

NETZSCH

Proven Excellence.



Environmental & Energy

Processes, Markets and Applications

Pumps & Systems

EXPERTISE CREATES TRUST

Intelligent solutions for a clean environment

Environmental protection, water management, energy technology – the challenge of these topics lies not only in the development of modern technology in order to serve the market in these areas, but also in the development of the necessary expertise how to produce responsibly dealing with raw materials, climate and environment. We are prepared for these versatile tasks.

The Businessfield Environmental & Energy serves the following industries:

- Agriculture
- Cleaning waste water
- Construction industry
- Electroplating
- Marine equipment
- Renewable energies
- Purification of water and drinking water
- and much more

What we offer

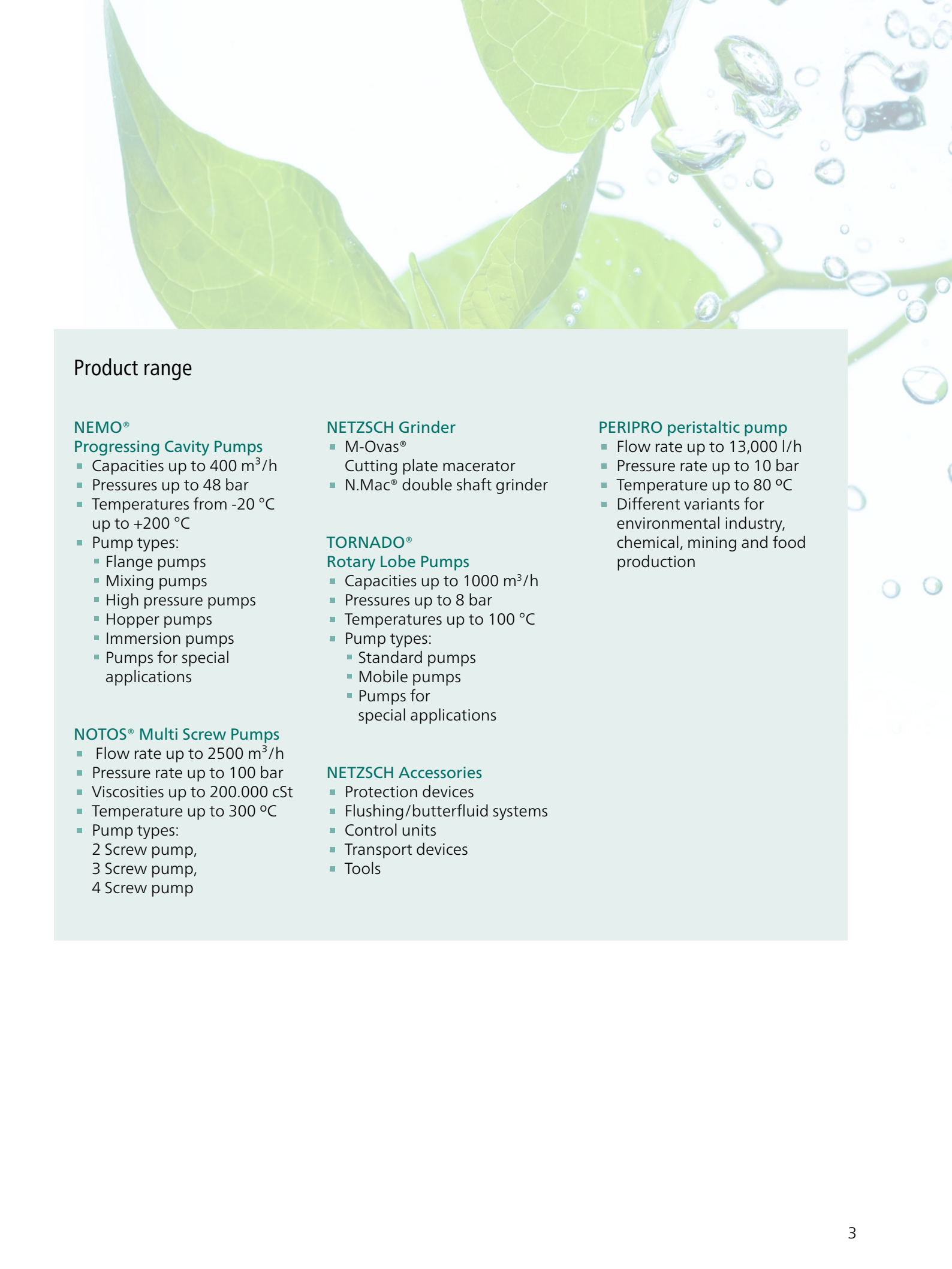
In the business field "Environment & Energy" we provide positive displacement pumps as conveying systems for all media in environmental technology. Due to their regulating characteristics, these pumps ensure a safe, reliable and efficient process. Here we differentiate between the NEMO® progressing cavity pumps, TORNADO® rotary lobe pumps, NOTOS® multi screw pump and PERIPRO peristaltic pump.

Why you succeed with us

The technically best pump is selected for the respective application. You benefit from reliable pumps and systems optimally tuned to your application and matched to the market. Our NEMO® and TORNADO® pumps are supplemented by grinding systems and accessories.

Who we are

NETZSCH Pumps & Systems is a family-run, medium-sized company headquartered in Waldkraiburg, founded in 1952. It employs more than 2,000 employees at five development and production sites and at 30 distribution companies, one partner and more than 200 NETZSCH representatives. NETZSCH is always close to you.



Product range

NEMO®

Progressing Cavity Pumps

- Capacities up to 400 m³/h
- Pressures up to 48 bar
- Temperatures from -20 °C up to +200 °C
- Pump types:
 - Flange pumps
 - Mixing pumps
 - High pressure pumps
 - Hopper pumps
 - Immersion pumps
 - Pumps for special applications

NOTOS® Multi Screw Pumps

- Flow rate up to 2500 m³/h
- Pressure rate up to 100 bar
- Viscosities up to 200.000 cSt
- Temperature up to 300 °C
- Pump types:
 - 2 Screw pump,
 - 3 Screw pump,
 - 4 Screw pump

NETZSCH Grinder

- M-Ovas®
 - Cutting plate macerator
- N.Mac® double shaft grinder

TORNADO®

Rotary Lobe Pumps

- Capacities up to 1000 m³/h
- Pressures up to 8 bar
- Temperatures up to 100 °C
- Pump types:
 - Standard pumps
 - Mobile pumps
 - Pumps for special applications

NETZSCH Accessories

- Protection devices
- Flushing/butterfluid systems
- Control units
- Transport devices
- Tools

PERIPRO peristaltic pump

- Flow rate up to 13,000 l/h
- Pressure rate up to 10 bar
- Temperature up to 80 °C
- Different variants for environmental industry, chemical, mining and food production



WASTE WATER TREATMENT PLANT

We provide you NEMO® progressing cavity pumps, TORNADO® rotary lobe pumps and PERIPRO peristaltic pumps in diverse designs and materials, designed according to the location of use in the waste water treatment plant. 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 dewatered sludge, are suitable, either for different designs of the NEMO® hopper pumps with screw conveyors or also with our aBP-Module® to prevent bridging.

The TORNADO® rotary lobe pumps are predestined due to their compact construction for tight installation situations. They are just as robust as the progressing cavity pumps and suitable for media with large solids as well.

The grinders of NETZSCH protect lines and pumps and, alongside the wide range of accessories, also contribute to the process reliability of the overall plant.



Sludges, slurries and products with a high solids content or that are very abrasive such as lime milk are not a problem for the PERIPRO peristaltic pumps. Its robustness is achieved with the use of very strong materials, integrated bearings, large-size rollers and a system of reliable and very secure connections that prevent the appearance of leaks during its operation.



For water treatment, we offer you PERIPRO in two different versions: the industrial for non corrosivemedia, and the chemical for corrosive media.

CONSTRUCTION INDUSTRY AND CONSTRUCTION MATERIALS

Extremely robust pumps to ensure success

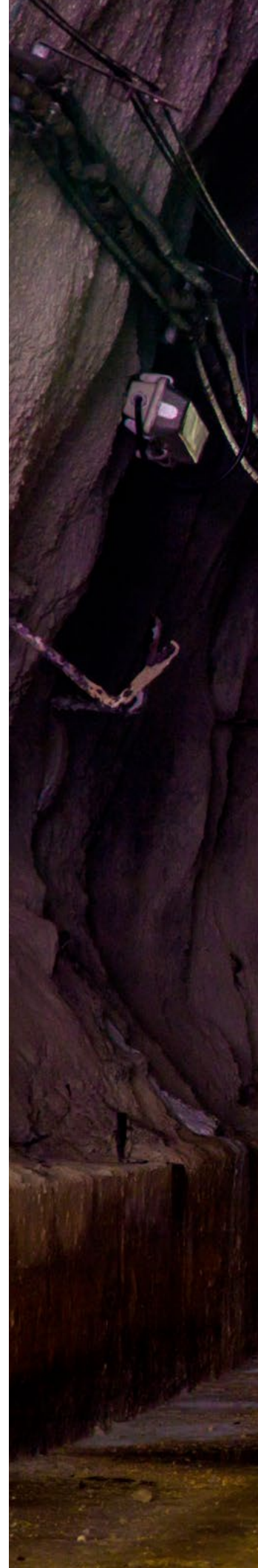
The high pressure in terms of deadlines and costs in construction make it important for pumps to run perfectly and also to be capable of efficient operation. In addition, construction primarily involves dealing with granular and binding media containing solids. These are generally difficult for pumps to convey. NETZSCH self-priming, rotating positive displacement pumps are well-prepared for these difficult tasks. They are wear-resistant thanks to the material coatings and have an extremely high resistance to solid contents. They ensure reliable operation in construction.

When it comes to extremely abrasive media, such as concrete primer or waste water from concrete production, the high-performance TORNADO® rotary lobe pumps prove their worth with an above-average service life. The TORNADO® rotary lobe pumps' compact design makes them suitable for areas where space is restricted. The pump oil-free drive – the pumps are driven by a synchronised belt drive – means any possible pollution of the groundwater is avoided.

Pumps are tailored to the relevant applications using the appropriate accessories. If necessary, equipment can include skids for construction sites, remote control, switch cabinets and/or hydraulic drive.

Your medium – We are prepared for everything

- Waste water from concrete production
- Concrete suspension
- Drilling sludge
- Gypsum suspension
- Gypsum slurry
- Adhesive bases
- Waste water
- Cement suspension





BIOGAS PLANTS

Process adaption for higher energy production

The inhomogeneous, liquid or solid, organic substances are decomposed through the use of microorganisms and, thereby, used to generate energy. Depending on the process sequence, it is necessary that the biomass is continuously fed to the fermenters.

Here, pump systems are required to convey the large quantity and sizes of grain in the solids flux without problems. NEMO® progressing cavity pumps as well as TORNADO® rotary lobe pumps are used for this application, sometimes combined with NETZSCH grinders.



Advantages

- Variable, modular system
- Robust, compact and powerful pumps
- Pumping media with high solids content
- Large range of materials
- The correct joint for every application
- Mechanical seal as standard, further seals as an option
- aBP-Module® to prevent bridging

Typical media:

- Biomass
- Bio waste
- Food waste
- Grains
- Haylage
- Manure
- Pomace
- Slaughterhouse waste





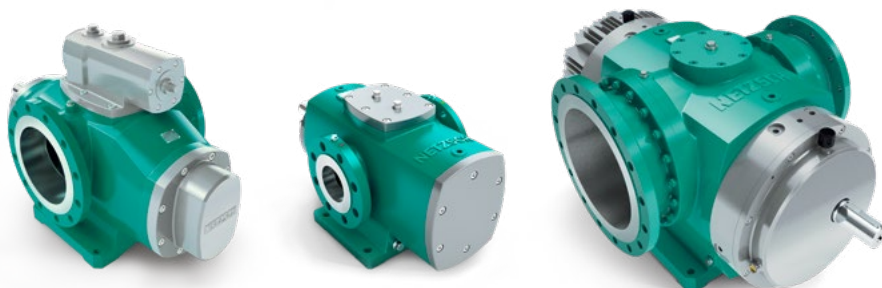
MARINE AND SHIP EQUIPMENT

Whether as a fuel or gear pump, hydraulic pump, bilge and mud pump or as pump for loading or unloading oil tankers, commercial or naval ships NETZSCH pumps are wide spread.

NEMO® progressing cavity pumps, TORNADO® rotary lobe pumps as well as NOTOS® multi screw pumps can be found in the engine room or on deck as transfer pumps. Highly viscous media such as black oil, pitch, tar and heavy oil are pumped as reliable as low viscosity media such as diesel oil, gasoline, hydrocarbons, salt and fresh water.

Typical media:

- anchor chains oil
- diesel fuel oil
- fuel oil
- lubricating oil
- residual oil
- sludge
- various chemicals
- waste oil
- waste water (grey and black water)



The NOTOS® pump family

NEMO® progressing cavity pumps:

POWERFUL FOR OUR ENVIRONMENT

NEMO® BY

in block design

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

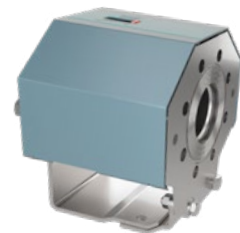


The FSIP® design

The FSIP® design enables a particularly service-friendly maintenance without dis-assembling of the pump from the pipeline. By easier access to all rotating parts through cartridge joint and mechanical seals the maintenance is reduced. The downtimes and the associated costs are reduced. In addition, it reduces the required installation space, since the stator is removed laterally. The FSIP® design is offered in modification sets. So you can upgrade also existing pumps with lower costs.

The xLC® stator adjustment unit

The xLC® stator adjustment unit makes it possible to reset the iFD-Stator® 2.0 several times before it eventually has to be replaced due to wear, thereby prolonging stator life significantly. The function of the xLC® unit is based on the iFD-Stator® 2.0. The xLC® unit is attached to the flange of the elastomer part of the stator and can compress or stretch it. In the case of wear the elastomer part of the stator can be compressed to restore the pretension between the rotor and stator ensuring an efficient sealing line. Depending on the application lifetime can be tripled or extended even further.



NEMO® SY

with bearing housing and drive shaft

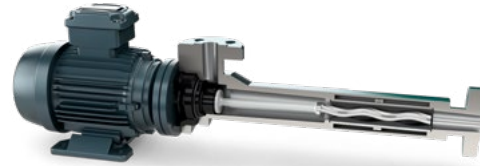
The design with bearing housing and drive shaft means it can be used with all types of drive. Four rotor/stator geometries for optimum performance for the respective application. Also available in FSIP® design.



NEMO® C.Pro

Mini dosing pump in plastic design

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



Further information

NEMO® C.Pro
Brochure NPS · 313

NEMO® BO/BS

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

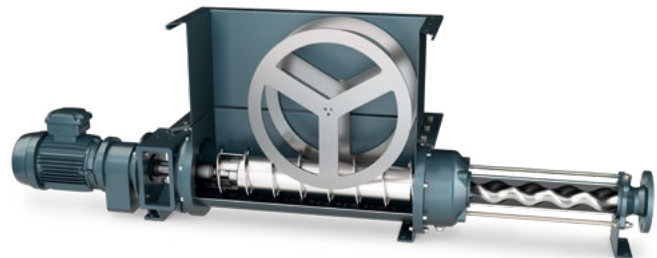
Housing with rectangular/square feed hopper and coupling rod with conveying screw with compression chamber for improved product feeding into the conveying elements.



NEMO® BF option with aBP-Module®

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

Housing with enlarged, rectangular feed hopper and coupling rod with patented, horizontally positioned conveying screw for optimum product feeding into the conveying elements.
Optional with aBP-Module® to prevent bridging.



Further information

aBP-Module®
Brochure NPS · 070

NEMO® B.Max

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

Housing with large, rectangular feed hopper*, coupling rod with patented, horizontally positioned 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 for the biomass.



Further information

NEMO® B.Max
Brochure NPS · 060

Repowering
Brochure NPS · 063

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

THE BEST CHOICE

for every application

TORNADO® rotary lobe pumps – powerful, robust, compact



TORNADO® self-priming, valveless positive displacement pumps for high-performance and optimally tailored to your individual requirements. They are used for continuous and smooth conveyance of almost all media, as well as for dosing in proportion to speed.

Further information

TORNADO®
Brochure NPS · 081

TORNADO® Mobile
Brochure NPS · 045

Broad range of applications

The pumps are primarily used with media that have the following features:

- With and without solids
- Low to high viscosity
- Thixotropic and dilatant
- Shear sensitive
- Abrasive
- Non-lubricating and lubricating

TORNADO® Mobile

The NETZSCH TORNADO® Mobile is ideal for applications where pumps have to be used quickly and flexibly outside buildings and plants or away from any infrastructure. This unit comprises a mobile TORNADO® rotary lobe pump with diesel drive conveys large quantities of sewage and sludge, independent of the local circumstances, and is therefore often used in civil protection. Smaller units are available, too.

"Full Service in Place" holds also true for our grinders

Grinding systems, so that every coarse material is pumpable

Powerful grinding systems are used to protect your plant and pump units contained therein. They ensure that impurities are separated or ground suitable for pumping. Thus, the risk of blocking and/or clogging in the pump systems is reliably prevented.

M-Ovas® cutting plate macerator

During the treatment of waste water, the impurities in the medium are directed through the specially shaped housing and gathered and cut by the rotating blades. Available in two sizes, this unit can be used for sludge with a throughput rate of up to max. 70 m³/h and a dry matter content of up to 12 %. It is characterised by its ease of maintenance.

N.Mac® double shaft grinder

Capable of fragmenting large and solid particles, the N.Mac® Double Shaft Grinder which is available in various sizes is the ideal equipment to suit different applications such as wastewater treatment, biomass substrate handling, food and fruit scraps. Its many housing designs in channel and inline version allow installation into effluent channels or flange assembly to prevent pipe clogging and to protect any downstream equipment, such as pumps.

Further information

Grinding Systems
Brochure NPS · 040



M-Ovas® cutting plate macerator



N.Mac® double shaft grinder

The NETZSCH Group is an owner-managed, international technology company with headquarters in Germany. The Business Units Analyzing & Testing, Grinding & Dispersing and Pumps & Systems represent customized solutions at the highest level. A worldwide sales and service network ensure customer proximity and competent service.

Our performance standards are high. We promise our customers Proven Excellence – exceptional performance in everything we do, proven time and again 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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