

Industrial Pumps

Stainless steel centrifugal pumps
for the general industries

Product overview

	MEI	ATEX	1935/2004 EC	Connections	Electropolished	Pump casing
NP60	√	O	-	Industrial	√	Stainless steel pressed cold rolled plate
ICP1	√	O	-	Industrial	√	Stainless steel pressed cold rolled plate
ICP2	√	O	-	Industrial	√	Stainless steel pressed cold rolled plate
ICP+	√	O	√	Hygienic	√	Stainless steel pressed cold rolled plate
ICP3	√	O	√	Industrial or hygienic	√	Stainless steel pressed cold rolled plate
MCP2	√	O	√	Industrial	√	Stainless steel investment cast
MWP2	-	O	-	Industrial	√	Duplex investment cast
MCP3	√	O	√	Industrial	√	Stainless steel investment cast
IPP2	-	O	√	Industrial or hygienic	√	Stainless steel machined
NMS	-	O	√	Industrial	√	Stainless steel pressed and investment cast
IRP	-	O	-	Industrial	√	Stainless steel pressed cold rolled plate
IRP+	-	O	√	Hygienic	√	Stainless steel pressed cold rolled plate
MSP2	-	O	√	Industrial or hygienic	√	Stainless steel investment cast
IFF	-	O	√	Industrial or hygienic	√	Stainless steel pressed cold rolled plate
MFF	-	O	√	Industrial	√	Stainless steel investment cast
SFP2	-	O	√	Hygienic	√	Stainless steel pressed cold rolled plate
SFP3	-	O	√	Hygienic	√	Stainless steel pressed cold rolled plate
VPCP	-	-	√	Industrial	√	Stainless steel welded
IML	-	-	√	Industrial or hygienic	√	Stainless steel pressed or investment cast
IMO	-	-	√	Industrial or hygienic	√	Stainless steel pressed or investment cast
IMXL	-	-	√	Industrial or hygienic	√	Stainless steel pressed or investment cast

	Impeller	Quench	Double seal	Special feature	Page
NP60	Open	O	-	Industrial low cost pump	14
ICP1	Open	-	-	Industrial process pump with limited options	16
ICP2	Open	O	O	Robust pressed industrial pump	18
ICP+	Open	O	O	Industrial pump with hygienic fittings	20
ICP3	Closed	O	O	Robust pressed industrial pump	22
MCP2	Open or semi-open	O	O	Cast industrial pump	24
MWP2	Open	O	O	Wear resistant applications	26
MCP3	Closed	O	O	Flow up to 1700 m ³ /h	28
IPP2	Open	O	O	Max. inlet pressure 40 bar	30
NMS	Open	O	O	Multistage pump	32
IRP	Open	O	O	Air handling pump for unloading applications	34
IRP+	Open	O	O	Air handling pump for CIP return & unloading	36
MSP2	Open	O	O	Self priming pump	38
IFF	Open, semi-open or vortex	O	O	Free flow with large passage for fibres and solids	40
MFF	Open or vortex	O	O	Free flow with large passage for fibres and solids	42
SFP2	Open	O	O	High shear pump	44
SFP3	Closed	O	O	High shear pump	44
VPCP	Vane	-	-	Large free passage	46
IML	Open, closed or vortex	-	-	Cantilever pump, maintenance free	48
IMO	Open, closed or vortex	-	-	Cantilever pump, maintenance free	50
IMXL	Open, closed or vortex	-	-	Vertical slide bearing sump pump up to 1,5 m length	52

Legend

√ = approved/standard
O = optional



Solid construction



Heavy constructed centrifugal pumps in stainless steel with investment cast impellers. These are more solid, less sensitive to crevice corrosion and obstruction compared to typical water pumps with spot welded impellers. Usage of open and channel impellers, large passage and non-clogging. Pump casings and back plate made of deep drawn or investment cast stainless steel are constructed much thicker compared to a traditional water pump resulting in extra seal stability in case of water hammer and giving an improved wear resistance against abrasive liquids.

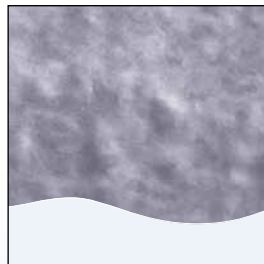


Hydraulic high quality product with the highest pump efficiencies and lowest NPSH values.

Lower energy bills thanks to Packo Pumps.

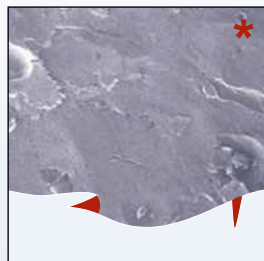
Electropolished design (for wetted & non-wetted parts)

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

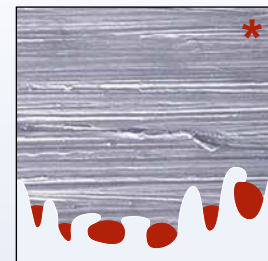


- Increased corrosion resistance
- Reduced internal material tensions, less 'tension' corrosion
- Increased resistance to adhesion of products
- Easier to clean, less bacteria traps

Electropolished



Glass bead blasted



Mechanical polishing 240 grit

* Higher risk of bacteria traps with other pump brand.

Designed for industry

Packo pumps are the reliable partner for about all industrial applications. With their solid and easy construction, their high efficiency and low NPSH, they rank among the most reliable and maintenance friendly pumps for general industrial applications.

Discover some of Packo pumps characteristics and find the perfect match for your production process.



Standardized mechanical seals to EN12756. Limited number of dimensions for the full Packo pump range.



Balanced O-ring seals are available for higher inlet pressures. Different seal configurations depending on liquid characteristics: single, quench, double pressureless or pressurized barrier

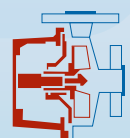


According to applicable standards and legislations, particularly within Europe, but also outside.

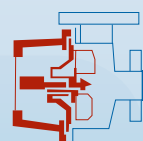


Modular Concept

The ICP, IFF, IRP and MSP series consist of the same components. Only the pump casing (and for some IFF pumps also the impeller) is different. This minimises the spare parts stock. Vertical cantilever pumps (ICP-IM) and pumps on pedestal can be supplied and some models are available in vertical In-Line (ICP-IL) construction.



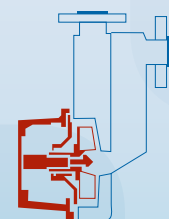
ICP



IFF



IRP



MSP

Before shipping all pumps are subjected to a thorough automated testing procedure. 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!

ISO 9001:2015
ISO 14001:2015



BQA_QMS019_C_1994041



BQA_EMS019_C_2015041



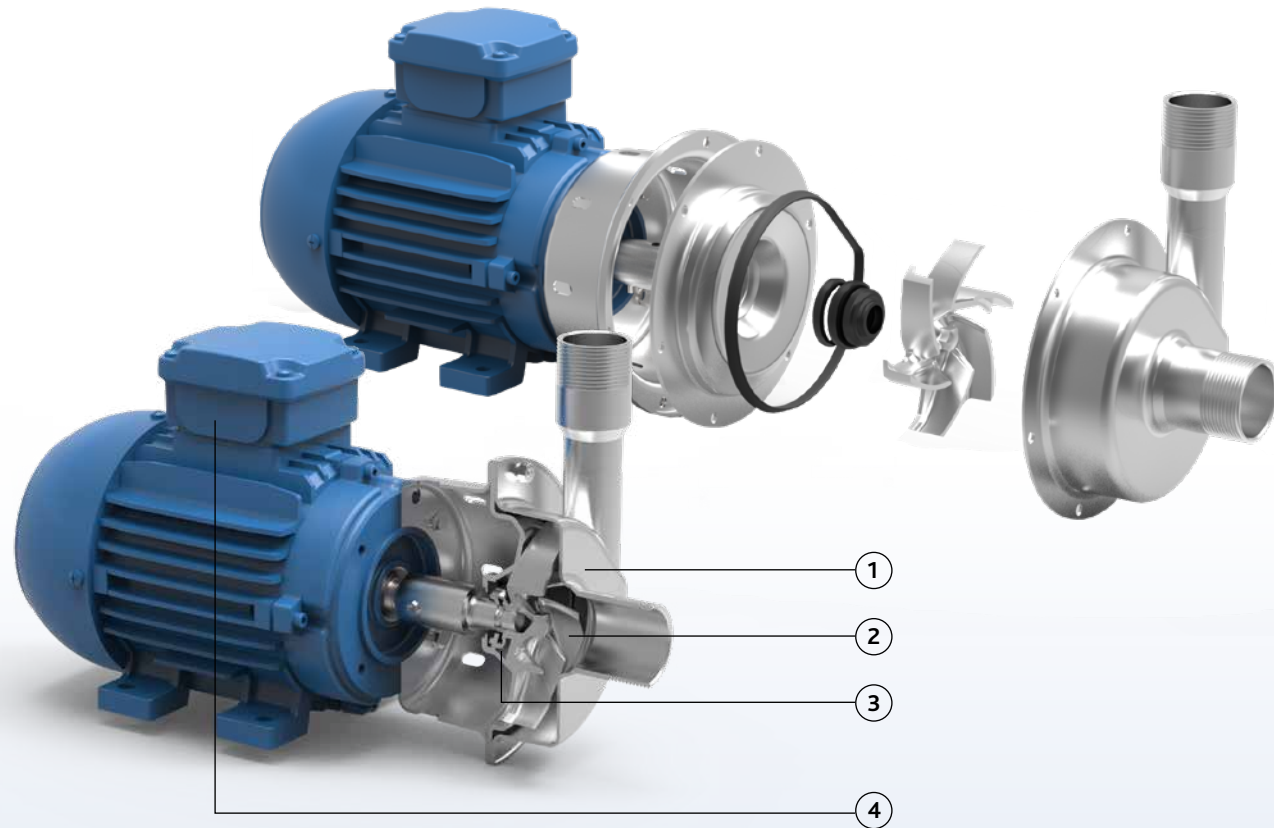
Standardized motor dimensions to IEC. Available in accordance with local motor laws.

Pump series NP60



Characteristics

The Packo stainless steel centrifugal pumps of the NP60 series are low cost industrial pumps. They have investment cast open impellers. This series achieves an overall high efficiency, leading to a lower energy consumption for your production process. Thanks to its modular concept it also guarantees an easy maintenance.



NP60

- 1 Pressed stainless steel with minimum thickness of 2 mm
- 2 Investment cast open impellers
- 3 Large seal cavity to guarantee liquid circulation around the seal
- 4 Monobloc execution with std. IEC motors
- 5 One seal diameter for the entire range: Ø 18 mm



Your benefits

- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy construction and easy maintenance: less downtime
- Easy to install
- Solid impellers compared to low cost spot welded versions

Application areas

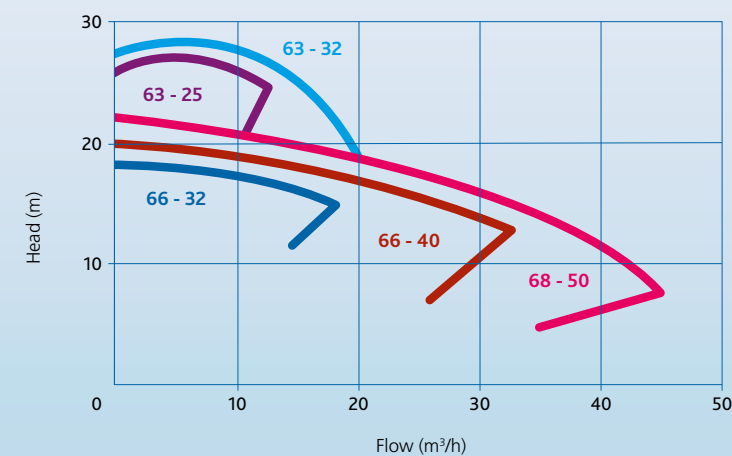
The NP60 pumps are mainly used for pure as well as slightly contaminated liquids up to a maximum viscosity of 500 cP.

They are often used as process pump for the washing of textiles, for water treatment, but also for pumping solvents, alcohols and chemicals.

Pump series	NP60
Performance	
max. flow rate	40 m ³ /h
max. differential head	27 m
max. inlet pressure	3 bar
max. liquid viscosity	500 cP
max. temperature	95°C
impeller type	open
max. free passage	15 mm
max. motor power	2.2 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single, quench
available O-ring materials	EPDM, FKM
connections	BSP fittings, flanges according to EN1092-1/02, smooth tubes
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

NP60

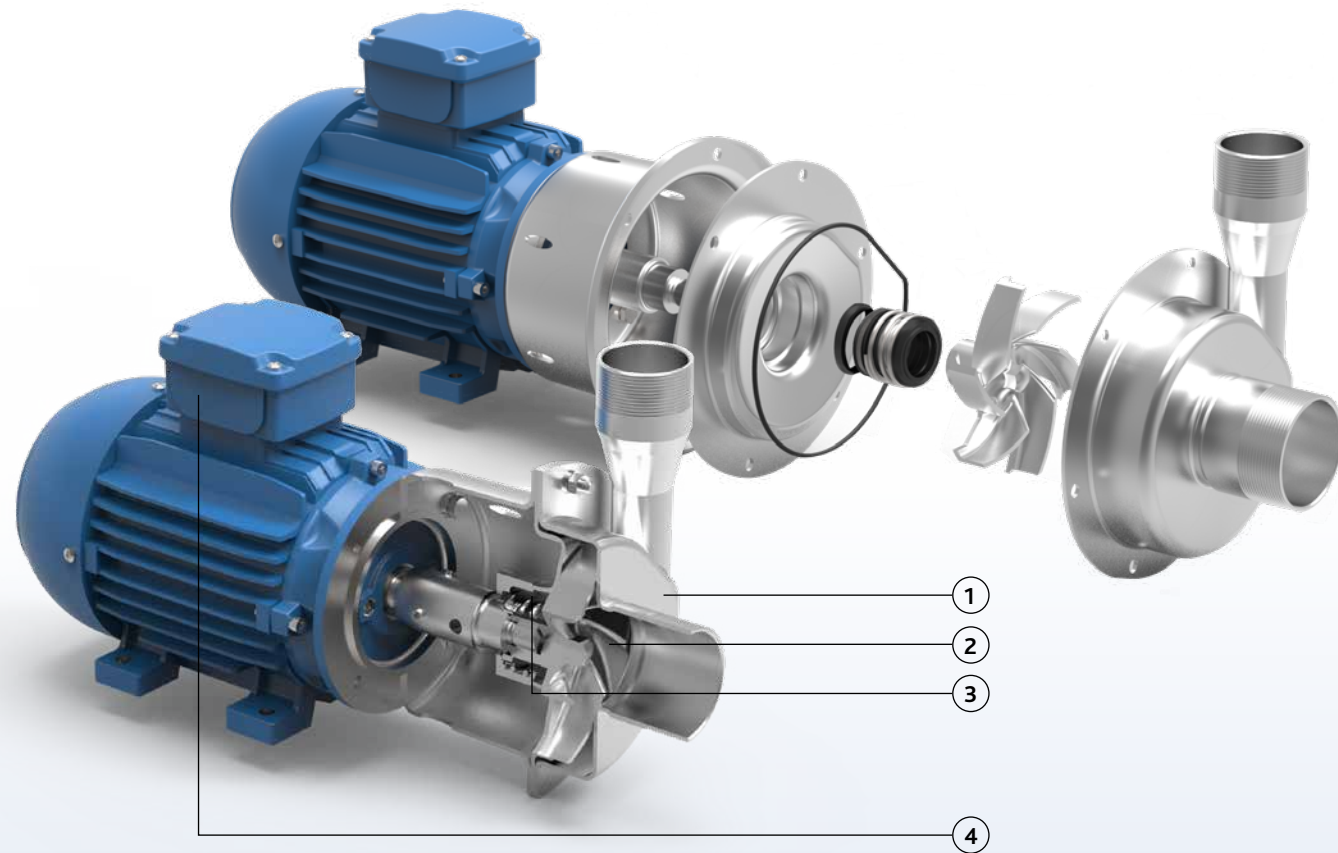


Pump series ICP1



Characteristics

The Packo stainless steel centrifugal pumps of the ICP1 series are the “best value for money” industrial pumps. They have investment cast open impellers. This series achieves an overall high efficiency, leading to a lower energy consumption for your production process. Thanks to its modular concept it also guarantees an easy maintenance.



ICP1

- 1 Pressed stainless steel with minimum thickness of 3 mm
- 2 Investment cast impellers
- 3 Large seal cavity to guarantee liquid circulation around the seal
- 4 Monobloc execution with std. IEC motors
- 5 Standardized mechanical seals to EN 12756
Bellow mechanical seals or balanced O-ring seals
- 6 One seal diameter for the entire range: Ø 33 mm



Your benefits

- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy construction and easy maintenance: less downtime
- Easy to install
- Solid impellers compared to low cost spot welded versions
- Standard components

Application areas

The ICP1 pumps are mainly used for pure as well as for slightly contaminated liquids. They are often used as a process pump in textile industry for washing textiles, for water treatment, but also for handling solvents, alcohols and chemicals.

Pump series

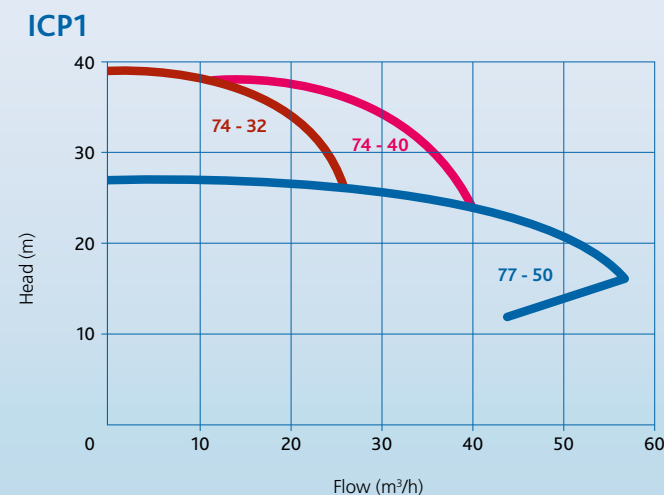
Performance

	ICP1
max. flow rate	55 m³/h
max. differential head	40 m
max. inlet pressure	6 bar
max. liquid viscosity	1000 cP
max. temperature	140°C
impeller type	Open
max. free passage	18 mm
max. motor power	5.5 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz

Technical specifications

materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced
available O-ring materials	EPDM, FKM, FEP, FFKM
connections	BSP fittings, flanges according to EN1092-1/02
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

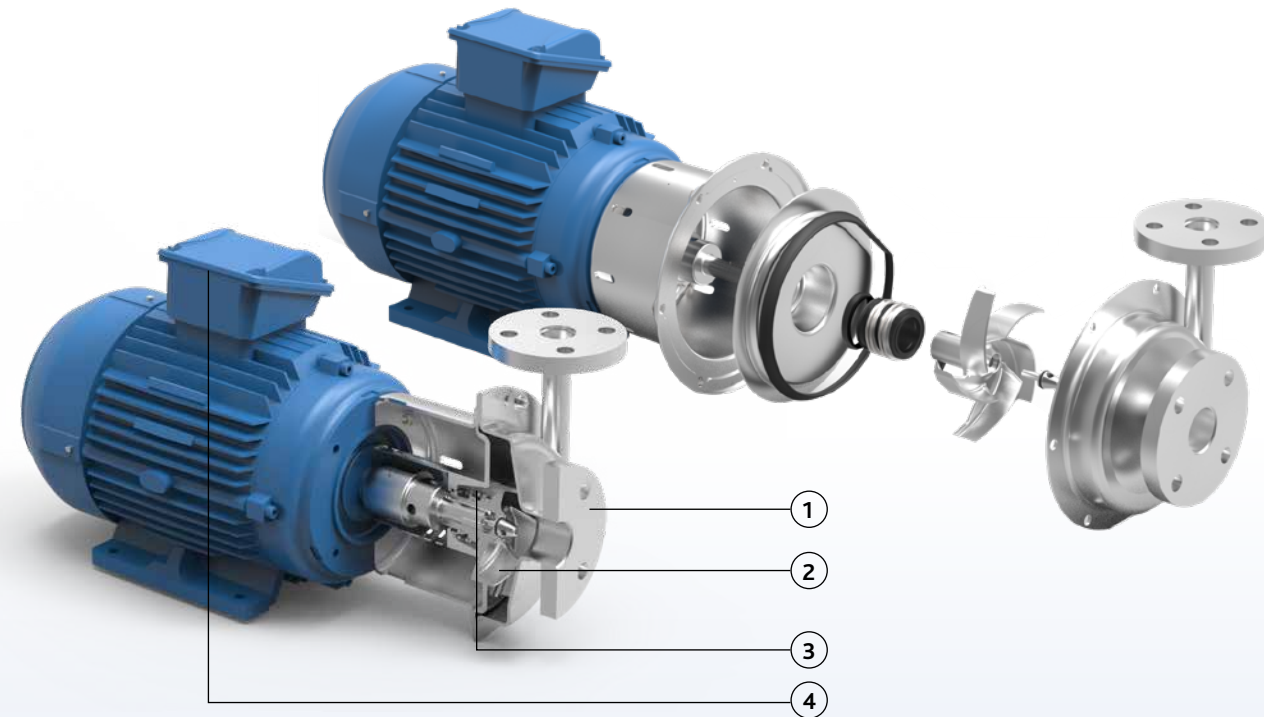


Pump series ICP2



Characteristics

These robust pumps have stainless steel 316L pump casings constructed in thick cold rolled plate and have open investment cast impellers in stainless steel 316L or duplex materials. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process.



ICP2

- 1 Pressed stainless steel, pump casing thickness up to 8 mm, back plate up to 20 mm
- 2 Investment cast impellers
- 3 Large seal cavity to guarantee liquid circulation around the seal
- 4 Monobloc execution with std. IEC motors
- 5 Standardized mechanical seals to EN 12756, all kind of configurations
- 6 One seal diameter: Ø 33 mm, except for 250 types: Ø 43 mm



Your benefits

- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy & robust construction and easy maintenance: less downtime
- Easy to install
- Solid impellers compared to low cost spot welded versions
- 2 mechanical seal diameters for entire range
- Standard components

Application areas

The Packo pumps of the series ICP2 are used in a wide range of industries and applications.

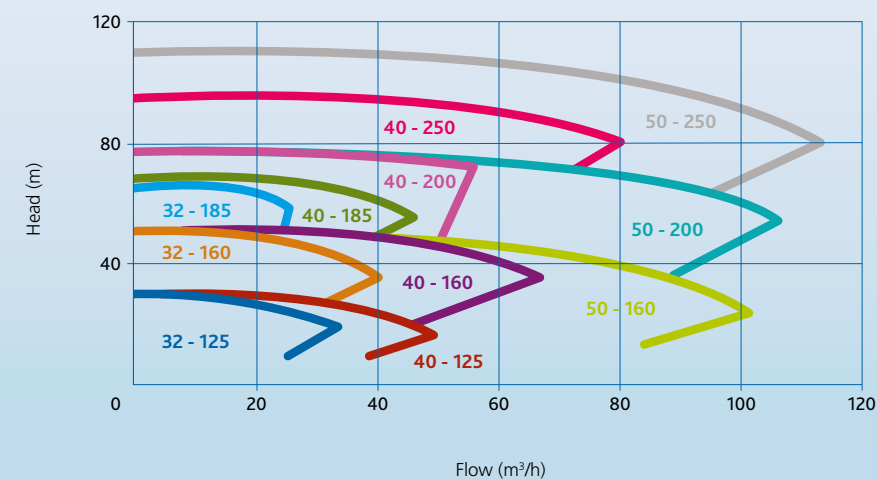
You can find them in just about all industries such as vegetable industry, breweries, water treatment and textile industry as well as in eg biogas, biodiesel and bioethanol applications.

Typical liquids: blanching water, mash, wort, process and contaminated water, biodiesel, bioethanol, alcohols, CIP, biogas, etc.

Pump series	ICP2
Performance	
max. flow rate	110 m ³ /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 or similar
mechanical seal configuration	single bellow, single balanced, quench, double, pressurized barrier
available O-ring materials	EPDM, FKM, FEP-FKM, FFKM, Silicone
connections	BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges, smooth tubes
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

ICP2

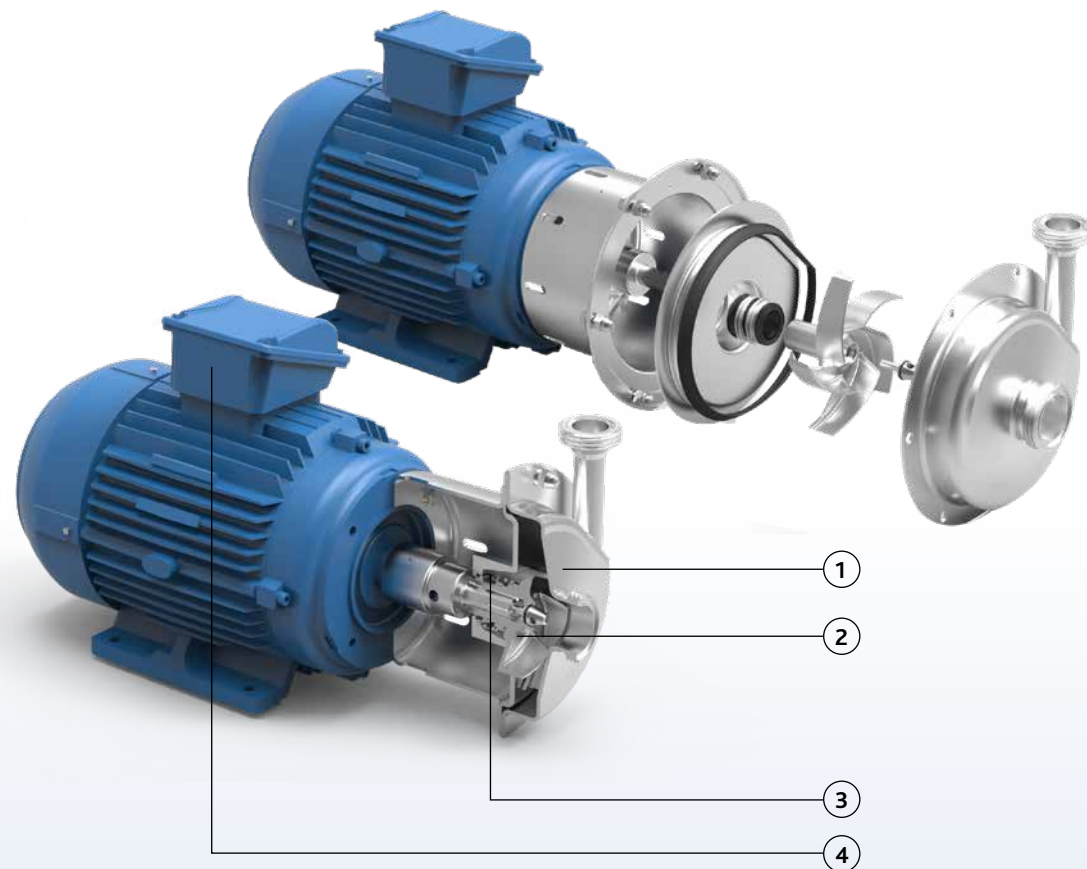


Pump series ICP+



Characteristics

These robust pumps have stainless steel 316L pump casings constructed in thick cold rolled plate and have open investment cast impellers in stainless steel 316L or duplex materials. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process.



ICP+

- 1 Pressed stainless steel, pump casing thickness up to 8 mm, back plate up to 20 mm
- 2 Investment cast impellers
- 3 Large seal cavity to guarantee liquid circulation around the seal
- 4 Monobloc execution with std. IEC motors
- 5 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals
- 6 One seal diameter: Ø 33 mm, except for 250 types: Ø 43 mm



Your benefits

- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy & robust construction and easy maintenance: less downtime
- Easy to install
- Solid impellers compared to low cost spot welded versions
- 2 mechanical seal diameters for entire range
- Standard components

Application areas

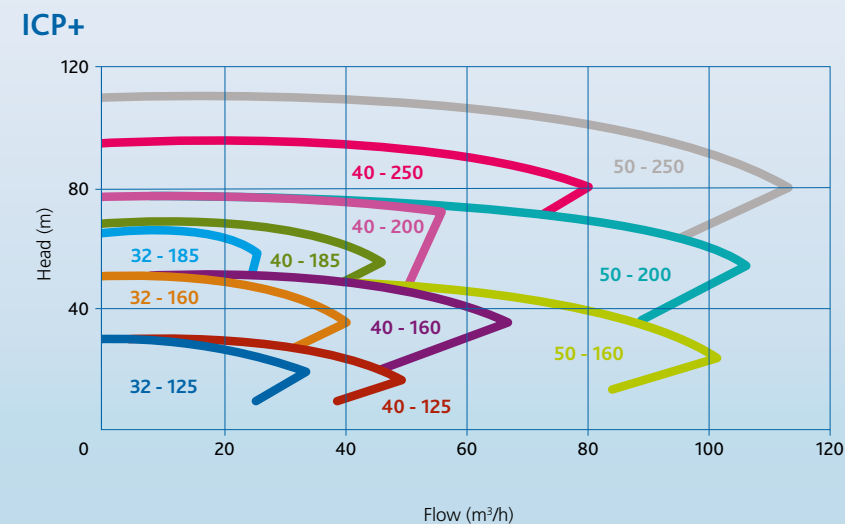
The Packo pumps of the series ICP+ are used in a wide range of industries and applications. You can find them in just about all industries such as vegetable industry, breweries, dairies, distilleries, etc.

They are the ideal solution for filtration applications, pasteurisation, evaporating systems, yeast propagation and for CIP cleaning systems as well.

Typical applications include filtration of beer, wine and fruit juices as well as pumping yeast, whey and curd.

Pump series	ICP+
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 or similar
mechanical seal configuration	single bellow, single balanced, quench, double, pressurized barrier
available O-ring materials	EPDM, FKM, FEP-FKM, FFKM, Silicone
connections	hygienic fittings
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

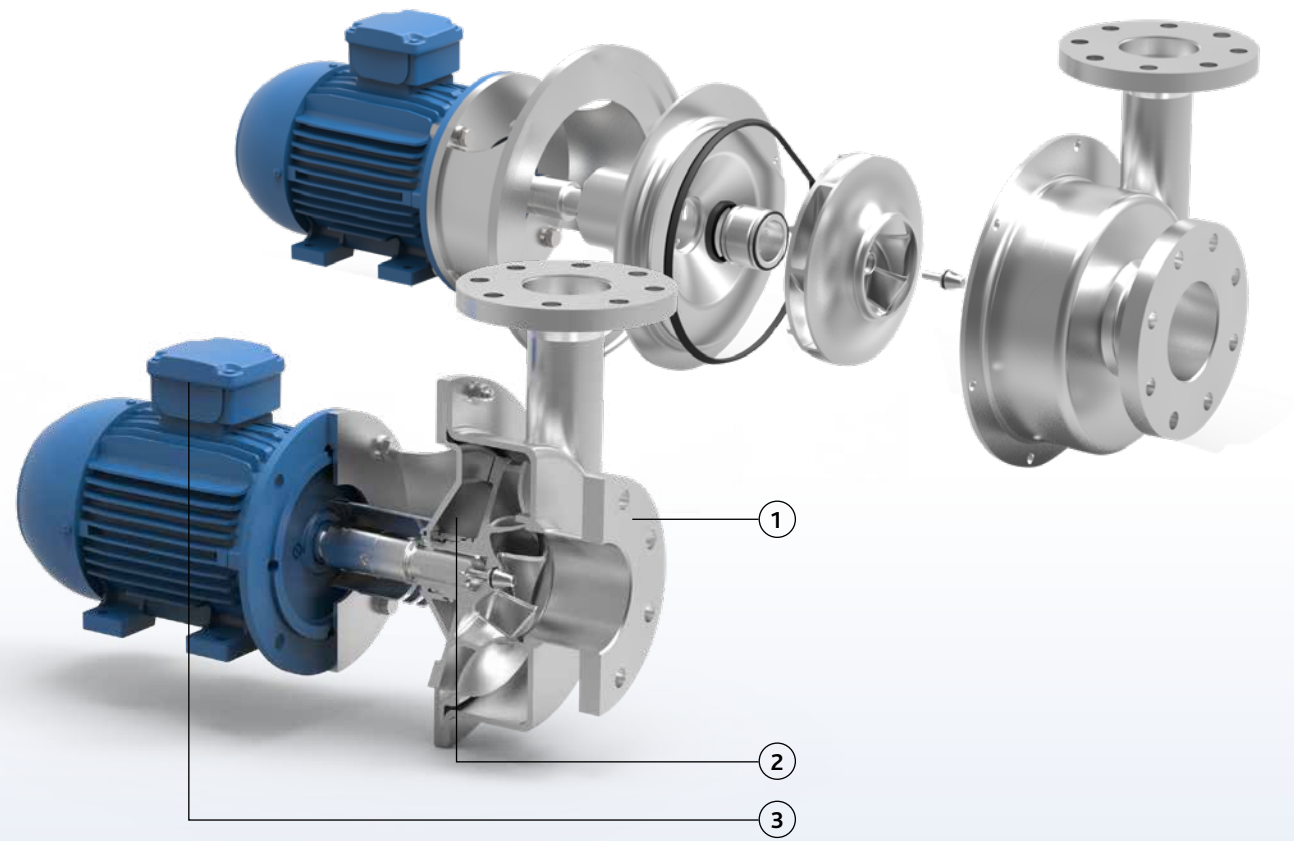


Pump series ICP3



Characteristics

These robust pumps have stainless steel 316L pump casings constructed in thick cold rolled plate and have closed investment cast impellers in duplex materials. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process.



ICP3

- 1 Pressed stainless steel, pump casing thickness up to 8 mm, back plate up to 30 mm
- 2 Large seal cavity to guarantee liquid circulation around the seal
- 3 Monobloc execution with std. IEC motors
- 4 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals
- 5 2 seal diameters for the entire range:
 - motor power > 22 kW 4p or 45 kW 2p: ø 70 mm
 - motor power < 22 kW 4p or 45 kW 2p: ø 43 mm



Your benefits

- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy & robust construction and easy maintenance: less downtime
- Easy to install
- Solid impellers compared to low cost spot welded versions
- 2 mechanical seal diameters for entire range
- Standard components

Application areas

The Packo pumps of the series ICP3 are used in a wide range of industries and applications.

You can find them in just about all industries such as vegetable industry, breweries, water treatment and textile industry as well as in e.g. biogas, biodiesel and bioethanol applications.

Typical liquids: blanching water, mash, wort, process and contaminated water, biodiesel, bioethanol, alcohols, CIP, biogas, etc.

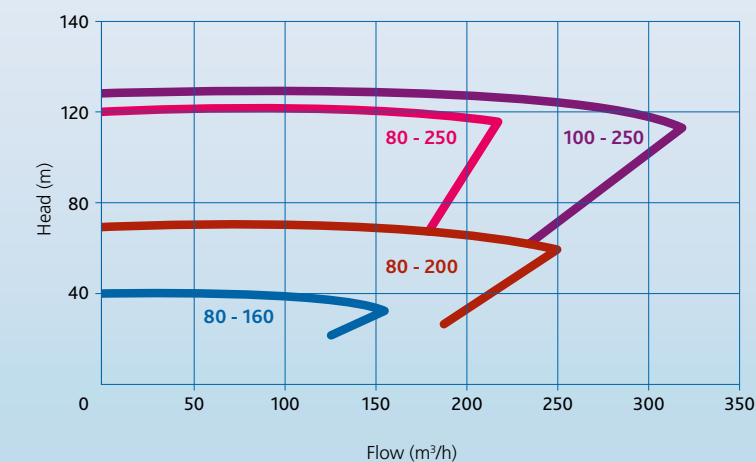
Pump series

ICP3

Performance	
max. flow rate	320 m ³ /h
max. differential head	120 m
max. discharge pressure	15 bar
max. liquid viscosity	1000 cP
max. temperature	140°C
impeller type	closed with back vanes and balancing holes
max. free passage	21 mm
max. motor power	90 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced, quench, double, pressurized barrier
available O-ring materials	EPDM, FKM, FEP-FKM, FFKM, Silicone
connections	BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges, smooth tubes
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

ICP3

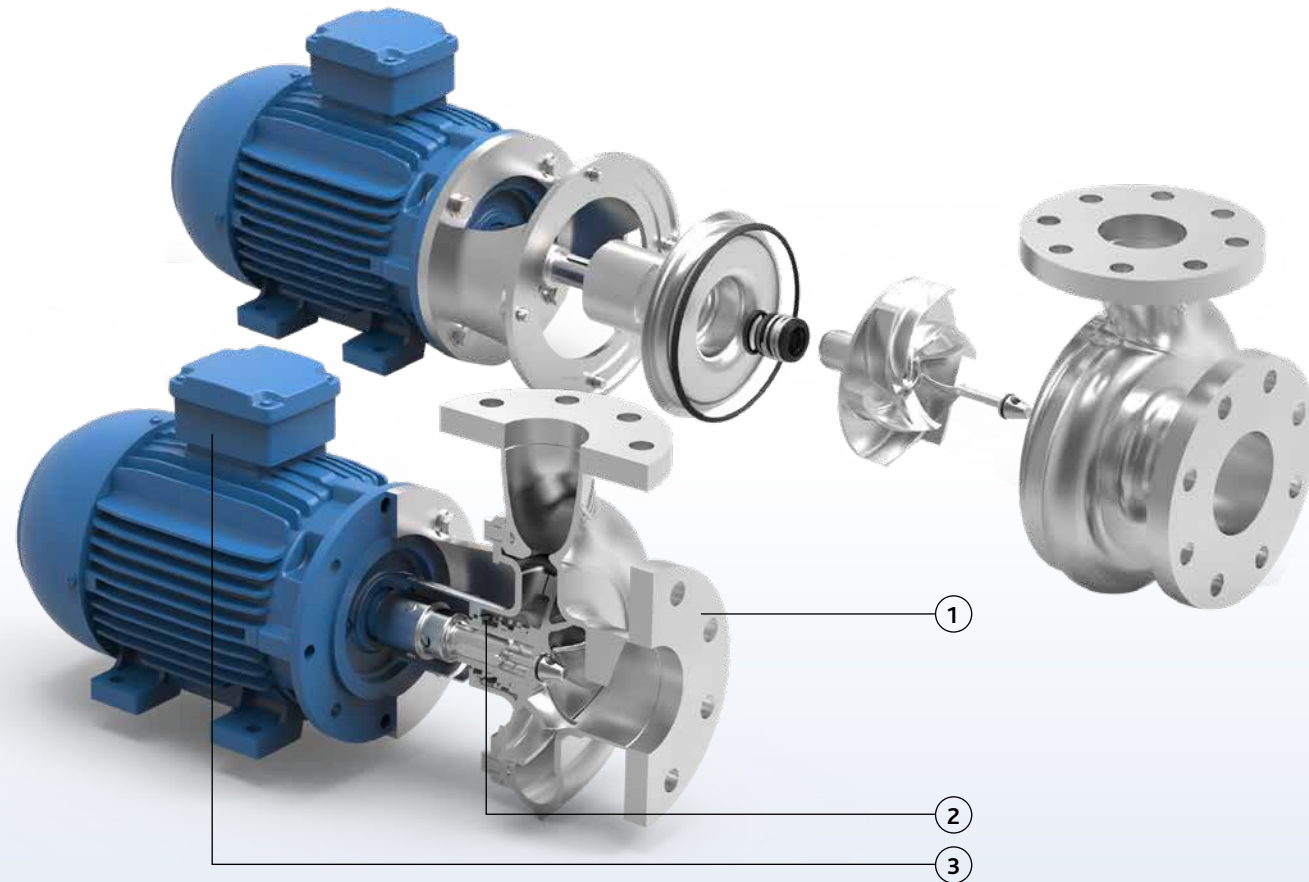


Pump series MCP2



Characteristics

These robust pumps have stainless steel 316L cast pump casings and open or semi-open investment cast impellers constructed in duplex materials. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process.



MCP2

- 1 Solid design thanks to investment cast pump casings and impellers
- 2 Large seal cavity to guarantee liquid circulation around the seal
- 3 Monobloc execution with std. IEC motors
- 4 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals
- 5 One seal diameter for the entire range: Ø 33 mm



Your benefits

- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy and robust construction and easy maintenance: less downtime
- Easy to install
- Solid impellers compared to low cost spot welded versions
- 1 mechanical seal diameter for entire range
- Standard components

Application areas

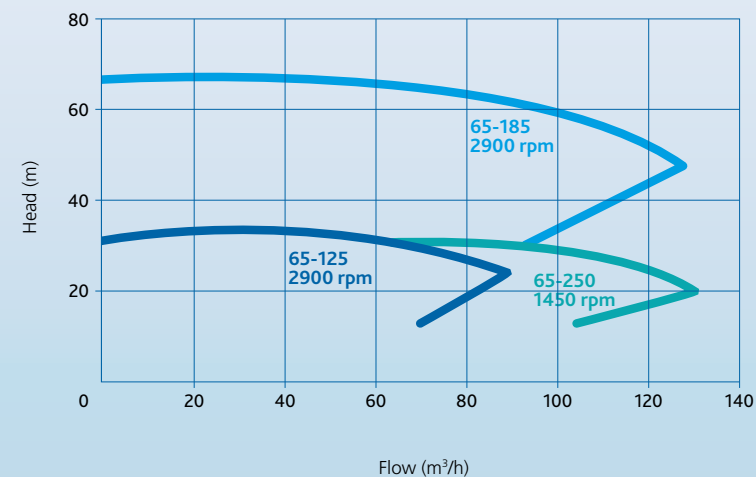
These robust process pumps are often used as process pump for contaminated water as well as for CIP cleaning systems, filtration of wine, mash, beer, whey and blanching of vegetables.

Typical liquids: mash, wort, process and contaminated water, biodiesel, bioethanol, alcohols, CIP, biogas, etc.

Pump series	MCP2
Performance	
max. flow rate	120 m ³ /h
max. differential head	65 m
max. inlet pressure	10 bar
max. liquid viscosity	1000 cP
max. temperature	140°C
impeller type	open or semi-open
max. free passage	25 mm
max. motor power	22 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced, quench, double, pressurized barrier
available O-ring materials	EPDM, FKM, FEP-FKM, FFKM, Silicone
connections	BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves

MCP2

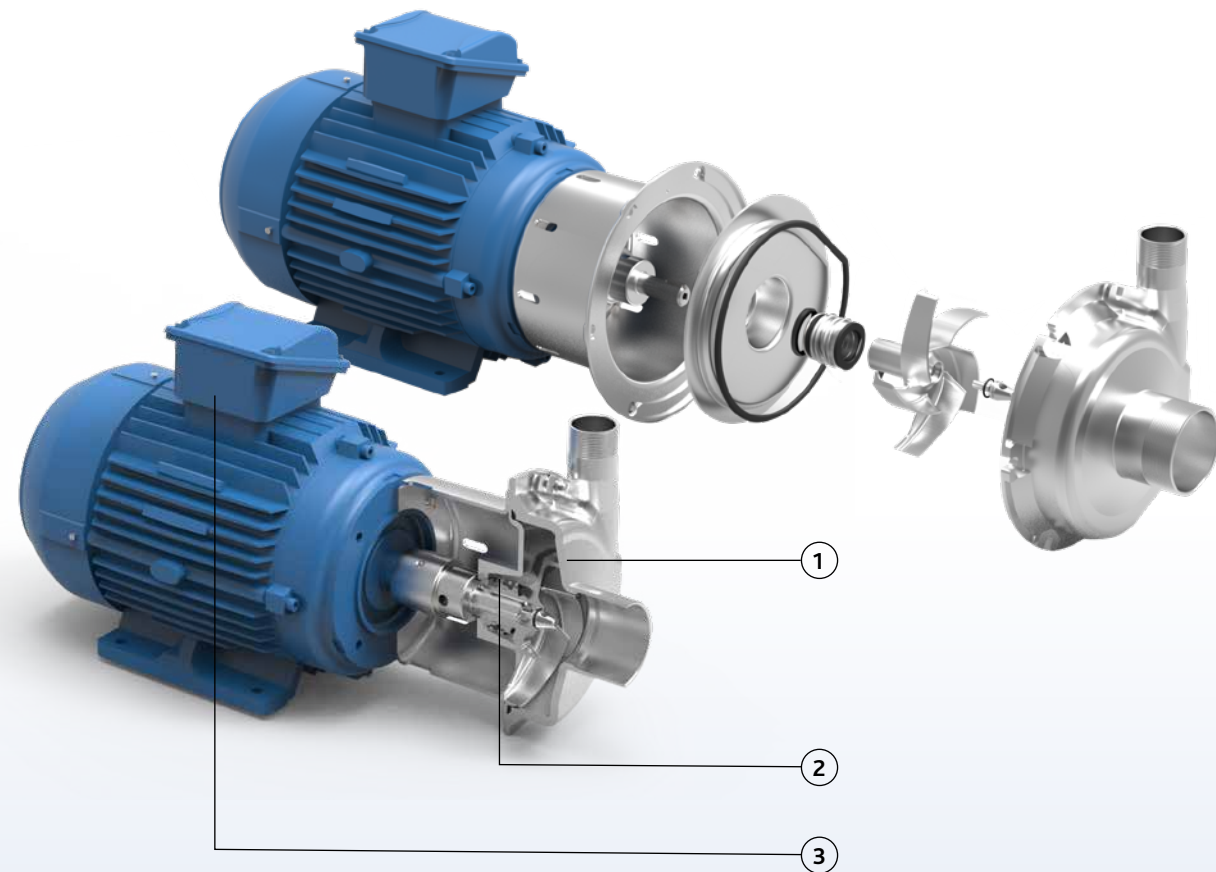


Pump series MWP2



Characteristics

These robust pumps are made of thick walled cast duplex stainless steel materials and have open impellers. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process. The Packo pumps of the MWP2 series are used in all kinds of industries for the transfer of erosive / abrasive liquids.



MWP2

- 1 Solid investment cast duplex pump casing
- 2 Large seal cavity to guarantee liquid circulation around the seal
- 3 Monobloc execution with std. IEC motors
- 4 Standardized mechanical seals to EN 12756, bellow mechanical seals
- 5 One seal diameter for the entire range: Ø 33 mm



Your benefits

- Wear resistant duplex pump casing ideal for handling abrasive liquids.
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy and robust construction and easy maintenance: less downtime
- Easy to install
- Solid impellers
- 1 mechanical seal diameter for entire range

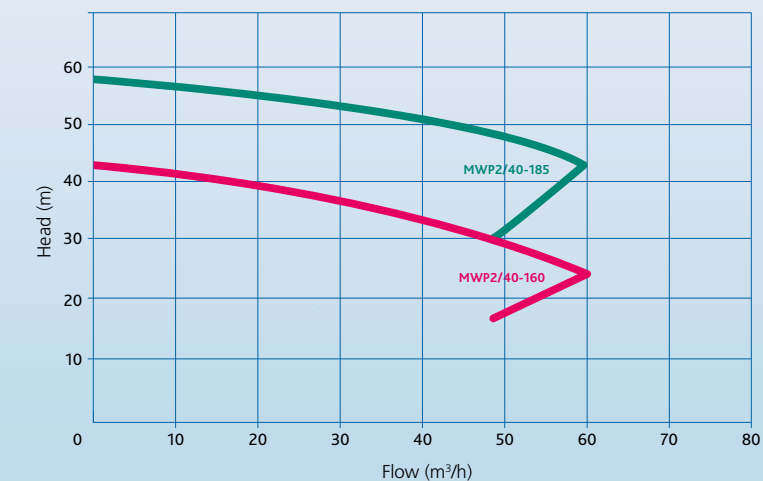
Application areas

These robust process pumps are often used as process pump for circulation of liquid feeding for animals, washing installations in potato and vegetable industry, diatomaceous earth (kieselgur) for filtration purposes, etc.

Pump series	MWP2
Performance	
max. flow rate	50 m³/h
max. differential head	60 m
max. inlet pressure	10 bar
max. liquid viscosity	1000 cP
max. temperature	140°C
impeller type	open
max. free passage	22 mm
max. motor power	11 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	duplex pump casings
mechanical seal configuration	single bellow, quench, double
available O-ring materials	EPDM, FKM, Silicone
connections	BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	EAC

Performance curves at 2900 rpm

MWP2

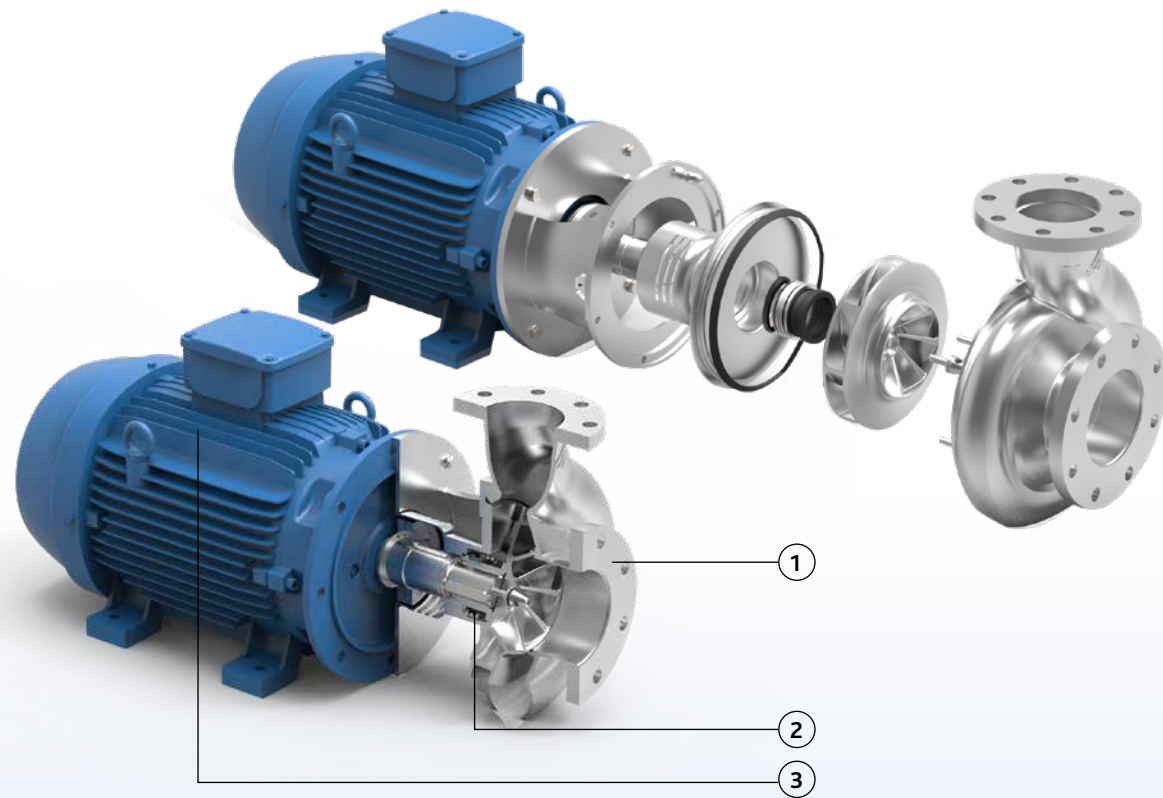


Pump series MCP3



Characteristics

These robust pumps have stainless steel 316L cast pump casings and closed or channel investment cast impellers constructed in duplex materials. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process.



MCP3

- 1 Solid design thanks to investment cast pump casings and impellers
- 2 Large seal cavity to guarantee liquid circulation around the seal
- 3 Monobloc execution with std. IEC motors
- 4 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals
- 5 Mechanical seal diameter depending on motor power: 43 - 70 – 100 mm



bellow seal

Your benefits

- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy and robust construction and easy maintenance: less downtime
- Easy to install
- Very quiet operation
- Standard components

Application areas

They are often used as process pump for contaminated water as well as for CIP cleaning systems, filtration of wine, mash, beer, whey and blanching of vegetables. Typical liquids: mash, wort, process and contaminated water, biodiesel, bioethanol, alcohols, CIP, biogas, etc.

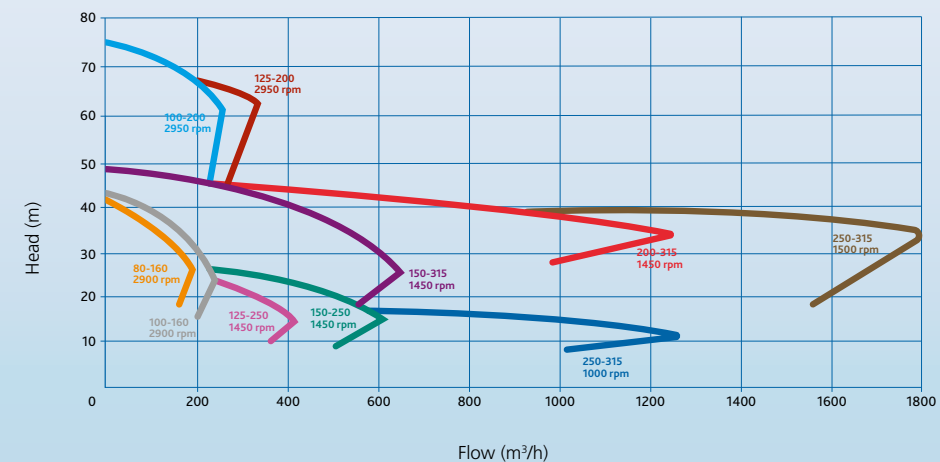
Pump series

MCP3

Performance	MCP3
max. flow rate	1700 m ³ /h
max. differential head	70 m
max. discharge pressure	12 bar
max. liquid viscosity	500 cP
max. temperature	140°C
impeller type	closed (with back vanes and balancing holes) – optional: channel impellers
max. free passage	closed impellers: 27 mm - channel impellers: 41 mm
max. motor power	250 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced, quench, double, pressurized barrier
available O-ring materials	EPDM, FKM, FEP-FKM, FFKM
connections	flanges according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves

MCP3

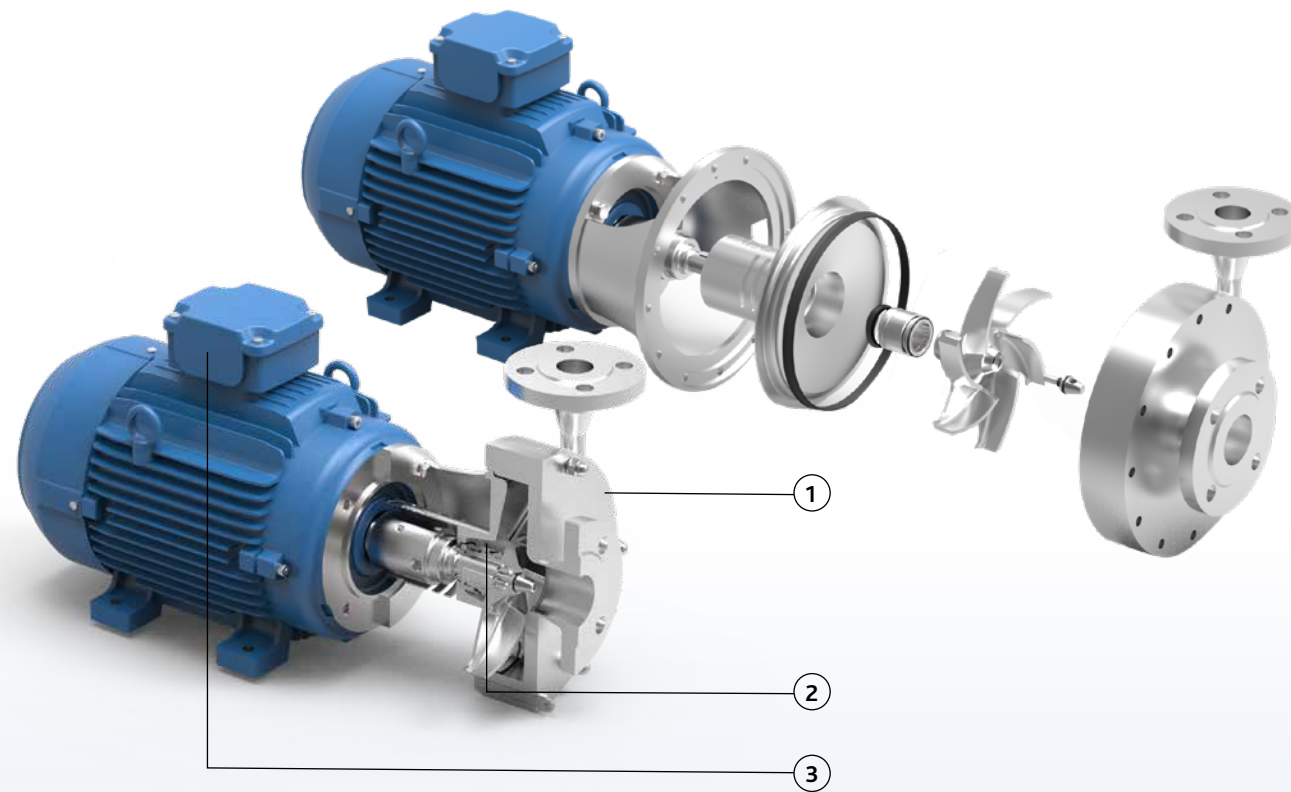


Pump series IPP2



Characteristics

The Packo stainless steel pumps of the IPP2 series are pumps made of solid, machined stainless steel 316L and are extremely suitable for high system pressure applications up to 40 bar.



IPP2

- 1 Solid design made of fully machined stainless steel
 - 2 Large seal cavity to guarantee liquid circulation around the seal
 - 3 Monobloc execution with std. IEC motors
 - 4 Standardized mechanical seals to EN 12756
 - 5 FDA approved balanced O-ring seals
- One seal diameter for the entire range: Ø 33 mm



Your benefits

- Suitable for system pressure applications up to 40 bar
- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy and robust construction and easy maintenance: less downtime
- Standard components
- Easy to install
- 1 seal diameter for entire range

Application areas

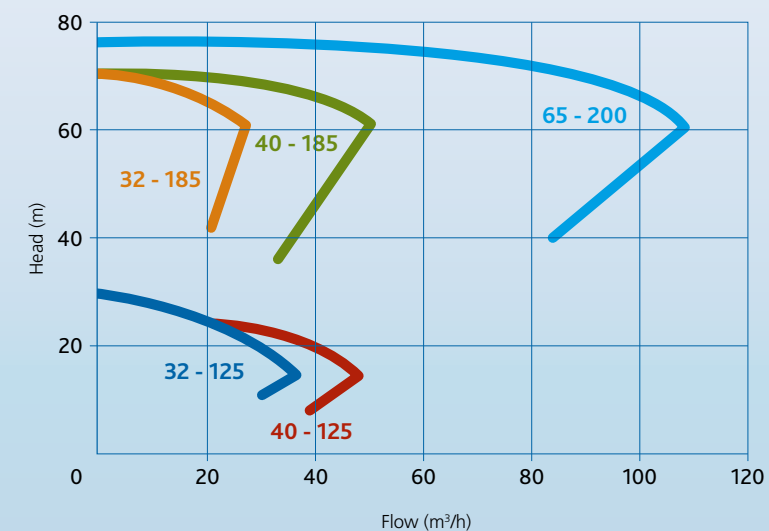
The Packo high pressure pumps of the IPP2 series are used primarily in reverse osmosis (RO) applications for the filtration of, for example, contaminated CIP-water, whey, etc. They are also used as a booster pump in a variety of skids.

You will find them in just about all industries including the dairy industry, breweries, beverage industry as well as in water treatment industry.

Pump series	IPP2
Performance	
max. flow rate	100 m ³ /h
max. differential head	70 m
max. inlet pressure	40 bar
max. liquid viscosity	1000 cP
max. temperature	140°C
impeller type	open
max. free passage	20 mm
max. motor power	22 kW
max. speed	3000 / 3600 rpm
available frequency	50 / 60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single balanced, quench, double
available O-ring materials	EPDM, FKM, FEP-FKM, FFKM, Silicone
connections	flanges according to EN1092-1/11 PN40, Tri-Clamp fittings, etc.
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

IPP2

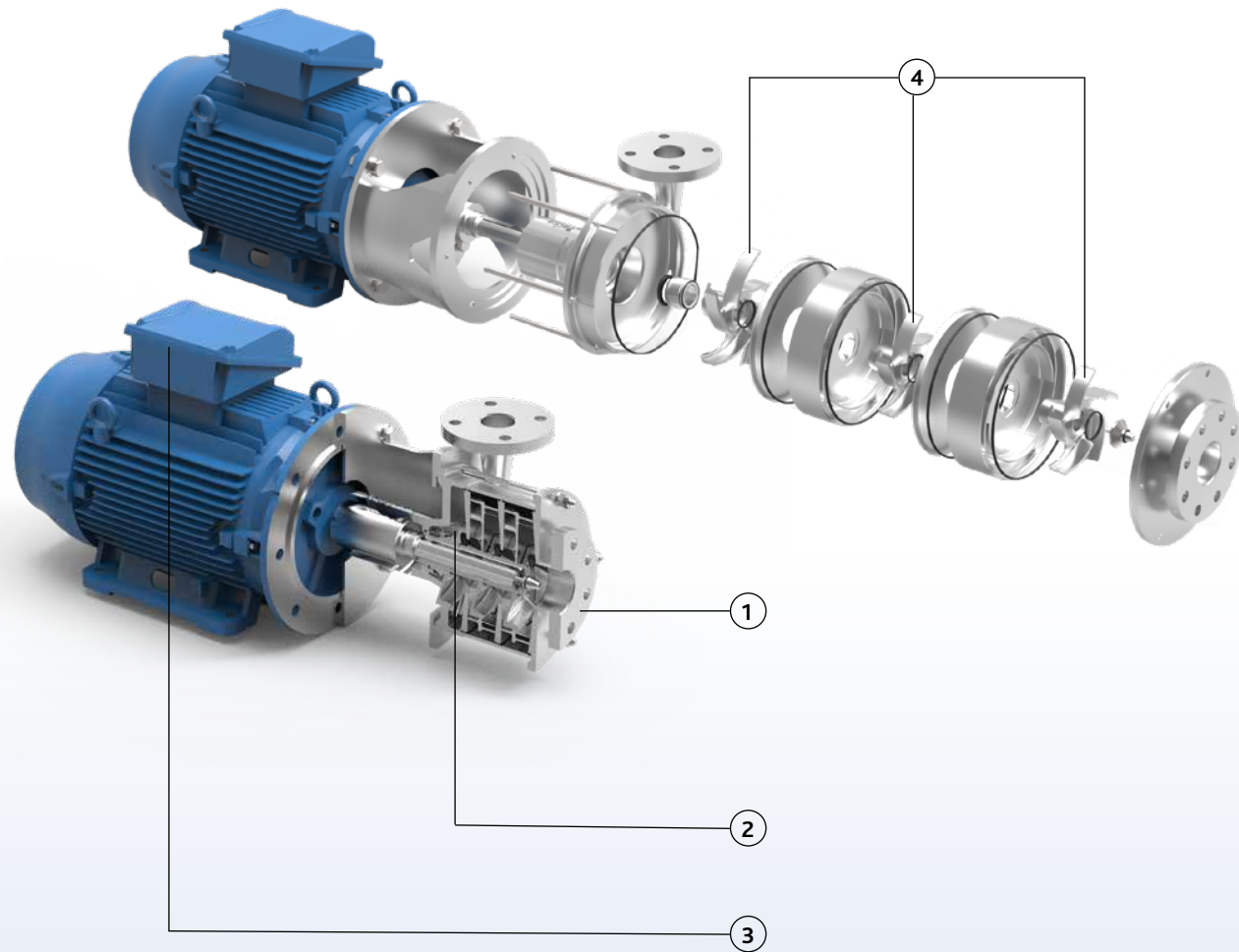


Pump series NMS



Characteristics

The Packo multistage pumps from the NMS series are equipped with open investment cast impellers and pump casings. They are the right match for operations at moderate flows and high pressures.



NMS

- 1 Solid design thanks to investment cast pump casings and impellers
- 2 Large seal cavity to guarantee liquid circulation around the seal
- 3 Monobloc execution with std. IEC motors
- 4 Open impellers: no axial forces on motor bearings
- 5 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals



bellow seal

Your benefits

- Ideal for operation at moderate flow rate and high pressures
- High pump efficiency resulting in lower energy consumption
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy & robust construction and easy maintenance: less downtime
- Standard components
- Easy to install
- Open impellers: longer bearing life

Application areas

For use in food, brew, beverage, pharmaceutical and chemical industries, as transfer and mixing pump for liquid food products, drinks, medicines, lotions, etc.

Typical applications: process pump for plate heat exchangers, pasteurizer systems, filters, filling machines, mixers, deaerators, carbonators and high pressure cleaning systems.

Pump series

Performance

	NMS
max. flow rate	50 m ³ /h
max. differential head	160 m
max. inlet pressure	8 bar
max. liquid viscosity	250 cP
max. temperature	140°C
impeller type	open
max. free passage	14 mm
max. motor power	45 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz

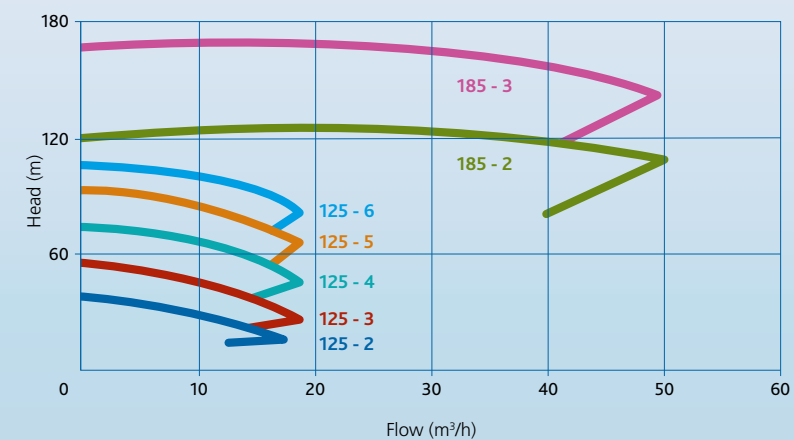
Technical specifications

materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced, quench, double
available O-ring materials	EPDM, FKM
connections	flanges acc. to EN1092-1/01, Tri-Clamp fittings, etc.
surface finish	industrial, welds not hand polished, electropolished



Performance curves at 2900 rpm

NMS

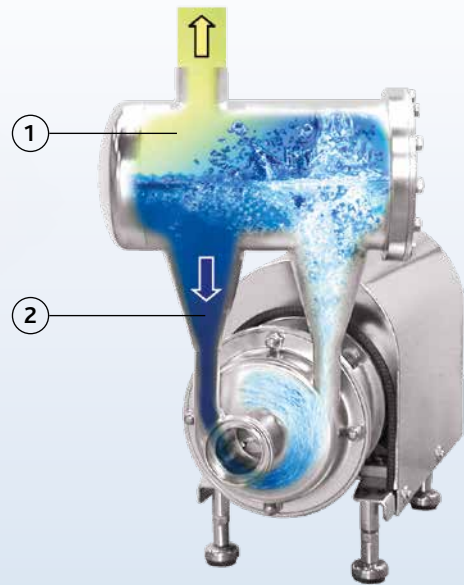
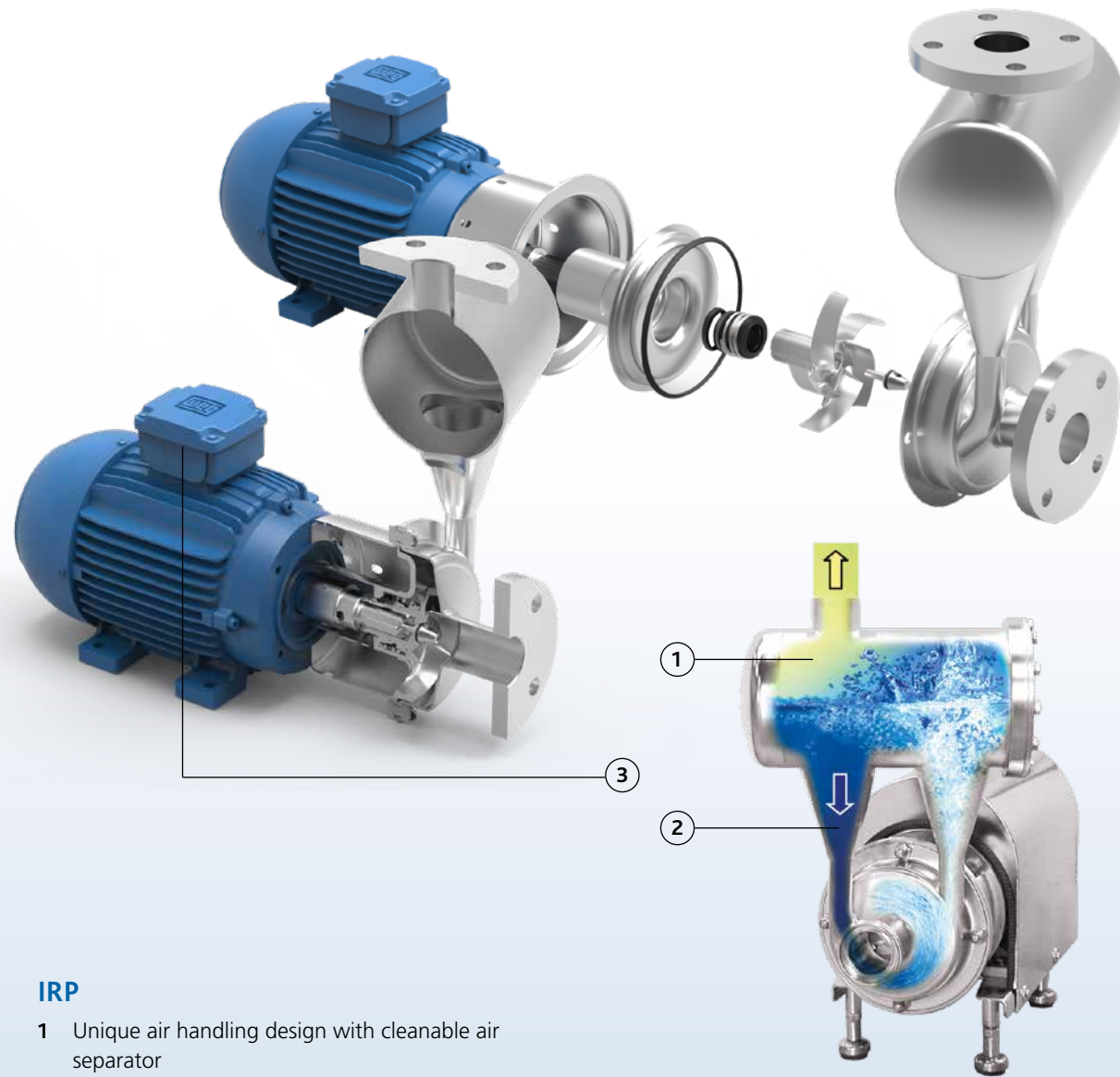


Pump series IRP



Characteristics

These air handling pumps have stainless steel 316L pump casings constructed in thick cold rolled plate, 100% non-porous and extremely smooth. The pumps have open or closed investment cast impellers, constructed in 316L or duplex materials. Together with an electropolished design the industrial air handling pump series IRP are a reliable component into your production process.



IRP

- 1 Unique air handling design with cleanable air separator
- 2 By-pass to casing taking care about air evacuation
- 3 Monobloc execution with std. IEC motors
- 4 Standardized mechanical seals to EN 12756 bellow mechanical seals or balanced O-ring seals
- 5 One seal diameter: Ø 33 mm, except for 80-160: Ø 43 mm

Your benefits

- Higher pump efficiency compared with a classic liquid ring pump
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy & robust construction, easy to install and easy maintenance: less downtime
- Construction without non-return valve
- Easy to install
- 2 mechanical seal diameters for the entire range
- Limited noise level

Application areas

Thanks to its unique air handling design based on a standard centrifugal pump, the IRP series are particularly suitable as a CIP return pump, as well as for unloading all type of collecting tankers and trucks.

Pump series

Performance

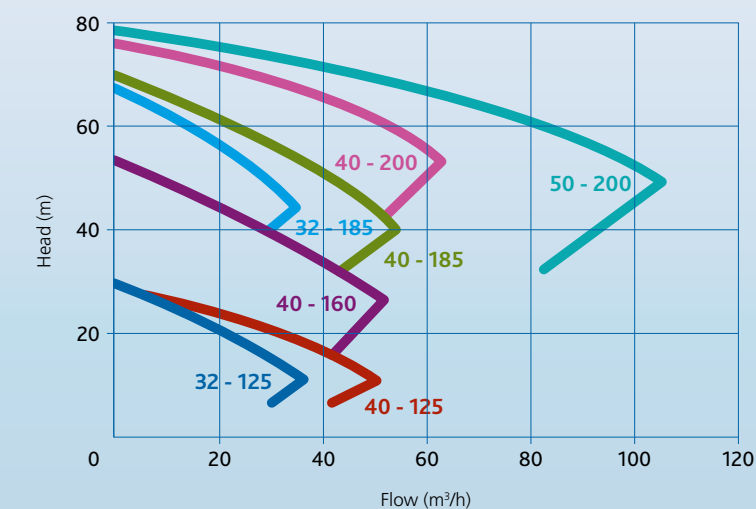
	IRP
max. flow rate	120 m³/h
max. differential head	75 m
max. inlet pressure	10 bar
max. liquid viscosity	10 cP
max. temperature	140°C
impeller type	open or closed
max. free passage	22 mm
max. motor power	22 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz

Technical specifications

materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced, quench, double
available O-ring materials	EPDM, FKM, FEP-FKM, FFKM or similar
connections	BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	EAC

Performance curves op 2900 rpm

IRP

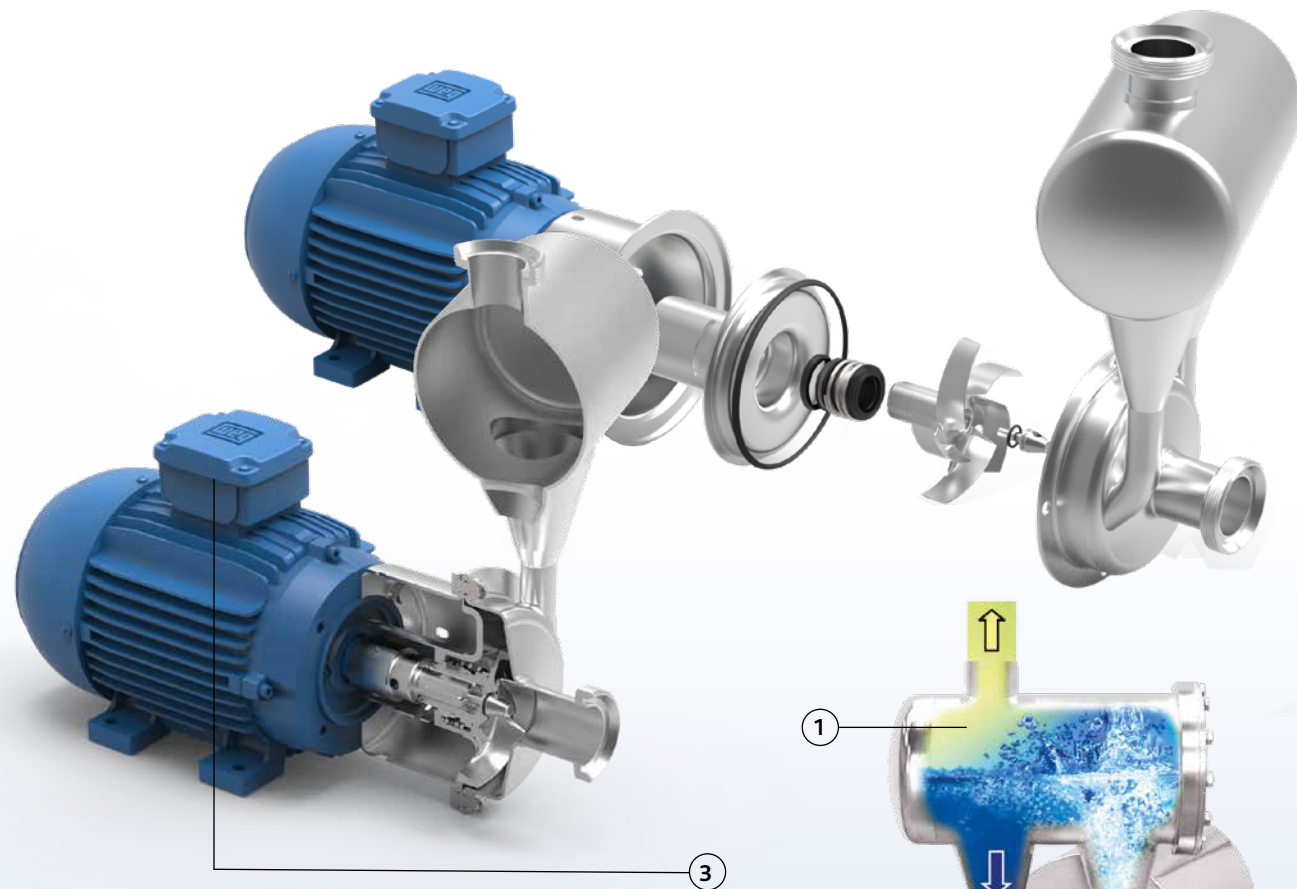


Pump series IRP+



Characteristics

These air handling pumps have stainless steel 316L pump casings constructed in thick cold rolled plate, 100% non-porous and extremely smooth. The pumps have open investment cast impellers, constructed in 316L or duplex materials. Together with an electropolished design the industrial air handling pump series IRP+ are a reliable component into your production process.



IRP+

- 1 Unique air handling design with cleanable air separator
- 2 By-pass to casing taking care about air evacuation
- 3 Monobloc execution with std. IEC motors
- 4 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals
- 5 One seal diameter: Ø 33 mm



Your benefits

- Higher pump efficiency compared with a classic liquid ring pump
- Low NPSH values: less risk on cavitation
- Electropolished: higher resistance against corrosion
- Easy & robust construction, easy to install and easy maintenance: less downtime
- Construction without non-return valve
- Easy to install
- 1 mechanical seal diameter for the entire range
- Limited noise level

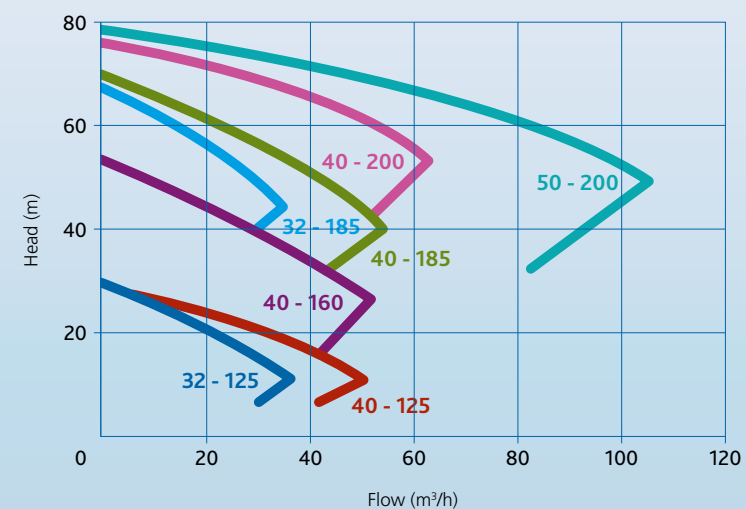
Application areas

Thanks to its unique air handling design based on a standard centrifugal pump, the IRP+ series are particularly suitable as a IRP+ return pump, as well as for unloading all type of collecting tankers and trucks.

Pump series	IRP+
Performance	
max. flow rate	100 m³/h
max. differential head	75 m
max. inlet pressure	10 bar
max. liquid viscosity	10 cP
max. temperature	140°C
impeller type	open or closed
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 or similar
mechanical seal configuration	single bellow, single balanced, quench, double, pressurized barrier
available O-ring materials	EPDM, FKM, FEP-FKM, FFKM or similar
pump connections	hygienic fittings
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

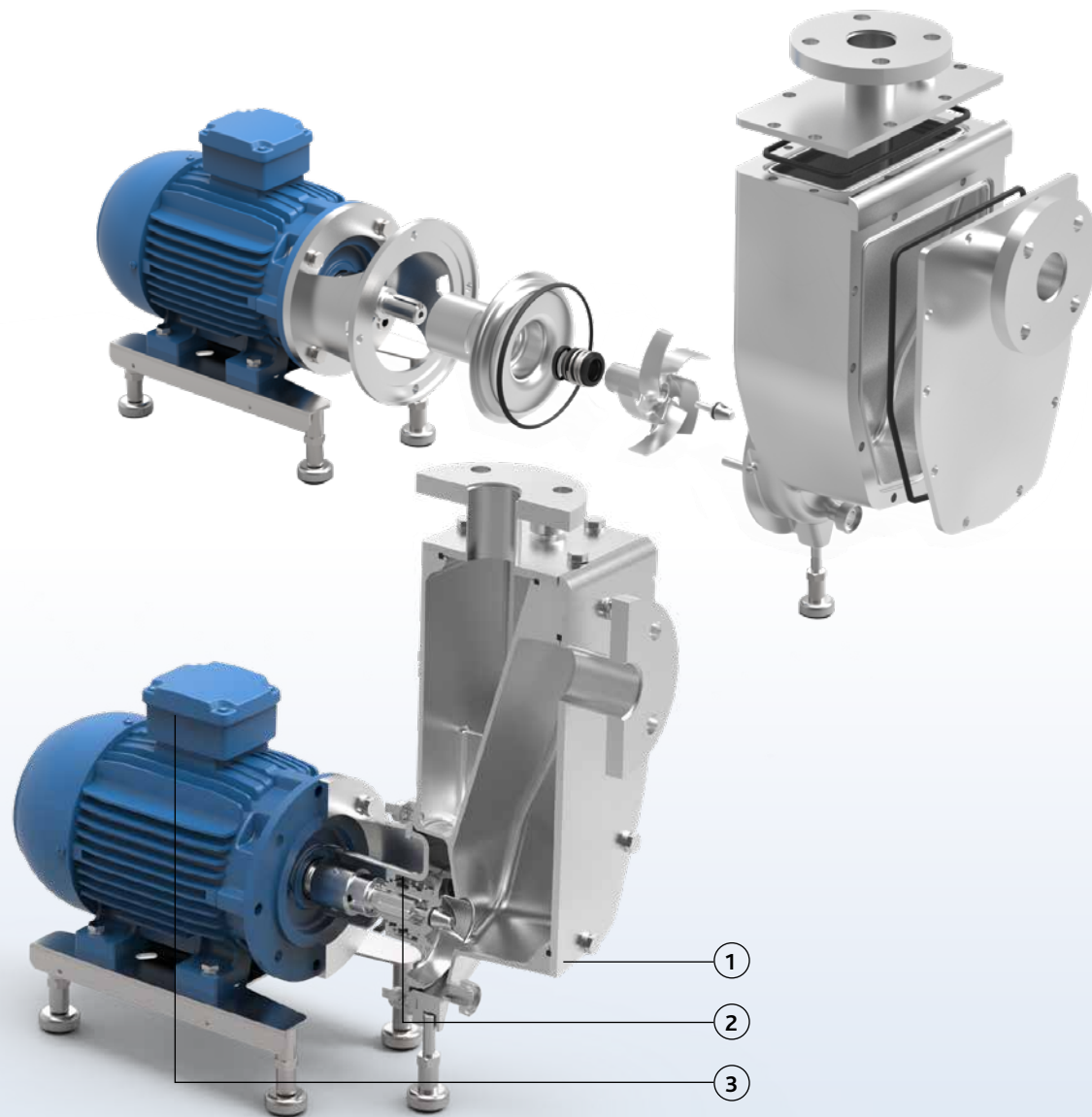
IRP+



Pump series MSP2

Characteristics

These robust pumps have cast pump casings and open investment cast impellers in stainless steel 316L. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process. They can lift liquid from a lower level into the pump.



MSP2

- 1 Solid design thanks to investment cast pump casings and impellers
- 2 Large seal cavity to guarantee liquid circulation around the seal
- 3 Monobloc execution with std. IEC motors
- 4 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals
- 5 One seal diameter for the entire range: \varnothing 33 mm



Your benefits

- Self-priming
- Ideal for handling mixtures of liquid and air
- Electropolished: higher resistance against corrosion
- Easy and robust construction and easy maintenance: less downtime
- Easy to install
- 1 mechanical seal diameter for entire range
- Standard components

Application areas

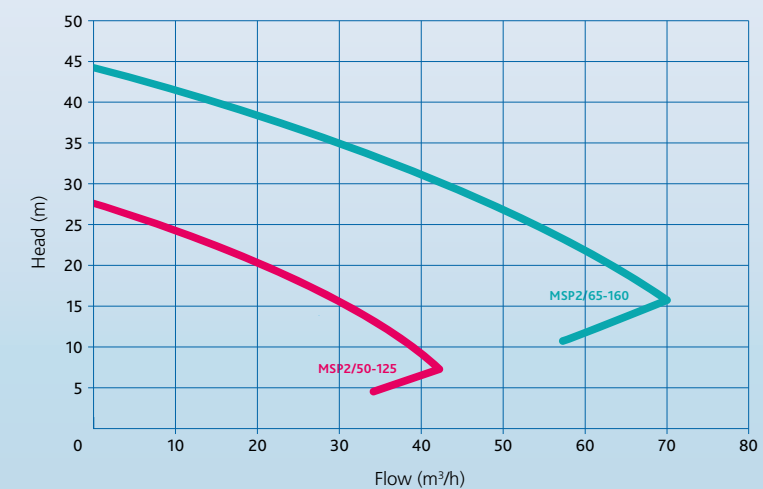
These robust self-priming pumps are often used for handling pure and slightly contaminated liquids, they are often used for unloading applications as well as for CIP return, etc.

The Packo pumps of the MSP2 series are self-priming pumps used in a big variety of industries.

Pump series	MSP2
Performance	
max. flow rate	70 m ³ /h
max. differential head	43 m
max. inlet pressure	3 bar
max. liquid viscosity	10 cP
max. temperature	140°C
impeller type	open
max. free passage	22 mm
max. motor power	11 kW
max. speed	3000/3600 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced, quench, double
available O-ring materials	EPDM, FKM, FFKM
connections	hygienic fittings, BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

MSP2

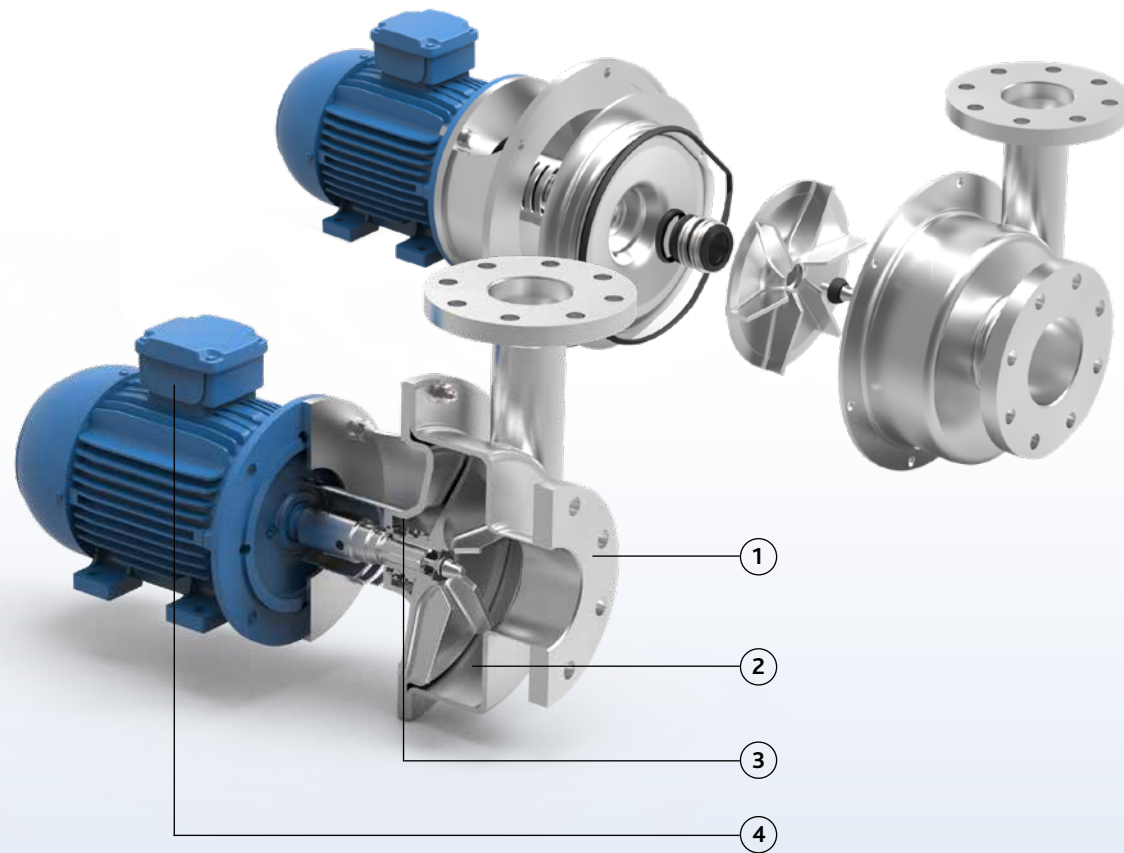


Pump series IFF



Characteristics

These robust pumps have stainless steel 316L pump casings constructed in thick cold rolled plate and can be equipped with open or vortex investment cast impellers stainless steel 316L or similar. The pumps have a large clearance between the impeller and the pump casing and as a result they can handle solids, fibres, foils and leaves without any risk of clogging. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process.



IFF

- 1 Pressed stainless steel, pump casing thickness up to 8 mm, back plate up to 30 mm
- 2 Large clearance between impeller and pump casing
- 3 Large seal cavity to guarantee liquid circulation around the seal
- 4 Monobloc execution with std. IEC motors
- 5 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals



Your benefits

- Non-clogging, suitable for handling liquids with solids, fibres, foils and / or leaves
- Electropolished: higher resistance against corrosion
- Easy & robust construction and easy maintenance: less downtime
- Easy to install
- Solid impellers in investment cast material
- Standard components

Application areas

The Packo pumps of the series IFF are used in a wide range of industries and applications.

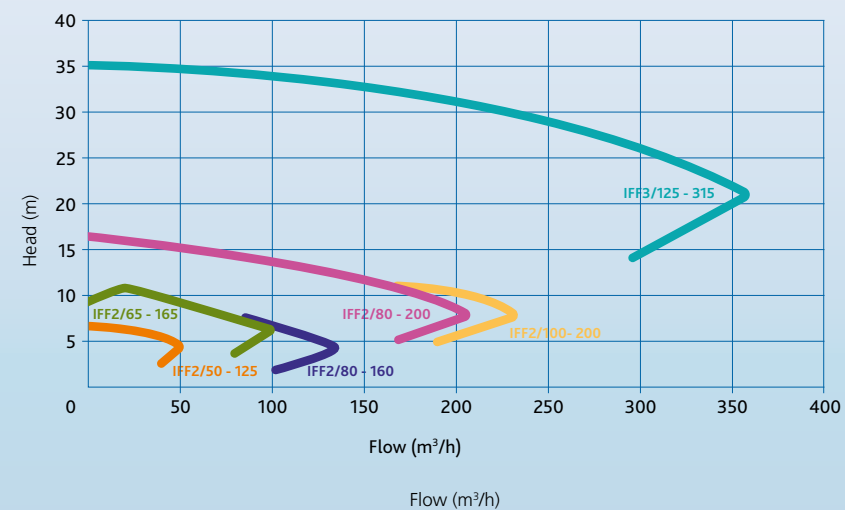
You can find them in just about all industries such as vegetable industry, water treatment and textile industry as well as in e.g. biogas, biodiesel and bioethanol applications.

Typically the pumps are transferring liquids with fibres and solids coming from washing or blanching vegetables, potato waste, circulation of liquids on digesters, etc.

Pump series	IFF
Performance	
max. flow rate	360 m ³ /h
max. differential head	35 m
max. inlet pressure	6 bar
max. liquid viscosity	500 cP
max. temperature	140°C
impeller type	open or vortex
max. free passage	55 mm
max. motor power	90 kW
max. speed	1500/1800 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced, quench, double, pressurized barrier
available O-ring materials	EPDM, FKM, FEP-FKM
connections	BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

IFF

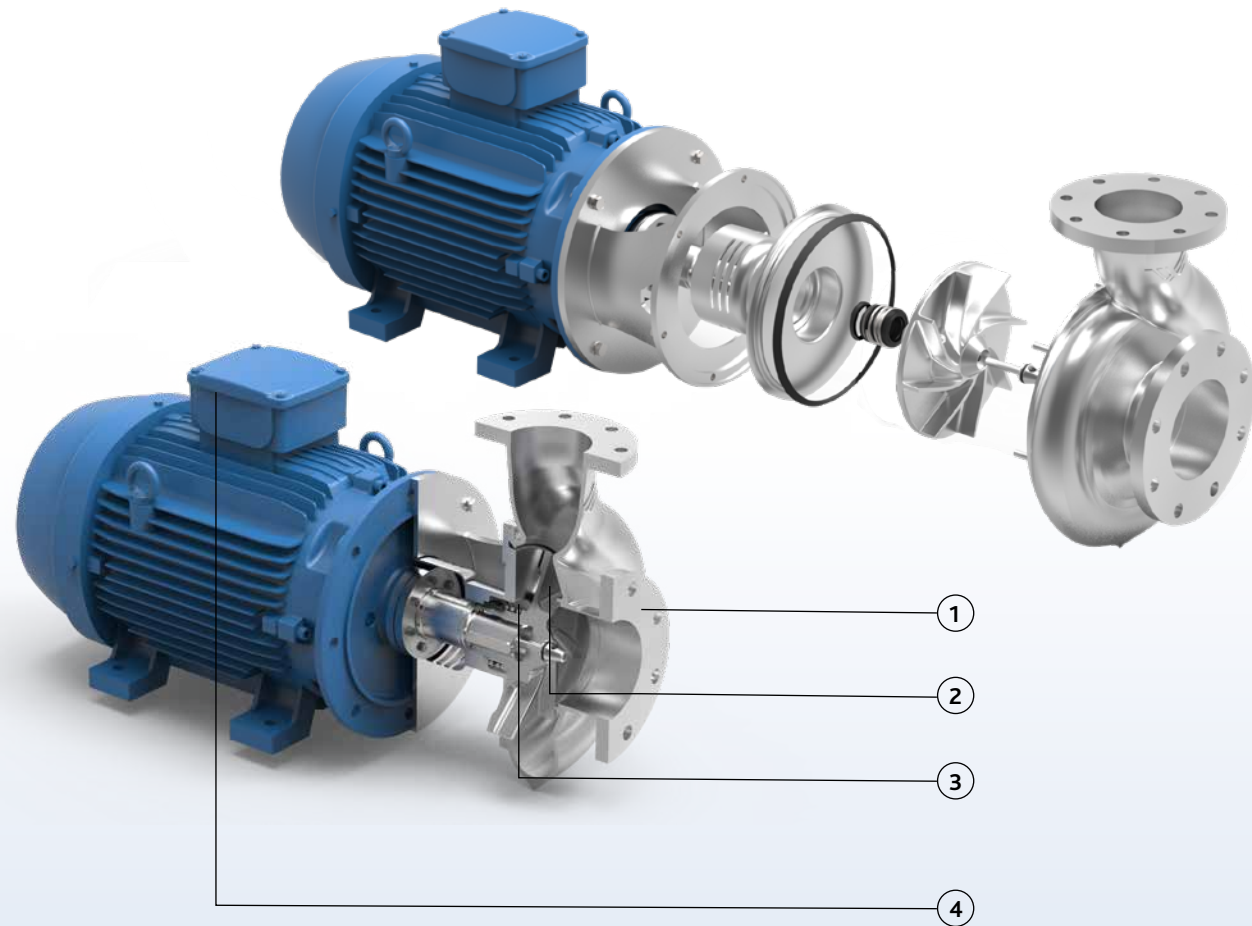


Pump series MFF



Characteristics

These robust pumps have stainless steel 316L investment cast pump casings and can be equipped with open, semi-open or vortex investment cast impellers in stainless steel 316L or similar. The pumps have a large clearance between the impeller and the pump casing and as a result they can handle solids and fibres without any risk of clogging. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process.



MFF

- 1 Investment cast stainless steel pump casings
- 2 Large clearance between impeller and pump casing
- 3 Large seal cavity to guarantee liquid circulation around the seal
- 4 Monobloc execution with std. IEC motors
- 5 Standardized mechanical seals to EN 12756
FDA approved bellow mechanical seals or balanced O-ring seals



bellow seal

Your benefits

- Non-clogging, suitable for handling liquids with solids and / or fibres
- Electropolished: higher resistance against corrosion
- Easy & robust construction and easy maintenance: less downtime
- Easy to install
- Solid impellers in investment cast material
- Standard components

Application areas

The Packo pumps of the series MFF are used in a wide range of industries and applications. You can find them in just about all industries such as vegetable industry, water treatment and textile industry as well as in e.g. biogas, biodiesel and bioethanol applications.

Typically the pumps are transferring liquids with fibres and solids coming from washing or blanching vegetables, potato waste, circulation of liquids on digesters, etc.

Pump series

Performance

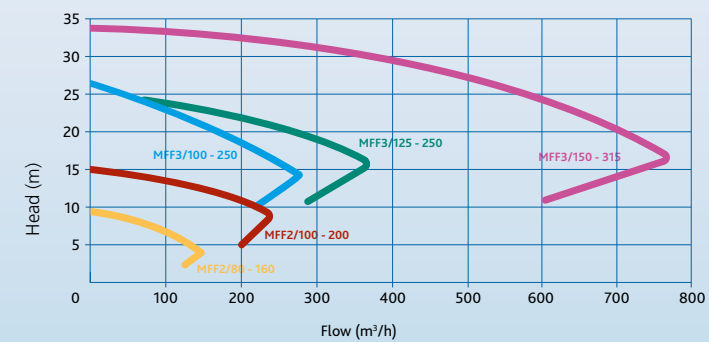
	MFF
max. flow rate	700 m ³ /h
max. differential head	25 m
max. inlet pressure	12 bar
max. liquid viscosity	500 cP
max. temperature	140°C
impeller type	open or vortex
max. free passage	50 mm
max. motor power	250 kW
max. speed	1500/1800 rpm
available frequency	50/60 Hz

Technical specifications

materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	single bellow, single balanced, quench, double, pressurized barrier
available O-ring materials	EPDM, FKM, FEP-FKM
connections	BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves at 2900 rpm

MFF

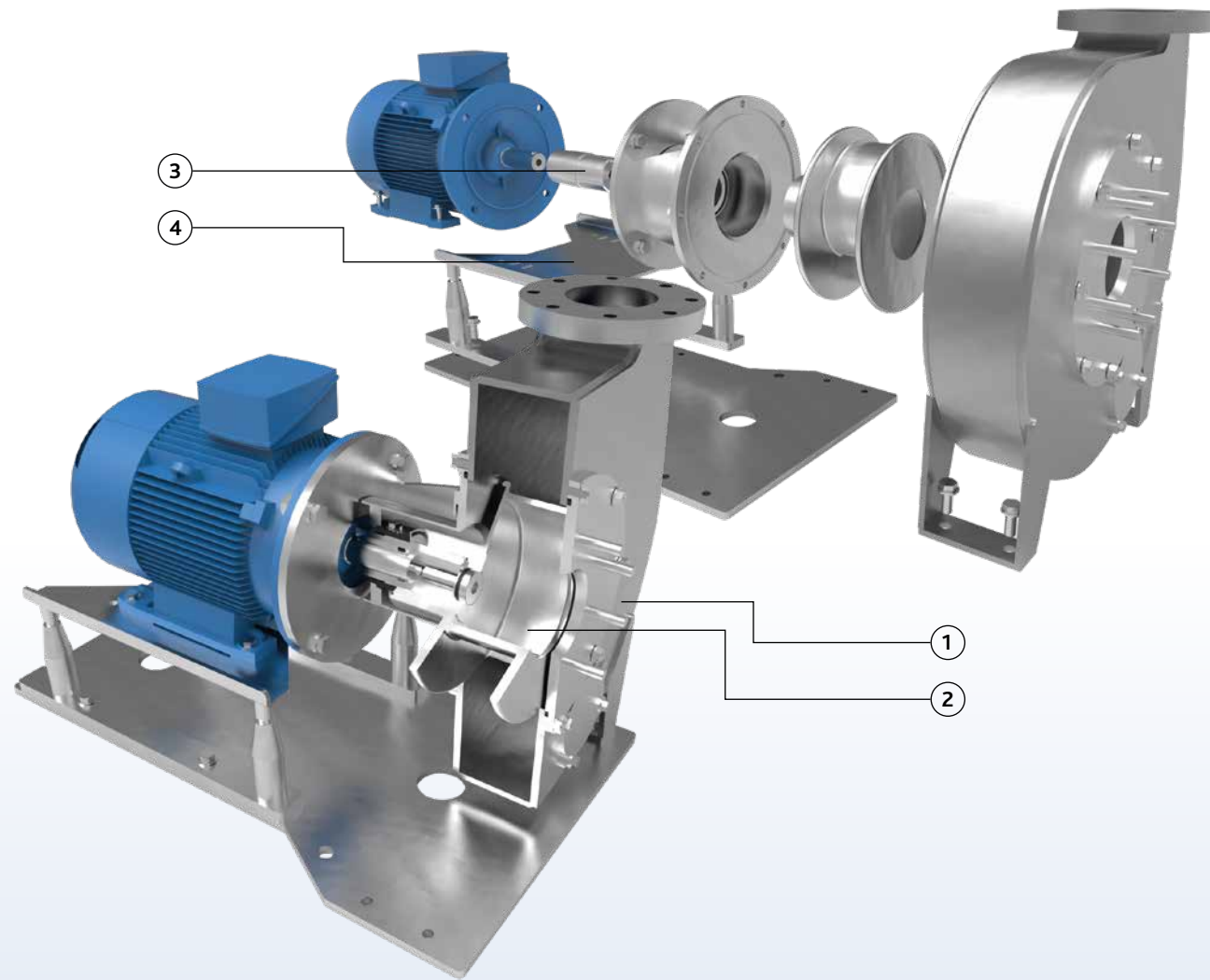


Pump series VPCP



Characteristics

The Packo stainless steel pumps of the VPCP series are the reference in gentle and damage free pumping of vegetables, potatoes, mussels, shrimps, etc. Due to the fact that they have an extremely large passage and to its specially designed vane they guarantee a smooth handling of your product.



VPCP

- 1 Electropolished: corrosion resistant, no rusting
- 2 Especially designed vane with large passage: pumping without product damage
- 3 Duplex stub shaft allows a quick and easy disassembly of the vane
- 4 Sledge construction: pump can be easily slid backwards while the pump casing remains in the piping system: short downtimes
- 5 Standardized FDA approved rubber bellow mechanical seals to EN 12756, 2 sizes for the entire range:
 - seal diameter Ø 80 mm up to 11 kW
 - motor power ≥ 18,5 kW: Ø 110 mm



bellow seal

Your benefits

- Gentle and damage-free pumping
- Easy maintenance: short downtimes
- Extremely large passage
- Electropolished stainless steel 304L: no rusting & easy to clean
- Monobloc design: space saving

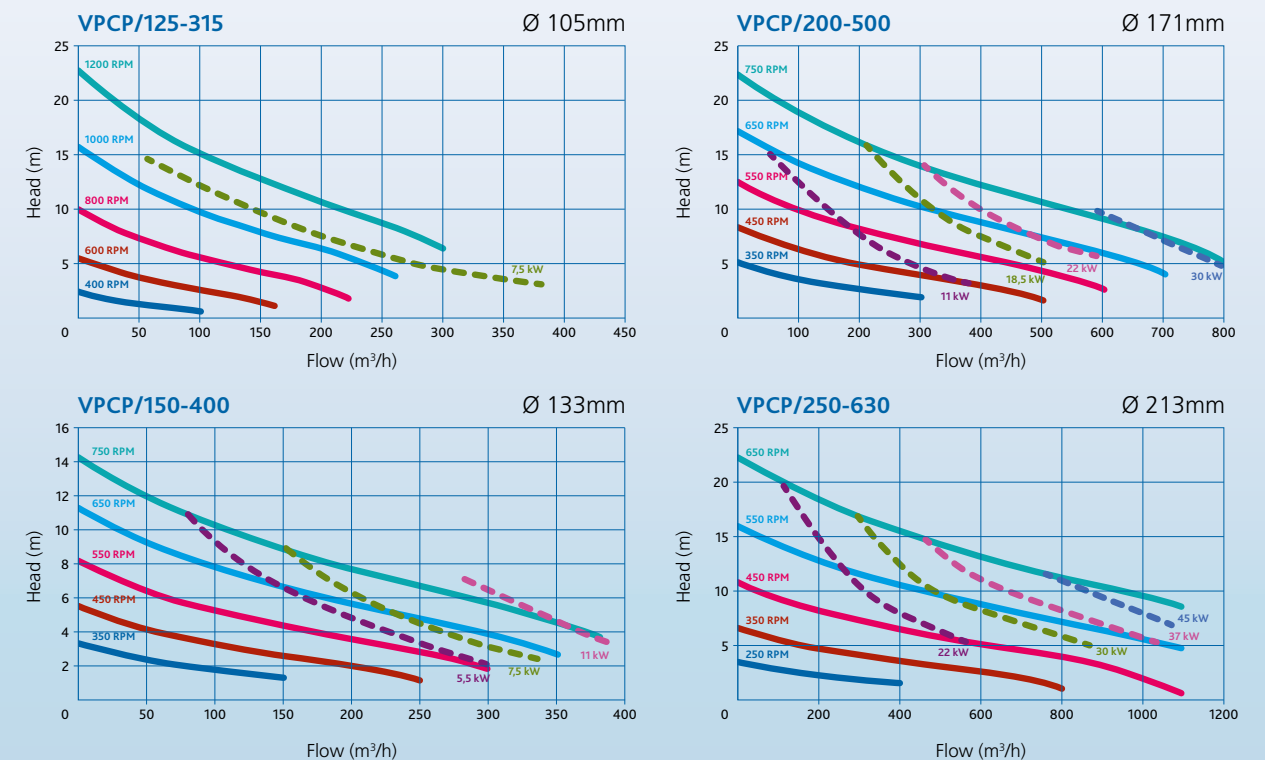
Application areas

The Packo VPCP pump range is specifically designed for damage-free pumping of potatoes and vegetables but also seafood such as mussels, cockles and shrimp.

The VPCP pump can be used in Belgian fries process lines, transport of vegetables to blanching lines as well as for transport of pasta from pasta cookers.

Pump series	VPCP
Performance	
max. flow rate	1000 m ³ /h
max. differential head	20 m
max. liquid viscosity	100 cP
max. temperature	80°C
impeller type	special designed vane
max. free passage	213 mm
max. motor power	55 kW
max. speed	1200 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 304 or similar
mechanical seal configuration	single
available material o-ring	NBR (FDA)
connections	industrial
surface finish	industrial finish: welds are not hand polished final surface treatment: electropolished
certificates & legislation	

Performance curves

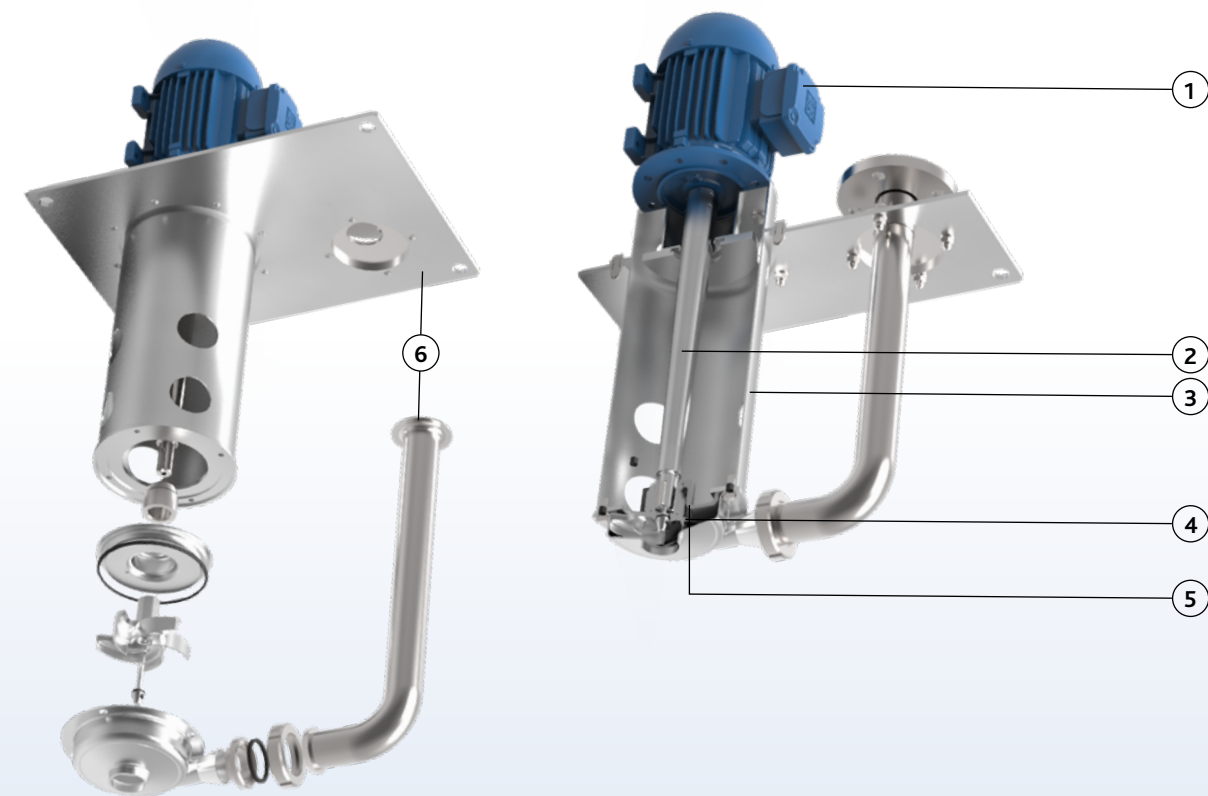


Pump series IML



Characteristics

The Packo submersible cantilever pump series IML are designed for installation in a sump or tank, having only the casing and impeller submerged. Because the absence of a mechanical seal and slide bearing in contact with the liquid, the cantilever pumps are maintenance friendly and reduce the downtime. These robust pumps have stainless steel 316L pressed or investment cast pump casings and can be equipped with open, semi-open, closed and vortex impellers. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process. Available in NP, ICP, MCP, IFF and MFF version with open, semi-open, closed or vortex impellers.



IML

- 1 Use of standard IEC motors
- 2 Tapered shaft, fully machined
- 3 High strength column support pipe. Rigidly maintains alignment between motor and casing. Protects pump shaft.
- 4 Cantilever design = no mechanical seals, no plain bearings. Reduced downtime and operating costs. No oil or water pipes required to lubricate these bearings.
- 5 Renewable "labyrinth" shaft sleeve to minimize blow-back of liquid around the shaft. Additional shaft protection against abrasive liquids.
- 6 Optional: stainless steel base plate and outlet pipe

Your benefits

- Cantilever design = leakage free, no seals and plain bearings
- Sealless pump: reducing downtime and operating costs
- Not sensitive for dry running
- Easy construction
- Electropolished: higher resistance against corrosion and sticky liquids
- Robust design
- Available with different impellers

Application areas

They are used in applications for liquids which are difficult to seal with a mechanical seal.

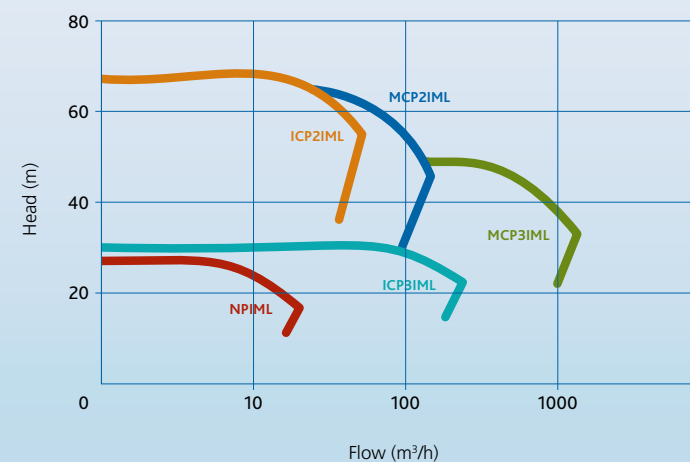
The Packo submersible cantilever pump series IML are used in a wide range of industries and applications such as metal finishing industry, industrial spray washers, water treatment, galvanizing and coating industry, chemical industry, etc.

They are handling degreasing, pickling & phosphatizing liquids, slurries, hot oils, process and industrial wastes, corrosive liquids, condensate, etc.

Pump series	IML
Performance	
max. flow rate	1000 m ³ /h
max. differential head	60 m
max. pump length	500 mm
max. liquid viscosity	500 cP
max. temperature	200°C
impeller type	open, semi-open, closed or vortex
max. free passage	45 mm
max. motor power	132 kW
max. speed	3000 rpm
available frequency	50 / 60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	no seal - cantilever
available O-ring materials	EPDM, FKM
connections	hygienic fittings, BSP fittings, flanges according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves

IML

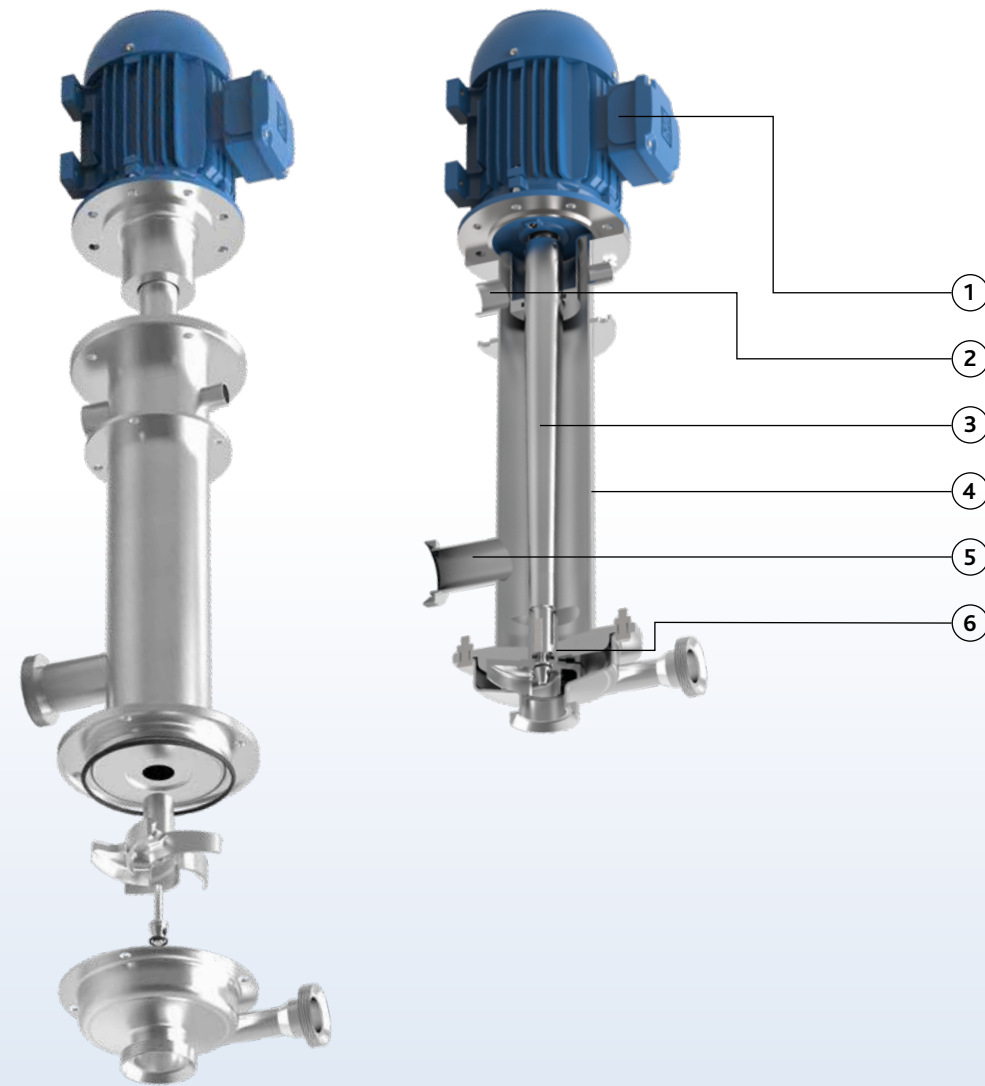


Pump series IMO



Characteristics

The Packo submersible cantilever pump series IMO are suitable for handling liquids with a temperature up to 200°C. They are especially constructed to handle liquids that are difficult to seal such as paints, varnishes, galvanic coatings, hot frying oil, etc.



IMO

- 1 Use of standard IEC motors
- 2 Connection for cleaning purposes
- 3 Tapered shaft, fully machined
- 4 High strength column support pipe. Rigidly maintains alignment between motor and casing. Protects pump shaft.
- 5 By-pass for overflow
- 6 Cantilever design = no mechanical seals, no plain bearings. Reduced downtime and operating costs. No bottom bearing, no oil or water pipes required to lubricate these bearings.

Your benefits

- Cantilever design = leakage free (no seals and plain bearings)
- Sealless pump: reducing downtime and operating costs
- Electropolished: easy to clean
- Robust design
- Not sensitive for dry running

Application areas

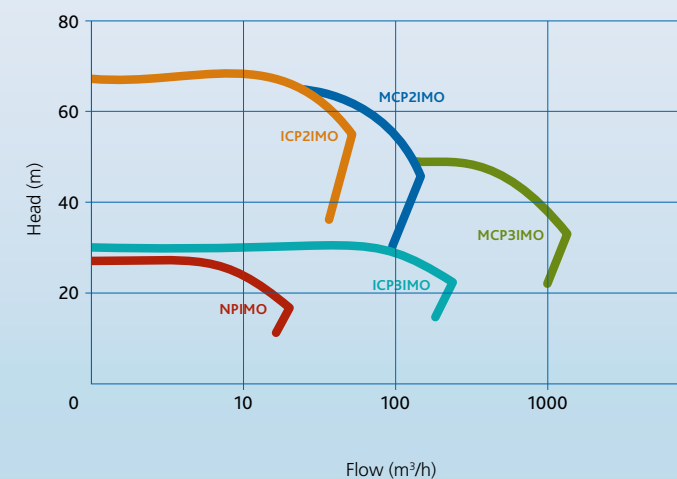
Particularly suitable for pumping liquids that are difficult to seal such as hot frying oil up to 200° C.

They are also used for pumping waste water from industrial waste such as CIP, acids, condensate, etc.

Pump series	IMO
Performance	
max. flow rate	1000 m ³ /h
max. differential head	60 m
max. inlet pressure	atmospheric
max. liquid viscosity	500 cP
max. temperature	200°C
impeller type	open, semi-open or closed
max. free passage	45 mm
max. motor power	132 kW
max. speed	3000 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	no seal - cantilever
available material o-ring	FKM - EPDM - Special
connections	industrial or hygienic
surface finish	industrial finish: welds are not hand polished. final surface treatment: electropolished
certificates & legislation	

Performance curves

IMO



Pump series IMXL

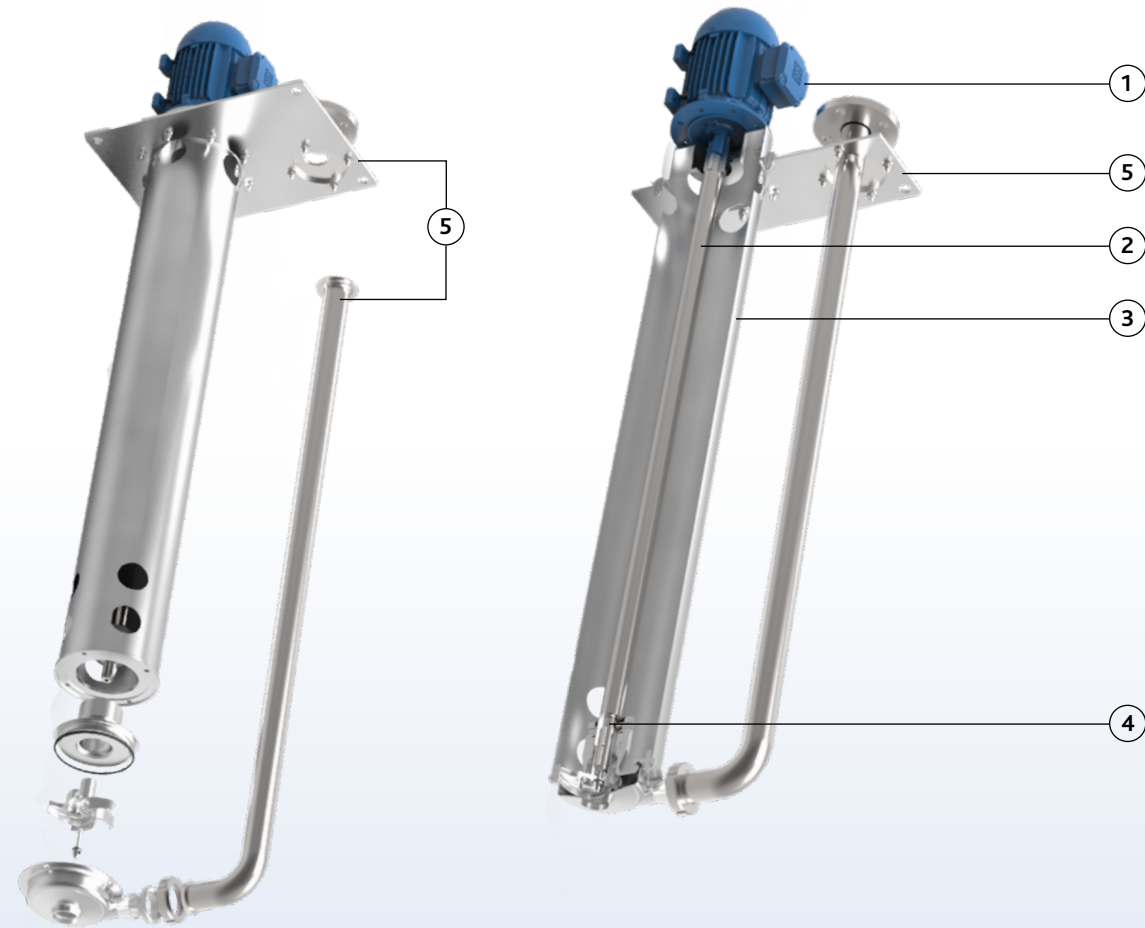


Characteristics

The Packo vertical sump pump series IMXL are designed for installation in a sump or tank, having only the casing and impeller submerged. The pumps have a length of 1500 mm having a shaft supported by a slide bearing in the liquid.

These robust pumps have stainless steel 316L pressed or investment cast pump casings and can be equipped with open, semi-open, closed impellers and vortex impellers. Thanks to its solid construction and electropolished design these pumps are the reliable component for your production process.

Available in ICP, MCP, IFF and MFF version with open, semi-open, closed or vortex impellers.



IMXL

- 1 Use of standard IEC motors
- 2 Tapered shaft, fully machined
- 3 High strength column support pipe. Rigidly maintains alignment between motor and casing. Protects pump shaft.
- 4 Executed with slide bearing in carbon / stainless steel or Silicon carbide / silicon carbide materials. No dry running allowed, additional flushing pipes for oil or water are available as an option.
- 5 Optional: stainless steel base plate and outlet pipe

Your benefits

- Pump length up to 1500 mm in 'monobloc' design
- Easy and robust construction
- Easy maintenance
- Electropolished: higher resistance against corrosion and sticky liquids
- Available with different impellers

Application areas

The Packo submersible cantilever pump series IMXL are used in a wide range of industries and applications such as metal finishing industry, industrial spray washers, water treatment, galvanizing and coating industry, chemical industry, etc.

They are handling degreasing, pickling & phosphatizing liquids, slurries, hot oils, process and industrial wastes, corrosive liquids, condensate, etc.

Pump series	IMXL
Performance	
max. flow rate	300 m ³ /h
max. differential head	28 m
max. pump length	1500 mm
max. liquid viscosity	500 cP
max. temperature	80°C
impeller type	open, semi-open or closed
max. free passage	45 mm
max. motor power	22 kW
max. speed	1500 rpm
available frequency	50/60 Hz
Technical specifications	
materials wetted parts	stainless steel 316L or similar
mechanical seal configuration	no mechanical seals, with slide bearings
available O-ring materials	EPDM, FKM, FEP-FKM, silicone
connections	hygienic fittings, BSP fittings, welds according to EN1092-1/01 & 02, ANSI flanges
surface finish	industrial, welds not hand polished, electropolished
certificates & legislation	

Performance curves

IMXL

