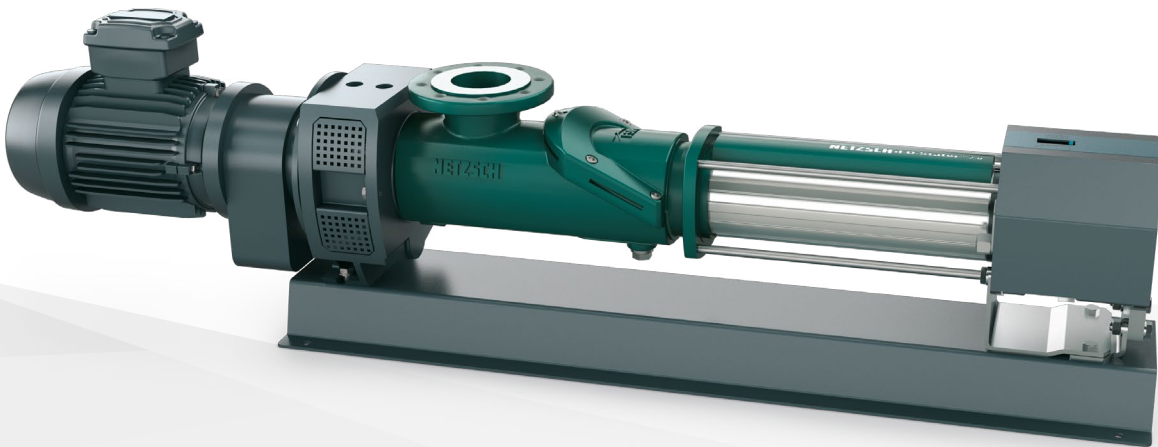


NETZSCH

Proven Excellence.



Products & accessories

NEMO® Progressing Cavity Pumps

Comprehensive and uncompromising solutions for all industries

Pumps & Systems

NEMO®

Progressing Cavity Pumps

– EXCELLENCE IN EVERY ASPECT

Proximity to our customers

Always focused on benefit to the customer, the NETZSCH product range covers everything from the smallest dosing pumps with flow rates of a few ml to high-performance pumps that convey up to 400 m³/h. We also offer grinders and a comprehensive range of accessories. We supply everything in and around the pump to suit your application perfectly, because we understand and know your process.

With 30 sales companies and other NETZSCH offices and more than 200 distributors and agents worldwide, we are internationally present and close to our customers. Organized into six application-focused business fields, we combine extensive application expertise with compliance to national and international standards, short communication paths, fast delivery times, and first-class on-site service.



Individual pump selection

Each individual pump is precisely tuned to the requirements of the application to deliver optimum performance, service life and reliability. The pumps are available with different conveying elements, so that the right solution can always be found for your application. Another benefit from our continued investment in product development is a range of gear joints selected to suit each and every application no matter how demanding. And last but not least, we supply a comprehensive range of options and accessories. Our goal is to provide service that goes beyond commissioning – fostering a long-term, trusted partnership with NETZSCH throughout the entire life of your pump.

Large capacity and pressure range

- Flow rates from just a few ml/h up to 400 m³/h
- Number of stages ranging from 1 to 8 for pressures from 6 to 48 bar (standard) or up to 240 bar (high pressure)

Broad range of applications

The pumps are primarily used for media with the following features:

- Containing solids (max. solid size up to 150 mm) and free of solids
- Low to high viscosity (1 mPas – 3 million mPas)
- Thixotropic and dilatant
- Shear sensitive
- Abrasive
- Non-lubricating and lubricating
- Aggressive (pH 0 – 14)
- Adhesive
- Toxic

Wide range of materials

Our range of metallic materials extends from simple grey cast iron and chromium-nickel steel to highly acid-resistant materials such as Duplex, Hastelloy and titanium to suit different conveying tasks. Ceramics and plastics round off the list for aggressive and abrasive applications. Our elastomers range from highly abrasion-resistant to oil-, acid- and alkali-resistant elastomers. For products in which elastomers cannot be used because of high temperatures or for reasons of durability, a large number of solid-based stators made from plastics or metallic materials is available.

Various conveying elements

Four different rotor/stator geometries are available to ensure the design is optimally adapted to the specific task.

Large variety of shaft seals

The range of mechanical shaft seals includes simple seals with and without quench, double-acting seals arranged back to back or in tandem, and cartridge seals. For specific applications, stuffing-box packing, lip seals and special seals are available. A pump with magnetic coupling is available for use with toxic media – to guarantee 100% that there are no leaks.

Additional features

- High suction capacity – up to 9 m wc
- Direction of rotation and flow can be reversed
- Can be installed in any position
- Quiet, smooth running
- Temperatures from - 20 °C to + 160 °C

Design of the NEMO® Pump

1

Rotor

From wear- and corrosion-resistant metal designs to the wear-free ceramic rotor NEMO CERATEC®.

2

Stator

We manufacture stators to the latest standards. Minimised tolerance ranges thereby optimise the performance of the pump. Our unique, fully networked production and process data monitoring system, developed in-house, is backed up by consistent quality testing.

2.1

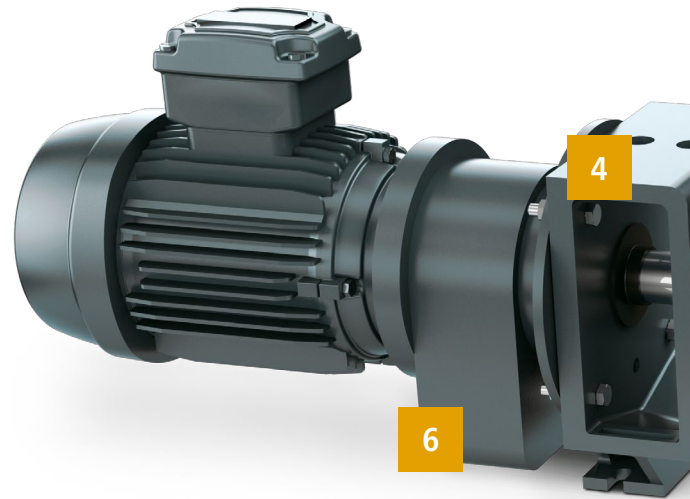
Stator with conventional technology

The stator inlet is vulcanised into the tubes with integrated seals on both ends. The inlets are available in a wide variety of NEMOLAST® elastomers, plastics and metals. Stator inlet with cone-shaped opening to improve product feeding into the conveying chamber.

2.2

Stator with iFD technology

The iFD-Stator® consists of a two-part reusable housing with a polygonal profile and the NEMOLAST® elastomer housed within. The advantages of this technology include a lower breakaway torque, higher efficiency, increased service life, simple and quick replacement, and environmentally friendly disposal.



3

Drive train

The drive and connecting shaft with coupling rod and two gimbal joints provide the power transmission from the drive to the rotor. Alternatively, also available with a flexible coupling rod without joint.

4

Shaft sealing

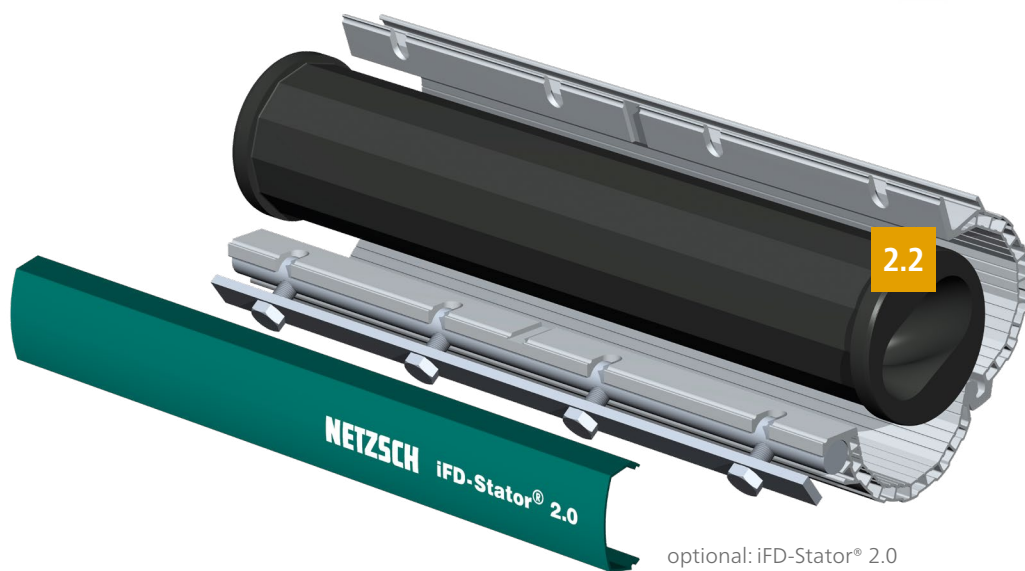
Standard design with single-acting, wear-resistant, bi-directional mechanical seals. On request, single-/ double-acting mechanical seals from a range of manufacturers, as well as cartridge and special seals and stuffing-box packing.

5

Suction and pressure housing

Hydrodynamic design with flange or thread connections in accordance with DIN and international standards. Grey cast iron, stainless steel, rubber-lined or Halar®-coated, and special materials as per requirements.

Halar® is a registered trademark of Solvay Solexis



6

Block design

As the drive is directly flanged onto the pump's lantern, the dimensions are compact, the overall weight is low, the shaft heights are constant irrespective of the design and size of the drive – the pump requires low maintenance and is economical.

„Full Service in Place“

PUMP SERVICE WITHOUT REMOVING THE PUMP FROM THE SYSTEM

The NEMO® Progressing Cavity Pump in FSIP® design is available...

- in the sizes NM 045 to NM 125 for flow rates from 2 to 250 m³/h
- for differential pressures from 6 bar (1 stage) up to 12 bar (2 stages)
- in various materials: grey cast iron and stainless steel
- with various stator elastomers, from highly abrasion-resistant to oil-, acid-, and alkali-resistant elastomers
- in all 4 geometries, S, L, D, and P to be customized optimally to your application

...and conveys

- thin to viscous fluids, with or without solid content.



1

Housing in FSIP® design with inspection cover

The FSIP® design of the suction housing mainly differs from the standard design when you look at the large inspection cover, but the housing dimensions remain unchanged. All installed NEMO® BY/SY pumps in the sizes mentioned above can be upgraded without any problem. After this upgrade you can fully service the pump while it is installed. All wetted parts are immediately accessible. All wearing parts can be replaced in less than half the time.

2

Inspection cover

The inspection cover is fixed by only a few screws which can be easily removed without special tools.

3

Stator with iFD® technology

The stator consists of a reusable housing with a polygonal profile and the elastomer inserted into it. The benefits of the technology are reduced starting torques, higher degree of efficiency, prolonged lifetime, easier and faster change of the wear part and environmentally friendly disposal. In combination with the housing in FSIP® design there is the additional benefit that the rotor/stator can be changed simply and quickly outside the pump and without pre-tensioning, once the stator housing has been opened. The rotating unit can simply be lifted out and leaves the pump open from flange to flange. The previously mandatory stator expansion length is no longer required, which significantly reduces the installation space needed.



4

Rotor

In wear- and corrosion-resistant designs, various materials on request.

5

5a

Drive train and sleeve coupling

Removing the inspection cover from the FSIP® pump gives you access to a sleeve coupling which joins the rotor to the coupling rod. Here only one screw has to be removed to split both elements from each other.

6

Shaft sealing

Standard for the FSIP® concept is a single-acting, non-directional and wear-resistant mechanical seal, which can be easily removed through the large inspection opening. Other options upon request.

7

xLC® stator adjustment unit

The xLC® unit is attached to the flange of the elastomer part of the stator and can compress or stretch it. In the event of wear, axial compression of the elastomer increases the preload between the rotor and stator, thereby compensating for the wear.

NEMO® Industrial Pumps

NEMO® progressing cavity pumps are used in all sectors of industries to convey almost all types of media continuously, smoothly, with low pulsation and dosing in proportion to speed.



in block design



Performance

Flow rates up to 400 m³/h

Pressures up to 24 bar

Fields of application

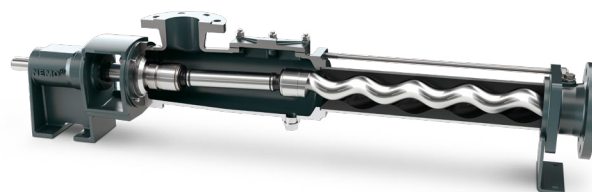
Industrial applications in environmental technology and in the food, oil and chemical industries for fluid to viscous media with and without solids.

Features

Compact design with directly flanged drive. It is characterised by low investment, operating and maintenance costs. Four rotor/stator geometries for optimum performance with every kind of application.



with bearing housing and drive shaft



Performance

Flow rates up to 500 m³/h

Pressures up to 48 bar (standard) or up to 240 bar (special applications)

Fields of application

Industrial applications in environmental technology and in the food, oil and chemical industries for fluid to viscous media with and without solids.

Features

Design with bearing housing and two-part shaft allows all types of drives to be used universally and makes servicing the rotating parts simple and fast. Four rotor/stator geometries for optimum performance with every kind of application.

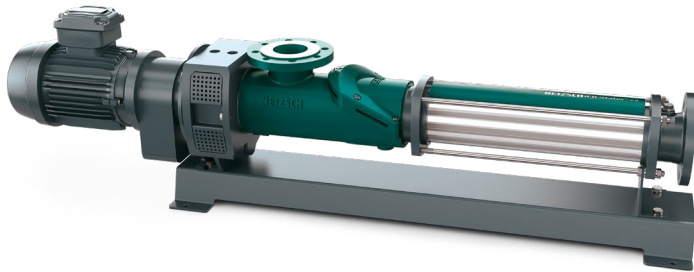


NEMO® Progressing Cavity Pump in FSIP® design

FSIP.ready, FSIP.advanced and FSIP.pro

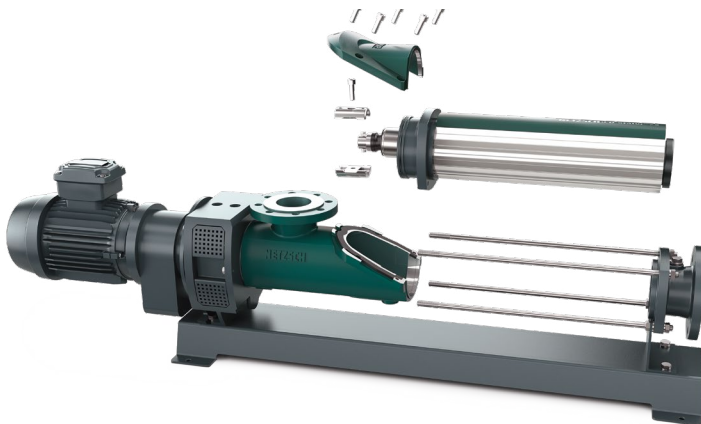
Technique

The FSIP® design is fully compatible to the existing BY and SY series. The concept consists of three stages, which are designed to upgrade already installed pumps step by step, or which are available for new installations according to the individual needs of our customers.



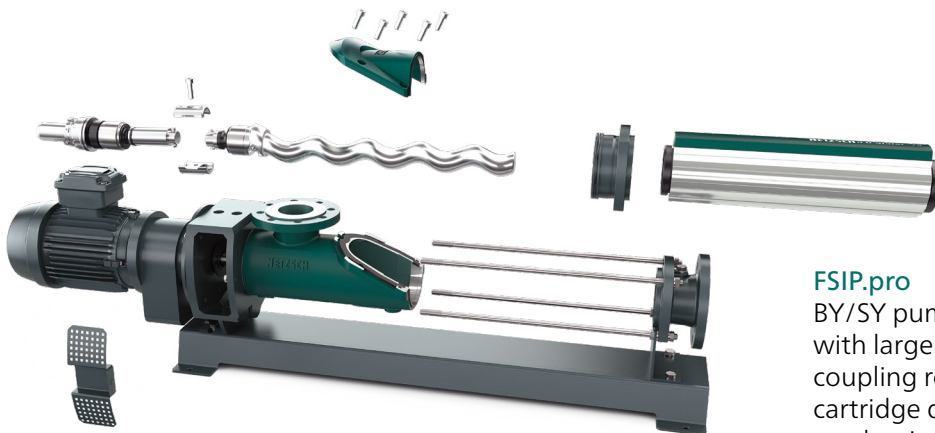
FSIP.ready

Basic BY/SY pump including revised housing design with large inspection cover, with standard drive train and various seal arrangements.



FSIP.advanced

BY/SY pump with housing design with large inspection cover, split coupling rod and various seal arrangements. Rotor and stator can be serviced in place.



FSIP.pro

BY/SY pump with housing design with large inspection cover, split coupling rod and 2 joints in cartridge design and single acting mechanical seal for „Full Service in Place“.



in block design

Performance

Flow rates up to 30 m³/h

Pressures up to 24 bar

Fields of application

In areas where products are difficult to seal, typically requiring double-acting mechanical seals and pressurised barrier systems.

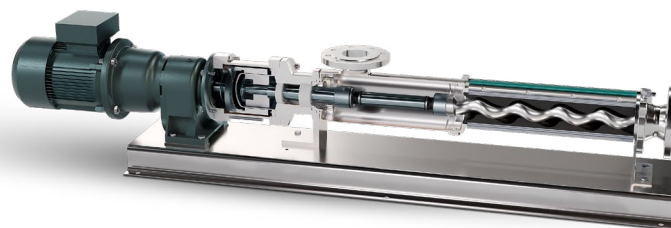
These include, for example, applications in which TA-Luft (Technical Instructions on Air Quality Control) or other environmental protection measures are required.

Suitable for sludges as well as abrasive and toxic media.

Features

Compact design with directly flange-mounted drive. Hermetically sealed pump eliminates maintenance requirements for mechanical seals.

Available with flexible coupling rod and B or K joint.



The Magnetic Coupling of NEMO® MY

The magnetic coupling ensures a hermetically sealed pump, guaranteeing no air enters the medium. The magnetic coupling also prevents potentially toxic gases from escaping, which increases system safety and eliminates the need for additional air extraction in the area of the pump seal.



Mini dosing pump in plastic design

Performance

Flow rates from 0.5 up to 1,500 l/h

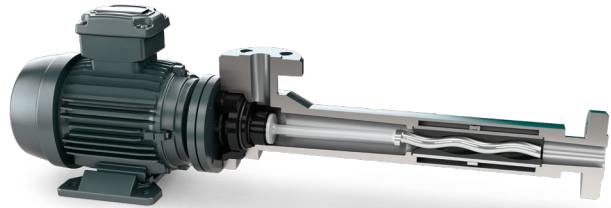
Pressures up to 20 bar

Fields of application

Industrial applications in environmental and chemical technology to convey and dose low- to moderately viscous media with and without solids.

Features

High dosing accuracy (deviation of < 1%). Compact design with directly flanged drive.



NEMO® Hygienic Pumps

The pumps are designed and manufactured in accordance with hygienic guidelines, are CIP/SIP-capable and are also available in 3-A Sanitary Standard. Two rotor/stator geometries are available to ensure optimum performance.

These pumps are suited for hygienic applications in the foodstuff, pharmaceutical, cosmetic and biotechnology industries for low and highly viscous media with and without solids.



Hygienic pump

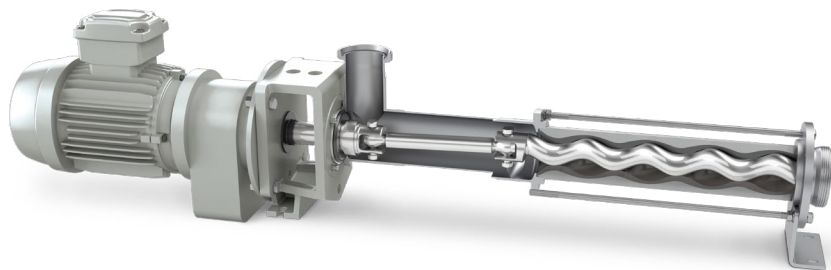
Performance

Flow rates up to 120 m³/h

Pressures up to 24 bar

Features

Compact design with directly flanged drive. It is characterised by low investment, operating and maintenance costs.





Hygienic Pump with Heating Jacket

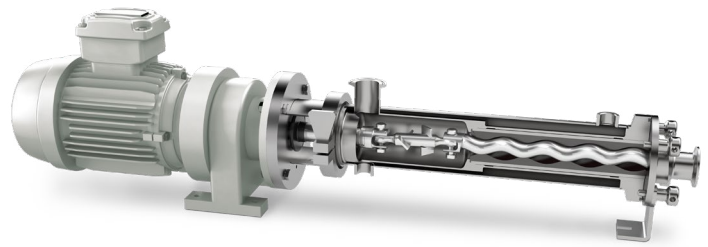
Performance

Flow rates up to 40 m³/h

Pressures up to 12 bar

Features

This pump is suitable for viscous media which have to be heated or cooled. The pump offers impressive process and operational reliability: dead-space-free mechanical seals, a heated housing and stator and gentle pumping ensure simple, process-appropriate cleaning. It can also be taken apart easily for maintenance thanks to quick-fit connections. It is available with various rotor/stator geometries and has open hygienic pin joints, exposed housing seals, mixing elements on the coupling rod and a heating jacket over the entire length of the stator and pump housing. All surfaces that come into contact with the product are polished. This prevents formation of medium deposits and facilitates cleaning.



Hygienic Pump

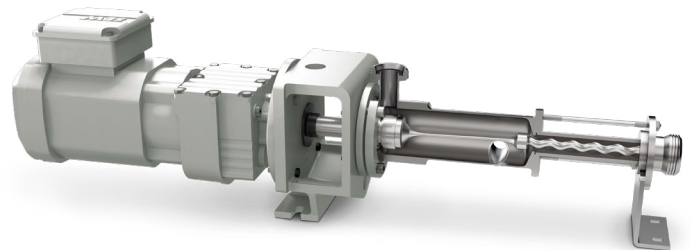
Performance

Flow rates from 0.1 up to 500 l/h

Pressures up to 36 bar

Features

The flexible rod is free of dead space and is wear- and maintenance-free so that it can be used even with highly sensitive and abrasive thin- to viscous products with or without solids. High dosing accuracy (deviation of < 1%). Compact design with directly flanged drive for low investment, operating and maintenance costs.



NEMO® SH PLUS

Hygienic Pump With Bearing Housing



Performance

Flow rates up to 120 m³/h

Pressures up to 24 bar

Features

The design, featuring a bearing housing and a free shaft, allows for the universal use of all types of drive systems. The progressing cavity pump is particularly suited for shear-sensitive, low- to high-viscosity, lubricating, non-lubricating, solids-containing, solids-free, thixotropic, dilatant, abrasive or adhesive media.

NEMO® SA

Aseptic Pump With Bearing Housing



Performance

Flow rates up to 120 m³/h

Pressures up to 24 bar

Features

The dead-space-free NEMO® SA aseptic pump enables gentle, low-pulsation conveying and precise dosing of hygienic and aseptic media. Thanks to its CIP/SIP cleanability and steam-sealed sealing points, it operates safely and without contamination. Its progressing cavity technology reliably handles a wide range of sensitive, viscous or solid-containing products. The bearing housing design with a free shaft end allows for the flexible use of various drives.

NEMO® Hopper Pumps

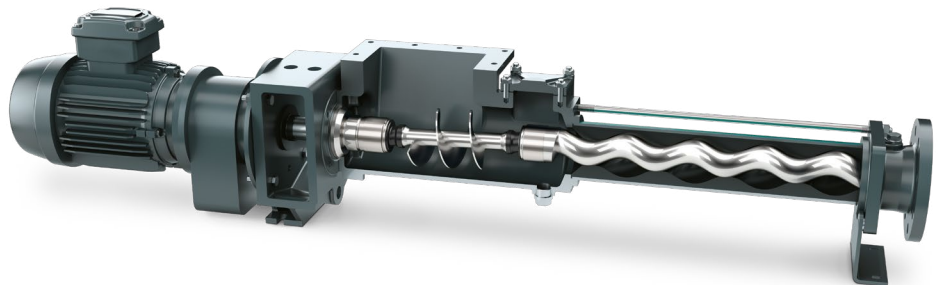
We provide you NEMO® progressing cavity pumps in diverse designs and materials, designed according to the location of use. Low viscosity and also abrasive sludge is reliably conveyed using our pumps with flanged connections.

For media with a high dry material content, such as de-watered sludge, different designs of the NEMO® hopper pumps* with screw conveyors or with aBP-Module® to prevent bridging are available.

* Technical notes: the hopper dimensions can be adjusted to suit the specific application.

NEMO® BO/BS

in block design with directly flanged drive or as NEMO® SO/SS with bearing housing and drive shaft



Performance

Flow rates up to 200 m³/h
Pressures up to 24 bar

Fields of application

Industrial applications in environmental technology, the food industry and the chemical industry for viscous to non-free flowing media with and without solids.

Features

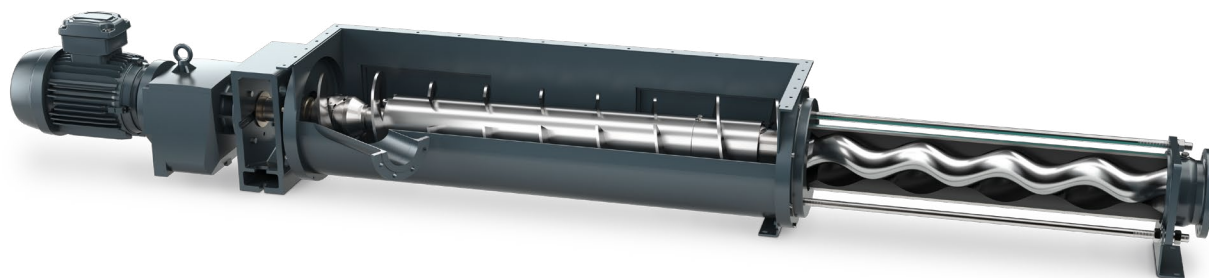
Housing with rectangular/quadratic feed hopper and coupling rod with conveying screw with compression chamber for improved product feeding into the conveying elements.



NEMO® B.Max

NEMO® B.Max

in block design with directly flanged drive or
with bearing housing and drive shaft



Performance

Flow rates up to 70 m³/h

Pressures up to 48 bar

Fields of application

Industrial applications in biogas and environmental technology for
viscous to non-free flowing media with and without solids.

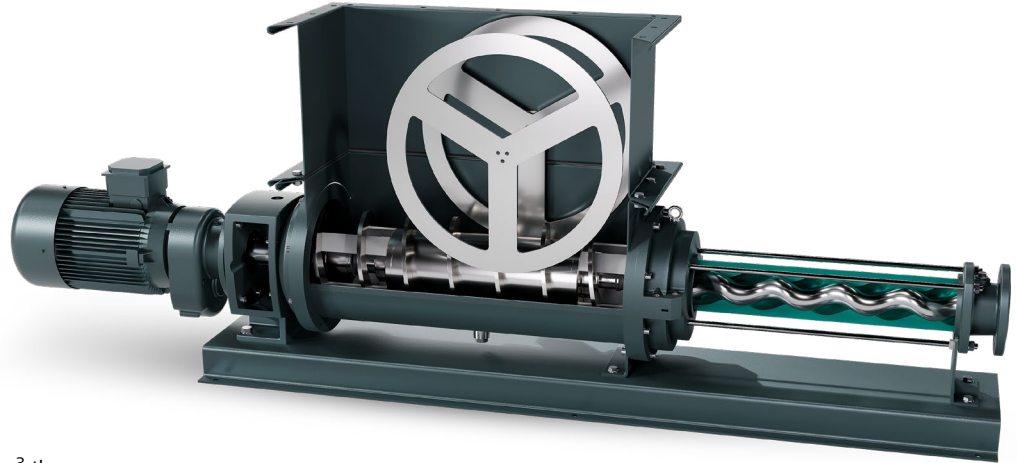
Features

Housing with large, rectangular feed hopper, coupling rod with
conveying screw for optimum product feeding into the conveying
elements. The additional, hydrodynamically designed flushing stud
installed on the hopper housing ensures the substrates are fed and mixed
optimally into the biomass.



NEMO® BF optional with aBP-Module®

in block design with directly flanged drive or NEMO® SF with bearing housing and drive shaft



Performance

Flow rates up to 200 m³/h

Pressures up to 48 bar

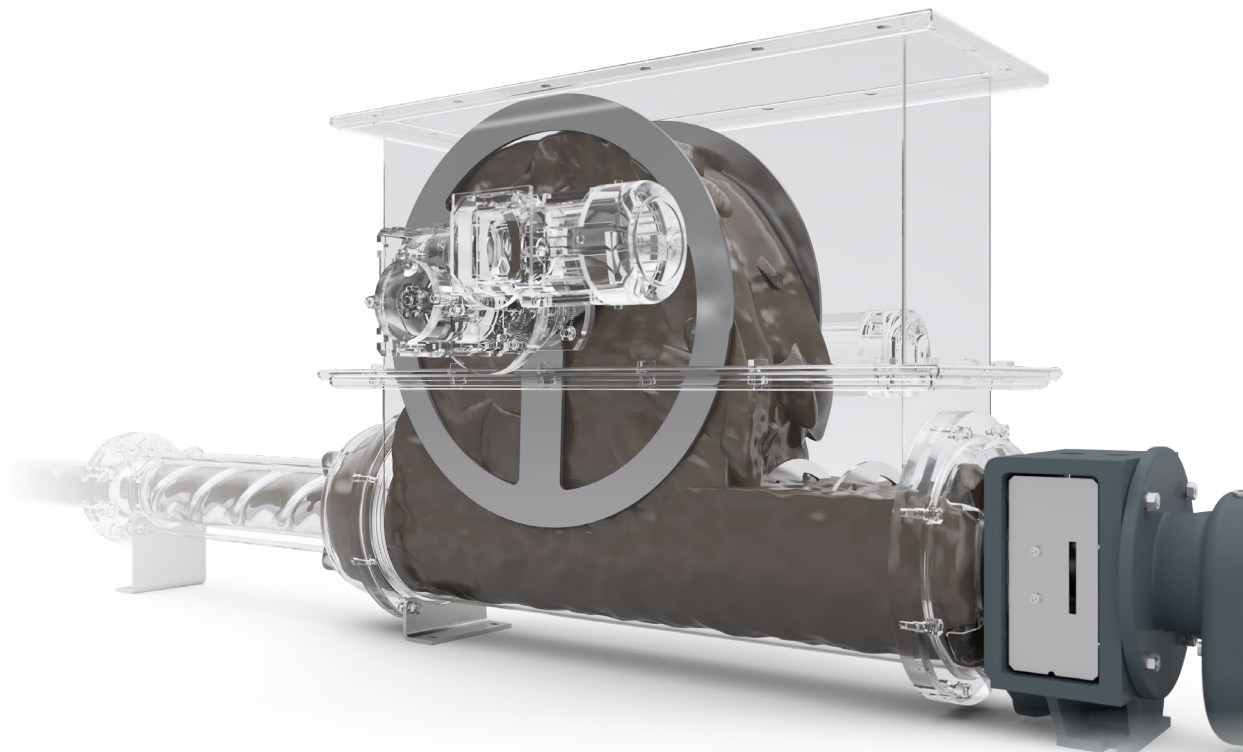
NEMO® BF/SF with aBP-Module® available from size NM045 to NM105.

Fields of application

Industrial applications in environmental technology, the food industry and the chemical industry for highly viscous, compacted and crumbly media. For media that tend to bridge, the pump is fitted with the optional aBP-Module®.

Features

Housing with enlarged, rectangular feed hopper and with removable, cone-shaped compression chamber, coupling rod with horizontally positioned conveying screw for optimum product feeding into the conveying elements.



NEMO® Immersible Pumps

NEMO® Immersible Pumps are used to empty barrels, containers, tanks, sedimentation tanks, pits etc., where space is restricted, there is a risk of cavitation or very low NPSH. The pumps are also used to empty containers holding materials that are hazardous to water or the environment.

NEMO® Immersible Pump BT

with mounting flange

The pump is used in closed shafts, tanks and containers and is secured using the mounting flange. Depending on the pump size, speed and immersion depth, an additional guide element is provided to secure the pump to the floor or wall. The pump can be removed even when the container is full, as the pump centres and locks itself within the guide element.

Performance

Flow rates up to 310 m³/h

Pressures up to 24 bar

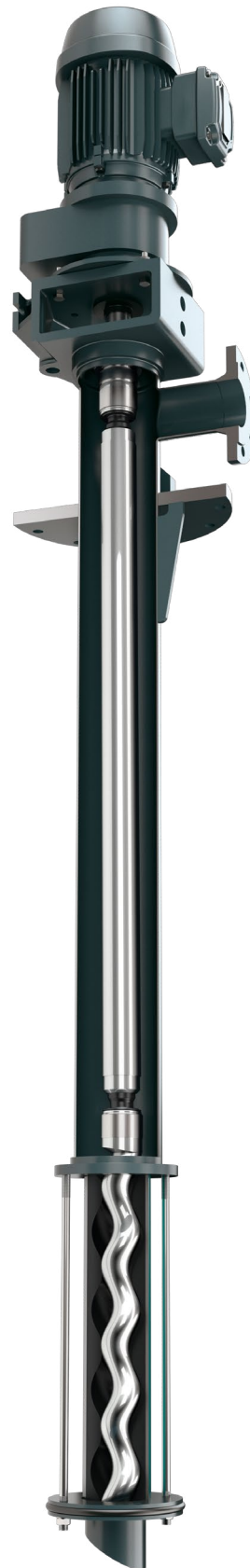
Depending on the specific application, various models/immersion variants are available. The immersion depth is adapted specifically to the application.

Features

Compact design with directly flanged drive. Four rotor/stator geometries for optimum performance with every kind of application.

Immersion depths up to 10 m.

The immersion tube length can be modified by extending the pump housing, adding a suction pipe or by a combination of the two.



Operating method and conveying principle in NEMO® Pumps with different rotor/stator geometries

Modular system

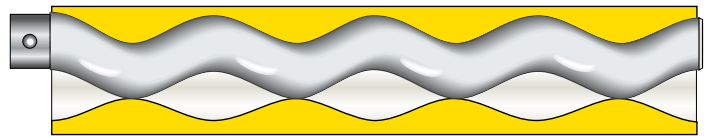
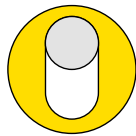
NEMO® Pumps belong to the group of rotary positive displacement pumps. The two conveying elements are the rotor and the fixed stator, in which the rotor eccentrically turns.

As the pumps all have the same external dimensions and identical connections on the suction and discharge sides across all four configurations, this results in a modular system. Therefore, for NEMO® pumps that are already installed, subsequent changes to flow rate or pressure can be adapted to the new operating conditions simply by replacing the rotor and stator.



S Geometry

- Very smooth conveying
- Compact dimensions despite large number of stages
- Large rotor inlet cross-sections
- Low flow velocity/NPSH
- Conveys crumbly products
- Pumps large solid particles



- 1/2 lobe
- Double stage
- Flow rate: 100%
- Differential pressure: 12 bar

L Geometry

- Good volumetric efficiency/long service life thanks to long seal line between rotor and stator
- Compact dimensions with high flow rates



- 1/2 lobe
- Single stage
- Flow rate: 200%
- Differential pressure: 6 bar

D Geometry

- Very compact dimensions despite high pressures and flow rates
- Almost pulsation-free pumping
- High dosing accuracy



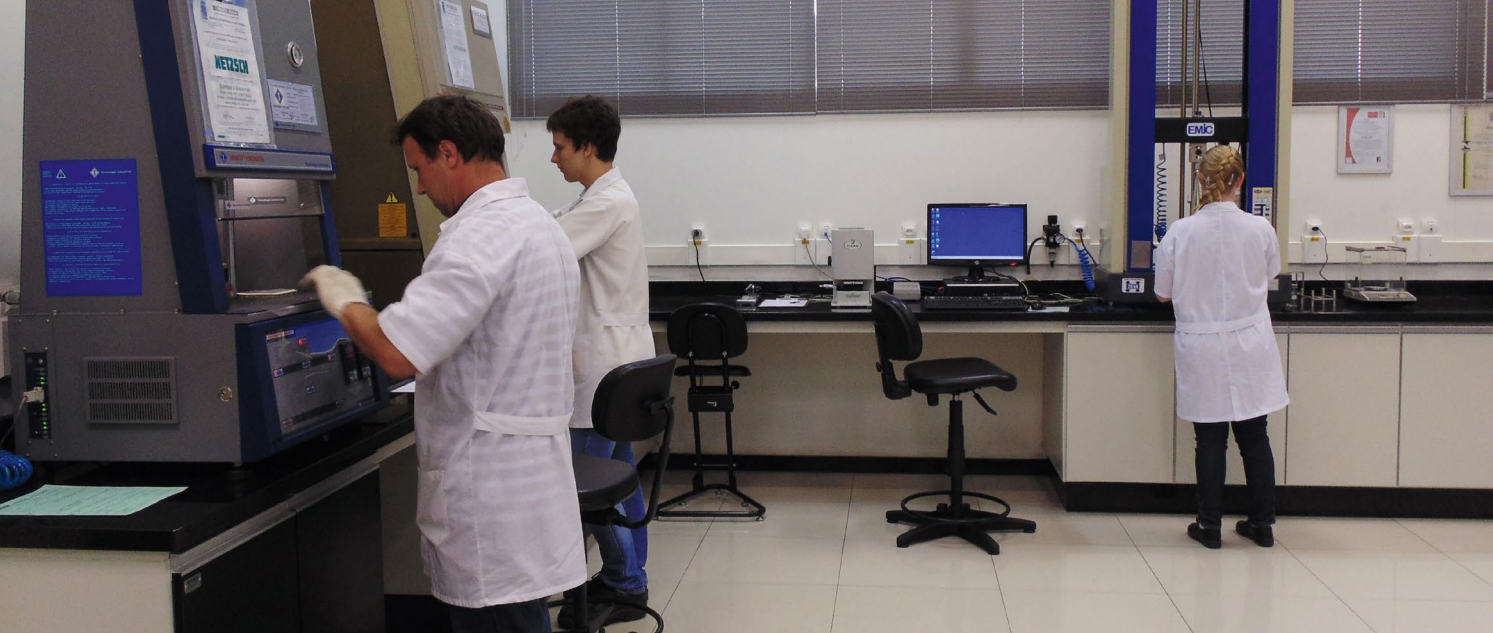
- 2/3 lobe
- Double stage
- Flow rate: 150%
- Differential pressure: 9 bar

P Geometry

- Compact dimensions in conjunction with very high flow rates
- Almost pulsation-free pumping
- High dosing accuracy
- Good volumetric efficiency/long service life thanks to long seal line between rotor and stator



- 2/3 lobe
- Single stage
- Flow rate: 300%
- Differential pressure: 5 bar



Testing properties and quality

NEMOLAST® & NEMOSOL®

ELASTOMERS AND THERMOPLASTICS DEVELOPED,
CONTINUOUSLY TESTED AND OPTIMISED AT NETZSCH

NEMOLAST®

Elastomer research & development is in-house at NETZSCH. At its in-house laboratory and in close collaboration with selected materials suppliers established over many years, NETZSCH develops and tests elastomer compounds and optimises them for the specific requirements of customers.

We therefore offer each customer the optimum quality of elastomer for the media to be conveyed in terms of abrasion resistance, temperature range, dynamic load and chemical resistance – a quality that cannot be matched by other suppliers. Only using original NETZSCH spare parts guarantees our pumps remain reliable.

70 years of experience in a wide range of industries and processes and 40 years of experience developing and manufacturing elastomers for NEMO® pumps form the foundation of our business and are essential for the further development of all our components for the various types of positive displacement pumps.

Consequently, more and more (fibre) composite materials are being used today to continuously improve the performance of the pumps and further extend the service life of the components.

To meet the constantly growing demand for our pumps and the associated need for spare parts, NETZSCH invested in a new 4000 m² production hall in Waldkraiburg to produce elastomer parts using production methods and the latest product standards. Alongside five extruder sets to manufacture conventional tube stators, injection moulding machines and presses were also acquired to manufacture iFD-stators, lobes and housing liners for rotary lobe pumps.

NEMOSOL®

The demands placed on the chemical resistance of materials are constantly increasing, particularly in industries where aggressive media are pumped. The focus is not only on traditional elastomer research and development, but also on innovative technologies and materials in the field of positive displacement pump technology, such as the use of thermoplastic materials, which can be processed on the company's own 3D printing system, amongst other methods. This enables the precise and flexible manufacture of complex components.

A particular focus is on the reduction of PFAS and the development of environmentally friendly alternatives with high chemical resistance. As a result, NETZSCH products meet current environmental and regulatory requirements whilst simultaneously opening up new applications without compromising on performance.

For NEMO® progressing cavity pumps, the focus is also on low starting torques and high pressure stability. By expanding its proven NEMOLAST® elastomers to include the high-performance NEMOSOL® material range, NETZSCH ensures efficient, reliable operation – even under demanding process conditions.

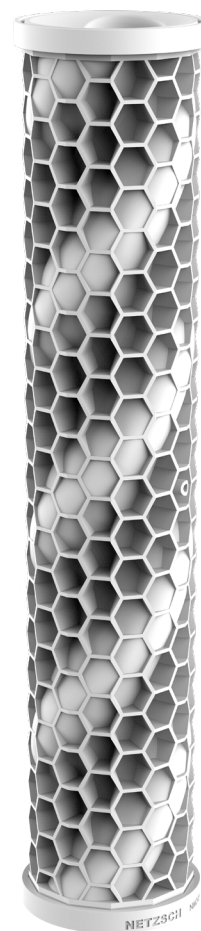
With in-house development, state-of-the-art manufacturing and a consistently sustainable materials strategy, NETZSCH offers tailor-made pump solutions that convincingly combine performance, process reliability and environmental responsibility.

Specific requirements in oil production and transfer

In addition to surface pumps, NETZSCH supplies submersible pumps that are installed in boreholes at depths of up to 2,000 metres and are primarily used for crude oil production. It is particularly under these challenging operating conditions that NETZSCH stators stand out for their exceptionally long service life, leading to a significant reduction in operating costs. Both for elastomer development as well as for optimal material selection the specific bore hole and fluid conditions have to be considered.

NETZSCH pumps are used as multiphase pumps, which means that gas-oil-water mixtures and various solids are conveyed simultaneously or alternately.

Therefore, we have developed special elastomer mixtures for conveying these phases in changing and variable concentrations. Additional challenges to the material are the fluctuating and sometimes very high temperatures and the high differential pressure up to 300 bar between the suction and pressure side. Very aggressive gases (such as H₂S and CO₂) or oils (with high aromatic content) can also be present.



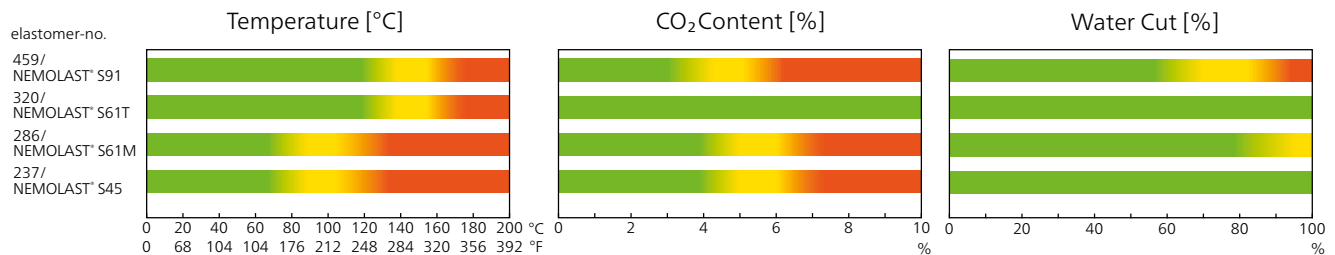
NEMOSOL® stator from NETZSCH.

	NEMOLAST® – stator qualities for industrial applications					
Material description/ NEMOLAST® Code	11	31	44	41* ¹⁾	91	495* ²⁾
Colour	black	black	white	black	black	black
Base polymer	Natural rubber/ butadiene rubber (NR/BR)	Chlorinated polyethylene (CM)	Ethylene propylene diene rubber (EPDM)	Ethylene propylene diene rubber (EPDM)	Fluorine rubber (FKM FPM)	Perfluoroelas- tomer (FFKM FFPM)
Ageing resistance	Good	Very good	Good	Very good	Very good	Very good
Ozone resistance	Low	Very good	Very good	Very good	Very good	Very good
Petrol resistance	Insufficient	Insufficient	Insufficient	Insufficient	Very good	Very good
Oil and fat resistance	Insufficient	Insufficient	Insufficient	Insufficient	Very good	Very good
Acid resistance	Medium	Very good	Good	Very good	Very good	Very good
Alkali resistance	Medium	Very good	Good	Good	Very good	Very good
Hot water	Medium	Good	Good	Very good	Very good	Very good
Min. operating temperature in °C	-40	-20	-20	-30	-5	0
Max. operating temperature in °C	+90	+110	+100	+130	+200	+200
Abrasion resistance	Very good	Good	Medium	Medium	Good	Medium
Hardness range (shore)	64 ± 5	73 ± 5	71 ± 5	70 ± 5	73 ± 5	70 ± 5
FDA	No	No	No	Yes	No	No
Nitrosamine-free	No	Yes	Yes	Yes	Yes	Yes

Abrasion resistance:

< 50 mm³: Very good | >50 mm³ <125 mm³: Good | >125 mm³ <200 mm³: Medium | > 200 mm³: Insufficient

NEMOLAST® stator qualities for oil production and transfer

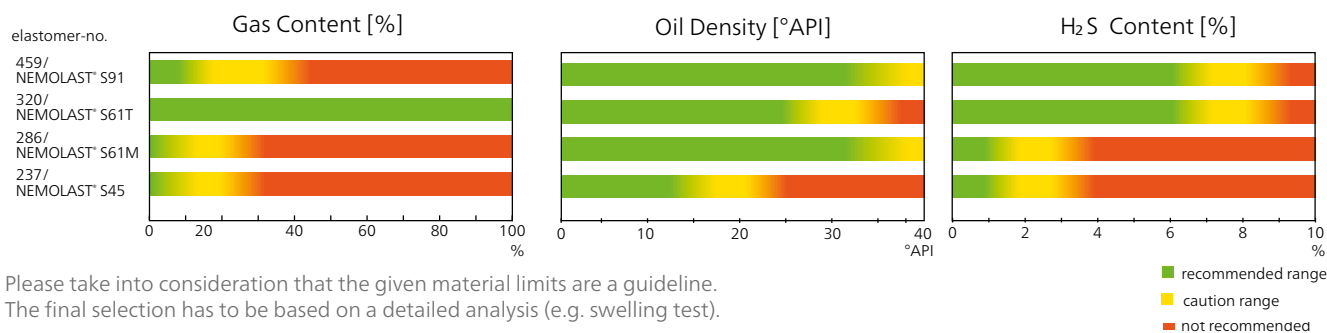


Feature	NEMOLAST®		
	459	332	299
Colour	black	black	black
Base polymer	Fluorine rubber (FKM FPM)	Hydrogenated nitrile butadiene rubber (HNBR)	Acrylonitrile butadiene

						NEMOSOL		
61T	62L*2)	66L	85	05G	74	25	12	22
black	black	black	opak	black	white	white	white	white
Hydrogenated acrylonitrile butadiene rubber (HNBR)	Acrylonitrile butadiene rubber (NBR)	Acrylonitrile butadiene rubber (NBR)	Silicone rubber (SI)	Chlorobutyl rubber (CIIR)	Polyether urethane rubber (EU)	Polytetrafluoroethylene (PTFE) + 25 % Fibre glass percentage	Polyamide 12 (PA)	Polypropylene (PP)
Very good	Very good	Very good	Good	Very good	Good	Very good	Medium	Medium
Very good	Good	Good	Good	Very good	Good	Very good	Medium	Medium
Good	Good	Good	Insufficient	Insufficient	Insufficient	Very good	Very good	Very good
Very good	Very good	Very good	Good	Insufficient	Medium	Very good	Very good	Very good
Good	Good	Good	Insufficient	Good	Medium	Very good	Medium	Good
Good	Good	Good	Good	Good	Very good	Very good	Good	Good
Very good	Good	Good	Good	Very good	Good	Very good	Very good	Very good
-5	-10	-20	-60	-30	-20	-100	-40	-20
+130	+100	+100	+150	+80	+80	+250	+100	+200
Very good	Good	Good	Very good	Medium	Very good	Very good	Very good	Medium
73 ± 5	73 ± 5	68 ± 5	65 ± 5	65 ± 5	82 ± 5	75 (Shore D)	65 (Shore D)	65 (Shore D)
No	No	Yes	Yes	Yes	Yes	Yes	Yes	–
Yes	Yes	Yes	Yes	Yes	Yes	–	–	–

*1) only for rotary lobe pumps

*2) only for dosing pumps



	286	261	237
	black	black	black
rubber (NBR)	Acrylonitrile butadiene rubber (NBR)	Acrylonitrile butadiene rubber (NBR)	Acrylonitrile butadiene rubber (NBR)

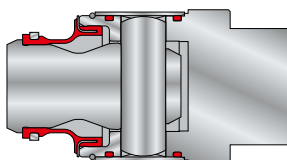
The right NEMO® joint

FOR EVERY APPLICATION

Having the right joint in your NEMO® pump has a decisive impact on operational reliability and life-cycle costs. The optimum joint is selected on the basis of the application, the operating conditions and the conveyed media. To achieve the optimum performance of a NEMO® pump, joints at NETZSCH are also further developed and adapted to the individual conditions.

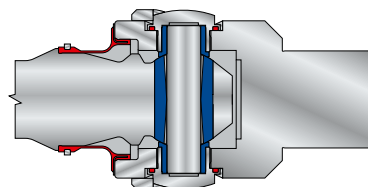
B Universal Pin Joint

The NEMO® universal pin joint is the standard joint for NEMO® industrial pumps thanks to its simple design and outstanding degree of reliability. The joint has a very long service life, as it is oil-filled and sealed using a NEMO® SM seal. The joint can also be used without a seal at extremely high temperatures and flow rates where elastomers are not suitable. The joint just has a small number of components and can therefore be easily dismantled for maintenance.



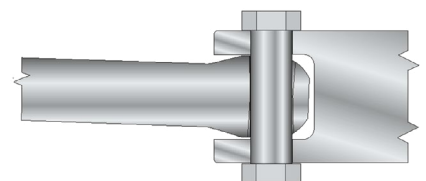
V Pin Joint

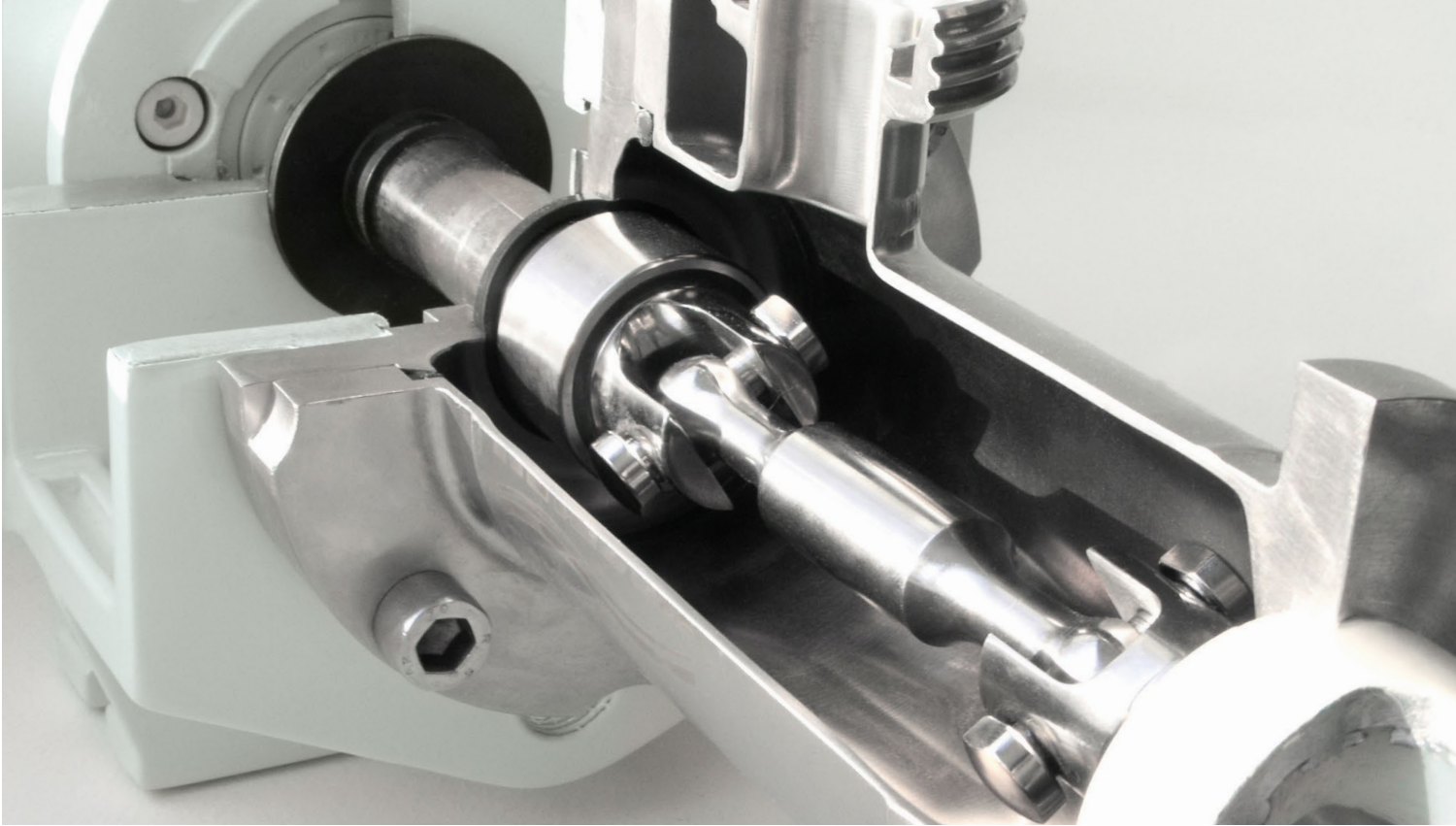
The NEMO® V pin joint functions in the same way as the B pin joint, but has a longer service life under tough operating conditions thanks to hardened bushings, which are fitted into boreholes in the coupling rod and the rotor/drive shaft head and can be replaced easily during maintenance.



H Hygienic Pin Joint

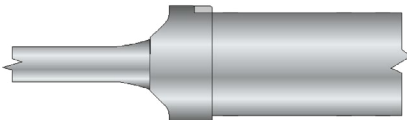
This open, hygienic pin joint has been developed specifically for use in NEMO® hygienic pumps. The joint has no crevices or dead space and is polished therefore, it is easy to clean. Also available in 3-A Sanitary Standard.





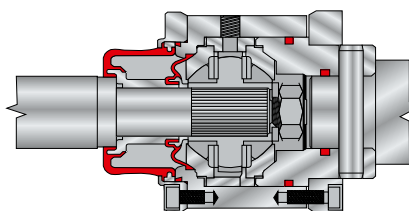
F Flexible Rod

This flexible rod is wear- and maintenance-free, because no parts move against each other as in other joint types. It also does not require lubricants or seals, meaning it can be used at extremely high ambient pressures and temperatures. As it is free of crevices and dead space, the flexible rod is also used to convey highly sensitive products in aseptic conditions. The flexible rod meets the requirements of the 3-A Sanitary Standards.



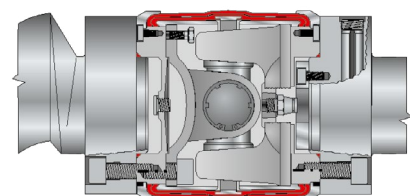
K Joint

The K joint was designed for highly demanding industrial applications. It is kinematically designed so that the torque and axial loads are shared by separate elements within the joint. The joint is oil lubricated and sealed hermetically by two joint seals that are resistant to/compatible with the lubricant and the pumped product. Filling the space between the two joint seals additionally with oil means that the joint can be used at ambient pressures of up to 12 bar.



Z Double Seal Pivot Joint

For large flows and/or pressures (from bearing block size NM125SY upward), NEMO® industrial pumps are equipped with kinematic precision cartridge type double seal pivot joints, which have been designed with extremely high permanent loads, torques and axial forces in mind. The joint is oil lubricated and sealed hermetically by two joint seals that are resistant to/compatible with the lubricant and the pumped product.





From A to Z

ACCESSORIES & SERVICE

Accessories to increase the operational safety of both pump and plant to prevent downtimes

Process monitoring

Dry running protectors safeguard elastomer parts of the pump against thermal damage and protect the pump.

- Dry running protection
- Flow sensors for solid stators
- Speed monitoring device

Overpressure and underpressure protectors safeguard the pump and protect downstream aggregates and valves against overpressure and underpressure.

- Diaphragm Pressure Gauge
- Diaphragm Pressure Gauge with Flanged Connection
- Multi-function pressure instrument
- By-pass line

Seal Support Systems

Additional flushing, quench or pressurised flushing systems that flush or close the seals with clean medium are often required to ensure shaft seals function correctly and reliably.

- Quench pot
- Permanent lubricator
- Pressure-sealing system or thermosiphon systems for double-acting mechanical seals

Protection Units and Trolleys

In all areas of production within the food, pharmaceutical and cosmetic industries, a range of optional parts are available to ensure uncompromising hygiene and to enable mobile use.

- Covers for drives
- Transport devices
- Machine feet: flexible, rigid

Tools and additional equipment

A large number of useful equipment is available to correctly maintain and smoothly operate your pumps.

- Gear joint filling unit
- Ring dosing nozzle
- Chemical anchor for securing pump baseplates to the ground
- Stator removal tool



Service and Support

FOR US, PARTNERSHIP DOES NOT END WITH THE PURCHASE.

We know no limits when it comes to offering our customers first rate service. Our promise is to deliver Proven Excellence – outstanding performance in all areas.



Unlimited personal support

Our experienced employees provide support and advice worldwide and around the clock, always tailored to your specific requirements. With our global network of service locations and warehouses, we guarantee prompt and efficient support, including on site and in person, so your pumps can always run smoothly.



Spare parts

NETZSCH original spare parts stand for the highest manufacturing quality. We ensure reliable quality through worldwide implementation of uniform standards as per DIN EN ISO 9001. This enables reliable operation of your pumps with little downtime and low maintenance costs, and therefore continued optimum performance.



Technical training

The specialists from our Technical Service provide practical training for your employees at the NETZSCH training centres, online or at your facility. This allows you to benefit from cost savings and increased pump efficiency and to avoid mistakes during commissioning, maintenance or repairs.

More information on our service and support can be found here:



The owner-managed NETZSCH Group is a leading global technology company specializing in mechanical, plant and instrument engineering.

Under the management of Erich NETZSCH B.V. & Co. Holding KG, the company consists of the three business units Analyzing & Testing, Grinding & Dispersing and Pumps & Systems, which are geared towards specific industries and products. A worldwide sales and service network has guaranteed customer proximity and competent service since 1873.

The NETZSCH Business Unit Pumps & Systems offers NEMO® progressing cavity pumps, TORNADO® rotary lobe pumps, NOTOS® multi screw pumps, PERIPRO® peristaltic pumps, macerators/grinders, dosing technology and equipment that are custom built for challenging solutions for different applications globally.

Proven Excellence.■

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