

Are you looking for a pump
that can be **used flexible**
in your process or which is
highly product resistant?
Both is better!



Highly precise twin screw pumps for the
chemical industry.

CHEMSPIN

JUNG :::::
PROCESS SYSTEMS



Jung Process Systems

Jung Process Systems specializes in stainless steel twin screw pumps and upholds the highest quality and profound expertise in pump technology. We design, develop and manufacture twin screw pumps to fulfill the highest demands. Our customized solutions guarantee a maximum of process safety and reliability for a wide range of applications. Jung Process Systems GmbH is part of the

JUNG Group, based in Kummerfeld, northwest of Hamburg – Germany.

The JUNG Group guarantees an in depth and in-house production fulfilling a high quality for the products and services. All core components are manufactured in our own facility.



JUNG :::::
PROCESS SYSTEMS

CHEMSPIN

One pump, highly flexible! The CHEMSPIN series is compact, efficient and easy to service. It offers high availability and reduces downtime for maintenance. This Pump has evolved from the successful HYGHSPIN series that is mainly used in the food-, beverage- and pharmaceutical

industries. The CHEMSPIN series was developed to fulfill the needs of the chemical-, process- and paint industry. All parts are machined at our modern CNC production center which guarantees logistical flexibility, fast delivery and high quality according to ISO 9001:2015.



APPLICATIONS / INDUSTRIES



Adhesives/glue

Adhesives, polymer solutions, discharge of resins even under vacuum conditions, low cavitation risk



Underbody sealants

Delicate components such as glass beads or other solids are not damaged



Tank farms

Low cavitation risk, fast discharging and pumping processes, high flexibility for different products, product change without cross-contamination



Paints and coatings

Delicate pigments are not damaged and residue-free batch change



Detergent

Gentle pumping without foam formation



Chemicals

Corrosive or abrasive chemicals that need to be pumped gently



CHEMSPIN

The multifunctional pump for the chemical industry

The CHEMSPIN's main strength is its flexibility. The pump is unmatched compared with centrifugal like side channel pumps or positive displacement pumps like progressive cavity or rotary lobe pumps. One CHEMSPIN can cover the whole range of an entire side channel pump series irrespective of volume and viscosity and is therefore destined for applications with varying system characteristics and complex automation – especially advantageous for minimal flow limitation.



Maximum flexibility in the pumping process

- Contactless operation of the screws
- Pumping and flushing
- Good suction properties, low NPSH r-value
- Pumping of gas-laden fluids or lumpy goods
- Different pitches and geometries of the feeding screws
- Design with increased wear protection

Easy retrofit to other sealing systems

- Semi-cartridge system for seals with identical installation space
- Service-friendly disassembly device
- 3 different systems for flexible handling

Flexible product connection

Nozzle arrangements are manufactured according to requirements such as DIN-flange, ASME-flange TriClamp etc.

Flexible motor selection

Standard electric motors, geared motors or servomotors, we supply the right drive for every application.

Self-draining

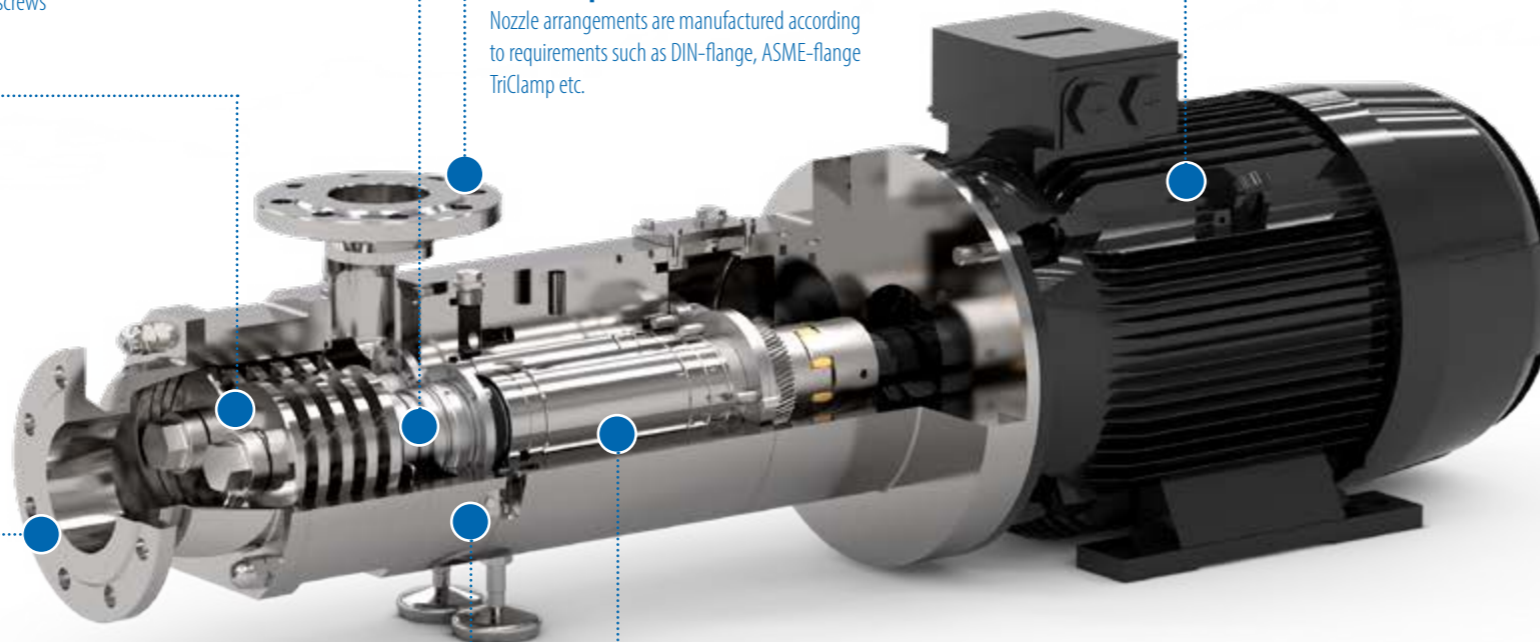
Axial connection at the lowest point of the housing for self-draining. No dead spaces.

Easy maintenance and cleaning

- Flushing connections for the mechanical seal
- Various circuits possible

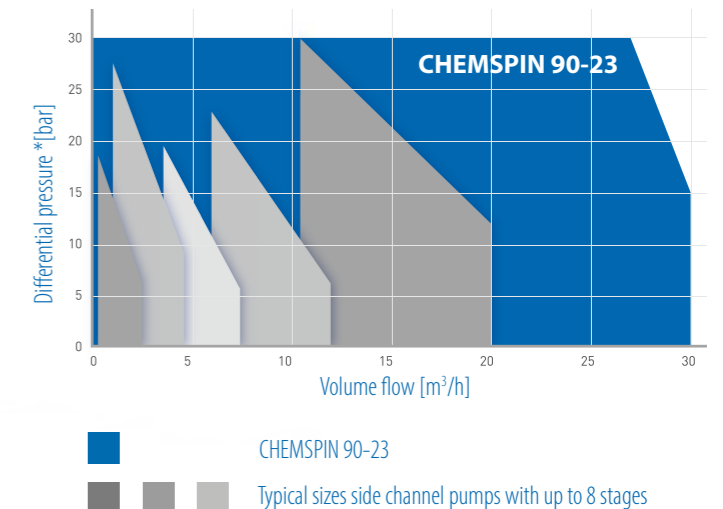
Smooth operation

- Solid, torsion-resistant bearing bracket with high-performance bearings
- Low heat input
- Temperature and vibration monitoring possible

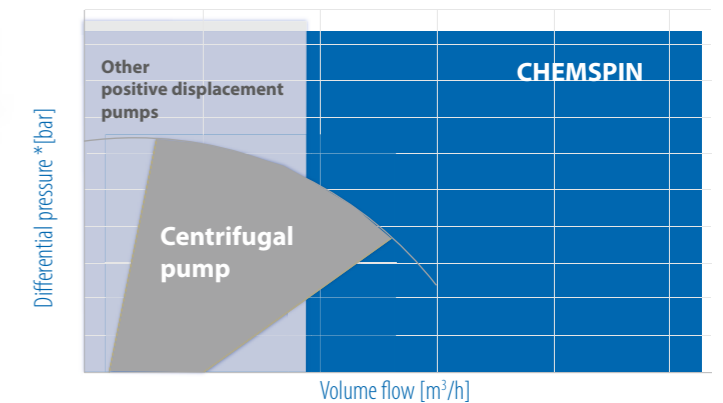


Comparison of CHEMSPIN with other positive displacement and centrifugal pumps

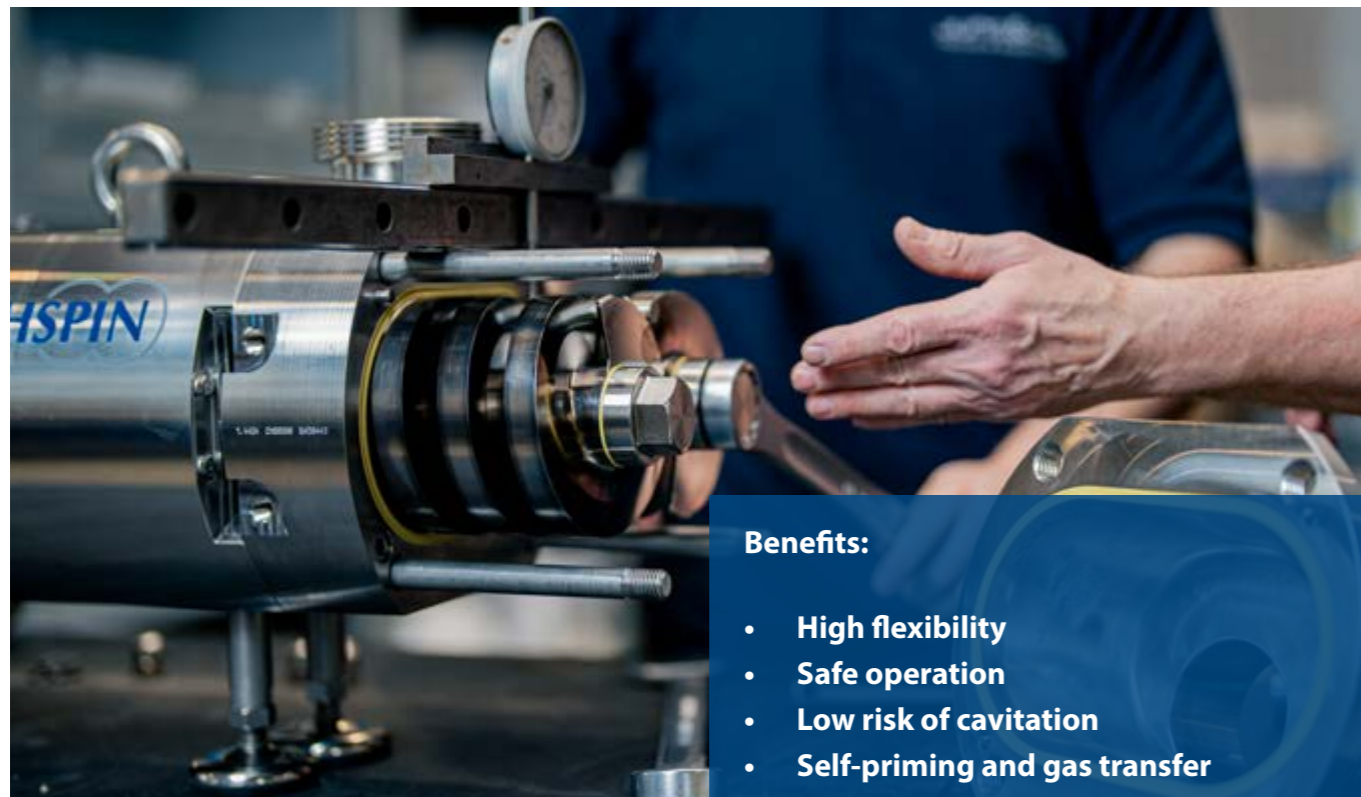
Performance values of the CHEMSPIN 90-23 for a viscosity of 100 mPas
Reduced performance of side channel pumps with increasing viscosity not taken into account



Comparison of CHEMSPIN with other positive displacement and centrifugal pumps



10 m delivery head rated as 1 bar differential pressure



Benefits:

- High flexibility
- Safe operation
- Low risk of cavitation
- Self-priming and gas transfer
- High durability

CHEMSPIN

The multi-talent for the chemical industry.

Our CHEMSPIN pump series is manufactured in-house out of high-quality austenitic steel according and is subject to the strictest quality standards. It is suited for almost any viscosity and can produce pressure up to 35 bar or even up to 50 bar in a modified version.

The pump series is highly efficient, has a service friendly design and a high suction capacity while simultaneously being highly resistant against corrosion and abrasion. A fast and safe transfer and pumping process is guaranteed thanks to the self priming and

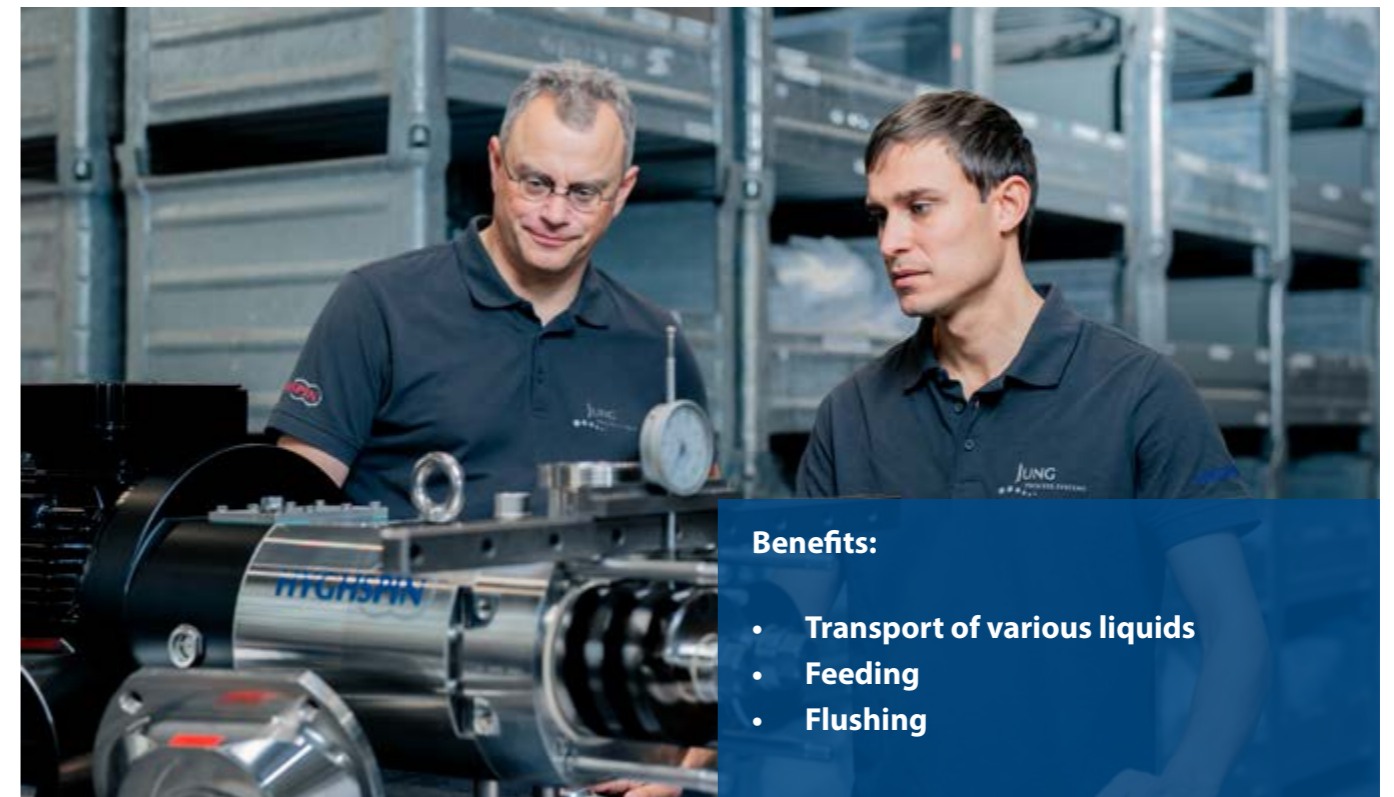


gas pumping properties. The pump can also be used in a variety of pumping and flushing processes.

The CHEMSPIN is a non pulsating positive displacement pump and thus ideal for pumping high viscosities.

The suction and multiphase capability are equal to those of a side channel pump while simultaneously being unimpared against solids.

Technical details, options and modification possibilities can be found on page 9



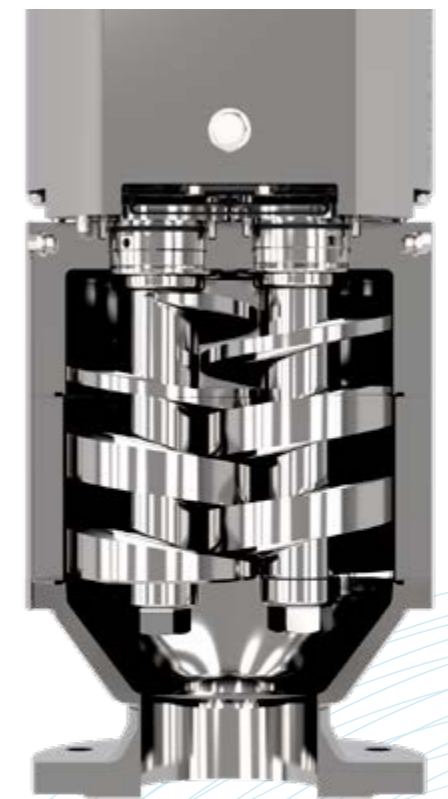
Benefits:

- Transport of various liquids
- Feeding
- Flushing

CHEMSPIN ES

Chemical pump with extended feed screws for high viscosities.

The CHEMSPIN ES is a modification of the CHEMSPIN pump series, also made out of stainless steel. The innovative twin screw pump is capable of transporting liquids with a viscosity up to 1.000.000 mPas/cp. The feed screws have been extended towards the inlet so that they draw in the highly viscous products below the inlet and into the pump housing, similar to a feed screw but much more gentle. Thus additional external feeding devices become redundant.



Technical details, options and modification possibilities can be found on page 9



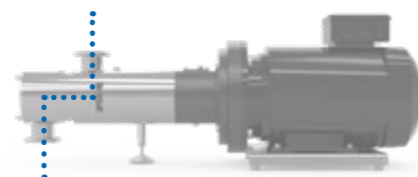
Installation

- Horizontally
- Vertical upwards or downwards
- Sideways
- On a wall mounting

CHEMSPIN INLINE

Simple replacement of installed pumps thanks to multiple installation possibilities and nozzle orientation.

CHEMSPIN twin screw pumps are available with a wide variety of nozzle orientations. INLINE versions with parallel nozzles are available for continuously vertical or horizontal pipelines. These versions make it easy to switch from rotary piston pump or rotary lobe pumps to CHEMSPIN twin screw pumps.



Vertical layout

Nozzles are in line opposite each other








Horizontal layout

Nozzles are in line opposite each other

Technical details, options and modification possibilities can be found on page 9



Technical parameters

Type	CHEMSPIN 50	CHEMSPIN 70	CHEMSPIN 90	CHEMSPIN 105	CHEMSPIN 125
					
Max. pump capacity	20 m ³ /h	40 m ³ /h	100 m ³ /h	180 m ³ /h	300 m ³ /h
Max. differential pressure	20 bar	25 bar	30 bar	20 bar	35 bar
Max. ø solid material	16 (25) mm	20 (30) mm	28 (45) mm	35 mm	45 (67) mm
Suction capability	NPSHr > 0.5 m, suction height of up to 9 m are possible				
Viscosity	0.5 - 1,000,000 mPas/cp higher viscosities on request				
Operation temperature	-10 to 180° C, higher temperatures on request				
Cleaning	fully CIP-capable (cleaning in place) in the system				
Sterilisation	SIP in the system with steam or hot water				
Wetted parts	1.4404, 1.4539 or 1.4462 as an option, other materials on request				
Elastomers	HNBR, FPM, EPDM, FFPM, FDA-approvals, other elastomers on request				
Shaft seals	single- and double-acting mechanical seals, with knife edge for adhesive media to avoid start up damage, single-acting safe-to-run dry lip seals				
Pump orientation	horizontal, vertical or lateral, INLINE models are possible				
Connections	different sizes and standards on request				
Designs	compact robust block design for all sizes, with bare shaft for sizes 70, 90, 105 and 125				
Drives	three-phase, gear or servo motors, hygienic drives in stainless steel as an option				

Performance data depending on the pump configuration, temperatures depending on speed, pressure and choice of elastomers

Optional features:

- Moveable cart
- Feeding screw
- Jacketed housing
- Vibration monitoring
- ATEX version
- Temperature monitoring
- Hardened surfaces with increased wear resistance

ATEX Concept

Thanks to the non contact pumping principle the CHEMSPIN twin screw pumps can also be used for ATEX applications. Depending on the process temperature it can be used for different temperature classes.



The ATEX concept includes the following details:

- Flameproof encapsulated motor for speed controle
- Monitoring the surface temperature of the pump housing and bearing bracket with appropriate sensors
- Monitoring seal temperature by means of a flushing system for double acting mechanical seals
- Dry running protection for single mechanical seals
- Breakthrough – or spark suppressing coupling in oil bath
- Non-sparking contact protection for base plate units
- Earthing connections for potential equalization

Dry-running safe units can be supplied with the appropriate shaft seals.

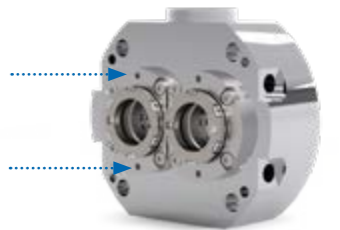
Sealing technology

Maximum flexibility thanks to Plug & Play seal replacement.

The CHEMSPIN series is available with various seal variants. All seals are designed as a semi-cartridge and have the same assembly dimension depending on the size of the pump. Thus pumps can easily be retrofitted with different seal systems. For critical processes, ad double-acting, buffered mechanical seal can be used in order to meet the requirements posed by TA-Luft.

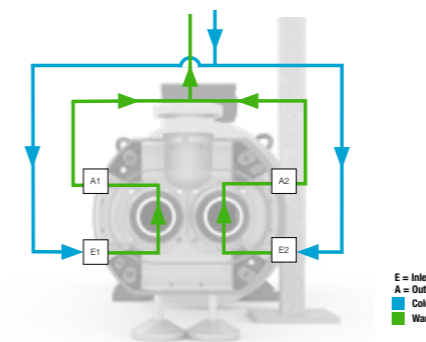
Easy disassembly

The seals are designed as semi-cartridge-seals and can be easily and conveniently removed from the housing.



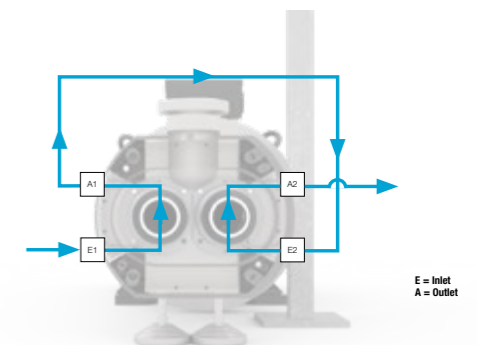
Circulating Flushing

The flushing fluid is circulating. In order to minimize the pressure drop the chambers are connected in parallel. This is important for a natural circulation.



Lost flushing

The flushing fluid is lost. The flushing chambers are connected in line to assure that both chambers are flushed in case of a flow detection.



Single mechanical seal

Basic version, no rinsing required, product contamination by flushing medium excluded.



Double mechanical seal

Flushed version:
High operational reliability, the pump is safe to run dry thanks to the flushing system.

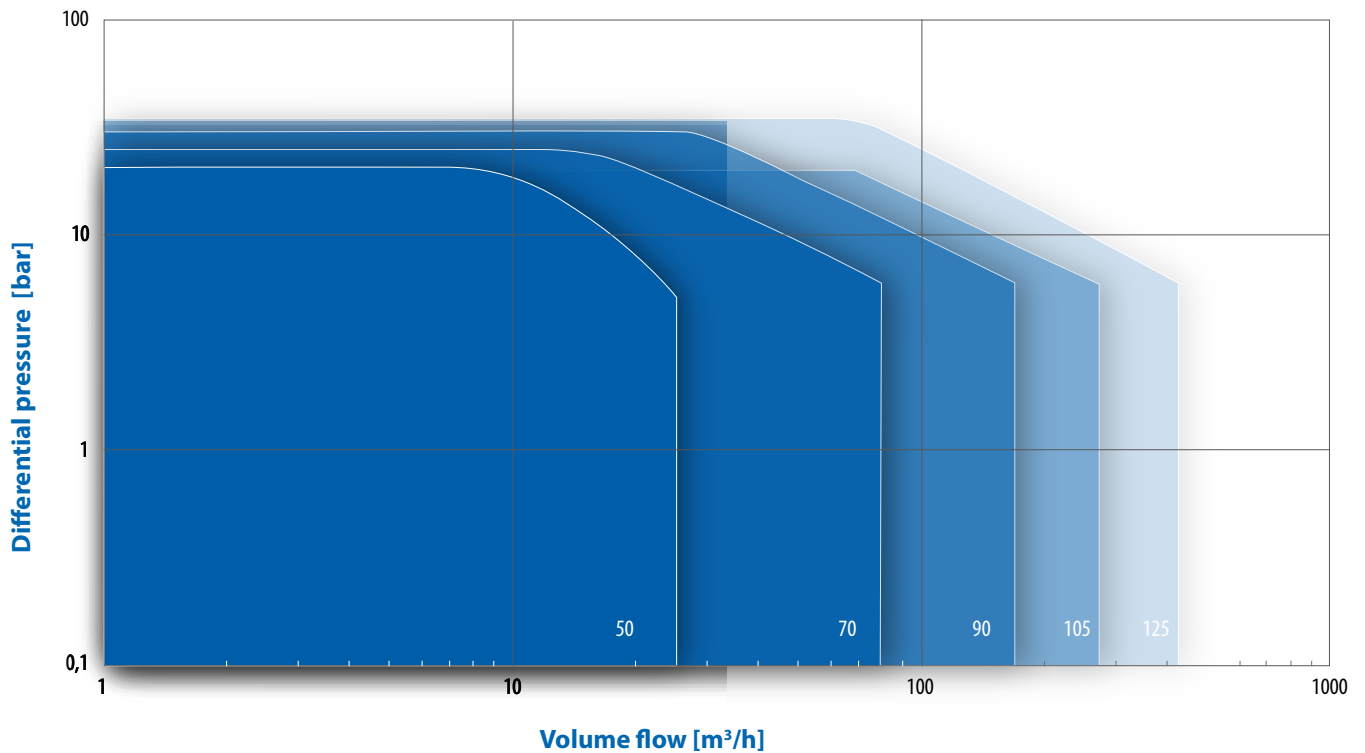
Buffered version
Product leakage to the outside is prevented by pressurizing the flushing chamber.



Lip seal

The dry-run safe solution without flushing, particularly suitable for mobile pumps.

Performance ranges of the various pump sizes based on a fluid with a viscosity of 100 mm²/s.



JUNG :::::
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Jung Process Systems GmbH

Auweg 8
25495 Kummerfeld
Germany

Phone: +49 4101 80409-0
Fax: +49 4101 80409-142

E-Mail: info@jung-process-systems.de
Web: www.jung-process-systems.com