

Progressing Cavity Pump

**WANGEN Xpress 48, 64, 78, 94**



The pump for low-viscosity media,  
with the (r)evolution in pump technology:  
the X-LIFT quick change system.



Progressing Cavity Pump

## WANGEN Xpress

The latest innovation from WANGEN PUMPEN. The Xpress pump range has been specially developed for easy maintenance and to considerably shorten the servicing time and thus reduce costs. This is achieved with a typical WANGEN complete solution that makes no compromises.

The X-LIFT quick change system developed by WANGEN PUMPEN ensures reliable pumping of media and a fast rotor/stator change. The X-LIFT flange is constructed on standard flange design principles. The pump rotor and stator are both constructed in one piece with no risk of product leakage due to a split sealing design. This ensures the high mechanical stability of the pump housing. And thanks to the block construction, it remains extremely compact. A clever solution that lives up to the high standards set by WANGEN PUMPEN.

Technical highlights:

Flowrate up to 102 m<sup>3</sup>/h

Temperature up to +60 °C

Max. differential pressure 6 bar

Viscosity up to 20.000 mPa·s

High solids content up to 8%

Run-dry monitoring PT100



## Applications

# Conveying Materials

The following media is typically pumped using the WANGEN Xpress progressing cavity pump:

- Raw water
- Thin, excess and digested sludge
- Polymer solutions, lime milk
- Household and industrial waste water with neutral pH
- Light aluminium and iron sulphate solutions
- Slurry, bovine manure, fermentation residues
- Dispersions for glues or galvanic sludges
- Starch suspensions, adhesives, resins or pigment sludges
- Bilge water on ships
- Secondary fibers
- Galvanic sludges
- Bentonite and rinsing mud
- Oil and bituminous emulsions
- Press water from separator
- Lubricants and coolants with neutral pH
- Cleaning and washing water from agricultural processes
- Cleaning water from milking parlor
- Grease separation
- Lubricants and coolants with neutral pH
- Binders of the woodindustry



WANGEN Xpress

# Construction Characteristics

WANGEN Xpress 64



Shaft seal is very easy to replace (see page 7).



Robust cardan shaft and joints.



covered cardan shaft with **NBR-collar** (view as cutway model)



Inspection ports for easy access to the interior



Robust rotor and stator in the highest quality from own manufacturing plant



Innovative X-LIFT design of discharge flange for quick rotor/stator change



The construction of our pumps clearly shows that they have been consistently designed with a view to performance and reliability. The WANGEN-typical cardan shaft with **flow-optimised fixing of the NBR-collar** ensures extensive power reserves.

## Functionality

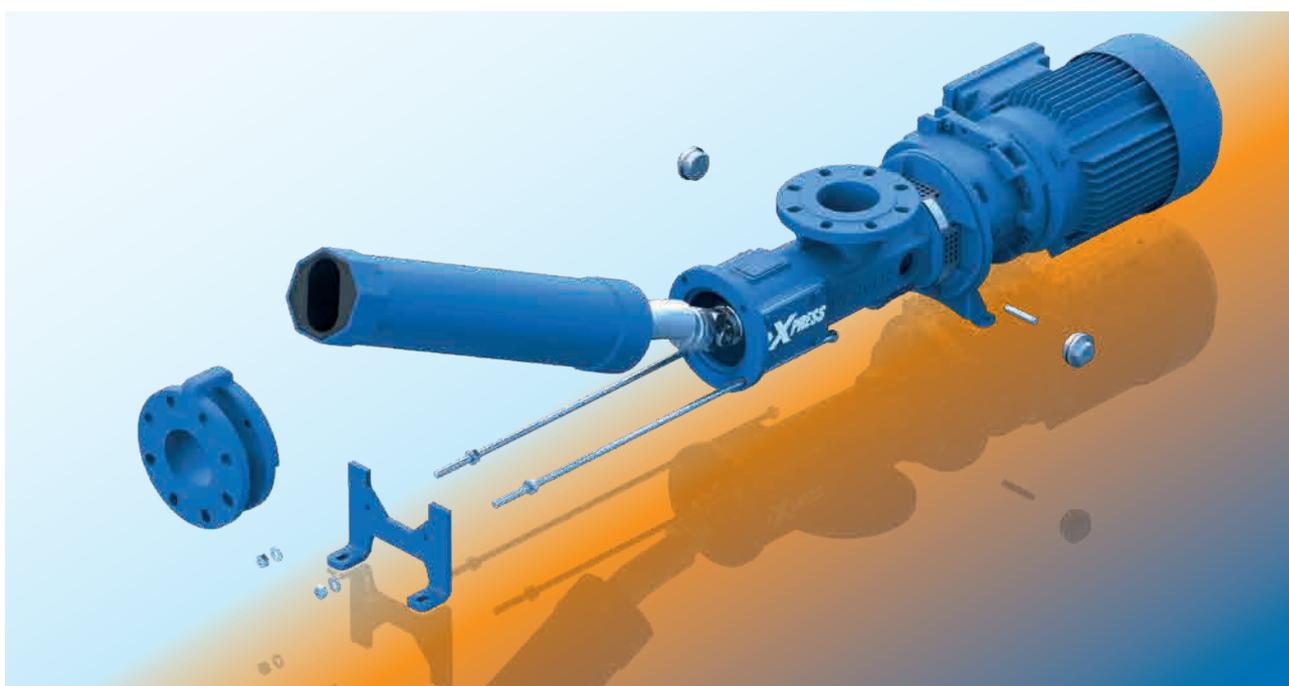
# The (r)evolutionary and safe solution

The changing of wear parts with very few actions, without removing the pump from the pipeline system, is now possible. The WANGEN Xpress manages this challenge even when there is very little space available thanks to Service in Place.

The innovative X-LIFT quick change system from WANGEN PUMPEN means that the suction housing remains attached to the pipeline and the discharge pipeline remains in place. This makes it easier to work in locations that are hard to access.

The easy removal of the discharge flange means that WANGEN customers profit exclusively from the benefits of the X-LIFT quick change system.

Since the WANGEN solution does not need additional splitting of the pump housing or additional sealing joints, additional components such as seals are unnecessary. This innovative design feature ensures stability and reliability of the pump remains inherent without any detriment to operational performance. Thus failure caused by leaking does not occur in the first place.



## Benefits

# Rotor/stator removal in just 4 steps

The new WANGEN X-LIFT quick change system enables the easy removal of rotor and stator and the entire drive section (cardan shaft and joints) in just 4 steps.

The pump remains in the installation thus considerably reducing the amount of mounting time required compared to traditional pumps. An additional benefit of the X-LIFT quick change system on the WANGEN Xpress is that the procedure can generally be carried out by a single person.

Changing the complete drive section of the WANGEN Xpress can be carried out using 4 standard tools, quickly and easily. The WANGEN Xpress ensures reduced maintenance downtime and substantial labour savings.



Only 4 standard tools are needed to carry out the change



Step 1: Undo the connecting rod on the discharge flange side and push back, remove the discharge flange by lifting up.



Step 2: Undo the closure screws and remove the connecting bolt.



Step 3: Pull the stator and rotor along with the cardan shaft forwards, tip upwards and pull out of the pump housing.



Step 4: Remove the stator from the rotor. Done.

## Benefits

# Quick change of shaft seal

When it comes to changing the shaft seal, the engineers of WANGEN PUMPEN have succeeded in increasing the service-friendliness of the Xpress range. When changing wear parts it is extremely important to position the separating points of components in such a way that the parts that will need to be replaced are easily accessible. This avoids the necessity to remove irrelevant elements and reduces the downtimes.

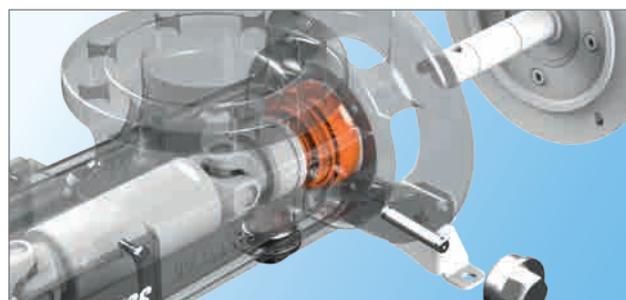
Changing the main shaft seal of the WANGEN Xpress can be carried out with just a few actions. Removing the motor from the housing and decoupling the drive section readily exposes the main shaft seal which can then be easily changed.

As with the rotor/stator change, the change of the main shaft seal can be carried out with the pump still in place (SIP, Service in Place). This ensures that these tasks can be carried out at any time without additional costs.

This procedure also only requires standard tools.



Main shaft seal in the pump



Remove the motor



Remove the old seal unit



Insert new seal unit

## Benefits

# Xpress delivery within 1 week

The name Xpress stands for quick and easy component changes, but also for another clear feature:

The pumps of the Xpress line of products will be delivered within a week.

This is possible thanks to the pre-produced standard individual components kept in storage as well as the tried and tested module principle of WANGEN PUMPEN which ensures that the Xpress product line is constantly being further developed. So, for example, our developers have succeeded in covering all areas of use with a low number of product versions, thanks to, among other things, multi-functional individual elements. So we also increase production time of the Xpress and makes the pump more economic.



## Spare Parts

By using original spare parts from WANGEN PUMPS, we guarantee that the performance output of our pumps will be fully restored. With our decades of manufacturing competence, you will thus also be able to profit from our first class quality as a manufacturer and as a consequence ensure the long service life of your pump.

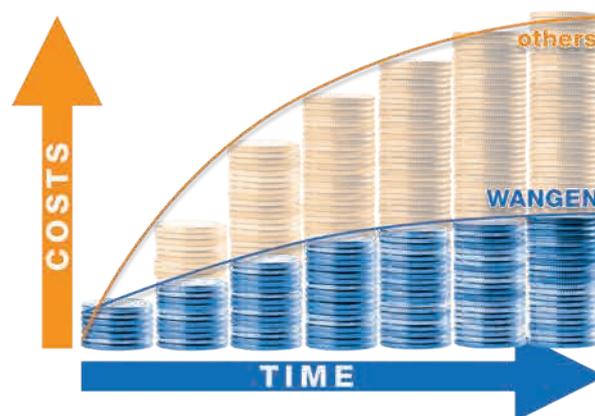


## Benefits

# Low Life-Cycle Costs

When purchasing a pump, we recommend that you carefully consider the operating costs as well as the purchase price. Because maintenance costs, production downtimes and energy costs make up a considerable share of the total costs over the life-cycle of a pump.

In this case, a decisive advantage of our philosophy becomes apparent: in order to keep total costs as low as possible over the entire life-cycle of the pump, the frequency of maintenance is restricted to a minimum. We achieve this thanks to the robust construction of our pumps, the use of high quality wearing parts and choosing a wear-resistant design for each pump.



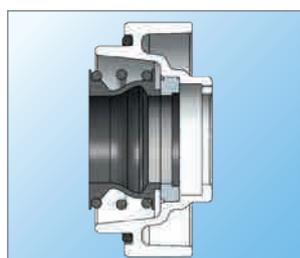
In addition, we have energy-efficient drives tailored specifically to the area of use and the Xpress range that already meet the IE3 Norm for the environmentally-friendly design of electrical motors.

## Technical Data

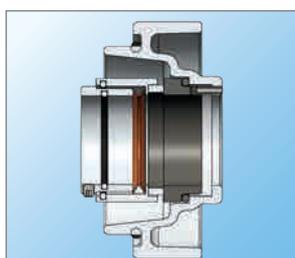
# Options and Accessories

We offer a large selection of accessories which are perfectly matched to our product range, providing the ideal complement or adaptation to your individual requirements and allowing you to create your own customized solutions. We would also be happy to advise you here, as special solutions are of course also possible.

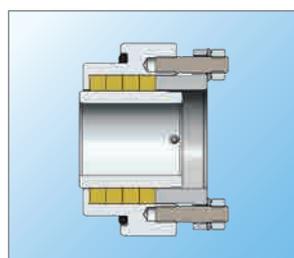
- ATEX-design available
- Retrofitting a base plate
- Range of seals package, LWD or encapsulated mechanical seal retrofittable
- PT100 temperature measurement can be retrofitted in stator



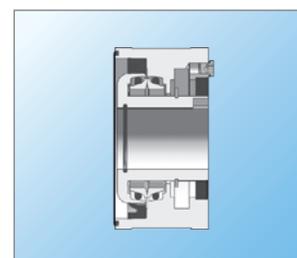
Mechanical seal with bellows



Encapsulated mechanical seal



Gland packing



LWD-cartridge (drive seal), only Xpress 78 and 94

## Technical Data

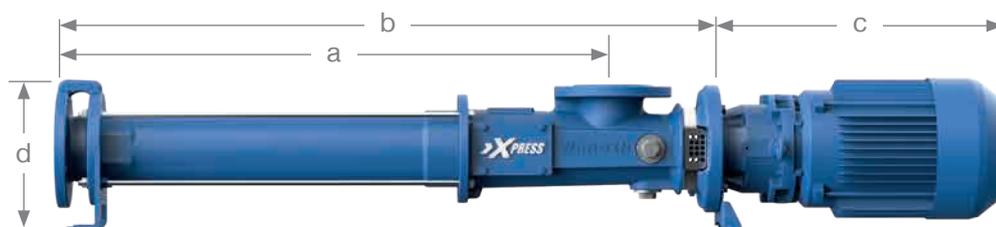
# Versions and Materials

In order to ensure the highest possible operating performance, WANGEN PUMPEN only uses the best materials and substances for the purpose in question. Our many years of experiences in the conveyance of various media ensures a design that does justice to modern requirements.

- Housing. pressure and suction flange: Cast iron, construction steel 1.0038
- Joint: Cardan joint in steel
- Seals: Single acting mechanical seals with bellow or encapsulated version, gland packing LWD-cartridge (only Xpress 78 and 94)
- Stators: diverse NBR materials
- Rotor: Hardened steel, ST-chrome, VA-chrome
- Drive: Drive motors in three performance classes:  
for Xpress 48: 1,5kW, 2,2kW und 3,0kW.  
for Xpress 64: 4,0kW, 5,5kW und 7,5kW.  
for Xpress 78: 7,5kW.  
for Xpress 94: 15,0kW.
- Selectable conveying direction



## Main dimensions in mm



Pump size	a	b	c	d
48	782	932	457 / 453 / 503	215
64	1084	1274	578 / 634 / 646	285
78	1669	1919	724	355
94	1669	1919	841	355

Technical Data

# Performance Data WANGEN Xpress

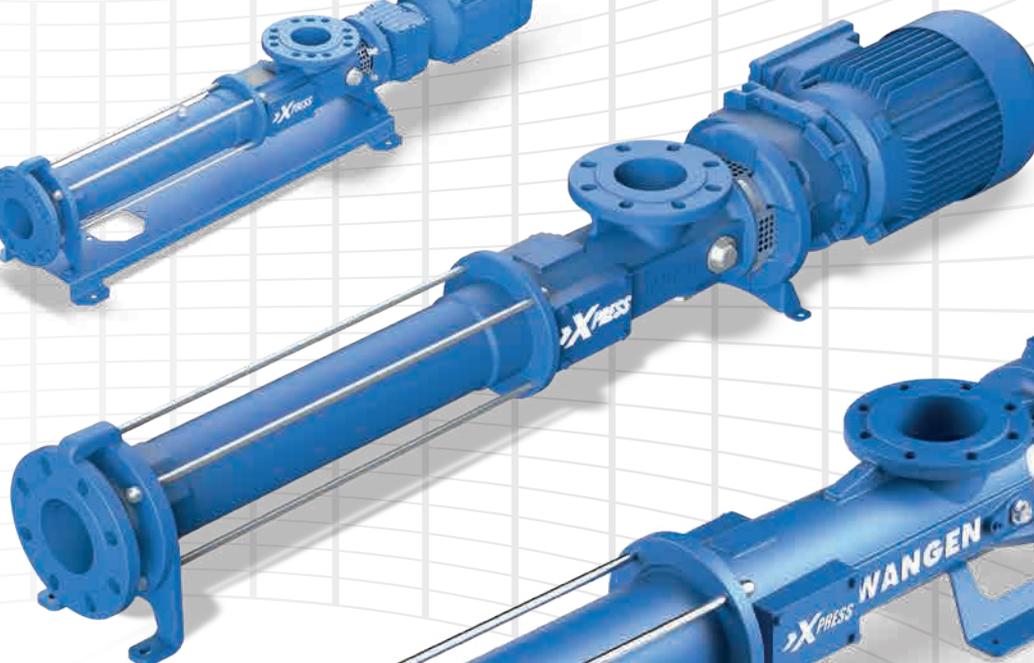
Pump size	Maximum completely free passage (mm)	Flowrate (m <sup>3</sup> /h) at 300 rpm *	Maximum differential pressure (bar)
48	38	up to 12	6
64	51	up to 36	6
78	61	up to 61	6
94	73	up to 102	6

\* speed of rotation in frequency inverter operation

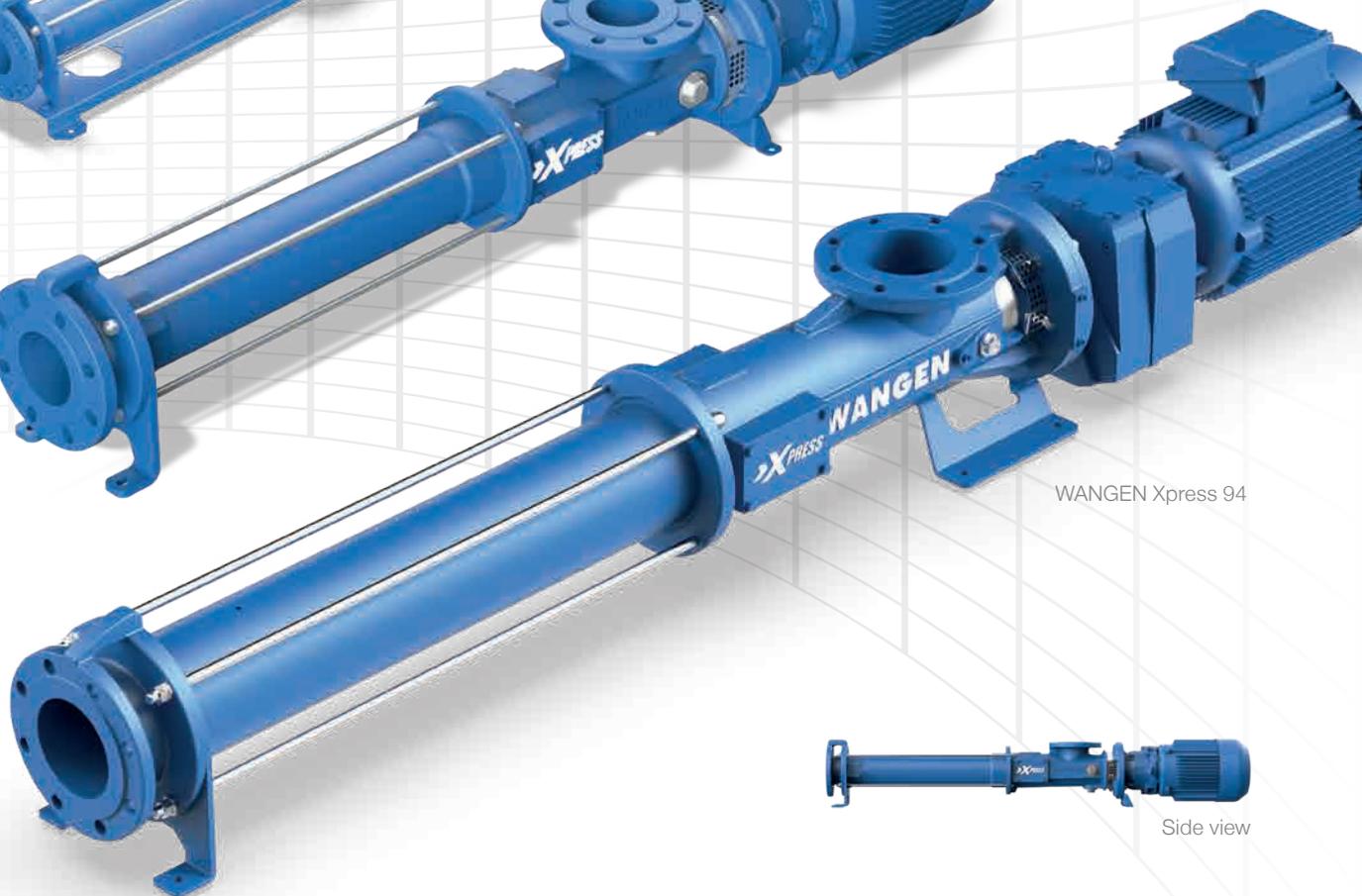
WANGEN Xpress 48 on base plate



WANGEN Xpress 64



WANGEN Xpress 94



Side view



Top view



**WANGEN PUMPEN is certified to:**

ISO 9001 (Quality management)

ISO 14001 (Environmental management)

ISO 45001 (Occupational safety and health protection)

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