Pumps with Independent Controls

Decentralized Drive Technology - Greater Flexibility and Lower Cost

One Stop Shopping for Pump Skid Packages
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

<table>
<thead>
<tr>
<th>Voltage</th>
<th>HP Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>115V-1</td>
<td>0.33 - 0.75</td>
</tr>
<tr>
<td>240V-1</td>
<td>0.33 - 1.5</td>
</tr>
<tr>
<td>240V-3</td>
<td>0.33 - 1.5</td>
</tr>
<tr>
<td>480V-3</td>
<td>0.25 - 3.0</td>
</tr>
</tbody>
</table>

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
TORNADO® Pumps

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)

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

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

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

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<td>115V~1</td>
<td>0.33 - 0.5</td>
<td>0.33 - 1.5</td>
<td>480V~3</td>
<td>0.75 - 3.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.75 - 1.0</td>
<td>2.0 - 3.0</td>
<td></td>
<td>4.0 - 5.0</td>
<td></td>
</tr>
<tr>
<td>240V~1</td>
<td>0.33 - 0.75</td>
<td>4.0 - 5.0</td>
<td>7.5 - 10</td>
<td>15 - 30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.0 - 1.5</td>
<td>7.5 - 15</td>
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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 3,800 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® twin shaft grinders, macerators, dosing systems and equipment custom built and challenging solutions for different applications globally.

Proven Excellence