



Typical Specifications

These specifications include the many options available for Type U submersible sump pumps. You can develop a complete pump specification by selecting the appropriate paragraphs for each construction detail or operating feature.

Type U Submersible Sump Pumps Models 3U and 5U

The electric submersible sump pump(s) shall be Peerless Model (3U) (5U) pump(s) designed to deliver - gpm against _____ feet total head. The pumped liquid will _____ at a temperature of not more than ____° (F) (C). Pump construction materials shall be (cast iron) (all bronze)*. The pump casing shall be cast with smooth water passages. The impeller shall be (polypropylene - 3UL, 3UH)(Bronze - 3UH-BR, 3UH-HT)(Cast Iron - 5UL, 5UH), hydraulically and dynamically balanced for smooth and quiet operation.

- Pump(s) shall be furnished without float controls and shall be on-off sequenced by remote devices.
- One phase pump model 3ULD shall be furnished with diaphragm type liquid level control switch mounted on unit.
- One phase 115 Volt pump model (3ULA1)(3UHA1)(3UHA1BR)(5ULA1) shall be furnished with discharge pipe mounted mercury float type liquid level control switch.
- One phase 230 Volt pump model (3UHA2)(3UHA2BR)(3UHA2HT)(3UHA2BRHT)(5ULA2)(5ULA2HT) shall be furnished with discharge pipe mounted mechanical type float liquid level control switch.
- Pump(s) shall be furnished with float switch for (simplex) (duplex) pump operation and arranged for mounting on top of the basin cover. The switch shall be (alternating) (non-alternating) type (with) (without) high water alarm contacts.

The pump motor shall be rated (1/3-3UL, 3UH) (1/2-5UL) horsepower, 60 Hertz, 1750 nominal rpm.

- 1 phase
 - 115 volt
 - 230 volt

The pump motor shall be rated (1/2-5UH) horsepower, 60 Hertz, 1750 nominal rpm.

- 3 phase
 - 200 volt
 - 230 volt
 - 460 volt

The power cable and level control switch cable length shall be

- 10 feet 3UL
- 15 feet 3UH, 5UL, 5UH

The sump pump shall be designed for a maximum working temperature of

- 104° F (66°C) - 3U, 5U (standard)
- 200° F (93° C) - 3UH-HT, 5UL-HT (high temperature)

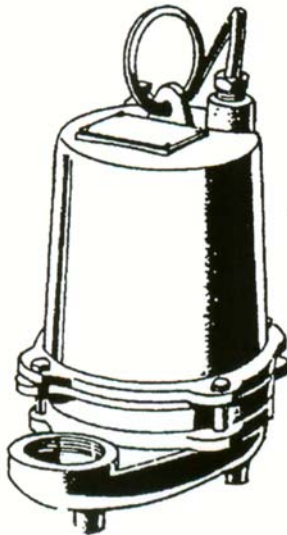
*All Bronze is available only in 3UH Series Only.

SUBMERSIBLE SUMP PUMPS
Type 3UH



Peerless Pump Company
 Indianapolis, IN 46207-7026

Type 3UH Submersible Sump Pump Data
1/3 Hp 1750 Rpm
1/2 Inch Spherical Solids Handling
Cast Iron and Bronze



Model:

- 3UHM1 - 115 V 1Ph 60 Hz Cast Iron
 - 3UHA1 - 115 V 1Ph 60 Hz Cast Iron*
 - 3UHM2 - 230 V 1Ph 60 Hz Cast Iron
 - 3UHA2 - 230 V 1Ph 60 Hz Cast Iron*
 - 3UHM1BR - 115 V 1Ph 60 Hz Bronze
 - 3UHA1BR - 115 V 1Ph 60 Hz Bronze*
 - 3UHM2BR - 230 V 1Ph 60 Hz Bronze
 - 3UHA2BR - 230 V 1Ph 60 Hz Bronze*
- *with Discharge Pipe Mounted Mercury Float Level Control

Description:

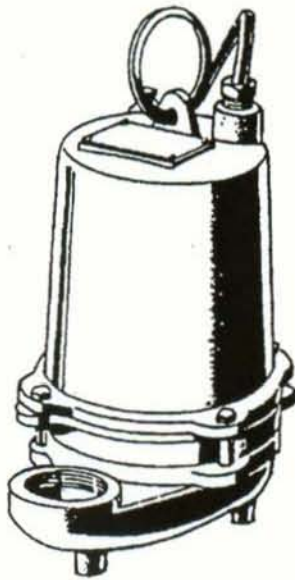
GENERAL PURPOSE PUMP FOR RESIDENTIAL AND LIGHT INDUSTRIAL SUMP APPLICATIONS.

Specifications

DISCHARGE:	2" NPT, Vertical
LIQUID TEMPERATURE:	104° F Continuous.
VOLUTE:	(3UH) Cast Iron ASTM A4-48, CI 30 (3UH-BR) Bronze 81-3-7-9
MOTOR HOUSING:	(3UH) Cast Iron ASTM A4-48, CI 30 (3UH-BR) Bronze 81-3-7-9
SEAL PLATE:	(3UH) Cast Iron ASTM A4-48, CI 30 (3UH-BR) Bronze 81-3-7-9
IMPELLER:	<i>Design:</i> 2 Vane, Open, With Pump Out Vanes On Back Side. Dynamically Balanced, ISO G6.3. <i>Material:</i> (3UH) Polypropylene with S. S. Insert (3UH-BR) Bronze 81-3-7-9
SHAFT:	416 Stainless Steel.
SQUARE RINGS:	Buna-N
HARDWARE:	(3UH) 300 Series Stainless Steel (3UH-BR) Bronze
PAINT:	Air Dry Enamel.
SEAL:	<i>Design:</i> Single Mechanical, Oil-Filled Reservoir, Secondary Exclusion Seal. <i>Material:</i> Rotating Face - Carbon Stationary Face - Ceramic Elastomer - Buna-N Hardware - 300 Series Stainless
CABLE ENTRY:	15 ft. Cord w/Plug On 115 & 230 Volt, Pressure Grommet For Sealing And Strain Relief.
SPEED:	1750 RPM (Nominal).
UPPER BEARING:	<i>Design:</i> Sleeve <i>Lubrication:</i> Oil <i>Load:</i> Radial
LOWER BEARING:	<i>Design:</i> Single Row, Ball <i>Lubrication:</i> Oil <i>Load:</i> Radial & Thrust
MOTOR:	<i>Design:</i> NEMA L Torque Curve. Completely Oil-Filled, Squirrel Cage Induction. Class A. <i>Insulation:</i> Permanent Split Capacitor (PSC). Includes Overload Protection In Motor.
SINGLE PHASE:	Permanent Split Capacitor (PSC). Includes Overload Protection In Motor.
FLOAT:	(3UHA) (3UHA-BR) Polypropylene with 15 Ft Cable with Piggy-Back Plug, ON and OFF points are adjustable



Type 3UH-HT Submersible Sump Pump Data
1/3 Hp 1750 Rpm
1/2 Inch Spherical Solids Handling
Cast Iron and Bronze



Model:

- 3UHM1HT - 115 V 1 Ph. 60 Hz. Cast Iron
 - 3UHM2HT - 230 V 1 Ph. 60 Hz. Cast Iron
 - 3UHA1HT* - 115 V 1 Ph. 60 Hz. Cast Iron
 - 3UHA2HT* - 230 V 1 Ph. 60 Hz. Cast Iron
 - 3UHM1BRHT - 115 V 1 Ph. 60 Hz. Bronze
 - 3UHM2BRHT - 230 V 1 Ph. 60 Hz. Bronze
 - 3UHA1BRHT* - 115 V 1 Ph. 60 Hz. Bronze
 - 3UHA2BRHT* - 230 V 1 Ph. 60 Hz. Bronze
- *with Discharge Pipe Mounted Mercury Float Level Control

Description:

GENERAL PURPOSE PUMP FOR RESIDENTIAL AND LIGHT INDUSTRIAL SUMP APPLICATIONS.

Specifications

DISCHARGE:	2" NPT, Vertical
LIQUID TEMPERATURE:	200° F Continuous.
VOLUTE:	(3UH) Cast Iron ASTM A4-48, CI 30 (3UH-BR) Bronze 81-3-7-9
MOTOR HOUSING:	(3UH) Cast Iron ASTM A4-48, CI 30 (3UH-BR) Bronze 81-3-7-9
SEAL PLATE:	(3UH) Cast Iron ASTM A4-48, CI 30 (3UH-BR) Bronze 81-3-7-9
IMPELLER: Design:	2 Vane, Open, With Pump Out Vanes On Back Side. Dynamically Balanced, ISO G6.3.
Material:	Bronze 81-3-7-9
SHAFT:	416 Stainless Steel.
SQUARE RINGS:	Buna-N
HARDWARE:	(3UH) 300 Series Stainless Steel (3UH-BR) Bronze
PAINT:	Air Dry Enamel.
SEAL: Design:	Single Mechanical, Oil-Filled Reservoir, Secondary Exclusion Seal.
Material:	Rotating Face - Carbon Stationary Face - Ceramic Elastomer - Buna-N Hardware - 300 Series Stainless
CABLE ENTRY:	15 ft. Cord w/Plug On 115 & 230 Volt, Pressure Grommet For Sealing And Strain Relief.
SPEED:	1750 RPM (Nominal).
UPPER BEARING: Design:	Sleeve
Lubrication:	Oil
Load:	Radial
LOWER BEARING: Design:	Single Row, Ball
Lubrication:	Oil
Load:	Radial & Thrust
MOTOR: Design:	NEMA L Torque Curve. Completely Oil-Filled, Squirrel Cage Induction. Class A.
Insulation:	Permanent Split Capacitor (PSC). Includes Overload Protection InMotor.
SINGLE PHASE:	(3UHA) (3UHA-BR) High Temperature Mechanical with 15 Ft Cable with Piggy-Back Plug, ON and OFF points are adjustable

**SUBMERSIBLE SUMP PUMPS
Type 5UL**



Peerless Pump Company
Indianapolis, IN 46207-7026

**Type 5UL Submersible Sump Pump Data
1/2 Hp 1750 Rpm
2 Inch Spherical Solids Handling
Cast Iron**



Model:

5ULM1 - 115 V 1 Ph. 60 Hz. Cast Iron
5ULM2 - 230 V 1 Ph. 60 Hz. Cast Iron
5ULA1* - 115 V 1 Ph. 60 Hz. Cast Iron
5ULA2* - 230 V 1 Ph. 60 Hz. Cast Iron
*with Discharge Pipe Mounted Mercury Float
Level Control

Description:

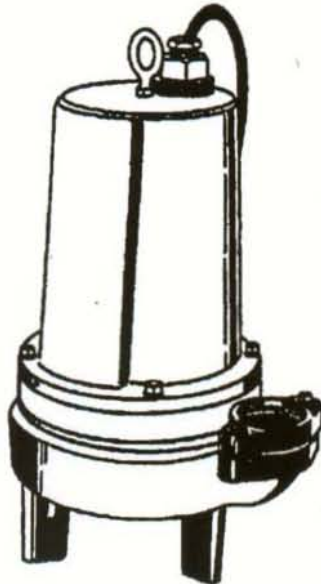
GENERAL PURPOSE PUMP FOR
RESIDENTIAL AND LIGHT INDUSTRIAL
SUMP APPLICATIONS.

Specifications:

DISCHARGE: 2" NPT, Vertical.
LIQUID TEMPERATURE: 104° F Continuous.
VOLUTE: Cast Iron ASTM A-48, Class 30.
MOTOR HOUSING: Cast Iron ASTM A-48, Class 30.
SEAL PLATE: Cast Iron ASTM A-48, Class 30.
IMPELLER:
Design: 2 Vane, Open, With Pump Out Vanes On Back Side. Dynamically Balanced, ISO G6.3.
Material: Cast Iron ASTM A-48 Class 30.
SHAFT: 416 Stainless Steel
SQUARE RINGS: Buna-N
HARDWARE: 300 Series Stainless Steel
PAINT: Air Dry Enamel.
SEAL:
Design: Single Mechanical, Oil Filled Reservoir.
Material: Rotating Faces - Carbon
Stationary Faces - Ceramic
Elastomer - Buna-N
Hardware -300 Series Stainless
CABLE ENTRY: 15 ft. Cord, Plug on 115 and 230 Volt, Pressure Grommet for Sealing and Strain Relief.
SPEED: 1750 RPM (Nominal).
UPPER BEARING:
Design: Sleeve
Lubrication: Oil
Load: Radial
LOWER BEARING:
Design: Single Row, Ball
Lubrication: Oil
Load: Radial & Thrust
MOTOR:
Design: NEMA L Torque Curve. Completely Oil-Filled, Squirrel Cage Induction.
Insulation: Class A .
SINGLE PHASE: Permanent Split Capacitor (PSC). Includes Overload Protection In Motor.
FLOAT: Polypropylene with 15 Ft Cable with Piggy-Back Plug, ON and OFF points are adjustable



Type 5UL-HT Submersible Sump Pump Data
1/2 Hp 1750 Rpm
2 Inch Spherical Solids Handling
Cast Iron



5ULM1HT - 115 V 1 Ph. 60 Hz. Cast Iron
5ULM2HT - 230 V 1 Ph. 60 Hz. Cast Iron
5ULA1HT* - 115 V 1 Ph. 60 Hz. Cast Iron
5ULA2HT* - 230 V 1 Ph. 60 Hz. Cast Iron
*with Discharge Pipe Mounted Mercury Float Level Control

Description:

GENERAL PURPOSE PUMP FOR RESIDENTIAL AND LIGHT INDUSTRIAL SUMP APPLICATIONS.

Specifications:

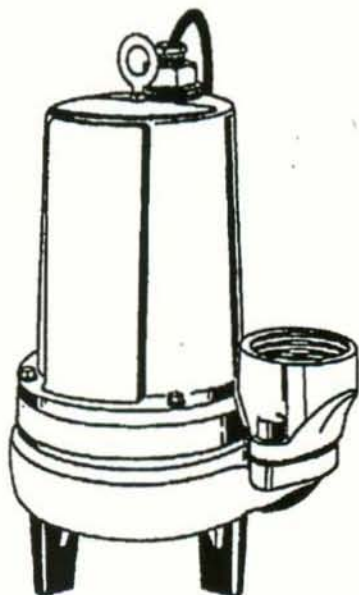
DISCHARGE: 2" NPT, Vertical
LIQUID TEMPERATURE: 200° F Continuous.
VOLUTE: Cast Iron ASTM A-48, Class 30.
MOTOR HOUSING: Cast Iron ASTM A-48, Class 30.
SEAL PLATE: Cast Iron ASTM A-48, Class 30.
IMPELLER:
Design: 2 Vane, Open, With Pump Out Vanes On Back Side. Dynamically Balanced, ISO G6.3.
Material: Cast Iron ASTM A-48 Class 30.
SHAFT: 416 Stainless Steel
SQUARE RINGS: Buna-N
HARDWARE: 300 Series Stainless Steel
PAINT: Air Dry Enamel.
SEAL:
Design: Single Mechanical, Oil Filled Reservoir.
Material: Rotating Faces - Carbon
Stationary Faces - Ceramic
Elastomer- Buna-N
Hardware -300 Series Stainless
CABLE ENTRY: 15 ft. Cord, Plug on 115 and 230 Volt, Pressure Grommet for Sealing and Strain Relief.
SPEED: 1750 RPM (Nominal).
UPPER BEARING:
Design: Sleeve
Lubrication: Oil
Load: Radial
LOWER BEARING:
Design: Single Row, Ball
Lubrication: Oil
Load: Radial & Thrust
MOTOR:
Design: NEMA L Torque Curve. Completely Oil-Filled, Squirrel Cage Induction. Class B.
Insulation: Includes Overload Protection In Motor.
SINGLE PHASE:
FLOAT: Polypropylene with 15 Ft Cable with Piggy-Back Plug, ON and OFF points are adjustable

SUBMERSIBLE SUMP PUMPS Type 5UH



Peerless Pump Company
Indianapolis, IN 46207-7026

Type 5UH Submersible Sump Pump Data 1/2 Hp 1750 Rpm 2 Inch Spherical Solids Handling Cast Iron



Model:
5UHM3 - 200-230 V 3 Ph. 60 Hz. Cast Iron
5UHM4 - 460 V 3 Ph. 60 Hz. Cast Iron

Description:

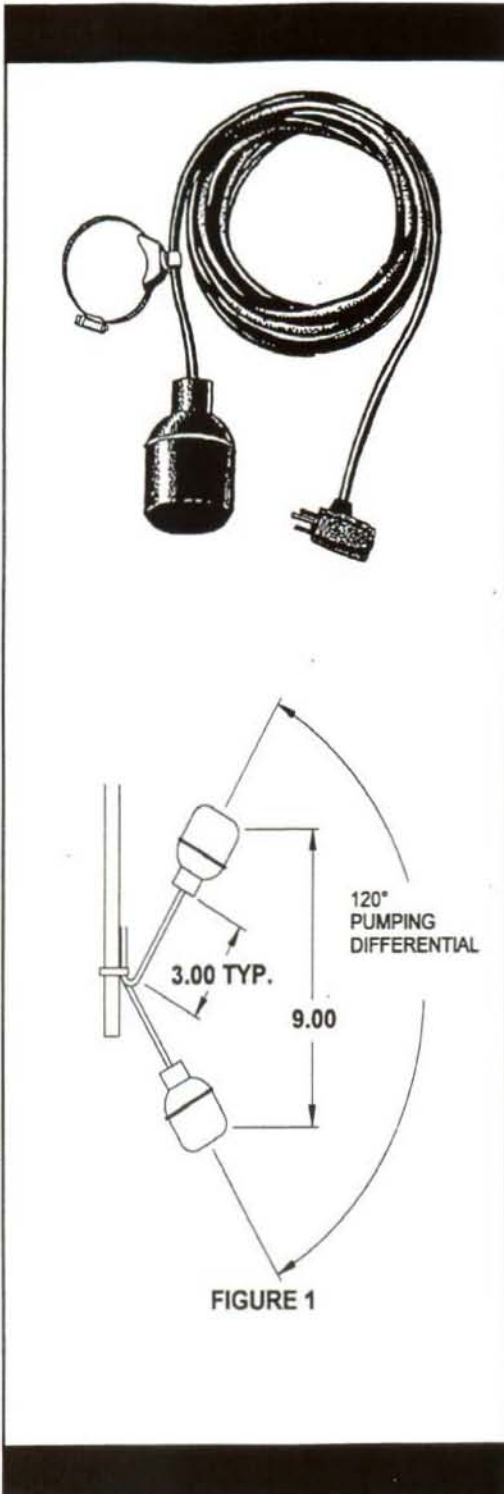
GENERAL PURPOSE PUMP FOR
RESIDENTIAL AND LIGHT INDUSTRIAL
SUMP APPLICATIONS.

Specifications:

DISCHARGE:	3 " NPT, Vertical.
LIQUID TEMPERATURE:	104° F Continuous.
VOLUTE:	Cast Iron, ASTM A-48 Class 30.
MOTOR HOUSING:	Cast Iron ASTM A-48, Class 30.
SEAL PLATE:	Cast Iron ASTM A-48 Class 30.
IMPELLER:	<i>Design:</i> 2 Vane, Open, With Pump Out Vanes On Back Side. Dynamically Balanced. ISO G6.3. <i>Material:</i> Cast Iron ASTM A-48 Class 30.
SHAFT:	416 Stainless Steel
SQUARE RINGS:	Buna-N
HARDWARE:	300 Series Stainless Steel
PAINT:	Air Dry Enamel.
SEAL:	<i>Design:</i> Single Mechanical, Oil Filled Reservoir. <i>Material:</i> Rotating Face - Carbon Stationary Face - Ceramic Elastomer - Buna-N
CABLE ENTRY:	Hardware - 300 Series Stainless 15 ft. Cord (Plug On 115 Volt), Pressure Grommet For Sealing And Strain Relief. 1750 RPM (Nominal).
SPEED:	1750 RPM (Nominal).
UPPER BEARING:	<i>Design:</i> Sleeve <i>Lubrication:</i> Oil <i>Load:</i> Radial
LOWER BEARING:	<i>Design:</i> Single Row, Ball <i>Lubrication:</i> Oil <i>Load:</i> Radial & Thrust
MOTOR:	<i>Design:</i> NEMA L-Single Phase, NEMA B-Three Phase Torque Curve. Completely Oil-Filled, Squirrel Cage Induction. Class A . <i>Insulation:</i>
SINGLE PHASE:	Permanent Split Capacitor (PSC). Includes Overload Protection In Motor.
THREE PHASE:	Tri Voltage 200-230/460; Requires Overload Protection to be Included In Control Panel.



Model MERC1 Submersible Sump Pump Mercury Float Switch Data
(Furnished as standard on Model No's. 3ULA, 3UHA1, 5ULA1 normal temperature units)



Specification:

CABLE:	<i>Material:</i>	16-2 SJOW-A, 65 Strand #34, 60°C
	<i>Size:</i>	.32 Dia. x 10 feet on 3ULA; 15 Feet on 3UHA1, 2, 5ULA1
PLUG:		115V Molded Male & Female (Piggy-Back) with Ground
HOUSING:	<i>Material:</i>	Polypropylene
	<i>Color:</i>	Blue
CLAMP:		Stainless Steel with Polypropylene Saddle, Adjustable, 1 inch to 3 inches
TEMPERATURE RATING:		60°C. (140° F.)
SWITCH:		Normally Open, Mercury, Wide Angle, 120°
SWITCH RATINGS:		13A. @ 115VAC. Continuous Current <i>Inrush NOT to Exceed 22A.</i>

Description:

The Wide Angle Mercury Level Control is a direct acting, in-line control system for automatically controlling 1/2 HP and smaller pump motors. The unit has a piggy-back plug attached to the cord, allowing the user to plug the pump plug directly into it, and then plug the entire unit into a standard grounded outlet. The Wide Angle Mercury Level Control is furnished with an adjustable strap for mounting to the pump discharge pipe. Standard units are preset at the factory for a nine inch pump down range, but can easily be adjusted to various pump down cycles by shortening or lengthening the cord length at the pivot point, (see Figure 1). The Level Control is also omni-directional; the pumping differential is maintained in any horizontal plane.

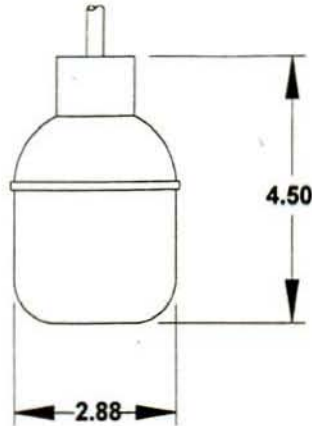
- No wiring
- Single float in sump
- Omni-directional
- Adjustable clamp
- Variable pumping range
- Corrosion resistant
- Easy to install

SUBMERSIBLE SUMP PUMPS
 Type 3U, 5U, 7U, 10U, 15U



Peerless Pump Company
 Indianapolis, IN 46207-7026

Model MERC1 Submersible Sump Pump Mercury Float Switch
Installation and Operation Data
 (For normal temperature units only)



ESTIMATED PUMPING DIFFERENTIAL

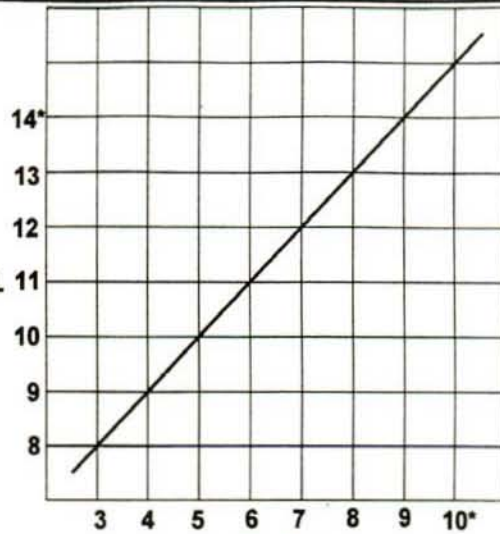


TABLE 1

* Maximum drawdown differential will vary from 13" to 15" at this point depending on temperature of liquid being pumped.

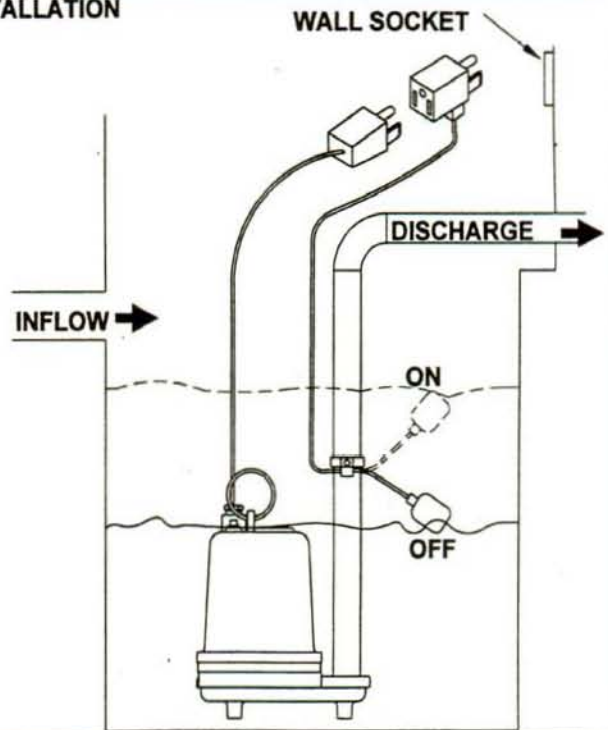
NOTE: Apply liquid soap to the cable and clamp for ease in sliding.

GENERAL COMMENTS:

1. Never work in sump with the power on.
2. Level Controls are factory set for a pumping differential of 9". If that is the cycle desired, simply circle the discharge pipe with the pipe mounting strap, feed the end through the worm drive, and tighten with a screwdriver. Be certain that the Level Control cannot hang up or foul in its swing from "ON" to "OFF". Also make certain the pump impeller is still submerged when the Level Control is in the "OFF" mode.
3. If a higher pump differential is needed, consult Table 1, for tether length needed. Loosen the screw on the pipe/cable clamp, measure the cable tether length from the neck of the float housing to the bottom of the pipe/cable clamp. Tighten the screw at the desired tether length and attach to the pipe.
4. Plug the unit into the wall receptacle, then plug the pump into the piggyback plug. One cycle of operation should be observed, so that any potential problems can be corrected.

IMPORTANT NOTE: Do not use the Wide Angle Mercury Level Control in gasoline, volatiles, or other combustibles.

TYPICAL INSTALLATION





Model DIAP1, DIAP2 Submersible Sump Pump Diaphragm Level Control Switch
(Furnished as Standard on Model No. 3ULD)
(For normal temperature units only)

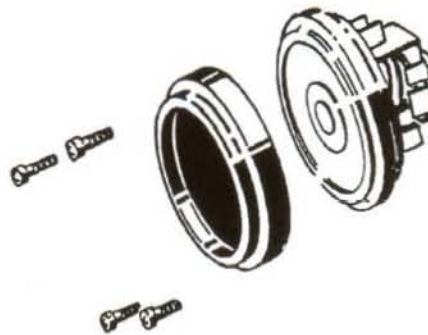


Specifications:

Diaphragm Switches are Pressure operated that turn on at 10" head (from bottom of housing) and off at 4" head.
For mounting on pumps with and without mounting ears and pipe mounted.

- | | | |
|--------------------------|------------------|---|
| CORD: | <i>Material:</i> | 18-3 SJT, Nylon with .12 Dia. Vent. |
| | <i>Size:</i> | .35 Dia. x 15Ft. Long. |
| PLUG: | | Male & Female (Piggy-Back), with Vent and Ground. |
| HOUSING: | | Black, Molded Celcon |
| SWITCH RETAINER: | | Celcon |
| CLAMP: | | 1. Clip, Stainless Steel (Pump Mtg.)
2. Bracket, Stainless Steel (Pump Mtg.)
3. Adjustable Clamp, 1-3/4 to 5" (Pipe Mtg.) |
| HARDWARE: | | Stainless Steel |
| SWITCH DIAPHRAGM: | | Oil Resistant Buna-N |
| SWITCH: | | Snap Action, Normally Open |
| SWITCH RATING: | | 15 Amp @ 115 Volt AC
10 Amp @ 230 Volt AC
1/2 HP- 115/230 Volt AC |

Diaphragm Level Control Repair Kit

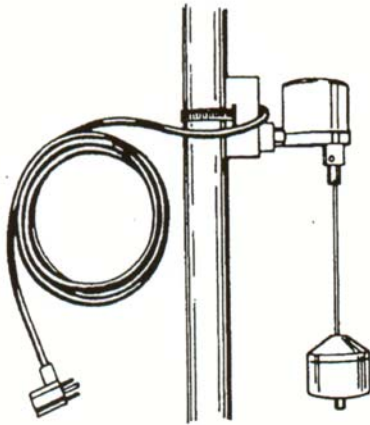


SUBMERSIBLE SUMP PUMPS
Type 3U, 5U, 7U, 10U, 15U



Peerless Pump Company
 Indianapolis, IN 46207-7026

Model VFC1 (115 Volt), VFC2 (230 Volt) Submersible Sump Pump Float Switch
Optional
(For normal temperature units only)



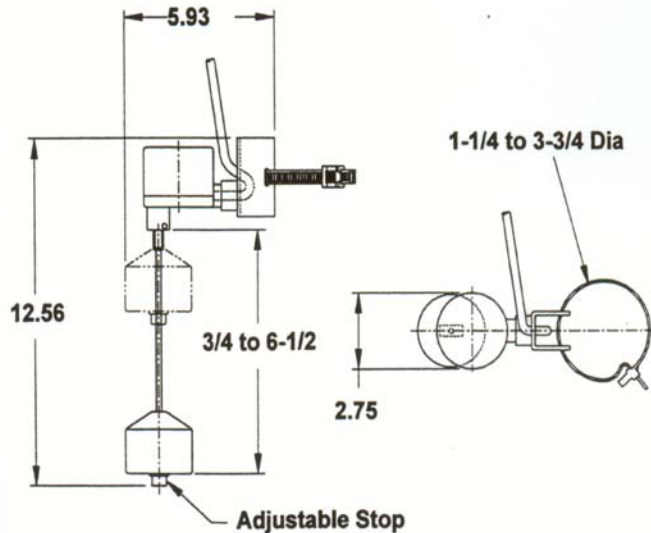
Specifications:

- CABLE:** *Material:* 16-2 SJOW-A (UL), SJOW (CSA), Water-resistant.
Size: .32 Dia. x 15ft. Long. with Piggy-Back Plug
- SWITCH & HOUSING:** Impact resistant, PVC
- FLOAT STOP:** Neoprene
- LIFT ROD:** Injection Molded Acetal Plastic.
- MOUNTING BRACKET:** PVC
- CLAMP:** Plastic
- TEMPERATURE RATING:** 140°F (60° C)
- SWITCH:** Snap Action
- SWITCH RATING:** 13 AMPS Max. Running Current
 60 AMPS Max. Starting Current
 1/2HP @ 115 Volts AC
 1HP @ 230 Volts AC
- PUMPING RANGE:** Adjustable, 3/4 to 6-1/2 inches.

Description:

The Vertical Level Control is designed to operate in applications with limited space and is available in pump down models only. The Vertical Level Control is not sensitive to turbulence. The plug may be removed for direct wiring and may be used in either 120V or 230V applications within specified amp range.

NOTE: This Level Control must be used only with pumps equipped with integral thermal overload protection.



IMPORTANT !
 DO NOT INSTALL LEVEL CONTROL IN LOCATIONS CLASSIFIED AS HAZARDOUS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, ANSI/NFPA 70-1993.