NOTOS® Multi Screw Pumps
Reliable and Efficient

Pumps & Systems
Since 1979 NETZSCH has been manufacturing multi screw pumps to serve a wide range of industries and applications. The most advanced technology is utilized to produce these pumps. Reliability, durability and experience are some reasons why you should choose NETZSCH.

**Range of applications**

NOTOS® pumps are designed to convey low to well lubricating fluids, low to high viscosity, shear sensitive or chemically aggressive media. They are typically used in the following industries:

- Oil & Gas
- Marine
- Power Generation
- Tank Storage
- Process Industries

**Capacity and pressure ranges**

Multi Screw Pumps are known as pumps for low to high flows and low to high pressures:

- Flow rate up to 2500 m³/h
- Pressure rate up to 100 bar
- Viscosities up to 200.000 cSt
- Temperature up to 300 ºC

**“High Efficiency Unique Design”**

Due to the “High Efficiency Unique Design” (HEUD), the pumps are optimized in order to increase their performance. Characteristics of this design are:

- Precise tolerances due to the state-of-the-art technology
- Optimized spindle profile
- Patented optimized discharge design

**Broad range of materials**

Our range of metallic materials extends from grey cast iron and chrome-nickel steel to duplex, super duplex or hastelloy steel. Further metal material options on request.

- No dynamically loaded rubber parts
- Static seals from NBR to FFKM

**Characteristics**

- Self-priming
- Good suction capability
- Continuous flow with low pulsation
- Flow with minimal turbulences
- Gentle product handling
- Low maintenance
- Low lifecycle cost
- Long service life
- Quiet operation
- Several mechanical seal options
- Magnetic drive optional
- Extremely low noise and vibrations
- Vertical or horizontal installation
The NOTOS® multi screw pump family comprises of three series in multiple arrangements which serve a wide range of industries and applications. The superior quality standard meets the highest level of requirements from our customers.

Three different pump series to meet your individual demands:

**2 NS – Two Screw Pump**
- Fluid properties:
  - From non to light abrasive
  - Corrosive and non corrosive
  - Low to medium viscosities
  - Low to well lubricant fluids

**3 NS – Three Screw Pump**
- Fluid properties:
  - Non abrasive
  - Non corrosive
  - Low to medium viscosities
  - Lubricant

**4 NS – Geared Twin Screw Pump**
- Fluid properties:
  - From non to medium abrasive
  - Corrosive and non corrosive
  - Low to high viscosities
  - Non lubricant and lubricant

Configuration samples of all series
2NS SERIES

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

Performance
- Flow up to 650 m³/h (2,860 gpm)
- Pressure up to 16 bar (230 psi)
- Temperature up to 300°C (570°F)
- Viscosity up to 100,000 cSt

Accessories
- Internal or external relief valve
- Vibration sensors
- Temperature sensors
- API 682 cartridge seals
- Various API seal plans

Arrangements
- Foot, vertical, semi-submersible, housing with replaceable liner or flange mounted
- Heating jacket optional

Advantages
- High efficiency
- Hydraulically balanced
- Quiet operation
- Long service life
- Low pulsation
- Excellent suction capability
- API 676 3rd ed., optional

1 Screws
Nitrate in alloy steel or in stainless steel. The HEUD (High Efficiency Unique Design) provides excellent performance.

2 Housing
Various ports configurations such as top top, side top or in line.

3 Bearing Bushes
Internal bearing bushes help to support radial loads.

4 Mechanical Seal
Under suction pressure just one mechanical seal is required for the 2NS. Magnetic drive optional.
**3NS SERIES**

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

**Performance**
- Flow up to 400 m³/h (1,760 gpm)
- Pressure up to 100 bar (1450 psi)
- Temperature up to 300°C (570°F)
- Viscosity up to 15,000 cSt

**Accessories**
- Internal or external relief valve
- Vibration sensors
- Temperature sensors
- API 682 cartridge seals
- Various API seal plans

**Arrangements**
- Foot, vertical, semi-submersible
- Housing with replaceable liner, light, top tank version
- Heating jacket optional

**1 Screws**
Nitrated in alloy steel or in stainless steel. The HEUD (High Efficiency Unique Design) provides excellent performance.

**2 Housing**
Various ports configurations such as top top, side top, front top or in line.

**3 Bearing Bushes**
Nitrated bushes help to prevent start up failures and help to support radial loads.

**4 Mechanical Seal**
Under suction pressure just one mechanical seal is required for the 3NS. Magnetic drive optional.

**Advantages**
- High efficiency
- Easy maintenance
- Lightweight and small footprint
- Low pulsation
- API 676 3rd ed., optional

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

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- Temperature up to 300°C (570°F)
- Viscosity up to 15,000 cSt

**Accessories**
- Internal or external relief valve
- Vibration sensors
- Temperature sensors
- API 682 cartridge seals
- Various API seal plans

**Arrangements**
- Foot, vertical, semi-submersible
- Housing with replaceable liner, light, top tank version
- Heating jacket optional

**1 Screws**
Nitrated in alloy steel or in stainless steel. The HEUD (High Efficiency Unique Design) provides excellent performance.

**2 Housing**
Various ports configurations such as top top, side top, front top or in line.

**3 Bearing Bushes**
Nitrated bushes help to prevent start up failures and help to support radial loads.

**4 Mechanical Seal**
Under suction pressure just one mechanical seal is required for the 3NS. Magnetic drive optional.

**Advantages**
- High efficiency
- Easy maintenance
- Lightweight and small footprint
- Low pulsation
- API 676 3rd ed., optional
NOTOS® geared twin screw pumps have two shafts and four screws. The torque is transferred to the driven shaft via helical gears. The design is hydraulically balanced.

**Performance**
- Flow up to 2,500 m³/h (11,000 gpm)
- Pressure up to 80 bar (1160 psi)
- Temperature up to 300°C (570°F)
- Viscosity up to 200,000 cSt

**Accessories**
- Internal or external relief valve
- Vibration sensors
- Temperature sensors
- API 682 cartridge seals
- Various API seal plans

**Arrangements**
- Housing with replaceable liner
- Heating jacket optional

**Advantages**
- High Efficiency
- No metal to metal contact
- Small footprint
- Long service life
- Excellent suction capability
- API 676 3rd ed., optional

**1 Screws**
Nitrated in alloy steel or in stainless steel. The HEUD (High Efficiency Unique Design) provides excellent performance.

**2 Housing**
Various ports configurations such as top top, side top or in line.

**3 Timing Gear**
Helical timing gears transfer the torque with reduced vibration and noise.

**4 Mechanical Seal**
Four mechanical seals under suction pressure.
APPLICATION

Truck Unloading
- Pump NOTOS®: 2 NS
- Media: Palm oil
- Flow rate: 9.2 m³/h
- Pressure: 5.0 bar
- Temperature: 50 to 60 °C
- Viscosity: 20 to 60 cSt

Tank Storage
- Pump NOTOS®: 4 NS
- Media: Oil/Water emulsion
- Flow rate: 100 to 127 m³/h
- Pressure: 18 bar
- Temperature: 35 °C
- Viscosity: 60 to 250 cSt

Boiler Feeding
- Pump NOTOS®: 3 NS
- Media: Fuel oil
- Flow rate: 21.2 m³/h
- Pressure: 25 bar
- Temperature: 60 °C
- Viscosity: 622 cSt
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 3,700 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 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.

Proven Excellence.