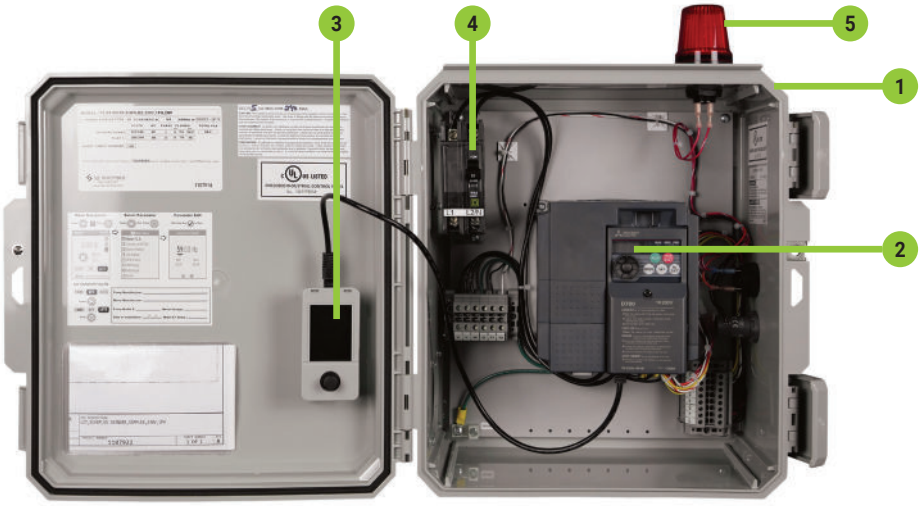
VARIOSPEED® GRINDER SIMPLEX CONTROL PANEL

Variable Frequency Drive for Grinder Pumps



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5 YEAR LIMITED WARRANTY

The Simplex VARIOspeed® Grinder Control Panels are available for single phase or for three phase incoming power. Both versions are designed to control a three phase sewage grinder pump in level control applications. Float switches activate a Variable Frequency Drive (VFD) to turn the pump on and off. If a high level alarm condition occurs, it activates the audible/visual alarm system. The VARIOspeed® Grinder control panel is able to reverse on start to clear any debris in the impeller. In addition, it can detect high-amp conditions during pump run, indicative of clogging and automatically reverse the impeller. This is done momentarily and repeatedly until the binding material has been shredded to a size that can easily pass through the pump. This control method reduces clogging and potential failure resulting from a locked rotor.

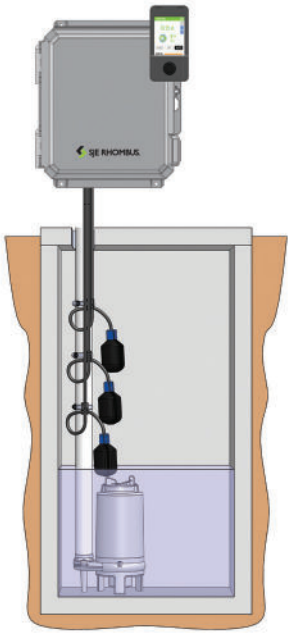
FEATURES

- Quick start wizard for easy setup
  1. Enter motor amps (FLA)
  2. Enter motor horsepower (HP)
  3. Enter motor voltage (V)
  4. Perform motor auto-tuning
- Graphic color display (LCD):
  - High Brightness / Direct sunlight readable
  - Removable/handheld for easy programming
  - Pump run indication (FWD or REV)
  - Pump speed (Hz)
  - Pump current (A)
  - Float switch status
  - Elapse time meter/cycle counter
  - Message bar (Status & Alarm)
  - Alarm history
  - Password protection
  - Rotary button for easy menu navigation
- Quick connect terminals for ease of troubleshooting and service
- Pump dry run alarm
- Thermal cutout protection
- 2 or 3 float switch operation
- Pump motor overload protection
- Pump run high level alarm
- Max pump cycle time limiter
- 3 auto-reverse modes available (multiple modes can be selected)
  - Auto-reverse on start (clears the pump before starting the pump cycle)
  - Auto-reverse on stop (clears the pump after the pump cycle)
  - Auto-reverse on High Amps Detection (during a run cycle)

COMPONENTS

1. Enclosure: NEMA 3R ultraviolet stabilized thermoplastic rated for outdoor use with mounting flanges, padlockable cover

   Note: See specifications on back side for sizing.
2. Variable Frequency Drive
3. LCD VFD display
4. Circuit breaker
5. LED beacon
6. Vents for VFD cooling (not shown)
7. Horn with Test/Silence button (not shown)



SJE RHOMBUS®

9500598C Rev 04/25

VARIOSPEED® SIMPLEX GRINDER CONTROL PANEL - Variable Frequency Drive for grinder pumps.

Part #	Model	Input Voltage	Pump Rating	HP	Max Out. Amps	Enclosure Size	Shipping Weight
1107914	VSGS-240-1-11	208-240V, 1 Phase	**208/230V, 3 Phase**	**2**	**11A**	14 x 12 x 6	18 lbs.
1107915	VSGS-240-1-17.8[1]	208-240V, 1 Phase	**208/230V, 3 Phase**	**3-5**	**17.8A**	18 x 16 x 10	33 lbs.
1113571	VSGS-240-1-28[1]	208-240V, 1 Phase	**208/230V, 3 Phase**	**7.5-10**	**28.0A**	28 x 20 x 12	42 lbs.
1107916	VSGS-240-3-11	208-240V, 3 Phase	**208/230V, 3 Phase**	**2**	**11A**	14 x 12 x 6	18 lbs.
1107917	VSGS-240-3-16.5	208-240V, 3 Phase	**208/230V, 3 Phase**	**5**	**16.5A**	14 x 12 x 6	26 lbs.
1107918	VSGS-240-3-31.8	208-240V, 3 Phase	**208/230V, 3 Phase**	**7.5-10**	**31.8A**	18 x 16 x 10	33 lbs.

[1]Model not UL Listed

SELECTING THE CORRECT VFD

1. Determine the number of phase and voltage available on site. If three phase is available, use models rated for three phase incoming power.
2. Select a pump with the same voltage rating as the incoming power (motor must be three phase).
3. Check pump motor nameplate Full Load Amps (FLA) for proper VFD sizing.
4. Select a VFD with an output amp rating equal or higher than motor FLA.

SPECIFICATIONS

CONTROL: VFD motor control (Sensorless Vector Control)
3 x Float Switch Inputs (Stop/Start/High Level)
1 x Thermal Cutout Input
1 x Aux Alarm Relay Output
Pump run/direction indication (FWD or REV)
Pump speed (Hz) and Amps (A) indication
Pump motor overload protection
Pump dry run alarm

ENCLOSURE: NEMA 3R ultraviolet stabilized thermoplastic rated for outdoor use with mounting flanges, padlockable cover

ENVIRONMENTAL: Surrounding air temperature: 14°F to 104°F (-10°C to 40°C)
Panel internal temperature: 14°F to 122°F (-10°C to 50°C)
Storage temperature: -4°F to 131°F (-20°C to 55°C)
Altitude: Maximum of 3,280 ft (1,000 m) above sea level

All conduits must be properly sealed to prevent sewer gas from entering the enclosure. Not rated for installation in hazardous locations.

ELECTRICAL: Input voltage: 240V nominal
208-240V 50Hz/60Hz, single phase for VSGS-240-1 models
208-240V 50Hz/60Hz, three phase for VSGS-240-3 models

Note: The output voltage cannot exceed the input voltage.

SJE Rhombus® recommends using the SJE MilliAmpMAster™ Control Switch, SJE MegaMaster® Control Switch or the EZconnex® Float Switch Connection System for level control and high level alarm. For ordering information, please see our catalog pages at www.sjerhombus.com.