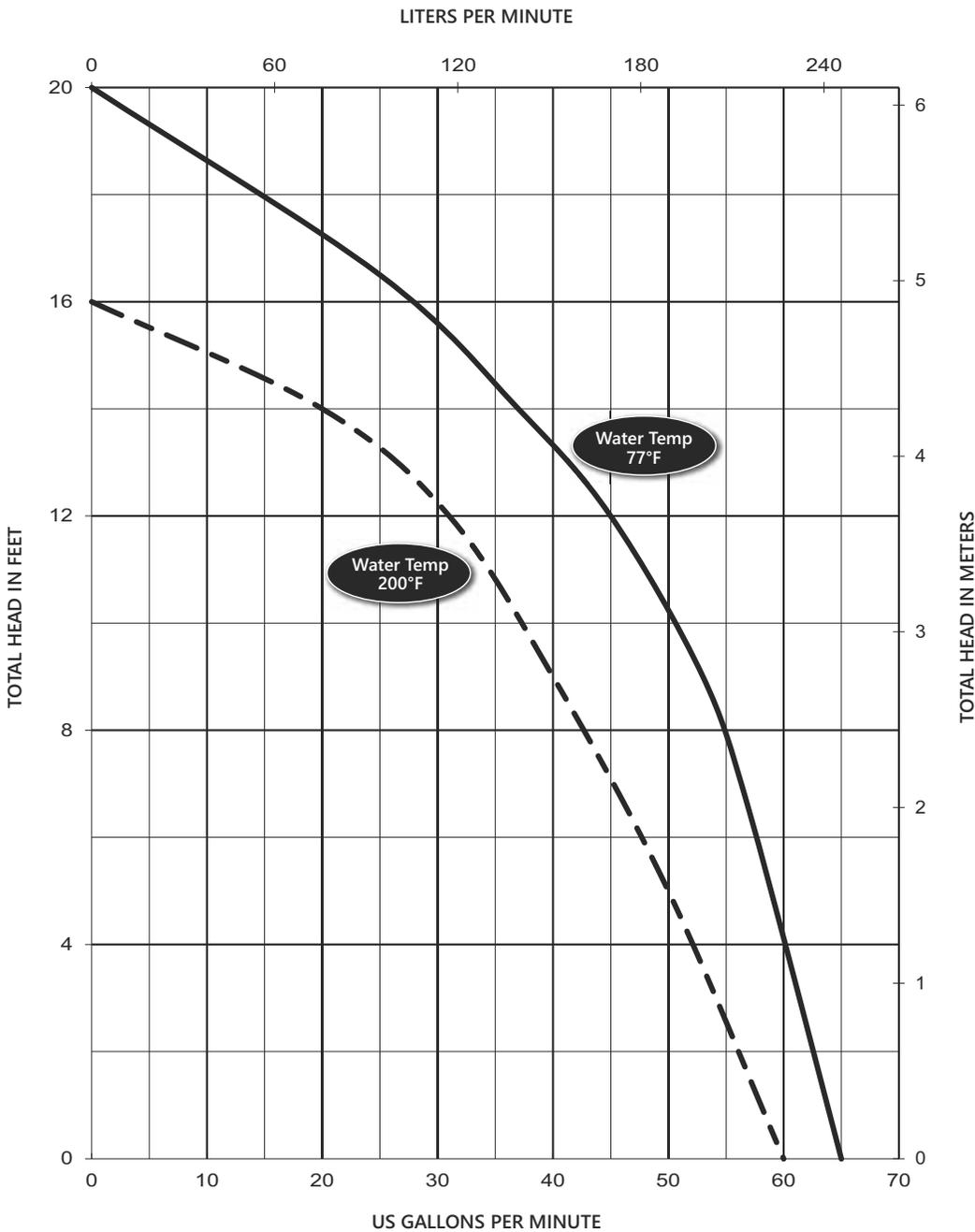
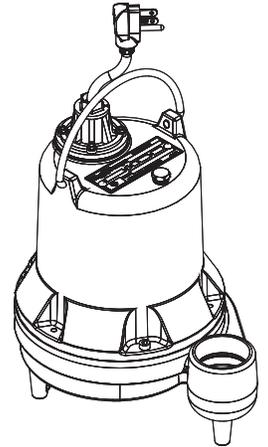


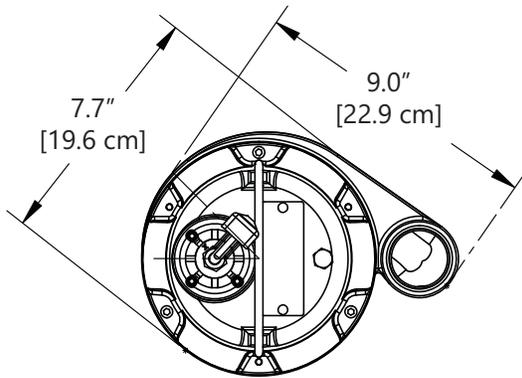
## Pump Specification

### HT40-Series

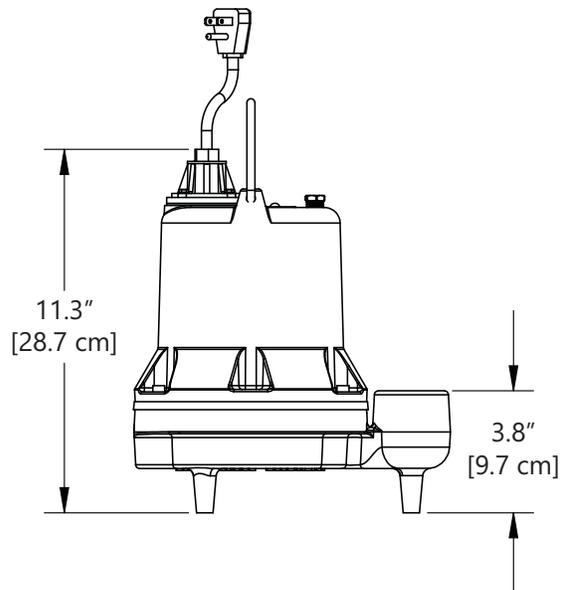
### High Temperature Submersible Sump Pump



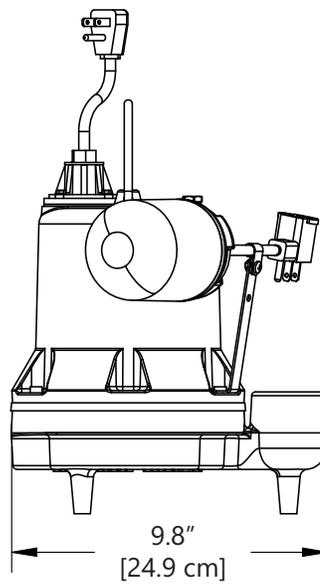
## HT40-Series Dimensional Data



CORD - 115V



PIGGYBACK SWITCH  
AUTOMATIC VERSION



HT40-Series

## HT40-Series Electrical Data

MODEL	HP	VOLTAGE	PHASE	FULL LOAD AMPS	LOCKED ROTOR AMPS	THERMAL OVERLOAD TEMP	STATOR WINDING CLASS	CORD LENGTH [FT]	DISCHARGE	AUTOMATIC
HT41A	4/10	115	1	12	23	150°C / 302°F	F	10	1-1/2"	YES
HT41A-2	4/10	115	1	12	23	150°C / 302°F	F	25	1-1/2"	YES
HT41M	4/10	115	1	12	23	150°C / 302°F	F	10	1-1/2"	NO
HT41M-2	4/10	115	1	12	23	150°C / 302°F	F	25	1-1/2"	NO

## HT40-Series Technical Data

IMPELLER	HIGH TEMP ENGINEERED POLYMER
SOLIDS HANDLING SIZE	3/4"
PAINT	POWDER COATING
MAX LIQUID TEMP	93°C / 200°F
MAX STATOR TEMP	155°C / 311°F
THERMAL OVERLOAD	150°C / 302°F
POWER CORD TYPE	SJEOOW
MOTOR HOUSING	CLASS 25 CAST IRON
VOLUTE	CLASS 25 CAST IRON
SHAFT	416 STAINLESS STEEL
HARDWARE	STAINLESS STEEL
O-RINGS	BUNA-N
MECHANICAL SEAL	CARBON CERAMIC
WEIGHT	16.8 KG / 37 LBS
CERTIFICATIONS	SSPMA

## ***HT40-Series Specifications***

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### **1.01 GENERAL**

The contractor shall provide labor, material, equipment, and incidentals required to provide \_\_\_\_\_ (QTY) centrifugal pumps as specified herein. The pump models covered in this specification are HT40-Series single-phase 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 4/10 hp, 115 volts, 1-phase, 60 Hz, 1550 RPM. The unit shall produce \_\_\_\_\_ GPM at \_\_\_\_\_ feet of total dynamic head.

The submersible pump shall be capable of handling effluent with 3/4" solid handling capability. The submersible pump shall have a shut-off head of 20 feet and a maximum flow of 59 GPM @ 5 feet of total dynamic head.

The pump shall be controlled with:

- \_\_\_\_\_ A piggyback style ON/OFF float switch
- \_\_\_\_\_ A NEMA 4X simplex control panel with three float switches including a high water alarm
- \_\_\_\_\_ A NEMA 4X duplex control panel with three float switches including a high water alarm

### **3.01 CONSTRUCTION**

Each centrifugal pump shall be equal to the HT40-Series pumps as manufactured by Liberty Pumps, Bergen NY. The castings shall be constructed of class 25 cast iron. The motor housing shall be oil-filled to dissipate heat. Air-filled motors shall not be considered equal since they do not properly dissipate heat from the motor. All mating parts shall be machined and sealed with a Buna-N O-ring. All fasteners exposed to the liquid shall be stainless steel. The motor shall be protected on the top side with sealed cord entry plate with molded pins to conduct electricity eliminating the ability of water to enter internally through the cord. The motor shall be protected on the lower side with a carbon ceramic seal with stainless steel housings and spring. The pump shall be furnished with stainless steel handle.

### **4.01 ELECTRICAL POWER CORD**

The submersible pump shall be supplied with 10 or 25 feet of multiconductor power cord. It shall be cord type SJEOOW, 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 watertight compression fitting cord plate assembly, with molded pins to conduct electricity. This will eliminate the ability of water to enter internally through the cord by means of a damaged or wicking cord.

### **5.01 MOTORS**

All motors shall be oil-filled, shaded pole, class F insulated NEMA B design, rated for continuous duty. At maximum load, the winding temperature shall not exceed 155°C un-submerged. Since air-filled motors are not capable of dissipating heat they shall not be considered equal. The pump motor shall have an integral thermal overload switch in the windings for protecting the motor.

## **6.01 BEARINGS AND SHAFT**

Upper and lower ball bearings shall be required. The bearings shall be a single ball/race type bearing. Both bearings shall be permanently lubricated by the oil that fills the motor housing. The motor shaft shall be made of 416 series stainless steel and have a minimum diameter of 0.500".

## **7.01 SEALS**

The pump shall have a carbon ceramic seal with stainless steel housings and spring equal to Crane Type 6A. The motor plate/housing interface shall be sealed with a Buna-N O-ring.

## **8.01 IMPELLER**

The impeller shall be a high temperature engineered polymer, with 3/4" solids handling capability. It shall have pump out vanes on the back shroud to keep debris away from the seal area. It shall be threaded to the motor shaft.

## **9.01 CONTROLS**

All units can be supplied with high temperature automatic wide-angle tilt float switches. The switches shall be equipped with 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. Manual pumps are operable by means of a pump control panel.

## **10.01 PAINT**

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

## **11.01 SUPPORT**

The pump shall have cast iron support legs, enabling it to be a freestanding unit. The legs will be high enough to allow 3/4" solids to enter the volute.

## **12.01 SERVICEABILITY**

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

## **13.01 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 monitored for run voltage and current, and checked for noise or other malfunction.

## **14.01 QUALITY CONTROL**

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

## **15.01 WARRANTY**

Standard limited warranty shall be 3 years.