

NETZSCH

Proven Excellence.



Positive Displacement Pumps and Grinders for the Poultry Industry

Sanitary and Industrial Equipment for Complex Fluid Handling

Pumps & Systems

Solutions for the Poultry Industry

for optimal performance in the sanitary and waste processes in your plant

The NETZSCH Business Unit Pumps & Systems supplies pumps to the Food markets worldwide with uncompromising sanitary and the most demanding process requirements with FDA, 3A and EHEDG compliant pump solutions. Our global experience as a leading supplier in the market offers unsurpassed application knowledge to provide you the best solution for your sanitary process and for your harsh and challenging conditions on the waste stream side.

Typical Applications

▪ **Chicken Trimmings**

The NEMO® Progressing Cavity Pump offers a low shear rate for product that is shear sensitive. It has a high flow and pressure capacity to move the product from small meat parts up to breast fillets. Meat parts can be conveyed for long distances in piping without damage.

▪ **Seasoning Fluids Metering**

For seasoning and brine injection and fluids metering processes, NEMO® Mini Progressing Cavity Pump and the PERIPRO® peristaltic pump offers high metering accuracy (deviation of < 1%).

Fixed or mobile Barrel Emptying systems are also available and empty pails and 55 gallon drums leaving almost no residue.

See Barrel Emptying Flyer for more information



▪ **Offal and Organ Meats**

Are easily conveyed either separately or all together without compromising the product.

▪ **Blood**

The TORNADO® Rotary Lobe, NEMO® Progressing Cavity and PERIPRO® Peristaltic pumps are perfectly suited for shear sensitive products, like blood, while still retaining its properties.

▪ **Cooking Oils**

NOTOS® Multiple Screw pumps handle high pressure, have high suction capability, low pulsation, and a small footprint. All metal parts in contact with the fluids are made of 316L stainless.

▪ **X-RAYS Inspection Systems**

NEMO® pumps provide a smooth, constant flow through X-ray systems installed in pipe lines. The constant, non-pulsating flow and

high pressure capability—unlike diaphragm pumps—makes this process more economically efficient, since the discard window is very minimal as compared to intermittent flows generated by other pump technologies.

▪ **Waste Food Including DOA Birds**

With an N.Mac® Twin Shaft Grinder installed horizontally on top of a NEMO® progressing cavity hopper pump, DOAs and other waste can be easily ground to small fragments and conveyed to following processes.

▪ **Waste Water**

NETZSCH pumps have been proven for various kinds of sludge conveying and chemical metering treatments for waste water, thin sludge, FOG (Fats, Oil, Grease), DAF system sludge, activated sludge, primary and secondary sludge, and thickened sludge applications.

Applications



Trimmings

Application: small parts, up to breast fillets pumped with no damage. NEMO® NM063BH02S12H Hopper Pumps in use with great success in Alabama, sold in 2021. 5,000 lbs/h / 2,268 kg/h 32 gpm / 7.3 m³/hr, 30 psi / 2 bar 130 rpm at 7.5HP

See video



Ground meat

Application: NEMO® NM076BH02S12H, with rectangular inlet and feeding screw, for ground chicken meat for chicken sausage, 33 gpm / 7.5 m³/hr, 112 psi / 7.7 bar, 15 HP, 97 rpm.



Ground meat

Application: NEMO® pump used in a line of processing / re-grinding "bricks" of frozen ground chicken meat.



Viscera

Application: Internal organs in the evisceration line. NEMO® pump applied in the Southwest, very low maintenance since installation in 2020.

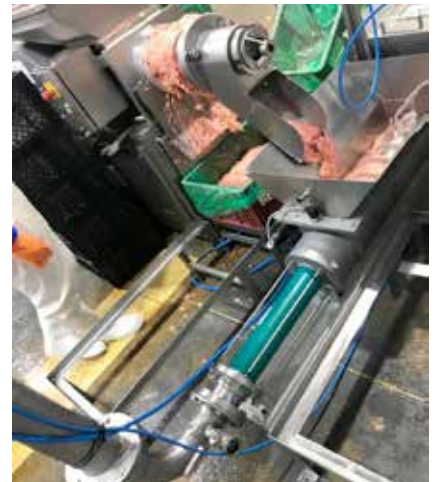
Applications

for optimal performance of your pump with a significantly longer service life



Blood

Application: NEMO® pumping blood that is commonly sold to further processors who dry the blood to use in animal food or as thickening, rehydrating, or color- and flavor-enhancing agents in the food industry.



MSM (mechanically separated meat) or MDM (mechanically deboned meat)

Application: MSM or MDM with NEMO® NM090BY pump.
NETZSCH has hundreds of pumps in these applications globally.
NETZSCH pumps are able to handle the high viscosity of the product and convey it over long distances and with high pressures if needed.



DOA Birds

DOAs are normally scraped into containers on the outside wall from slaughtering areas, those containers are moved to the waste area with forklifts.

Usage of NEMO® PC pumps plus one or two grinders mounted horizontally on top of the hopper is a cleaner

solution. The grinder reduces the DOA to small fragments. The sludge can then be pumped easily to the following processes.



Onsite waste water treatment operations

Application at left: NEMO® Pump NM045BY01L07V.2, for blended polymer for waste water treatment. Flow rate is 60 gpm / 14 m³/h, the pressure is up to 25 psi / 1.5 bar with ambient temperature.

We offer pumps for raw sludge conveying , DAF systems pumps,

dewatered sludge and flocculant metering applications.

Application above: N.Mac® Twin Shaft Grinder and a NEMO® Progressing Cavity Pump in FSIP® design installed in wastewater treatment plant for primary sludge.

NEMO® Progressing Cavity Pump

PRODUCTS AND COMPONENTS

NEMO® BH Sanitary Advanced Progressing Cavity Pump is ideal for handling viscous fluids and meat emulsions.



NEMO® BH Sanitary Advanced Pumps provide superior quality and versatility for food, cosmetics, pharmaceutical and chemical/ biochemical industries. Our pumps are appropriate for clean-in-place processes when provided with optional flushing connections. They also meet 3A standard requirements and can be disassembled quickly for easy cleaning.

The exclusive NEMO® progressing cavity modular pump design, combined with food grade Nitrile, EPDM or Viton stators create a proven and reliable solution for all of your sanitary pump applications.

Wide range of capacities and pressures

- Flow rates up to 620 gpm / 140 m³/h
- Pressure 360 psi / 24 bar
- Particles 3/4" / 18 mm
- Ball Passage 3" / 76 mm

Features

- All wetted parts are in 316 stainless steel and are polished to 32 micro inch Ra.
- Crevice free and no dead spaces for optimal cleaning.
- Available with CIP ports (standard or tangential arrangement).
- Standard Tri-Clamp
- Single or double acting mechanical seal (multiple face materials available).
- Steady, non-pulsating metered flow.
- Perfect for shear sensitive products.
- Space saving block construction.

Your Benefits

- Very smooth conveyance.
- Easy to clean and service.
- Complies with your 3A Sanitary Standard FDA certified materials and PL certified materials requirements Manufactured/ tested according to EHEDG and QHD regulations.
- Low mean time between repairs.
- Suitable for SIP and CIP applications.
- Economical operation and routine maintenance requirements only.

Our barrel emptying systems with a sanitary NEMO® progressing cavity pump provides a great solution for a seasoning injection line or for sauces for pre-cooked meal preparation lines.



TORNADO® Rotary Lobe Pumps

POWERFUL, ROBUST AND COMPACT

The oil-free construction and lobe design makes the hygienic T.Sano® ideal for food industry.

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 metering applications. TORNADO® hygienic rotary lobe pumps are normally used for fluids having shear sensitive, with or without solids, thixotropic and dilatant, adhesive and lubricating and non lubricating fluids.

CIP-/SIP-Process

For the CIP process, the entire system requires a cleaning fluid velocity of at least 5 ft/s. / 1.5 m/s. As the pump reaches the required flow speed, it can also be used as a cleaning pump, i.e. the conveying and cleaning can be done by the same pump. All materials are in line with CIP and SIP processes.

Wide range of capacities and pressures

- Flow rates up to 520 gpm / 120 m³/h
- Pressures up to 120 psi / 8 bar
- In 6 different sizes
- Medium up to high viscosity (300 cps to 100.000 cps)



Features

- Full Service -in-Place (FSIP®) maintenance friendly design
- Full flang-to-flange access
- Lubrication-free design
- Compact design
- No dead spaces
- Reversible flow direction
- Flow rate in proportion to speed
- Smallest installation envelope of any rotary lobe pump technology in its class

Your benefits

- High performance
- Suitable for a wide temperature range
- CIP and SIP capable
- Gentle product handling
- Low vibration, low noise emission
- Easy maintenance of the conveying elements and shaft seal without removing the pump from the pipeline

Video for TORNADO® and NEMO® Pump details



PERIPRO® Peristaltic Pump

PRODUCTS AND COMPONENTS

The food version of the PERIPRO® peristaltic pump is optimized for hygienic applications. It is compatible with food and beverages as well as cosmetic products and complies with current specifications and regulations.

PERIPRO® food version is a peristaltic pump for sensitive product suitable for pumping food and cosmetics. Their design is based on the use of special peristaltic hoses made of food grade nitrile (FDA approved). Hygienic connections according to DIN 11851 or Tri-Clamp and a design that facilitates CIP cleaning through simple disassembly round off this construction. The inner extruded layer of the peristaltic hose increases the life of this component, thus reducing the consumption of spares and maintenance operations. At the same time, it improves the performance of the cleaning process with temperatures of up to 176°F (80 °C).

The unlimited dry running and the suction capacity of up to 13.5 psi (9.5 mWc) complement the advantages of the PERIPRO® pumps

See video



Features

- The latest generation peristaltic hose in FDA approved food Nitrile DIN 11851 or Tri-clamp connections
- Easy and quick to remove the front cover to aid CIP cleaning processes
- Front removal roller, support, base plate and covers
- Stainless steel base plate and cover
- Food version of the pump with the hose in FDA approved food Nitrile, hygienic connections, easy and quick removal of front cover and front removal roller

Your benefits

- Energy savings of up to 30 %
- 90 % less lubricant required
- Food grade internal lubricant
- Ease of hose replacement
- Wide range of operation
- Low starting torque eliminates the friction against the hoses
- Ease of maintenance and operation
- Low shear fluid pumping
- Maximum process efficiency
- Self-priming pump
- Full control of metering with $\pm 1\%$ accuracy

Wide range of capacities and pressures

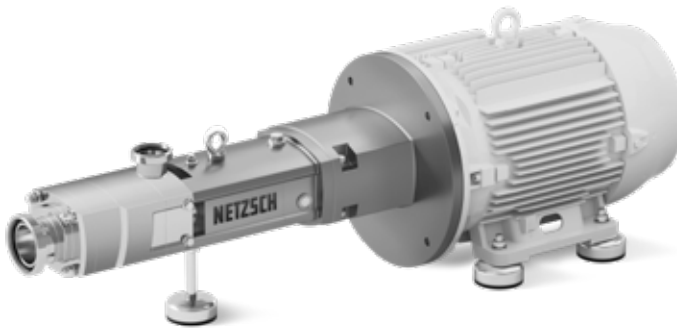
- Discharge pressures of up to 145 psi / 10 bar
- Flow rates from 0.05 to 230 gpm / 11 to 52,000 l/h
- The NETZSCH PERIPRO® can extend the maximum flow up to 460 gpm/ 104,000 l/h using a double head pump.



NOTOS® Multiple Screw Pump

PRODUCTS AND COMPONENTS

The food version of the PERIPRO® peristaltic pump is optimized for hygienic applications. It is compatible with food and beverages as well as cosmetic products and complies with current specifications and regulations.



All sizes meet FDA requirements
Pump sizes 1, 2, and 3 meet 3A and EHEDG requirements

The pump is made of AISI 316L stainless steel and polished according to international standards, making it easy to clean (CIP) and to sterilize (SIP) in place. As there is no contact between the rotating parts, the pump speed can be increased. Therefore, cleaning fluid (CIP fluid) and the main product can be carried out by the 2NSH itself without the need for an auxiliary system or a separate CIP pump.

Small space requirements due to the compact design. Foot and flange mounting options are available.

Wide range of capacities and pressures

- Flow rate up to 880 gpm / 200 m³/h
- Pressure up to 230 psi / 16 bar

Features

NOTOS® 2NSH meets the high requirements of food, beverage, chemical, pharmaceutical and cosmetic industries:

- Metal parts in contact with the fluid are made of 316L stainless steel
- High suction capability (low NPSHr)
- No contact between the rotating parts
- Reversible flow
- Low pulsation
- No dead spaces
- Smooth feeding of the pumped product

See video



Your benefits

- Versatile use eliminating the need for a CIP pump
- Easy maintenance: simple assembly/disassembly
- Flexibility: use the same equipment for pumping fluids with low or high temperature/viscosity
- No damage to the pumped product

Product flexibility

Due to the operation principle and the design of this positive displacement pump, fluids with the following properties can be conveyed:

- Low to high viscosity
- With/without solids
- Shear sensitive and shear-stable

N.Mac[®] Twin Shaft Grinders

PRODUCTS AND COMPONENTS

N.Mac[®] Channel Twin Shaft Grinder

The N.Mac[®] channel twin shaft grinder macerates coarse and solid contaminants in fluids. It is ideal for a wide range of applications from wastewater treatment, substrates for biogas plants to food and fruit residues. The various housing designs allow installation in sewers as well as in piping systems to prevent pipe blockage and protect downstream equipment such as pumps.

Broad range of applications

The channel twin shaft grinder is preferably used with media in the following industries:

- Biogas plants
- Agriculture
- Slaughterhouses and recycling plants
- Canning factories
- Industrial kitchens
- Sugar factories

Channel Twin Shaft Grinders can also be installed horizontally on top of a NEMO[®] Open hopper Pump.

Wide range of capacities

Flow rates of up to 1,750 gpm / 400 m³/h with a solid content of up to 10%.

Features

- Housing for inline or channel installations
- Twin shaft technology for reduction of solid particles
- Low power installation at 2.2 kW (and 3 kW)
- Low rotation of the cutters at high torque (1:29 reduction)
- Hexagonal shaft in hardened steel
- Standard cutter arrangement 7/7 teeth
- Optional control unit to reverse direction of rotation in case of blockage
- Optional extended shaft for channel version
- Patented bearing and mechanical seal cartridges US #9,422,985 B2
- 3 Year Warranty

Benefits

- Shock absorption system
- Mechanical seals with quench
- Modular design of cutting units
- Easy maintenance in place
- Optional clearing comb for fibrous materials
- Efficiency increasing side rails (flow and cutting)



N.Mac[®] in Inline and Channel version

Complex Fluid Handling Solutions

FOR CHALLENGING PROCESS WASTE AND SLUDGE CONVEYING

NETZSCH also offers a complete line of industrial pumps and grinders for the waste management systems of your poultry plant. We have decades experience and thousands of installed pumps in the waste sludge conveying, DAF, and chemical metering systems in waste water treatment applications globally.

NEMO® Progressing
Cavity Pumps



TORNADO® Rotary
Lobe Pumps



PERIPRO®
Peristaltic
Pumps



NETZSCH Service and Spare Parts

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 your system. We have over 60 years with more than 1,000,000 installed pumps behind us.


Spare Parts and Service

Our distributor / representative partners are available for quick and economic service of your pump at your site. Call to learn who your local representative is, call our Customer Service team at:
1-610 363-8010 Exton
1-346 445-2400 Houston
1-705 797-8426 Canada

24 / 7 EMERGENCY HOTLINE:

For urgent spare parts
or service issues, please call
1-484-986-8480





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 4,600 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 NEMO® progressing cavity pumps, TORNADO® rotary lobe pumps, NOTOS® screw pumps, PERIPRO® peristaltic pumps, macerators/grinders, metering technology and equipment custom built for challenging solutions for different applications globally.

Proven Excellence.

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