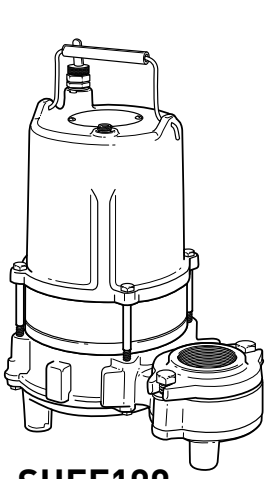
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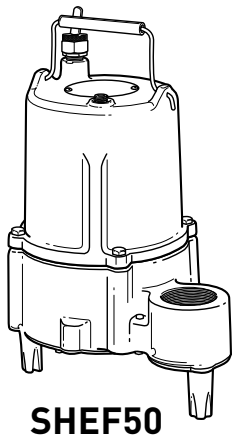
PERFORMANCE DATA

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

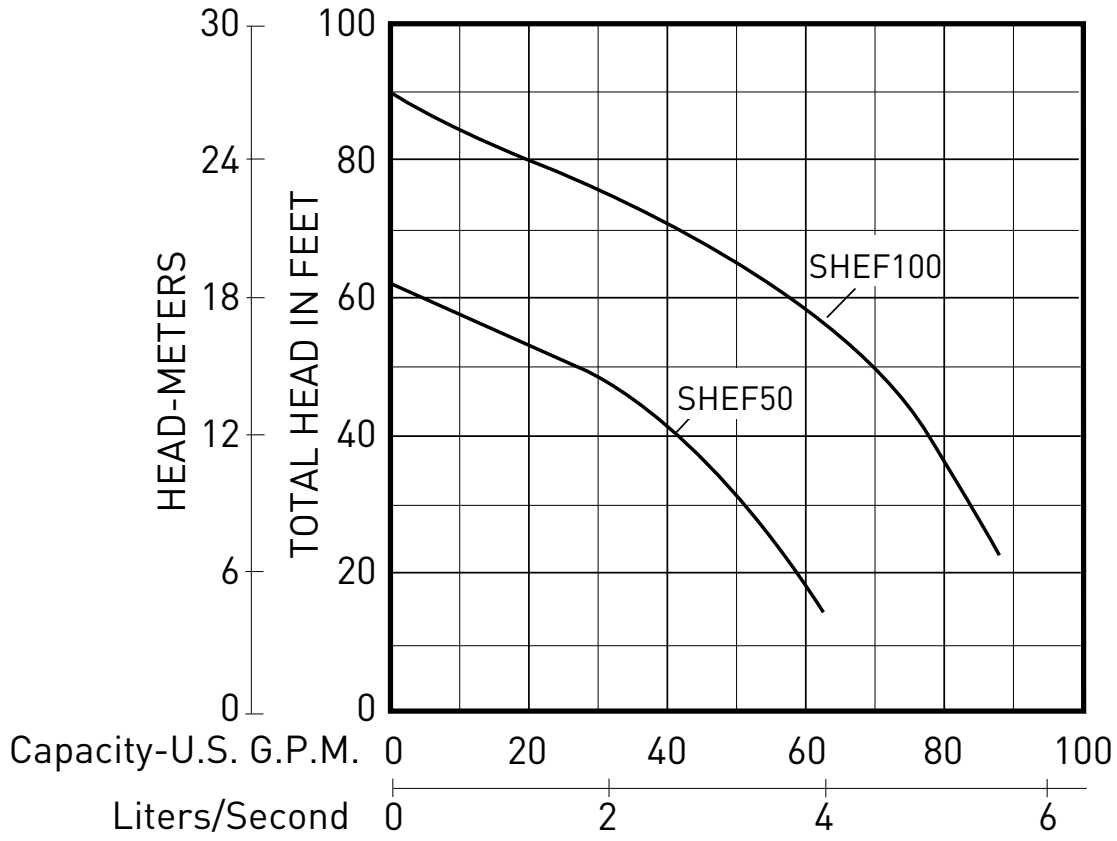
Wholesale Products Page: 6370-1
Dated: January 2001
RPM: **3450** Discharge: **2"** Solids: **¾"**



SHEF100



SHEF50



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

PENTAIR

Conditions of Service:

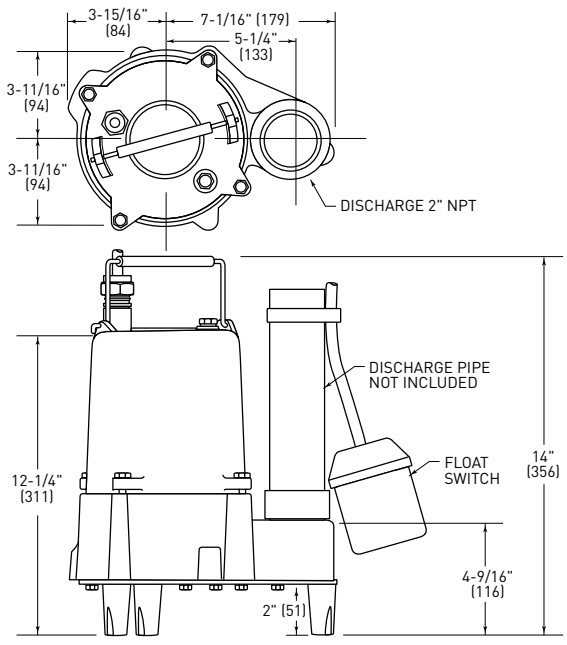
GPM:_____ **TDH**:_____

HYDROMATIC®

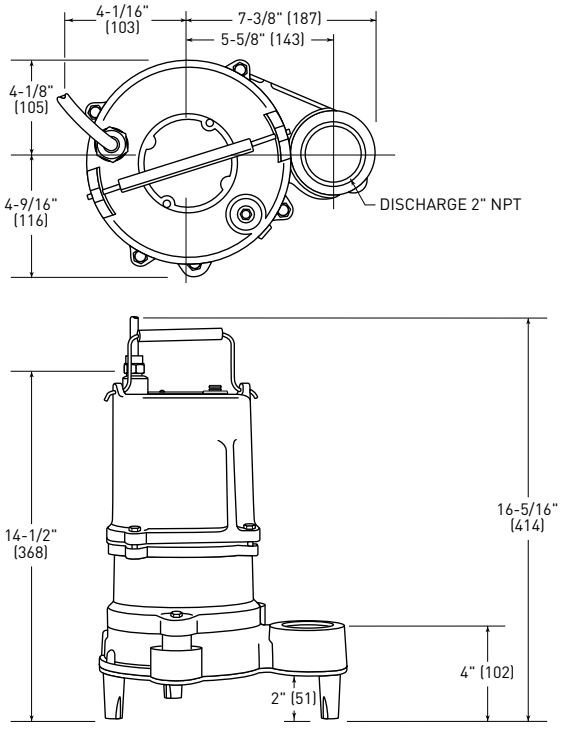
SHEF50/100

SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-2
Dated: January 2001



SHEF50



SHEF100

All dimensions in inches. Metric for international use. Component dimensions may vary ± 1/8 inch. Dimensional data not for construction purpose unless certified. Dimensions and weights are approximate. On/Off level adjustable. We reserve the right to make revisions to our product (s) and the product (s) specifications without notice.

HYDROMATIC®

SHEF50

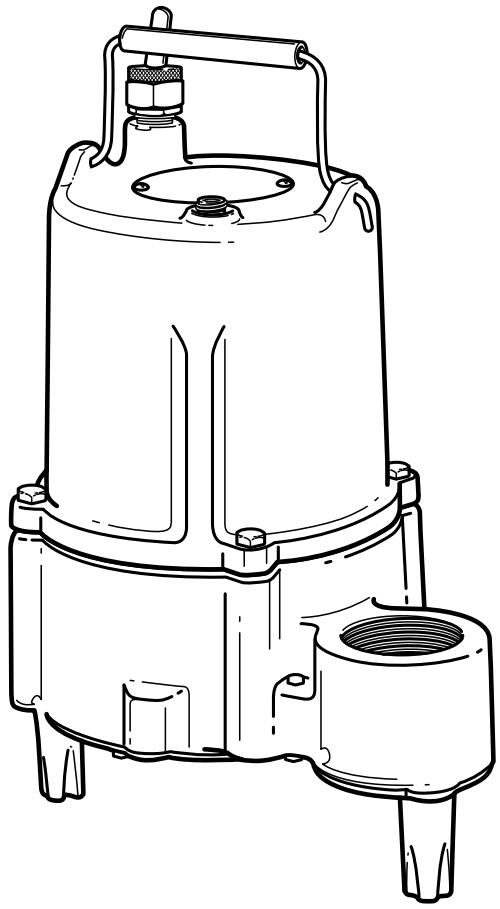
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-3
Dated: January 2001

MODEL: SHEF50

R.P.M.	3450
MOTOR TYPE	THERMAL OVERLOAD WITH AUTOMATIC RESET
MOTOR PROTECTION	AUTOMATIC RESET / THERMAL OVERLOAD

HP	VOLTAGE	PHASE	NEC CODE	SERVICE FACTOR	FULL LOAD AMPS
1/2	115	1	-	1	14.5
	200				7.6
	230	3			3.1
	460				1.6
	575				1.2



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HYDROMATIC®

SHEF100

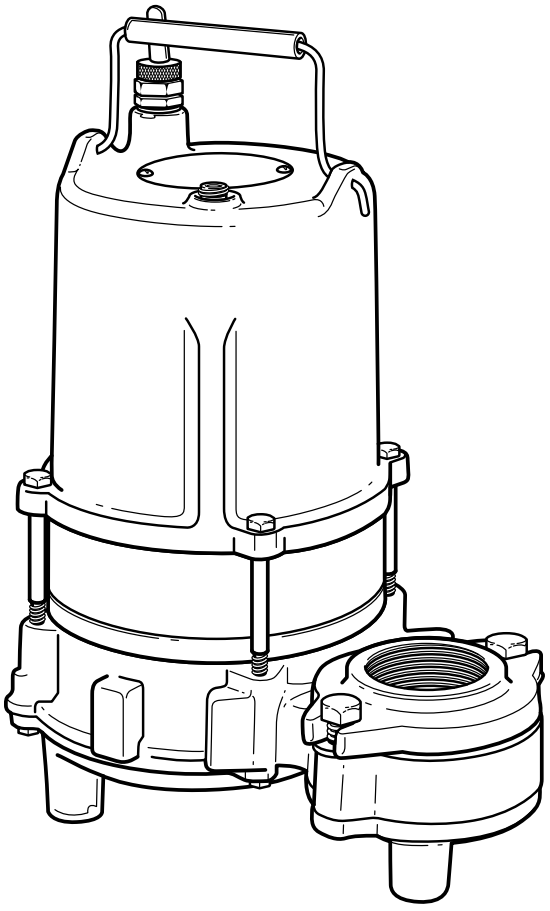
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-4
Dated: January 2001

MODEL: SHEF100

R.P.M.	3450
MOTOR TYPE	OIL FILLED WITH AUTOMATIC RESET THERMAL OVERLOAD
MOTOR PROTECTION	AUTOMATIC RESET / THERMAL OVERLOAD

HP	VOLTAGE	PHASE	NEC CODE	SERVICE FACTOR	FULL LOAD AMPS
1	200	1	-	1	12.1
	230				12.1
	230	3			5.8
	460				2.8
	575				1.9



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HYDROMATIC®
SHEF50
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-5
Dated: January 2001

MODEL: SHEF50

Physical Data

DISCHARGE SIZE	2" NPT
SOLIDS SIZE	¾"
IMPELLER TYPE	NON CLOG
CABLE LENGTH	20' STANDARD 30' OPTIONAL
PAINT	PAINTED AFTER ASSEMBLY DARK GREEN, WATER REDUCIBLE ENAMEL, ONE COAT, AIR DRIED.

Temperature

MAXIMUM LIQUID	140°F
MAXIMUM STATOR	-
OIL FLASH POINT	-

Technical Data

POWER CORD TYPE		SJTW / STW-A
MATERIALS OF CONSTRUCTION	MOTOR HOUSING	CAST IRON
	CASING	CAST IRON
	IMPELLER	THERMOPLASTIC
	MOTOR SHAFT	416 STAINLESS STEEL
	HARDWARE	STAINLESS STEEL
	"O" RINGS	BUNA-N
MECHANICAL SEALS Standard:		CARBON / CERAMIC
UPPER BEARING		BALL
LOWER BEARING		BALL

HYDROMATIC®
SHEF100
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-6
Dated: January 2001

MODEL: SHEF100

Physical Data

DISCHARGE SIZE	2" NPT
SOLIDS SIZE	¾"
IMPELLER TYPE	NON CLOG
CABLE LENGTH	20' STANDARD 30' OPTIONAL
PAINT	PAINTED AFTER ASSEMBLY, DARK GREEN, WATER REDUCIBLE ENAMEL, ONE COAT, AIR DRIED.

Temperature

MAXIMUM LIQUID	140°F
MAXIMUM STATOR	-
OIL FLASH POINT	-

Technical Data

POWER CORD TYPE		SJTW / STW-A
MATERIALS OF CONSTRUCTION	MOTOR HOUSING	CAST IRON
	CASING	CAST IRON
	IMPELLER	THERMOPLASTIC
	MOTOR SHAFT	STAINLESS STEEL
	HARDWARE	STAINLESS STEEL
	"O" RINGS	BUNA-N
MECHANICAL SEALS Standard:		CARBON / CERAMIC
UPPER BEARING		BALL
LOWER BEARING		BALL

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-7
Dated: January 2001

MODELS: SHEF50 and SHEF100

1.01 **GENERAL**

Contractor shall furnish all labor, materials, equipment and incidentals required to provide _____ (Qty.) submersible centrifugal high head effluent pump(s) as specified herein. The pump models covered in this specification are the SHEF 50 and SHEF100. The pump furnished for this application shall be MODEL _____ as manufactured by Hydromatic Pumps.

2.01 **DESIGN CONDITIONS**

Each pump shall be rated _____ H.P., _____ volts, _____ phase, _____ hertz and operate at _____ RPM.

3.01 **OPERATING CONDITIONS**

The pump shall deliver _____ U.S. GPM/LPS at feet/meters TDH, and handle a _____ inch solid. The curve submitted for approval shall state, in addition to head and capacity performance, solid handling capability, amp rating, and design impeller diameter.

4.01 **CONSTRUCTION**

Each pump shall be of the sealed submersible type, incorporating features normally found in pumps furnished for the residential market.

These features include:

1. The pump volute, motor, and seal housing shall be high quality gray cast iron, ASTM A-48, Class 30.
2. The pump inlet shall be open and clear, without screening to provide access for effluent and septic tank solids.
3. All external mating parts shall be machined and Buna N, O-Ring sealed.
4. All fasteners exposed to the pumped liquid shall be 300 series stainless steel.
5. All power cords shall be water resistant UL or CSA approved, with double insulation, and sized as a function of Amp. draw.

5.01 **MOTOR AND SHAFT**

The stator, rotor and bearings shall be mounted in a sealed submersible type housing. Single phase motors shall be split phase with centrifugal switch and start capacitor. Three phase motors shall be Polyphase. Full Load and Locked Rotor Amps as well as Start and Run winding resistance shall be tabulated for each pump.

6.01 **BEARINGS, SHAFT AND MECHANICAL SEAL**

An upper radial and lower thrust bearing shall be required. The upper and lower bearings in the SHEF50 and SHEF100 shall be heavy duty single row ball bearings. The bearings will be permanently and continuously lubricated and cooled by the dielectric oil which fills the motor housing. The motor shaft shall be corrosion resistant steel and sealed from the pumped liquid with a carbon ceramic mechanical seal.

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

7.01 **IMPELLER**

The Impeller in the SHEF50/100 shall be high capacity, two vane, high head design with four pump out vanes on the back side. These vanes wash out grit and stringy material that will damage the shaft and mechanical seal.

8.01 **AUTOMATIC CONTROL**

All single phase pumps should be capable of automatic operation.

9.01 **FLOAT SWITCH**

The SHEF50 and SHEF100 pumps are supplied with a tilt sensitive wide-angle float switch which is sealed in a non-corrosive PVC enclosure. The switch is UL listed for water and sewage and CSA certified. The float switch shall also be fitted with a piggy-back plug that allows the pump to be operated manually without removal from the sump.

10.01 **PAINTING**

All cast iron parts shall be painted before assembly with a water reducible alkyd air dried enamel. The paint shall be applied in one coat with a minimum thickness of 3 to 4 mils.

11.01 **TESTING**

All pumps shall be individually tested to include the following:

1. The pump and power cord shall be visually inspected for imperfections, cuts or nicks.
2. The pump shall have a ground continuity check and the motor chamber shall be Hi-potted to test for moisture content and/or insulation defects.
3. The motor and volute housing shall be pressurized and a 10 second air leak decay test run.
4. Oil is added, and the pump is run. Voltage and current are monitored visually, electronically, and the tester listens for any noise or malfunction.

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