



Dura-Drive™ Overhead Stirrer

CLS-1440-100



OPERATIONS MANUAL



3800 North Mill Road • Vineland, NJ 08360 • USA

Tel: 1-800-843-1794 • Fax: 1-800-922-4361

Web: www.cglifesciences.com

General Description

The CGLS Digital Overhead 'Dura-Drive™' is a versatile direct-drive agitator for cell culture and most aseptic mixing applications. The Dura-Drive™ is designed to eliminate the problem of a magnetic agitator decoupling often observed in large volume mixing over 3L and the stirring of solutions with viscosities greater than water.

The Dura-Drive™ features a brushless, maintenance-free DC motor with drive assemblies designed for quiet operation. The units are powered by a 24 VDC power supply (included).

Specifications:

Speed Range: 5-150 rpm

Dimensions (HxWxD): 8 x 4.5 x 6.5" (20 x 12 x 17cm) *including handle*

Weight: 4.3 lb (2.0 kg)

Rating: CLS-1440-100/E, 24VDC fused at 1 amp

Features:

Forward and Reverse modes

Locking Speed Control Knob

Brushless DC "maintenance free" Motor

Attached Handle for easy transportation

Locking Input power cord

Unpacking Instructions

Unpack your stirrer carefully. Be certain to retain the warranty information, all packing material and instruction manual. Claims for damages require that packing material be retained for inspection.

All damage claims must be initiated with the delivering carrier within five (5) days of receipt of the product.

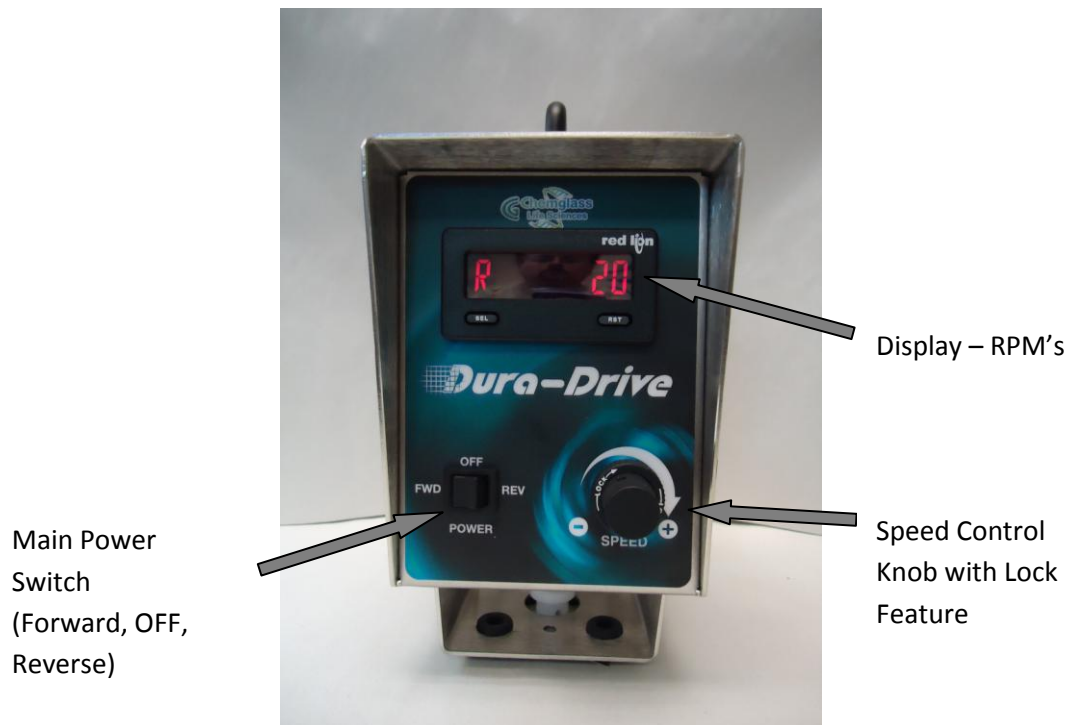
Operating Instructions

The Power Supply MUST be attached to unit BEFORE plugging the AC end into the supply outlet.

1. Dura-Drive™ is shipped complete and ready for operation. With the unit turned off (rocker switch in the center position), insert and screw the DC (round) end of the supplied power cord set into the rear jack of the unit (indicated as "24VDC"). Plug the opposite (AC) end into any appropriate outlet (one providing power at the rated voltage and frequency).
2. Position the unit over the drive stem. Align the four grommets with the pegs on the drive stem. Rotate the shaft at the top of the drive stem to align the pin with the groove in the drive fork. Press down until all four grommets are securely seated.

3. The power switch is a three-position switch, allowing both Forward (FWD) and Reverse (REV) rotation. The center position is OFF. Press the power switch to either the FWD or REV position. The display will illuminate indicating that the unit is in operation.
4. To operate, turn the speed control knob to set the desired rpm value. The units are designed to operate within a range of 5-150 rpm. Adjust the speed by turning the speed control knob, CW to increase speed, CCW to decrease it. The unit will ramp up (or down) to your selected speed. Turn the “LOCK” ring clockwise about an eighth of a turn to any inadvertent changes to the set speed. Turn the “LOCK” ring counterclockwise to unlock the speed control knob.

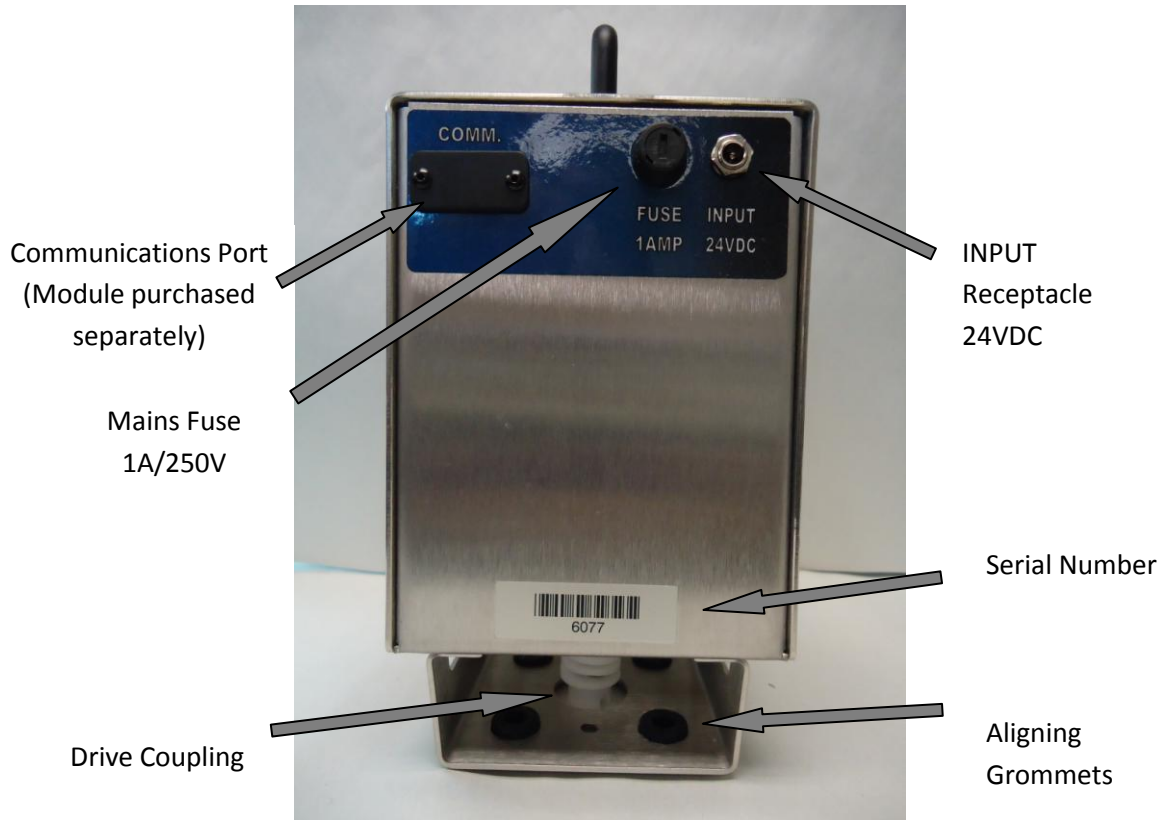
Figure 1: FRONT PANEL



NOTE:

To protect the drive mechanism and prevent cell shear, reduce the speed of rotation to zero before changing direction or stopping the Dura-Drive. Additionally, failure to reduce the speed may cause damage to the drive coupling.

Figure 2: REAR PANEL



Troubleshooting and Service

In the event that a problem develops with any CGLS product, **DO NOT** attempt to perform any service on the unit without first contacting the CGLS Customer Service Department at 1-800-843-1794. **Unauthorized servicing may void the warranty.** CGLS will supply information on minor repairs upon request. In any correspondence to CGLS concerning these units, please include the catalog number (1440-100) and the serial number, which may be found on the rear of the unit.

WARNING: POTENTIAL SHOCK HAZARD EXISTS WHEN COVER IS REMOVED. DISCONNECT POWER CORD BEFORE SERVICING.

Common Troubleshooting Tips

1. Unit does not turn on:
 - a. Check condition of Mains fuse.
 - b. Ensure power cord is fully inserted into DC power supply. A green L.E.D located on the DC power supply will illuminate, indicating connections.

- c. Ensure DC power supply cord is fully inserted into 24VDC receptacle on rear panel.
2. Unit turns on but there's no rotation:
 - a. Verify drive coupling and motor shaft are secure
 - b. Check coupling pin located on overhead drive adapter.
3. Contact CGLS for additional troubleshooting assistance.

Replacement of Mains Fuse – Using a small flathead screwdriver, depress slightly and turn the black fuse holder cap counterclockwise on the rear panel. The fuse holder cap will pop free exposing the fuse. Replace the defective fuse with one of equal rating [(1 Amp/250V) (5x20mm)]. Replace the fuse holder cap by inserting into the fuse holder base, depressing slightly and turning clockwise.

CGLS WARRANTY AND LIMITATION OF LIABILITY

CGLS warrants to the original purchaser, its products to be free from defects in materials and workmanship for a **period of one (1) year from the date of shipment, unless otherwise specified**. Our obligation under this warranty is limited to, at our option, repair, replace, or cause any necessary repairs to be made to, any defective part or parts, which shall be returned to us. **CGLS takes no responsibility for damage to merchandise in transit**. All such claims must be submitted to the carrier. This warranty shall not apply to any equipment or parts which shall have been repaired or altered outside our factory, or subjected to misuse, negligence, accidents, faulty installation by other parties, or **unauthorized** repairs or modifications. In addition, CGLS, shall not be responsible to the original purchaser or any other party or parties for bodily or property loss, damages, or injuries of any kind or nature through either direct or indirect use of the product. This warranty is made expressly in lieu of any and all other warranties, expressed or implied, or statutory as to the merchantability, fitness for purpose sold, description, quality, productiveness or any other matter. All other such warranties are specifically excluded.

SHIPMENTS

All items are shipped F.O.B. Vineland, New Jersey with the charges prepaid and added to the invoice. Special shipping instructions should accompany your order. We will select the best method if none is specified. Air shipments are available for an additional charge. Delivery of large products shall be to the customer's loading dock. **It is the customer's responsibility to arrange movement from the loading dock to the site of use, unless otherwise agreed to by CGLS**. Products requiring special or crating may incur additional handling fees.

CGLS takes every reasonable precaution to ensure that its products arrive without damage. However, occasionally damage will occur during the shipment of a product. For this reason, it is imperative that Purchaser examine each product **immediately** upon receipt in order to determine whether the product, has arrived in proper condition. In the event Purchaser detects any damage to the product, Purchaser shall **immediately** notify **CGLS** and the carrier who delivered the product. **Failure to notify CGLS and the carrier of any damage within five (5) days of receipt of the product shall constitute a waiver of any claim for damage to the product**. The freight carrier shall be exclusively responsible for any damage which occurs during shipment.