



# MUNSCH

PLASTIC PUMPS FOR AGGRESSIVE MEDIA



## Chemical Pumps with mechanical seal

MUNSCH NPC-Mammut – for Flowrates up to 5.000 m<sup>3</sup>/h  
Available in PP/PE-UHMW/PVDF





# NON-METALLIC PUMPS FROM THE SPECIALIST

## **MUNSCH GmbH,**

a family-owned company, 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 beginnings of our activities, our single-minded focus has been on non-metallic pumps for corrosive and abrasive service environments satisfying 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, being lived out to the full and putting us in a position to respond flexibly to our customer's special product and service needs. Thanks to our high level of vertical integration and latest manufacturing technology, we can manufacture individual components just as cost-effectively as the volume components.

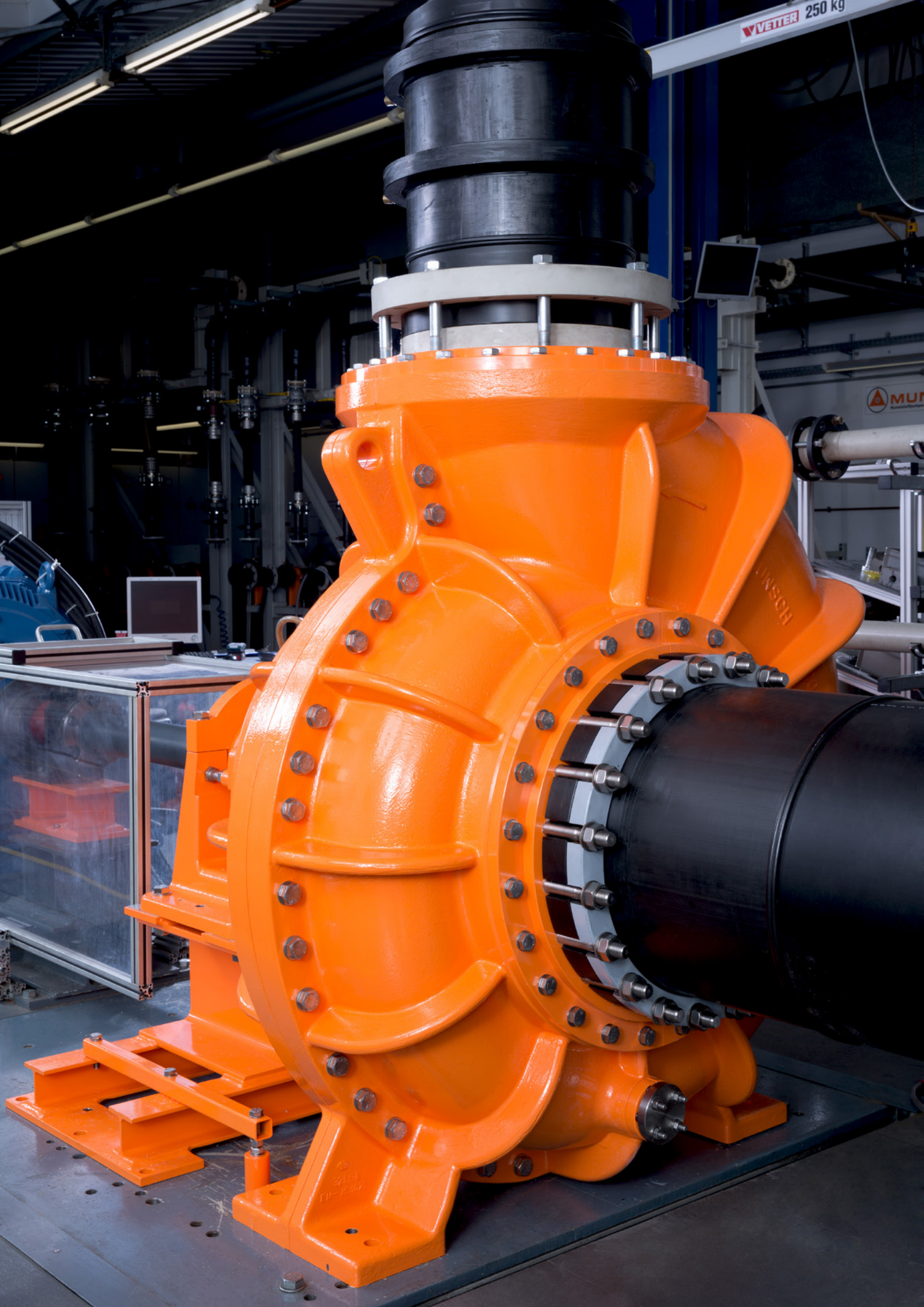
## **MUNSCH pumps ...**

have earned themselves an excellent reputation among industry users and our customers' project engineers over the years. They stand for reliability, safe operation, ease of handling, high efficiencies and thick-walled plastic casings. Drawing on numerous configuration options, the different MUNSCH product series can be perfectly matched to the requirements of the specific application.

## **Together with our customers ...**

and building on our many years of experience, we select optimum solutions from our product portfolio that guarantee reliable operation at optimum life cycle cost. Competent advice by our field technicians and technical support throughout the lifecycle of the pump are the services that come with our products.





# NPC-MAMMUT

**For performances beyond the standard.**

The NPC-Mammut is the biggest plastic chemical pump world-wide and designed for highest demands. Its robust design with strong wall-thicknesses at superior energy-efficiency and with optimized suction performance make the NPC-Mammut be the solution for extreme tasks like big exhaust-gas scrubbers. The Mammut's performance is unequalled in applications with corrosive and solid-loaded media at flows of 1000 m<sup>3</sup>/h up to 5000 m<sup>3</sup>/h and high delivery heads.

## Applications

The NPC-Mammut is being used when acids, brines or chemically loaded media with or without solids are supposed to be pumped. Typical applications are the chemical industry, metallurgy, galvanic industry, steel- and stainless steel pickling plants, evaporation- and regeneration plants, gas cleaning after waste incineration as well as exhaust air cleaning and waste water treatment.



**Use in areas exposed to explosion hazards**

Pumps Type NPC meet the requirements of EU-guideline 2014/34/EU and are suitable for the use in areas exposed to explosion hazards.





# THE SOLUTION FOR EXTREME TASKS

## Type of construction

The NPC-Mammut is volute casing centrifugal pump with radial impeller. The pump is single-inlet, single-staged and fulfils the technical requirements of class II, EN ISO 5199 towards centrifugal pumps.

## Materials

The pump parts in contact with the medium are being produced in thick-walled plastics material PP, PE-UHMW and PVDF. The ceramic parts within the mechanical seal as well as the secondary seals in fluorine polymere materials make the pump virtually universally resistant.

## Double mechanical seal

The NPC-Mammut process pump is equipped with double mechanical seals. Ceramic components and a variety of flushing options allow the pump to operate even in highly polluted media.

## Permissive towards solids

An especially constructed separator keeps solids from passing into the shaft area. Casing with high abrasion tolerance. Volute casing with wall thickness > 30 mm.

Standard flange connections as per DIN 2533, PN 16; optional:

- as per ANSI B16.5, Class 150
- as per JIS B2210, Class 10K

## Impeller

The impeller impresses with a high degree of efficiency and low NPSH values.

## Safety – in every way

The impeller is fixed to the shaft. For MUNSCH pumps, rotation in the wrong direction (for example during testing the rotating direction) remains without negative consequences.

## Exact operating points

Steep performance curves allow for the desired operating point to be set up precisely.

## Adjustable axial gap

The axial play between impeller and volute casing is being adjusted via the bearing bracket.

## Closed all the way

The intermediate lantern does not have any lateral openings.

## Simple assembly

All pump components can be assembled without special tools. No adjustment of the mechanical seal is required.

## Power unit

MUNSCH pumps are powered by electric motors in B3 design, in accordance with IEC, BS or NEMA. Safety class, type of ignition protection and motor voltage are freely selectable.

## Performance Data:

Capacity [Q]:	up to 5000 m <sup>3</sup> /h
Differential head [H]:	up to 100 m
Operating temperature:	0 up to 100 °C
Operating pressure [p]:	up to 10 bar
Particle Size:	up to 15 mm
Discharge nozzle:	DN 250 up to DN 400
Motor rating:	up to 1 MW

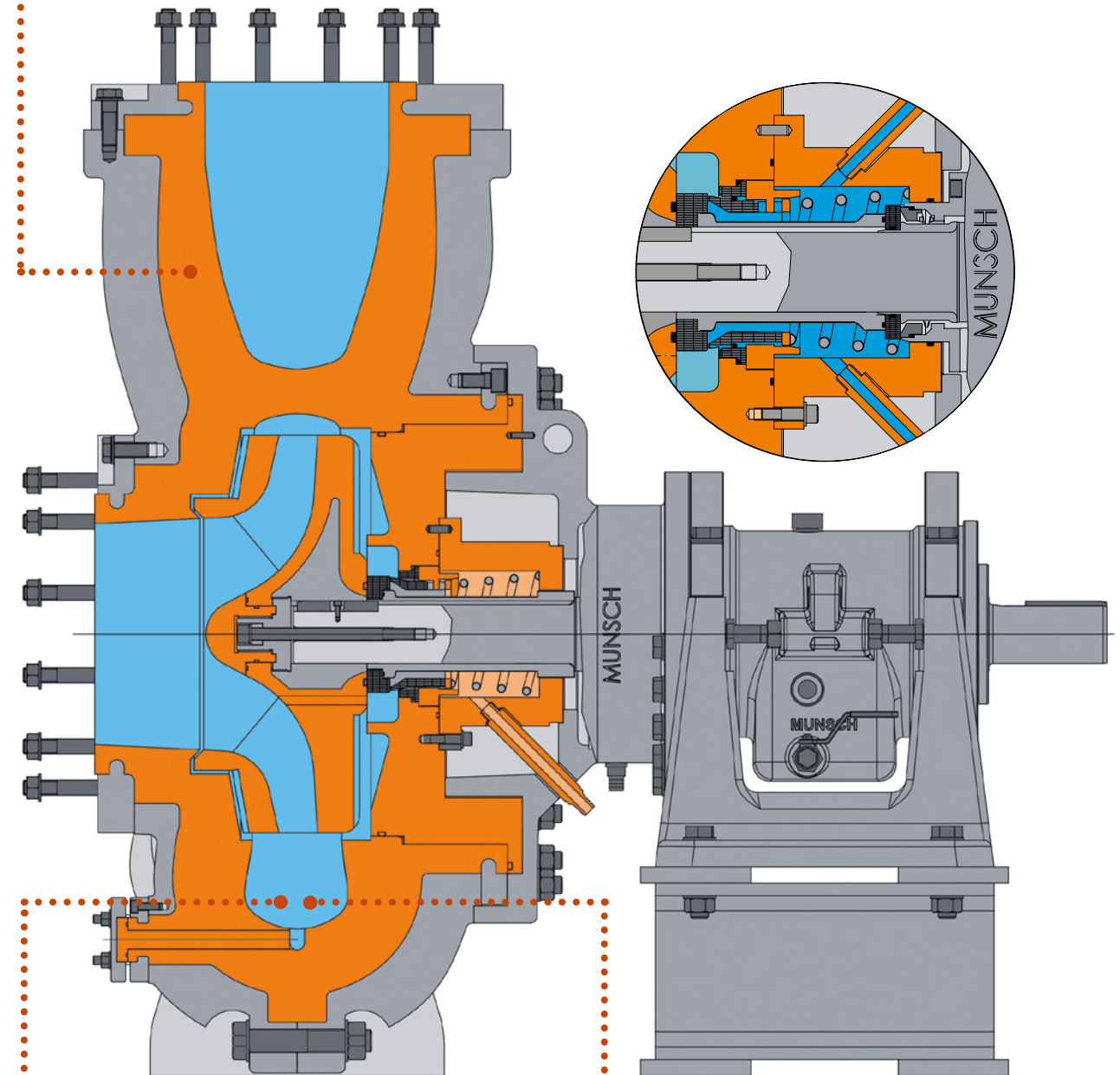
## Surface coating

The pumps are being coated with a highly resistant powder coating, which withstands even the roughest surroundings. Special painting is available upon request.



## Extremely strong volute casing

The pump casing needs to stand against a pump pressure of up to 10 bar. A seamless, thick-walled and self-supporting design of the synthetic pump casing in combination with a form-fit cast iron armor, offer high stability and reserves for high pressures and temperatures up to 100 °C.



## Retrofit casing draining

It is possible to implement a casing drain at the lowest point of the spiral casing. This connection can also be retrofitted.



## Temperature detection directly in the medium

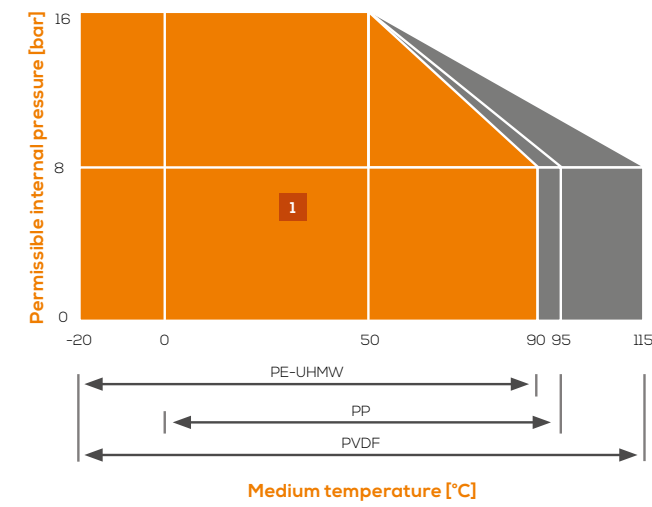
The medium temperature can be measured by means of a feeler gauge (PT100), which is being installed in the casing drain opening.





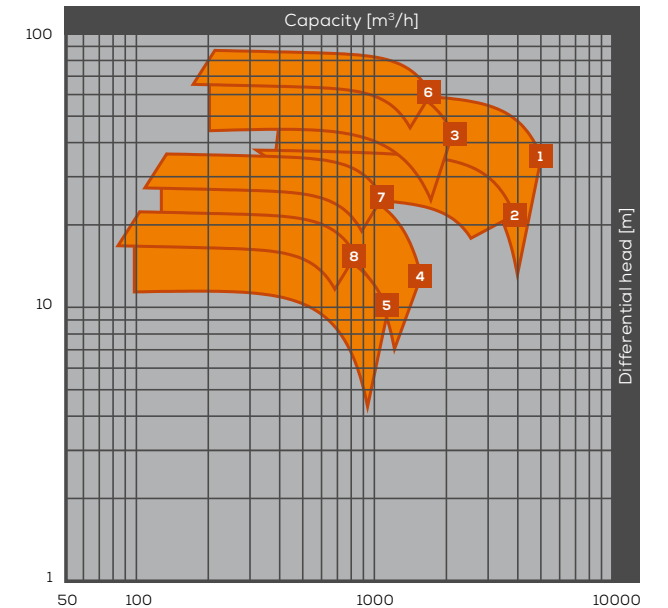
# TECHNICAL DATA

## Pressure- and temperature limitations



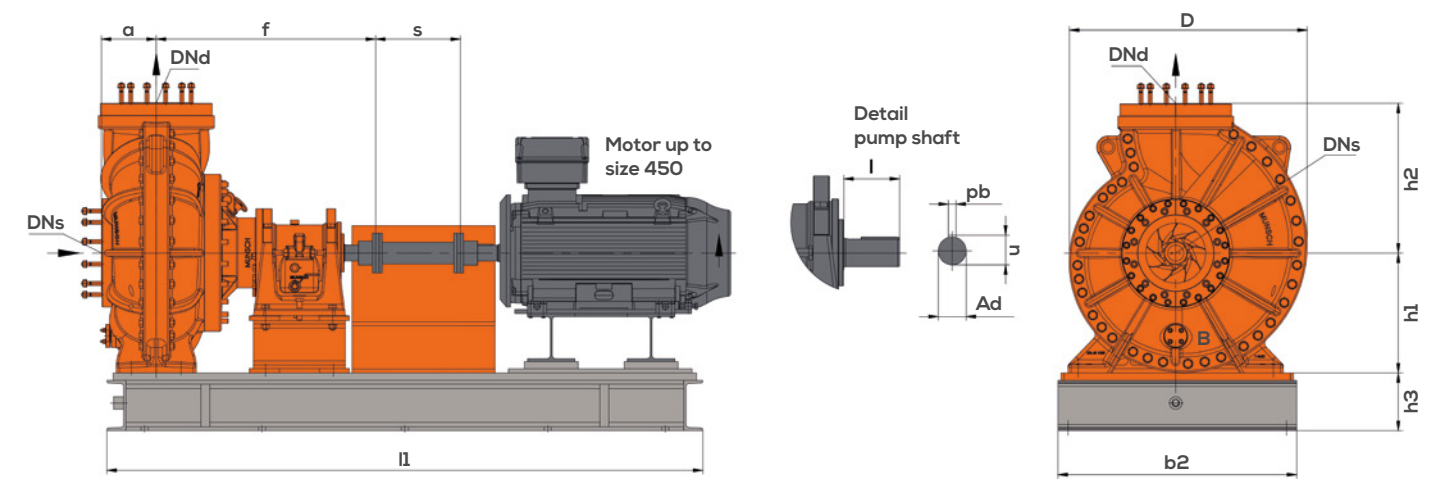
1 Standard operation field PE-UHMW

## Performance curve 50 Hz, 750 – 1450 1/min



- 1 500-400-700-A    2 500-400-700-A    3 300-250-400-C    4 300-250-400-C
- 5 300-250-400-C    6 300-250-400-A    7 300-250-400-A    8 300-250-400-A

## Dimensions



## Pump dimensions

Pump sizes	DNs	DNd	a	b2	D	Ød	f	h1	h2	h3	l	l1	pb	s	u
300-250-400	300	250	275	1350	1320	80	1100	600	750	230	160	3750	22	500	85
500-400-700	500	400	400	1350	1540	80	1140	750	900	230	160	3750	22	700	85



# MUNSCH PRODUCT RANGE

Also available as close-coupled pump



**STANDARDIZED CHEMICAL PUMP TYPE CS**  
with mechanical seal

The specialist for the chemical process industry.



**STANDARDIZED CHEMICAL PUMP TYPE NPC**  
with mechanical seal

Setting new standards of performance and service range.



**PROCESS PUMP NPC MAMMUT**  
with mechanical seal

For capacities up to 5000 m<sup>3</sup>/h.

Also available as close-coupled pump



**STANDARDIZED CHEMICAL PUMP TYPE NP**  
with mechanical seal

The tried-and-tested allrounder.

Also available as close-coupled pump



**STANDARDIZED CHEMICAL PUMP TYPE CM**  
with magnetic drive

The specialist for the chemical process industry.

Also available as close-coupled pump



**STANDARDIZED CHEMICAL PUMP TYPE ECM**  
with magnetic drive

Solid technology for standard applications.

Also available as close-coupled pump



**VERTICAL CHEMICAL PUMP TYPE TNP-KL**

The tried-and tested-allrounder with foot bearing.



**VERTICAL CHEMICAL PUMPS TYPES TPC AND TPC-M**

Cantilever design for extreme tasks.



**PRIMING POT**  
in plastic material

Self-priming capability for horizontal pumps.

# NEXT GENERATION

WELDING TECHNOLOGY BY MUNSCH



Apart from plastic pumps, 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.



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