Wilo SP Series
Submersible Utility Pumps ETT

ETT24–10.25

Installation and operating instructions

1. PREINSTALLATION CHECK

Inspect this pump before it is used. Occasionally, pumps can be damaged during shipping. If the pump or components are deformed, cracked, or there is an oil leak, Call us Toll Free at: 866-945-6872, or e-mail: info@wilo-usa.com Monday – Friday between 8a.m. – 6 p.m., EST. ATTEMPTING TO USE A DAMAGED PUMP can result in personal injury or death!

2. DESCRIPTION

The electronically controlled submersible utility pump is designed to automatically detect the presence of water. After plug in pump switch, If water is detected the pump will run .If no water is detected the pump will enter a "Sleep Mode", The unit is equipped with an 15-ft., 3- prong grounding –type power cord. The motor is sealed and designed to operate under water. The pump includes a removable check valve, and a fitting to accept either a 1inch pipe or a 3/4 inch garden hose.

⚠Warning **Do not pump flammable or explosive liquids such as oil, gasoline, kerosene, ethanol, etc. Do not use in the presence of flammable or explosive vapors. Using this pump with or near flammable liquids can cause explosion or fire, resulting in serious personal injury or death and/or property damage.**

3. SPECIFICATIONS

Power supply required .....115 volt, 60Hz
Motor.....Single phase
Thermal protector.....Automatic reset
Liquid temperature range.....Max.77°F (25°C)
Operating position.....Vertical
Circuit requirement(minimum).....15Amps
Power cord.....SJTW, 16AWG/3C, 15ft

NOTICE: This unit is not designed to be used to pump salt water or brine! Use with salt water or brine will void warranty.

4. CONSTRUCTION

Motor housing.....Class reinforced thermoplastic
Volute.....Class reinforced thermoplastic
Impeller.....Class reinforced thermoplastic

5. PERFORMANCE

Table 1

Model	HP	GPM of Water @ Total Feet of Head				Max. Head
		0	5ft.(1.5m)	10ft.(3m)	15ft.(4.6m)	20ft. (6.1m)
ETT24-10.25	1/4	25	23	20	14	7.5

6. GENERAL SAFETY INFORMATION

1. Know the pump application, limitations, and potential hazards, Read these rules and the instructions carefully. Failure to follow them could cause serious bodily injury and /or property damage.

The following are the general safety requirements. Failure to follow them could cause serious personal injury or

death and/or property damage.

⚠Warning **For your protection and safety, always follow these general rules with pumps:**

- ✓ **Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene etc.**
- ✓ **Do not use in flammable and/or explosive atmospheres.**
- ✓ **Pump should only be used with liquids compatible with pump component materials. Failure to**
- ✓ **follow this warning can result in personal injury and/or property damage**

2. Make certain that the power source (electric motor) conforms to the requirements of the equipment.

⚠Warning **For your protection and safety, always follow these general rules with pumps:**

- ✓ **Disconnect power before servicing. If the power disconnect is out of sight, lock in the open position and tag it to prevent unexpected application of power. Failure to do so could result in fatal electrical shock!**

3. Release all pressure within the system before servicing any component.
4. Drain all liquids from the system before servicing.
5. Secure the discharge line before starting the pump. An unsecured discharge line will whip, possibly causing personal injury and/or property damage.
6. Check hoses for weak and worn condition before each use, making certain that all connections are secure.
7. Periodically inspect the pump and system components. Perform routine maintenance as required (See Maintenance Section).

Additional Safety Precautions

1. Know the pump applications, limitations, and potential hazards.
2. Make certain the electrical power source is adequate for the requirements of the pump.
3. ALWAYS disconnect the power to the pump and drain all water from the system before servicing.
4. Secure the pump on a solid base to keep the pump vertical and above mud and sand during operation to maximize pumping efficiency and prevent clogging and premature pump failure.
5. Secure the discharge hose before starting the pump. Pump torque may cause an unsecured discharge hose to “whip”, possibly causing personal injury and/or property damage.
6. Check that all hose connections are tight to minimize leaks.
7. Connect the pump DIRECTLY to a grounded, GFCI outlet
8. Extension cords may not deliver sufficient voltage to the pump motor. Extension cords present a life threatening safety hazard if the insulation becomes damaged or the connection ends fall into water.
9. Make certain the electrical circuit to the pump is protected by a 15 Amp or larger fuse or circuit breaker.
10. Periodically inspect pump and system components, to be sure pump inlets are free of mud, sand, and debris.
    a. DISCONNECT PUMP FROM THE POWER SUPPLY BEFORE INSPECTING.
11. Do not handle pump or pump motor with wet hands or when standing on wet or damp surface, or in water.
12. Wear safety glasses at all times when working with pumps.
13. Follow all electrical and safety codes, particularly the National Electrical Code (NEC) and in the workplace, the Occupational Safety and Health Act (OSHA).

14. This unit is designed only for use on 115 volts (single phase), 60 Hz, and is equipped with an approved 3-conductor cord and 3-prong grounded plug. DO NOT REMOVE THE GROUND PIN UNDER ANY CIRCUMSTANCES. The 3-prong plug must be directly inserted into a properly installed and grounded 3-prong, grounding-type receptacle. **Do not use pump with a** 2-prong wall outlet. Replace the 2-prong outlet with a properly grounded 3-prong receptacle (**a GFCI outlet**) installed in accordance with the National Electrical Code and local codes and ordinances. All wiring should be performed by a qualified electrician.
15. Protect the electrical cord from sharp objects, hot surfaces, oil, and chemicals. Avoid kinking the cord. **Do not use damaged or worn cords.**

7. INSTALLATION

IMPORTANT: This pump is not designed for use in septic tanks or underground vaults to handle raw sewage or effluents. It should never be used in hazardous or explosive locations. Do not use power cord to lift motor. Always use the handle.

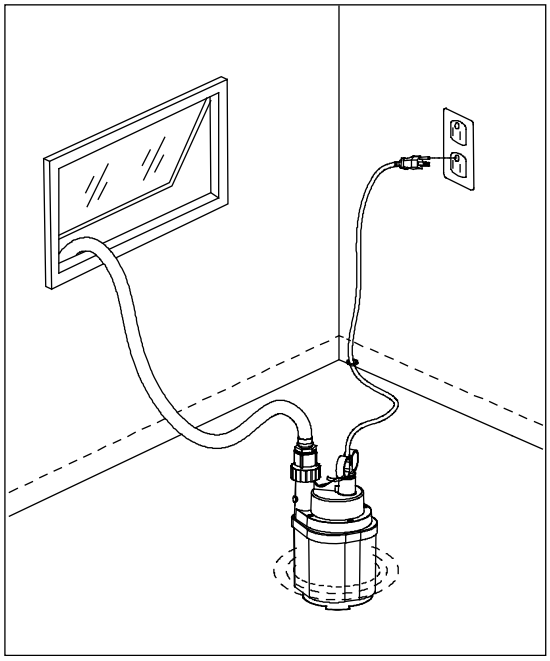
NOTE: Pump is supplied with a discharge check valve and a garden hose adapter. The check valve should be use to prevent water from back flushing through the pump when it shuts off.

1. Pump should be located and should rest on a level solid foundation. A minimum of one and a half (1-1/2) inches of water is recommended to properly prime utility pump. Do not suspend pump by means of the discharge pipe or power cord. Keep pump inlet screen clear. Do not install pump directly on clay, earth or sand surfaces. Protect pump from extreme heat and cold. Use pipe joint sealant to ensure airtight pipe connections.
2. Thread discharge (outlet) pipe into pump carefully to avoid stripping or cross threading.
3. To install garden hose, install the adapter provided with the pump. Thread garden hose onto the check valve fitting.
   NOTE: The garden hose must be 3/4 inch or larger to keep friction as low as possible.
   A 1 inch sump discharge hose adapter can be connected directly to the pump body using Teflon tape.
4. Run discharge pipe/hose away from the pump.
5. It is strongly recommended that this pump motor be electrically connected to a ground fault interrupter. Consult your local electrician for availability and installation.

Power Supply: Pump is designed for 115volt, 60Hz operation and requires a circuit of 15 amperes or more capacity. Pump is supplied with a 3-wire cord set with grounding –type plug for use in a 3-wire, grounded outlet.

⚠Warning **Do not cut off the round grounding prong. Cutting cord or plug will void warranty and may make pump inoperable.**

6. Do not bend, kink or cut power cord. Protect cord from sharp objects, hot surfaces, oil and chemicals. Replace damaged cord.
7. After all piping and controls have been installed, unit is ready for operation.



Picture 1

8. OPERATION

DANGER

Do not touch pump, pump motor, water of discharge piping when the pump is connected to electrical power. Do not handle a pump or pump motor with wet hands or when standing on wet or damp surface, or in water. Never touch the pump or discharge piping when unit is operation or fails to operate. Always disconnect the pump cord (power) before handling.

DANGER

Risk of electrical shock! This pump is supplied with a grounding conductor and grounding type attachment plug. Use a grounded receptacle to reduce the risk of fatal electrical shock.

This pump is designed for 115 Volt, 60Hz operation and requires a 15 amp circuit or more and is equipped with a 3-wire cord set with a grounding–type plug for use in a 3-wire grounded outlet. For safety, this pump should always be electrically grounded to a suitable electrical ground. NEVER cut off the round grounding plug.

1. Plug unit into 115 volt outlet. Pump will run for 30 seconds.
   TIME-SEQUENCED AUTOMATIC OPERATION WHEN SUBMERGED IN A MINIMUM OF 1-1/2 INCHES OF WATER.
   a. **If no water is detected, pump shut off for 15 seconds.** Then pump will run for 10 seconds. 4 cycles. After 4 cycles .If still no water is detected, pump shut off for 120 seconds, then pump will run for 10 seconds. Then repeat cycle.
   b. **If water is introduced during the 120 seconds and you do not want to wait, simply unplug the pump and plug back in.** This will start the 30 seconds test, if still no water, it will always keep pump. If still no water is detected, then will repeat step a).

2. The pump will pump water below 1/4 inch, but will not remove all of the water. Use a mop or squeegee to remove the remaining water.

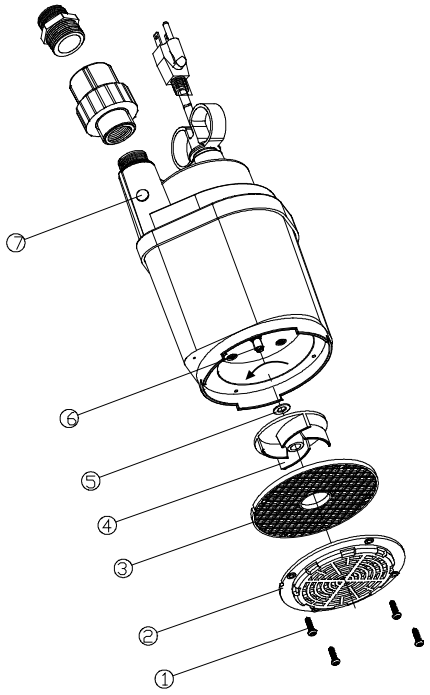
⚠Warning **Make certain that the pump is unplugged before attempting to service or remove any component. This pump is assembled in the factory using special equipment；therefore only authorized service dealers or qualified electricians should attempt to repair this unit. Improper repair can cause an electrical shock hazard.**

3. The motor is equipped with an automatically resetting thermal overload protector. If the motor gets too hot, the overload protector will stop the motor before if is damaged. When the motor has cooled sufficiently, the overload protector will reset itself and the motor will restart. If the overload protector stops the pump repeatedly, disconnect the power from the pump and check it to find the problem. Low voltage, long extension cords, clogged impeller, too much back pressure in the discharge hose (as when pumping through 50 foot(15m) of coiled hose), or extended running of pump with no load, can all cause overheating. The water being pumped cools the motor, allowing the pump to run continuously at any depth of water above 1/4 inch. However, if the motor overload stops the pump, allow it to cool for one hour before restarting. Motor will not restart before the overload has cooled.

4. AIRLOCKS
   When a pump airlocks, it runs but does not move any water. Airlocks will cause the pump to overheat and fail. This pump has an automatic priming valve in the top of the pump body. If you suspect an airlock, unplug the pump, clean out the hole around the automatic priming valve with a paper clip or piece of wire, and restart the pump. If problem persists, remove check valve and connect garden hose connector directly to pump. If the outlet of the discharge hose/pipe is submerged, you must have a 1/8 inch in the discharge hose/pipe to prevent airlock. This hole must be open to air.

9. MAINTENANCE

1. No oiling is required for this pump.
2. Disassembly of the motor prior to expiration of warranty will void the warranty. It might also cause internal leakage and damage to the unit. If repairs are required, return the pump to the dealer from whom it was purchased or contact local electrical repair shop station. If motor is ever disassembled the O-ring must be replaced. Care must be taken to ensure that all seals do not leak.
3. Inlet should be kept clean and free of all foreign objects remove debris.



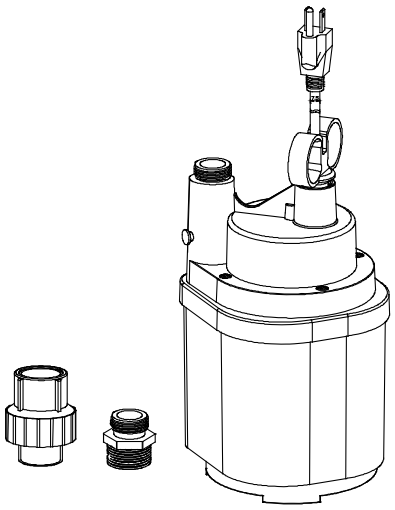
No.	Description	Qty
1	Screw	4
2	Screen	1
3	Diffuser	1
4	Impeller	1
5	Flat washer	1
6	Shaft	1
7	air valve	1

10. TROUBLESHOOTING

Do not disassemble the motor housing. This pump has NO repairable internal parts, and disassembling may cause an water leak or dangerous electrical wiring conditions.

Table 2: Troubleshooting Common Pump Problems

Problem	Possible Cause	Corrective Action
Pump will not start or run	1. Pump is in "sleep Mode" 2. Blown fuse or tripped circuit breaker 3. Low line voltage 4. Defective motor 5. Impeller (pump filled with debris) 6. Not properly primed	1. Briefly unplug pump to reset 2. If blown, replace with proper sized fuse or reset breaker 3. If voltage is under recommended minimum, check wiring size from the main switch on property. If ok, contact power company 4. Replace pump 5. If impeller will not turn, remove base and remove debris. 6. Reposition pump in at least 1-1/2 inches of water to properly prime
Pump shuts off and turns on independently	1. Pump cycles automatically 2. Excessive water temperature 3. Pump has run dry. Insufficient fluid level for pump Insufficient fluid level for pump to prime	1. No action necessary, Refer to Operation Modes For explanation of operating model. 3. Pump should not be used for water above 77° 3. Replace or reposition pump
Pump operates noisily or vibrates excessively	1. Worn bearings 2. Debris in impeller cavity 3. Piping attachments to building structure too rigid or too loose	1. Replace pump 2. Remove base, clean impeller 3. Replace portion of discharge pipe with flexible co
Pump operates but delivers little or no water	1. Low line voltage 2. Debris caught in impeller or discharge 3. Worn or defective pump parts or plugged impeller 4. Check valve stuck closed 5. Air trapped in volute	1. If voltage is under recommended minimum, check wiring size from the main switch on property. If ok, contact power Company 2. Remove base, clean impeller 3. Replace pump. Clean parts if required 4. Remove and examine check valve for proper installation and free operation 5. Check automatic priming valve. It should move freely in and out. If problem persists, remove check valve and connect garden hose connector directly to pump



Wilo USA LLC
1290 N 25th Ave
Melrose Park, IL 60160

Tel: 866-945-6872
Fax: 708-338-9455
Email: info@wilo-usa.com
Web: www.wilo-usa.com

Wilo Canada Inc.
Bay 7-2915 10th Ave NE
Calgary, AB T2A 5L4

Tel: 866-945-6236
Fax: 403-277-9456
Email: info@wilo-canada.com
Web: www.wilo-canada.com

Wilo Mexico
Managua No 978, Colonia Lindavista
07300 México, D.F., México

Tel: + 52 55 5586 3209
Fax: + 52 55 5586 3209
Email: info@wilo.com.mx
Web: www.wilo-mexico.com