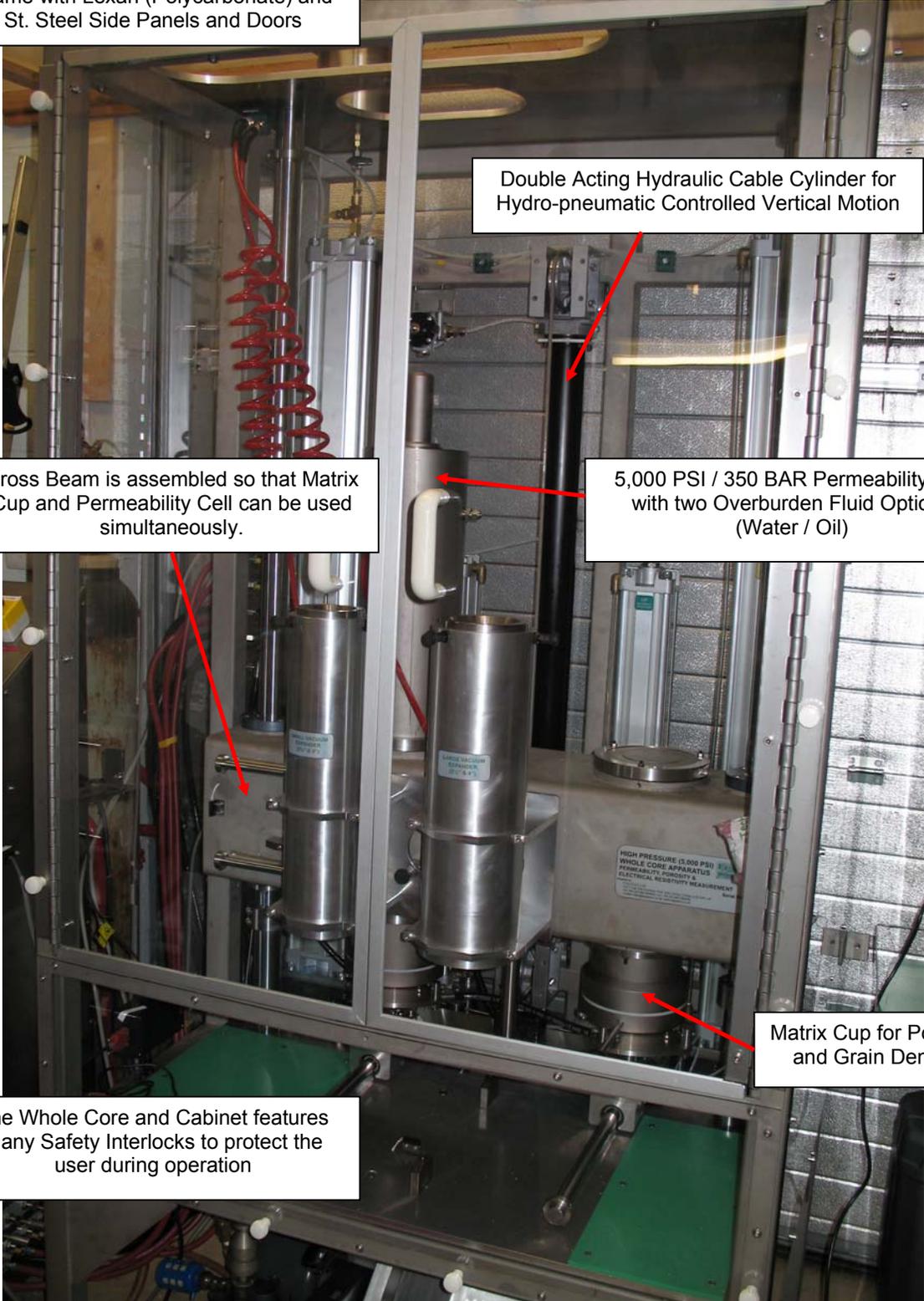


Fully Enclosed St. Steel Box Section  
 Frame with Lexan (Polycarbonate) and  
 St. Steel Side Panels and Doors



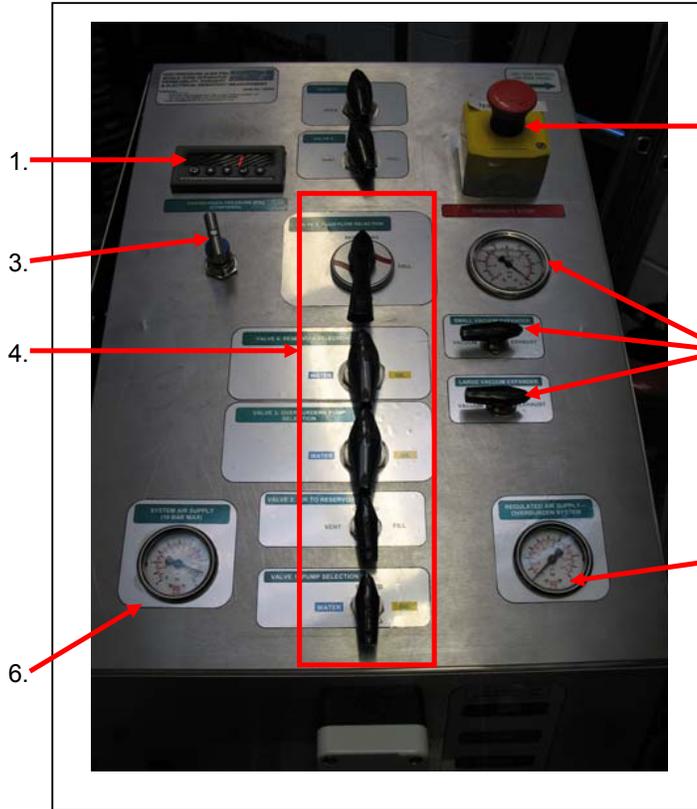
Double Acting Hydraulic Cable Cylinder for  
 Hydro-pneumatic Controlled Vertical Motion

Cross Beam is assembled so that Matrix  
 Cup and Permeability Cell can be used  
 simultaneously.

5,000 PSI / 350 BAR Permeability Cell  
 with two Overburden Fluid Options  
 (Water / Oil)

Matrix Cup for Porosity  
 and Grain Density

The Whole Core and Cabinet features  
 many Safety Interlocks to protect the  
 user during operation

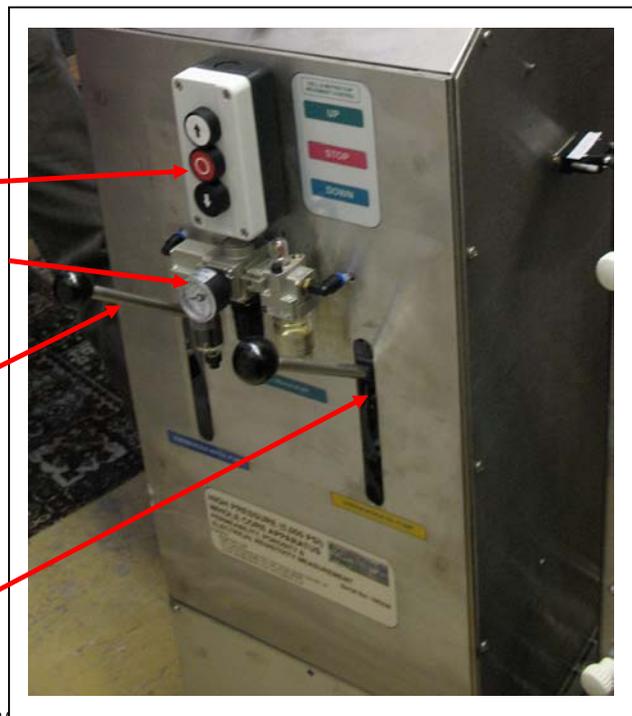


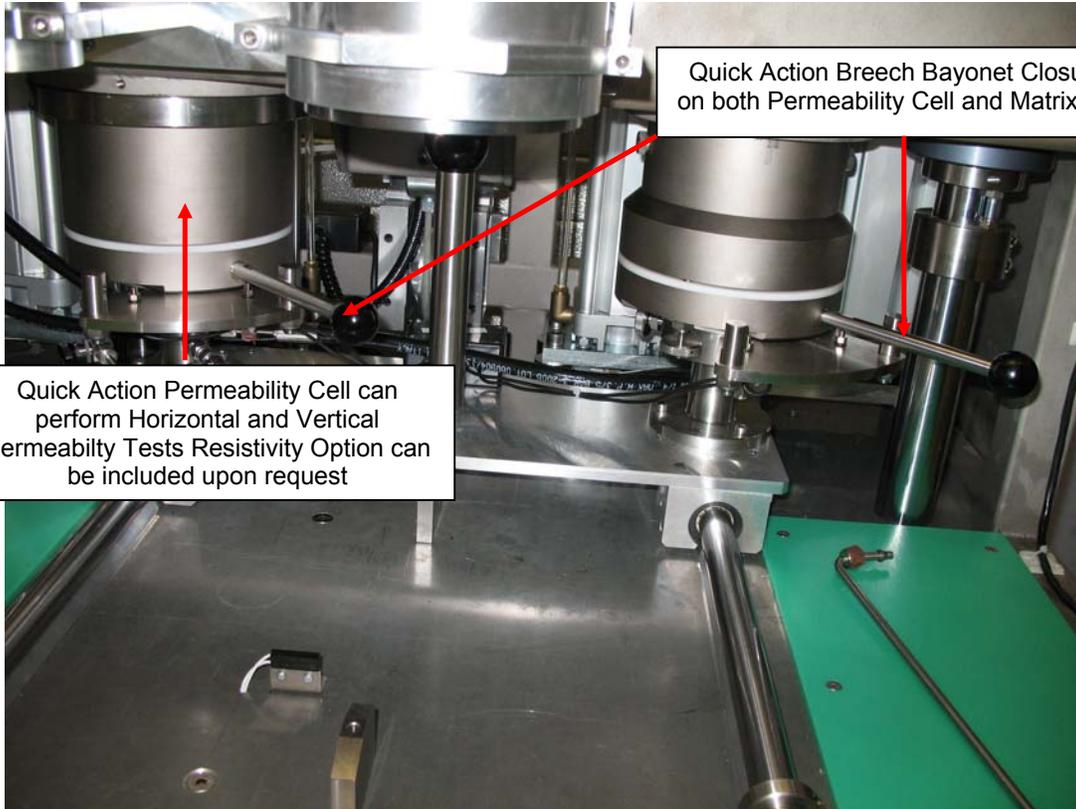
**Stand Alone Control Console**  
 (Compressed Air driven Water/Oil Overburden  
 Pressure Application)

1. Digital Overburden Pressure Display
2. Emergency Stop to Isolated Electronics
3. Overburden Needle Relief Valve
4. Swagelok and Hoke High Pressure Trunion Ball Valves (5,000 & 6,000 PSI rated)
5. Independent Vacuum Valves with Vacuum Gauge (Integral Vacuum pump is installed within the console)
6. System Air Supply and Regulated Air Supply Gauges

7. Simple Vertical Motion Control
8. Air Filter/Regulator for increased control Overburden Pressure Control
9. Pumps can be manually operated to reach target Overburden Pressure. This feature will reduce the Chance of over shooting (Especially important when testing unconsolidated samples).

Optional additional pump for Oil Overburden Pressure (for apparatus with Resistivity - FRF option) instead of Compressed Air and Water O/B

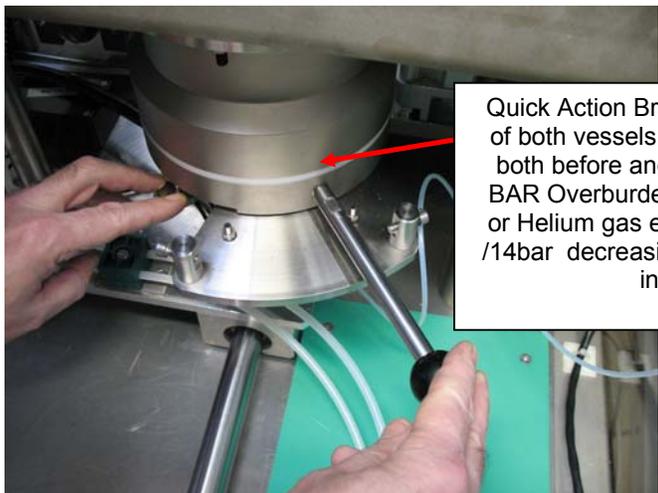




Quick Action Breech Bayonet Closures on both Permeability Cell and Matrix Cup

Quick Action Permeability Cell can perform Horizontal and Vertical Permeability Tests Resistivity Option can be included upon request

Proximity Sensors and Locking Bolts are used to ensure correct position of components during in operation



Quick Action Breech Bayonet Closures of both vessels offer smooth operation both before and after 5,000 PSI / 350 BAR Overburden Pressure Application or Helium gas expansion from 200PSI / 14bar decreasing to approx. half of its initial value



2 Aluminium Vacuum Expanders capable of mounting sleeves on Core Diameters of 2", 3", 4" & 5"

ErgoTech's Whole Core Apparatus comes supplied with:

1. Neoprene Core Sleeves and Security Cuffs for all 4 Diameters
2. Delrin Pack Outs allow the operator to test cores varying in length from 2" and 12"
3. Serialised Delrin calibrated volumes for accurate Grain Volume determination
4. Stable Engineering Plastic (Delrin) Inserts for Matrix Cup that allow the measurement of all 4 Diameters with minimal dead volume
5. Permeability Top and Bottom Platens, which can be used for Vertical and Horizontal Measurement (St. Steel Hollander Weave Screens are included)
6. Resistivity Top and Bottom Platens, including St. Steel Plates and Pack Outs for variable Core Lengths

**PERMEABILITY AND POROSITY – DEFINITION OF TERMS:**

- KH0 – Horizontal Permeability at 0°; parallel to fractures or bedding direction
- KH90 – Horizontal Permeability at 90°; perpendicular to fractures or bedding direction
- KV – Vertical Permeability
- PV – Pore Volume
- GV – Grain Volume
- GD – Grain Density
- O/B – Overburden Pressure

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