



HUMBOLDT

HM-2900 Digital ProLoader

The HM-2900 Digital ProLoader handles triaxial tests with ease. Its design allows for stand-alone or computer-controlled operation, automating your lab and increasing your productivity.



The HM-2900 ProLoader has been specifically designed to handle triaxial testing applications, including: UU, CU and CD triaxials, UC. From educational institutions and consulting firms to high-volume commercial labs and construction projects, the ProLoader can handle any application with ease. With its 3,000 lb. load capacity, the HM-2900 can easily handle all basic triaxial tests with ease.

The HM-2900 ProLoader provides fully-automatic test performance allowing unattended operation while controlling motor start/stop, speed selection and test data acquisition. Its modular design allows the machine to be custom configured to handle any test necessary. So, you can purchase the machine set up to handle a specific test need now, and add on to its capabilities later to handle additional tests. This way you only pay for what you need, but you are never faced with an obsolete system.

The HM-2900 will function as a stand-alone device or can be interfaced with a computer using Humboldt's HMTS software. It also provides an analog output port if you need to utilize an XYt chart recorder.

With its integral, four-channel data logger, the HM-2900 can acquire data from load, strain, pore pressure and volume transducers. The data acquisition can be automated by setting trigger conditions to start and stop logging. Tests can be initiated or terminated automatically, increasing lab productivity.

Features include:

- Four channels with real-time data acquisition
- Backlit LCD display
- RS232 interface for computer or printer.
- Nonvolatile test data and instrument calibration storage
- Battery-backed real-time clock
- Auto conversion of instrument calibration between English or Imperial units and SI or metric units
- Test setup and selection via keypad
- Automatic triggering of test logging data
- View logged test data via the LCD display
- Logging rate as fast as 0.1 second/reading
- Humboldt HMTS, Basic, User-Defined Level software included for data acquisition

Covers: UU, CU, CD, UC Tests

ASTM: D2850, D2166, D4767, and D1559

AASHTO: T193, T296, T297 and T208

BS 1377: Part 4: 1990, BS 1377: Part 7: 1990,

BS 1377: Part 8: 1990,

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Triaxial Setup using the HM-2900.3F Load Frame

Pictured is the HM-2900.3F Load frame with a typical Triaxial setup. See the charts to the right for items to order for specific test setups.

Part Numbers ending in .XX require a size code to be entered referring to the sample size to be tested. **For Triaxial** samples, sizes are: .14 = 1.4"; .15 = 1.5"; .20 = 2.0"; .25 = 2.5"; .28 = 28"; .30 = 3.0"; .40 = 4.0"; .35 = 35mm; .38 = 38mm; .50 = 50mm; .70 = 70mm, and .100 = 100mm.

Specifications

Dimensions (l x w x h)	12 x 13.5 x 43.5 inch (305 x 343 x 1105mm)
Platen Travel	3 inches (76mm) Max.
Net Weight	77 lbs. (35Kg)
Shipping Weight	120 lbs. (54Kg)
Speed Range	0 - 3.0000 inch/min (0 - 75.0000 mm/min)
Load Capacity	3000 lbf (15 kN)
Vertical Clearance	27 inch (686mm) Max.
Horizontal Clearance	11.25 inch (286mm)
Voltage	110/220 VAC 50/60HZ
Current	8.5 Amps
Analog to Digital Converter	16 Bit
Data Storage	4000 Readings
Data Collection Rate	100 ms
Computer Port	RS232

Typical UU Triaxial, 1-Cell Setup using HM-2900.3F

Part #	Qty	Description
HM-2900.3F	1	Digital ProLoader 110/220V
HM-3002SW	1	UU Triaxial Reporting Software
HM-4140	1	FlexPanel I (3-Burette Panel)
HM-4199B	1	Triaxial Cell, Brass Fittings
HM-4199.XX	1	Top Cap & Base
HM-2300.020	1	S-Type Load Cell, 2,000lbf (50 kN)
HM-2310.20	1	Strain Transducer 2" (50mm)
HM-4179.XX	2	Acrylic Base Disk
HM-4178BRT	1	Displacement Transducer Bracket
HM-200387	1	Ball Seat Adapter

Typical CU Triaxial, 1-Cell Setup using HM-2900.3F

Part #	Qty	Description
HM-2900.3F	1	Digital ProLoader 110/220V
HM-3003SW	1	CU Triaxial Reporting Software
HM-4150	1	FlexPanel I (3-Burette Panel)
HM-4199B	1	Triaxial Cell, Brass Fittings
HM-4199.XX	1	Top Cap & Base
HM-2300.020	1	S-Type Load Cell, 2,000lbf (50 kN)
HM-2310.20	1	Strain Transducer 2" (50mm)
HM-4170	1	Pore Pressure Transducer 200 PSI
HM-4178BRT	1	Displacement Transducer Bracket
HM-200387	1	Ball Seat Adapter

Typical Unconfined Compression Setup using HM-2900.3F

Part #	Qty	Description
HM-2900.3F	1	Digital ProLoader 110/220V
HM-3004SW	1	UC Triaxial Reporting Software
HM-2300.020	1	S-Type Load Cell, 2,000lbf (50 kN)
HM-2310.20	1	Strain Transducer 2" (50mm)
HM-4178BRT	1	Displacement Transducer Bracket
HM-2002	1	Unconfined Upper Platen