

# NEMO® Progressing Cavity Pumps Characteristics and Typical Components

## Universal Installation

NEMO® progressing cavity pumps are utilized in various industries to pump many types of fluids in a continuous, low pulsating manner, while maintaining an accurate flow.

## Wide Range of Applications

The pumps are specifically designed for products with the following characteristics:

- High Solids content  
(maximum particle sizes up to 6"/150 mm) and free of solids
- Low to high viscosity  
(1 cps – 3 million cps)
- Thixotropic and dilatant
- Shear-sensitive
- Abrasive
- Lubricating and non-lubricating
- Aggressive (pH 0 – 14)
- Adhesive
- Toxic

## Large Range of Capacities and Pressures

- Capacities from a few mls up to 2,200 gpm / 500 m<sup>3</sup>/h
- Number of stages ranging from 1 up to 8 pressures from 90 psi up to 720 psi / 6 up to 48 bar as standard, up to 3,400 psi / 240 bar as special design

## Various Pumping Elements

Four different rotor/stator geometries choices allow optimization of the pump characteristics for specific applications.

## Extensive Range of materials of Construction

Wetted parts are available in numerous materials. Standard housings are made of cast iron and stainless steel. Parts are available in mild steel, stainless steel and tool steel. Other materials are available upon request. Highly abrasion resistant natural rubber elastomers, oil- acid- and alkali-proof elastomers, Aflas and Viton are available.

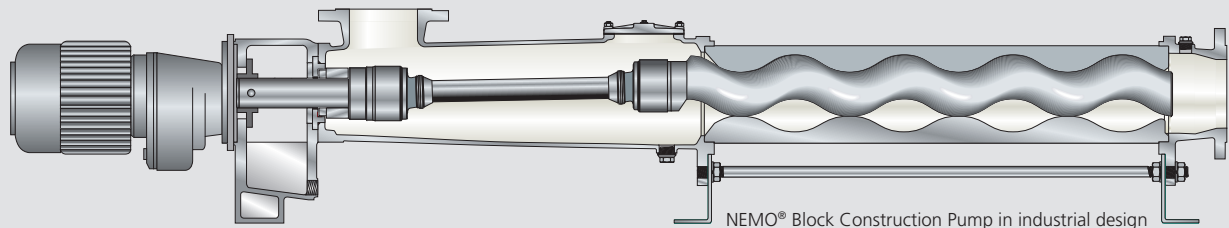
When elastomers cannot be used due to high temperatures or compatibility reasons, NETZSCH offers a variety of solid materials.

## A Wide Variety of Shaft Sealing Options

Shaft seals range from single-acting mechanical seals, with and without quench, to double-acting mechanical seals in back-to-back or tandem arrangements as well as cartridge seals per customer specification. Gland packings, lip seals and specially designed seals are available. For toxic fluids, pumps with a magnetic coupling which is 100% leak proof are available.

## Additional Features

- High suction capability up to 30 ftwc/9 mwc
- Reversible direction of rotation and thus flow
- Installation in any position
- Smooth and quiet operation
- Temperatures of -5 up to +570°F or -20 up to 300°C



Optional: Energy saving NETZSCH iFD-Stator®

## NEMO® – Progressing Cavity Pumps Applications, Performance, and Product Program

### Progressing Cavity Pumps

#### Performance

- Capacities from 0.0004 gpm (0.1 l/h) up to 2,200 gpm (500 m<sup>3</sup>/h)
- Pressures up to 720 psi / 48 bar
- Standard, up to 3,400 psi / 240 bar as high pressure

#### Description

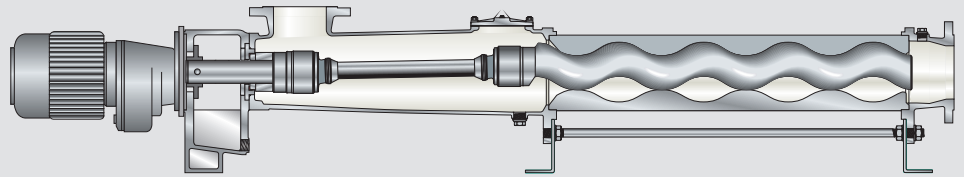
Compact design with flanged drive; low investment and operating maintenance costs. Four rotor/stator geometries for optimized performance. Model designed with bearing housing and drive shaft allows for universal use of all types of drives. Designed with high dosing accuracy (deviation < 1%).

#### Range of Applications

Industrial applications in environmental, food, oil and chemical industries for low and highly viscous fluids with or without solids.

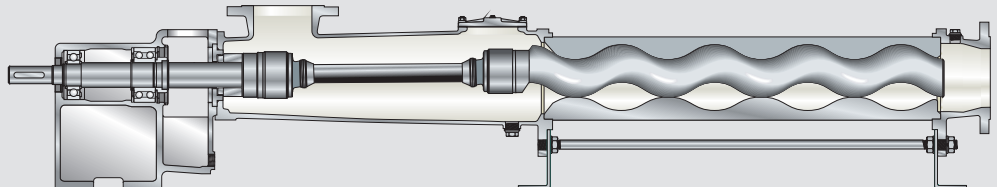
#### NEMO® BY

In block construction design



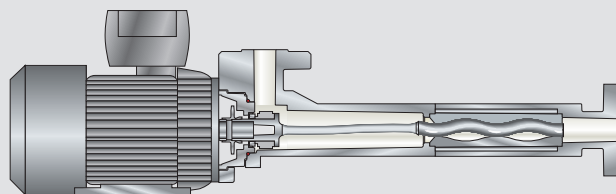
#### NEMO® SY

With bearing Housing and drive shaft



#### NEMO® C.Pro®

Plastic Dosing Pump



# NEMO® – Open Hopper Progressing Cavity Pumps Applications, Performance, and Product Program

## Performance

- Capacities up to 308 gpm (80 m<sup>3</sup>/h)
- Pressures up to 720 psi / 48 bar

## Description

Housing with removable rectangular/ square hopper and coupling rod with feeding screw with or without force

feed chamber for easier entry of the fluid into the rotor and stator.

Models designed with enlarged rectangular hopper, tapered force feed chamber and patented feeding auger. Models available with integrated bridge breaker, mixing additions, flushing stud at the hopper dousing for the best blending of substrates.

Models with aBP-Module® are available for applications where media tends to bridge.

## Range of Applications

Industrial applications in environmental, food, and chemical industries. Models are available for highly viscous and non free-flowing fluids with or without solids, for compact and crumbly media that do not have a tendency to bridge, and for compact and crumbly media that do have a tendency to bridge.

## Technical Information

Hopper dimensions can be adjusted to fit specific applications.

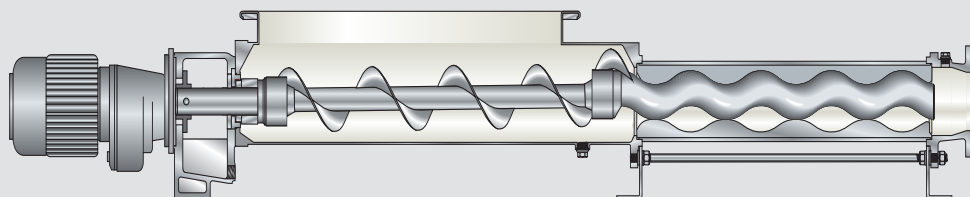
### NEMO® BO / BS

in block construction design with directly flanged drive

or as

### NEMO® SO / SS

with bearing housing and drive shaft



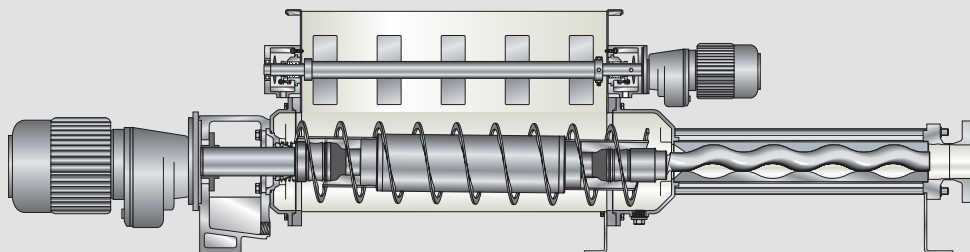
### NEMO® BP

in block construction design with directly flanged drive

or as

### NEMO® SP

with bearing housing and drive shaft



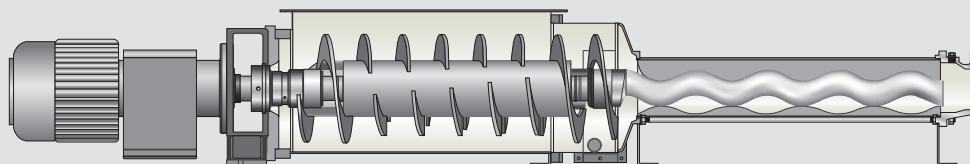
### NEMO® B.Max®

in block construction design with directly flanged drive

or as

### NEMO® B.Max®

with bearing housing and drive shaft



## NEMO® – Sanitary Progressing Cavity Pumps Applications, Performance, and Product Program

### General

The pumps are designed and manufactured according to EHEDG and QHD-standards; they are suitable for CIP and SIP and are constructed in accordance with the US 3-A Sanitary Standards. Three rotor/stator geometries for optimal performance

### Performance

- Capacities of 0.025 gph up to 620 gpm (140 m<sup>3</sup>/h)
- Pressures up to 540 psi / 36 bar

### Description

The smooth crevice-free flexible rod requires no maintenance and is not subject to wear, thus enabling the pumping of highly sensitive and abrasive products.

Compact design models with directly flanged drive results in low initial investment, economical operation and maintenance. High dosing accuracy (deviation 1%).

Models with bearing housing and drive shaft allows for use of all types of drives.

### Range of Applications

For sanitary applications and optimal cleaning in food, pharmaceutical, cosmetics and chemical/biochemical industries for non-viscous up to highly viscous fluids with or without solids.

### NEMO®

Sanitary Pumps

