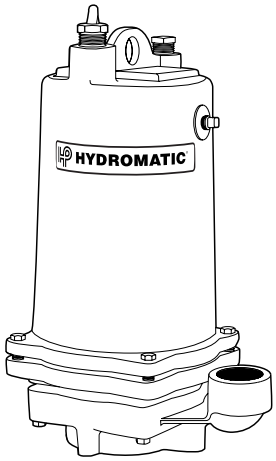
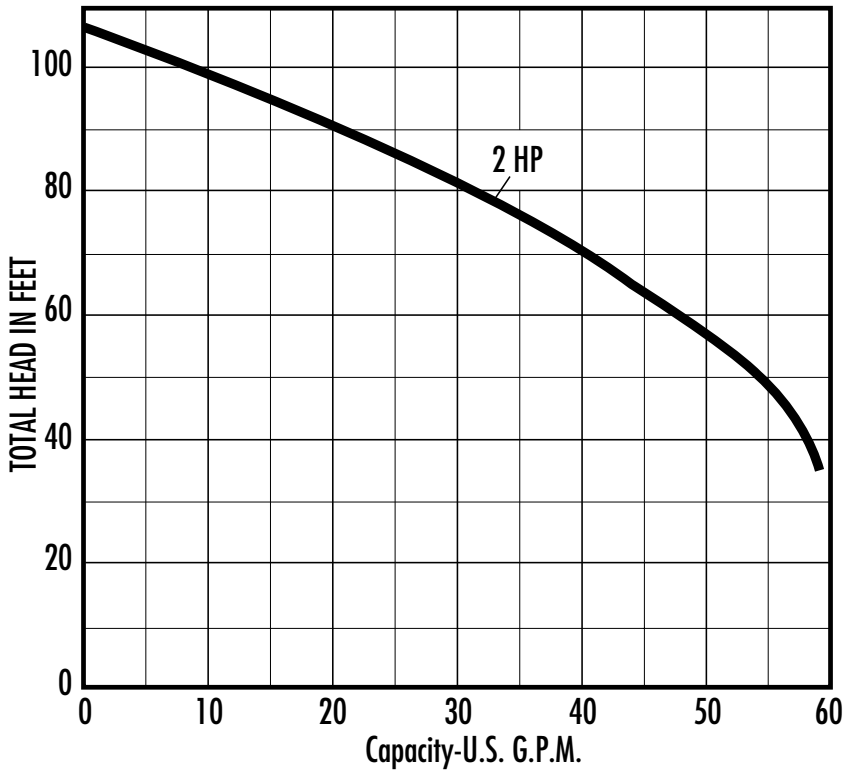
Performance Data

HPGR200

RPM: **3450** Discharge: **1-1/4"** Solids: **2"**





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.

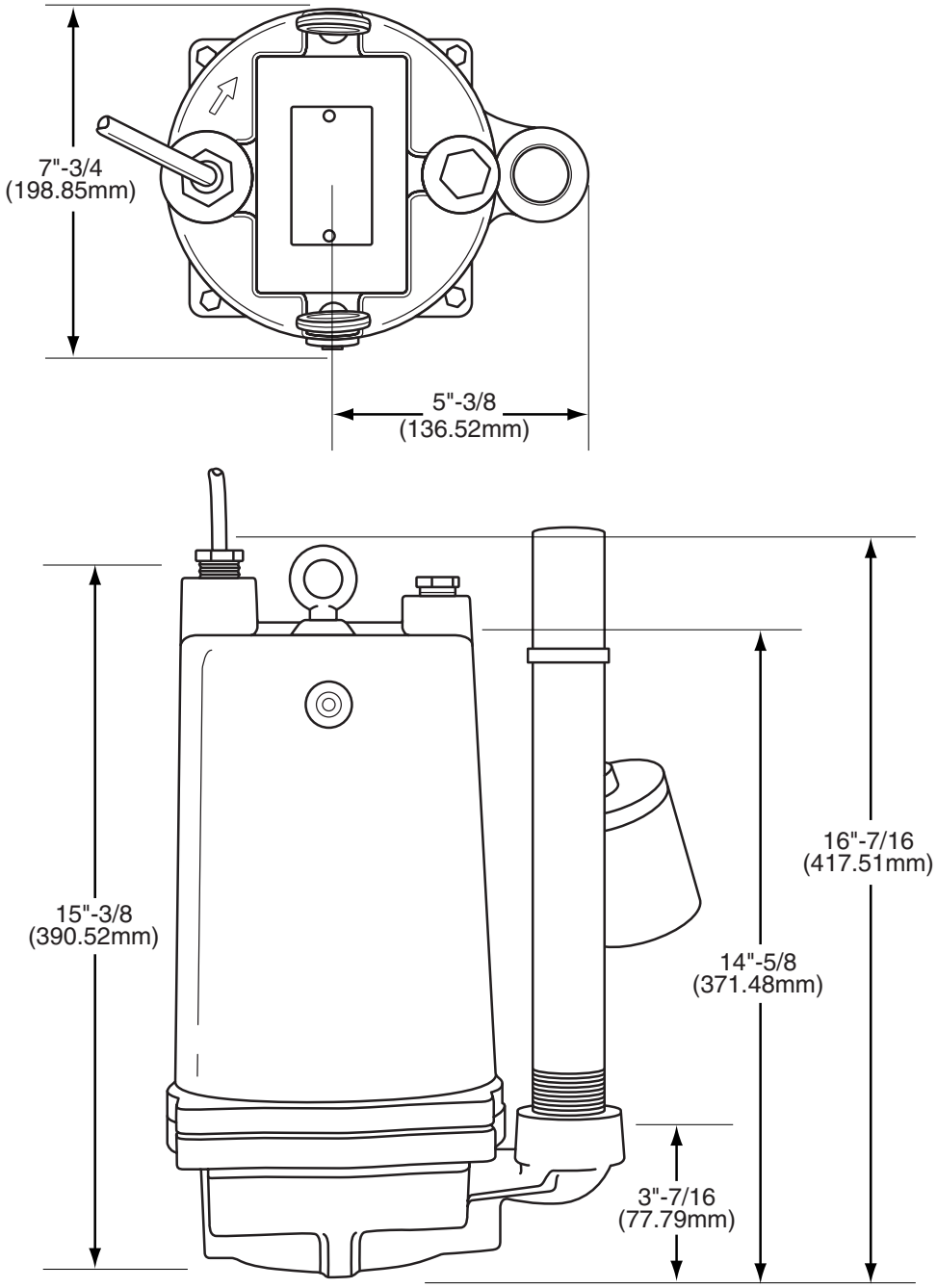
Conditions of Service:

GPM:_____ **TDH**:_____

HYDROMATIC®

Dimensional Data

HPGR200



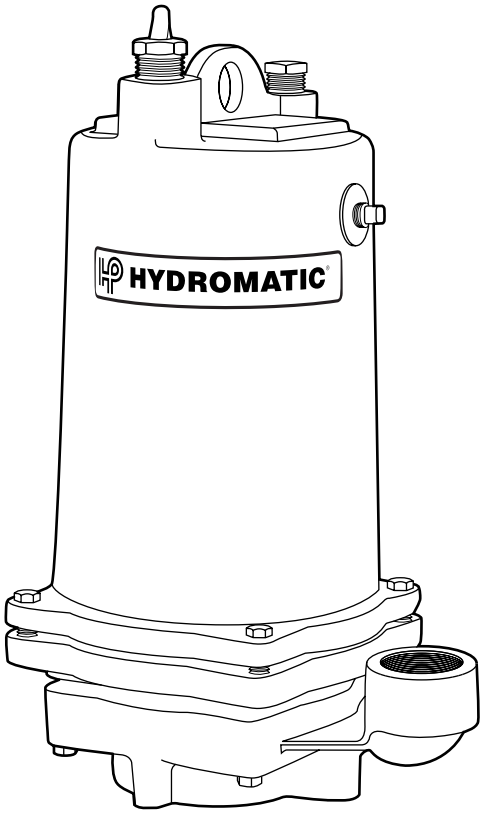
All dimensions in inches. Metric for international use. Component dimensions may vary ± 1/8 inch. Dimensional data not for construction purpose unless certified. Dimensions and weights are approximate. On/Off level adjustable. We reserve the right to make revisions to our product (s) and the product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

HYDROMATIC®

MODEL: HPGR—Standard Grinder Pumps

R.P.M.	3450
MOTOR TYPE	ENCLOSED, OIL COOLED INDUCTION, CAP START
MOTOR DESIGN NEMA TYPE	A (1ø)
GENERAL INSULATION CLASS	B
STATOR WINDING CLASS	F
MAXIMUM STATOR TEMPERATURE	130°C
VOLTAGE TOLERANCE	±10%

HP	VOLTAGE	PHASE	NEC CODE	SF	FULL LOAD AMPS	RUN KW	START KVA	RUN KVA
2	230	1	J	1.0	15.0	-	11.9	3.2



MODEL: HPG200 — Standard Grinder Pumps

Physical Data:

DISCHARGE SIZE	1¼" NPT
IMPELLER TYPE	SEMI-OPEN 5 VANE
CABLE LENGTH	15' STANDARD
PAINT	PAINTED AFTER ASSEMBLY. DARK GREEN, ENAMEL, ONE COAT, AIR DRIED.

Temperature:

MAXIMUM LIQUID	140°F
MAXIMUM STATOR	266°F
OIL FLASH POINT	390°F
HEAT SENSOR Open: Closed:	257°F MAX./239°F MIN. 194°F MAX./149°F MIN.

Technical Data:

POWER CORD TYPE		SOW/SOW-A WATER RESISTANT 600V, 60°C
MATERIALS OF CONSTRUCTION	MOTOR HOUSING	CAST IRON ASTM A-48 CLASS 30
	CASING	CAST IRON ASTM A-48 CLASS 30
	IMPELLER	RED BRASS #85-5-5-5 ASTM B584-836/VALOX 420 SEO WITH BRONZE INSERT
	CUTTERS Stationary: Upper (Axial): Lower (Radial):	 440C STAINLESS STEEL HARDENED TO 55-60 ROCKWELL C 440C STAINLESS STEEL HARDENED TO 55-60 ROCKWELL C 440C STAINLESS STEEL HARDENED TO 55-60 ROCKWELL C
	MOTOR SHAFT	416 STAINLESS STEEL
	HARDWARE	300 SERIES STAINLESS STEEL
	"O" RINGS	BUNA N
MECHANICAL SEALS Standard: Optional:		 UPPER CARBON/CERAMIC/BUNA-N, TYPE 21 LOWER TUNGSTEN CARBIDE/TUNGSTEN CARBIDE, TYPE 21, BD1D1
UPPER BEARING		(RADIAL) SINGLE ROW BALL 6203
LOWER BEARING		(THRUST) SINGLE ROW BALL 6306
MIN. B-10 BEARING LIFE		50,000 Hrs

MODEL: HPGR200, Submersible Sewage Grinder Pump

1.01 **GENERAL**

Contractor shall furnish all labor, materials, equipment and incidentals required to provide (Qty.) submersible centrifugal non clog sewage pump(s) as specified herein. The pump model covered in this specification are the HPGR200. The pump furnished for this application shall be MODEL _____ as manufactured by Hydromatic Pump.

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 heavy duty industrial or municipal markets.

These features include:

1. The seal housing for the HPGR200 is corrosion resistant high density thermoplastic.
2. The pump inlet shall be open and clear, without screening to provide access for sewage and 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 or capacitor start with centrifugal switch. 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. These shall be heavy duty single row ball bearings which are permanently and continuously lubricated and cooled by the dielectric oil which fills the motor housing. The motor shaft shall be stainless steel and sealed from the pumped liquid with a carbon ceramic mechanical seal.

7.01 **IMPELLER**

The Impeller shall be high capacity, two vane, non clog design with 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 **PRESSURE SWITCH**

The Single Phase pumps are furnished with a pressure diaphragm switch that features a piggy-back plug that allows the pump to be operated manually without removal from the sump.

10.01 **FLOAT SWITCH**

The Single Phase pump is supplied with a tilt-sensitive wide-angle float switch is sealed in a non-corrosive PVC enclosure. The unit 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.

11.01 **MANUAL CONTROL**

The Single Phase pumps are not supplied with any type of automatic control. A super or double wide angle piggy-back float switch can be supplied and fitted to these pumps.

12.01 **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.

13.01 **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.