NETZSCH do Brasil

NETZSCH do Brasil was founded in 1973 and is owned by the German family company Erich Netzsch Holding, which was founded in 1873.

NEMO® Progressing Cavity Pump production was started in 1976 and the product range was adapted to meet the challenges of the most difficult pumping applications in Brazil.

Today NETZSCH do Brasil builds and sells Progressing Cavity Pumps to the Americas (North, Central and South) with all production concentrated in the Pomerode – SC manufacturing unit.

Its full range of pumps are designed to meet the demands of Brazilian industry and include, in addition to NEMO® Progressing Cavity Pumps, plastic centrifugal pumps, sanitary pumps, rotary lobe pumps, high viscosity media pumps, vertical pumps, dosing, and pneumatic pumps. Besides its manufacturing unit in Pomerode,

NETZSCH do Brasil owns 9 sales and service subsidiaries: São Paulo, Minas Gerais, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina, Centro-Oeste, Bahia, and an Export Subsidiary for the Americas which allows a quick, safe and customized service.

The NETZSCH Group is the world’s leading Progressing Cavity Pump manufacturer with a subsidiary in China, and the main headquarters located in Bavaria, Germany.
NEMO® Pumps Application History in the Sugar and Alcohol Industry

Since its foundation in 1973, the sugar and alcohol sector has always been considered a strategic segment because of its critical nature involving a 24 hours a day, 7 days a week schedule, for a harvest which could last between 6 to 8 months.

Applications started with honey, syrup, rich honey, lean honey, polymer dosing, lime and later more complex applications such as slurry, magma and dough.

The NEMO® Pump, whose production started in 1976 with mostly imported components, is now fully manufactured in Brazil by local specialized labor with expert knowledge for the different applications.

Within the group, NETZSCH do Brasil engineers utilize cutting-edge technology for pumping applications in the sugar and alcohol industry.

Experience and Differentiated Service

The ever-growing sugar and alcohol segment allowed NETZSCH do Brasil to refine and expand its knowledge of pump applications in this segment.

In our Research and Development Center in Pomerode/SC we study and test new pump products and applications in the field of sugar and alcohol mills, guaranteeing a flawless operation of the whole system without stops.

Additionally, we support our customers 24 hours a day, 365 days a year with differentiated service and spare parts, keeping up with the segment’s growth and assuring pumping efficiency with reliability and low costs.
Sugar production is one of the oldest consumption goods in Brazil. Since colonial times, the mills have been producing sugar for internal and external consumption.

As development and plantations grew, and the method of extraction and distribution (logistics) of sugar was improved, Brazil became the world’s largest sugar exporter.

Sugarcane, together with other Brazilian growth products, is of large economic and cultural importance thanks to fertile soil, a large plantation area, and an infrastructure which has been improved for many years.
Alcohol

Production of alcohol, as well as sugar, has been in existence for a long time, with the local market absorbing most of the production in Brazil. Constant growth of this market has broadened commercial relations with other countries, optimizing Brazil’s foreign market share. Strong demand of sugar and alcohol is partially due to the internal markets which consume a large part of the national production by means of many subproducts, but it can also be attributed to the exportation levels which add value to the product.

From a technological point of view, Brazil is the most advanced country in the use and production of ethanol as fuel, followed by the USA and at a smaller scale by Argentina and others. This is incentivized by the government reducing taxes in the sugar and alcohol segments, which helps maximize the investments and allows Brazil to maximize commercialization.

Alcohol is an attractive product because of its many applications, that include fuel for industry and transportation. From an energy point of view, it is a non-polluting biodegradable fuel with minimal greenhouse effects like produced by fossil fuels.

Legend

1. Juice
2. Mud
3. Polymer
4. Lime
5. Syrup
6. Molasse A/B
7. Magma
8. Final molasse
9. Chemicals dosing
### Application

**Syrup and Molasse Pump**  
**Product Withdrawal from Evaporators and Cookers**

#### Product Features
- Lightly abrasive
- Non corrosive
- Viscosity: Medium
- Brix: 60° to 80°
- Density: 1.3 kg/l
- Temperature: 40° to 60°C
- Suction: flooded

#### Advantages of the NEMO® Pump
- Low installed power
- Easy maintenance
- No damage of sugar crystals
- Medium operation speed

#### Pump Materials
- Casing: cast iron
- Internal: AISI 420
- Rotor: SAE 1045 plated chromium
- Stator: SBE
- Sealing: special mechanical seal or gasket
Open Reservoir Magma Pump
Sugar Mass from Centrifuge

Product Features

- Abrasive
- Non corrosive
- Viscosity: high
- Brix: 88° to 90°
- Density: 1.5 kg/l
- Temperature: 40° to 60°C
- Suction: Flooded

Advantages of the NEMO® Pump

- No damage of sugar crystal
- No special adjustments needed during assembly
- Shaft sealing works with low pressure
- Operation speed: Low

Pump Materials

- Casing: cast iron
- Internal: AISI 420
- Rotor: SAE 1045 plated chromium
- Stator: CB
- Sealing: special mechanical seal or gasket

![Diagram of Open Reservoir Magma Pump](image)
Continuous Vacuum Pot Pump
Sugar Dough – Vacuum Choke

Product Features
- Abrasive
- Non corrosive
- Viscosity: High
- Brix: 92° to 94°
- Density: 1,5 kg/l
- Temperature: 40°C
- Suction: Vacuum

Pump Materials
- Casing: Cast iron
- Internal: AISI 420
- Rotor: SAE 1045 chromium plated
- Stator: CB
- Sealing: Gasket with water sealing

Advantages of the NEMO® Pump
- No damage of sugar crystals
- No special adjustments needed during assembly
- Mechanical seal works under low pressure
- Operation speed: Low

Magma de 92° Brix

<table>
<thead>
<tr>
<th>Temperature °C</th>
<th>Viscosity [m²/s]</th>
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<tr>
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<tr>
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<td>10,000</td>
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Polymer and Chemicals Dosing Pump
Addition of Polymers to Agglomerate the Solid Particles and Facilitate the Decantation

Product Features
- Non abrasive (polymers)
- Corrosives (acids)
- Viscosity: Large spectrum
- With or without suspended solids
- Density: Large spectrum
- Temperature: 20° to 30°C
- Suction: Flooded

Pump Materials
- Casing: cast iron ou AISI 316
- Internal: AISI 420 or AISI 316
- Rotor: SAE 1045 special chromium or AISI 316 plated
- Stator: special Elastomers for chemical products
- Sealing: Special mechanical seal

Advantages of the NEMO® Pump
- Continuous flow without pulsation
- Keeps dosing precision regardless of backflow pressure
- Keeps physical-chemical properties of the pumped media
- Operation speed: Medium/High
Lime Solution Pump
Lime Addition for pH Control

Product Features
- Abrasive
- Lightly Corrosive
- Viscosity: Low
- Scale Baumé: 10° to 15°
- Density: 1,01 kg/l
- Temperature: 20° to 30°C
- Suction: Flooded

Pump Materials
- Casing: cast iron
- Internal: AISI 420
- Rotor: SAE 1045 chromium plated
- Stator: CB
- Sealing: Special mechanical seal or gasket

Advantages of the NEMO® Pump
- Continuous dosing flow without pulsations
- Dosing precision even with suspended solids
- Easy installation and cleaning
- Operation speed: Médium/Low
Mud Pump
Removal of Mud from Juice After Decantation

Product Features
- Abrasive
- Lightly corrosive
- Viscosity: Low
- 10% to 15% suspended solids
- Density: 1,2 kg/l
- Temperature: 90°C
- Suction: Flooded

Pump Materials
- Casing: Cast iron
- Internos: AISI 420
- Rotor: AISI 420 special chrome
- Stator: SBE
- Sealing: Special mechanical seal or gasket

Advantages of the NEMO® Pump
- Keeps the mud cluster preventing the breakdown of the pumping flakes
- Less consumption of polymer due to low shear
- Wear-resistant: Low installed power
- Operation speed: Medium/Low
The NETZSCH Group is an owner-managed, internationally operating technology company headquartered in Germany.

The three Business Units – Pumps & Systems, Analyzing & Testing and Grinding & Dispersing – provide tailored solutions for highest-level needs. Over 2,300 employees at 130 sales and production centers in 23 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, Screw Pumps, Macerators/Grinders, Dosing Systems and equipment custom built and challenging solutions for different applications on a global base.