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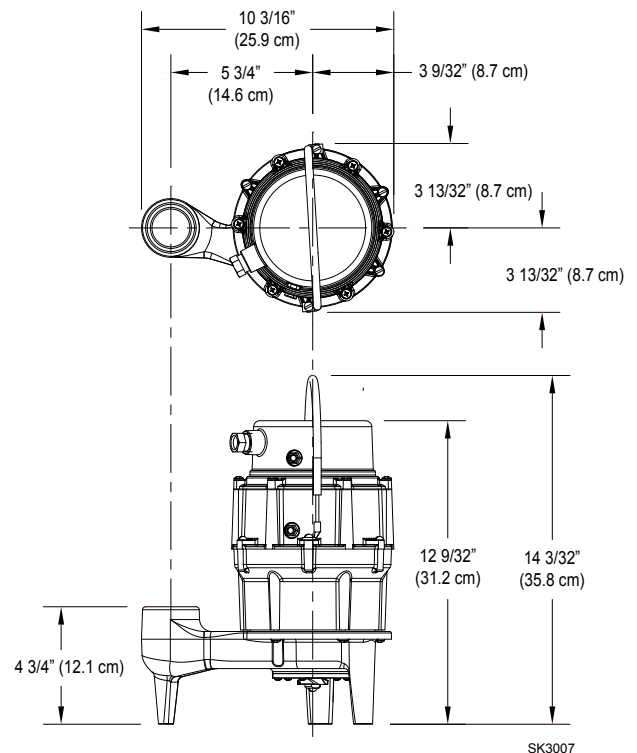

PUMP COMPANY
Zoeller Family of Water Solutions™

TECHNICAL DATA SHEET

THE SHARK^{Series} SEWAGE WASTE SERIES Model 800 Grinder Pump "Duplex - N - Done" Package

PUMP SPECIFICATIONS

MOTOR	Horse Power	1/2
	Voltage	115
	Phase	1 Ph
	Hertz	60 Hz
	RPM	3450
	Amps	7.0
PUMP	Discharge Size	1-1/4"
	Cord Length	15' (5 m) standard
	Cord Type	UL listed neoprene
	Max. Head	26' (7.9 m)
	Max. Flow Rate	46 GPM (174 LPM)
MATERIALS	Cap	Engineered plastic
	Upper Motor Housing	Engineered plastic
	Lower Motor Housing	Cast iron
	Pump Housing	Cast iron
	Upper Bearing	Ball bearing
	Lower Bearing	Ball bearing
	Mechanical Seals	Carbon/ceramic
	Impeller Type	Non-clogging vortex
	Impeller	Engineered plastic
	Hardware	Stainless steel
	Motor Shaft	AISI 1215
	Gasket	Buna-N pump o-ring
	Cutter	Hardened stainless steel, Rockwell C55-60



(includes two pumps)

System includes:

- (2) Model 800 pumps
- (2) P/N 30-0239 Quiet Check Valves
- (2) P/N 10-2042 Switches
- (1) P/N 10-0804 Smart-Pak Plus



P/N 10-0804 (1)
Smart-Pak Plus
Residential Alternator System



P/N 30-0239 (2)
Quiet Check Valve
1.25"



P/N 10-2042 (2)
13 Amp Maximum
Normally Open Vertical
Piggyback



INSTALLATION

1. Unpack unit and inspect for damage.
2. Review Figure 1 for a typical installation.
3. Follow instructions included with each pump for proper pump installation. Test pump on and off cycle several times to ensure proper pump cycling.
4. Mount unit on wall within reach of pumps' cords.
5. Mount the alarm switch on one of the discharge pipes a couple inches above the on level of the pumps. If possible, this should be below the inlet to the pit.
6. Connect the alarm float switch cord to the High Water connection on the side of the Smart-Pak Plus.
7. Plug the power cord into a properly grounded outlet.
8. Check system for proper operation as outlined below.



WARNING All installations must be in accordance with the National Electric Code, and any other applicable state and local electrical requirements.

WARNING Do not remove ground pin. Severe electrical shock could occur.

NORMAL OPERATION

Upon first plugging the Smart-Pak Plus into AC power, the four LED lights will illuminate briefly in red, then green. The LED lights will turn off, then the Pump 1 and Power LED lights will illuminate green. When water rises to the level that both pumps' switches are on, the unit will send power to Pump 1 until its switch turns off. The Pump 2 LED will then illuminate indicating that power will be provided to Pump 2 once both pumps' switches are once again on. The control unit will continue to alternate between pumps 1 and 2, in this manner, until an alarm is detected. The Power LED remains green as long as AC power is available.

ALARM OPERATION

There are five modes of alarm operation, as follows:

1. High Water Alarm Operation

If the sump's water level reaches the level of the high-water float switch, the alarm will sound, dry contacts will close and the unit will automatically alternate power to the other pump. Once the water level drops below the off level of the high-water float switch, the alarm will continue to sound and the light will flash red. Pressing the Silence/Reset button on the front of the unit will quiet the alarm and leave the LED illuminated. Once the alarm event has ended, pressing the Silence/Reset button for five seconds or

longer will reset the alarm and the light will no longer be illuminated. If power is out and a high-water condition is present, the Power LED flashes red and the alarm chirps every three seconds. (The pump will not run while unit is on battery power.)

2. Loss of Power Alarm Operation

If AC power is lost, the alarm and LED lights operate until internal battery is dead or AC power is restored. The Power LED flashes red and alarm chirps every 12 seconds, and the dry contacts close. The red LED and alarm will clear themselves if power is restored.

3. Continuous Pump Run Alarm Operation

If either pump runs continuous for over 300 seconds, the Smart-Pak Plus will alternate to the other pump, the LED for the pump flashes red, the audible alarm will sound, and dry contacts close. The red LED and alarm will clear themselves if the condition is remedied. After five consecutive faults, the alarm will remain on until it is manually reset.

4. Continuous Pump Run Alarm Operation

If the active pump draws more than 14 amps continuously the alternator will switch to the other pump. After five consecutive cycles where a pump draws more than 14 amps, the alternator will disable that pump. If the active pump has an instantaneous current draw of more than 30 amps for two consecutive cycles the alternator disables the pump. Either condition will cause the red LED to flash for the failed pump, sound the alarm, and the dry contacts close. The Smart-Pak Plus will not attempt to use the problematic pump again until the alarm is reset.

5. Pump Failure Alarm Operation

If the Smart-Pak Plus detects that one of the pumps does not run, after five consecutive cycles of the high-water alarm tripping, that pump's LED flashes red, the alarm sounds and the dry contacts close.

SILENCE/RESET BUTTON

Pressing the Silence/Reset button silences the audible alarm. Additional alarm conditions will sound the alarm again. Pressing and holding the Silence/Reset button for five seconds will reset any faults.

BATTERY

The Smart-Pak Plus has a rechargeable nickel-metal-hydrate battery installed in the unit. The charging circuit "exercises" the battery to extend the life of the battery and reduce power consumption. Battery is not replaceable in the field.

Figure 1: Typical Installation

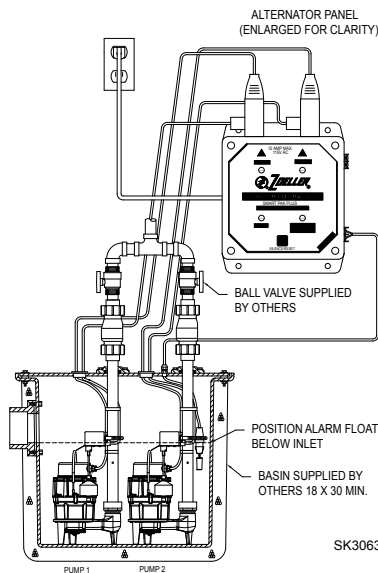
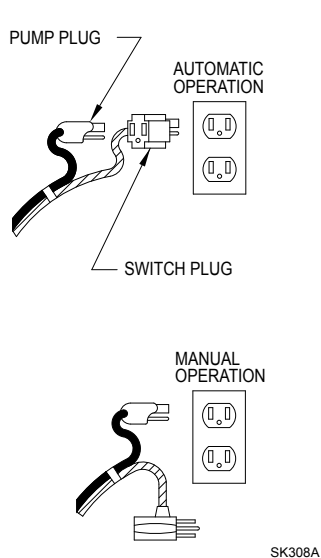


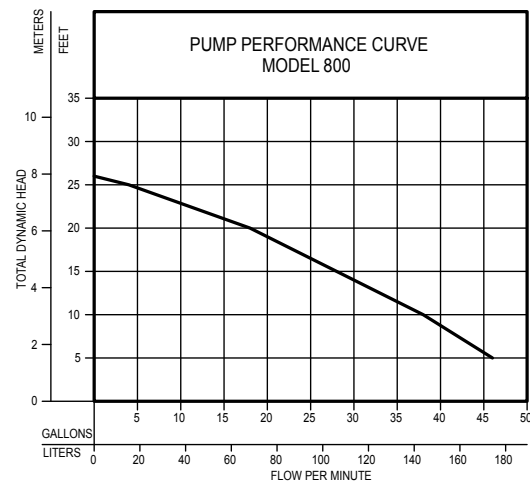
Figure 2: Single Piggyback Installation



WARNING Branch circuit should be protected as per the National Electrical Code.

NOTES:

- Use of a working high-water alarm switch, properly connected to the Smart-Pak Plus, is required in order to allow for emergency pump alternation.
- The Smart-Pak Plus does not provide power to AC pumps during a power loss.
- Almost any standard, normally open pump switch can be substituted for the included high-water alarm float switch.
- The Smart-Pak Plus will not operate the pumps at the same time.
- The Smart-Pak Plus is a pump alternating device. It is not intended to bypass or augment the pumps' switches. Working switches are required for proper pump operation.



**TOTAL DYNAMIC HEAD
FLOW PER MINUTE**

MODEL		800	
Feet	Meters	Gal.	Liters
5	1.5	46	174
10	3.0	38	144
15	4.6	28	106
20	6.1	18	68
25	7.6	4	15
Shut-off Head:		26 ft. (8.1m)	

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