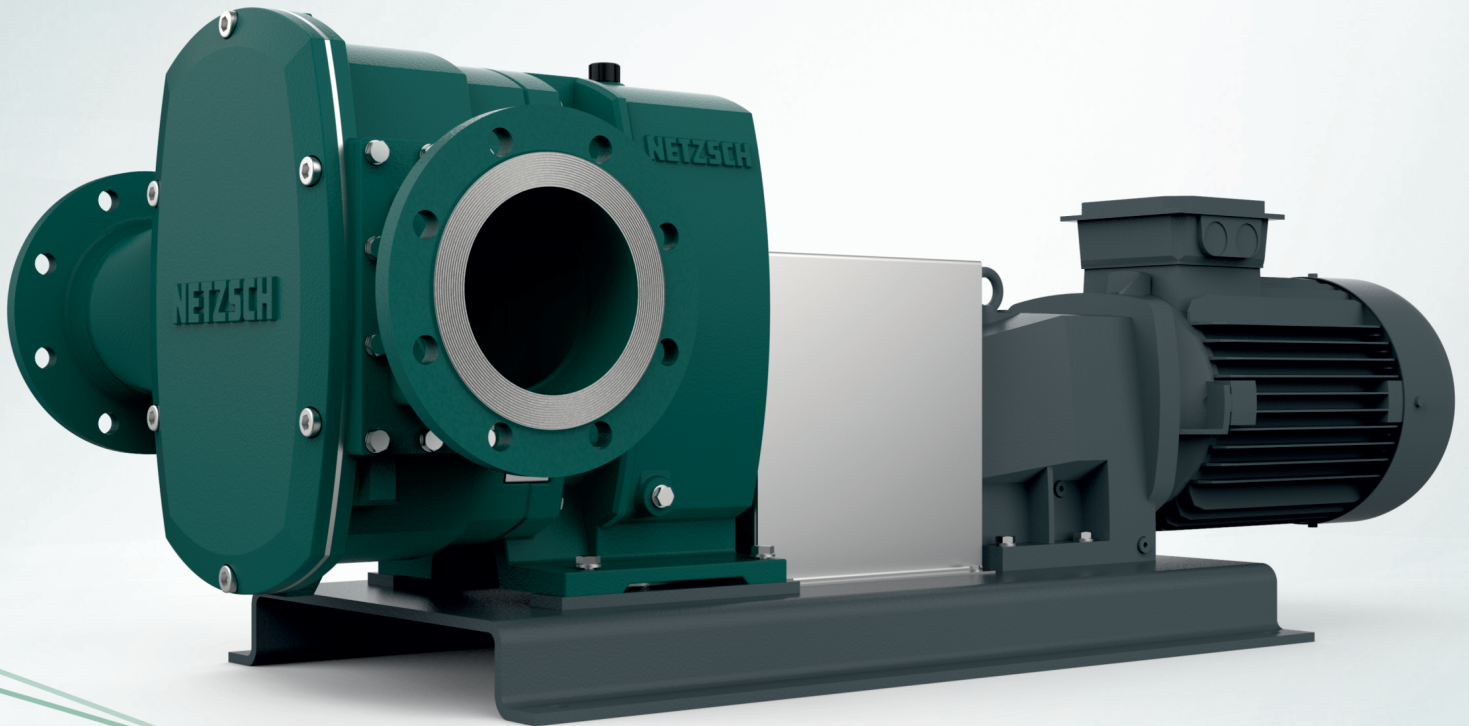


NETZSCH

Proven Excellence.



TORNADO® Rotary Lobe Pumps T1

The Service-friendly rotary lobe pump constructed according to the principle of "full service in place"

Pumps & Systems

TORNADO® Rotary Lobe Pumps

MAXIMUM SERVICE FRIENDLINESS MEETS HIGH PERFORMANCE

NETZSCH TORNADO® self priming valveless, positive displacement pumps can be optimally customized to meet specific process and application requirements. They can be used for almost any media on intermittent, continuous or dosing applications.

TORNADO® pumps are particularly service and maintenance friendly; all parts that come into contact with the media are directly accessible without dismantling the pipework or disconnecting the drive. Their advantages are small space requirements due to their compact design, high performance and maximised operational reliability, and the physical separation between the pump head and bearing housing.

Characteristics :

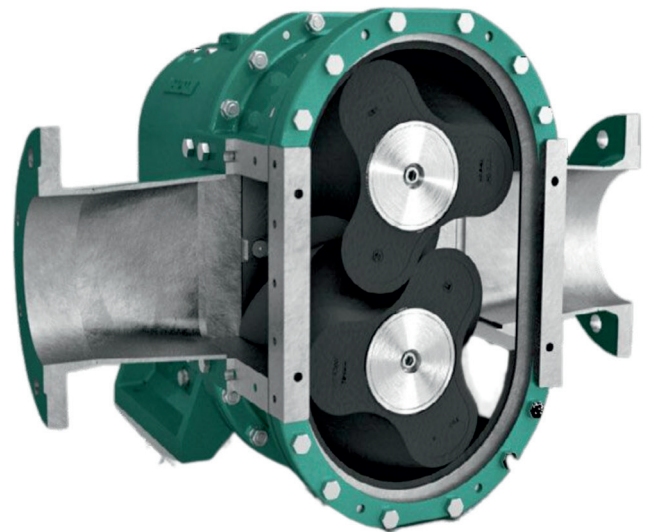
- Valve free construction
- Self priming
- Suitable for any liquid including, media containing gas, solids or fibrous matter
- Suitable for non-lubricating and lubricating media
- Pumping media with high or low viscosity
- Handling shear sensitive fluids
- High resistance to wear
- Negative/high suction lift capability upto 8m
- Compact construction
- Reversible operation
- Tolerance of dry running
- Can be serviced without disconnecting pipework
- Easy maintenance with improved design
- Suitable for Mobile Applications

Additional Options:

- Special lobe puller tool
- Dry run protection device
- Seal plan provision
- Flexible hose for end connections
- ANSI Flanges

Functioning principle

The TORNADO® rotary lobe pump is a positive displacement pump. The pumping action is generated by the contra-rotation of two rotors within the pump chamber which are synchronised externally. The media enters the pump chamber through the inlet port and is carted around the chamber by the rotors to the outlet port where it is discharged.



Technical Specifications:

- Flow rates up to 1000m³/hr
- Differential Pressures of up to 10 bar
- Viscosity: 1,00,000 cP

Materials:

- Housing: Cast Iron, Stainless steel, and Special materials on request
- Lobes: NBR, EPDM and Viton

The F-GENERATION TORNADO® T1

with it's Proven Quality

The pump performance, size and material of the TORNADO® T1 rotary lobe pumps are matching precisely the properties of the pumped medium and the place of use. Three series with a total of eighteen sizes cover a flow rate range from 1-1000 m³/h.

Your Benefits :

- GSS1 technology for lasting reliability
- Maintenance without removing the pump from the pipeline
- Easy and quick access to the lobes and shaft seal
- Insensitivity to dry running
- Fast availability through stock piling of the pumps and required components
- ATEX and CE certifiable

Minimal service time

The pump has been designed in such a way that it requires few components to be maintained. The patented sealing sleeves never come into contact with medium, thus guarantee faster removal, and thus contribute to reduction of maintenance and plant downtime.

High Energy efficiency

Thanks to the new bearing concept, less drive power is required. This reduces energy costs and thus also the TCO.

High resistance to wear

Again thanks to new bearing concept, it contributes in extending service life of the pump, despite the higher pressures, the wear of the rotary pistons has been reduced. Also, due to the flow-optimised inlet and outlet of the pump chamber, pulsation and vibration have been reduced.

Pressures of up to 10 bar are standard

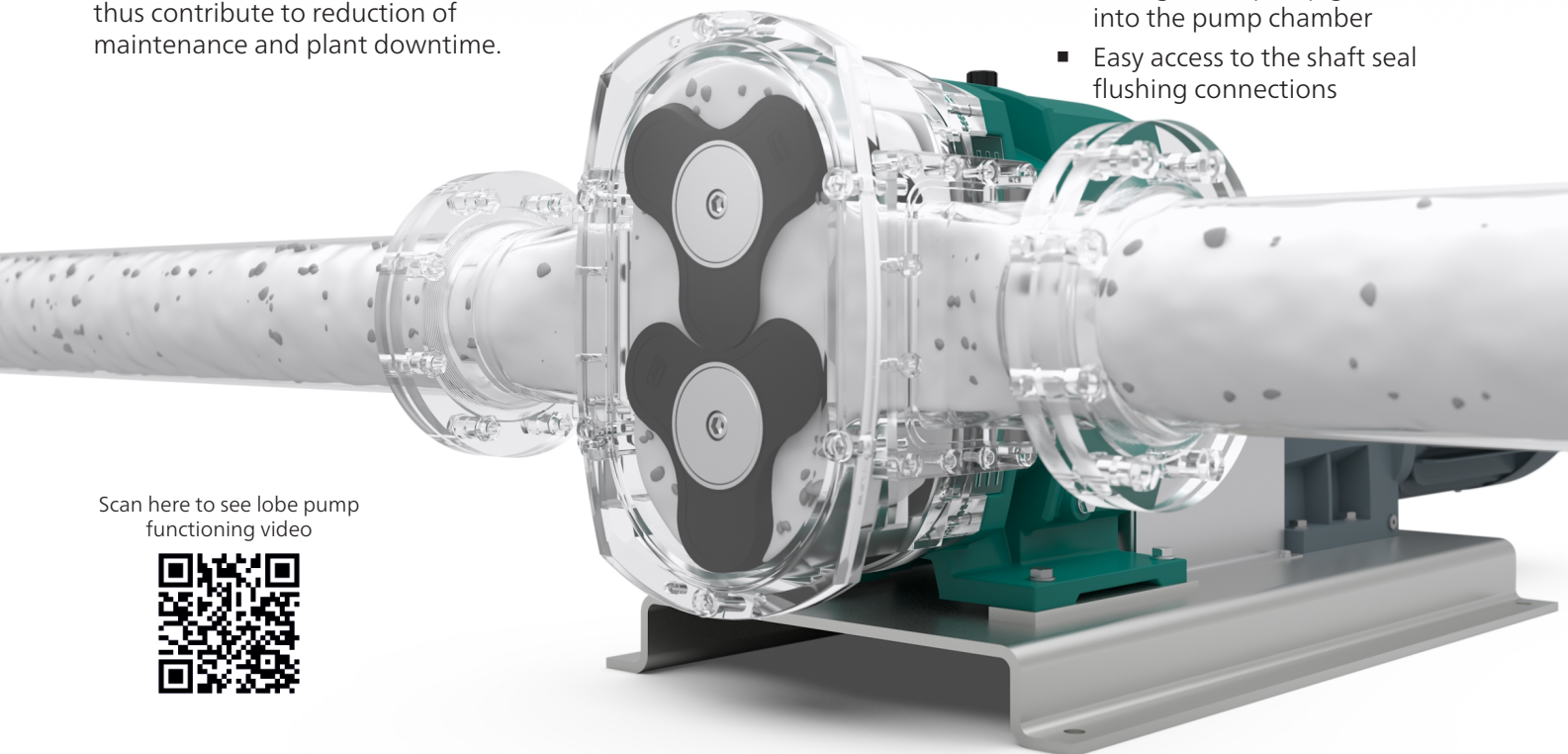
The pumps are in the standard version for pressures of up to 10 bar in continuous operation designed. For higher pressures, we offer customised solutions.

Applications

- Crude oil, Oily water with sand & sludge
- Bowser unloading
- Pit dewatering
- MBR sludge, oily sludge, thickened sludge, ETP sludge
- Sanitary sewage, Wastewater
- Cement slurry water
- Coal slurry, Iron Ore Slurry, Tio₂ slurry
- Paper pulp, Kaolin slurry, Latex dispersion, binders
- Fruit juice concentrates, purees
- Edible Oils
- And so on..

The NETZSCH GSS technology (Synchronous Gear Protection System) guarantees you the highest level of operating safety. The pump chamber and the gearbox are physically separated ensures:

- Extended operational reliability
- No ingress of the pumped media into the pump gearbox in the event of product leaking
- No ingress of pump gearbox oil into the pump chamber
- Easy access to the shaft seal flushing connections

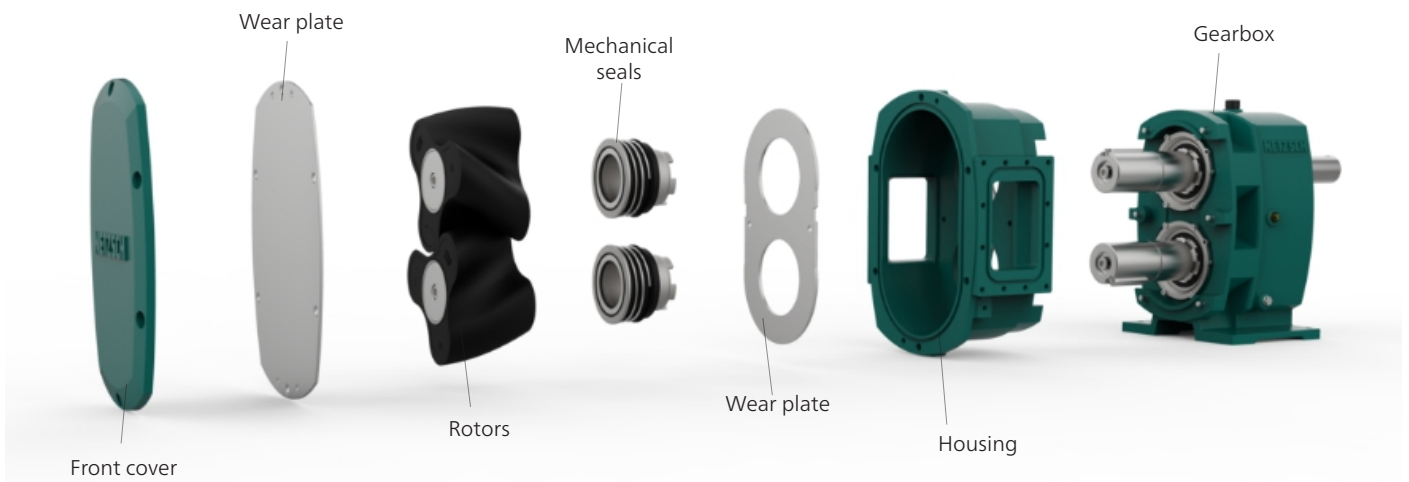


Scan here to see lobe pump functioning video



The Modern TORNADO® T1

The Design



Front Cover

Rotary lobes, pump and gearbox seals can be easily serviced or replaced after opening the casing cover, without the need to dismantle the pump casing and piping. Only 24 screws need to be loosened for this.

Mechanical Seals

Wide range of highly engineered product seals in different materials are available, which are selected to individual application requirements and to extend the pump operating life. Service-friendly shaft seals with low wear, direction-independent drive or mechanical seal in the application specific design. Up to four different mechanical seal concepts can be used.

Wear Plates

Highly abrasion-resistant, chemically resistant and replaceable wear plates are fitted to both ends of the casing. In addition, more than 50 different seal variants are available.

Rotors/Lobes

Depending on the application, two, three, four straight or spiral rotary lobes in various materials are used. The material and design of the rotary lobes are adapted to the special requirements of the medium. Materials adapted to the medium increase the rotary lobes resistance and service life.

Housing

Modular housing design, adjustable housing shells for long service life. Optionally with replaceable, chemically resistant wear protection plates.

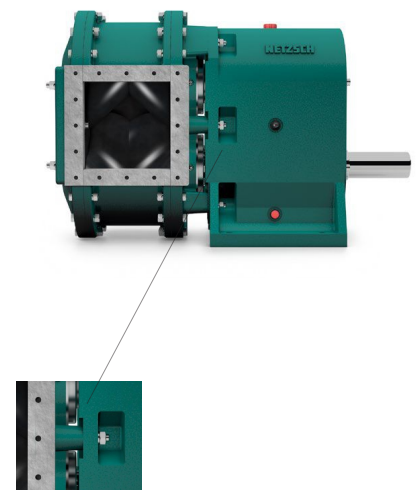
Gearbox

Patented synchronizing gear with decoupled seals for pump and gear reliably discharges any product leakage. GSS technology (Gearbox Security System) prevents the product from entering the synchronizing gear and gear oil from entering the pump chamber.

[Click here for 3D model](#)



Different Lobe Geometries



Gearbox Security System

Performance Data

Model Name	Max. Flow (m ³ /hr)	Max. Pressure (Bar)	Max. Speed (RPM)
MB Series	35	10	900
XB Series	115	6	550
XLB Series	900	8	550

*Further sizes and technical data on request

TORNADO® Mobile - Installation Flexibility

The TORNADO® Mobile combines the flexibility and independence of a mobile unit with the robust technology of the rotary lobe pump from NETZSCH. The self priming, valveless positive displacement pumps are powerful and are optimally adapted to your requirements.

TORNADO® pumps are able to transfer media containing solids and fibrous matter. Mobility through mounting on a car or truck trailer enables the pumping of large quantities of fluids with high solid content, wastewater and slurry at the most diverse and unusual locations.

The TORNADO® range of sizes, specifications and materials allows customised solution for all applications.

TORNADO® pumps can be mounted on baseplate, trolleys or trailers and the range of drives available include electric motors, diesel engines and hydraulic motors.



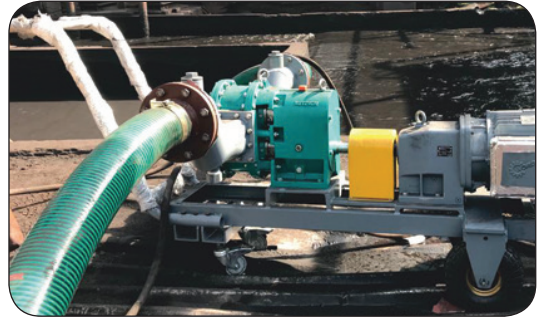
Scan QR code to know more about T. Mobile®



TORNADO® T1 Installations



TORNADO® T1 transferring Kaolin Slurry
in Paper Industry



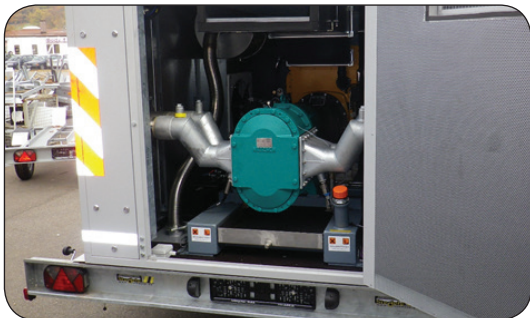
Trolley mounted TORNADO® T1 in Pit dewatering
transferring fine coal slurry



TORNADO® T1 transferring oily sludge



TORNADO® T1 transferring Iron Ore Slurry



Truck Mounted TORNADO® T1 Rotary Lobe Pump
transferring sewage sludge



TORNADO® T1 transferring sludge in
less space environment



Customized design TORNADO® T1 Rotary Lobe Pump
transferring china clay



Trolley mounted TORNADO® T1 Rotary Lobe Pump
transferring sewage

NETZSCH Original Spare Parts & Service

NETZSCH after-sales is built on 3 pillars :

Maintenance & Repairs

when commissioning, maintaining, retrofitting & repairing, and with service contract from NETZSCH you are on the safe side.

The benefit to you

Advice, Service and Quality are our strengths. Strict quality standards, test procedures and certification in accordance with DIN EN ISO 9001 guarantee that you receive the very highest quality without exception. To maintain the performance and quality of your pump, we continue to provide support after delivery in all aspects of your pump to ensure it operates reliably in our system. We have over 70 years of experience with more than 5,00,000 installed pumps behind us.

Technical Training

by NETZSCH experts at our customer's site or at our locations.

Original Spare Parts

with NETZSCH manufacturing quality.

For NETZSCH Original spare parts & technical service, scan the QR code



Mail us at info.nti@netzsch.com
or Call us at **+91 44 42965100**



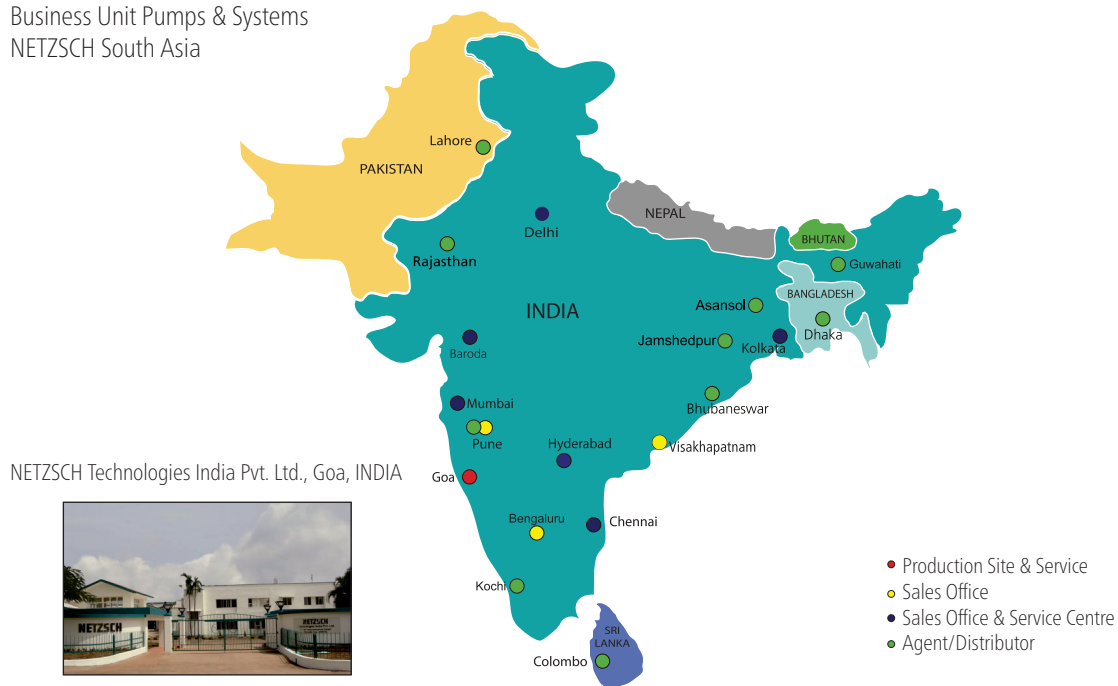
The NETZSCH Group is a mid-sized, family-owned German company engaging in the manufacture of machinery and instrumentation with worldwide production, sales, and service branches.

The three Business Units – Pumps & Systems, Grinding & Dispersing and Analyzing & Testing, – provide tailored solutions for highest-level needs. Over 4,000 employees at 210 sales and production centers in 36 countries across the globe guarantee that expert service is never far from our customers.

NETZSCH Pumps & Systems has its manufacturing unit since 2005, the state of art of manufacturing plant in Goa. Services customers in India, Srilanka, Bangladesh, Pakistan and Nepal through over Regional Offices and Distribution Network.

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

Business Unit Pumps & Systems
NETZSCH South Asia



Proven Excellence.

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