



# HUMBOLDT

## Automatic 250,000 lbs (1,112kN), Humboldt Compression Machines

### HCM-2500 Series Compression Machines

ASTM C1073, ASTM C109, ASTM C140, ASTM C39,  
ASTM C87, ASTM C496

Humboldt's Automatic Pump and Controller System is the most versatile, accurate and easy-to-use concrete compression machine controller available today. It is designed to make fast work of testing cylinders, cubes, and beam. It provides an easy-to-use automated testing workflow — just choose the test standard you wish to use from the menu, and you will be quickly guided through the test setup and testing process.

The system features a robust, reliable and cool-running 1hp, multi-piston pump, which works together with the controller for full operational control. The controller's touchscreen provides accurate, precision machine operation, setup and calibration. Setup and operation are simple with step-by-step procedures. Calibration is also easy with the controller, allowing from 1 to 10 points to calibrate the machine in any increment chosen. It also provides an accurate motor-control knob, which allows calibrators to dial in precise calibration loads. The system provides two channel inputs for load, which can be used to control two separate compression frames when using the HCM-HP4014 selector valve accessory. Two additional channels are provided for displacement, which provides an easy solution for determining Poisson's ratio and Young's modulus testing.

- 7", high-resolution color touch-screen display with live readout, graphical and tabular display
- Easy test setup, just choose the standard you wish to test for and the controller will walk you through the complete setup
- Rapid approach, initial load and testing load are automated during test cycles
- Automatic control of test parameters
- Provides data acquisition of one reading per second
- Integral storage within the controller of up to 1000 tests and 3000 points per test
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- Simple, Fast and accurate machine calibration with accurate, motor-control knob
- Piston automatically retract to the starting position after the sample breaks
- Test report data is presented in both tabular and graphical formats and can later be uploaded to a computer with the included Humboldt Data Download Software.
- Rapid Testing Option allows the controller to automatically create a new test name based on the last test and start a test for the next sample.



POINT	APPLIED	A/D COUNTS
0	0	12852
1	50000	24401
2	100000	35649
3	150000	38348
4	200000	42120
5	250000	50520
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0

# Automatic 250,000 lbs (1,112kN), Humboldt Compression Machine

Supports the following standards: ASTM C1073, ASTM C109, ASTM C140, ASTM C39, ASTM C87, ASTM C496

- Suitable for cylinders, cubes, beams and cores of standard strength concrete mixes
- 2500 to 250,000 lbf (11 to 1112kN) testing range with accuracy of  $\pm 0.5\%$  of indicated load
- Suitable for concrete strength up to 7,000 psi for 6" diameter cylinders
- Standard configuration includes platens to test 6" x 12" (150mm x 300mm) cylinders.
- Optional test platens and accessories available
- Steel protective doors, not plastic.

## Specifications:

- Vertical Opening - 19.375" (492mm)
- Horizontal Opening - 9.25" (235mm)
- Piston Stroke - 2.5" (63.5mm)
- Lower Platen, Dia. - 6.5" (165mm) $\phi$
- Upper Platen, Dia. - 6.5" (165mm)
- Oil Reservoir Cap - 2 gal (7.6 liter)
- Overall Width - 27" (686mm)
- Overall Depth - 17" (432mm)
- Overall Height - 56.312" (1430mm)

Controller System Specifications	
HCM-5080 HCM-5080.4F	120V 60Hz 220V 50/60HZ
HCM-5070 HCM-5070.4F	120V 60Hz 220V 50/60HZ
Display	7" (178mm) VGA (480 x 800) Resistive-touch screen
Processor	Dual 32-bit ARM
RAM	4GB
Analog to digital converter	24 bit
Data acquisition	4 Channels
Data Speed	1000Hz (1kH)
Logging speed	1 reading per second
Test storage	1000
Points per test	3000



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