



# HUMBOLDT

# ELITE SERIES Automated Pressure Controllers



HM-5820

HM-5810

Specifications:	HM-5810	HM-5820
Maximum hydraulic pressure	200-500 psi	
Volumetric capacity	270mL/channel	
Load capacity	N/A	3000 lbf (15kN)
Voltage/Current	110/220V 50/60Hz - 16.0 amps	
Dimensions (L x D x H)	38" x 15" x 20.5" (970 x 385 x 520 mm)	38" x 15" x 45.5" (970 x 385 x 1160 mm)

Humboldt's new automated pressure controllers are designed to handle saturation, consolidation and permeation of a triaxial test samples, as well as perform a shear function when using the HM-5020 and its integral Load Frame. Both machines provide a simple and compact setup for doing tests without the need for separate distribution panels, which simplifies the tubing and control cable setup.

These pressure controllers are built around Humboldt's integral, data logger with touch-screen control, which allows the both to be used as a standalone device capable of full test control and data logging. They can also be controlled by a networked computer at any location with access to the network.

## NOTES

Triaxial cells, sample prep materials and additional load cells, etc. are not included and need to be purchased separately.

Controller Specifications:	
Display (Resistive Touch)	7" (178mm) VGA (480 x 800)
Real-time test data	Graphic and tabulation
Processor	Dual 32-bit ARM
RAM	64MB
Memory, non-volatile	4GB
Analog to digital converter	24 bit
Logging speed	up to 50 readings per second
Multi-test storage	1000
Points per test	3000
USB port (front)	export data, import/export calibration data, WiFi
USB port (back)	provides external power for wireless access point
Ethernet connection	for network connectivity
24-bit differential analog to digital converter	2
Ambient temperature sensor	1
Firmware Update	Ethernet or flash drive

# ELITE SERIES

## Automated Pressure Controllers



### Automated, Pressure Controller with Load Frame

The HM-5820 is an automated pressure controller designed to handle saturation, consolidation and permeation of a tri-axial test sample, as well as perform a shear function with the use of its integral HM-5020 Load Frame. This allows the technician to also perform triaxial shear tests without having to purchase an additional unit.

Cell, head and tail pressure can be set in increments of 0.1 PSI while volume change is measured to 0.0001cc. The flow rate for permeation can be set from 1 cc/sec (60 cc/min) down to less than 0.000002 cc/sec (0.00012 cc/min). There are three data input channels – one for each pressure transducer, or if you are only doing permeability, you will only need one of the channels/pressure transducers.

The HM-5820 provides an accurate and compact configuration for performing triaxial tests without the need for separate distribution panels, and simplifying tubing and control cable setup. By using the integral load frame, the HM-5820 provides an extremely compact and organized setup.

The HM-5820 is built around Humboldt's integral, data logger with touch-screen control, which allows the HM-5810 to be used as a standalone device capable of full test control and data logging. It can also be controlled by a networked computer at any location with access to the network.

### Triax-Control Pressure Controller

**HM-5820.3F**

Shipping wt. 168 lb (76kg)

### Automated, Pressure Controller

The HM-5810 is an automated pressure controller designed to handle saturation, consolidation and permeation of a tri-axial test sample. In this application it can be used solely for permeability testing as well, eliminating the need for distribution panels, etc. The HM-5810 is all you need to successfully do permeability testing for soil.

Cell, head and tail pressure can be set in increments of 0.1 PSI while volume change is measured to 0.0001cc. The flow rate for permeation can be set from 1 cc/sec (60 cc/min) down to less than 0.000002 cc/sec (0.00012 cc/min). There are three data input channels – one for each pressure transducer, or if you are only doing permeability, you will only need one of the channels/pressure transducers.

The HM-5810 provides an accurate and simplified permeability setup, which eliminates the need for separate distribution panels, and simplifying tubing and control cable setup. By using the integral staging platform, the HM-5810 provides an extremely compact and organized setup.

The HM-5810 is built around Humboldt's integral, data logger with touch-screen control, which allows the HM-5810 to be used as a standalone device capable of full test control and data logging. It can also be controlled by a networked computer at any location with access to the network.

### Hydro-Control Pressure Controller

**HM-5810.3F**

Shipping wt. 168 lb (76kg)



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