

NETZSCH

Proven Excellence.



More Efficiency for Storage Tanks

High suction capability with NETZSCH positive displacement pumps

Pumps & Systems

NETZSCH positive displacement pumps enable complete emptying even with high viscous media



Tank farms form the backbone of many industries, especially in the oil and fuel markets, as storage tanks or intermediate storage facilities. However, these media have a higher viscosity that makes the tank stripping, i.e. the pumping-out of the residues, difficult. Remaining substances reduce the useable tank volume. To secure the maximum available storage space, more companies in these markets have recognized the value of using positive displacement pumps from NETZSCH.

The good suction characteristics with low NPSHr values of NETZSCH pumps enable complete emptying of even heavy crude oil or bitumen. They can be used flexibly for differing viscosities offering an adjustable and wide range of the flow rate from around 1 to 10. This not only optimizes the profit margins of the raw materials and processing companies, but also minimizes the loss of valuable resources, which is an additional benefit for these non-renewable goods.

The most suitable solution for each application

For tank farm applications NOTOS® multi screw pumps, TORNADO® rotary lobe pumps and NEMO® progressing cavity pumps can all be considered. NETZSCH, as producer of three pump technologies, is ideally positioned to offer impartial and qualified advice, to help you choose the pump technology best matched to your application.



APPLICATION EXAMPLES

Transfer

- Pump: 2 NS
- Media: Polyol
- Flow: 200 gpm / 45.1 m³/h
- Pressure: 200 psi / 13.9 bar
- Temperature: 77 to 100 °F / 25 to 37.8 °C
- Viscosity: 770 to 2,950 cSt



Transfer from tank to ship (loading)

- Pump: 4 NS
- Media: Palm Oil
- Flow: 2,350 gpm / 533 m³/h
- Pressure: 116 psi / 8.0 bar
- Temperature: 122 °F / 50 °C
- Viscosity: 35 cSt
- Special Feature: Supplied with control system



Fuel Oil Transfer

- Pump: 4 NS
- Media: Fuel Oil 1A
- Flow: 570 gpm / 130 m³/h
- Pressure: 220 psi / 15.1 bar
- Temperature: 140 °F / 60 °C
- Viscosity: 605 cSt



THE NOTOS® Multi Screw Pump family for high suction capacity

2 NS – Two Screw Pump

NOTOS® two screw pumps have one drive screw, transferring torque through the hydrodynamic film to the rotating intermeshing driven screw.

- Flow up to 2,200 gpm / 500 m³/h
- Pressure up to 230 psi / 16 bar
- Temperature up to 570 °F / 300 °C
- Viscosity up to 100,000 cSt

3 NS – Three Screw Pump

NOTOS® three screw pumps have one drive screw, transferring torque through the hydrodynamic film to the two rotating intermeshing driven screws.

- Flow up to 1,500 gpm / 350 m³/h
- Pressure up to 1,160 psi / 80 bar
- Temperature up to 570 °F / 300 °C
- Viscosity up to 15,000 cSt

4 NS – Geared Twin Screw Pump

NOTOS® geared twin screw pumps have two double-flow screws. The double helix drive screw transfers the torque to the double helix driven screw via intermeshing gears. The design is hydraulically balanced.

- Flow up to 6,600 gpm / 1,500 m³/h
- Pressure up to 1,160 psi / 80 bar
- Temperature up to 570 °F / 300 °C
- Viscosity up to 200,000 cSt



Your Advantages

- High efficiency especially for highly viscous media, frequently 75% and more
- Self-priming
- Excellent suction capability
- Continuous flow with low pulsation
- Gentle product handling
- Low lifecycle cost
- Long service life
- Quiet operation

TORNADO® Rotary Lobe Pumps

powerful, robust and compact

TORNADO® self-priming, rotary lobe pumps for high-performance and high efficiency are 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.

TORNADO Rotary Lobe Pump in elastomer/metal or metal/metal version

Performance

Flow rates up to 4,400 gpm / 1,000 m³/h at pressures up to 116 psi / 8 bar.

Features

Designed after the FSIP® concept (Full Service-in-Place), it makes servicing of the rotating parts simple and fast even in confined spaces. Different configurations available for optimum performance with every kind of application.

Application range

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



Your Advantages

- Valve-free design
- Self-priming
- Suitable for any kind of liquid, including media containing gas
- Solids or fibrous matter
- Effective for lubricating and non-lubricating media
- Pumping media with high or low viscosity
- Handling shear sensitive fluids
- Operating at temperature up to 212 °F / 100 °C
- Reversible operation
- Can be serviced without disconnecting pipework
- Tolerance of dry running

For the final support:

The NEMO[®] Industrial Progressing Cavity Pump

Performance

Flow rates up to 4,400 gpm / 1,000 m³/h and pressures up to 700 psi / 48 bar (standard) or up to 3,480 psi / 240 bar (special applications).

Features

Designs with bearing housing and split connecting shaft allows all types of drives to be used and makes servicing the rotating parts simple and fast. Four rotor/stator geometries for optimum performance in every kind of application. The FSIP[®] (Full Service-in-Place) design is available.

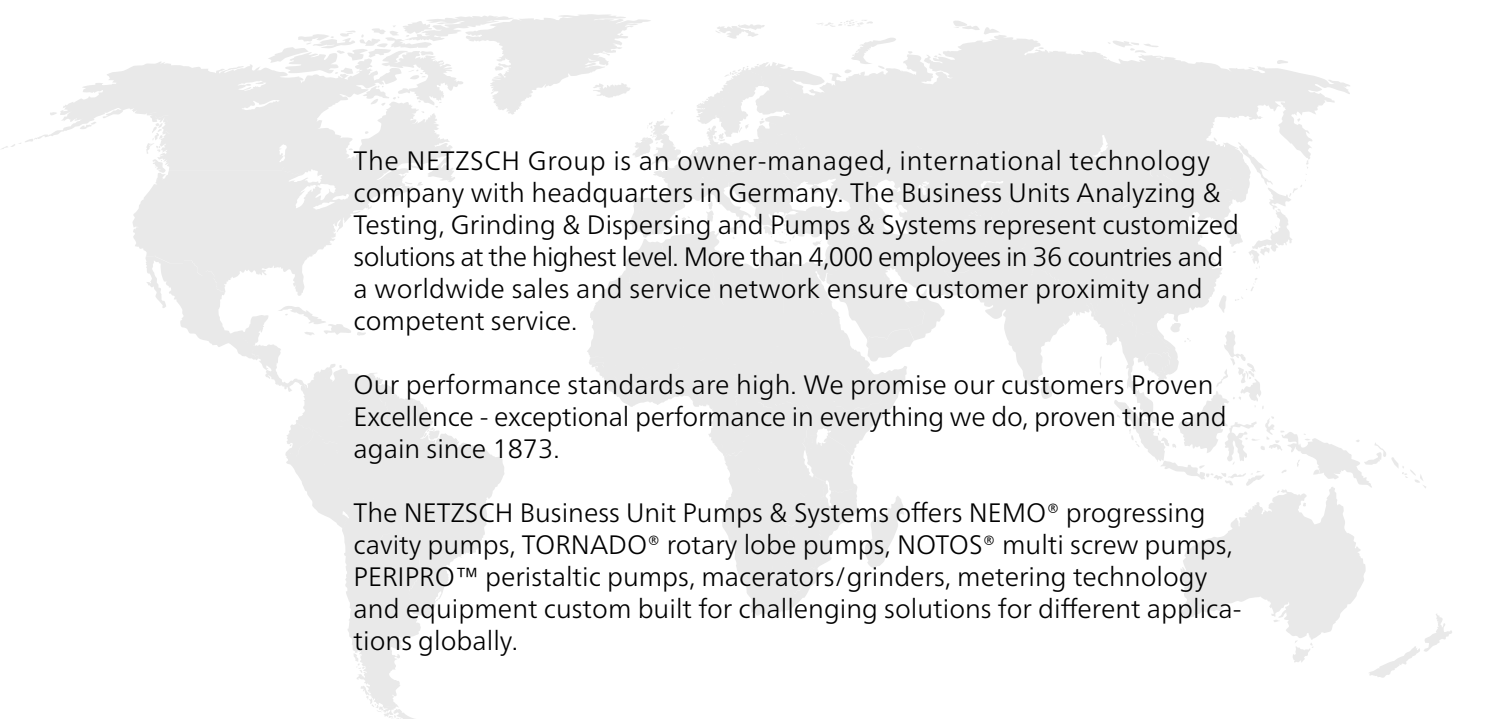
Media range

Substances with consistencies from low to high viscosity, with or without solid content.



Your Advantages

- High suction capability – up to 29 ft wc / 9 m H₂O
- Direction of rotation and flow can be reversed
- Can be installed in any position
- Quiet, smooth running
- Temperatures from -4 to + 392 °F / -20 °C to + 200 °C
- Can be serviced without disconnecting pipework



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. More than 4,000 employees in 36 countries and 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, metering technology and equipment custom built for challenging solutions for different applications globally.

Proven Excellence. ■

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