User Instructions

Glas-Col Stirrer Control
Variable Speed

Models:

099D ST20N/2004/20/2021/2044
3.0 Amp, 120Volt, 50/60 Hz.

099D ST220N/22004/220/22021/22044
3.0 Amp, 240Volt, 50/60 Hz.
Located and identify parts shipped with the stirrer drive:
- Motor speed control
- Chuck/arbor
- Motor/Bracket
- Propeller
- Allen wrench

Mount the motor on a ring stand or vertical lattice rod with the clamp provided. Now install the keyless chuck with arbor to the motor shaft using the allen wrench provided. Be sure to tighten the set screw on the flat of the motor shaft. Insert the metal stirring shaft into the keyless chuck.

Connect the motor cord to the control. This plug is polarized so it can only be plugged in one way. Make sure the forward/reverse switch is in the center OFF position and the motor speed knob is fully counter clockwise and snapped to the OFF position. Plug the power cord into a properly grounded and polarized receptacle. Select the desired direction with the forward/reverse switch. Turn the motor speed knob clockwise to turn on and set the motor speed.

The motor is a totally enclosed ball bearing, reversible permanent magnet geared type with an output shaft rated at:

<table>
<thead>
<tr>
<th>Model</th>
<th>Power</th>
<th>Torque</th>
<th>RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>099D ST20N/220N</td>
<td>1/8 HP</td>
<td>50 oz.in.</td>
<td>2500</td>
</tr>
<tr>
<td>099D ST2004/22004</td>
<td>¼ HP</td>
<td>9 lb.in.</td>
<td>660</td>
</tr>
<tr>
<td>099D ST20/220</td>
<td>¼ HP</td>
<td>31 lb.in</td>
<td>266</td>
</tr>
<tr>
<td>099D ST2021/22021</td>
<td>¼ HP</td>
<td>77 lb.in.</td>
<td>125</td>
</tr>
<tr>
<td>099D ST2044/22044</td>
<td>¼ HP</td>
<td>157 lb. in.</td>
<td>57</td>
</tr>
</tbody>
</table>

**Specifications:**
- **Power:**
  - 120 vac +/-10%
  - 240 vac +/-10%
  - 50 to 60Hz. +/- 5%
- **Ambient Temperature:**
  - 77 °F/25 °C +/- 5 °C
- **Operating Environment:**
  - 0 to 90% relative humidity
  - 32 to 100 °F/0 to 37 °C

**Operation:**
Connect the motor cord to the control. This plug is polarized so that it can only be plugged in one way. Make sure the forward/reverse switch is in the center OFF position and the motor speed knob is fully counter clockwise and snapped to the off position. Plug the control power cord into a properly grounded and polarized receptacle. Select the desired direction with the forward/reverse switch. Turn the motor speed knob clockwise to turn on and set the motor speed.
Control Features:
1. **SPEED POSITION KNOB**: This allows for speed adjustment of the drive; power on/off switch integral.
2. **FORWARD/REVERSE SWITCH**: For selection of rotational direction of motor.
3. **CIRCUIT FUSE**: The stirrer circuit is protected against overloads with a 3 amp circuit breaker
4. **OUTPUT SOCKET**: Socket for connection for motor to control.

Always use proper safety equipment when stirring, for example, gloves, glasses, etc. Read and follow instructions that are supplied with your stirrer drive.

When reversing the motor direction, let the motor stop before changing direction.

As a general rule, use the slower speeds whenever possible for the work to be done. Limit your use of the high-speed shaft to small propellers and low viscosity fluids. Large paddles will overload the motor, even running in water, if you use it at maximum speed on the high-speed shaft.

**Caution:**
The circuit breaker is rated at 3.0 amps; it won't necessarily protect the motor or the controller against prolonged, moderate overloads.

Use of a stirrer for an alternate purpose or alteration of stirrer construction features such as electrical connecting devices, may cause unsatisfactory performance and the warranty to be voided.

Your stirrer drive requires very little maintenance. Keep it clean and avoid spills. Inspect the motor brushed occasionally (with the power cord disconnected) to make sure they have not worn excessively. Do not use if electrical cords are worn or frayed.

**Spare Parts**
Spare parts for Glas-Col stirrers are generally available from the factory. Consult Glas-Col for part numbers and pricing.

**Limited Warranty:**

See the current Glas-Col warranty policy located under the General Sales Policy on the Glas-Col website at [www.glascol.com](http://www.glascol.com).

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