**1K Series Stainless Steel Submersible Pumps**

**Models**

**1K100-1K505**

**FEATURES**

- 304SSL construction offers corrosion resistance and increases operating life over typical cast iron models.
- Unique bulge formed components eliminates harsh radius and welds and provides greater efficiency and durability.
- Lubricated double mechanical seal offers dependable performance with a variety of liquids.
- Air filled, continuous-duty motors for reliable, long term operation.
- Single phase motor features permanent split capacitor and thermal protection with automatic reset for added protection and extend motor life.
- Versatile, reliable operation whether fully or partially submerged.
- Multiple sizes from 1/3 to 1-1/2 hp offers application flexibility.
- Sealed float switch for automatic operation.

**Quality Materials**

- Casing is 304SSL for durability over traditional cast iron.
- Semi-open impeller is 304SSL for long life, durability and economy. (1K100 and 1K102 feature RTP-Noryl.)
- Shaft is 304SSL for dependable, long life.
- Motor frame is 304SSL for dependability.
- Fasteners are all 304SS for durability.
- Shaft Seals are special blend NBR and FPM for compatibility and long life.
- Sealed Bearings for longer life.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>U.S. Measure</th>
<th>Flow Range</th>
<th>Pressure Range</th>
<th>Pressure Range</th>
<th>RPM</th>
<th>Discharge Fitting</th>
<th>Motor Phase</th>
<th>Motor Phase</th>
<th>Motor Phase</th>
<th>Cycle</th>
<th>Cable Length</th>
<th>Float Operation</th>
<th>Maximum Starts/Hour</th>
<th>Maximum Temperature</th>
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<tbody>
<tr>
<td></td>
<td>up to 88 gpm</td>
<td>up to 24 psi</td>
<td>up to 55 Ft. Head</td>
<td>3450 RPM</td>
<td>1/3 HP</td>
<td>1-1/4 NPT</td>
<td>Single</td>
<td>Class F 115V</td>
<td>60 Hz</td>
<td>20 Ft.</td>
<td>Manual or Automatic</td>
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<td></td>
<td></td>
<td></td>
<td>1/2-1-1/2 HP</td>
<td>1-1/2 NPT</td>
<td>Three</td>
<td>Class F 230V</td>
<td></td>
<td>[Gauge AWG 16, UL/CSA]</td>
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<td></td>
<td></td>
<td></td>
<td>Class F 460V</td>
<td>Three</td>
<td>Three</td>
<td>Class F 460V</td>
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<td>20 Ft.</td>
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<td></td>
<td></td>
<td></td>
<td>[Gauge AWG 16, UL/CSA 3-Prong]</td>
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</table>

**Maximum Solids Diameter**: 3/8”

**Weight (see charts)**: 11-31 lbs.

**Dimensions (see charts)**: Length 10.25-17.18”, Diameter 6.37-8.25”

**CAPACITY IN GALLONS PER MINUTE (GPM)**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FEET OF HEAD</th>
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<tr>
<td>1K100-103</td>
<td>5 10 15 20 25 30 35 40 45 50 55</td>
</tr>
<tr>
<td>1K201-205</td>
<td>45 39 31 21 5</td>
</tr>
<tr>
<td>1K301-305</td>
<td>73 67 60 51 40 27 9</td>
</tr>
<tr>
<td>1K404-405</td>
<td>74 67 58 49 39 28 16</td>
</tr>
<tr>
<td>1K504-505</td>
<td>82 75 65 55 42 27</td>
</tr>
</tbody>
</table>

**Air filled, continuous-duty motors for reliable, long term operation.**
1. Use with the proper electrical receptacle. On single phase models cord is supplied with a grounding type, 3-prong plug. On a three phase models, no 3-prong plug is supplied.  
   NOTE: DO NOT USE GROUNDING ADAPTER.
2. Do not use if outer covering of cord becomes excessively cut or worn.
3. Each pump comes with a built-in handle for lifting. For added convenience, the 899045 25 ft. marine rope can be attached to the handle.

**WARNING**
Do not lift with power cord. This can cause damage to the connection and result in shock or serious injury.

4. Continued cycling on and off is an indication the motor is in overload. Make certain the pump is level and adequately submerged in liquid.  
   NOTE: CONTINUED OPERATION WITH EXCESSIVE CYCLING WILL OVERHEAT AND BURN OUT MOTOR.
5. All automatic models come with a float switch to shut-off unit when liquid level drops below safe operation. For field retro-fit, the 899080 115V float switch can be added to automate the manual units.

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**PUMP CYCLES ON AND OFF**
- Insufficient liquid
- Low voltage
- Check power supply.

**PUMP WONT START**
- Blown fuse or tripped circuit
- Low voltage line
- Overheated motor
- Impeller clogged
- Not primed

**PUMP WENT DRY**
- Check power supply.
- Overheated and burned out unit must be replaced.

**TROUBLESHOOTING**
- Reposition pump in liquid with minimum 4" liquid.

**PUMP OPERATES BUT DELIVERS LITTLE FLOW**
- Impeller clogged
- Low voltage
- Worn seals

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**AUTOMATIC MODELS**

<table>
<thead>
<tr>
<th>Model</th>
<th>HP</th>
<th>Phase</th>
<th>Volts</th>
<th>Amps</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E (NPT)</th>
<th>Wt. (lbs)</th>
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<tbody>
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<td>1/3</td>
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<td>115</td>
<td>4.0</td>
<td>10.25</td>
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<tr>
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<td>10.25</td>
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<td>1.25</td>
<td>27</td>
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- *Only single phase has motor over load and auto-reset.

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**MANUAL MODELS**

<table>
<thead>
<tr>
<th>Model</th>
<th>HP</th>
<th>Phase</th>
<th>Volts</th>
<th>Amps</th>
<th>A</th>
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**1K SERIES PERFORMANCE RANGES**

- **PRESSURE**
  - 26.0 [60]
  - 21.7 [50]
  - 17.3 [40]
  - 13.0 [30]
  - 8.7 [20]
  - 4.3 [10]

- **FLOW**
  - 10 GPM
  - 20 LPM
  - 30
  - 40
  - 50
  - 60
  - 70
  - 80
  - 90
  - 100
  - 114
  - 189
  - 227
  - 265
  - 303
  - 341

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**WARRANTY**
This pump is warranted for one year from date of purchase. Improper installation and use will void the warranty. Tampering with the power cord, impeller or seals will void the warranty.

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**CAT PUMPS**
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