

NETZSCH

Proven Excellence.



NOTOS® Multi Screw Pumps

High Efficiency and Unique Design

Pumps & Systems

NOTOS® MULTI SCREW PUMPS

3 ranges for all applications

Since 1979 NETZSCH has been manufacturing multi screw pumps to serve a wide range of industries and applications. The most advanced technology is used 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 very lubricating fluids, low to high viscosity, shear sensitive or chemically aggressive media. NOTOS® pumps are typically used in the following industries:

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

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. Other metal material options are available on request.

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

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 11,000 gpm / 2,500 m³/h
- Pressure rate up to 1,450 psi / 100 bar
- Viscosities up to 200,000 cSt
- Temperature up to 570 °F / 300 °C

“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

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 is comprised of three pump 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:



Configuration samples of all series

2 NS – Two Screw Pump

Fluid properties:

- From non to light abrasive
- Corrosive and non corrosive
- Low to medium viscosities
- Low to well lubricating fluids

3 NS – Three Screw Pump

Fluid properties:

- Non abrasive
- Non corrosive
- Low to medium viscosities
- Lubricants

4 NS – Geared Twin Screw Pump

Fluid properties:

- From non to medium abrasive
- Corrosive and non corrosive
- Low to high viscosities
- Non lubricants and lubricants

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

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.

Accessories

- Mounted on or external relief valve
- Vibration sensor
- Temperature sensors
- API 682 cartridge seal
- Various API seal plans

3 Bearing Bushings

Internal bearing bushings helps to support radial loads.

4 Mechanical Seal

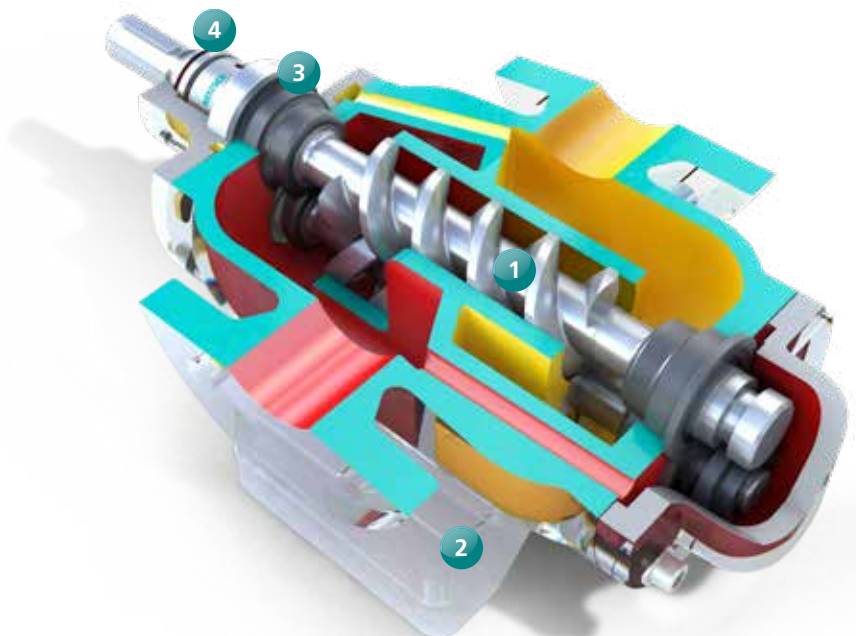
Under suction pressure just one mechanical seal is required for the 2NS. Magnetic drive optional.

Configurations

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

Advantages

- High efficiency
- Hydraulically balanced
- Quiet operation
- Long service life
- Low pulsation
- Excellent suction capability
- API 676 3rd ed., optional
- 3-year manufacturer's warranty



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 1,760 gpm / 400 m³/h
- Pressure up to 1,450 psi / 100 bar
- Temperature up to 570 °F / 300 °C
- Viscosity up to 15,000 cSt

Accessories

- Mounted on or external relief valve
- Vibration sensor
- Temperature sensors
- API 682 cartridge seal
- Various API seal plans

Configurations

- Foot, vertical, semi-submersible
- Housing with replaceable liner, light, top tank version
- Heating jacket is 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 Bearing Bushings

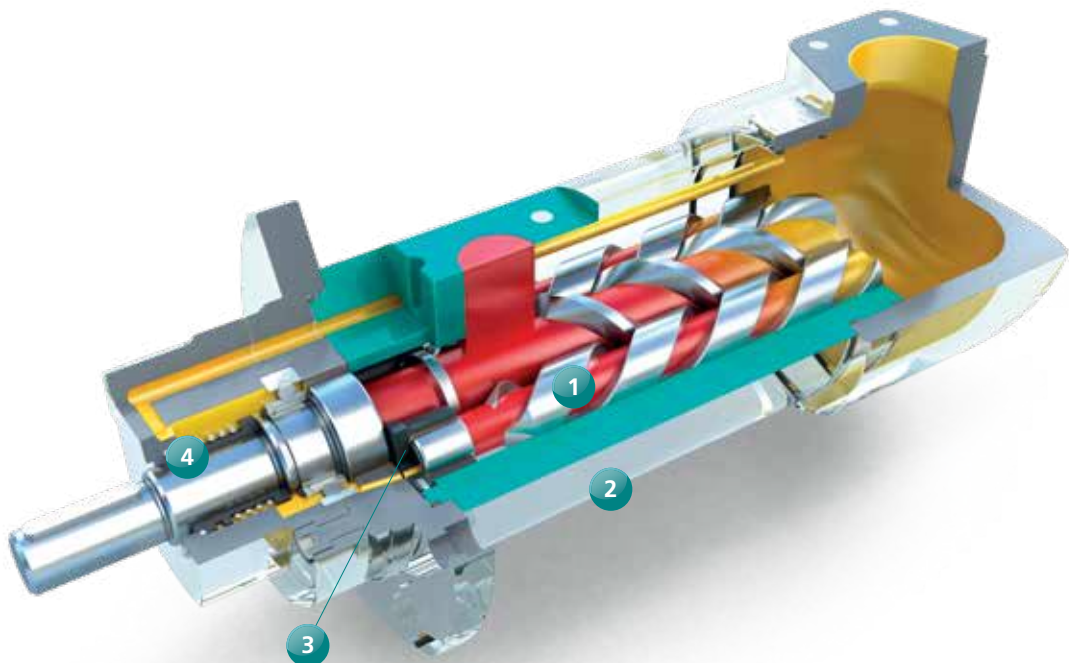
Nitrated bushings help to prevent start up failures and help to support radial loads.

4 Mechanical Seal

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

Advantages

- High efficiency
- Easy maintenance
- Lightweight and small footprint
- Low pulsation
- API 676 3rd ed., optional
- 3-year manufacturer's warranty



4NS SERIES

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 11,000 gpm / 2,500 m³/h
- Pressure up to 1,160 psi / 80 bar
- Temperature up to 570 °F / 300 °C
- Viscosity up to 200,000 cSt

Accessories

- Mounted on or external relief valve
- Vibration sensors
- Temperature sensors
- API 682 cartridge seals
- Various API seal plans

Configurations

- Housing with replaceable liner
- Heating jacket is optional

1 Screws

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

3 Timing Gear

Double helical timing gears transfer the torque with reduced vibration and noise.

2 Housing

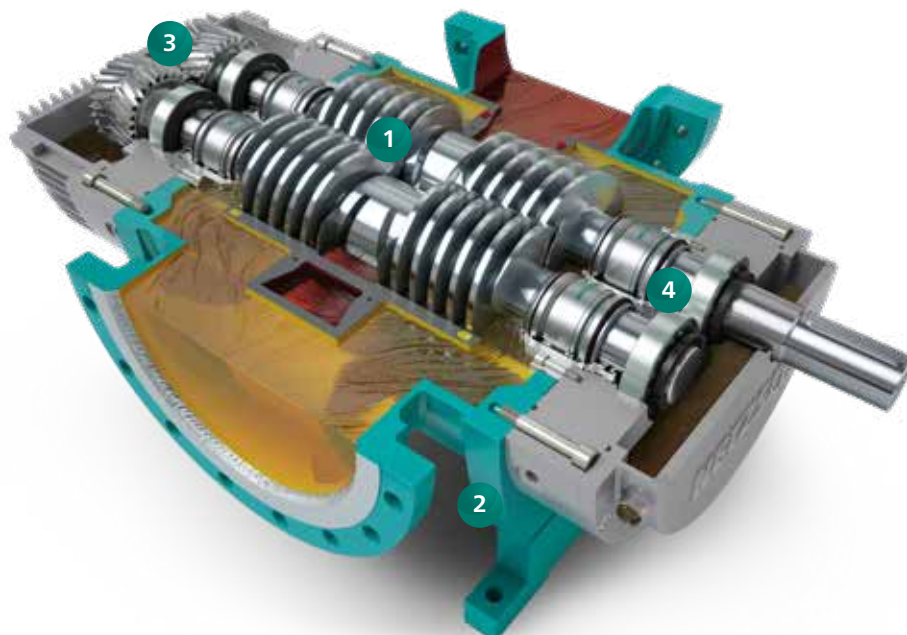
Various ports configurations such as top top, side top or in line.

4 Mechanical Seal

Four mechanical seals under suction pressure.

Advantages

- High Efficiency
- No metal to metal contact
- Small footprint
- Long service life
- Excellent suction capability
- API 676 3rd ed., optional
- 3-year manufacturer's warranty



APPLICATION EXAMPLES

Truck Unloading

- Pump NOTOS®: 2 NS
- Media: Palm oil
- Flow rate: 40 gpm / 9.2 m³/h
- Pressure: 72.5 psi / 5.0 bar
- Temperature: 122 to 140°F /
50 to 60 °C
- Viscosity: 20 to 60 cSt



Boiler Feeding


- Pump NOTOS®: 3 NS
- Media: Fuel Oil
- Flow rate: 93 gpm / 21.2 m³/h
- Pressure: 362 psi / 25 bar
- Temperature: 140 °F / 60 °C
- Viscosity: 622 cSt



Tank Storage

- Pump NOTOS®: 4 NS
- Media: Water emulsion
- Flow rate: 440 to 560 gpm /
100 to 127 m³/h
- Pressure: 261 psi / 18 bar
- Temperature: 95 °F / 35 °C
- Viscosity: 60 to 250 cSt





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 3,700 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 NEMO® progressing cavity pumps, TORNADO® rotary lobe pumps, NOTOS® multiple screw pumps, N.Mac® grinding systems, macerators, dosing systems and equipment custom built and challenging solutions for different applications globally.

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