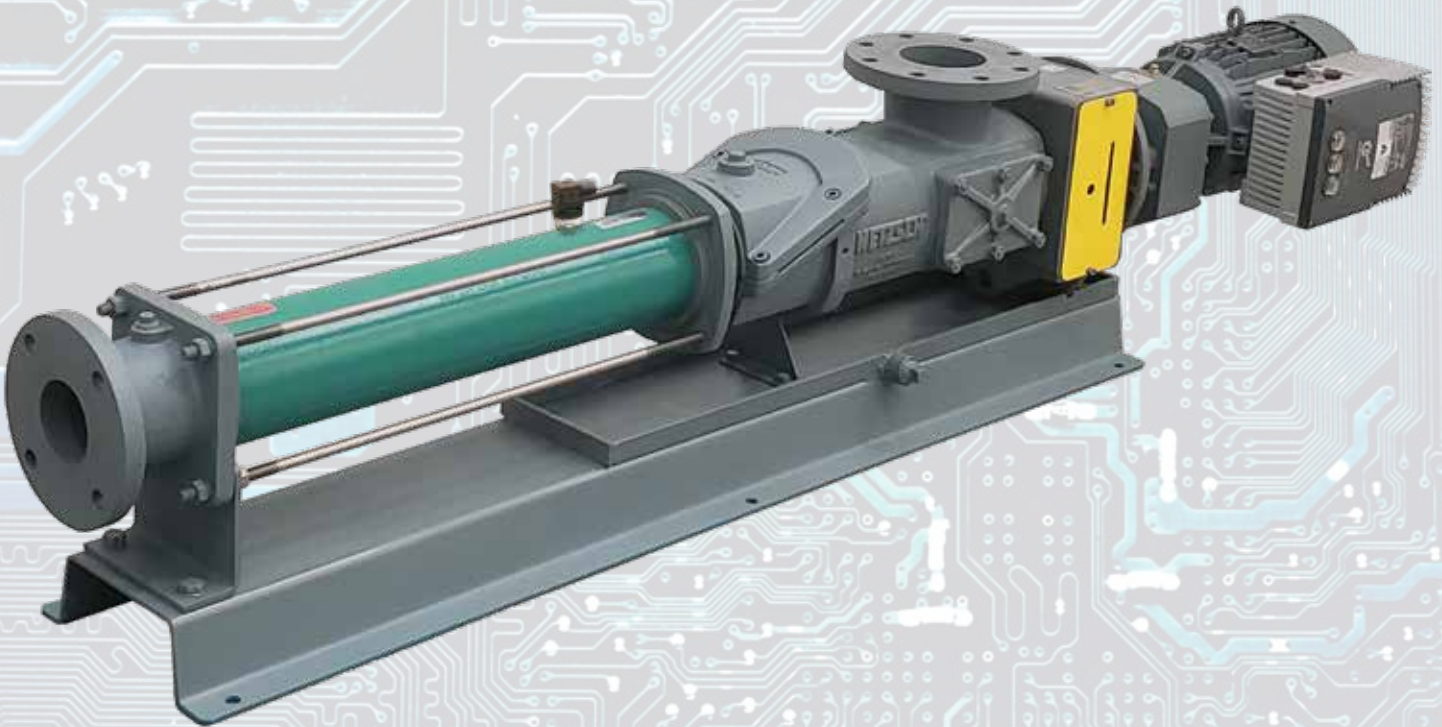


# NETZSCH

Proven Excellence.



## Pumps with Independent Controls

Decentralized Drive Technology - Greater Flexibility and Lower Cost

One Stop Shopping for Pump Skid Packages

Pumps & Systems

# NETZSCH Pumps

With inverters for decentralized drives for NEMO® and TORNADO® Pumps

## Control Capabilities only available on the NETZSCH pumps with the Basic Model

- Potentiometer allows for linear flow control
- Ability to change the direction of rotation
- IP66 rating protects against dust and water ingress
- Status lights for quick and easy diagnostics
- Compact and efficient pump skid
- Completely wired to plug and play
- Standardly capable of 5:1 turndown; 10:1 turndown available as option



## Features

- Motor, gear reducer, VFD with Speed Pot and Switch.
- Preprogrammed VFD mounted on the AC Motor for compactness.
- Left/Off/Right switch for control over the direction of pump rotation and flow direction.
- Speed potentiometer for local speed control.
- 4 Digital inputs, 2 Analog inputs standard SK180E
- 2 Additional Digital inputs on the SK200E
- Optional handheld programmer for diagnostics

## Dual Potentiometers

One potentiometer is provided for switching left/off/right pump rotation and another for speed control.



## Available Input Power

Voltage	HP Rating
115V-1	0.33 - 0.75
240V-1	0.33 - 1.5
240V-3	0.33 - 1.5
480V-3	0.25- 3.0

## Other advantages of mounting the VFD directly to the motor

- Lower electrical noise
- No additional or separate VFD enclosure required
- VFD only requires fusing/Circuit Breaker overcurrent protection and a power disconnect means

## Control Capabilities only available on the NETZSCH pumps with the Advanced Model

- Potentiometer allows for linear flow control
- Works with optional overpressure protection
- Works with optional dry run protection
- Ability to work with PID controls
- Status lights for quick and easy diagnostics
- IP66 rating protects against dust and water ingress
- Change local pump control to remote pump control
- Handheld program tool for simple and efficient programming
- Compact and efficient pump skid
- Completely wired to plug and play
- Standardly capable of 5:1 turndown; 10:1 turndown available as option



## Features

### Local Mode Operation

- Inverter will run as soon as switch is placed in "Local" position
- Speed reference will come from speed potentiometer mounted to the side of the inverter (potentiometer is not lockable)

### Remote Mode Operation

- Inverter can be set up to run as soon as the switch is placed in the "Remote" position
- Inverter can also be configured to run via remote digital signal
- Speed reference comes from remote analog signal (0-10 V or 4-20 mA)

### M12 Quick Disconnects

Up to 4 quick disconnects can be installed on inverter for cable connection:

- Dry run controller (digital input)
- Pressure sensor (analog input)
- 2x digital outputs and 1x analog output for control feedback
- 2x digital inputs and 1x analog input for remote run/speed control

### Potentiometer Adapter

With the Potentiometer, a robust unit with switching (right-off-left) and a potentiometer may be integrated. Handheld Programmer is included.

### Sensor Inputs

0-10 V or 4-20 mA input available for pressure sensor

- Inverter can be set up to monitor these analog signals
- Level can be programmed so that once exceeded, the inverter will stop/trip

1. Dry run controller input available for

NETZSCH STP3 temperature probe

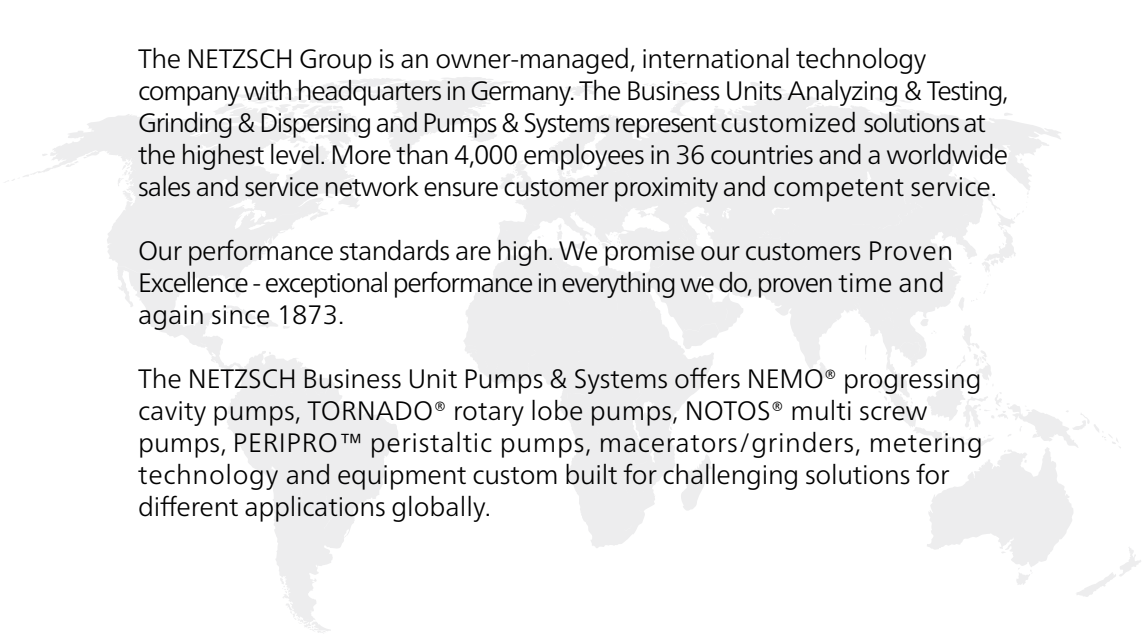
- Relay contacts from temperature controller connected to overtemperature input
- When relay contacts open from temperature controller, the inverter will stop/trip

2. Overpressure input available for overpressure protection

- Relay contacts for pressure switch connected to overpressure input
- When relay contacts open from pressure switch, the inverter will stop/trip
- When relay contacts open from thermal controller, the inverter will stop/trip

### Available Input Power

Voltage	HP Rating	Voltage	HP Rating	Voltage	HP Rating
115V~1	0.33 - 0.5	240V~3	0.33 - 1.5	480V~3	0.75 - 3.0
	0.75 - 1.0		2.0 - 3.0		4.0 - 5.0
0.33 - 0.75	4.0 - 5.0		7.5 - 10		
240V~1	1.0 - 1.5		7.5 - 15		15 - 30



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 4,000 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® multi screw pumps, PERIPRO™ peristaltic pumps, macerators/grinders, metering technology and equipment custom built for challenging solutions for different applications globally.

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