

Product Name :
Servo Hydraulic Rock Shear Equipment

Product Code :
CHINAELABC2750048



Description :

Rock Shear Box Apparatus - Servo Hydraulic Rock Shear Equipment

Technical Specification :

The system comprises of two controllers, hydraulic power pack with Tandem Pump to feed two actuators. Since the size of the box is 300 mm x 300 mm x 450 mm, it can take maximum rock specimens of 300 x 300 x 150 mm, naturally or artificially jointed, in any shape and form. All the parameters like normal load and shearing load either on strain basis or stress basis are controlled through the dedicated computer. On line graphical presentation is shown on the monitor. After the completion of the test the following graphs are plotted in window operated software.

Shear force Vs Horizontal displacement

Horizontal displacement Vs Vertical displacement.

Shear Stress Vs normal stress.

The system includes :-
Loading Unit

It is a welded structure fitted with two actuators for normal and shear load.

Box assembly can be moved out of the loading unit on the railings provided. This facilitates in the easy loading of the sample.

Capacity of the actuators

Normal Load : 500kN

Shearing Load : 750kN

Strain Adjustment : 0.001 mm/min-50 mm/min.

Shear box assembly: 300 x 300 x 400 mm.

Comprises of :-

Shear box housing in two halves.

Spherical seating

L.V.D.T. ± 20 mm for vertical strain : 2 Nos.

L.V.D.T. ± 20 mm for horizontal strain : 2 Nos.

Load Cell for Shear Load, 750kN capacity : 1 No.

Bottom Plate : 1 No.

Casting Mould : 1 No.

Load Cell for normal Load 500kN : 1 No.5)

Power Pack

Capacity of the oil tank : 100 Ltrs.

Pumps tandem type : 30 Ltrs/min.

HP of the motor : 15 HP

Heat Exchanger : 10,000 k cal/hr.

Servo Valves : Moog/Tokyo

Instruments

Operating Pressure : 20 mPa.

Pressure Line Filters : 3 Microns Absolute

Accumulators : Piston Type, 1 Ltr. Capacity.

Computer Pentium IV with Data Acquisition Card (Dedicated)



Engineering Lab China