FEATURES

Impeller: Cast iron, ASTM A48, Class 30, two vane semi-open, non-clog design with pump out vanes for mechanical seal protection. Computer balanced for smooth operation. Silicon bronze impeller is an option.

Casing: Heavy duty gray cast iron, ASTM A48, Class 30. Volute type casing with 3”, 125#, flanged, horizontal discharge conforming to ANSI standards. Compatible with A10-30 cast iron or A10-30B cast iron and brass (non-sparking) slide rail assembly.

Seals: Tandem mechanical seal system in an oil filled seal chamber. Each seal operates independently to ensure fail safe performance. Standard seals are carbon rotary and ceramic stationary. Outer seals are designed for easy replacement. Optional seals are available.

Seal Sensor Probes: Pump has a standard dual probe moisture detection system located in an oil filled seal chamber. The sensor leads must be connected to a “seal fail circuit” in the control panel.
APPLICATIONS
Designed for a variety of hazardous commercial and industrial applications such as:
• Sewage systems
• Flood and pollution control
• Dewatering and effluent
• Hospitals
• Trailer courts
• Hotels and motels

SPECIFICATIONS
Pump:
• Maximum solid size: 2.5”
• Discharge size: 3” ANSI 125# Flange
• Maximum capacity: 550 GPM
• Maximum total head: 67’

MOTOR SPECIFICATIONS
• Maximum ambient temperature: 40° C (104° F)
• Rated for continuous duty with motor fully submerged
• Service Factor: 1.15
• HP range:
  Three phase: 1.5 to 5 HP
  60 Hz Voltages available:
    Three phase: 380 volt
• Insulation: Class F
• Single row ball bearings

CONTROL PANEL REQUIREMENTS
To maintain warranty coverage and agency listings, Control Panels must have:
• Moisture Detection System – to warn of a seal failure.
• Thermal Protection System – winding thermostats open the pilot circuit of the magnetic motor controller before dangerous temperatures are reached.
• Overload (Over Current) Protection – Class 10, quick-trip type overload protection must be provided in both three phase and single phase controls.

MOTOR FEATURES
• Explosion Proof Motor: For use in hazardous locations. Rated Class 1, Groups C & D.
• Standards: All motors conform to the latest requirements of NEMA, IEEE, ANSI and NEC standards.
• Air filled motor
• Class F insulation
• Thermal Protection System: The motor is equipped with two automatic reset on-winding thermostats to protect it from high temperatures.
• Operating Design: Motors are designed for continuous submerged operation. The maximum allowable run time in air is 15 minutes.
• Bearings: Single row greased for life sealed bearings. Rated for minimum L10 life of 17,500 hours. The bearings are designed to carry the radial and thrust loads.
• Cable Entry: Power and control cables are epoxy encapsulated to prevent wicking even if the cable jacket is punctured. Buna-N grommets provide an additional cable seal.
• Shaft: The shaft is 416 stainless steel.
• Power and Control Cables: Standard length is 25’, optional 50’ is available. The power leads are sized from 14/4 to 8/4 depending on HP and voltage, rated as SOW and SOOW. The control cable is 18/5 SOW cable.

Typical Control Option:
• Guaranteed Pump Submergence Float – Many engineers specify a redundant OFF float or a Guaranteed Pump Submergence Circuit. This provides a second OFF float as protection from “OFF” float failure or hang up which protects the pump(s) from running dry.
### MODELS AND MOTOR INFORMATION

<table>
<thead>
<tr>
<th>Order Number</th>
<th>HP</th>
<th>Phase</th>
<th>Volts</th>
<th>RPM</th>
<th>Impeller Dia. (in.)</th>
<th>Impeller Code</th>
<th>Maximum Amps</th>
<th>Locked Rotor Amps</th>
<th>KVA Code</th>
<th>Resistance Start</th>
<th>Weight (lbs.)</th>
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<td>1½</td>
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<td>380</td>
<td>1450</td>
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<td>J</td>
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### NOMENCLATURE DESCRIPTION

**1st - 4th Characters - Discharge Size and Type**
3DX = 3” discharge, 2½” solids handling, dual seal, Explosion Proof Sewage Pump

**5th Character - Lower (outer) Mechanical Seal**
The upper seal is carbon/rotary, ceramic/stationary, with Buna elastomers and 304SS metal parts – it is non-modifiable. The 5th character identifies which lower (outer) seal is to be ordered:
- 1 = Standard Lower Seal - Carbon/rotary, ceramic/stationary, Buna elastomers, 304SS metal parts
- 3 = Optional Lower Seal - Silicon carbide/rotary, silicon carbide/stationary, Viton, 304SS
- 5 = Optional Lower Seal - Silicon carbide/rotary, tungsten carbide/stationary, Viton, 304SS

**6th Character - Cycle/RPM**
6 = 50 Hz/1450 RPM

**7th Character - Horsepower**
F = 1½ HP   H = 3 HP
G = 2 HP    J = 5 HP

**8th Character - Phase/Voltage/Hertz**
6 = three phase, 380 V, 50 Hz

**9th Character - Impeller Diameter**
- K = 5.81"
- J = 6.12"
- H = 6.75"
- G = 7.62"
- F = 8.31"
- T = Special trim

**10th Character - Cord Length (Power and Sensor)**
C = 25’ standard length
F = 50’ optional length

**11th/12th Characters - Options**
B = Bronze impeller E = Epoxy paint    BE = Both
**APPLICATION DATA**

- Maximum Solid Size: 2¾" (33/8")
- Minimum Casing Thickness: ¾" (31 13/16")
- Casing Corrosion Allowance: ¾"
- Maximum Working Pressure: 100 PSI
- Maximum Submergence: 200 feet depth
- Maximum Environmental Temperature: 40°C (104°F) ambient conditions
- Maximum Starts Per Hour: 10 evenly distributed starts/stops per hour

**DIMENSIONS**

(All dimensions are in inches. Do not use for construction purposes.)

**MATERIALS OF CONSTRUCTION**

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<thead>
<tr>
<th>Item No.</th>
<th>Part Name</th>
<th>Material Code</th>
<th>Engineering Standard</th>
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<td>Impeller, non-clog</td>
<td>1003</td>
<td>Cast iron – ASTM A48 Class 30</td>
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<td>2</td>
<td>Casing</td>
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<td>Shaft–keyed</td>
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<td>304 Series SS</td>
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<td>Cast Iron</td>
<td>Additional lengths</td>
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<td>Power and Control Cables</td>
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<td>8</td>
<td>Outer Mech. Seal</td>
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<tr>
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<td>304 Series SS</td>
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</tr>
</tbody>
</table>

**STANDARD PARTS**

- Ball Bearings: Greased for life, single row, upper and lower ball bearings, L10 rating life of 17,500 hours
- Mechanical Seals - Standard
  - Upper: Carbon – rotary / ceramic – stationary / Buna elastomers / 304SS metal parts
  - Lower: Silicon carbide – rotary / silicon carbide – stationary / Viton / 304SS
- Mechanical Seals - Optional
  - Lower: Silicon carbide – rotary / tungsten carbide – stationary / Viton / 304SS
- Standard O-Rings: BUNA-N (nitrile)
- External Hardware: Stainless steel