



MUNSCHE NPC

**THE UNIVERSAL PUMP FOR CORROSIVE
AND ABRASIVE SERVICE CONDITIONS**

NON-METALLIC PUMPS FROM THE SPECIALIST

As a family-owned company, MUNSCH has been a reliable partner to the chemical and process industries for more than 50 years, working shoulder to shoulder with its customers. From the very beginning, our single-minded focus has been on non-metallic pumps for corrosive and abrasive service environments to satisfy the highest quality, reliability and efficiency standards.

Our dedicated staff and their drive for innovation are steering us into the world of tomorrow. At MUNSCH, digitalization has long been part of our corporate philosophy. This approach now puts us in a position to respond flexibly to our customer's special product and service needs. Our high level of vertical integration and latest manufacturing technology mean, we can manufacture customized pumps just as cost-effectively as standardized pumps.

TOGETHER WITH OUR CUSTOMERS ...

and building on our many years of experience, we select the best solutions from our product portfolio that guarantee reliable operation at optimum life cycle cost.

Throughout the lifecycle of our products we provide expert advice and technical support from our field technicians.

MUNSCH PUMPS ...

have earned an excellent reputation among industry users and our customers' project engineers over the years. Standing for reliability, safe operation, ease of handling, high efficiencies and thick-walled plastic casings; the NPC series unites these attributes and is setting new standards of performance and application range.



THE MUNSCH NPC

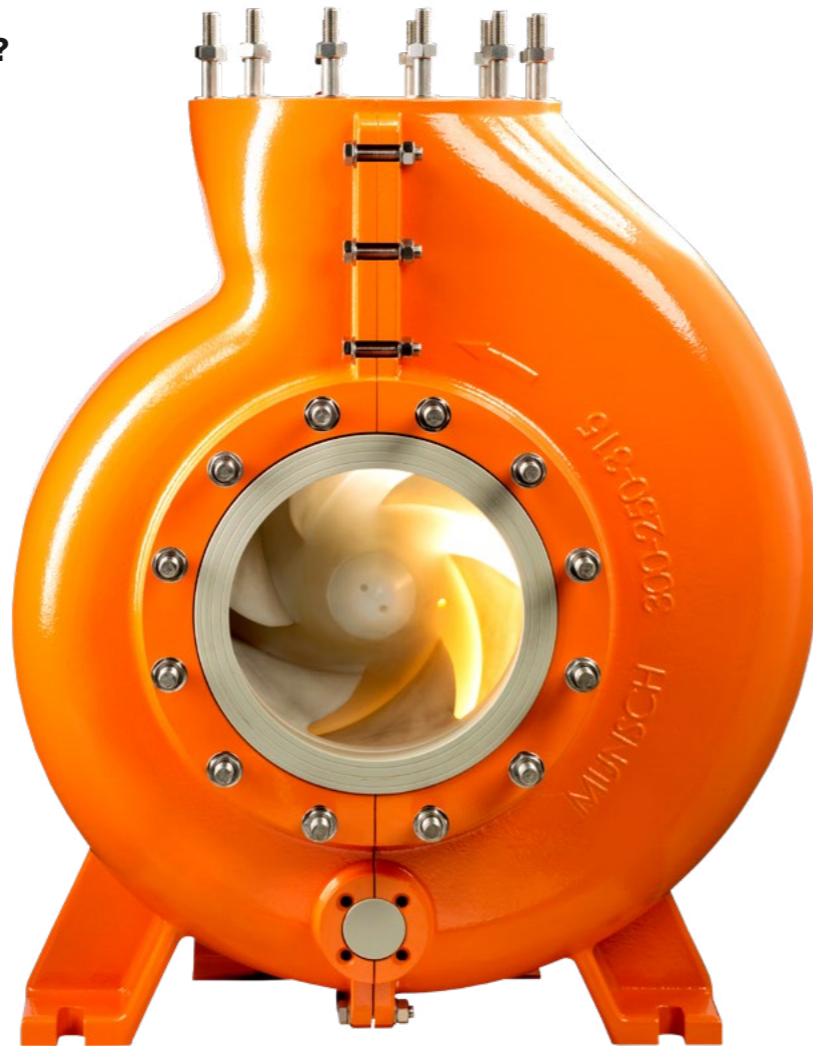
Our universal pump for corrosive and abrasive service environments

A well-thought-out pump concept that is universally applicable, extremely long-lived and energy-efficient. Higher pressure, higher temperatures, best possible efficiency and excellent reliability. We have understood these requirements and developed a high-quality, non-metallic pump that will surprise you. Combining the latest hydraulic design with a thick-walled construction, the NPC features exceptional running smoothness and robustness.

WHAT MAKES THE NPC UNIVERSAL?

Among the many different pump sizes we recommend the one that suits your specific application.

- A variety of engineered plastics through to PTFE optimally covers all applications.
- A special mechanical seal that fits the pump and provides ample wear reserve – and of course metal-free.



Also available as
close-coupled
pump

APPLICATIONS

No worries about abrasion and corrosion

Type NPC standardized chemical pumps are used whenever maximum reliability is a must and metallic pumps are facing corrosion and wear problems. Yes, you have read correctly: wear problems.

Contrary to popular belief, pumps fabricated from thick-walled engineered plastics as used by MUNSCH are extremely robust in applications involving solids-carrying fluids. Erosion and corrosion are no issue for the NPC!

Flexible sealing concepts, explosion protection and adapted monitoring options make MUNSCH the easy choice for you.

Typical applications include the pumping of acids, alkalis, chemically contaminated fluids, scrubbing liquids and waste water in the

- metal finishing industry
- general process industries and environmental sector
- mineral processing industry
- chemical industry

FACTS

The MUNSCH NPC at a glance

TYPE

Horizontal centrifugal pump in back pull-out or close-coupled design with mechanical seal. Designed to EN 22858, ISO 2858 and ISO 5199 dimensional standards and requirements. Connections available to DIN, ANSI or JIS standards. No need to say, the NPC series also meets the requirements of ATEX 2014/34/EU.

VERSATILE MECHANICAL SEAL

No leaks are of primary importance – we have proven that time and again with the MUNSCH REA. This is also the reason why our mechanical seal is very thick-walled. We have saved neither on materials nor on wall thickness to increase service life far beyond the average.

One seal size fits all the pumps of the NPC series. We have anticipated simple adaptations to the specific installation environment and made all the necessary preparations.

For more information, see page 10.

ACCESSORIES TO YOUR SPECIFICATIONS

All components are tried and tested to give you maximum confidence:

- Base plates or base frames of different materials
- Levelling bolts, expansion joints, connecting adapters
- High-quality couplings of all makes
- Priming pots (providing the pump with self-priming capability)
- Seal flush systems and accessories
- Pump monitoring (e.g. motor overload switch, temperature and vibration monitors) matched to your specific application

DOCUMENTATION

A MUNSCH project team with expert technical and application knowhow prepares your important documents from the 3D-model through to the individual project documentation.

ASSEMBLY

We have learned from service staff throughout the world that ease of repair is all-important. With the NPC series, you will need no special tools nor will any alignment and adjustments be needed. Repair or inspection requires no specialist skills or knowledge!

AVAILABILITY – A MATTER OF HONOUR

We are there for you when time is of the essence. Our high level of vertical integration makes us largely independent of sub-suppliers.





For many decades, our delivery promise has been one of the main reasons why many customers choose MUNSCH.

LEISTUNGSDATEN

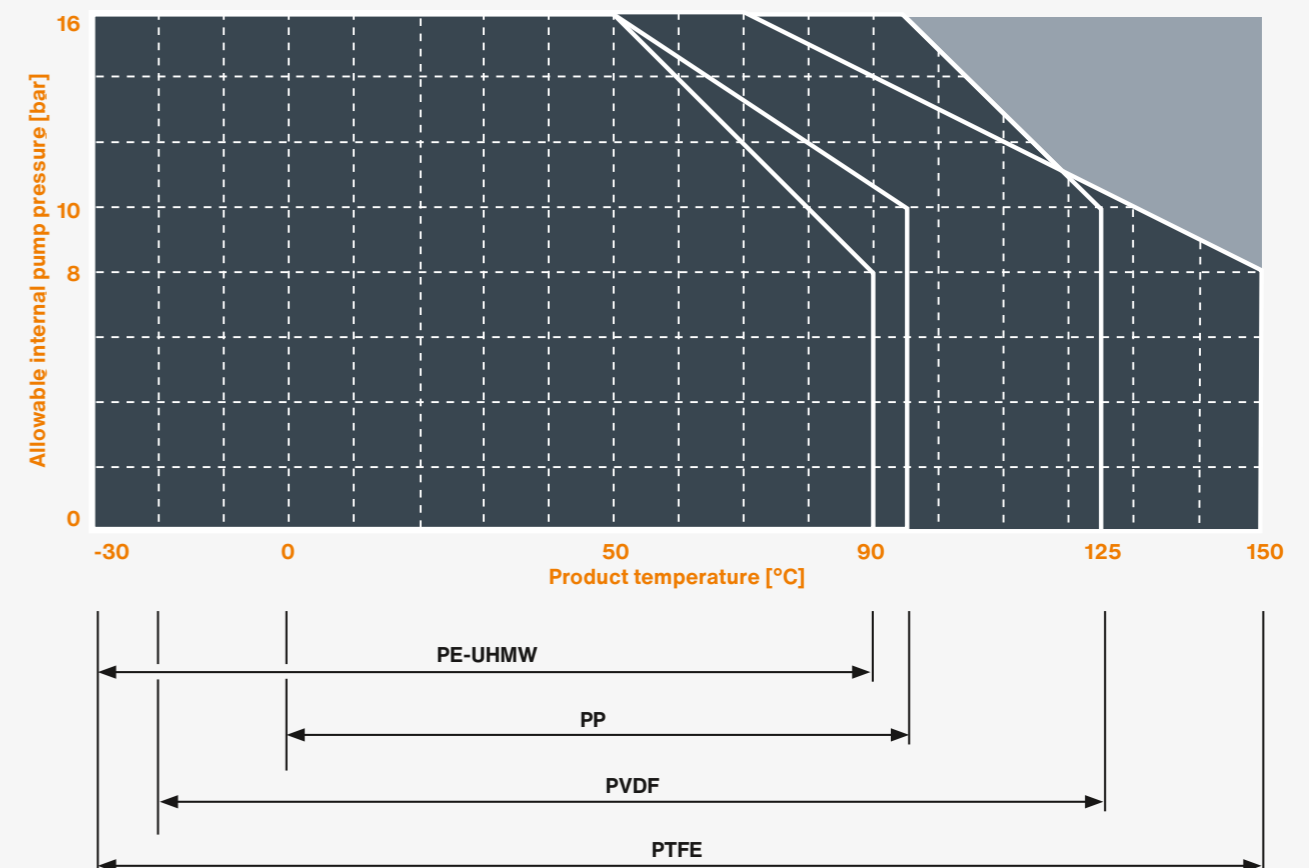
Capacity [Q]:	up to 1200 m ³ /h
Differential head [H]:	up to 80 m
Operating temperature:	-30 to 150 °C
Operating pressure [p]:	up to 16 bar
Discharge nozzle:	DN 40 to DN 250
Motor rating:	up to 200 kW

MATERIALS

A key characteristic of our pumps is the thick-walled plastics. You can choose between PE-UHMW, PP, PVDF or PTFE/PFA.

	PE-UHMW	-30 to 90°C	Highly cross-linked resin offering excellent resistance and outstanding wear properties. The ideal solution for fluids carrying high solids loads.
	PP	0 to 95°C	Good resistance to many inorganic acids. Offers excellent wear properties.
	PVDF	-20 to 125°C	Versatile, partly fluorinated plastic. Depending on the application, an economical alternative to PTFE/PFA.
	PTFE/PFA	-30 to 150°C	Universally applicable fluoropolymer with a broad temperature and application range.

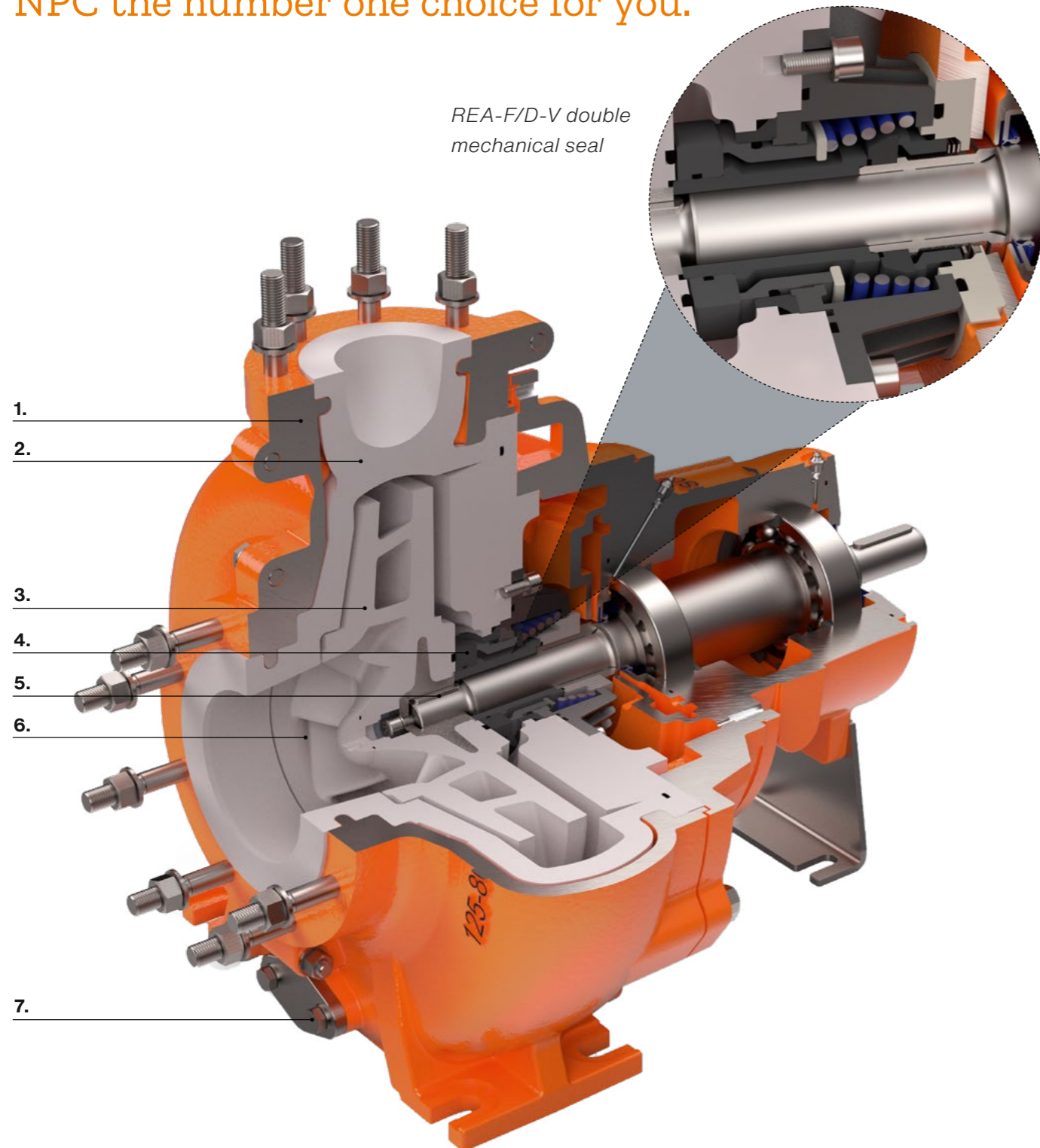
MAXIMUM ALLOWABLE OPERATING PRESSURES AND TEMPERATURES



COMPONENTS AND FEATURES

Perfect workmanship down to the minute detail combined with optimized hydraulics make the MUNSCH NPC the number one choice for you.

REA-F/D-V double mechanical seal



1. ROBUST METAL ARMOUR

A unique metal armour can accommodate system pressures of up to 16 bar. This means high stability and reserves in any situation.

2. THICK-WALLED PLASTICS

Delivers excellent performance on solid-laden liquids and eliminates material diffusion issues.

3. OPTIMIZED HYDRAULICS

A perfectly matched impeller and casing combination ensures highest energy efficiency, exceptional running smoothness and a long service life.

4. THE PERFECT MECHANICAL SEAL

- Bigger, sturdier, more robust – when it comes to the mechanical seal, we do not do things by halves. The components can handle solids well and the unique MUNSCH sealing concept allows flexible adaptation to any situation.
- Metal-free and high-quality – this applies to all components of the MUNSCH mechanical seal.
- The MUNSCH mechanical seal is sturdy and long-lived – the rotating seal components are positively locked to the shaft.
- We make it easy for you – a kit system provides you with long-term flexibility. One mechanical seal fits all pump sizes and helps you save costs.

- You gain flexibility – conversion from a single to a double-acting mechanical seal is feasible at any time with a minimum of parts. Provisions for cleaning and flushing are already in place.
- Best materials for long life cycles – the main components of the mechanical seal are fabricated from silicon carbide, known for its extreme wear resistance and universal chemical resistance.

5. SAFETY – IN ANY DIRECTION

The impeller of the NPC is positively locked to the pump shaft. An advantage in the sense of rotation check and one less worry for you.

6. THE RIGHT IMPELLER

Closed, semi-open or vortex design. Here, we have invested a lot in perfecting impeller flow dynamics for your benefit.

7. EASE OF CLEANING

Our consistent cleaning concept and a casing drain will help you save maintenance time. Connection variants and accessories are available.

A CONCEPT AGAINST DAMAGE AND WEAR!

- We have designed the entire pump interior so that solids have hardly a chance to cause damage.
- Components with wall thicknesses of 10 mm and more, offer wear reserves at the right locations. Here, PE-UHMW outperforms most metallic materials in corrosive service conditions.
- The mechanical seal has been engineered for tough service conditions. This feature has guaranteed the success of the MUNSCH concept for more than 50 years.
- Special impellers have been optimized in particular for pumping solids-laden liquids.

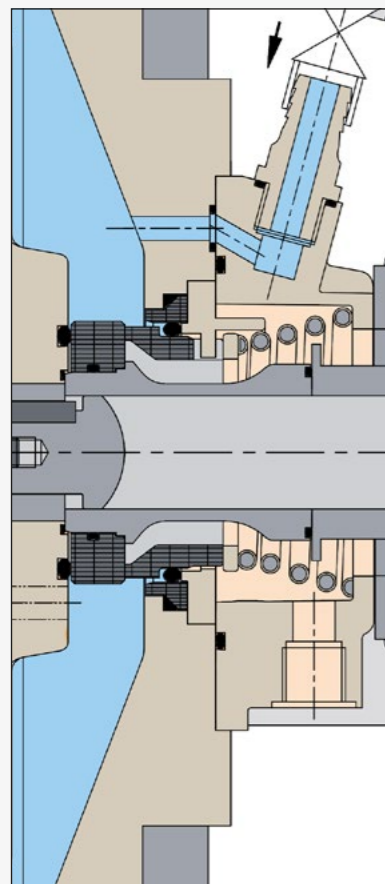
THE SHAFT SEAL AND ITS FLUSHING OPTIONS

Our REA-F-V mechanical seal is unmatched when it comes to adaptation to changed service conditions. Any necessary modifications can be made at any time with a minimum of effort.

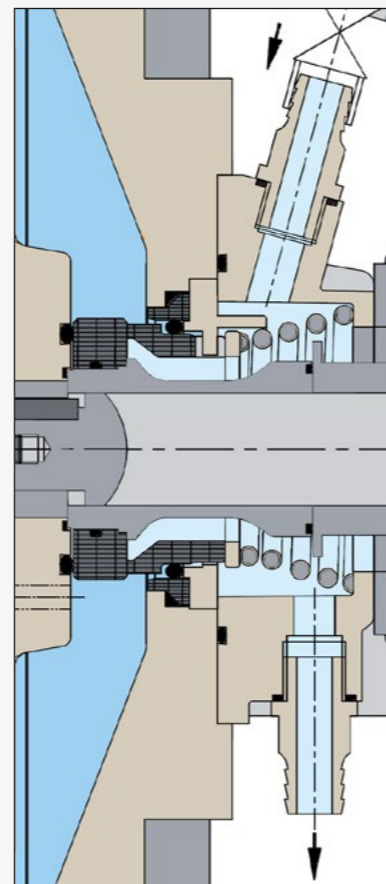
CLEAN THE SEAL REGULARLY!

Pump performance will be improved if you clean the areas in front of and behind the seal of product residues, in particular during shutdown periods.

SHUTDOWN FLUSHING SYSTEM



SPRING CHAMBER FLUSHING SYSTEM



Two thirds of all pump failures can be attributed to damaged mechanical seals – Opt for the best! Benefit from our extensive experience. Your MUNSCH sales engineer has an eye on your application and your concerns when it comes to any sealing challenges.

- Commanding 50 years' experience with difficult solids-carrying fluids, we know what works.
- Flexible, simple, cost effective and adaptable to your specific situation.
- Long service life through extremely thick-walled and robust components

FLUSHING DURING OPERATION

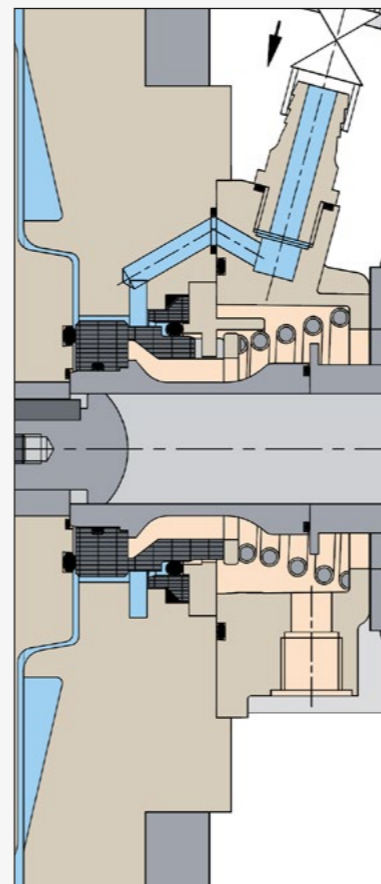
In difficult applications, flushing liquid from an external source lubricates the seal, displaces problematic products and protects the seal during any potential operating issue.

MAXIMUM SAFETY – DOUBLE MECHANICAL SEAL

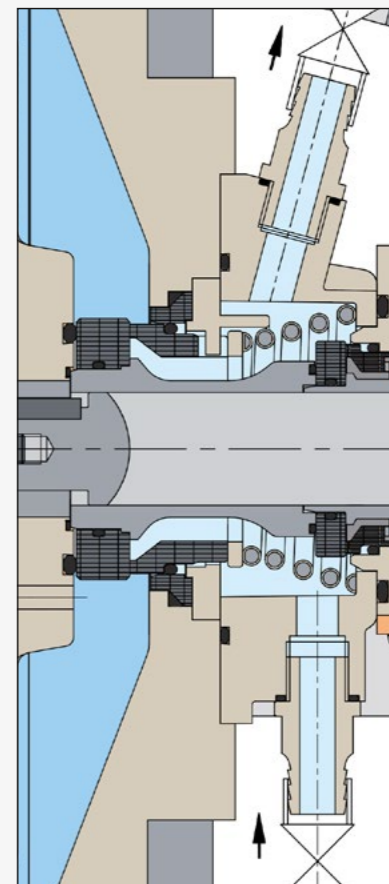
High solid loads or toxic fluids require an additional seal. A barrier fluid between the two seals ensures that no pumped fluid escapes into the environment.

The double mechanical seal can be operated with barrier fluid in once-through mode, with a closed-loop pressurized barrier fluid system or a quench system.

CONTINUOUS FLUSHING SYSTEM



DOUBLE MECHANICAL SEAL

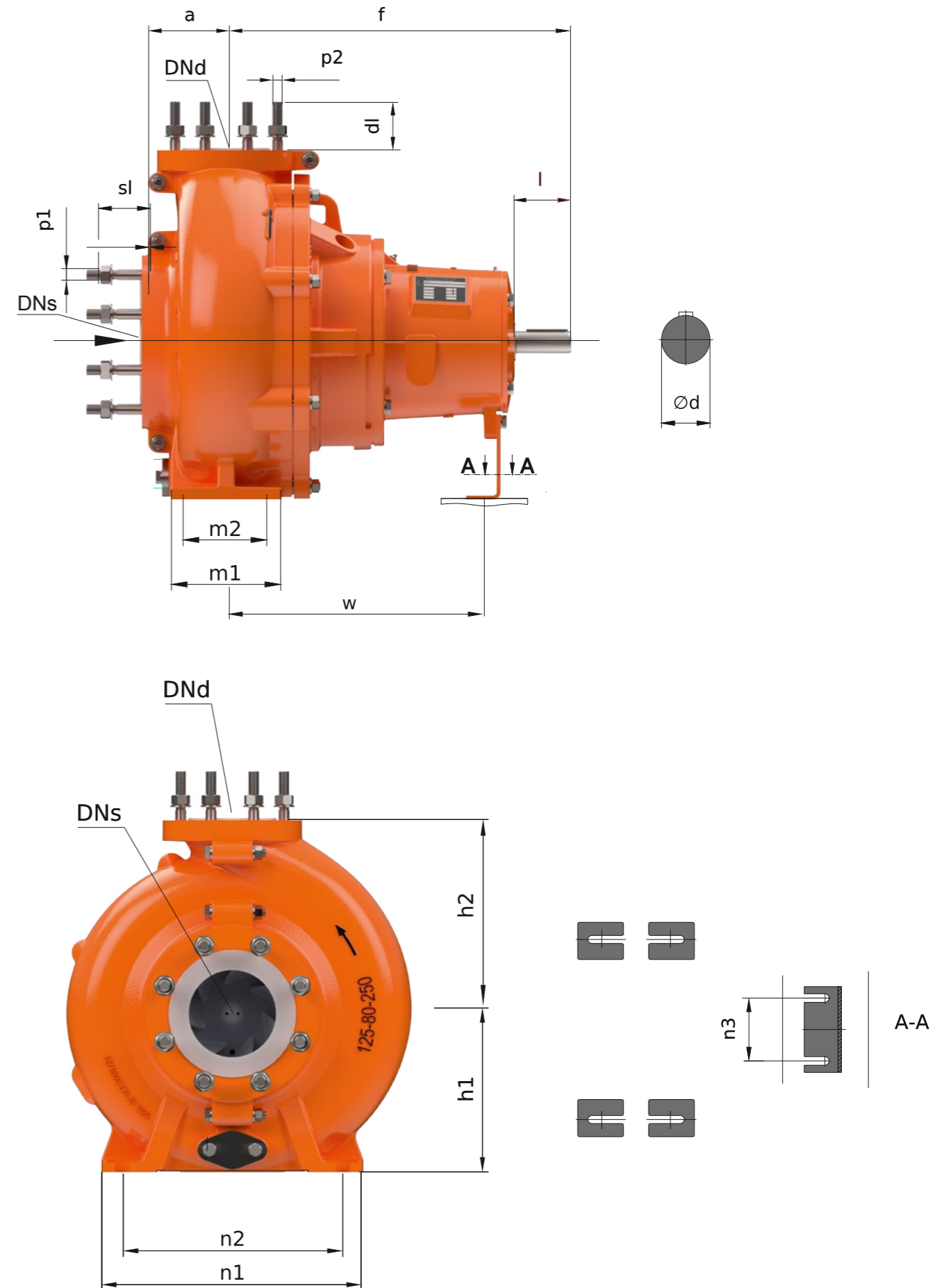


PUMP SIZES AND DIMENSIONS

The MUNSCH NPC is currently available in 14 sizes. The series will be successively complemented by further pump sizes.

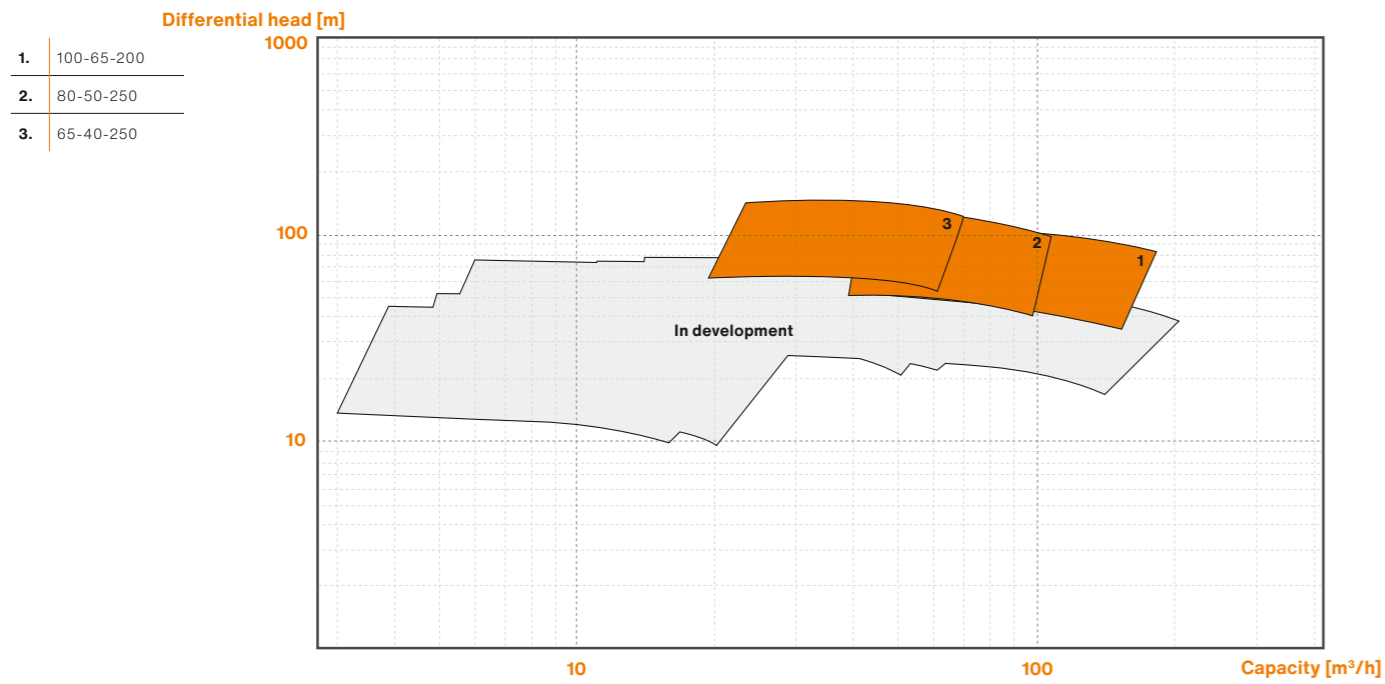
Pump size	DNs	DNd	a	f	h1	h2	n1	n2	n3	w	sl	dl	p1	p2	m1	m2	Ød	l
65-40-250	65	40	100	500	180	225	335	280	110	370	70	60	M16	M16	125	95	32	80
80-50-250	80	50	125	500	180	225	335	280	110	370	70	70	M16	M16	125	95	32	80
80-50-315	80	50	125	500	225	280	375	315	110	370	70	70	M16	M16	135	95	32	80
100-65-200	100	65	100	500	180	225	335	280	110	370	70	70	M16	M16	125	95	32	80
100-65-250	100	65	125	500	200	250	375	315	110	370	70	70	M16	M16	160	120	32	80
100-65-315	100	65	125	530	225	280	375	315	110	370	70	70	M16	M16	160	120	42	110
125-80-250	125	80	125	500	225	280	375	315	110	370	80	70	M16	M16	160	120	32	80
125-100-200	125	100	125	500	200	280	375	315	110	370	80	70	M16	M16	160	120	32	80
125-100-250	125	100	140	530	225	280	375	315	110	370	80	70	M16	M16	160	120	42	110
150-125-250	150	125	140	530	250	355	400	315	110	370	90	80	M20	M16	160	120	42	110
150-125-315	150	125	140	530	280	355	500	400	110	370	90	80	M20	M16	200	150	42	110
200-150-250	200	150	160	530	280	375	500	400	110	370	100	90	M20	M20	200	150	42	110
250-200-400	250	200	180	800	355	500	755	640	140	600	110	100	M24	M20	260	200	60	110
300-250-315	300	250	250	800	475	530	755	640	200	600	110	110	M24	M24	260	200	60	110

All dimensions indicated in mm.

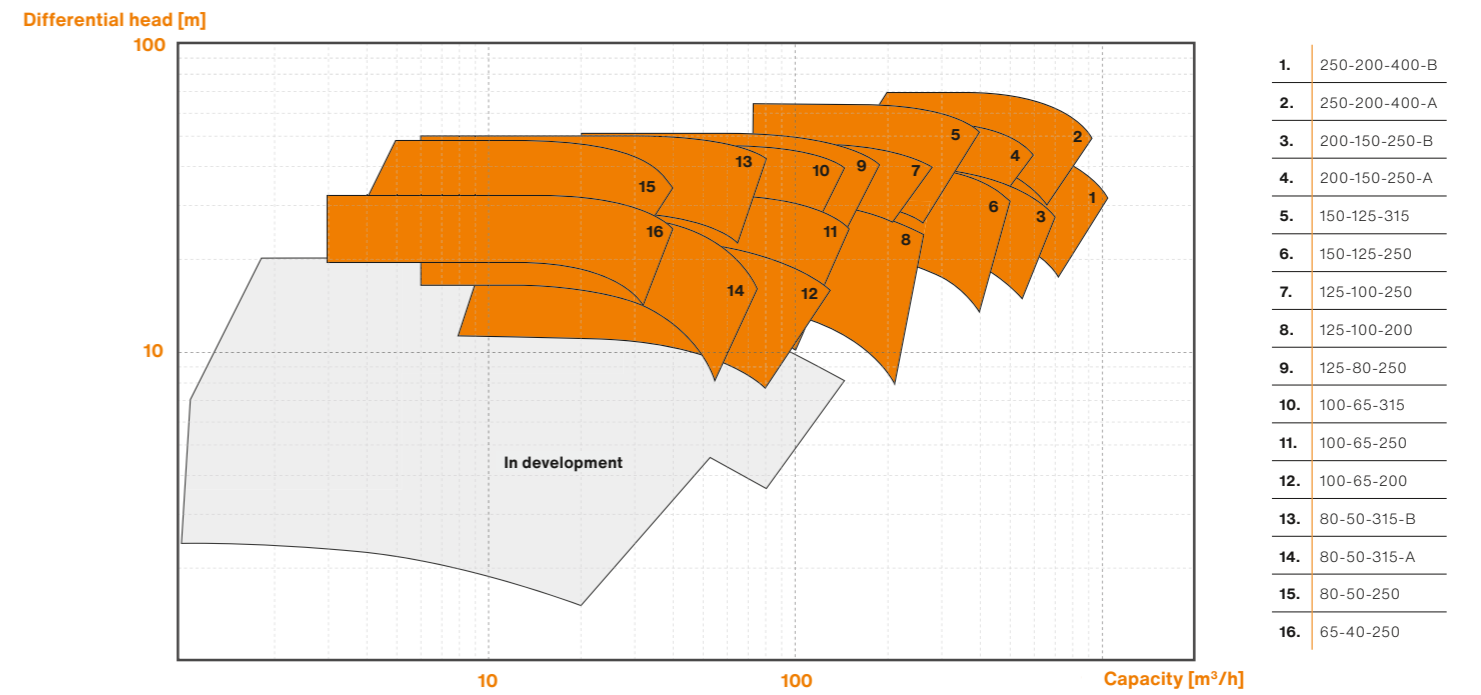


PERFORMANCE RANGES

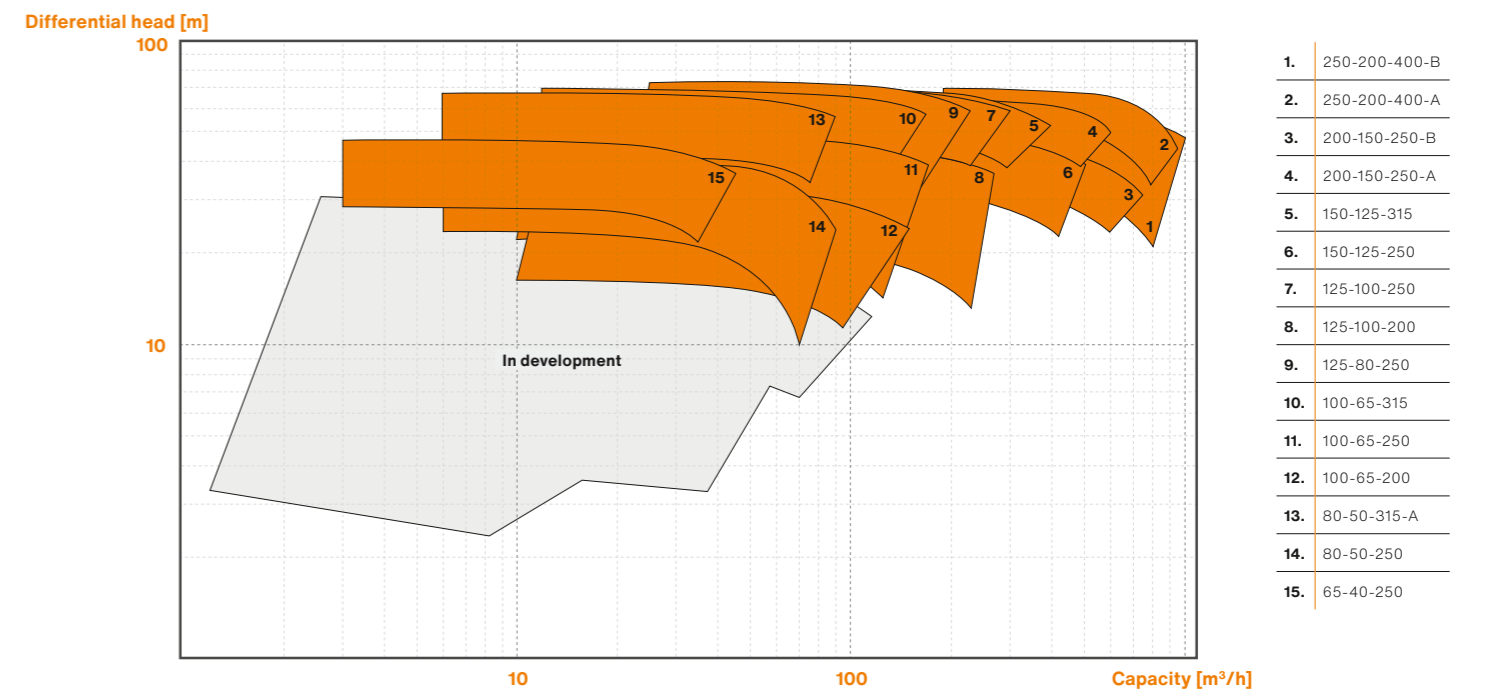
PERFORMANCE RANGE CHARTS 2950 MIN⁻¹ (50 HZ 2-POLE)



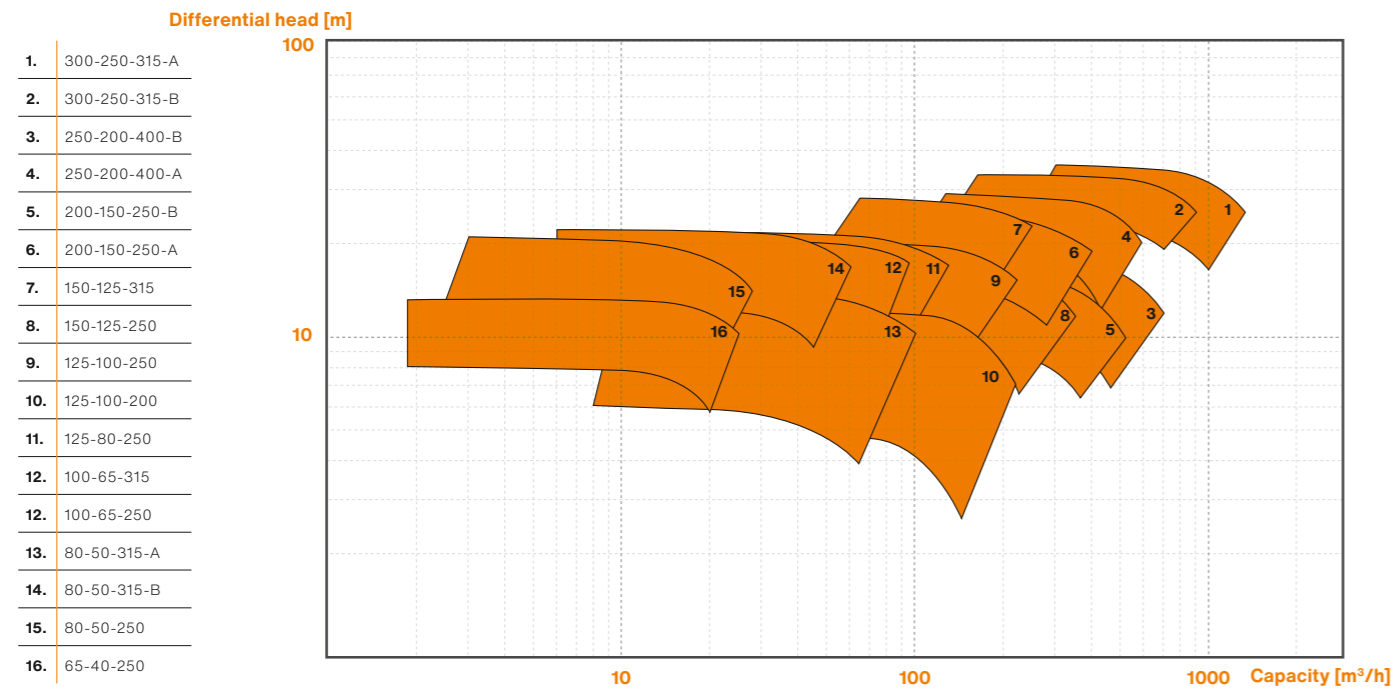
PERFORMANCE RANGE CHARTS 1450 MIN⁻¹ (50 HZ 4-POLE)



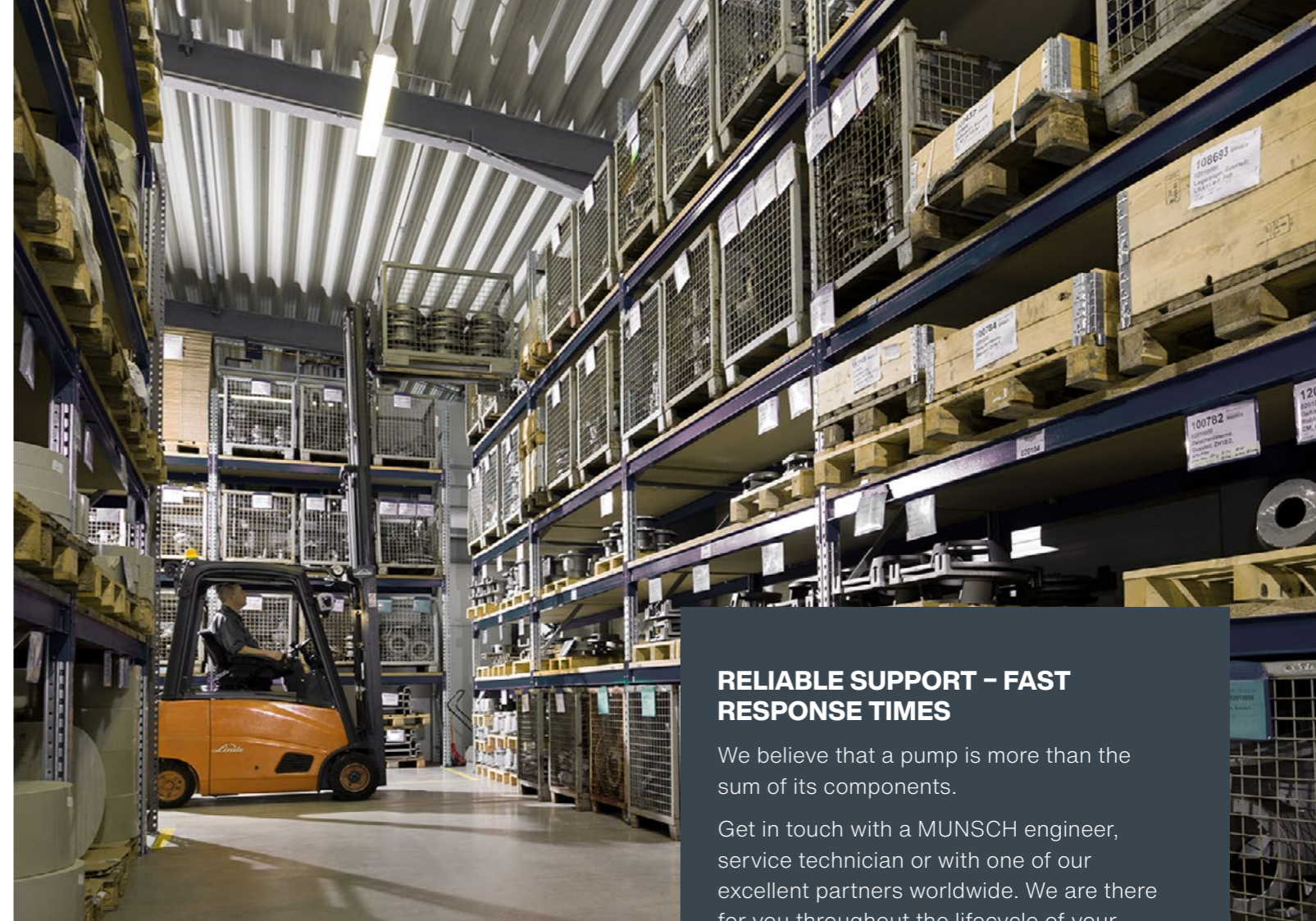
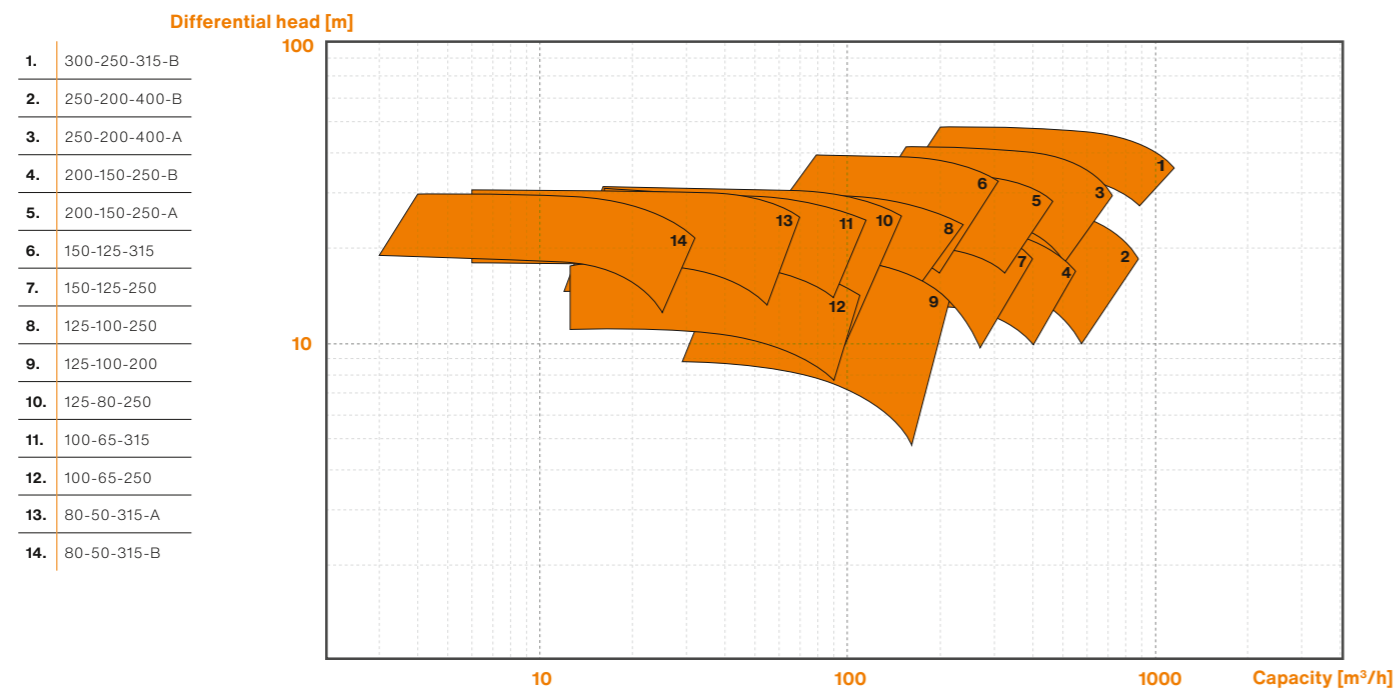
PERFORMANCE RANGE CHARTS 1750 MIN⁻¹ (60 HZ 4-POLE)



PERFORMANCE RANGE CHARTS 950 MIN⁻¹ (50 HZ 6-POLE)



PERFORMANCE RANGE CHARTS 1150 MIN⁻¹ (60 HZ 6-POLE)



RELIABLE SUPPORT - FAST RESPONSE TIMES

We believe that a pump is more than the sum of its components.

Get in touch with a MUNSCH engineer, service technician or with one of our excellent partners worldwide. We are there for you throughout the lifecycle of your MUNSCH pump.

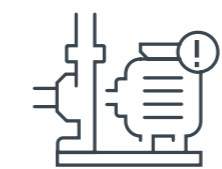
Spare parts have priority and leave our production site in the shortest possible time.

THE BEST SERVICE

Service ranks high at MUNSCH. Our service team is there for you, even after you've placed your order!



HIGHLY MOTIVATED SERVICE TEAM



PREVENTATIVE MAINTENANCE



SPARE PARTS AND CUSTOM PARTS



REPAIRS AND CONVERSIONS

PORTFOLIO

Our solutions for all applications



HORIZONTAL CENTRIFUGAL PUMPS WITH MECHANICAL SEALS

Capacity	up to 4,500 m ³ /h
Pump head	up to 90 m
Pump pressure	up to 16 bar
Main material	UHMW-PE (PE1000) · PP · PVDF · PTFE/PFA
Fluid temperature	up to 150°C
Pump sizes	40-25-125 to 500-400-700
Seals	Single/double metal-free MUNSCH REA mechanical seal



HORIZONTAL CENTRIFUGAL PUMPS WITH MAGNETIC COUPLING

Capacity	up to 180 m ³ /h
Pump head	up to 90 m
Pump pressure	up to 16 bar
Main material	PP · PVDF · PTFE/PFA
Fluid temperature	up to 190 °C
Seals	Sealless (magnetically coupled)



VERTICAL CENTRIFUGAL PUMPS FOR TANKS AND PUMP SUMPS

Capacity	up to 650 m ³ /h
Pump head	up to 70 m
Pump pressure	up to 10 bar
Main material	PE-UHMW · PP · PVDF
Fluid temperature	up to 120 °C
Pump sizes	50-32-125 to 200-150-250
Vertical setting depth	500 to 3,000 mm

VARIANTS AND ACCESSORIES

- Space-saving close-coupled design available
- High-quality motors to your specifications
- High-quality couplings
- Priming pots with limit switch for suction-lift operation
- Pressure and temperature monitors
- Leakage and pump monitoring systems
- Flange adapters and expansion joints
- Seal flush systems based on API



Already heard?

PLASTIC EXTRUSION WELDERS

MUNSCH offers you a broad range of hand-held plastic extrusion welders with a full suite of accessories for container engineering, hydraulic engineering and landfill construction applications.

More information at: www.munschwelding.com



WHAT YOU CAN EXPECT FROM MUNSCH

Expect more than just a pump! Our customers appreciate that we are accessible, good listeners and act fast. Our solutions do not stop at the pump discharge nozzle – we are interested in what our customers do and offer flexible solutions. We mean it – give us a try!

Your MUNSCH team is putting its heart and soul into problem solving and product development.

Together with our worldwide partners, we put every effort into meeting your pumping needs.

MUNSCH Chemie-Pumpen GmbH

Im Staudchen · D-56235 Ransbach-Baumbach
P.O. Box 1 42 · D-56221 Ransbach-Baumbach
Germany

Phone: +49 (0) 2623-8 98-90
Telefax: +49 (0) 2623-8 98-95
Internet: www.munsch.de
Email: munsch@munsch.de