

Pressure Intensifier System (HPVC-070)



- Closed-loop digital servo control of pressure or flow (volume) with “bump-less” transfer
- 70 MPa (10,000 psi) pressure range
- 500 cc stroke capacity
- Stainless-steel construction
- Can be used as a volume change measurement device for triaxial and permeability testing
- Larger pressure and volume stroke capacities also available

DESCRIPTION

GCTS Pressure Intensifiers are ideal for the servo control of the cell pressure in triaxial tests, head pressure in permeability tests, or fluid pressure in hydro-fracture tests. This intensifier can also be used to measure flow in permeability tests and volume change in triaxial tests while applying prescribed pressures. Together with GCTS digital servo controller and the triaxial software, it allows the performance of more advanced tests such as stress/strain path.

The HPVC-070 is mounted in a metal cabinet on casters to house the confining pressure/volume servo controlled intensifier, fluid reservoir, sight level gage, and venturi vacuum pump. All valves are mounted on the front panel for easy intensifier operation and filling or draining the cell.

GCTS makes a dual piston intensifier model for tests where continuous flow is required and pressure spikes cannot be tolerated. These models include two intensifiers and two servo valves together with the necessary check valves, plumbing, and special control software for automatic operation. Also available, as an alternative, is an economical air/oil pressure booster. These units operate with 700 kPa (100 psi) air pressure input for a 70 MPa (10,000 psi) output. GCTS pressure boosters offer a low cost, trouble free operation and are ideal for use in creep and sustained loading in long term tests.

SPECIFICATIONS

Pressure control precision: ± 0.1 MPa (15 psi)
 Pressure transducer resolution: 0.02 MPa
 Volume transducer resolution: 0.01 cc.
 Pressure test gauge accuracy: $\pm 0.25\%$.
 Fluid media compatibility: oil and water (consult GCTS for other)
 Fluid reservoir capacity: 19 liter (5 gallon)
 Required pressure input: 21 MPa (3,000 psi)

SHIPPING

Weight: 285 kg.
 Dimensions (meters): 0.85W x 0.85D x 2.0H



