match for your pharmaceutical process.



Sterile balanced seals, also for higher inlet pressures.

Hydropad for WFI > 80 °C.

Novapad suitable for SIP when pump is operating.



According to applicable standards and legislations, particularly within Europe, but also outside.



Before shipping all pumps are subjected to an internal Factory Acceptance Test (FAT). Performance and hydrostatic pressure tests, as well as a vibration test and control of the main dimensions are part of the standard test procedure. 100% final inspection! The pumps are provided with a certification package and supplier documents.

ISO 9001:2015
ISO 14001:2015



BQA_QMS019_C_1904041



BQA_EMS019_C_2015041



Standardized motor dimensions to IEC. Available in accordance with local motor laws.

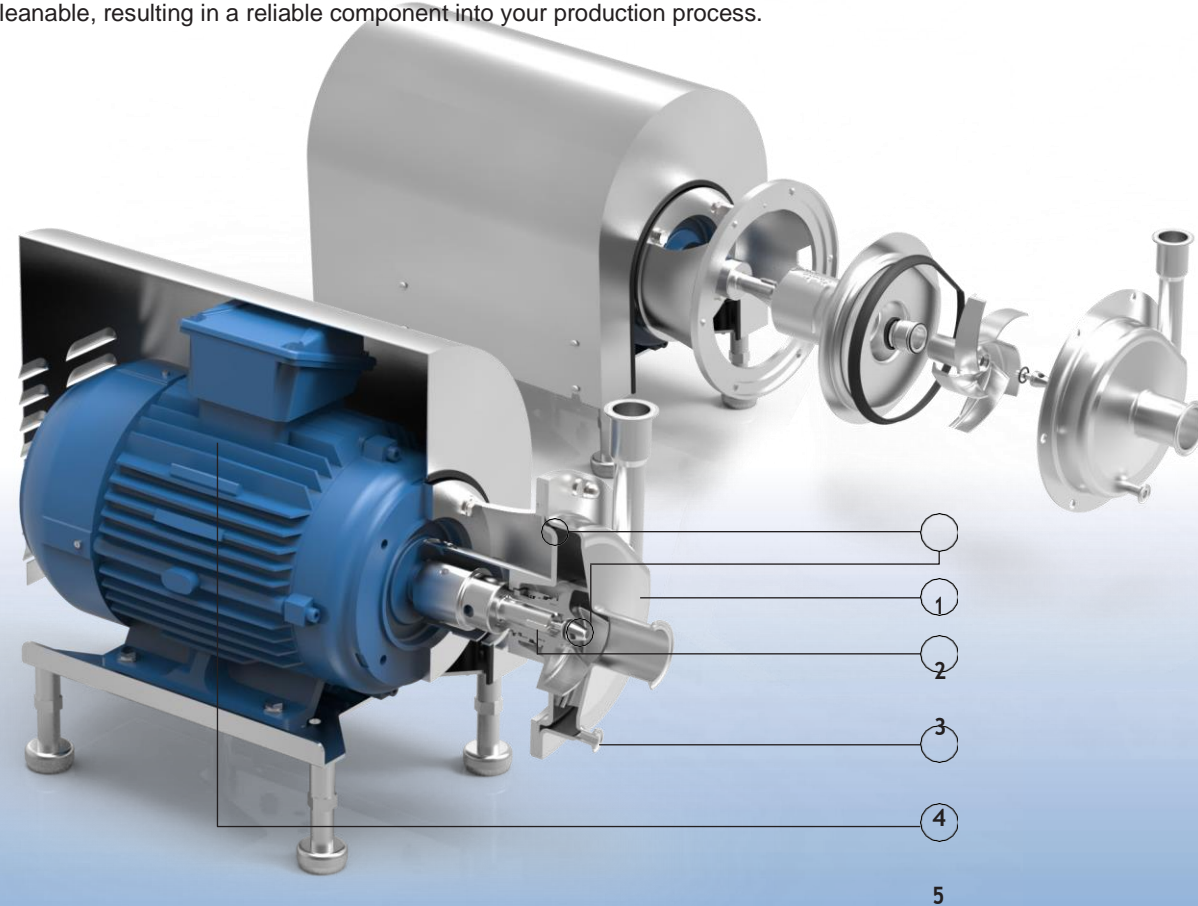
- Destillation of purified water at very high temperature

PumpseriesPHP2



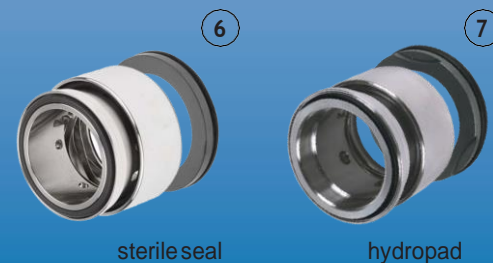
Characteristics

The Packo 3A certified pharmaceutical process pumps of the PHP2 series are used for the most demanding sterile applications in the pharmaceutical, biotech and semi-conductor industry. These perfectly cleanable pumps have stainless steel 316L pump casings constructed in thick cold rolled plate, 100% non porous and extremely smooth. The pumps have fully machined open impellers constructed in 1.4435 material. Thanks to its crevice-free design and electropolishing as a final surface treatment, the PHP2 pump series are perfectly cleanable, resulting in a reliable component into your production process.



PHP2

- 1 Electropolished, easy to clean construction, no bacteria traps and no small clearances in order to clean the area around the O-ring
- 2 Pressed stainless steel pump casing in 2B, extremely smooth
- 3 Large seal cavity to clean mechanical seal properly
- 4 Fully drainable
- 5 Monobloc execution with std. IEC motors
- 6 Standardized mechanical seals to EN 12756
FDA approved sterile O-ringseals
- 7 Sterile mechanical seal with hydropad
static seal face for WFI > 80°C



Your benefits:

- High pump efficiency lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: perfectly cleanable
- Easy & robust construction and easy maintenance: Less downtime
- Standard components
- 2 mechanical seal diameters for entire range
- Fully certified (roughness value, FDA, USP, 3.1 for wetted parts, certificate of conformity, etc.)
- Suitable for SIP
- Parts in contact < 0,4 µm

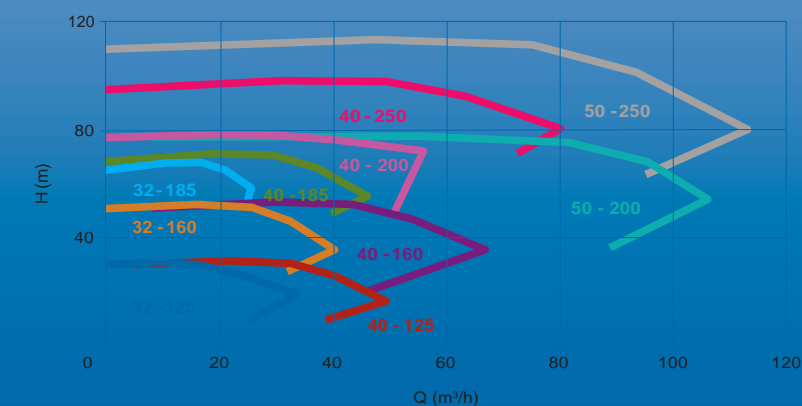
Application areas

These perfectly cleanable process pumps are the ideal solution for pure water circulation loops, cleaning applications, etc.
Typical liquids are pure water, WFI, CIP, syrups, etc.

Pump series	PHP2
Performance	
max. flow rate	110 m³/h
max. differential head	110 m
max. Inlet pressure	13 bar
max. liquid viscosity	1000 cP
max. temperature	140°C
Impeller type	Open
max. free passage	22 mm
max. motor power	45 kW
max. speed	3000 / 3600 rpm
available frequency	50 / 60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L for casing and backplate, 1.4435 for the impellers, duplex 1.4462 for metallic parts of the seal and impeller screw
available materials o-ring	EPDM, FKM, FEP-FKM, FFKM, Silicone
mechanical seal configuration	single, quench, double
connections	sterile connections
surface finish	pharmaceutical quality, roughness value < 0,4 µm for wetted parts, electropolished, fully certified
certificates & legislation	

Performance curves at 2900 rpm

PHP2

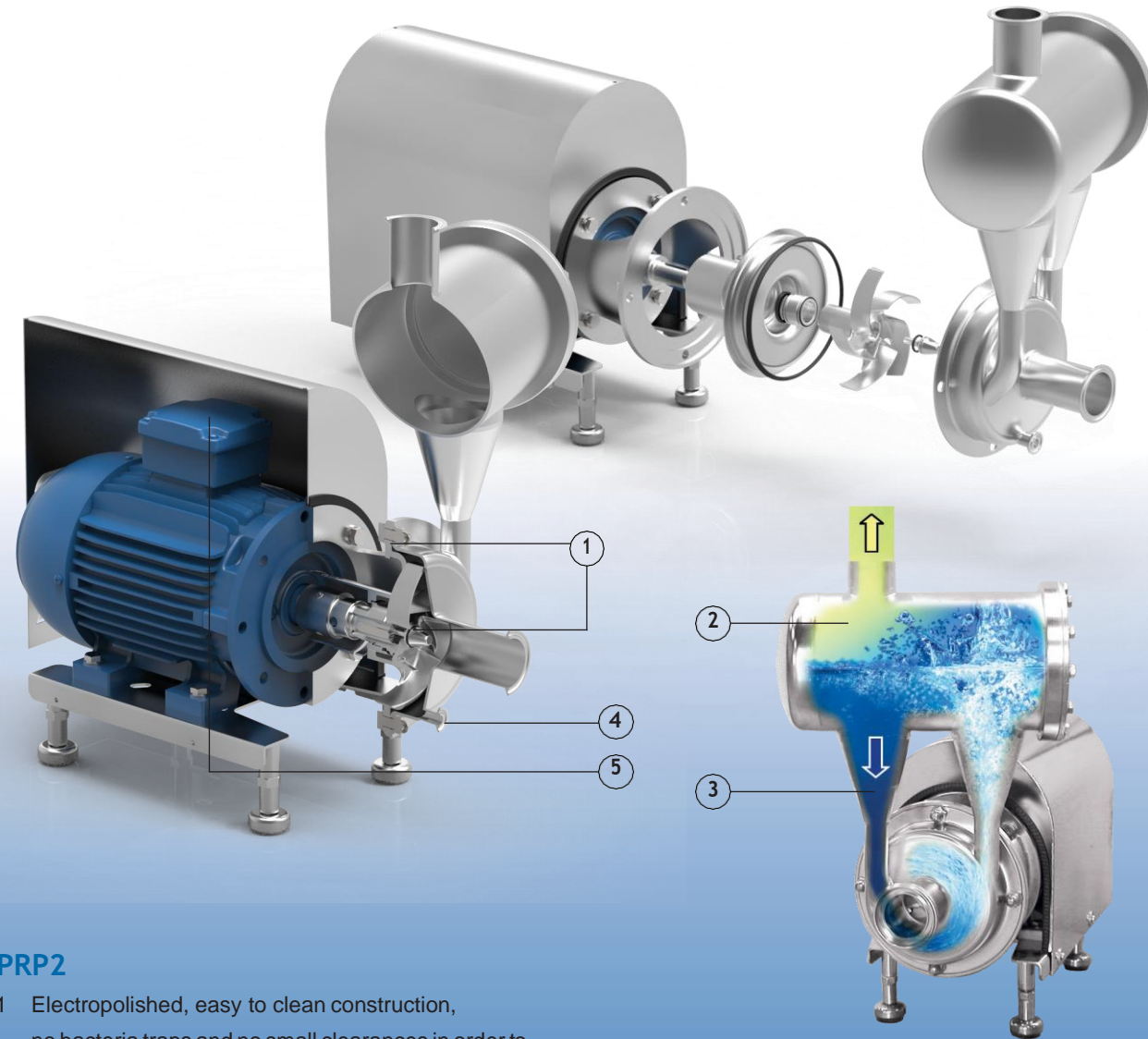


Pump series PRP2



Characteristics

The pumps of the PRP2 series are perfectly cleanable EHEDG and 3A certified air handling pumps and are mainly used to pump a mixture of liquid and air. These perfectly cleanable pumps have stainless steel 316L pump casings constructed in thick cold rolled plate, 100% non porous and extremely smooth. The pumps have fully machined open impellers constructed in 1.4435 material. Thanks to its crevice-free design and electropolishing as a final surface treatment, the PRP2 pump series are perfectly cleanable, resulting in a reliable component into your production process.



PRP2

- 1 Electropolished, easy to clean construction, no bacteria traps and no small clearances in order to clean the area around the O-ring
- 2 Unique air handling design with cleanable air separator
- 3 By-pass to casing taking care about airevacuation
- 4 Fully drainable
- 5 Monobloc execution with std. IEC motors
- 6 Standardized mechanical seals to EN 12756 FDA approved sterile O-ringseals
- 7 Optional: Novapad seal for applications with poor lubrication



Your benefits:

- Higher pump efficiency compared with a classic liquid ring pump
- Low NPSH values: less risk on cavitation
- Electropolished: perfectly cleanable
- Easy & robust construction and easy maintenance: Less downtime
- Limited noise level
- 1 mechanical seal diameter for the entire range
- Fully certified (roughness value, FDA, USP, 3.1 for wetted parts, certificate of conformity, etc.)
- Suitable for SIP
- Parts in contact < 0.4 µm

Application areas

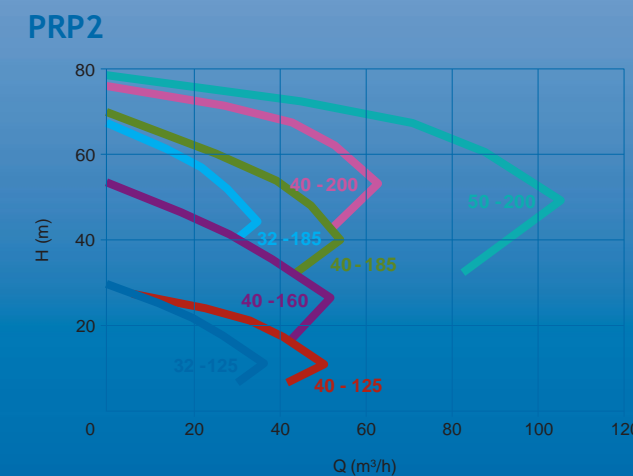
Thanks to its unique air handling design based on a standard centrifugal pump, the PRP2 series are particularly suitable as CIP return pump!

Pump series

PRP2

Performance	
max. flow rate	105 m³/h
max. differential head	75 m
max. inlet pressure	13 bar
max. liquid viscosity	10 cP (to guarantee air handling capabilities)
max. temperature	140°C
impeller type	Open
max. free passage	22 mm
max. motor power	22 kW
max. speed	3000 / 3600 rpm
available frequency	50 / 60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L for casing and backplate, 1.4435 for the impellers, duplex 1.4462 for metallic parts of the seal and impeller screw
available materials o-ring	EPDM, FKM, FEP-FKM, FFKM, Silicone
mechanical seal configuration	Single, quench, double
connections	sterile connections
surface finish	pharmaceutical quality, roughness value < 0.4 µm for wetted parts, electropolished, fully certified
certificates & legislation	

Performance curves at 2900 rpm





We optimize your flow

A **VERDER** COMPANY

Packo Inox Ltd • Industriepark Heernisse • Cardijnlaan 10 • 8600 Diksmuide • BELGIUM
Tel. +32-51-51 92 80 • Fax +32-51-51 92 99 • E-mail pumps@packo.com • www.packopumps.com
LinkedIn: www.linkedin.com/company/packopumps