

OPERATION AND PARTS MANUAL



MODELS **ST1** **ST1F** **SUBMERSIBLE PUMP**

Revision #0 (02/01/21)

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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

PROPOSITION 65 WARNING



**ST1/ST1F
Submersible Pump**

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NOTICE

Specifications and part numbers are subject to change without notice.

SAFETY INFORMATION

Do not operate or service the equipment before reading the entire manual. Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the safety messages and operating instructions could result in injury to yourself and others.



SAFETY MESSAGES

The four safety messages shown below will inform you about potential hazards that could injure you or others. The safety messages specifically address the level of exposure to the operator and are preceded by one of four words: **DANGER**, **WARNING**, **CAUTION** or **NOTICE**.

SAFETY SYMBOLS

! **DANGER**

Indicates a hazardous situation which, if not avoided, **WILL** result in **DEATH** or **SERIOUS INJURY**.

! **WARNING**

Indicates a hazardous situation which, if not avoided, **COULD** result in **DEATH** or **SERIOUS INJURY**.





! **CAUTION**

Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE INJURY**.

NOTICE

Addresses practices not related to personal injury.

Potential hazards associated with the operation of this equipment will be referenced with hazard symbols which may appear throughout this manual in conjunction with safety messages.

Symbol	Safety Hazard
	Burn hazards
	Electric shock hazards
	Rotating parts hazards
	Pressurized fluid hazards

SAFETY INFORMATION

GENERAL SAFETY

CAUTION

- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, respiratory protection, hearing protection, steel-toed boots and other protective devices required by the job or city and state regulations.



- Avoid wearing jewelry or loose fitting clothes that may snag on the controls or moving parts as this can cause serious injury.
- **NEVER** operate this equipment when not feeling well due to fatigue, illness or when under medication.
- **NEVER** operate this equipment under the influence of drugs or alcohol.



- **ALWAYS** clear the work area of any debris, tools, etc. that would constitute a hazard while the equipment is in operation.
- No one other than the operator is to be in the working area when the equipment is in operation.
- **DO NOT** use the equipment for any purpose other than its intended purposes or applications.

NOTICE

- This equipment should only be operated by trained and qualified personnel 18 years of age and older.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modification will void all warranties.
- **NEVER** use accessories or attachments that are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- **ALWAYS** know the location of the nearest fire extinguisher.
- **ALWAYS** know the location of the nearest first aid kit.
- **ALWAYS** know the location of the nearest phone or **keep a phone on the job site**. Also, know the phone numbers of the nearest **ambulance, doctor and fire department**. This information will be invaluable in the case of an emergency.



PUMP SAFETY

DANGER

- **NEVER** operate the equipment in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe **bodily harm or even death**.



WARNING

- Accidental starting can cause severe injury or death. **ALWAYS** place the ON/OFF switch in the OFF position.
- **DO NOT** place hands or fingers inside pump when pump is running.



SAFETY INFORMATION

■ NEVER disconnect any **emergency or safety devices**.

These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death. Disconnection of any of these devices will void all warranties.

■ **Risk of Electric Shock** - Do not enter the pool or spa if the pump is operating.

CAUTION

- Be careful of discharge hose whipping under pressure.
- **ALWAYS** check pump oil level only when pump is cool. Expansion due to heat may cause hot oil to spray from the oil plug when the oil plug is removed. The possibility of severe scalding may exist.

NOTICE

- **ALWAYS** place the pump in an upright position on a platform before using. The platform will prevent the pump from burrowing itself on soft sand or mud.
- **NEVER** operate pump on its side.
- **DO NOT** allow the pump to freeze in water.
- **NEVER** leave an open pump chamber unattended.
- **ALWAYS** keep the machine in proper running condition.
- **DO NOT** attempt to thaw out a frozen pump by using a torch or other source of flame. Application of heat in this manner may heat the oil in the seal cavity above the critical point, causing pump damage.
- **DO NOT** pump water with a temperature greater than 140°F (60°C).
- **DO NOT** pump liquids containing acid or alkali.
- **ALWAYS** check strainer before pumping. Make sure strainer is not clogged. Remove any large objects, dirt or debris from the strainer to prevent clogging.
- **ALWAYS** use a large basket strainer when pumping water that contains large debris.
- **ALWAYS** flush pump (clean) after use when pumping water concentrated with heavy debris. It is very important to always flush the pump before turning it off to prevent clogging.
- Fix damage to machine and replace any broken parts immediately.
- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children and unauthorized personnel.

■ **NEVER** lubricate components or attempt service on a running machine.

■ **NEVER** run pump *dry*.

■ **ALWAYS** allow the machine a proper amount of time to cool before servicing.

■ Keep machine in proper running condition.

ELECTRICAL SAFETY

DANGER

- The electrical voltage required to operate pump can cause severe injury or even death through physical contact with live circuits. **ALWAYS** disconnect electrical power from pump before performing maintenance on pump.



WARNING

- To reduce the risk of electric shock, connect to a circuit protected by a Ground-Fault Circuit-Interrupter (GFCI).
- **Risk of Electric Shock** - This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding-type receptacle.

AVERTISSEMENT

- Risques de chocs électriques. Cette pompe est alimentée en électricité au moyen d'un conducteur et d'une fiche d'alimentation de terre. Afin de réduire les risques de chocs électriques, s'assurer que la pompe est uniquement connectée à des boîtiers de protection de mise à la terre correctement enterrés.

NOTICE

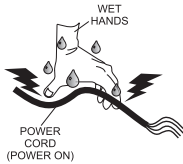
- **ALWAYS** make certain that the voltage supplied to the pump is correct. Always read the pump's nameplate to determine what the power requirements are.

SAFETY INFORMATION

Power Cord/Cable Safety

DANGER

- **NEVER** stand in water while AC power cord is connected to a live power source.
- **NEVER** use **damaged** or **worn** cables or cords. Inspect for cuts in the insulation.
- **NEVER** grab or touch a live power cord or cable with wet hands. The possibility exists of **electrical shock, electrocution or death**.
- Make sure power cables are securely connected to the motor's output receptacles. Incorrect connections may cause electrical shock and damage to the motor.



WARNING

- **NEVER** attempt to use the power cord as a lifting or lowering device for the pump.

NOTICE

- **ALWAYS** make certain that proper power or extension cord has been selected for the job. See Cable Selection Chart in this manual.

Grounding Safety

DANGER

- **ALWAYS** make sure pump is grounded.
- **NEVER** use gas piping as an electrical ground.
- **ALWAYS** make sure that electrical circuits are properly grounded to a suitable earth ground (ground rod) per the National Electrical Code (NEC) and local codes before operating generator. **Severe injury or death by electrocution** can result from operating an ungrounded motor.

Control Box Safety

DANGER

- **ALWAYS** have a qualified electrician perform the control box installation. The possibility exists of electrical shock or electrocution.

NOTICE

- **ALWAYS** mount control box in a vertical position protected from harsh environmental elements.

LIFTING SAFETY

CAUTION

- When raising or lowering of the pump is required, always attach an adequate rope or lifting device to the correct lifting point (handle) on the pump.

NOTICE

- **NEVER** lift the equipment while the electric motor is running.

TRANSPORTING SAFETY

NOTICE

- **ALWAYS** shut down pump before transporting.
- **ALWAYS** tie down equipment during transport.

ENVIRONMENTAL SAFETY/DECOMMISSIONING

- **DO NOT** pour waste or oil directly onto the ground, down a drain or into any water source.
- Contact your country's Department of Public Works or recycling agency in your area and arrange for proper disposal of any electrical components, waste or oil associated with this equipment.
- When the life cycle of this equipment is over it is recommended that the pump casing and all other metal parts be sent to a recycling center



Metal recycling involves the collection of metal from discarded products and its transformation into raw materials to use in manufacturing a new product.

Recyclers and manufacturers alike promote the process of recycling metal. Using a metal recycling center promotes energy cost savings.

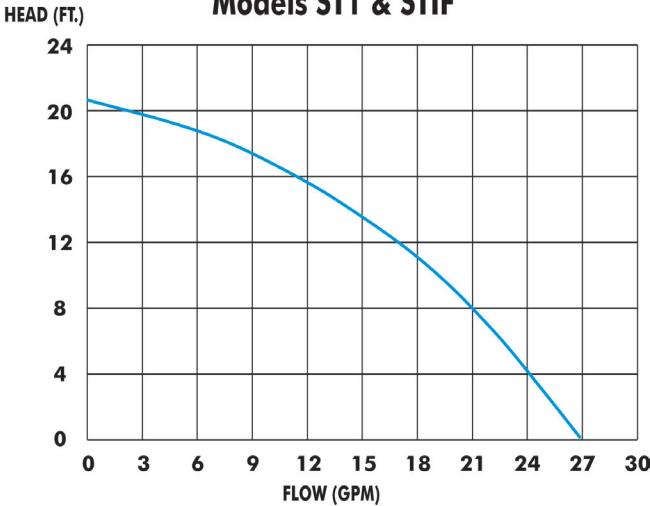
SPECIFICATIONS

Table 1. Specifications

Model	ST1	ST1F
PumpType	Centrifugal Submersible	Centrifugal Submersible
Motor	Oil-free, asynchronous motor, 2 pole	Oil-free, asynchronous motor, 2 pole
HP	1/4	1/4
Power/ Hz	115V/60	115V/60
Starting Amps	6	6
Running Amps	2.8	2.8
Running RPM	3,450	3,450
Discharge	3/4 inch GHT	3/4 inch GHT
Max Flow (GPM)	27	27
Max Head (FT)	23	23
Max Solids (IN)	0.4	0.4
Max Temperature (F)	140°	140°
Pumping Level (IN)	1/4	1/4
Internal Thermal Overload	YES	YES
Case Housing	Corrosion resistant aluminum casing for superior heat dissipation	Corrosion resistant aluminum casing for superior heat dissipation
Mechanical Seal	Permanently oil-lubricated triple lip seals for exceptional durability	Permanently oil-lubricated triple lip seals for exceptional durability
Float Switch	N/A	Integrated, mechanical float design
Power Cord Length (FT)	10	10
Integrated Float Switch	No	Yes
Thermal Overload	Yes	Yes
MAX Width (IN)	6.25	9.5
Height (IN)	11	11
MAX Diameter	6.25	12 (Float employed)
Weight (LBS.)	8.8	9.2
Shipping DIMS per unit	7.3 X 6 X 13.2 in	7.3 X 6 X 13.2 in

PUMP PERFORMANCE CURVE

Models ST1 & ST1F



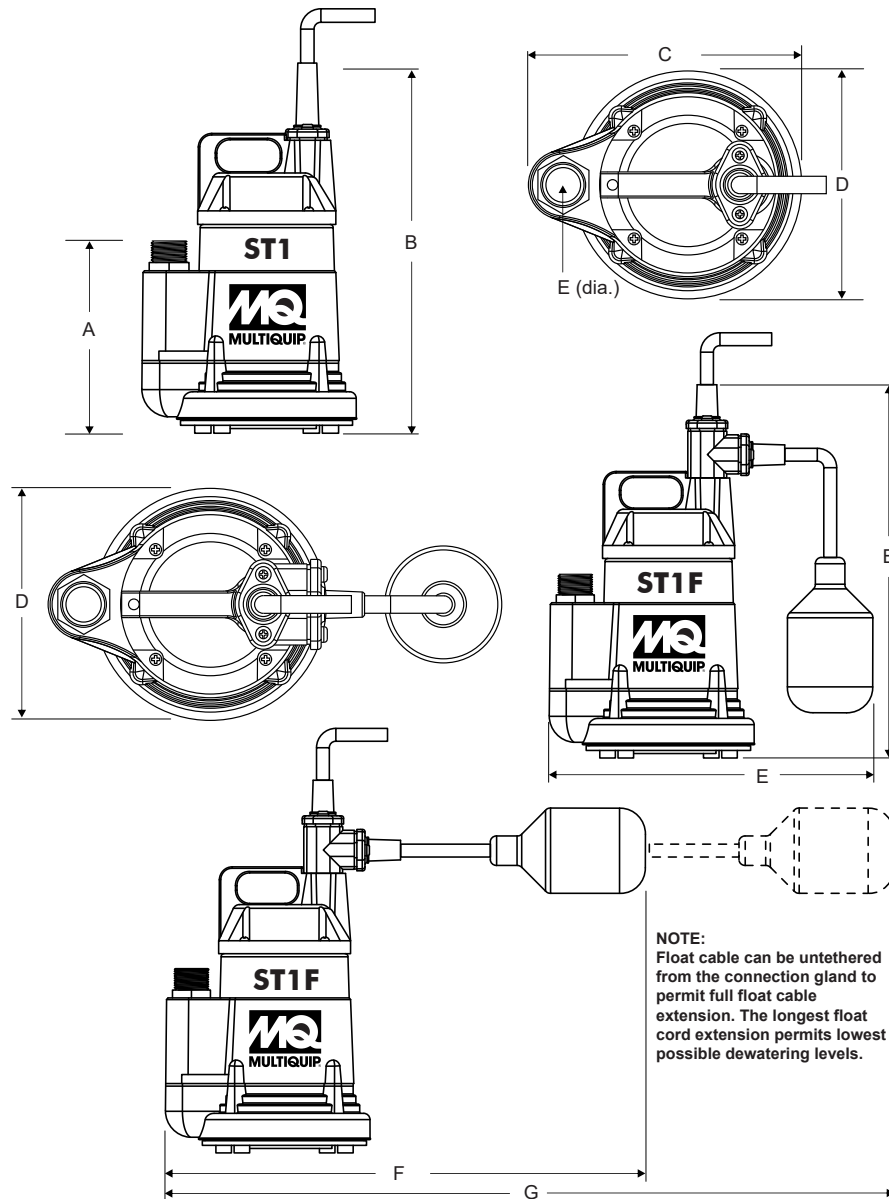


Figure 1. Dimensions

Table 2. Dimensions	
	ST1/ST1F (inches)
A	6
B	11
C	6.25
D	5.2
E	7.5
F	12
G	23

PUMP COMPONENTS

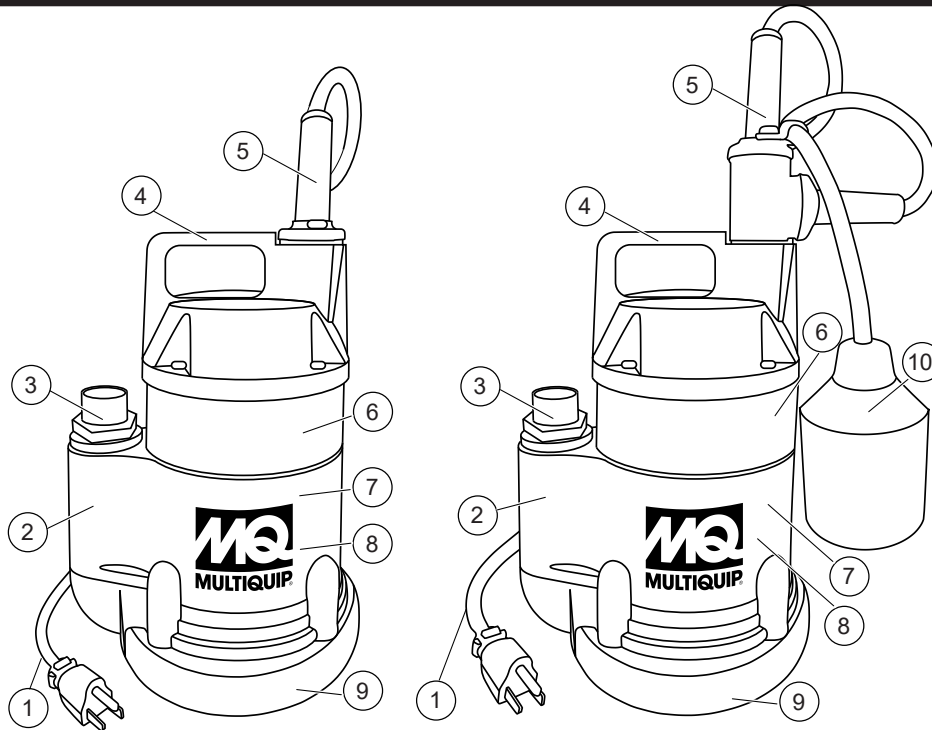


Figure 2 shows the location of the basic components, for the ST1 and ST1F submersible pumps.

Figure 2. ST1/ST1F Pump Components

Listed below is a brief explanation of each component.

1. **Power Cord** — SJTW, 18AWG, 3C 3.3M (10 ft) with molded NEMA 5-15 Plug. NEVER use a defective power cord. See Table 3 for Extension Cord support data.
2. **Rugged Pump Casing** — the pump is designed with an aluminum casing for durability and corrosion resistance. The casing also provides optimum cooling for the motor.
3. **Pump Adapter Coupler** — the polyethylene adapter provides threaded connection to a common garden hose with a 3/4" female adapter end. Coupler is a male 3/4" GHT.
4. **Carry Handle** — a molded handle is formed with the top cover, and should be used to transport the pump and provide an anchoring point to attach a cord. NEVER carry or place the pump into operation via the power cord.
5. **Power Cord Strain Relief** — a molded, and reinforced strain relief assembly is provided for the power cord.
6. **Thermal Overload** — (internal) the pump detects high motor temperatures, and provides automatic shutdown until the motor cools.
7. **Capacitor Start** — (internal) a powerful 250V X 12 uF start capacitor provides immediate motor starts, while minimizing high start amperage.
8. **Powerful Electric Motor** — (internal) an a synchronous, 2-pole motor operates on 115 VAC 1- phase, 60Hz power and delivers 3,450 RPM.
9. **Polyethylene Impeller and Clean-out Screen** — (internal) an abrasive resistant open impeller and easy to access clean-out screen support simple maintenance actions as necessary.
10. **Rugged Float Switch** — the ST1F pump employs a mechanical type float switch comprised of a heavy polyethylene jacket, molded power cord with strain relief, and is internally connected to the motor for automatic service.

GENERAL INFORMATION

The Multiquip models ST1 and ST1F are compact, general utility submersible pumps designed to move fresh water in many dewatering applications such as: flooded rooms, fountains and waterfalls, swimming pools and spas, simple fill-tank requirements, and other low-flow water transfer operations.

The pumps do not have ON/OFF switches and automatically begin to operate once the power cord is connected to an 115V electrical source. The model ST1F provides an integrated mechanical float switch assembly that allows the pump to start and stop automatically when a prefixed water level has been reached.

The ST1 and ST1F can discharge a very limited size and amount of debris, and are not designed to handle chemicals, salts, or other low pH liquids. The unit's best operate with water temperatures below 140° F.

For discharge, the pumps provide a single, common $\frac{3}{4}$ " Garden Hose Thread GHT male coupler. Excessive discharge hose or pipe lengths will affect flow and head performance (see Performance Curve Chart in this manual).

NOTICE

DO NOT allow the pumps to run 'Dry', or be allowed to freeze with water still in the unit.

For optimum performance and motor longevity, it is best to: (1) position the pumps in a vertical, upright position (2) ensure 115VAC single-phase 60 Hz power is supplied (3) limit the lengths of extension cords (4) ensure that only fresh water is being pumped (5) ensure the pumps remain fully submerged as long as possible (6) NEVER allow the pumps to run 'Dry' and (7) limit the amount of debris and particles that could enter the units.

The pumps are designed with internal overload protection if extreme overheating of the motor occurs, but this feature should not be relied upon as a common means of operations.

Continual overheating of the motor often caused by improper electrical power, extreme extension cord lengths (combined with unsuitable cord gauge), operating 'DRY', continual operations for long extended periods of time and excessively high fluid temperature operations will shorten the life of the pumps.

Pumping performance of these pumps (Flow, Head, Velocity and Pressure) is based upon the application gives that include: discharge hose or pipe length, friction loss factors, and general rise/run figures. The pumps provide for dewatering surfaces down to approximately $\frac{1}{4}$ ".

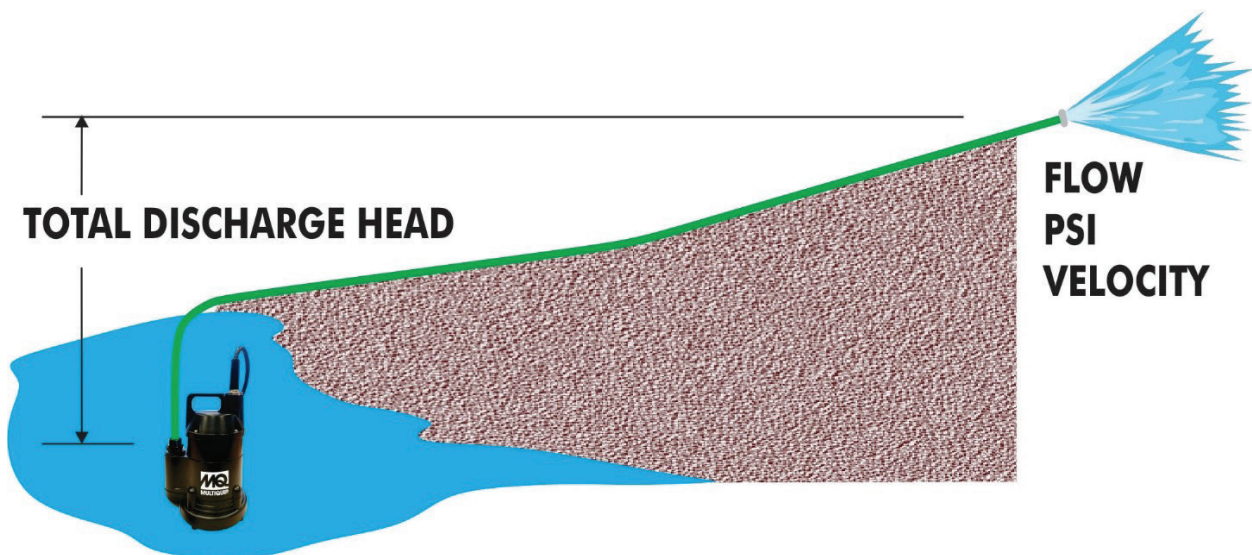


Figure 3. Performance Application Variables

PRE-OPERATION SETUP

WARNING



Explosion or Fire Hazard exists if this pump is used with flammable liquids. DO NOT use this pump with flammable liquids. DO NOT install this pump in hazardous locations as defined by the National Electrical Code, ANSI/NFPA 70.

1. Avoid using this pump in conditions where mud, grit, silt, or heavy debris is present. If debris is present, it is highly recommended to place the pump on a simple platform to keep the suction inlet free from direct contact with an undesirable surface.
2. The pump should be installed in a free standing (upright) position. See Figure 4 and Figure 5.
3. It is highly recommended to tie a rope around the carry handle for lifting and positioning the pump. DO NOT use the power cord for lifting the pump.
4. For maximum water flow, the discharge hose/pipe should be kept as short as possible, with minimum elevation above the pump.

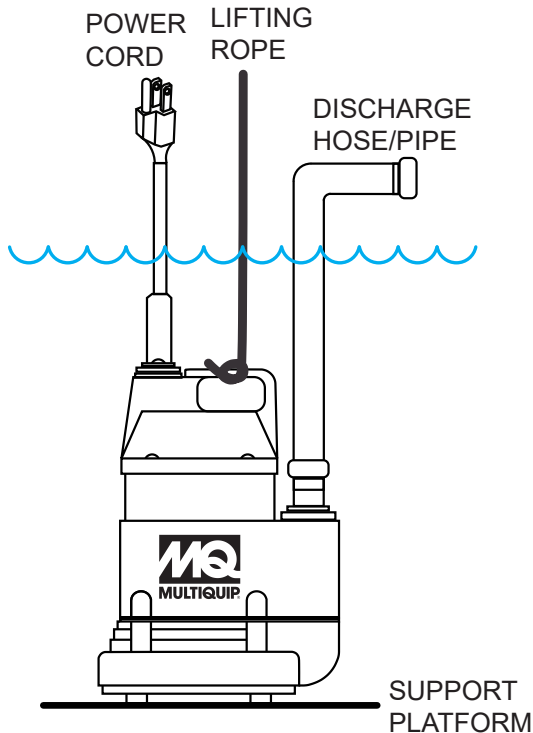


Figure 4. Submersible Pump Upright Position (Correct)

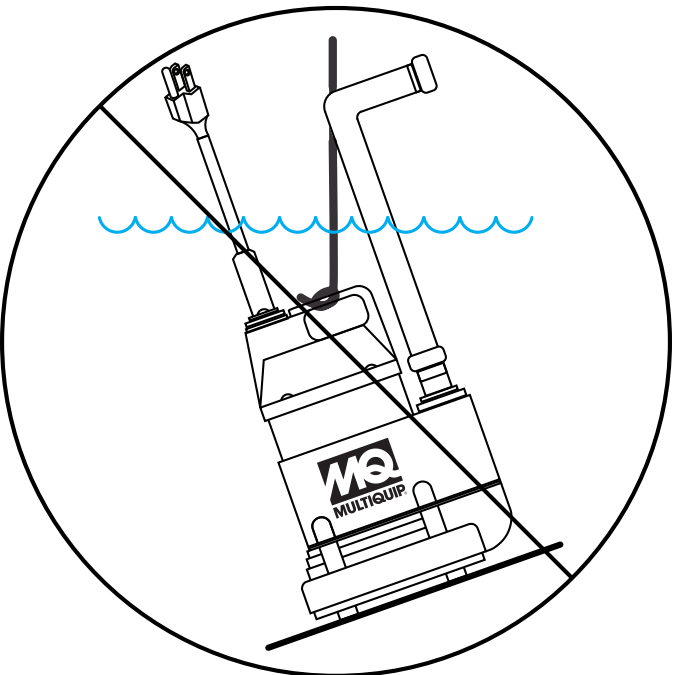


Figure 5. Submersible Pump Tilted Position (Incorrect)

5. Ensure that the discharge hose/pipe that is to be used has a female $\frac{3}{4}$ " Garden Hose Thread (GHT) coupler to match the discharge coupler of the pump.
6. Ensure the power source provided to the pump is 115VAC, single-phase, 60 Hz. It is highly recommended to connect the pump to a GFCI receptacle if possible.
7. Ensure that the pump will not be operated or left in freezing conditions. NEVER leave residual water in the pump in freezing conditions.
8. If extension cords are required for the application, refer to Table 3. Using incorrect gauge extension cords for the necessary operating lengths can damage the electric motor in time.

Table 3. Cord Length and Wire Size

AMPS	50 FT	100 FT	150 FT
6	16 AWG	16 AWG	14 AWG
8	16 AWG	14 AWG	12 AWG
10	16 AWG	14 AWG	12 AWG
12	14 AWG	14 AWG	12 AWG
14	14 AWG	12 AWG	10 AWG
16	12 AWG	12 AWG	10 AWG

OPERATION (ST1)

⚠ CAUTION

Applying incorrect power (voltage phasing) to the submersible pump can cause severe damage to the pump.

Make sure that the correct voltage and phase are transferred to the pump at all times.

⚠ DANGER



NEVER grab or touch a live power cord. **DO NOT** stand in water when connecting the pump's power cord into a voltage source. The possibility exists of electrical shock, electrocution and possibly death!

See Figure 6 for standard ST1 Operation Setup.

1. Prepare the pump for the application by securely threading a 3/4" garden hose or 3/4" GHT pipe onto the discharge port.
2. Orient the hose/pipe in manner that limits extreme bends, kinks, or twists. Ensure the hose/pipe discharge end is positioned where you desire the flow of water to travel.
3. Tie a rope or cord (not supplied) around the carry handle to lower and retrieve the pump from the water source.
4. Consider using a support platform base (not supplied) for the pump to sit upon to keep the suction inlet from directly engaging with any silty, sandy bottom conditions.
5. Slowly lower the pump to its operating position ensuring that it remains vertical. Ensure that the pump remains submerged as long as possible, and do not allow the pump to run dry for more than a minute.
6. Connect to the pump's power cord to the proper electrical source. The pump will automatically operate as soon as power is connected.
7. Once electrical power is introduced, the water should flow from the discharge hose/pipe within seconds. Check to the flow rate to be steady and continuous.

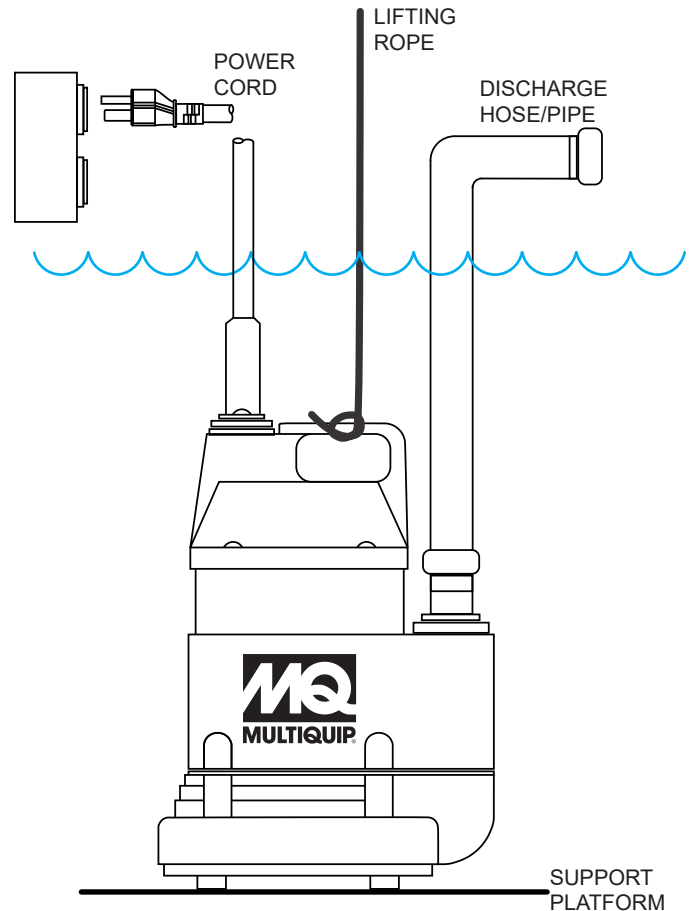


Figure 6. Standard ST1 Pump Setup

8. Once the watering/dewatering operation is complete: disconnect the power source, pull the pump from its position and allow it to drain completely. Remove the discharge hose/pipe, and store the pump in temperatures above freezing.
9. An optimum power source for consideration would be a GFCI receptacle.
10. If an extension power cord is necessary, refer to Table 3 for Recommended Extension Cord Data, and consider purchasing and installing an Extension Cord Safety Cover with Waterproof Seal.

OPERATION (ST1F)

CAUTION

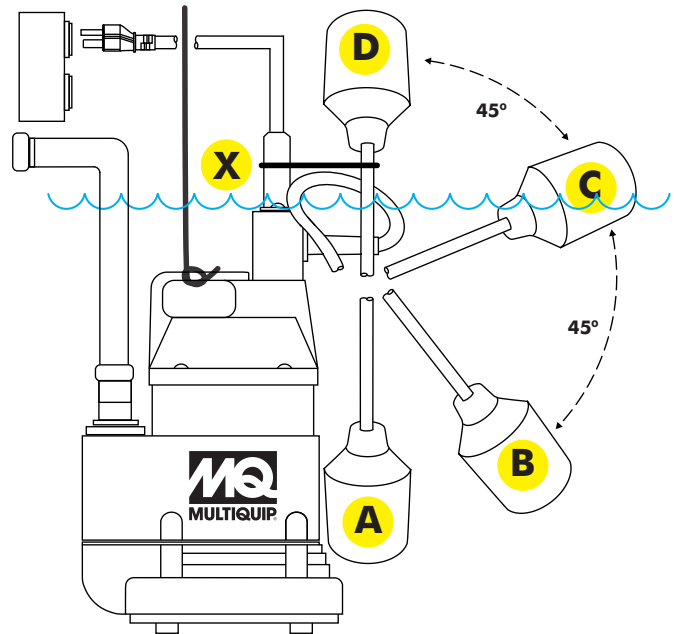
Applying incorrect power (voltage phasing) to the submersible pump can cause severe damage to the pump.

Make sure that the correct voltage and phase are transferred to the pump at all times.

DANGER



NEVER grab or touch a live power cord. **DO NOT** stand in water when connecting the pump's power cord into a voltage source. The possibility exists of electrical shock, electrocution and possibly death!



See for standard ST1F Operation Setup.

1. Prepare the pump for Float Switch Operations. The Float Switch activates based upon the angle of the float in the water source. Ensure there is sufficient lateral distance to employ the float horizontally (@ 13").

Pump OFF (A and B): due to the position of the float, the internal metal ball has made contact cutting off electrical power.

Pump ON (C): the water level is high enough to permit the float to rise (contact broken) permitting the motor to engage.

The pump can also be used without the Float by securing the assembly to the top of the pump with a cord or zip tie (X).

2. Securely thread a 3/4" garden hose or 3/4" GHT pipe onto the discharge port.
3. Orient the hose/pipe in manner that limits extreme bends, kinks, or twists. Ensure the hose/pipe discharge end is positioned where you desire the flow of water to travel.
4. Tie a rope or cord (not supplied) around the carry handle to lower and retrieve the pump from the water source.
5. Consider using a support platform base (not supplied) for the pump to sit upon to keep the suction inlet from directly engaging with any silty, sandy bottom conditions.

Figure 7. Standard ST1F Pump Operation Setup

6. Slowly lower the pump to its operating position ensuring that it remains vertical. Ensure that the pump remains submerged as long as possible, and do not allow the pump to run dry for more than a minute.
7. Connect to the pump's power cord to the proper electrical source. The pump will automatically operate as soon as power is connected & the Float Switch is oriented for desired operations.
8. Once electrical power is introduced, the water should flow from the discharge hose/pipe within seconds. Check to the flow rate to be steady and continuous.
9. Once the watering/dewatering operation is complete: disconnect the power source, pull the pump from its position and allow it to drain completely. Remove the discharge hose/pipe, and store the pump in temperatures above freezing.
10. An optimum power source for consideration would be a GFCI receptacle.
11. If an extension power cord is necessary, refer to Table 3 for Recommended Extension Cord Data, and consider purchasing and installing an Extension Cord Safety Cover with Waterproof Seal.

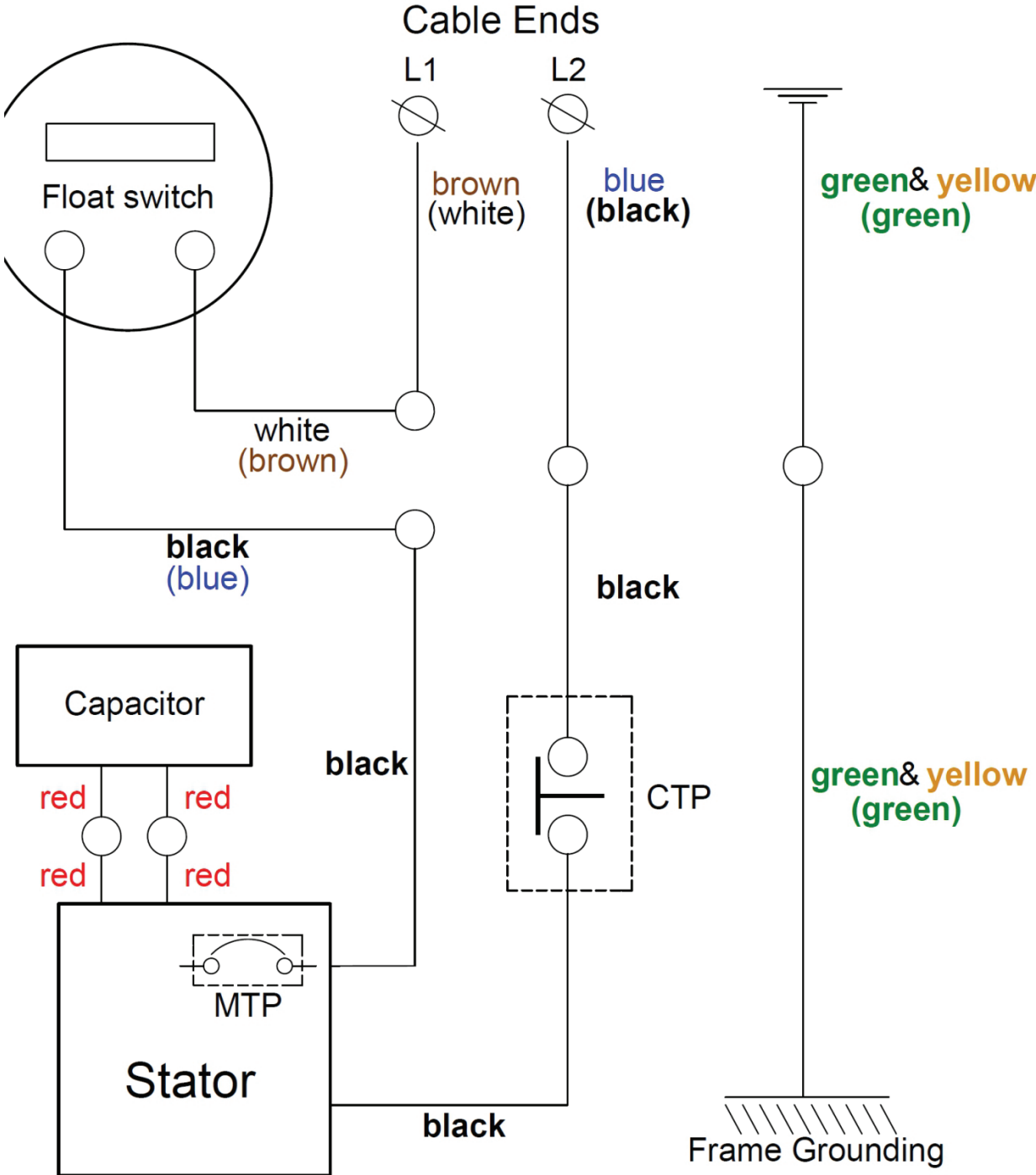
TROUBLESHOOTING

Troubleshooting (Pump)		
Symptom	Possible Problem	Solution
Pump Fails To Start	Incorrect voltage/amps?	Check that proper voltage (115VAC, single-phase) is being supplied to the pump. Also check that there is an adequate amount of current (amps) to run the pump. Check power source circuit.
	Bad electrical connections?	Inspect power cord.
	Blown power fuse or tripped circuit breaker?	Check circuit breaker. Replace fuse.
	Impeller locked?	Disconnect pump from power source and check for clogging. Unclog pump impeller and inlet.
	Thermal Overload Activated?	Disconnect pump from power source, let the motor cool for at least one hour, ensure that proper electricity is being delivered to the pump. Check the length and gauge of extension cord(s) if used.
Pump Fails to Deliver Adequate Performance	Application Challenges?	Check to ensure that the application (Rise/Run) does not exceed the pumps performance capability.
	Discharge Hose Issue(s)?	Ensure the hose does not exhibit any excessive bends, kinks or twisting. Ensure the hose is not clogged.
	Clogged Strainer or Impeller?	Clean the strainer and check impeller for clogging debris. Ensure the integrity of the vanes of the impeller, and replace the impeller as required.

WIRING DIAGRAM

MOTOR: 115VAC, 1Ø, 60 Hz, 2-Pole electric motor

H05RN-F : brown / blue / green&yellow
H07RN-F : brown / blue / green&yellow
SJTW : white / black / green



EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN. ...	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol (@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the “Remarks” Column.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

“INCLUDES ITEMS W/(unique symbol)”

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:

“S/N XXXXX AND BELOW”

“S/N XXXX AND ABOVE”

“S/N XXXX TO S/N XXX”

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

“XXXXX ONLY”

“NOT USED ON XXXX”

“Make/Obtain Locally” — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

“Not Sold Separately” — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

SUGGESTED SPARE PARTS

ST1/ST1F SUBMERSIBLE PUMP

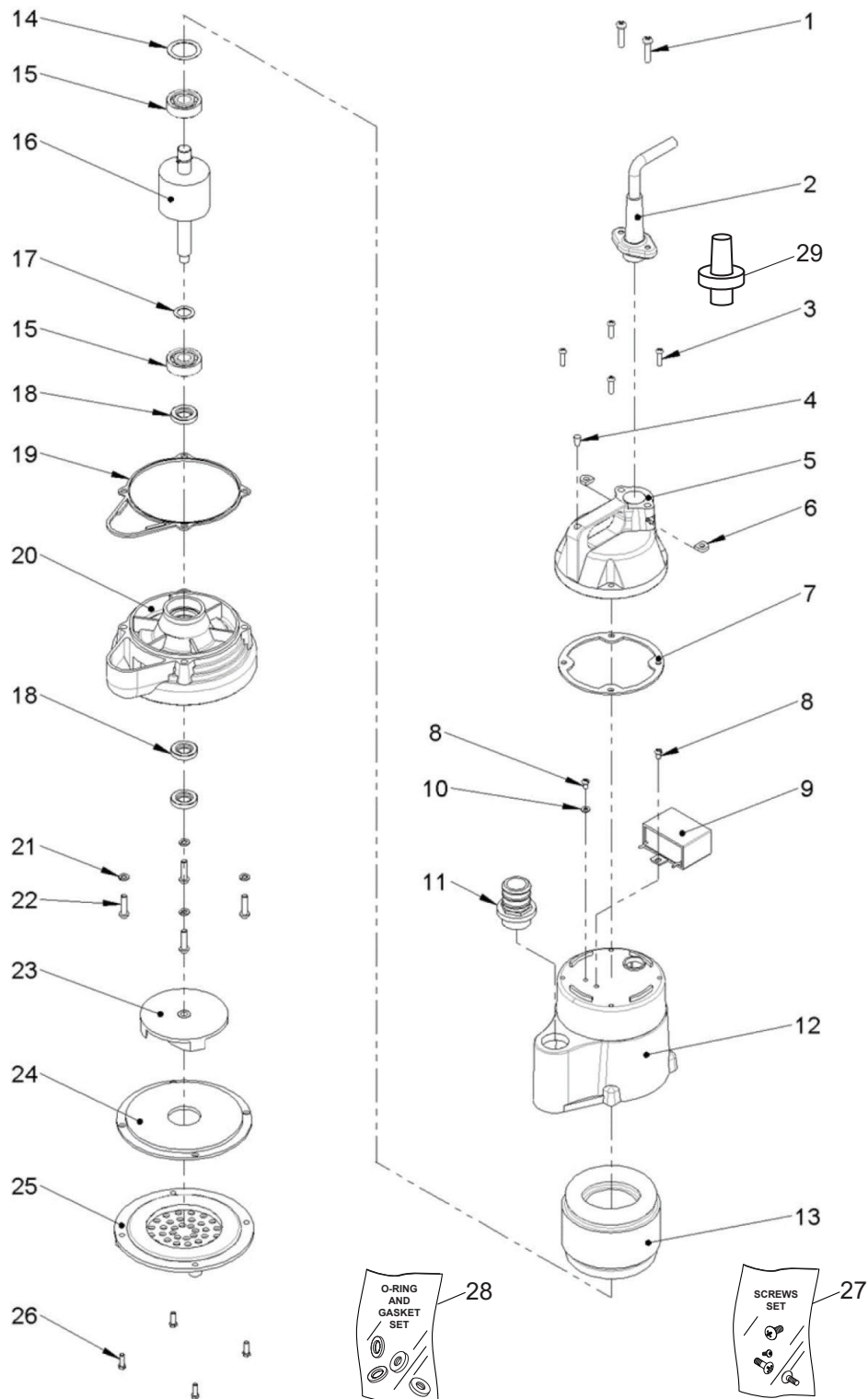
1 to 3 units

Qty.	P/N	Description
2.....	3015010502.....	3" DIA. IMPELLER
2.....	3001010301.....	3/4" DISCHARGE PORT

NOTICE

Part numbers on this Suggested Spare Parts list may supersede/replace the part numbers shown in the following parts lists.

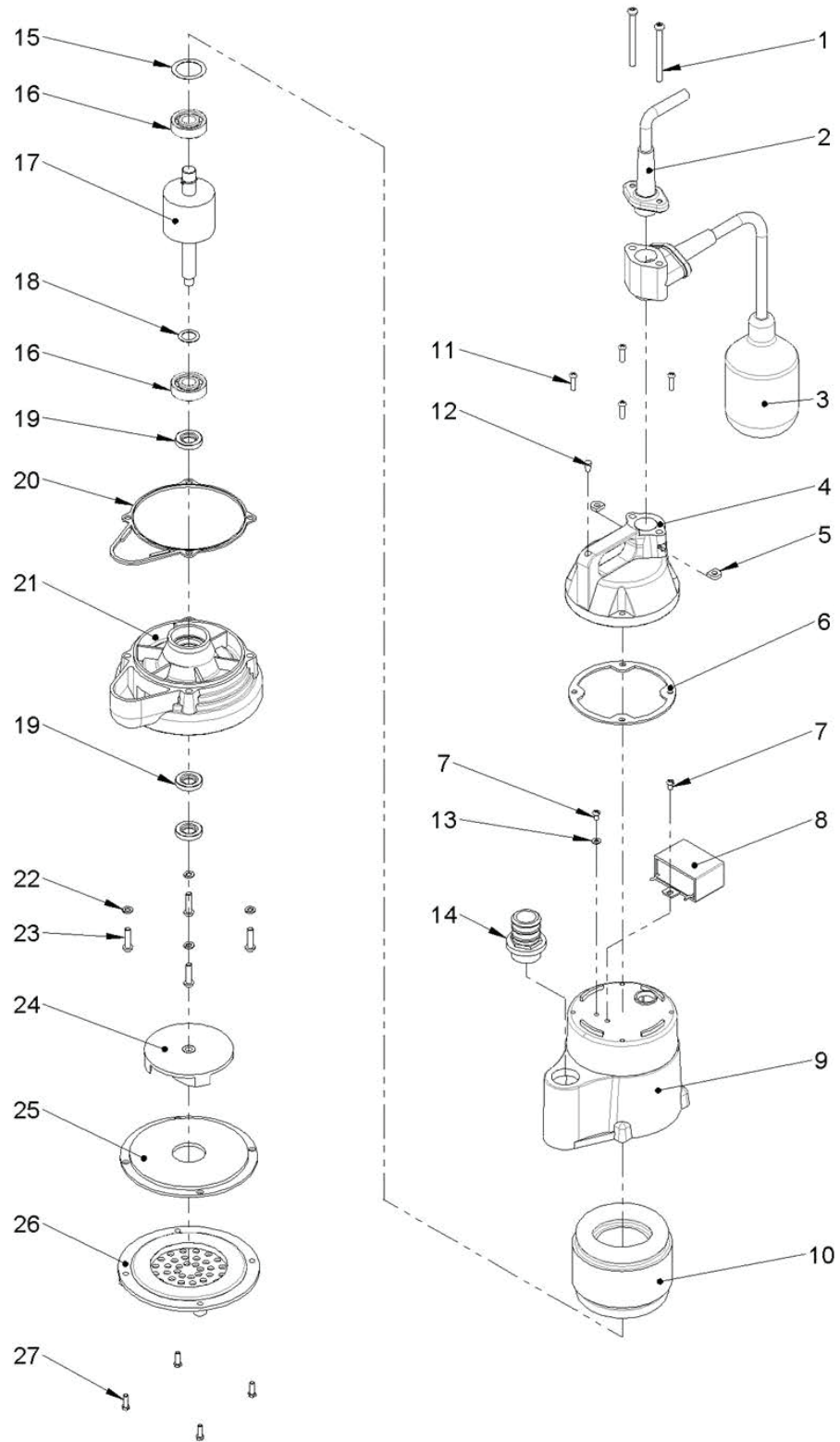
ST1 PUMP ASSEMBLY



ST1 PUMP ASSEMBLY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2730443201	SCREW, ROUND CROSS, M5 X 22	2	
2	4810101110	POWER CABLE W/ PLUG, 18AWG, 10.83 FT.	1	
3	2730243101	SCREW, ROUND CROSS, M4 X 15	4	
4	3045111003	AIR HOLES GASKET	1	
5	3004010005	UPPER COVER	1	
6	3065053001	SHIM, UPPER COVER	2	
7	3045031008	GASKET	1	
8	2730230102	SCREW, ROUND CROSS, M4 X 6	2	
9	1720200001	CAPACITOR, 250V X 12UF	1	
10	2750730002	WASHER, AW-04, 4MM	1	
11	3001010301	DISCHARGE PORT, 3/4"GHT X 3/4"NPT	1	
12	3017500002	MOTOR FRAME	1	
13	3031101201	STATOR, 1Ø, 2P, 90 X 47 X 40L	1	
14	2750130003	WAVE WASHER, BWW-6201	1	
15	1790100005	BEARING, ZZ 6201	2	
16	3032301005	SHAFT/ROTOR WITHOUT BEARING	1	
17	2750830002	BEARING WASHER, 12.5 X 19 X 0.5T	1	
18	1424302001	OIL SEAL, 12MM-24 X 4.5	3	
19	3045041006	PUMP CASING GASKET	1	
20	3011500004	SEAL BRACKET	1	
21	2750343004	WASHER, LOCK, M5, 3/16"	4	
22	2730243203	SCREW, ROUND CROSS, M5 X 20	4	
23	3015010502	IMPELLER, 3" DIA.	1	
24	3012010006	INLET PLATE	1	
25	3013010008	STRAINER	1	
26	2730243103	SCREW, ROUND CROSS, M4 X 12	4	
27	4730100002	SCREWS SET	1	
28	4410100002	O-RING AND GASKET SET	1	
29	3066102003	CABLE GLAND	1	

ST1F PUMP ASSEMBLY



ST1F PUMP ASSEMBLY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2730543101	SCREW, ROUND CROSS, M5 X 58	2	
2	4810101110	POWER CABLE W/ PLUG, 18AWG, 10.83 FT.	1	
3	3070020007	FLOAT SWITCH, MECHANICAL	1	
4	3004010005	UPPER COVER	1	
5	3065053001	SHIM, UPPER COVER	2	
6	3045031008	GASKET	1	
7	2730230102	SCREW, ROUND CROSS, M4 X 6	2	
8	1720200001	CAPACITOR, 250V X 12UF	1	
9	3017500002	MOTOR FRAME	1	
10	3031101201	STATOR, 1Ø, 2P, 90 X 47 X 40L	1	
11	2730243101	SCREW, ROUND CROSS, M4 X 15	4	
12	3045111003	AIR HOLES GASKET	1	
13	2750730002	WASHER, AW-04, 4MM	1	
14	3001010301	DISCHARGE PORT, 3/4"GHT X 3/4"NPT	1	
15	2750130003	WAVE WASHER, BWW-6201	1	
16	1790100005	BEARING, ZZ 6201	2	
17	3032301005	SHAFT/ROTOR WITHOUT BEARING	1	
18	2750830002	BEARING WASHER, 12.5 X 19 X 0.5T	1	
19	1424302001	OIL SEAL, 12MM-24 X 4.5	3	
20	3045041006	PUMP CASING GASKET	1	
21	3011500004	SEAL BRACKET	1	
22	2750343004	SPRING WASHER, M5, 3/16"	4	
23	2730243203	SCREW, ROUND CROSS, M5 X 20	4	
24	3015010502	IMPELLER, 3" DIA.	1	
25	3012010006	INLET PLATE	1	
26	3013010008	STRAINER	1	
27	2730243103	SCREW, ROUND CROSS, M4 X 12	4	

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON-HAND WHEN CALLING

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