



Package Systems, Controls, and Accessories

Package Systems

Check Valves

Float Switches

Alarm Systems

Control Panels

Rail Systems

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



Trusted. Tested. Tough.®

WHAT SETS ZOELLER SYSTEMS APART

Since 1939, Zoeller Company has been manufacturing pumps. From pedestal pumps in the beginning to large HP pumps in recent years, we have gained invaluable manufacturing experience beginning in August Zoeller's basement workshop.

Over the years, one of our most important mottos has been 'things done right the first time'. From start to finish, we take pride in our products. For residential or commercial wastewater issues, you can count on Zoeller to deliver the very best solutions. Our commitment to unsurpassed quality offers years of service and durability with a responsive and knowledgeable product support team just a phone call away.

• SUPPORTING THE WHOLE PACKAGE...

In pumping systems, the "whole package" encompasses far more than just high quality pumps. The control, alarm, valves, disconnects, piping and container are all important components of a complete system. Zoeller understands that an installation is only as good as the weakest element, so we have gone to great lengths to provide accessory items that are as reliable as our legendary pumps. While we manufacture most of our products from start to finish, including check valves and rail systems, we recognize that producing certain specialized accessories requires a different skill set than our roots provide. In order to offer you the best components for your project, we have partnered with other specialized manufacturers, all of them leaders in their respective fields. You can be assured that the vein of Zoeller quality runs top to bottom throughout our entire product offering.

• QUALITY CONTROL AT ALL LEVELS...

You may have heard that all of Zoeller's submersible pumps are 100% factory tested underwater prior to shipment. However, you may not be aware that before any new product is judged fit to carry a Zoeller label, we first subject it to a barrage of durability and performance tests. We pressurize check valves until they burst, cycle float switches until they give out, and crush basins until they collapse. These over-the-top abuses have very practical goals. They ensure that our products will withstand the rigors of your real world applications. We follow this testing with inspections of all materials that come through our doors in order to ensure the highest level of quality and consistency. At Zoeller, we realize that your projects are our projects and that your successes are our successes.

• FULL BREADTH OF PRODUCT LINE...

Zoeller is your 'one stop shop' when dealing with dewatering and wastewater systems. We offer everything from a small fractional sump pump to a large, 100 HP non-clog pump. From battery back-ups, check valves, sewage grinder systems, small prepackaged residential units or large prepackaged municipal systems, Zoeller can offer it all. Next time you are looking for a water or wastewater system, reach for the only catalog you will ever need... Zoeller Company!

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900 Series

Preassembled Sump Pump Systems

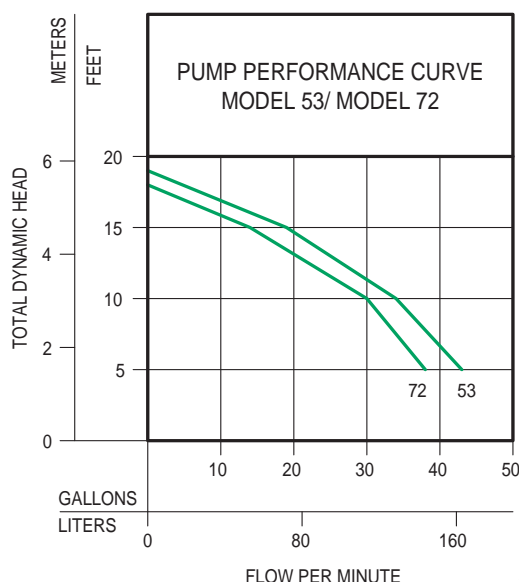
SPECIFICATIONS:

- No assembly required! Drop it in the hole and go!
- Pump switch is installed 180° from inlet
- Discharge pipe is plumbed with a predrilled 3/16" (5 mm) vent hole.
- Electrical cord seal is installed in cover
- Cover is sealed and bolted down
- Basin is filled with environmentally-safe peanuts for safe transit. Just add water and they dissolve!
- Automatic cast iron or thermoplastic pump with tank and all hardware
- 18" x 22" (45.7 x 55.9 cm) basin with 4" inlet
- Deluxe unit has a radon-approved basin and cover for radon prevention
- Standard and economy models use a polyethylene basin and cover
- Standard and economy covers have a 2" vent, 1-1/2" discharge
- Deluxe cover has a 3" vent, 1-1/2" discharge
- Fast, easy and job ready!



See FM2124 for further information.

SUMP PUMP SERIES	MODEL PUMP WITH BASIN	SYSTEM TYPE	WEIGHT (lbs/kg)
900-0001	M53	DELUXE	48 lbs/21.8 kg
900-0002	M53	STANDARD	53 lbs/24.0 kg
900-0003	M72	ECONOMY	44 lbs/20.0 kg



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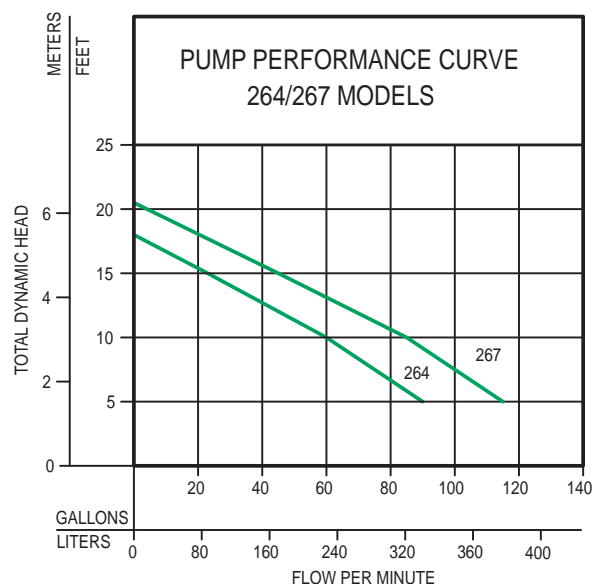
Duplex System for Indoor Sewage Applications (unassembled)

INCLUDES:

- (2) automatic pumps (M264 or M267)
- (1) 10-0804 SmartPak® residential alternator with alarm
- (1) 31-1105 30" x 36" (76.2 x 91.4 cm) poly-foam basin with 2" vent/discharge
- (2) 30-0101 Tri-Check® valves



See FM0454 for further information.



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912 Systems

Simplex Sewage Package Systems (job ready/assembled)

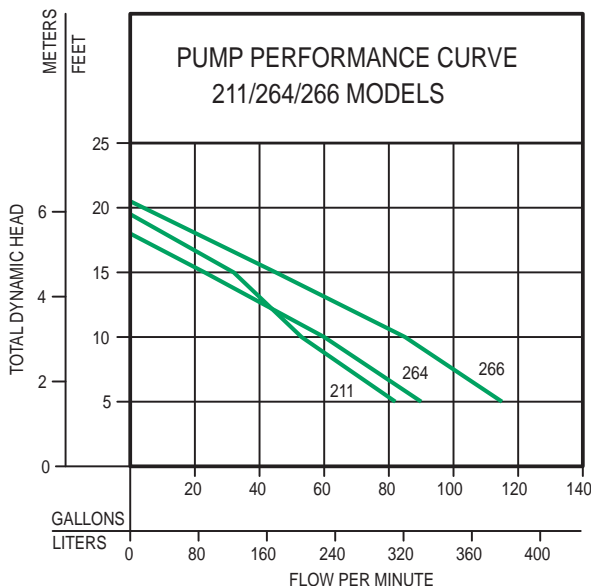
SPECIFICATIONS:

- More choices, easier installation and fast delivery
- Saves labor and reduces installation errors
- 2" (50 mm) solids-handling pump
- 2" PVC discharge pipe, 30" (76 cm) long on 18" x 30" (46 x 76 cm), 24" (61 cm) long on 24" x 24" (61 x 61 cm) and 36" (91 cm) long on 24" x 36" (61 x 91 cm)
- Basins - polyethylene, poly-foam or fiberglass construction with poly or solid steel covers and 4" pipe seal hub, 4" PVC hub (deluxe) or 4" cast iron hub on L.A. Code Systems
- Check valve options - 30-0151, 30-0020, 30-0021, 30-0101 or 30-0103 (not included)
- Systems available with alarms and preinstalled alarm float.
- Premium indoor systems have a split cover for easy pump inspection, torque stops and an anti-flotation device
- Side discharge systems rated for outdoor burial: solid polyethylene structural foam lid and basin with 2" discharge on side
- 3/16" (5 mm) vent hole drilled

See FM2164 for further information.

24" X 24" Simplex Sewage System

See FM2810 for further information.



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912-0007 shown



912-1161 shown

915 Grinder Package Sy

1/2, 3/4, 1 HP Grinder Packages

The fractional HP grinder pumps are now available in package systems. This job-ready (non-suspended) system uses our innovative, stainless steel Tri-Slice® cutter, which requires little or no maintenance. The hardened stainless steel cutter is ideal for handling difficult solids such as wipes, rags, towels, etc. that can jam traditional style ejector pumps.



APPLICATIONS:

- Residential wastewater
- Light commercial

SPECIFICATIONS:

- 1-1/4" top discharge
- 803 - 1/2 HP, 805 - 3/4 HP, 807 - 1 HP
- Cast iron construction
- Oil filled for optimal heat dissipation
- Available in 18" x 30" (46 x 76 cm) polystyrene foam or 24" x 24" (61 x 61 cm) poly basin. Consult factory for additional options.
- Thermally-protected motor



24" x 24" (61 x 61 cm)

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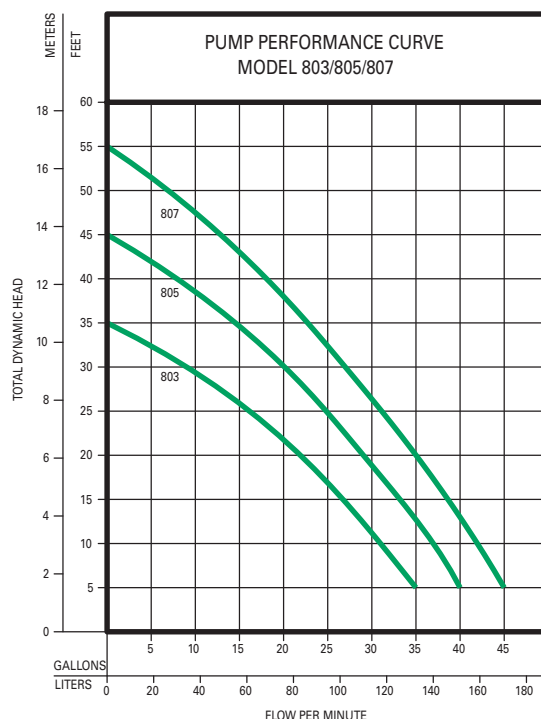


Cutter Blade



18" x 30" (46 x 76 cm)

For complete product information, visit:
zoellerpumps.com



Sump & Sewage Basins

SPECIFICATIONS:

- Available in high-density polyethylene structural foam (PSF), polyethylene or fiberglass
- Ideal for residential, commercial and industrial applications
- Complete with necessary sealing hardware and flanges
- Available with 2" or 3" vent and 2" or 3" discharge
- Lid with gasket and 4" cast iron inlet hub with anti-corrosion coating are included with the sewage basins
- Centerline of hub is located 10-1/2" (26.7 cm) from top of basin (std.). Custom locations available
- Polyethylene sewage pump basins are IAPMO approved. For 10' (3 m) stack test models, refer to charts on FM0487
- Sealed (radon) basins for sump pumps in 18" x 22" (45.7 x 55.9 cm) and 18" x 30" (45.7 x 76.2 cm) sizes
- Polyethylene sump basin available with plastic unsealed covers in 18" x 22" (45.7 x 55.9 cm)
- Sewage basins are watertight and gas-tight when properly installed
- Durable steel cover with gasket standard on simplex and duplex sewage basins
- One piece, seamless construction on all basins
- Duplex covers include two pump plates and inspection plate
- Ready to install for economical and simple installation
- Dimensional engineering data available
- Temperature rated 130 °F (54 °C)
- Fiberglass models available that will pass the 10' (3 m) water stack test. (Refer to charts on FM0487) (L. A. - RR-5311)
- Various custom diameters and lengths available in fiberglass. Consult factory. Also with 10' (3 m) water stack test

See FM0487 for further information and accessories.

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QLS Series

QLS SERIES[®]

PREFABRICATED LIFT STATIONS WITH Z-RAIL[®] TECHNOLOGY

Complete grinder package systems are factory assembled for quicker, easier installation at the jobsite. Zoeller's Z-Rail[®] Technology with powder coated, ductile iron elbows and brackets provides longer life and reliability. Dual-rail system offers added support and stability while raising and lowering pumps compared to single-rail systems. A wide variety of basin diameters and depths are stocked to accommodate almost any job. Cover choices include solid fiberglass and either steel or aluminum hatches.

Z-Rail[®] System

Both the disconnect portion and the upper guide rail supports are made of domestic epoxy powder coated ductile iron, providing superior strength. Dual guide rails add stability, ensuring that the pump will not spin on the rail during installation or removal.

Basin

Zoeller Company stocks many different basin and cover options to fit a multitude of wastewater collection projects. Basin sizes from 24" x 48" to 48" x 120" meet most application needs. Customized packages available.

Basin Cover

Solid fiberglass, aluminum hatch, and steel hatch covers are stocked for QLS Series[™] packages.

Three Way Ball Valve

The QLS Series[™] systems utilize a 3-way ball valve in duplex configurations. The valve is positioned so that the service providers can easily isolate pumps without entering the basin.

Pipe Seal Hub

A 4" pipe seal is provided as a convenient field-installed inlet hub.

AFD

QLS Series[™] basins come with an anti-floatation collar to resist buoyancy in high groundwater locations.

Flex-Boot Discharge Connection

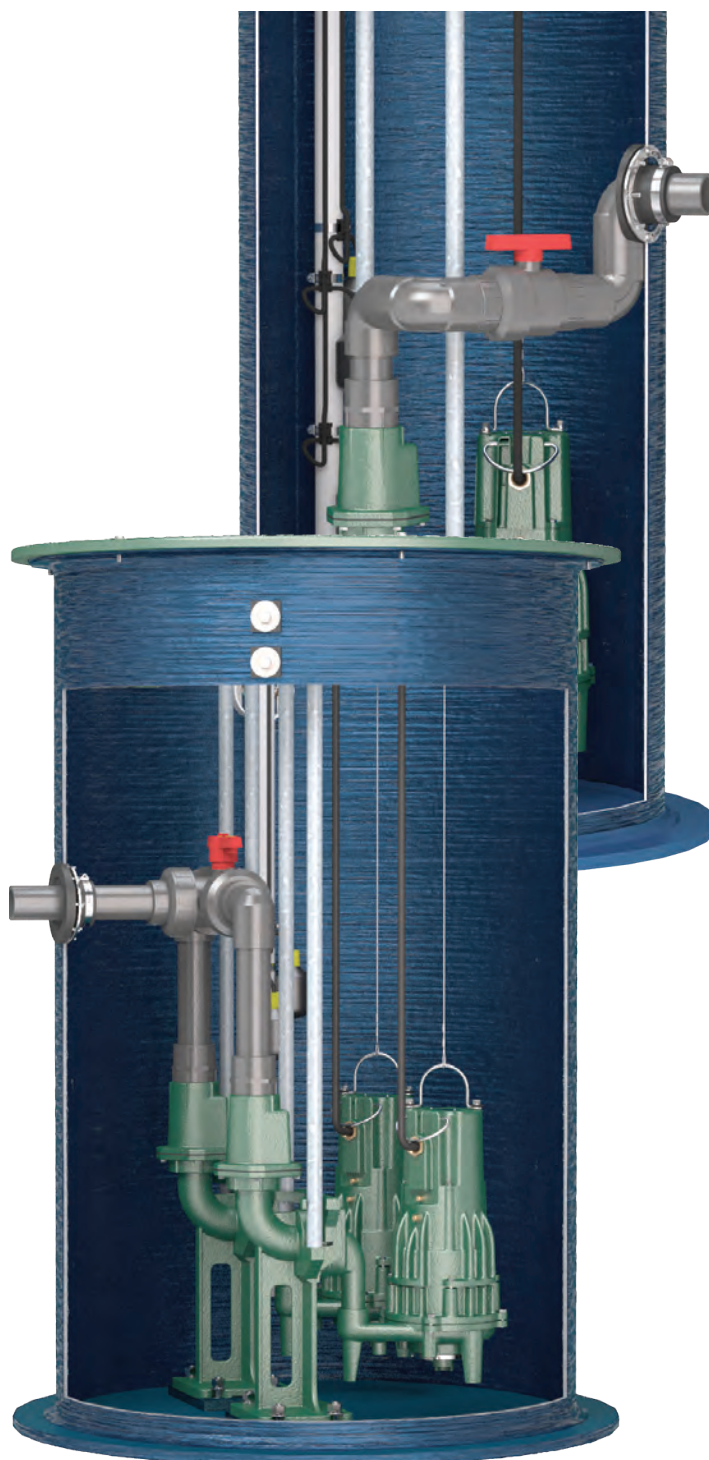
A flexible, stable discharge seal remains watertight despite external pressures due to pipe settling.

Schedule 80 PVC Piping

Schedule 80 PVC discharge piping provides greater support and dependability with its thicker walls and higher pressure rating.

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Please consult with your engineer or plumber for correct sizing, piping and implementation.



BASINS & PACKAGE SYSTEMS

Valves: Check, Ball, & Plug

Full-Flow Unichecks

30-0152 / 30-0160
30-0163 / 30-0164
1-1/4" - 3" Cast Iron



SPECIFICATIONS:

- Vertical or horizontal installation
- Full-flow design, no restrictions
- Stops backflow of water
- Standard, 1-1/4", 1-1/2", 2", 3" female NPT pipe
- Neoprene polyester, reinforced flapper, smooth edge design, with cast iron and non-corrosive metal backing plates and stainless steel fastener
- Corrosion-resistant, powder coated epoxy finish
- Rated at 50 PSI (115' [35 m] of head) at 130 °F (54 °C)
- Stainless steel bolts
- Suitable for installation below basin cover



30-0021 / 30-0151
2" Plastic or Cast
Iron Slip Union



SPECIFICATIONS:

- Full 2" flow design - meets BOCA (P.604.2) 2" full flow pump code
- Checks backflow of water
- Simple to install (no threading of pipe required). Save time and material costs
- Neoprene gasket and flapper, weighted with heavy stainless steel metal backing plates and rivet
- Vertical or horizontal installation
- Slips over ABS, PVC, steel or copper pipe
- Reduces motor and pump noise
- Flexible neoprene slip x slip union includes stainless steel clamps for low pressure systems. Avoid more than 10' (3 m) static head above the check valve. 4.3 PSI at 130 °F (54 °C)
- Extra wide hinge to reduce stress
- Plastic check has PVC body and can be installed with solvent-welded couplings for pressure systems to 25 PSI, 57' (17.4 m) of head (30-0023)
- Model 30-0151 has corrosion-resistant, powder coated epoxy finish
- Stainless steel sleeves available to meet Illinois Plumbing Code. (Cast Iron 30-0201 / PVC 30-0202)
- Meets requirements of Wisconsin Uniform Plumbing Code

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.

SPECIFICATIONS:

- Flapper bends over a radius, no sharp 90° edges — lengthens life of flapper hinge
- PVC plastic check body, ultrasonically welded and can be solvent-welded for rigid, pressure-rated piping systems to 25 PSI, (57' [17.4 m] of head) at 130 °F (54 °C) (30-0182)
- Vertical or horizontal installation
- Available in individual packages for pegboard display (30-0191)
- All stainless steel screws, nuts and clamps on model 30-0200 only
- Slip x slip for 4.3 PSI, 10' (3 m) of head at 130 °F (54 °C). Avoid more than 10' (3 m) static head above the check valve.
- Designed to reduce water hammer



30-0214 / 30-0215 / 30-0216
1-1/4" - 2" Cast Iron NPT
High-Temperature



SPECIFICATIONS:

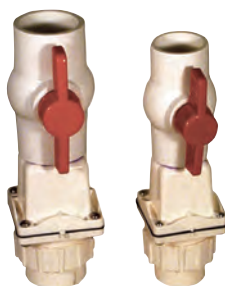
- Use with 2000 and 3000 series high-temperature pumps
- Vertical or horizontal installation
- Full-flow design, no restrictions
- Stops backflow of water
- Standard 1-1/4", 1-1/2", 2" female NPT pipe
- EPDM strand-reinforced flapper, smooth-edge design with cast iron and non-corrosive metal backing plates & stainless steel fastener
- Corrosion-resistant, powder coated epoxy finish
- Rated at 50 PSI (115' [35 m] of head) at 200 °F (93 °C)
- Stainless steel bolts



Valves: Check, Ball, & P

Tri-Check®

30-0100 / 30-0101 1-1/2" - 2" PVC Check Valve/Ball Valve Union Combination



SPECIFICATIONS:

- Full-flow check valve design
- Threaded union allows pump to be removed without disrupting discharge piping
- Saves time and money - easy to install
- Neoprene gasket and flapper, weighted with stainless steel backing plates and rivet
- Can be installed on vertical or horizontal pipe
- Meets plumbing codes requiring a ball valve installed in conjunction with a check valve

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SPECIFICATIONS:

- All stainless steel screws
- Replaceable flapper in the check valve
- Extra wide hinge to reduce stress
- Rated for 25 psi, 57' (17.4 m) of head

VALVES AND CONTROLS

Quiet Check - PVC Solvent Weld with Union Check Valve



P/N 30-0040
White PVC

P/N 30-0041
Clear PVC

P/N 30-0046
White PVC

P/N 30-242
Clear PVC

SPECIFICATIONS:

- 1/2 lb. (0.23 kg) spring eliminates water hammer
- Reduces motor and pump noise
- Designed for both horizontal and vertical usage
- Full-flow, non-clog design installation
- Durable PVC check body and compression end fittings
- Solvent-weld ends allow for easy installation
- 30-0044 and 30-0045 have no unions
- No threading of pipe required - saves time and money
- Pressure rated at 50 PSI (115' [35 m])
- 30-0241 & 30-0242 Slip Union: 40 PSI (92' [28 m])
- 30-0243 & 30-0244 Slip Union: 30 PSI (69' [21 m])
- Consult factory for use over 130 °F (54 °C)
- Suitable for installation below basin cover

P/N	SERVICE PART
152294	1-1/2" union assembly
152293	2.0" union assembly

QUIET CHECKS PVC SOLVENT WELD

Item Number	Pipe size	Valve Body	Weight (lbs/kg)	Length (in/mm)	Carton Qty
30-0239	1-1/4"	White	0.75 lbs/0.3 kg	9.50"/241 mm	12
30-0040	1-1/2"	White	2 lbs/0.9 kg	9.50"/241 mm	12
30-0041	1-1/2"	Clear	2 lbs/0.9 kg	9.50"/241 mm	12
30-0042	2"	White	3 lbs/1.4 kg	10.50"/267 mm	12
30-0043	2"	Clear	3 lbs/1.4 kg	10.50"/267 mm	12
30-0044	3"	White*	3 lbs/1.4 kg	9.50"/241 mm	8
30-0045	3"	Clear*	3 lbs/1.4 kg	9.50"/241 mm	8

QUIET CHECKS PVC SLIP UNION

30-0241	1-1/2"	White	1.2 lbs/0.5 kg	10.50"/267 mm	12
30-0242	1-1/2"	Clear	1.2 lbs/0.5 kg	10.50"/267 mm	12
30-0243	2"	White	1.8 lbs/0.8 kg	11.50"/292 mm	12
30-0244	2"	Clear	1.8 lbs/0.8 kg	11.50"/292 mm	12

QUIET CHECKS WITH QUARTER TURN BALL VALVES

30-0046	1-1/2"	White	3 lbs/1.4 kg	14.75"/375 mm	12
30-0047	1-1/2"	Clear*	3 lbs/1.4 kg	14.75"/375 mm	12
30-0048	2"	White	4 lbs/1.8 kg	16.12"/409 mm	12
30-0049	2"	Clear*	4 lbs/1.8 kg	16.12"/409 mm	12

*Solvent weld only. No unions included (see chart).

GENERAL CAUTION: Water hammer creates momentary high pressure surges. These surges can cause severe damage to check valves and the piping system. Consideration for water hammer must be included in the piping system design. Reference ASPE Data Book, Chapter 2.33. May require check valves with special non-slam features or other engineered solutions.

Valves: Check, Ball, & Plug

Compression 1-1/2" - 3" Compression Unichecks



ITEM NO.	PIPE SIZE	WEIGHT (lbs/kg)	LENGTH (in/mm)	CARTON QTY
30-0015	1-1/2"	1.1 lbs/0.5 kg	7-1/2"/180 mm	12
30-0020	2"	1.7 lbs/0.8 kg	9-3/4"/248 mm	12
30-0030	3"	5 lbs/2.3 kg	14"/356 mm	2

Pressure rated to 125 psi (861 kPa) at 285° (86.9 m) at 75 °F (24 °C)

3" & 4" Flanged Check Valves

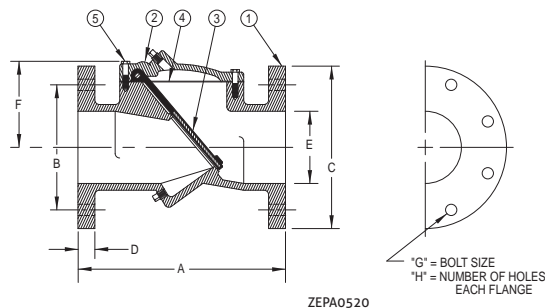


SPECIFICATIONS:

- Heavy-duty ductile iron construction
- Angled seal for non-slam closure
- Non-clog design
- Reinforced disc
- Drip-tight seating
- Rated up to 250 PSIG
- Designed for both horizontal and vertical usage
- Optional backflow actuator and mechanical indicator

PART NO.	VALVE SIZE	"A" (in/mm)	"B" (in/mm)	"C" (in/mm)	"D" (in/mm)	"E" (in/mm)	"F" (in/mm)	"G" (in/mm)	"H" (in/mm)	WEIGHT (lbs/kg)
6030-0197	2-1/2"	8-1/2"/ 215.9 mm	5-1/2"/ 139.7 mm	7"/ 177.8 mm	11/16"/ 17.5 mm	1-1/2"/ 63.5 mm	3-3/8"/ 85.7 mm	5/8"/ 15.9 mm	4"/ 101.6 mm	32 lbs/ 14.5 kg
6030-0202	3"	9-1/2"/ 241.3 mm	6"/ 152.4 mm	7-1/2"/ 196.5 mm	3/4"/ 19.1 mm	3"/ 76.2 mm	5-1/8"/ 130.2 mm	5/8"/ 15.9 mm	4"/ 101.6 mm	37 lbs/ 16.8 kg
6030-0203	4"	11-1/2"/ 292.1 mm	7-1/2"/ 190.5 mm	9"/ 228.6 mm	15/16"/ 23/9 mm	4"/ 101.6 mm	5-3/4"/ 146.1 mm	5/8"/ 15.9 mm	8"/ 203.2 mm	63 lbs/ 28.6 kg

REF NO.	PART NAME	MATERIAL
1	Body	Ductile iron ASTM A536, Grade 65-45-12
2	Cover	Ductile iron ASTM A536, Grade 65-45-12
3	Disc	Buna-N w/ steel and nylon reinforcement
4	Gasket	Compressed non asbestos fiber
5	Cover Bolt	Alloy steel SAE Grade 5



GENERAL CAUTION: Water hammer creates momentary high pressure surges. These surges can cause severe damage to check valves and the piping system. Consideration for water hammer must be included in the piping system design. Reference ASPE Data Book, Chapter 2.33. May require check valves with special non-slam features or other engineered solutions.

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- Rubber coupling with stainless steel clamps
- Threads into pump discharge
- Pre-drilled weephole
- 4.3 PSI, 10' (3 m) of head max
- Vertical installation only

2", 3" & 4" Cast Iron Plug Valves



SPECIFICATIONS:

- Designed to handle solids-bearing flows
- Cast iron housing - rated 175 psi
- 99% pure nickel welded seat
- 1/4 turn Buna plug
- Upper and lower ball bearings
- Provided with hand lever*

*Hand lever not shown in photos



THREADED MODELS				
SIZE	PART NO.	WIDTH (in/mm)	HEIGHT (in/mm)	WEIGHT (lbs/kg)
2"	6030-0082	5-1/4"/ 133.4 mm	7-1/8"/ 181.0 mm	12 lbs/12.4 kg
3"	6030-0083	8-3/4"/ 222.3 mm	14-1/8"/ 358.8 mm	45 lbs/20.4 kg

FLANGED MODELS				
SIZE	PART NO.	WIDTH (in/mm)	HEIGHT (in/mm)	WEIGHT (lbs/kg)
3"	6030-0085	8"/ 203.2 mm	14-1/8"/ 358.8 mm	53 lbs/24.0 kg
4"	6030-0086	9"/ 228.6 mm	16-3/4"/ 425.5 mm	66 lbs/29.9 kg

Switch-Mate Piggyback

Variable Level Float Switch

SPECIFICATIONS:

- Converts nonautomatic pump to automatic pump
- Simple installation
- Adjustable/variable level
- Standard 15' (5 m) and 20' (6 m) SJOW CPE cord with molded plug.
- Float is constructed of durable PVC/polypropylene
- Standard - normally open (NO) ("pumps down")
- Optional - normally closed (NC) ("pumps up"). Consult factory
- Maximum operating temperature for 10-0748: 120 °F (49 °C). All other switches: 140 °F (60 °C)
- Float is omnidirectional
- Includes mounting clamp
- Designed for EFFLUENT, SEWAGE and DEWATERING applications
- Variable level float switch, for use in 18" (45.7 cm) minimum diameter basins
- 10-0748 - 25' (8 m) cord standard, no molded plug. Can be used as a control switch to operate an external magnetic or combination starter on three phase pumps
- Vertical piggyback float switch. Ideal for narrow diameter basins. 6.5" (16.5 cm) maximum cycle range
- Use recommendation chart for switch selection

Single Piggyback Variable Level Float Switch

13 AMP MAXIMUM	15 AMP MAXIMUM	20 AMP MAXIMUM
Normally Open (NO)	Normally Open (NO)	Normally Open (NO)
10-0055 - 115 V - 10' (3 m)	10-0032 - 115 V - 15' (5 m)	10-0748 - 115 V/230 V - 25' (8 m)
10-0034 - 115 V - 15' (5 m)	10-0033 - 230 V - 15' (5 m)	
10-0035 - 230 V - 15' (5 m)	10-0705 - 115 V - 20' (6 m)	
10-0063 - 115 V - 20' (6 m)	10-0559 - 230 V - 20' (6 m)	
10-0706 - 230 V - 20' (6 m)		
Normally Closed (NC)	Normally Closed (NC)	
10-0065 - 115 V - 10' (3 m)	10-0064 - 115 V - 15' (5 m)	
10-0037 - 115 V - 15' (5 m)		
10-0062 - 230 V - 15' (5 m)		



Canadian Standards Association approval available.



Note: All variable level float switches in this section are mechanically activated and do not contain mercury.



Single Piggyback Vertical Float Switch

13 AMP MAXIMUM NORMALLY OPEN (NO) VERTICAL
10-2041 - 115 V - 10' (3 m)
10-2042 - 115 V - 15' (5 m)
10-2043 - 115 V - 20' (6 m)



Canadian Standards Association approval available.



Double Piggyback Variable Level Float Switch

MECHANICAL
10-1964 - 115 V - 15 Amp - 15' (5 m)
10-1965 - 230 V - 15 Amp - 15' (5 m)



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Please consult with your engineer or plumber for correct sizing, piping and implementation.

Variable Level Control

APPLICATIONS:

- Simplex or duplex pump control and high level alarm on electrical alterations
- For dewatering, effluent and sewage applications
- Switch for APak®

SPECIFICATIONS:

- Float is constructed of durable PVC/polypropylene
- Standard mechanical variable level control switches are rated for 115/230 V, 5 Amps
- Low-current, mechanical variable level control switches are rated for 125 VAC/30 VDC, 0.1 Amps
- 18/2 Type SJOW CPE cord standard
- Cords are available in 15-25-35-50' (5-8-11-15 m) lengths
- Temperature rating of 140 °F (60 °C)
- Approximately 1.5" (38 mm) liquid level differential in switching action

ADJUSTABLE WEIGHT: (P/N 10-0689) provides an accurate pivot point for suspended float switches.

- Gripping teeth on clip and weight channel securely lock float cable into place
- Cable weight can be adjusted without the use of tools

HOUSING: 1lb 12oz. (0.8 kg), 2.8" x 3.3" (7.1 x 8.4 cm), impact-resistant and non-corrodible, PVC housing for liquids up to 140 °F (60 °C)

CLIP: injection-molded acetal plastic

WIRE/CABLE ACCOMODATED: SJOW, SJTW, 18/2, 18/3, 16/3, 14/2, 14/3

SHIP WEIGHT: 2 lbs. (0.9 kg)

FLOAT SWITCHES			
Mechanical		Cord Length (ft/m)	Mounting Method
Standard P/N*	Low Current P/N**		
10-0743	10-2060	15/5	Clamp
10-0744	10-2061	20/6	Clamp
10-1877	10-2062	25/8	Clamp
10-1878	10-2063	35/11	Clamp
10-1879	10-2064	50/15	Clamp
10-1880	10-2065	15/5	Adjustable Weight
10-1881	10-2066	25/8	Adjustable Weight
10-1882	10-2067	35/11	Adjustable Weight
10-1883	10-2068	50/15	Adjustable Weight

FLOAT SWITCH TREES			
Mechanical		Cord Length (ft/m)	Mounting Method
Standard P/N*	Intrinsically Safe P/N**		
10-1456	10-1456	---	Tree Only
10-1886	10-2069	15/5	(3) 15' (5 m) Floats & Tree
10-1887	10-2070	15/5	(4) 15' (5 m) Floats & Tree

* Not for use with intrinsically-safe control systems.

** For use with intrinsically-safe control systems only.

Products may not be exactly as pictured.

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



SmartPak® Plus

10-0804 Residential Alternator System

SPECIFICATIONS:

- Alternates two automatic pumps up to 1/2 HP, 12 amps each, 115 V, single phase (not to be used with model 63 or model 95 pump, or with any model grinder pump)
- Extends pump life
- Compact design easily mounts in confined spaces
- Circuit fault protection
- Specially designed for humid areas
- Universal connection for alarm switch replacement
- Auxiliary output contacts (normally open) for remote alarm connection
- Solid green LED lights for Pump 1, Pump 2 and Power
- Flashing red LED lights for alarm conditions
- 9' (2.7 m) power cord
- Multiple alarm modes will alert user to potential problems and protect property by switching to the other pump when necessary

Alarms include:

- High water
- Loss of power
- Continuous pump run
- Breaker tripped
- Pump failure
- Button for Silence and Reset
- Built-in, rechargeable battery will operate the alarm and LED lights for a limited time during power outage

Note: Not to be used with model 63 or model 95 pump, or with any model grinder pump.



MC 170468  US

These are example product specifications and are for reference ONLY, as equals may be accepted. Please consult with your engineer or plumber for correct sizing, piping and implementation.

- Utilizes your free account on the Z Control® Cloud
- When used with the Z Control® Enabled products that require the Gateway, additional features such as remote control and monitoring are included
- Power adapter included
- Connects to existing router using either Wi-Fi® or ethernet



Real Time Peace of Mind™



RIES AND CONTROLS

APak® Alarm Systems

The APak® alarm is compact and easy to install. It is CSA approved from 2 AA batteries. Alarm may be used as AC only, DC only, or a horn when a potentially threatening liquid level condition remains on until the condition is remedied.

A green "POWER ON" light indicates 120 V primary power to the battery should be replaced. A red "ALARM" light indicates a high-level condition.

NOTE: It is always recommended to power the alarm from a separate circuit during a tripped breaker scenario.

10-4012 Apak® Alarm

SPECIFICATIONS:

- NEMA 1 enclosure (INDOOR USE ONLY)
- Automatic alarm reset
- Horn is rated 87 decibels at 10' (3 m)
- 2 AA battery backup (battery not included)
- 15' (5 m) alarm (12 V) tethered switch
- 6' (2 m) power cord
- Auxiliary dry contacts (use 10-4014)



10-4011 Apak® Alarm

SPECIFICATIONS:

Same standard features of our 10-4012 with:

- 15' (5 m) alarm reed switch
- Auxiliary dry contacts (use 10-4013)

Z Control® Enabled Models

10-4013 and 10-4014 Apak® Indoor Alarms

SPECIFICATIONS:

- 10-4013 comes with reed sensor
- 10-4014 comes with mechanical float switch
- 10-4683 comes with no switch
- All the standard features plus:
- 2nd input for additional monitoring ability
- Dry contacts for connection to home security system, etc.
- Z Control Enabled
 - Wi-Fi® equipped
 - Receive free text, email, and push alerts on:
 - Power outage
 - Low battery
 - Input 1 or 2 triggers
 - Loss of contact with Z Control®
 - Remotely silence, reset alarm.
 - Free Z Control App and Web interfaces
 - Free Z Control account
 - No monthly cost
 - Simple setup
 - Z Control connectivity LED

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



10-4012



10-4013

APak® Alarm Systems

91104-0001 Apak® Outdoor Alarm

SPECIFICATIONS:

- APak Outdoor Alarm System Features
- NEMA 4X Outdoor use per UL 864 for US and Canada
- Alarm system (horn & light) operates to warn of a high-water condition
- Horn is rated 82 decibels at 10' (3 m)
- Auxiliary dry contacts for high level alarm, 5 Amps
- Operates on separate circuit from pump, 115 VAC
- Alarm test and horn silence switch with automatic reset
- Terminal connections for a pump and float switch (Model 91104-0001)
- Can be used with liquids to 140 °F (60 °C)
- 15' (5 m) float switch (Model 91104-0001)
- 20' (6 m) float switch, 6' (2 m) power cord, watertight cord connectors (Model 10-0682)
- 3 year limited warranty (Model 10-2614, 10-0682, 91104-0001)

NOTE: All variable level float switches in this section are mechanically activated and do not contain mercury.



These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



91104-0002 Apak® Outdoor Alarm

SPECIFICATIONS:

Same standard features of our 91104-0001 with:

- 20' (6 m) alarm (12 V) tethered switch
- 6' (2 m), 115 V power cord with water-tight cord connectors

Flood Alert®

10-0763

High Water Alarm

SPECIFICATIONS:

- Operates on (3) AAA batteries
- Low battery alarm
- Warns you when sensor contacts water
- Loud intermittent horn rated at 103 +/- 3 db at 1' (30 cm)
- On/Off silence switch
- Stainless steel sensor contacts
- Easy to install, portable and safe!
- Compact design (3-1/4" x 2-1/4" [8.3 x 5.7 cm])
- No adjustments needed
- Solid state electronic components
- 5' (1.5 m) of lead wire
- 12-month limited warranty
- AC power adapter capability. Requires Class 2 transformer, Input: 120 VAC/60 Hz, output: 4.5 VDC/150 mA, tip positive, type B plug. (Not included, but available at most electronics stores)

Flexible sensor wire allows this alert to be used in many applications. Alerts you of overflowing:

- Sump pump • Toilets • Broken pipes
- Dishwashers or washing machines • Laundry sinks
- Air conditioning pans • Bath tubs or hot tubs



Electrical Alternator Co.

For Duplex Installations

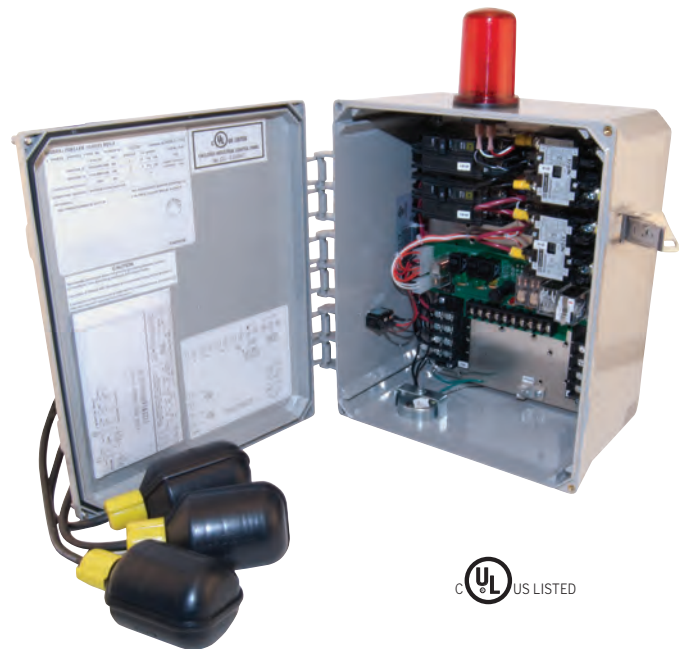
An electrical alternator is used on a duplex pump application where protection in residential or commercial applications. With one pump operational in the event the water level continues to rise. The buzzer sounds either when the second pump becomes operational with a 3 phase system. All electrical systems must be installed by a qualified electrician (Section 430-71 through 430-113, plus any others that apply).

SPECIFICATIONS:

- Hand-off-auto toggle switch for each pump
- Green pump run pilot light for each pump
- Alarm test and silence switches
- Red pilot light (NEMA1 only) and audible alarm with 83 to 85 decibel rating for a high-water condition
- Red alarm beacon included with NEMA 4x enclosure
- Auxiliary dry contact
- High water alarm
- Single phase - circuit breaker for each pump
- Three phase - motor protective switch with overload protection
- Magnetic starter for each pump
- Alternating mechanism
- Numbered terminal strip for connecting pumps and variable level float switches
- NEMA 1 - general purpose or NEMA 4x - watertight enclosures available
- Integral auxiliary terminal board connections (dry contact) for remote alarm devices
- 3 or 4 variable level float switch control operation
- Three 20' (6 m) float switches included with single phase panels
- Off-the-shelf components provide easy field maintenance and repair
- Float switches not included with three phase panels

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.

CONTROL PANELS USED WITH			
NEMA 1 ENCLOSURE WITH :			
Order No.	Dimensions HxWxD in (cm)		
10-1039	12" x 10" x 6" (30 x 25 x 15 cm)		
10-1040	12" x 10" x 6" (30 x 25 x 15 cm)	115	15-20
10-0092*	12" x 10" x 6" (30 x 25 x 15 cm)	115/200/230	0-20
NEMA 4X ENCLOSURE WITH 20' (6 m) FLOAT SWITCH			
10-1041	12" x 10" x 6" (30 x 25 x 15 cm)	115	7-15
10-1042	12" x 10" x 6" (30 x 25 x 15 cm)	115	15-20
10-1043	12" x 10" x 6" (30 x 25 x 15 cm)	115/200/230	0-7
10-1044	12" x 10" x 6" (30 x 25 x 15 cm)	115/200/230	7-15
10-1045	12" x 10" x 6" (30 x 25 x 15 cm)	115/200/230	15-20
10-1046	12" x 10" x 6" (30 x 25 x 15 cm)	115/200/230	20-30
10-0093*	12" x 10" x 6" (30 x 25 x 15 cm)	115/200/230	0-20

*Branch circuit protection provided by installing electrician.

CONTROL PANELS USED WITH THREE PHASE PUMPS			
NEMA 4X ENCLOSURE (Float Switches not included)			
Order No.	Dimensions HxWxD in (cm)	Volts*	Amp Range
10-1102	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	1.0-1.6
10-1104	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	1.6-2.5
10-1106	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	2.5-4.0
10-1108	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	4.0-6.3
10-1110	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	6.3-10.0
10-1111	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	9.0-14.0
10-1112	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	13.0-18.0
10-1114	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	17.0-23.0
10-1115	14" x 12" x 6" (36 x 30 x 15 cm)	200/230/460	20.0-25.0
10-1183	14" x 12" x 6" (36 x 30 x 15 cm)	200/208	23.0-32.0
10-1154	14" x 12" x 6" (36 x 30 x 15 cm)	575	1.6-2.5
10-1156	14" x 12" x 6" (36 x 30 x 15 cm)	575	2.5-4.0
10-1158	14" x 12" x 6" (36 x 30 x 15 cm)	575	4.0-6.3

*Three phase panel has multi-tap transformer with secondary fusing.

NOTE: All variable level float switches in this section are mechanically activated and do not contain mercury.

NOTE: 600 and X600 Series single phase pumps require special panels that include start components. See Selection Guide FM1228 and FM1705 for correct panel selection.

Electrical Simplex Control

An electrical control panel is used on a simplex pump application added protection in residential or commercial applications. A cc pump. The built-in alarm system, a standard feature, will activate systems must be installed by a qualified electrician and according 430-113, plus any others that apply).

Single Phase Control Panel

SPECIFICATIONS:

- 115- 200- 230 Volts
- Dead front panel
- Complete with (3) 20' (6 m) control float switches
- Clear inner door (10-0125 only)
- Equipment disconnect (10-0125 only)
- Motor contactor (all models except 10-1019 and 10-1023)
- NEMA 4X watertight enclosure with lockable latch
- Top-mounted alarm light
- Alarm horn provides audio warning of alarm condition (83 to 85 decibel rating)
- Pump run indicator light
- Horn silence and alarm test toggle switches
- HOA switch
- Dry auxiliary contact (not available in plug-in panels)



These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.

SPECIFICATIONS:

- 115V (10-1019) or 230V (10-1023)
- NEMA 4X enclosure with hinged cover
- Corded plug for use with piggyback pump switch
- Alarm horn (83 to 85 decibel rating)
- Terminal strip
- Horn silence switch to turn alarm on or off
- Alarm float only



Three Phase

SPECIFICATIONS:

- 200-230-460-575 Volts
- NEMA 4X - watertight enclosure with lockable latch
- Hand-off-auto toggle switch
- Green pump run light
- Alarm test & silence switches
- Red alarm beacon and audible alarm for a high water condition (83 to 85 decibel rating)
- Motor protection switch with overload protection
- Magnetic starter
- Numbered terminal strip for connecting pumps and variable level float switches
- Dry auxiliary contacts for remote alarm devices
- Three float operation (floats not included - see FM0526)
- Off-the-shelf components provide easy field maintenance and repair

THREE PHASE SIMPLEX PUMP CONTROL PANELS

Model	Dimensions HxWxD in (cm)	Volts	Amp Range
10-1074	12" x 10" x 6" (30 x 25 x 15 cm)	200/230/460	1.0 - 1.6
10-1076	12" x 10" x 6" (30 x 25 x 15 cm)	200/230/460	1.6 - 2.5
10-1078	12" x 10" x 6" (30 x 25 x 15 cm)	200/230/460	2.5 - 4.0
10-1080	12" x 10" x 6" (30 x 25 x 15 cm)	200/230/460	4.0 - 6.3
10-1082	12" x 10" x 6" (30 x 25 x 15 cm)	200/230/460	6.0 - 10.0
10-1083	12" x 10" x 6" (30 x 25 x 15 cm)	200/230/460	9.0 - 14.0
10-1084	12" x 10" x 6" (30 x 25 x 15 cm)	200/230/460	13.0 - 18.0
10-1086	12" x 10" x 6" (30 x 25 x 15 cm)	200/230/460	17.0 - 23.0
10-1132	12" x 10" x 6" (30 x 25 x 15 cm)	575	1.6 - 2.5
10-1134	12" x 10" x 6" (30 x 25 x 15 cm)	575	2.5 - 4.0
10-1136	12" x 10" x 6" (30 x 25 x 15 cm)	575	4.0 - 6.3

SINGLE PHASE SIMPLEX PUMP CONTROL/ALARM SYSTEM

Model #	Volts	Dimensions HxWxD in (cm)	Amp Range	Float switches included	Features
10-1019	115V	8" x 6" x 4" (20 x 15 x 10 cm)	0-15	Alarm float only	Plug-In
10-1023	230V	8" x 6" x 4" (20 x 15 x 10 cm)	0-15	Alarm float only	Plug-In
10-1036	115V, 200-230V	8" x 6" x 4" (20 x 15 x 10 cm)	0-7	Three 20' (6 m) control floats	Circuit breaker disconnect
10-1037	115V, 200-230V	8" x 6" x 4" (20 x 15 x 10 cm)	7-15	Three 20' (6 m) control floats	Circuit breaker disconnect
10-1038	115V, 200-230V	8" x 6" x 4" (20 x 15 x 10 cm)	15-20	Three 20' (6 m) control floats	Circuit breaker disconnect
10-0125*	115V, 200-230V	10" x 8" x 4" (25 x 20 x 10 cm)	0-20	Three 20' (6 m) control floats	Equipment disconnect

* 10-0125 Branch Circuit Protection provided by the installing electrician.

Control Panels for Explosion-Proof Pumps

Simplex and Duplex with Intrinsically Safe Relays

These intrinsically-safe control panels are used on pump applications as a hazardous duty location. Lift stations in some regions fall under Class I, II, or III classification. The intrinsically-safe panel, in conjunction with an explosion-proof pump, will provide a system that will not allow ignition of explosive gases. The purpose of the control panel is to cycle a pump automatically. Each panel comes standard with pump run light(s), a high water audible and visual alarm, seal fail indicator(s), and a UL Listing. All panels come standard with a NEMA 4X rating for indoor or outdoor use.

These panels MUST NOT be in the space classified as needing explosion-proof equipment. Special fittings that either prevent the passage of hot gases, in the case of an explosion in a Class I area, or the passage of combustible dust, fibers, or flyings in a Class II or III area (NEC 501-5 and 502-5) are required. A qualified electrician must install all electrical systems. National Electrical Code (NEC) Articles 500 through 503 explain in detail the requirements for the installation of wiring or electrical equipment in hazardous locations. These articles, along with other applicable regulations, local governing inspection authorities, insurance representatives, and qualified engineering/technical assistance, should be your guides to the installation of wiring or electrical equipment in any hazardous or potentially hazardous location.

SPECIFICATIONS:

- Intrinsically-safe relays
- NEMA 4X enclosure
- Top-mounted alarm light
- Hands-off-auto toggle switch for each pump
- UL Listed
- Alarm horn with silence switch
- Magnetic motor contactor
- Lockable Latch
- Auxiliary dry contact/high water alarm
- Circuit breaker pump disconnect
- 3 or 4 variable float switch control operation
- Off-the-shelf components provide for relatively easy field maintenance and repair
- Green pump run pilot light for each pump
- Seal fail indicator light(s)
- Thermal cutouts for 3 phase
- Duplex only - lead/lag alternating circuit



Tested to UL Standard UL 508

STANDARD ENCLOSURE DIMENSIONS		
Panel	Phase	Dimensions (HxWxD)
Simplex	1	16" x 14" x 6" (41 x 36 x 15 cm)
Duplex	1	16" x 14" x 6" (41 x 36 x 15 cm)
Simplex	3	16" x 14" x 6" (41 x 36 x 15 cm)
Duplex	3	16" x 14" x 6" (41 x 36 x 15 cm)

Products may not be exactly as pictured.

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



Nema-4X Junction-box

Economy Junction Box (Field Assemble

PVC plastic box with removable cover for use in sewage, effluent, d
10 x 5 cm) and is field-drilled for maximum flexibility in each instal

SPECIFICATIONS:

- 10-0770-Box includes 2 UF cord seals for 12 or 14 gage UF cable and 3 round cord seals for 16-3, 16-2, 18-3, or 18-2 SO type cords
- 10-0776-Box includes one 3/4" PVC conduit adapter and 3 round cord seals for 16-3, 16-2, 18-3, 18-2 SO type cords
- 10-0777-Box includes one 3/4" PVC conduit adapter and 4 round cords seals for 16-3, 16-2, 18-3, 18-2 SO type cords
- 10-0778-Box includes one 3/4" PVC conduit adapter and 5 round cord seals for 16-3, 16-2, 18-3, 18-2 SO type cords

Sewage/Waste Junction Boxes

NEMA-4X Junction Boxes are electrical enclosures that are watertight, dust-tight, and corrosion resistant. Boxes are completely assembled with cord seals and terminal strip for easy field wiring.

Pump Model	Type	LxWxH	Cord Grips	Part No.
611, 621, 631, 641, 651, 661 (under 20 Amps)	Simplex	6" x 6" x 4-3/8"	1 each-Pump 3 each-Floats	10-0985
	Duplex	8" x 8" x 4-1/2"	2 each-Pump 4 each-Floats	10-1015
651, 661 (20 Amps & up)	Simplex	6" x 6" x 4-3/8"	1 each-Pump 3 each-Floats	10-0987
	Duplex	8" x 8" x 4-1/2"	2 each-Pump 4 each-Floats	10-1016

Qwik- Box Pump Control and Alarm

The Qwik-Box is a junction box designed for easy hookup of pumps and alarm systems. It is used in septic effluent, sewage, or dewatering applications, and requires a connection outside the building or residence. The Qwik-Box eliminates the need for junction wiring boxes inside sewage and septic tanks, and consists of UL listed components.

SPECIFICATIONS:

- No need to cut off plugs
- Sealed watertight enclosure
- Available in 115 Volt or 230 Volt design
- Corrosion-resistant PVC construction
- Easy hookup of indoor alarm with terminal strip exposed for low voltage wiring
- Rated for NEMA 4X
- Water-tight rubber cord seal for pump and switch cables
- Optional indoor tank alert alarm with silence switch and LED indicator
- Installation and wiring instructions included
- Meets NEC requirements for a disconnect

See FM1420 for further information.

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



Nema-4X Junction-box

Starter Kits

A starter kit is required for all single phase model 611, 621, 631 phase capacitors and relay required to run the pump. These components are required for the control panel.

Starter Kit P/N	Pump Model
10-0914	611/621/631
10-2221	611/621 (after 10/1/07)
10-0915	631/641
10-1434	651

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.

Deluxe Junction Box(Factory Assembled)

High-impact, corrosion-resistant, weatherproof thermoplastic enclosure with flexible PVC gasket and brass screws. Preassembled at the factory for convenience and ease of installation.



DELUXE (Factory Assembled) Pump Model	Type	LxWxH	Hub Size	Cord Grips	Part No.
51, 53, 55, 57, 59, 98, 137, 139, 140, 142, 151, 152, 153, 161 (except 115 V), 163 (except 115 V), 165, 185, 186 (3 phase), 188 (3 phase), 189 (460 & 575V), 264, 266, 267, 268, 270, 282, 284, 293, 294 (3 phase), 295 (460V & 575V only), 404 (230/460/575V 3 phase), 405 (230/460/575V 3 phase) and all effluent STEP Systems.	Simplex	4" x 4" x 4"	3/4"	4 small & 1 plug	10-1398
	Simplex	4" x 4" x 4"	1-1/2"	4 small & 1 plug	10-1399
	Simplex	6" x 6" x 4"	1-1/2"	4 small & 1 plug	10-1402
	Simplex/Duplex	6" x 6" x 4"	1"	5 small & 1 plug	10-1401
	Duplex	6" x 6" x 4"	1"	6 small & 1 plug	10-1633
	Duplex	6" x 6" x 4"	2"	5 small & 1 plug	10-1403
161 (115 V), 163 (115 V), 186 (single phase), 188 (single phase), 189 (200 & 230 V), 191, 292, 294 (single phase), 295 (200 & 230 V), 404 (single phase & 200 V 3 phase), 405 (single phase & 200 V 3 phase).	Simplex	6" x 6" x 4"	1-1/2"	3 small, 1 large & 1 plug	10-1404
	Duplex	6" x 6" x 4"	2"	4 small, 2 large & 1 plug	10-1405

Note: Small cord grips are for 16 ga. and 18 ga. cable.
Large cord grips are for 12 ga. 4 conductor cable and 14 ga. 4 conductor cable.

Disconnect & Rail Systems

Z-Rail® Threaded Rail Systems 1-1/4" - 3" NPT Discharge Pumps

SPECIFICATIONS:

- Sewage, storm water, effluent and grinder pump systems
- For use in concrete, steel, or fiberglass tanks
- Allows for removal of pumps from ground level
- No confined space entry to service pump
- No pull rods or hold down rods
- Disconnect fitting with positive machine fit and o-ring provides a reliable seal
- Seals up to 370' TDH (160 psi) and supports a weight up to 300 lbs
- Guide rails direct the pump to and from the disconnect fitting. Systems are supplied complete with disconnect fitting, guide plate, rail guide, and upper rail support bracket
- All systems use 3/4" schedule 40 pipe rails (not included)

3" & 4" Flanged Rail Systems Horizontal Discharge

SPECIFICATIONS:

- For 600 and X600 Series solids-handling pumps
- For basins of any depth
- Cast iron construction with stainless steel hardware
- Easy engagement and disengagement of pump from ground level
- Suitable for most horizontal discharge pumps having a 3" or 4" ANSI flange
- Seals up to 100' TDH (43.9 psi) and supports a weight up to 500 lbs
- Includes base elbow, pump adaptor plate, sealing gasket, rail guide and upper rail support
- All systems use 2" schedule 40 rail pipes (not included)

EZ Pull Quick Disconnect



The EZ-Pull quick disconnect is a convenient accessory to use when installing or removing a pump from a tank.

Features

- Two-piece tapered male and female connection that locks itself into place when sliding the two pieces together
- Injection molded, glass filled thermoplastic with an o-ring which provides a watertight seal even under high head conditions
- Available in 1-1/4", 1-1/2" and 2" FPT

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



2" Z-Rail® unit shown.



4" Non-sparking unit shown.

Disconnect Only 1-1/4" - 2" Discharge

SPECIFICATIONS:

- Brass or thermoplastic
- Economical, reduces time and cost of removing pump
- Safety: keeps personnel out of pits & out of contact with contaminants
- Used for shallow systems where guide rails are not necessary (pull rod not included)





These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.

ABOUT THE ZOELLER FAMILY OF WATER SOLUTIONS

Founded in 1939, Zoeller Company is one of the oldest independently-owned professional pump manufacturers in North America. Headquartered in Louisville, Kentucky USA, Zoeller has over 800 employees worldwide and close to 600,000 sq. ft. of manufacturing facilities from our seven operations in North America and Asia.

Zoeller Company has established itself as an innovative leader in pumping equipment and water treatment systems by continuous research and development. The quality of our products is demonstrated by UL, CSA, CE, and NSF listings as well as continued growth throughout the United States, Canada, Mexico, and over 40 other countries around the globe. The company has also expanded to include five brands, which have become the foundation of Zoeller.



The original Zoeller product line now resides in Zoeller Pump Company, which offers a broad range of submersible pumps from fractional to 7-1/2 HP for residential and commercial sump, effluent, dewatering and grinding applications.



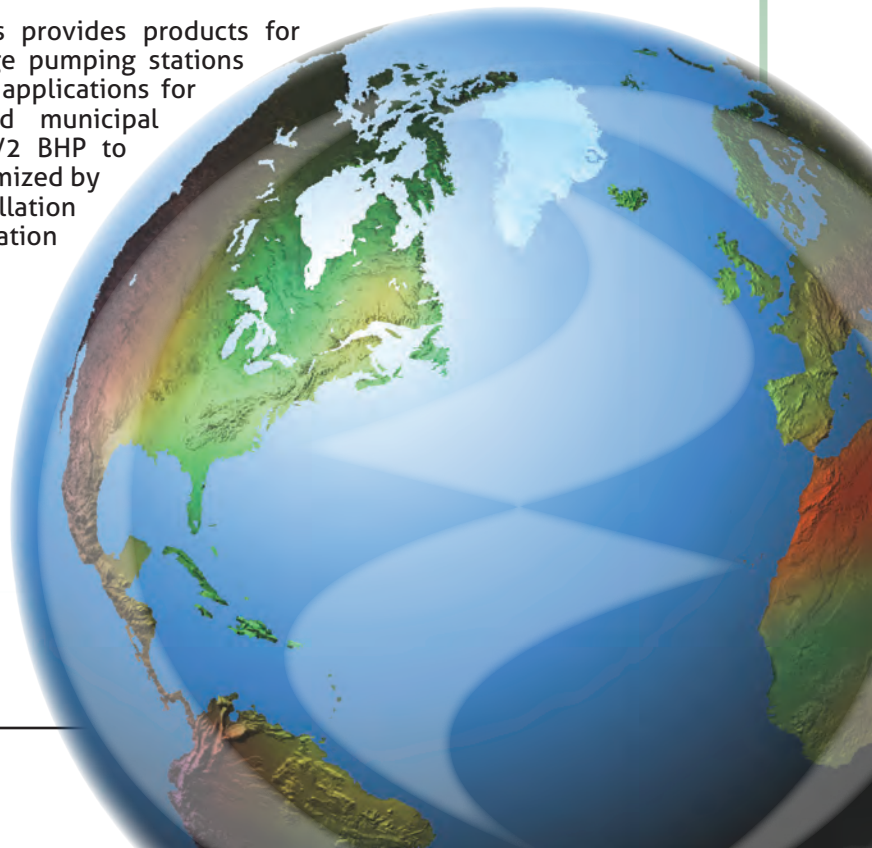
Flint & Walling, founded in 1866 in Kendallville, Indiana USA, is the only pump company in the U. S. to manufacture its own motor for jet and centrifugal pumps. This product line specializes in deep well pumps that range from 5 GPM to 1,000 GPM, as well as centrifugal, jet, booster, and submersible pumps up to 7-1/2 HP.



Founded in 1952, Wolf Pump is a manufacturer of submersible turbine pumps located in Abernathy, Texas. Wolf currently produces 4" to 8" pumps with capacities ranging from 35 to 1000 GPM. These pumps are known for their efficiency and durability in demanding water applications including irrigation, municipal water supplies, dewatering applications, dairy production, mining, the oil and gas industries, aquaculture, and more.



Zoeller Engineered Products provides products for storm water removal, sewage pumping stations and hazardous environment applications for residential, commercial and municipal markets. Available from 1/2 BHP to 100 BHP, each pump is customized by design, manufacture and installation according to exact application needs.



Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.



MAIL TO: P.O. BOX 1634
SHIP TO: 3649 Cane Run Rd.
(502) 778-2731 • 1 (800) 92

COMPARE THESE FEATURES

- Non-clogging vortex impeller.
- Durable cast construction. Cast iron switch case, motor and pump housing, base and impeller. No sheet metal parts to rust or corrode. All cast iron class 30 30000# tensile strength.
- Stainless steel screws, bolts, float rod, handle, guard and arm and seal assembly.
- Shaft Seal - Carbon & ceramic rotary face seal, with stainless steel wetted parts.
- UL Listed 3-wire neoprene cord and plug. 10 ft. standard for automatic. 15 ft. standard for nonautomatic.
- Upper and lower ball bearing running in a bath of oil.
- Maximum temperature for sewage or dewatering 130°F (54°C).
- Motor - 60 Hz, 1750 RPM, oil-filled, hermetically sealed, automatic reset thermal overload protected (1 Ph and Auto 3 Ph).
- All models are available in 2" or 3" discharge.
- All models pass 2 inch spherical solids.
- Automatic units available with float operated, submersible (NEMA 6) mechanical switch. Available in both 1 and 3 Phase Units.**
- On point 15¼", Off point 5¼".
- Corrosion resistant powder coated epoxy finish.
- Major width 13 9/16". Major height 19 9/16". (Single seal pumps)

MODELS 4282-4284 DOUBLE SEAL PUMPS (nonauto only)

- Protects motor from seal leaks.
- Improved bearing lubrication.
- Helps eliminate seal and bearing damage from dry runs.
- Major width 13 9/16". Height 21 7/16".

NOTE: The sizing of effluent systems normally requires variable level float(s) controls and properly sized basins to achieve required pumping cycles or dosing timers with nonautomatic pumps.

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



Tested to UL Sta
UL778

(For Pump Prefix Identification see News & Views 0052)



Certified to CSA Standard
C22.2 No. 108

"WASTE-MATE"

SUBMERSIBLE

SEWAGE

OR DEWATERING PUMP

2" OR 3" FLANGED DISCHARGE • PASSES 2" SOLIDS



**AUTOMATIC THREE
PHASE
PUMP****

**SINGLE
SEAL
PUMP**

**DOUBLE
SEAL
PUMP**



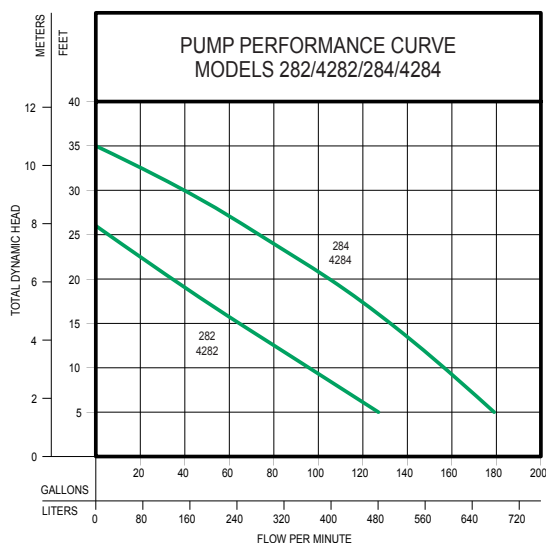
**POWDER
COATED
TOUGH™**

MODELS AVAILABLE

- Automatic or Nonautomatic with single seal
- Nonautomatic with double seals
- 2" or 3" discharge.
- Single phase or three phase motors available.
- See selection chart for specifications or specific models.

*NOTE: No UL Listing or CSA Certification for Extra Duty (ED) pumps.
See back page for UL & CSA Listings.

**THREE PHASE AUTOMATIC UNITS AVAILABLE IN 230V SINGLE SEAL ONLY.



MODEL	
Feet	M
5	1.5
10	3.0
15	4.5
20	6.0
25	7.5
30	9.0
Shut-off Head	

These are example product specifications and are for reference ONLY, as equals may be accepted. Please consult with your engineer or plumber for correct sizing, piping and implementation.

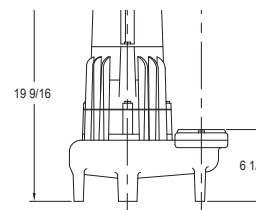
CONSULT FACTORY FOR SPECIAL APPLICATIONS

- Three phase pumps are available in 200V, 230V, 460V, or 575V. 230V three phase is available in automatic and nonautomatic models.
- Electrical alternators, for duplex systems, are available and supplied with a high water alarm, refer to FM0486.
- Simplex Panel with high water alarm, refer to FM1596.
- Variable level control switches are available for controlling single and three phase systems.
- Double piggyback variable level float switches are available for variable level long cycle controls.
- Long cords are available in lengths of 25 - 35 - 50 feet.
- Simplex and duplex basins are available.
- Refer to FM1922 and FM0806 for temperatures over 130°F.

SPECIFICATIONS								CONTROL SELECTION		Listings	
Single Seal Model	Double Seal Model	Volt	Phase	Mode	Amps	HP	Cord Length	Simplex	Duplex	cCSAus	UL
M282	--	115	1Ph	Auto	10.3	1/2	10	1	--	Y	Y
N282	N4282	115	1Ph	Non	10.3	1/2	15	2 or 3	4	Y	Y
D282	--	230	1Ph	Auto	5.0	1/2	10	1	--	Y	Y
E282	E4282	230	1Ph	Non	5.0	1/2	15	2 or 3	4	Y	Y
* H282	--	200	1Ph	Auto	6.1	1/2	10	1	--	Y	N
* I282	* I4282	200	1Ph	Non	6.1	1/2	15	3	4	Y	N
* J282	* J4282	200	3Ph	Non	3.6	1/2	15	3	4	Y	Y
* F282	* F4282	230	3Ph	Non	3.0	1/2	15	3	4	Y	Y
* CF282	--	230	3Ph	Auto	3.0	1/2	15	1	--	N	Y
* G282	* G4282	460	3Ph	Non	1.7	1/2	15	3	4	Y	Y
* BA282	* BA4282	575	3Ph	Non	1.4	1/2	15	3	4	Y	N
D284	--	230	1Ph	Auto	8.9	1	10	1	--	Y	Y
E284	E4284	230	1Ph	Non	8.9	1	15	2 or 3	4	Y	Y
* H284	--	200	1Ph	Auto	9.3	1	10	1	--	Y	N
* I284	* I4284	200	1Ph	Non	9.3	1	15	3	4	Y	N
* J284	* J4284	200	3Ph	Non	5.5	1	15	3	4	Y	Y
* F284	* F4284	230	3Ph	Non	5.0	1	15	3	4	Y	Y
* CF284	--	230	3Ph	Auto	5.0	1	15	1	--	N	Y
* G284	* G4284	460	3Ph	Non	2.6	1	15	3	4	Y	Y
* BA284	* BA4284	575	3Ph	Non	2.2	1	15	3	4	Y	N

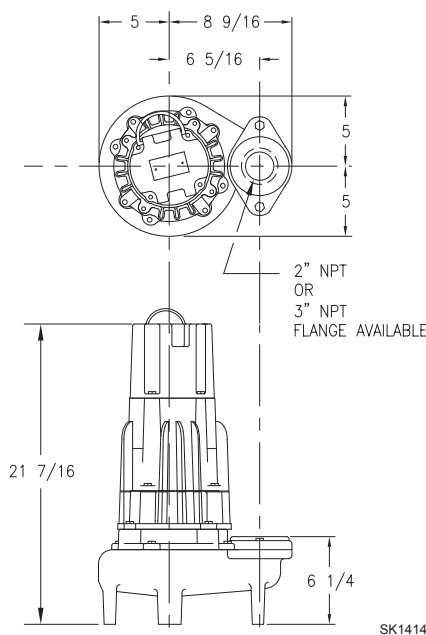
* No Molded Plug

For information on additional Zoeller products refer to catalog on Piggyback Variable Level Float Switches, FM0477; Electrical Alternator, FM0486; Sump/Sewage Basins, FM0487; Simplex Pump Control, FM1596; Alarm Systems, FM0732; and Disconnect/Rail Systems, FM0787.



SK1023

**Double Seal Design
Weight 88-91 lbs.**



SK1414

SELECTION GUIDE

1. Integral float operated mechanical switch, no external control required.
2. For automatic use single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
3. See FM1228 for correct model of simplex control panel.
4. See FM0712 for correct model of duplex control panel.

CAUTION

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 Electric Code (NEC) and the Occupational Safety and Health Act (OSHA).

RESERVE POWERED DESIGN

For unusual conditions a reserve safety factor is engineered into the design of every Zoeller pump.

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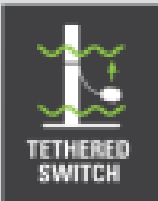
SEWAGE

SUBMERSIBLE GRINDER PUMP

Cast Iron

Model 2701-0005
1 HP
48 GPM

- Stainless steel cutter with shredding ring tears up flushable solids
- Rugged 115V, 60Hz motor
- Thermal overload protects against overheating
- 1-1/4-in. discharge for economical installation
- Can replace traditional sewage pumps when pumping to a pressurized sewer main
- Designed to pump long distances (750 feet or more) and high lifts (minimum of 30 feet)



100% FACTORY TESTED

1 YEAR LIMITED WARRANTY



PERFORMANCE

	DISCHARGE HEIGHT ABOVE PUMPING LEVEL (LIFT)					DIMENSIONS	
	0 FT.	10 FT.	20 FT.	30 FT.	40 FT.	W IN	H IN
GALLONS PER MINUTE	48	42	36	28	16	10-1/4	17
LITERS PER MINUTE	182	159	136	106	61		



These are example product specifications and are for reference ONLY, as equals may be accepted.
 Please consult with your engineer or plumber for correct sizing, piping and implementation.



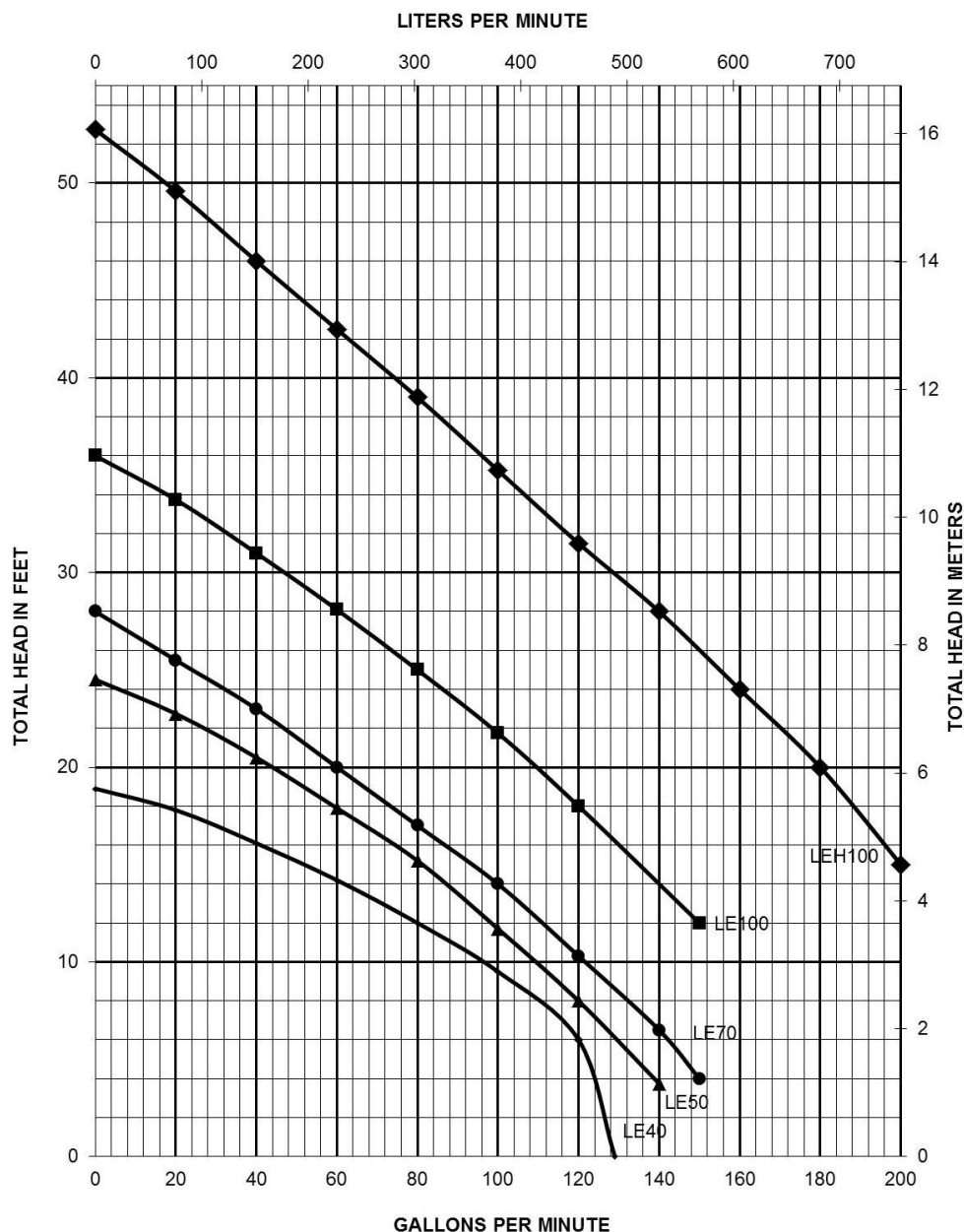
Product Specification

P380-Series

Submersible Sewage Simplex Package

These are example product specifications and are for reference ONLY, as equals may be accepted.

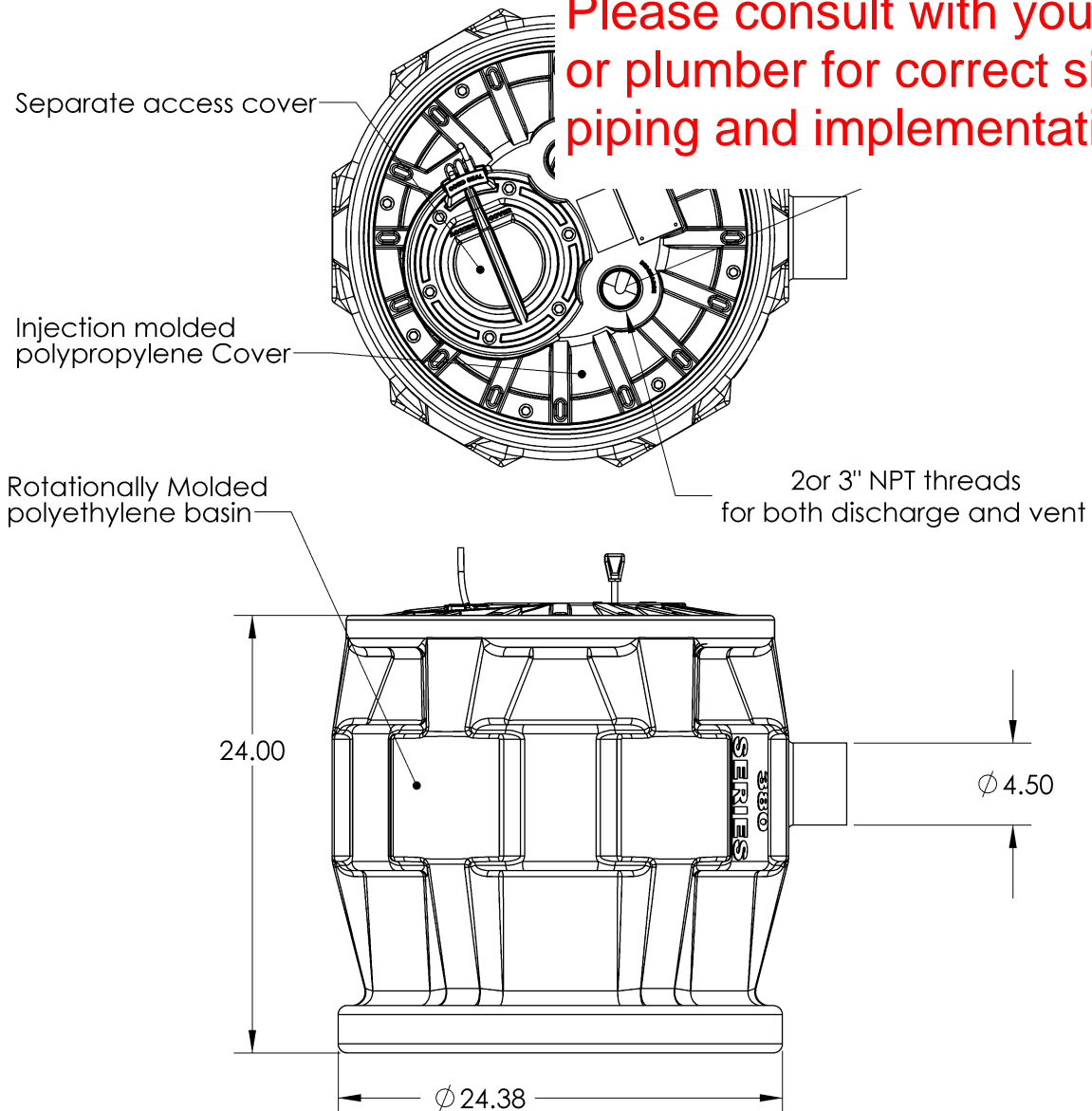
Please consult with your engineer or plumber for correct sizing, piping and implementation.



P380-Series Dimensional Data

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Please consult with your engineer or plumber for correct sizing, piping and implementation.



**Liberty
Pumps**

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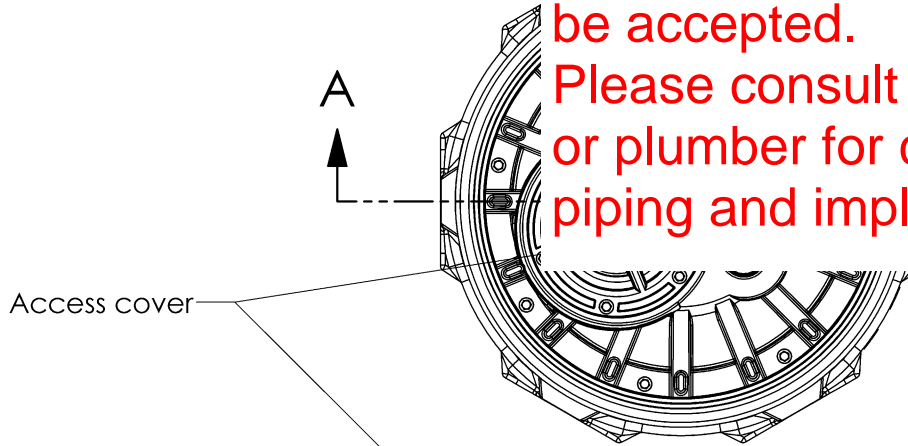
P380 SERIES DIMENSIONAL			
DWG. NO.			
SIZE A	DATE:	REV. A	
SCALE: 1:4	WEIGHT:	LBS	SHEET 1 OF 1

APPLICATION

DO NOT SCALE DRAWING

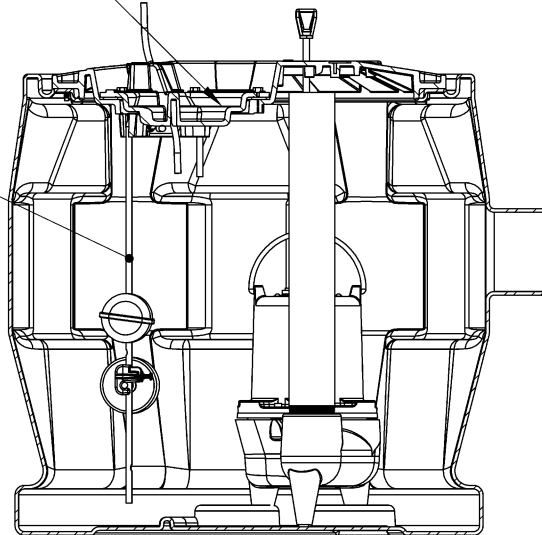
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Please consult with your engineer or plumber for correct sizing, piping and implementation.



Access cover

QuickTree® float system
Allows removal of floats
without pulling the pump



SECTION A-A

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DWG. NO. P380 SERIES DIMENSIONAL

SIZE
A

DATE:

REV.
A

SCALE:1:4

WEIGHT:

LBS

SHEET 1 OF 1

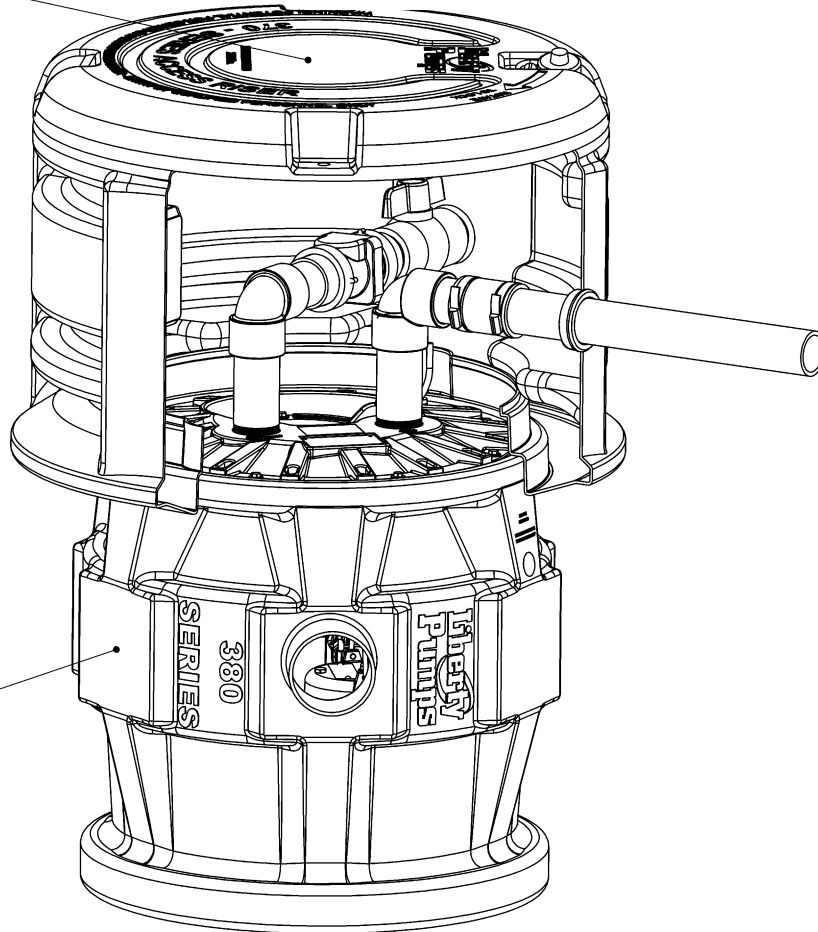
APPLICATION

DO NOT SCALE DRAWING

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OPTIONAL
ARC18 RISER

P380 SYSTEM



**Liberty
Pumps**

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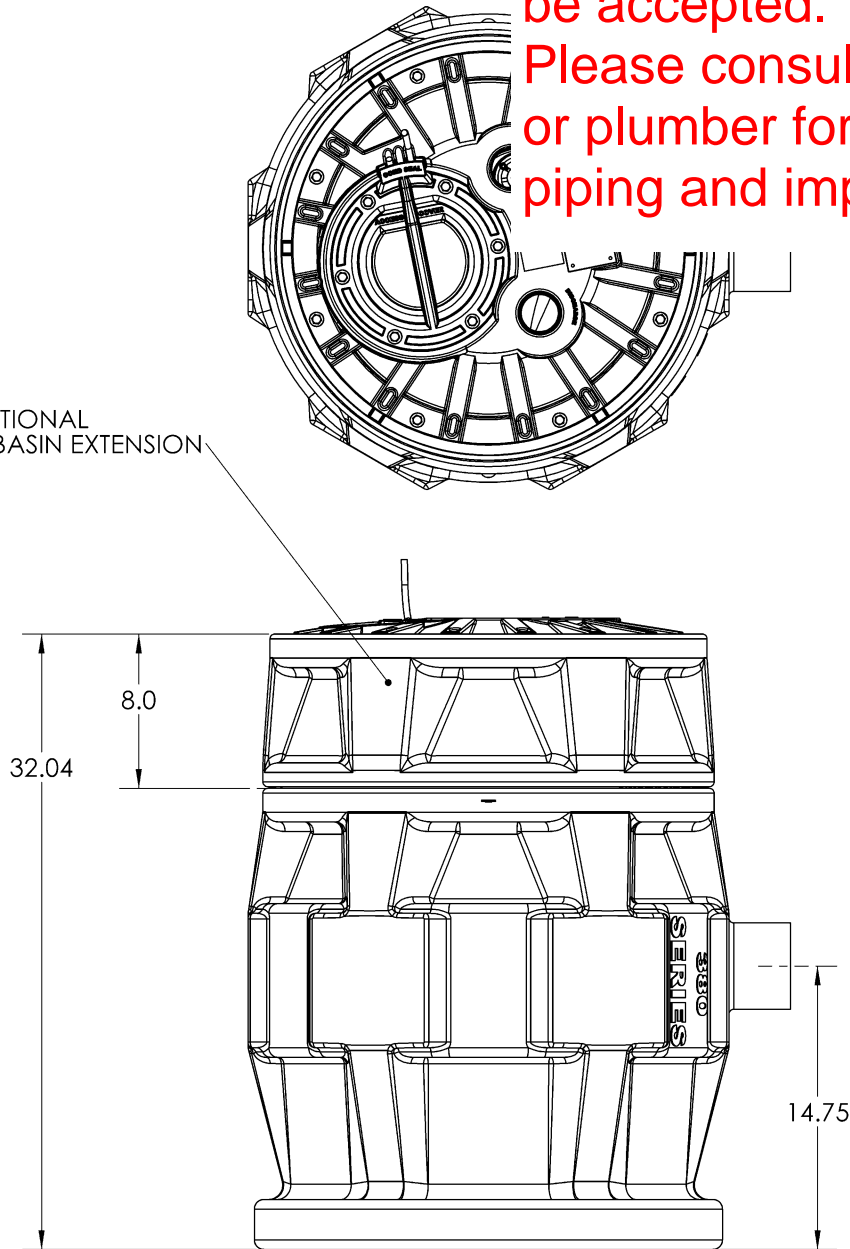
DWG. NO.		P380 SERIES W/ RISER	
SIZE A	DATE:	REV. A	
SCALE:1:4	WEIGHT:	LBS	SHEET 1 OF 1

APPLICATION	DO NOT SCALE DRAWING
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These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.

OPTIONAL
8" BASIN EXTENSION



**Liberty
Pumps**

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DWG. NO. P380 SERIES W/ EXTENSION

SIZE
A

DATE:

REV.
A

SCALE:1:4

WEIGHT:

LBS

SHEET 1 OF 1

APPLICATION

DO NOT SCALE DRAWING

P380-Series Electrical Data

MODEL	HP	VOLTAGE	PHASE	SF	FULL LOAD AMPS
P382LE41	4/10	115	1	1.00	12
P382LE51	1/2	115	1	1.00	12
P382LE52	1/2	208-230	1	1.00	6.8
P382LE71	3/4	115	1	1.00	12
P382LE72	3/4	208-230	1	1.00	6
P382LE102	1	208-230	1	1.00	8
P382LEH102	1	208-230	1	1.00	12
P383LE41	4/10	115	1	1.00	12
P383LE51	1/2	115	1	1.00	12
P383LE52	1/2	208-230	1	1.00	6.8
P383LE71	3/4	115	1	1.00	12
P383LE72	3/4	208-230	1	1.00	6
P383LE102	1	208-230	1	1.00	8
P383LEH102	1	208-230	1	1.00	12

These are example product specifications and are for reference ONLY, as equals may be accepted. Please consult with your engineer or plumber for correct sizing, piping and implementation.

21	105°C 221°F	B	2"	YES
30	105°C 221°F	B	3"	YES
22.5	105°C 221°F	B	3"	YES
22.5	105°C 221°F	B	3"	YES
12	105°C 221°F	B	3"	YES
28	105°C 221°F	B	3"	YES
13	105°C 221°F	B	3"	YES
21	105°C 221°F	B	3"	YES
30	105°C 221°F	B	3"	YES

P380-Series Technical Data

TANK	POLYETHYLENE *
COVER	POLYPROPYLENE
GUIDE RAIL	NONE – PUMPS PULL OUT WITH COVER
INLET HUB	INCORPORATED INTO TANK
DISCHARGE PIPING	SCHEDULE 80 PVC
CONTROLS	PIGGY BACK FLOATS
IMPELLER	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
SOLIDS HANDLING SIZE	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
PAINT	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
MAX LIQUID TEMP	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
MAX STATOR TEMP	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
THERMAL OVERLOAD	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
POWER CORD TYPE	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
MOTOR HOUSING	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
VOLUTE	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
SHAFT	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
HARDWARE	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
ORINGS	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
MECHANICAL SEAL	SEE INDIVIDUAL PUMP MODELS SPEC SHEET
MIN BEARING LIFE	SEE INDIVIDUAL PUMP MODELS SPEC SHEET

*XL MODELS UTILIZE A UPC LISTED POLYETHYLENE BASIN WHICH MEETS IAPMO PS52 10' STACK TEST

These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.

P380-Series Specifications

See individual pump specification for

WARRANTY

Standard limited warranty shall be 3 years.

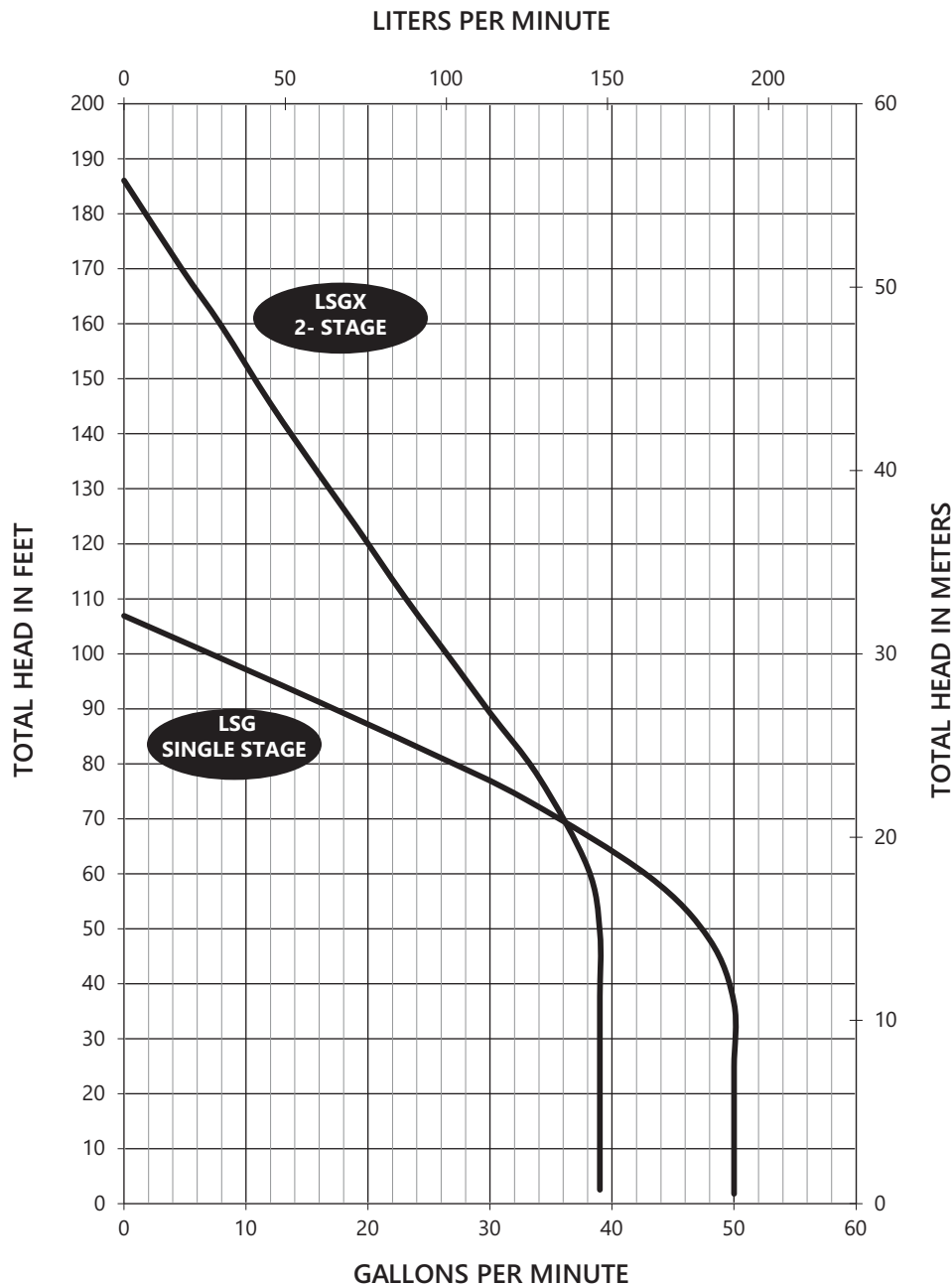
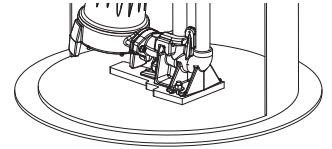


A Family and Employee Owned Company

Pump Specification

3036LSG/LSGX-Series Omnivore® 2 HP Simplex G

These are example product specifications and are for reference ONLY, as equals may be accepted. Please consult with your engineer or plumber for correct sizing, piping and implementation.

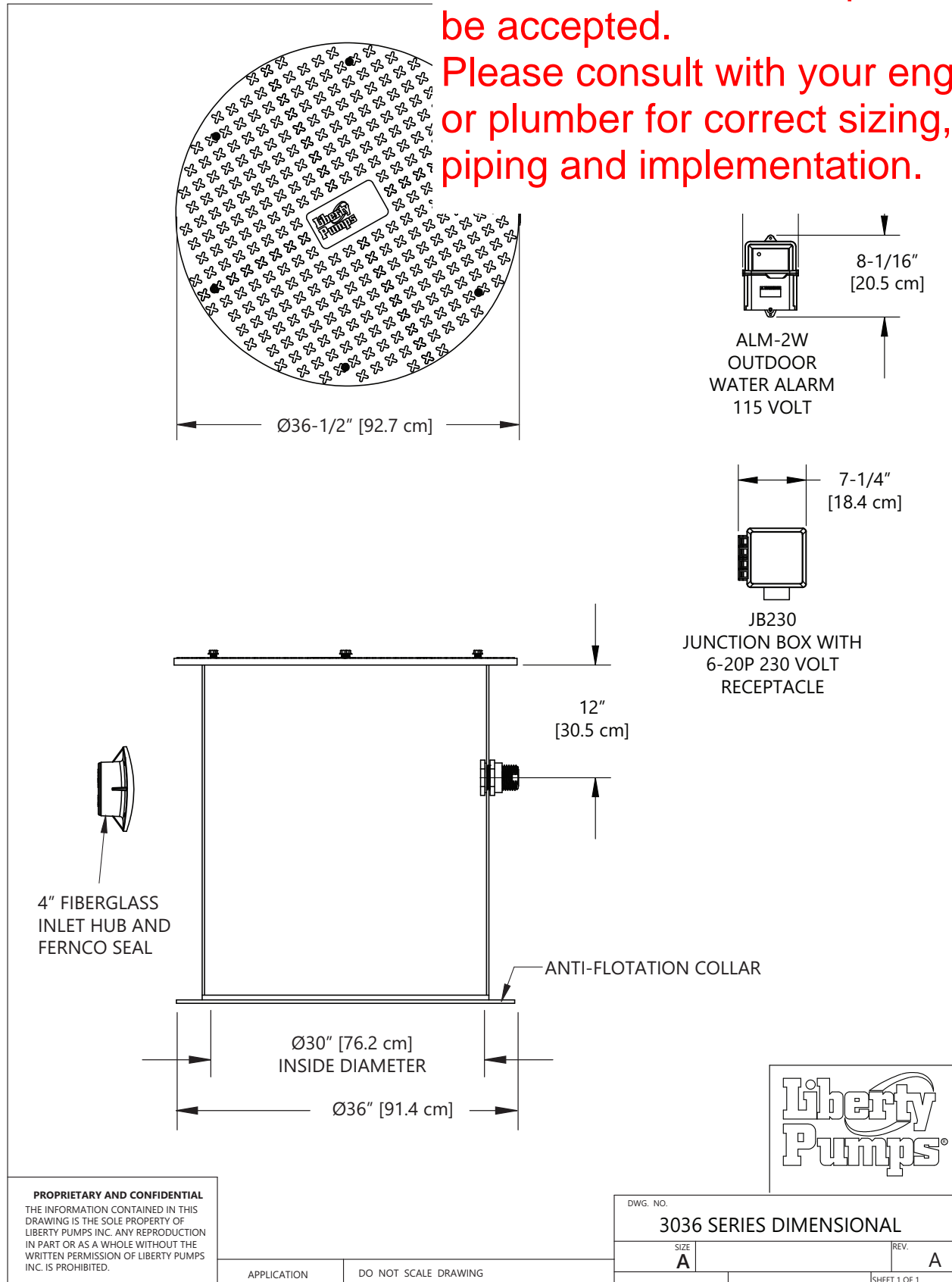


ATTENTION

For pressure sewer applications, verify a **Redundant Check Valve Assembly** (curb stop and check valve) is installed between the pump discharge and the street main, as close to the public right-of-way as possible, on all installations to protect from system pressures.

3036LSG/LSGX-Series Dimensional Data

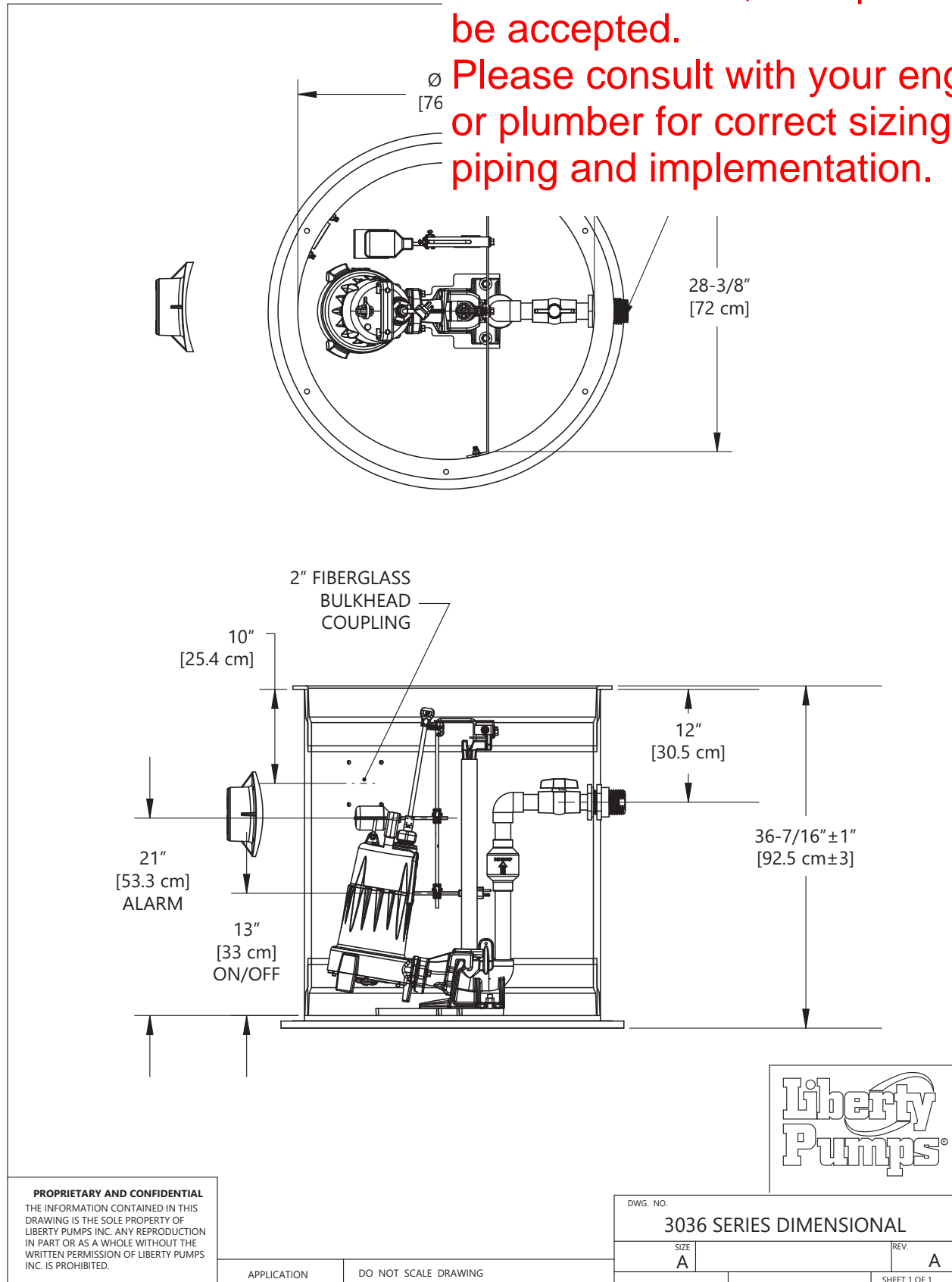
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3036LSG/LSGX-Series Dimensional Data

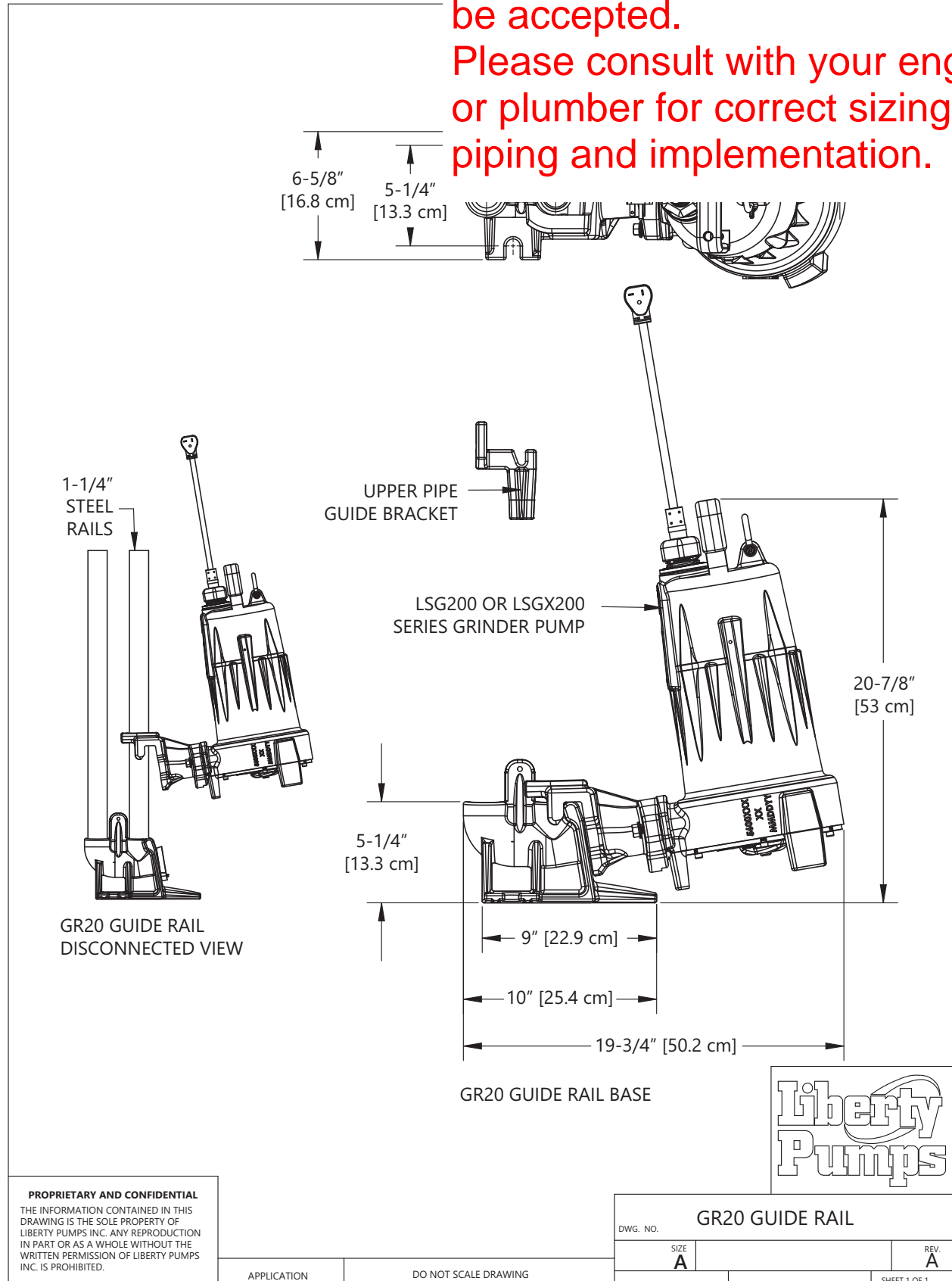
These are example product specifications and are for reference ONLY, as equals may be accepted.

Please consult with your engineer or plumber for correct sizing, piping and implementation.



3036LSG/LSGX-Series Dimensional Data

These are example product specifications and are for reference ONLY, as equals may be accepted. Please consult with your engineer or plumber for correct sizing, piping and implementation.



3036LSG/LSGX-Series Electrical Data

MODEL	HP	VOLTAGE	PHASE	SF	FULL LOAD AMPS						
3036LSG202	2	208/230	1	1.0	15						
3036LSGX202	2	208-230	1	1.0	15						

These are example product specifications and are for reference ONLY, as equals may be accepted.
Please consult with your engineer or plumber for correct sizing, piping and implementation.

3036LSG/LSGX-Series Technical Data

SYSTEM	TANK	WOUND FIBERGLASS WITH ANTI-FLOTATION FLANGE STANDARD – FIBERGLASS COVER OPTIONAL – STEEL COVER
	CAPACITY	TOTAL BASIN VOLUME – 110 GALLON / 416 LITERS PUMP CYCLE – 21 GALLONS / 79 LITERS
	GUIDE RAIL	STANDARD – SCHEDULE 40 GALVANIZED OPTIONAL – SCHEDULE 40 STAINLESS STEEL
	GUIDE RAIL BASE/DISCONNECT (GR20)	CAST IRON
	INLET HUB	4" WITH FLANGE GASKET AND PIPE SEAL
	DISCHARGE PIPING	SCHEDULE 80 PVC
	JUNCTION BOX	NEMA 4X OUTDOOR WITH 6-20R 230V RECEPTACLE
	ALARM	NEMA 4X OUTDOOR ALARM WITH VISUAL AND AUDIBLE (80 DBI) ALARM
	WEIGHT	264 LBS / 120 KG

These are example product specifications and are for reference ONLY, as equals may be accepted. Please consult with your engineer or plumber for correct sizing, piping and implementation.

PUMP	IMPELLER	
	PAINT	
	MAX LIQUID TEMP	
	MAX STATOR TEMP	
	THERMAL OVERLOAD	
	POWER CORD TYPE	SJOOW
	MOTOR HOUSING	CLASS 25 CAST IRON
	VOLUTE	CLASS 25 CAST IRON
	SHAFT	300 SERIES STAINLESS STEEL
	HARDWARE	STAINLESS
	O-RINGS	BUNA-N
	MECHANICAL SEAL	UNITIZED GRAPHITE IMPREGNATED SILICON CARBIDE
	MIN BEARING LIFE	50,000 HRS
	CERTIFICATIONS	SSPMA, cCSAus

3036LSG/LSGX-Series Specifications

1.01 GENERAL

The contractor shall provide labor, material, equipment, and incidentals required to provide _____ (QTY) centrifugal grinder pump systems as specified herein. The pump models covered in this specification are LSG/LSGX-Series single-phase grinder pumps. The pump furnished for this application shall be model _____ as manufactured by Liberty Pumps.


2.01 OPERATING CONDITIONS

Each submersible pump shall be rated at 2 hp, _____ volts, 1-phase, 60 Hz, 3450 RPM. The unit shall produce _____ GPM at _____ feet of total dynamic head.

The submersible pump shall be capable of handling residential and commercial sewage and grinding it to a fine slurry enabling it to be pumped over long distances in pipelines as small as 1.25" in diameter. The LSG-Series single stage submersible pump shall have a shut-off head of 110 feet and a maximum flow of 50 GPM @ 10 feet of total dynamic head. The LSGX-Series 2-stage submersible pump shall have a shut-off head of 185 feet and a maximum flow of 38 GPM @ 10 feet of total dynamic head.

The pump shall be controlled with a piggyback style on/off float switch.

3.01 CONSTRUCTION

Each centrifugal grinder pump shall be equal to the  C Bergen NY. The castings shall be constructed of class 25 cast shall not be considered equal since they do not properly dis with a Buna-N O-ring. All fasteners exposed to the liquid sha cord entry plate with molded pins to conduct electricity elim shall be protected on the lower side with a dual seal arrangen The second/main seal shall be a unitized graphite impregnat The upper and lower bearing shall be capable of handling all handle the downward axial thrust produced by the impeller and cutters by design of angular contact roller races. The pump housing shall be of the concentric design thereby equalizing the pressure forces inside the housing, which will extend the service life of the seals and bearings. Additionally there shall be no cutwater in the housing volute in order to discourage the entrapment of flowing debris. The pump shall be furnished with a stainless steel handle having a nitrile grip.

These are example product specifications and are for reference ONLY, as equals may be accepted. Please consult with your engineer or plumber for correct sizing, piping and implementation.

4.01 ELECTRICAL POWER CORD

The submersible pump shall be supplied with 25 feet of multi-conductor power cord. It shall be cord type SJOOW, capable of continued exposure to the pumped liquid. The power cord shall be sized for the rated full load amps of the pump in accordance with the National Electric Code. The power cable shall not enter the motor housing directly but will conduct electricity to the motor by means of a water tight compression fitting cord plate assembly, with molded pins to conduct electricity. This eliminates the ability for water to enter internally through the cord by means of a damaged or wicking cord.

5.01 MOTORS

All motors shall be oil filled, capacitor start/capacitor run, class B insulated NEMA B design, rated for continuous duty. Since air filled motors are not capable of dissipating heat as effectively, they shall not be considered equal. At maximum load, the winding temperature shall not exceed 105°C for model LSG and 135°C for LSGX models (unsubmerged). The pump motor shall have an integral thermal overload switch in the windings for protecting the motor. The capacitor circuit shall be mounted internally in the pump. Single-phase motors shall have an integral solid state starting circuit switch for switching the start winding off.

6.01 BEARINGS AND SHAFT

An upper radial and a lower angular contact ball bearing shall be required. The upper bearing shall be a single ball/race type bearing. The lower bearing shall be an angular contact heavy duty ball/race type bearing, designed to handle axial grinder pump thrust loads. Both bearings shall be permanently lubricated by the oil that fills the motor housing. The bearing system shall be designed to enable proper cutter alignment from shut off head to maximum load at 10 feet of TDH. The motor shaft shall be made of 300 series stainless steel and have a minimum diameter of 0.670".

7.01 SEALS

The pump shall have a dual seal arrangement consisting of a lower and upper seal to protect the motor from the pumping liquid. The lower seal shall be fluoroelastomer OR Buna-N molded double lip seal, designed to exclude foreign material away from the main upper seal. The upper seal shall be a unitized graphite impregnated silicon carbide hard face seal with stainless steel housings and spring equal to Crane Type T-6a. The motor plate/housing interface shall be sealed with a Buna-N O-ring.

8.01 IMPELLER

The impeller shall be an investment cast stainless steel impeller seal area. It shall be keyed and bolted to the motor shaft.

9.01 CUTTER MECHANISM

The cutter and plate shall consist of 440 stainless steel with a R designed orifices through it, which enable the slurry to flow through the stationary cutter shall consist of V shapes to maximize cutting the rotary cutter. The rotary cutter shall have four (4) blades and be designed with a recessed area behind the cutting edge to prevent the accumulation and binding of any material between rotary cutter and the stationary cutter. The cutting system must incorporate close tolerances for optimum performance. Ring or radial cutters, or those that grind on the outside circumference, shall not be considered equal.

10.01 PRESSURE SEWER APPLICATIONS

A redundant check valve assembly consisting of a curb stop and check valve must be installed between the pump discharge and the street main, as close to the public right-of-way as possible, on all pressure (force main) sewer installations to protect from system pressures. The curb stop valve is necessary to isolate the site from the pressure sewer while the check valve provides redundant protection against potentially detrimental backflow. All valves and fittings should be rated for at least 200 PSI service. See Liberty Pumps line of CSV-Series Curb Stop/Swing Check Valve Assemblies and CK-Series Connection Kit.

11.01 CONTROLS

All units shall be supplied with CSA and UL approved automatic wide angle tilt float switches. The switches shall be equipped with a piggyback style plug that allows the pump to be operated manually without the removal of the pump in the event that a switch becomes inoperable.

12.01 PAINT

The exterior of the casting shall be protected with powder coat paint.

13.01 SUPPORT

The pump shall have cast iron support legs, enabling it to be a freestanding unit. The legs shall be high enough to allow solids and long stringy debris to enter the cutter assembly.

14.01 SERVICEABILITY

Components required for the repair of the pump shall be shipped within a period of 24 hours.

These are example product specifications and are for reference ONLY, as equals may be accepted.
Please consult with your engineer or plumber for correct sizing, piping and implementation.

15.01 FACTORY ASSEMBLED TANK SYSTEMS WITH GUI

- _____ Factory mounted guide rail system with pump suspend grommets. The Discharge piping shall be schedule 80 F shall be wound fiberglass or roto-molded plastic. An i
- _____ Stainless steel guide rail
- _____ Zinc plated steel guide rail
- _____ " diameter of basin size
- _____ " height of basin size
- _____ " distance from top of tank to discharge pipe outlet
- _____ Fiberglass cover
- _____ Structural foam polymer cover
- _____ Steel cover
- _____ Simplex system with outdoor panel and alarm
- _____ Separate outdoor alarm
- _____ Remote outdoor alarm

16.01 TESTING

The pump shall have a ground continuity check and the motor chamber shall be hi-potted to test for electrical integrity, moisture content, and insulation defects. The motor and volute housing shall be pressurized and an air leak decay test performed to ensure integrity of the motor housing. The pump shall be run, voltage current monitored, and checked for noise or other malfunction.

17.01 QUALITY CONTROL

The pump shall be manufactured in an ISO 9001 certified facility.

18.01 WARRANTY

Standard limited warranty shall be 3 years.

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