H-2966B Production, Cylinder End Grinder
The manually-operated production cylinder end grinder is designed for medium production laboratories, who need a fast and precise method of preparing cylinders for compression testing. The machine’s small footprint makes it perfect for most labs where space is at a premium, and, its virtually maintenance-free operation will be appreciated by the typical busy lab.

The H-2966B production grinder is capable of preparing approximately 20 cylinders per hour for testing. It can handle 4" x 8" and 6" x 12" cylinders with equal ease and provide them plane and parallel within ASTM C617 tolerances. The grinder removes material at a rate of 1/32" (0.8mm) per pass, and is capable of quickly handling multiple passes while maintaining its preciseness.

The 2966B comes complete with a simple and reliable water recirculation system. The machine requires minimal maintenance. It is suggested that water/coolant be changed and debris being removed from the debris tray every other day. Voltage is 110/120V 60HZ, or H-2966B.5F is 220V 50Hz.

- Grinds the faces of concrete cylinders plane and parallel to within ASTM C617
- One pass of the diamond wheel is usually sufficient
- Compression testing can commence immediately after grinding without the use of capping materials
- Eliminates fumes and waiting time associated with capping compound

**Spares suggested:**
(1) H-2965.1 Diamond Cutting Wheel

### Specifications

<table>
<thead>
<tr>
<th>Spec</th>
<th>Details</th>
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<tbody>
<tr>
<td>Sample Size</td>
<td>4&quot; x 8&quot; (75 x 150mm) 6&quot; x 12&quot; (75 x 150mm) cylinders</td>
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<tr>
<td>Cut Precision</td>
<td>Plane and Parallel to within 0.002&quot; (.05 mm)</td>
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<tr>
<td>Cutting Feed</td>
<td>Manual—right hand operation</td>
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<tr>
<td>Cutting Head</td>
<td>Diamond wheel</td>
</tr>
<tr>
<td>Cutting Speed</td>
<td>3800 rpm</td>
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<tr>
<td>Utilities Required</td>
<td>Water source required for coolant</td>
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<tr>
<td>Dimensions</td>
<td>30&quot; D x 24&quot; H x 22&quot;W (764 x 610 x 559mm)</td>
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<tr>
<td>Shipping wt.</td>
<td>275 lb (125 kg)</td>
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Receiving and Installation Instructions

Check for any visible damage prior to unbolting the machine from the skid. If the machine is damaged or the skid appears to have been dropped, mark “damaged” on the bill of lading and report to the transport carrier within 7 days of receipt.

Positioning of Machine

Machine requires 2 feet of clearance on the left hand side to facilitate removal of the water and debris collection pan. The machine requires power from a standard 110V, 15 amp electrical outlet.

Assembly

Fill debris tray with water. Position submersible pump over perforated stand. Pump must be 2.5 inches above bottom of tray to avoid sucking in debris that will plug the pump. Connect the water hose from the pump to the water valve at the top left hand corner of the machine. Plug the electrical cord from the pump into the outlet provided on the machine.

DO NOT PLUG IN MACHINE BEFORE READING THE FOLLOWING:

Machine Parts Supplied

1 - Jig fixture 6" x 12"
1 - Jig fixture 4" x 8"
1 - Debris pan with pump stand
1 - Submersible pump with hose attachment
1 - Grinding wheel – installed
4 - Grinding stops numbered 0, 1, & 2
   Stop #0 is factory installed
   Stops #1, & 2 are mounted on right side of stand clamp.
Maintenance

Each grinding stop is designed to allow 1/32” (0.8mm) of material removal. As the grinding wheel wears down the material removed will lessen until there will be no cut at all. **Do Not** remove the grinding wheel! Replace the “O” grinding stop with the #1 grinding stop. Install the “O” grinding stop on the clamp stand. As the wheel wears down repeat the changing of the grinding stop **IN SEQUENCE**. When stop #3 is installed order a new grinding wheel now!

Machine arrives factory lubricated. Usually no machine maintenance is required. The debris tray should be removed and cleaned and the water replaced with clean water each week under normal use, or more often with continuous use.

**Fuse replacement:** The 15 amp buss fuse is accessible through the left side service panel.

Front Panel Configuration

The front panel is configured as follows:

1) The top right green push button switch provides power. When this is switched on the small green pilot light immediately to the left will light if power is present and the cutting wheel will start.

2) Turn coolant on by pressing turn switch on. Right hand side indicates “Pump On”

3) Position cylinder against the internal stop.

4) Clamp cylinder using knurled knob on right hand side of the vise.

5) As with a drill press, bring handle down gently. Proceed through the cut at even speed. On the way back jog 2 or 3 times to polish the cut

6) When you don’t hear any noise, there is no cutting.

7) Turn pump off now

8) Remove cylinder. Check visually if O.K. Reverse end and repeat cutting procedure.

Safety Tip: Never put your hand or fingers inside the cutting hole.

Note: Grinding Wheel Change

Remove top front plate with appropriate access key supplied. Push down “T” handle above grinding wheel to freeze it in position. While holding down the “T” handle, unscrew the center Allen bolt with the Allen key provided.
**Cutting Tips**

Never force the wheel into the cut. A gentle start will make a better cut and preserve the grinding wheel. If grinding wheel is not removing enough material each pass, then replace grinding stop with next sequential number. The factory installed stop is number “0”. When stop #2 has been installed, order a new grinding wheel.

Never remove concrete cylinder from jig fixture before both ends have been cut. If concrete cylinder has been badly cast – ie. 1/4" differential from side to side, you may want to saw the rough end before grinding to save time.

**Accuracy**

Machine is calibrated to grind cylinders plane and parallel within 2 thousand of an inch (.002").

**Grinding Wheel**

The diamond grinding wheel should last at least 6 months before wearing down to the point where stop #2 must be installed. The strength of the concrete has no bearing on grinding wheel wear. The wheel wear is directly proportional to the hardness of the aggregate, steel in the cylinder and repetition of use.

For replacement of grinding wheel: Order H-2965.1.

**Tray Removal and Cleaning**

Disconnect the pump from the 110V power supply and remove pump from tray. Grasp tray handle and slide tray back and out away from the machine. Remove debris from tray, slide tray back into machine until tray touches front travel stop. Put fresh water into the tray. Replace pump in the tray. Check that pump on/off toggle switch is in the off position. Reconnect pump cord to 110V power supply. Check that the main red power switch on the front of the machine is in the off position. Reconnect the machine 110V power supply.

Eventually (usually 2 to 3 years) the diamond cutting wheel may wear to the point where replacement is necessary. If the vise adjustment becomes sloppy it can be adjusted using the allen key and wrench provided. If the motor or belt adjustment becomes necessary, these components may be accessed through the rear access panel.
Warranty
Humboldt Mfg. Co. warrants its products to be free from defects in material or workmanship. The exclusive remedy for this warranty is Humboldt Mfg. Co., factory replacement of any part or parts of such product, for the warranty of this product please refer to Humboldt Mfg. Co. catalog on Terms and Conditions of Sale. The purchaser is responsible for the transportation charges. Humboldt Mfg. Co. shall not be responsible under this warranty if the goods have been improperly maintained, installed, operated or the goods have been altered or modified so as to adversely affect the operation, use performance or durability or so as to change their intended use. The Humboldt Mfg. Co. liability under the warranty contained in this clause is limited to the repair or replacement of defective goods and making good, defective workmanship.