

**NETZSCH**



## More Efficiency for Storage Tanks

NETZSCH Positive Displacement Pumps

# NETZSCH Positive Displacement Pumps enable complete emptying even with higher viscous media

Tanks, as well as entire tank storage, form the backbone of many industries, especially in the oil and fuel sector, as storage tanks or intermediate storage facilities. However, these media have a higher viscosity, which makes the stripping, i.e. the pumping-out of the tanks difficult. Usually, there are leftovers which are reducing the useable tank volume. In order to secure the maximum yield here, more and more companies in these sectors are now using pumps from NETZSCH.

Their good suction characteristics with low NPSHr values enable a complete emptying of crude oil or bitumen storage. They can be used flexibly for different viscosities and offer a largely free adjustment of the delivery rate. This not only optimizes the profit margins of the raw materials and processing companies, but also minimizes the loss of valuable resources, which is especially important for non-renewable goods.

## The most suitable solution for each application

For the applications in tank storages the use of NOTOS® multi screw pumps, NEMO® progressing cavity or TORNADO® rotary lobe pumps is potentially possible. NETZSCH as producer of three pump technologies is ideally positioned to offer impartial and qualified advice, which pump technology is best suited to your application.



# THE NOTOS® Multi Screw Pump family for high suction capacity

## 2 NS – Two Screw Pump

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

- Flow up to 500 m/h<sup>3</sup> (2200 gpm)
- Pressure up to 16 bar (230 psi)
- Temperature up to 300°C (570°F)
- Viscosity up to 25.000 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 200 m/h<sup>3</sup> (440 gpm)
- Pressure up to 80 bar (1160 psi)
- Temperature up to 300°C (570°F)
- Viscosity up to 10.000 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 1500 m/h<sup>3</sup> (6600 gpm)
- Pressure up to 80 bar (1160 psi)
- Temperature up to 300°C (570°F)
- Viscosity up to 50.000 cSt



### Your Advantages

- Self priming
- Good suction capability
- Quiet operation
- Continuous flow with low pulsation
- Gentle product handling
- Low maintenance
- Low lifecycle cost
- Long service life
- Several mechanical seal options including magnetic drive
- Extremely low noise and vibrations

# The NEMO® Progressing Cavity Pump is available with bearing housing and drive shaft

## Performance

Flow rates up to 1000 m<sup>3</sup>/h and pressures up to 48 bar (standard) or up to 240 bar (special applications).

## Features

Design with bearing housing and two-part shaft allows all types of drive 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. Also in FSIP® (Full Service in Place) design available.

## And conveys ...

... substances with consistencies from runny to pasty, with or without solid content.



## Your Advantages

- High suction capacity – up to 9 mH<sub>2</sub>O
- Direction of rotation and flow can be reversed
- Can be installed in any position
- Quiet, smooth running
- Temperatures from - 20 °C to + 200 °C
- Can be serviced without disconnecting pipework

# TORNADO® Rotary Lobe Pumps

## powerful, robust and 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.

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

#### Performance

Flow rates up to 1000 m<sup>3</sup>/h at pressures up to 8 bar.  
Fields of application Industrial applications and in the oil and chemical industries for fluid to viscous media with and without solids.

#### Features

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



#### Your Advantages

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

# EXAMPLES OF OUR APPLICATIONS

## Brazil

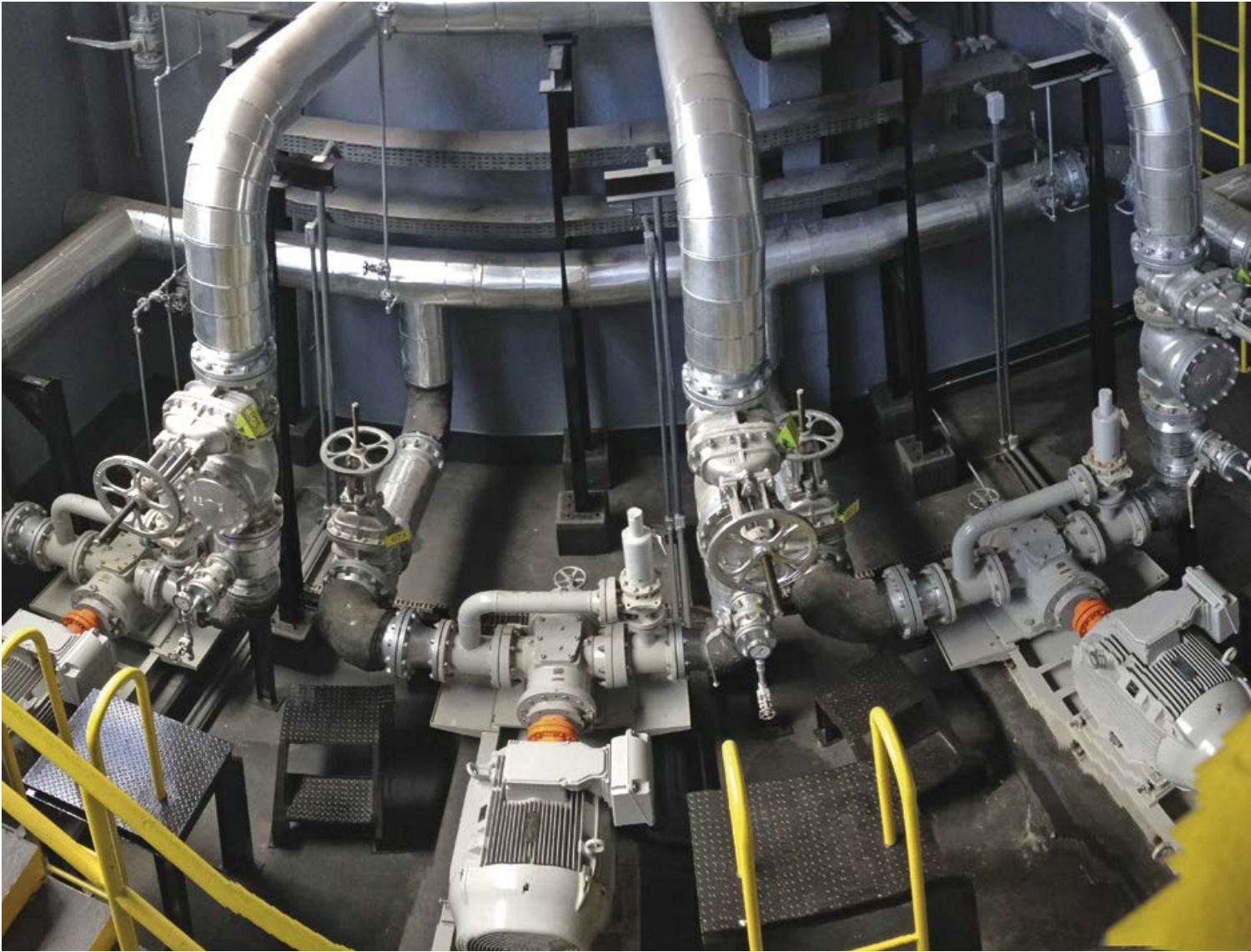
- Pump: 4 NS
- Media: Polyol
- Flow: 45,1 m<sup>3</sup>/h
- Pressure: 11 –13,9 bar
- Temperature: 25–37,8°C
- Viscosity: 770 - 2950 cSt
- Application: Transfer



## Guatemala


- Pump: 4 NS
- Media: Palm Oil
- Flow: 533 m<sup>3</sup>/h
- Pressure: 8,0 bar
- Temperature: 50 °C
- Viscosity: 35 cSt
- Application: Transfer from tank to ship
- Special Feat.: Supplied with Electric Panel and bearing temperature monitoring and mechanical relief valve





## Domenican Republic

- Pump: 4 NS
- Media: Fuel Oil 1A
- Flow: 130 m<sup>3</sup>/h
- Pressure: 15,1 bar
- Temperature: 60 °C
- Viscosity: 605 cSt
- Application: Fuel Oil Transfer



The NETZSCH Group is a mid-sized, family-owned German company engaging in the manufacture of machinery and instrumentation with worldwide production, sales, and service branches.

The three Business Units – Analyzing & Testing, Grinding & Dispersing and Pumps & Systems – provide tailored solutions for highest-level needs. Over 3,300 employees at 210 sales and production centers in 35 countries across the globe guarantee that expert service is never far from our customers.

The NETZSCH Business Unit Pumps & Systems offers with NEMO® progressing cavity pumps, TORNADO® rotary lobe pumps, NOTOS® multi screw pumps, macerators/grinders, dosing technology and equipment custom built and challenging solutions for different applications on a global basis.

NETZSCH Pumps & Systems – Solutions you can trust ■

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