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SECTION: 2.25.070
FM2799
0622
Supersedes
0721

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TECHNICAL DATA SHEET

MODEL 840/841/842

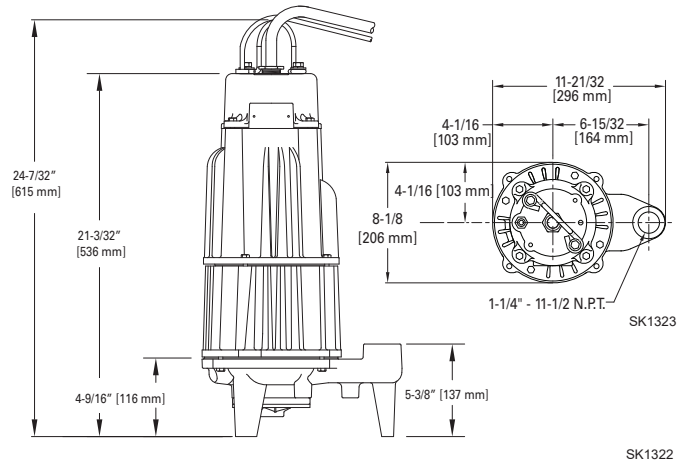
DUAL SEAL GRINDER PUMPS

Pump Systems And Controls

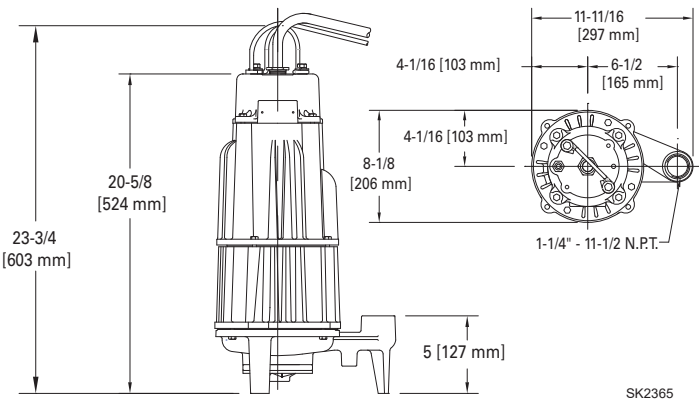
PRODUCT SPECIFICATIONS

MOTOR	Horse Power	2
	Voltage	200 - 575
	Phase	1 or 3 Ph
	Hertz	60 Hz
	RPM	3450
	Type	Capacitor start / capacitor run or 3 Ph
	Insulation	Class F
	Amps	4.5 - 20.0
PUMP	Operation	Nonautomatic
	Discharge Size	1-1/4" NPT vertical or horizontal
	Cord Length	20' (6 m) standard
	Cord Type	SOW or SOOW, multi-wire neoprene
	Max. Head	125' (38.1 m)
	Max. Flow Rate	59 GPM (223 LPM)
	Max. Operating Temp.	130 °F (54 °C)
	Cooling	Oil filled
MATERIALS	Motor Protection	Auto reset thermal overload (1 Ph), thermal sensor (3 Ph) Moisture Sensors
	Cap	Cast iron
	Motor Housing	Cast iron
	Adapter	Cast iron
	Pump Housing	Cast iron
	Upper Bearing	Ball bearing
	Lower Bearing	Ball bearing
	Mechanical Seals	Carbon/ceramic
	Impeller Type	Non-clogging vortex
	Impeller	Ductile iron
	Hardware	Stainless steel 304
	Motor Shaft	Stainless steel 416
	Square Rings	Neoprene
	Cutter	Hardened stainless steel, Rockwell C55-60

Model 840 (Reversing Grinder Pump)



Models 841/842 Vertical Discharge



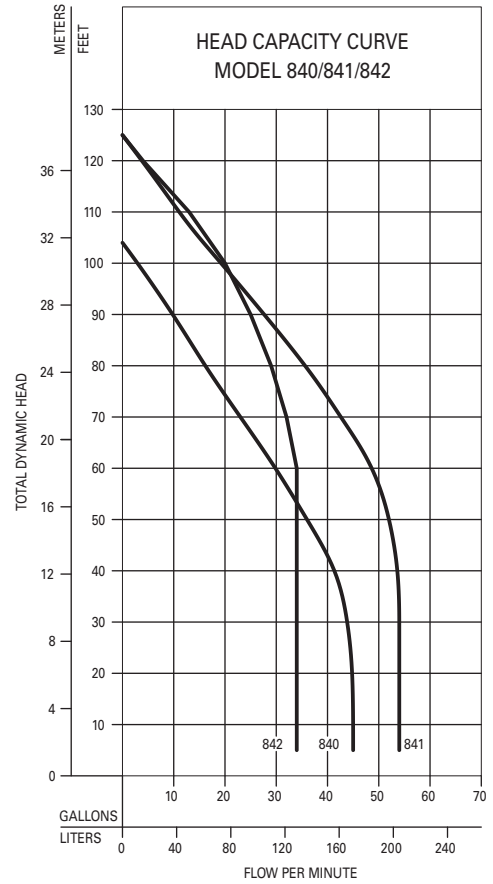
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TOTAL DYNAMIC HEAD FLOW PER MINUTE

MODEL		840		841		842	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	45	170	54	204	34	129
10	3.0	45	170	54	204	34	129
20	6.1	45	170	54	204	34	129
30	9.1	44	167	54	204	34	129
40	12.2	42	159	54	204	34	129
50	15.2	36	136	52	197	34	129
60	18.3	30	114	49	185	34	129
70	21.3	23	87	43	163	32	121
80	24.4	16	61	36	136	29	110
90	27.4	10	38	28	106	25	95
100	30.5	3	11	19	72	20	76
110	33.5	--	--	11	42	13	49
120	36.6	--	--	4	15	4	15
Shut-off Head:		104 ft (31.7 m)		125 ft (38.1 m)		125 ft (38.1 m)	

016532



ELECTRICAL DATA AND CONTROL PANEL SELECTION GUIDE					
A) Models	Weight	Volts / Phase	Amps	B) NEMA 4X Control Panels	
840 REVERSING GRINDER				SIMPLEX	DUPLEX
E840*	137 lbs (62.1 Kg)	230 / 1	17.2	10-0420	10-0512
I840*	137 lbs (62.1 Kg)	200 / 1	20.0	10-0420	10-0512
F840	132 lbs (59.8 Kg)	230 / 3	10.8	10-0634	10-0443
J840	132 lbs (59.8 Kg)	200 / 3	12.3	10-0634	10-0443
G840	132 lbs (59.8 Kg)	460 / 3	5.5	10-0599	10-0511
BA840	132 lbs (59.8 Kg)	575 / 3	4.5	Consult Factory	Consult Factory
841 SINGLE DIRECTION GRINDER				SIMPLEX	DUPLEX
E841*	137 lbs (62.1 Kg)	230 / 1	17.2	10-1650	10-1652
I841*	137 lbs (62.1 Kg)	200 / 1	20.0	10-1650	10-1652
F841	132 lbs (59.8 Kg)	230 / 3	10.8	10-1097	10-1125
J841	132 lbs (59.8 Kg)	200 / 3	12.3	10-1097	10-1125
G841	132 lbs (59.8 Kg)	460 / 3	5.5	10-1094	10-1122
BA841	132 lbs (59.8 Kg)	575 / 3	4.5	10-1146	10-1168
842 SINGLE DIRECTION GRINDER				SIMPLEX	DUPLEX
E842*	137 lbs (62.1 Kg)	230 / 1	17.2	10-1650	10-1652
I842*	137 lbs (62.1 Kg)	200 / 1	20.0	10-1650	10-1652
F842	132 lbs (59.8 Kg)	230 / 3	10.8	10-1097	10-1125
J842	132 lbs (59.8 Kg)	200 / 3	12.3	10-1097	10-1125
G842	132 lbs (59.8 Kg)	460 / 3	5.5	10-1094	10-1122
BA842	132 lbs (59.8 Kg)	575 / 3	4.5	10-1146	10-1168

B) CONTROL PANEL STANDARD FEATURES:

- NEMA 4X outdoor rating
- Automatic reversing circuit (840 model only)
- Audible and visual high water alarm
- Starting, control, and alarm circuits
- Thermal cut-out circuit (3 Ph only)
- Circuit breaker and rated motor contactor (1 Ph)
- Capacitors and motor starting relay on (1 PH)
- Motor protective switch (circuit breaker / phase adjustable overloads) and rated motor contactor (3 Ph)
- Alternating circuit (duplex)
- High water alarm light
- Internal seal leak light
- HOA switches and pilot light(s)
- Terminal strips
- Padlock hasp

OPTIONS:

- Flasher for high water alarm light
- Manual reset of high water alarm
- Intrinsically-safe relays
- Elapsed time meters
- Dry auxiliary contact
- For other options, consult factory

* Single phase units require a set of capacitors and relay starting components, included in panel



All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

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C) VARIABLE LEVEL FLOAT SWITCHES

INDOOR SYSTEM

- 3 Switches and weights
- P/N 10-0347 WGT. 9.5 lb (4.3 kg)
- 4 Switches and weights
- P/N 10-0348 WGT. 13 lb (5.9 kg)

OUTDOOR SYSTEM

- Switches with pipe clamps, 3 required
- P/N 10-0744 20' WGT. 2 lb (kg)
- P/N 10-1878 35' WGT. 3 lb (kg)
- P/N 10-1879 50' WGT. 4.0 lb (kg)

D) JUNCTION BOXES - TYPE 4X

SIMPLEX

- 5 holes with seals for (1) power cord, (1) sensor cord, (3) float switch cords.
- P/N 10-0331 WGT. 2.5 lb (1.1 kg) 3-float system
- P/N 10-4508 Simplex J-box

DUPLEX

- 8 holes with seals for (2) power cords, (2) sensor cords, (3 or 4) float switch cords.
- P/N 10-0332 WGT. 2.5 lb (1.1 kg) 3-float system
- P/N 10-0421 WGT. 2.5 lb (1.1 kg) 4-float system
- P/N 10-4509 Duplex J-box

**F) OUTDOOR BASIN, COVER, AND RAIL SYSTEM
BASIN - STANDARD EQUIPMENT**

- Fiberglass basin with anti-flotation ring
- 1.25" X 2" Z-Rail® disconnect system w/ 3/4" galvanized rail pipes
- 2" SCH. 80 PVC discharge pipe from disconnect
- 2" Flex boot discharge fitting
- Stainless steel lifting cable
- 2" PVC ball valve(s)
- 2" cast iron check valve(s)
- (1)-4" rubber inlet pipe seal (field-installed)
- Float tree
- Blank fiberglass cover with Zoeller imprint

SIMPLEX

<input type="checkbox"/> 24" x 48" (61 x 122 cm)	P/N 33-2054	WGT. 180 lb (93.4 kg)15"
<input type="checkbox"/> 24" x 60" (61 x 152 cm)	P/N 33-2057	WGT. 187 lb (99.3 kg)24"
<input type="checkbox"/> 24" x 72" (61 x 183 cm)	P/N 33-2060	WGT. 192 lb (105.7 kg)30"
<input type="checkbox"/> 24" x 84" (61 x 213 cm)	P/N 33-2063	WGT. 213 lb (119.7 kg)36"
<input type="checkbox"/> 24" x 96" (61 x 244 cm)	P/N 33-2069	WGT. 230 lb (125.6 kg)36"
<input type="checkbox"/> 24" x 108" (61 x 244 cm)	P/N 33-2075	WGT. 248 lb (125.6 kg)48"
<input type="checkbox"/> 24" x 120" (61 x 244 cm)	P/N 33-2078	WGT. 260 lb (125.6 kg)48"

DUPLEX

<input type="checkbox"/> 36" x 48" (91 x 122 cm)	P/N 33-2108	WGT. 258 lb (166.5 kg)19"
<input type="checkbox"/> 36" x 60" (91 x 152 cm)	P/N 33-2111	WGT. 272 lb (176.4 kg)24"
<input type="checkbox"/> 36" x 72" (91 x 183 cm)	P/N 33-2114	WGT. 285 lb (214.1 kg)30"
<input type="checkbox"/> 36" x 84" (91 x 213 cm)	P/N 33-2117	WGT. 304 lb (226.3 kg)36"
<input type="checkbox"/> 36" x 96" (91 x 244 cm)	P/N 33-2123	WGT. 332 lb (238.1 kg)36"
<input type="checkbox"/> 36" x 108" (91 x 244 cm)	P/N 33-2129	WGT. 359 lb (163 kg)48"
<input type="checkbox"/> 36" x 120" (91 x 244 cm)	P/N 33-2132	WGT. 379 lb (172 kg)48"

Note: 30" diameter simplex and 48" diameter duplex system also available

**E) INDOOR BASIN, COVER, AND HARDWARE
PREPACKAGED STANDARD EQUIPMENT**

- Fiberglass basin
- Rust-resistant steel cover (epoxy coated only)
- Inspection plate
- Individual pump covers
- 3" adaptaflex vent seal
- 1-1/4" adaptaflex discharge pipe seal(s)
- Cord seal(s)
- 1-4" rubber inlet pipe seal (field-installed)
- Pump support hardware
- 1-1/4" check valve(s)
- Ball valve(s)

SIMPLEX

- 24" x 36" (61 x 91 cm) P/N 32-0005 WGT. 107 lb (48.5 kg)

DUPLEX

- 30" x 36" (76 x 91 cm) P/N 32-0006 WGT. 154 lb (69.9 kg) 3-float system
- 30" x 36" (76 x 91 cm) P/N 32-0007 WGT. 154 lb (69.9 kg) 4-float system

**G) STAINLESS STEEL LIFTING CABLE
(Field-Installed Systems)**

8' (2.4 m)	<input type="checkbox"/> P/N 39-0031	WGT. 1 lb (0.5 kg)
12' (3.7 m)	<input type="checkbox"/> P/N 39-0032	WGT. 1 lb (0.5 kg)
16' (4.9 m)	<input type="checkbox"/> P/N 39-0033	WGT. 1 lb (0.5 kg)

STARTER KITS*

P/N	Pump Model	Type
10-0380	840, 841 & 842	Shipped Loose
013736	840, 841 & 843	Bracket Mounted

*Starter kits needed if using existing panels and single phase (E or I model) grinder pumps

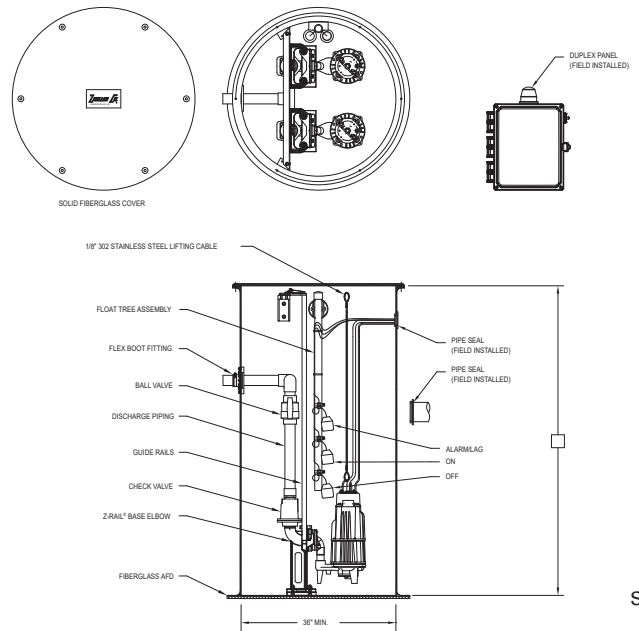
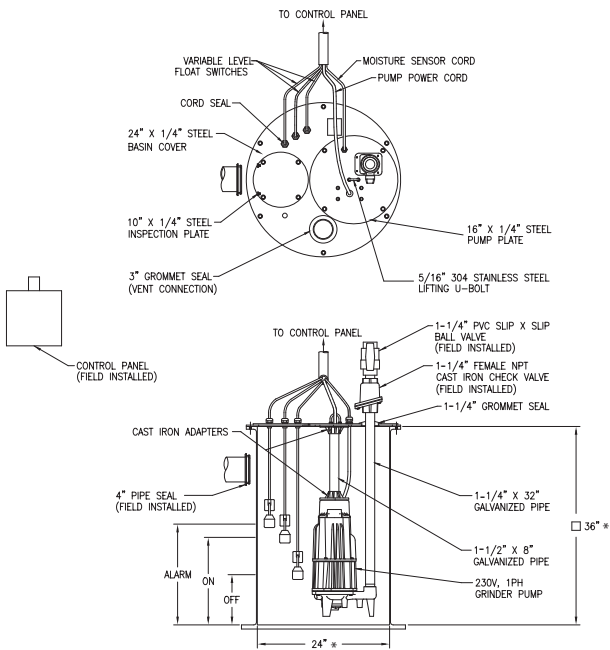
SIMPLEX REVERSING CONTROL BOXES*

AUTOMATIC			MANUAL		
MODEL	P/N	WGT.	P/N	WGT.	
E840	<input type="checkbox"/> 10-0352	8 lb (3.6 kg)	<input type="checkbox"/> 10-0360	7 lb (3.2 kg)	
I840	<input type="checkbox"/> 10-0352	8 lb (3.6 kg)	<input type="checkbox"/> 10-0360	7 lb (3.2 kg)	
F840	<input type="checkbox"/> 10-0353	6 lb (2.7 kg)	<input type="checkbox"/> 10-0361	5 lb (2.3 kg)	
J840	<input type="checkbox"/> 10-0353	6 lb (2.7 kg)	<input type="checkbox"/> 10-0361	5 lb (2.3 kg)	
G840	<input type="checkbox"/> 10-0353	12 lb (5.4 kg)	<input type="checkbox"/>	Not available	

*These control boxes consist of the reversing mechanisms and capacitors (1Ph units) only. They will not control pumps. Refer to Section B for complete system controls. For duplex applications use two simplex reversing control boxes.

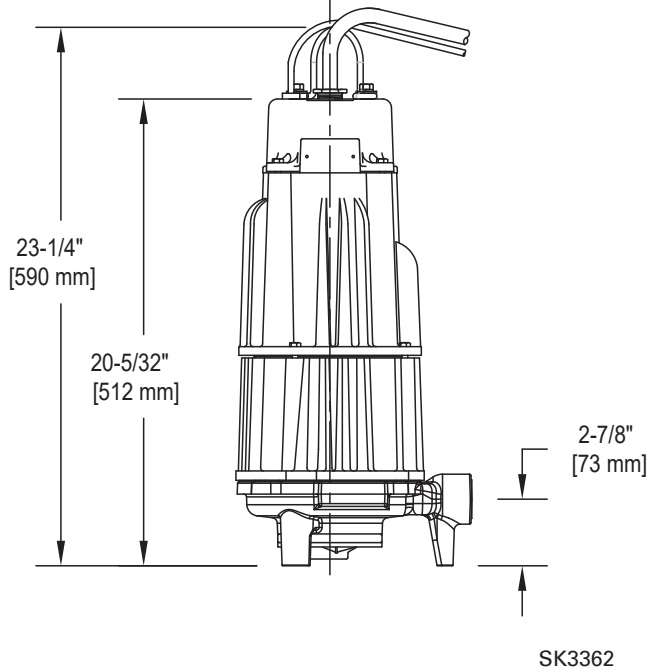
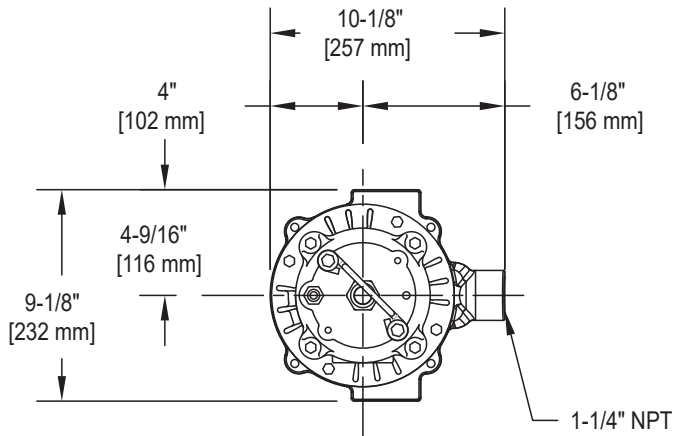
PREPACKAGED AND JOB READY SYSTEMS CHECKLIST

INDOOR			
SIMPLEX		DUPLEX	
REQ.	REQ.	REQ.	REQ.
1 grinder pump	P/N _____ (A)	2 grinders pumps	P/N _____ (A)
1 simplex control panel	P/N _____ (B)	1 duplex control panel	P/N _____ (B)
1 float switch asm.	P/N _____ (C)	1 float switch asm.	P/N _____ (C)
1 basin, cover and hardware	P/N _____ (E)	1 basin, cover and hardware	P/N _____ (E)
OUTDOOR			
SIMPLEX		DUPLEX	
REQ.	REQ.	REQ.	REQ.
1 grinder pump	P/N _____ (A)	2 grinders pumps	P/N _____ (A)
1 simplex control panel	P/N _____ (B)	1 duplex control panel	P/N _____ (B)
3 float switches	P/N _____ (C)	3 or 4 float switches	P/N _____ (C)
1 j-box (optional)	P/N _____ (D)	1 j-box (optional)	P/N _____ (D)
1 basin, cover and hardware	P/N _____ (F)	1 basin, cover and hardware	P/N _____ (F)

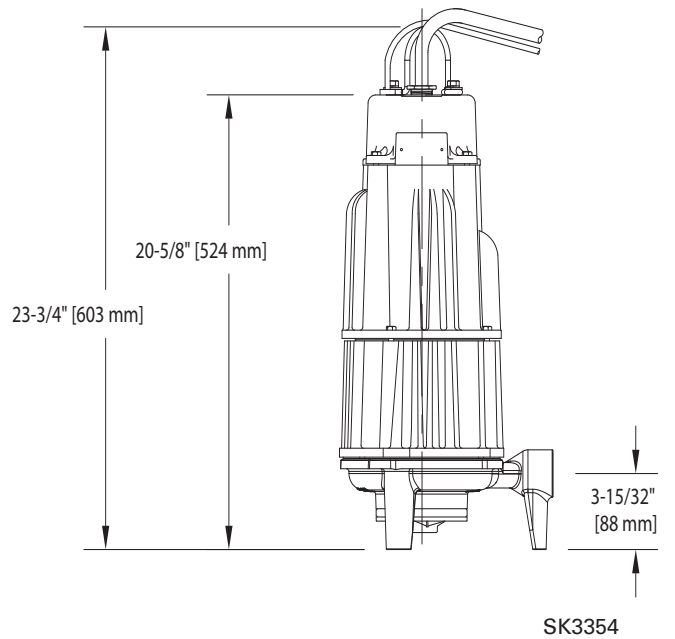
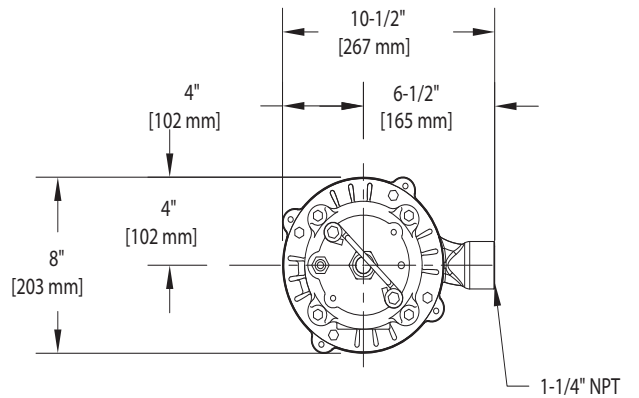


840/841/842 Horizontal Discharge Dimensional Data

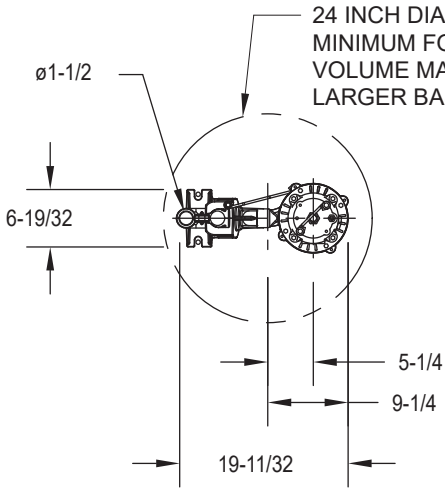
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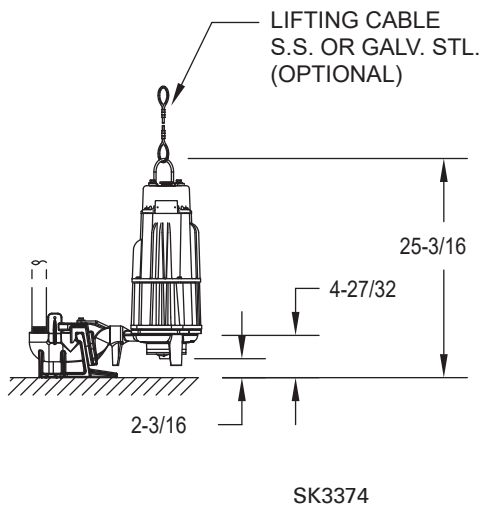
841/842



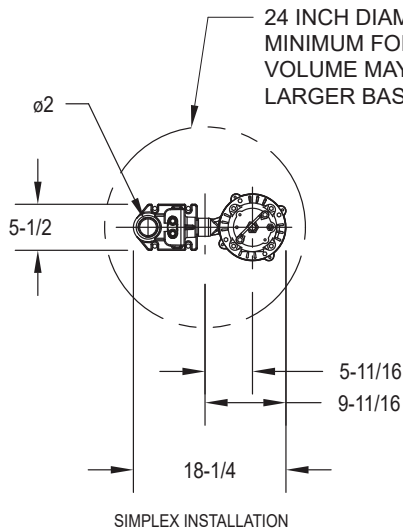
FLYGT ADAPTER - 39-0183



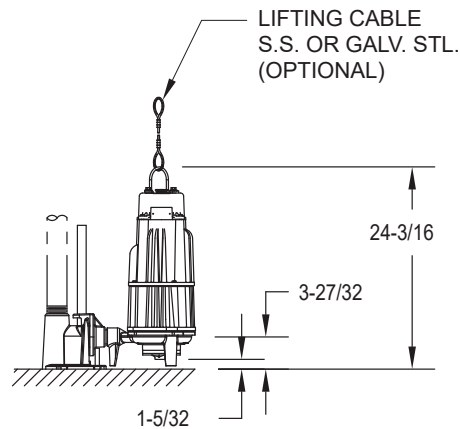
DIMENSIONS ARE BASED ON STD. ANSI FITTING SIZES. CHECK VALVES REQUIRED, NOT SHOWN FOR CLARITY. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.



LIBERTY ADAPTER - 39-0182



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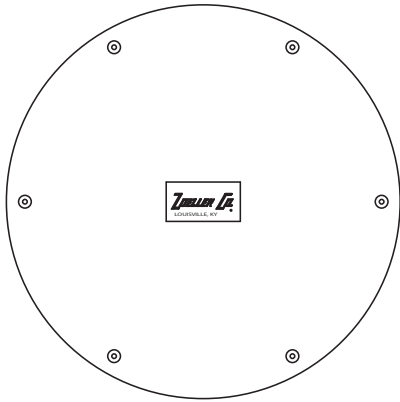


Note: For other competitor adapters consult factory

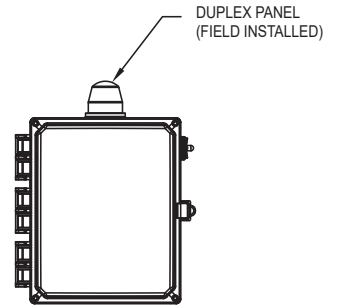
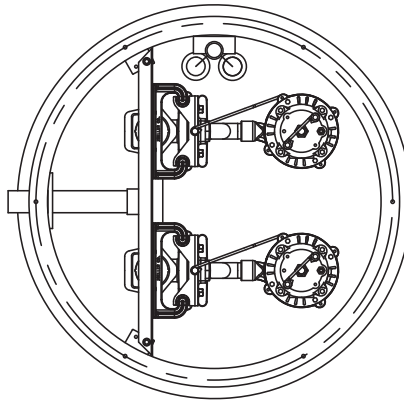
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SK3373

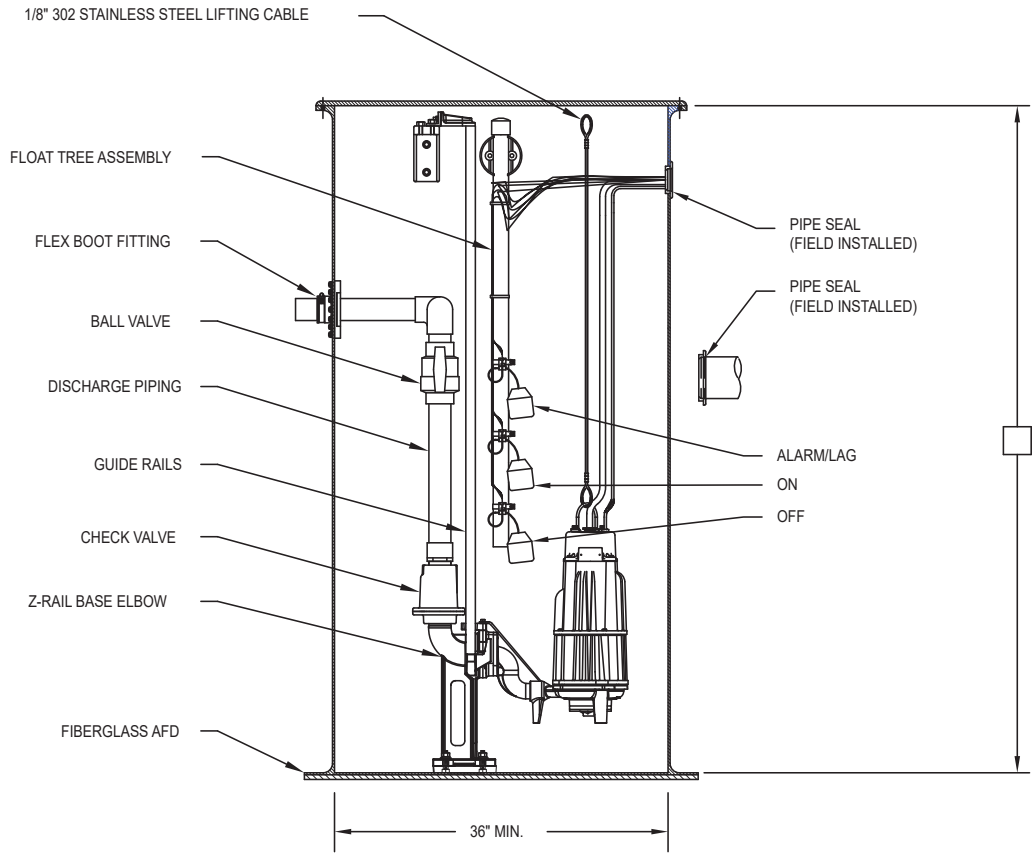
**HORIZONTAL DISCHARGE ON A Z-RAIL SYSTEM
39-0137 & 39-0138 Z-Rail**



SOLID FIBERGLASS COVER



DUPLEX PANEL
(FIELD INSTALLED)



SK3355



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