

Three-Wheel Polishing Device

The Humboldt Mfg H-3212 Three-Wheel Polisher is designed to simulate the polishing effects of traffic. Polishing of unbound aggregates per AASHTO PP103 and asphalt mixtures per AASHTO PP104 can be accomplished prior to dynamic friction testing. A staging area facilitates the installation and removal of the molds in the testing area. Electronic actuators lift and lower the wheel carriage onto and off the sample. The VFD allows for a variable rotation of 50-70 rpm from the rugged 1/2hp gear motor. A counter mounted on the electronic controller counts down, stopping the test automatically when the 100,000 rotations are completed.

Technical specifications

- 115/130 VAC, 60Hz
- 1/2hp, three phase gear motor
- VFD (Variable Frequency Drive) Controlled
- 115V, 60Hz Submersible water pump
- RPM range: 50-70

Frame

- Rugged 80/20 aluminum slotted frame
- Clear plexiglass on all 4 sides
- Front access door with safety cut off switch
- Locking door hinges prevent door from closing when open
- Sample/mold adjustment and locking knobs, locks the mold in place preventing it from moving during testing.
- Electronic actuators lift and lowers the wheel base

Wheelbase

- 145 ±5 lbs, including steel weights and carriage assembly
- Three 2.8/2.40-40 tires on heavy-duty swivel casters
- 11.2" diameter wheel path
- Connects to electronic actuator for easy lifting and lowering

Staging area

- The 24" x 22" sample staging allows the user to easily slide the sample in and out of the testing area.
- Stainless steel metal platform

Water basin

- 5' L x 3.5' W x 6" D with drain valve



Electronic Controller

- Counter: 0-999999 (6-digit)
- Run Button: Starts rotation of wheelbase.
- Stop Button: Terminates rotation of wheelbase.
- Pump Toggle Switch:
 - ON: Operates during testing
 - OFF: Does not operate during testing
- Reset: Resets counter count to 100000
- Up Button: Lifts lifting mechanism in the upward direction.
- Down Button: Lowers lifting mechanism in the downward direction.
- E-Stop Switch: Shuts off machine operation when pressed. Machine remains inoperable while depressed. Rotate the red button clockwise to release the emergency stop feature.






Count Adjustment



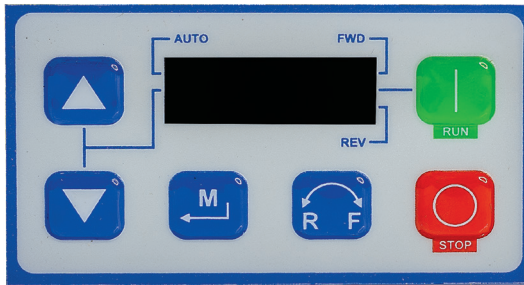
H-3212 Counter

The counter has been adjusted at the factory to count in descending order from 100000 to 0 rotations.

Adjustment of counter

1. Press  on the counter display
2. Press  to select the digit you wish to adjust
3. Press   to adjust the selected digit up or down
4. Press  to save

Adjustment of wheelbase rotation speed



The H-3212, Three-Wheel Polisher has been programmed at the factory to run at a speed of 60 rpm. The steps below show how to reduce or increase the speed through the VFD located inside the electronic controller box.

1. Unlatch and open the electronic controller.
2. Locate the VFD
3. Press the up arrow or down arrow key on the VFD's control panel to increase or decrease the speed.

Water pump

The H-3212, Three-Wheel Polisher water pump is programmed so it turns on at the start of the test and turns off automatically at the completion of the test.

The on/off pump toggle switch located at the front panel of the controller, allows the user to decide if they want to run the water pump during testing.

Sprayer Assembly rods

Sprays water onto the sample for the duration of the test. Turns off automatically at completion of test. Spray feature disabled if pump toggle switch on electronic controller is in off position.

Front door safety switch

The H-3212, Three Wheel Polisher comes equipped with a front door safety switch. Wheelbase rotation will cease to operate if the door is opened at any time during testing.

Wheelbase lifting mechanism

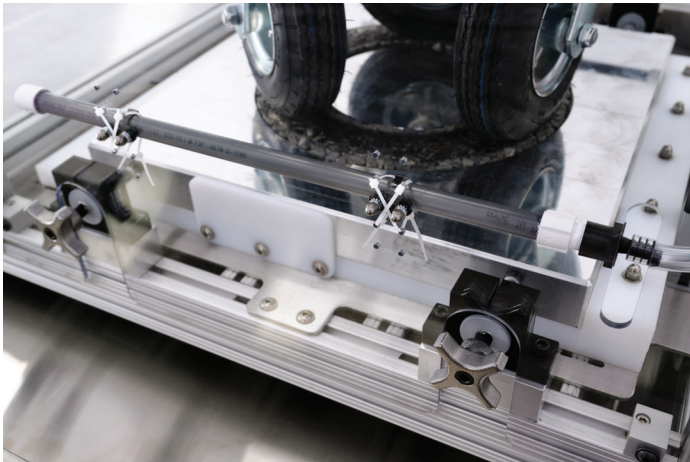
Lift: Press the white “Up” button located on the electronic controller to lift the wheelbase to allow the mold to be inserted or removed from the machine base. Maximum height clearance is 6 inches.

Lower: Press the black “Down” button located on the electronic controller to lower the wheelbase onto the mold prior to testing.

Electronic actuators must be disengaged from the wheelbase prior to running the motor. Failure to do so will result in damage to the machine.

Molds

- H-3212.13 - Circular casting mold
- H-3212.13.1 - Capping mold sturdy metal plate
- H-3212.13.3 - Square sample holder



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.

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Testing Equipment for



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