



### APPLICATIONS

- **Strength and elastic properties**
- **Shear strength at different confining pressures**
- **Angle of shearing resistance and cohesion**
- **Modulus of elasticity and Poisson's ratio**
- **High temperature application (optional)**
- **Acoustic velocity (optional)**



### DESCRIPTION

The HOEK Cell is designed for use in triaxial compression tests that provide vital data on rock strength and elasticity, including parameters such as shear strength under varying confining pressures, internal friction angle, cohesion intercept, and Young's modulus.

The Hoek Cell consists of a hollow steel cylinder with screw-on end caps, two high-strength spherically seated loading pistons, and a protective polyurethane sleeve. The cylinder includes two self-sealing couplings: one for connection to the hydraulic pressure system and another for venting air from the cell chamber.

During testing, the rock specimen is placed between two movable loading pistons and subjected to axial compression using a load frame. A specialized sleeve ensures that the sample remains isolated from the hydraulic confining fluid.

Three HOEK cell models are available. Each model is designed to accommodate specimens of various diameters, ranging from 21.5 mm to 101.6 mm.

Polyurethane sleeves can be replaced with Viton sleeves for high-temperature applications. When equipped with a Viton sleeve and a heating jacket, the HOEK Cell provides an efficient and reliable solution for performing triaxial tests at elevated temperatures.

Optionally, the cell can be equipped with permeability platens for permeability measurements or with acoustic platens for acoustic velocity measurements during testing.

For enhanced data acquisition, the cell can optionally be fitted with integrated strain gauges, enabling detailed analysis of the failure envelope in addition to the previously mentioned rock mechanical properties.

## FEATURES

Standard:	ASTM (D2664)
Confining pressure:	70 MPa (10,000 psi)
Temperature range:	Ambient to 150°C (option)
Specimen diameter:	<b>Type 1:</b> 21.5 mm (0.845 inch) 25.4 mm (1.0 inch) 30.1 mm (1.185 inches) 38.1 mm (1.5 inches) <b>Type 2:</b> 42.0 mm (1.654 inches) 47.6 mm (1.654 inches) 54.7 mm (2.154 inches) 63.5 mm (2.5 inches) <b>Type 3:</b> 76.2 mm (3.00 inches) 85 mm (3.34 inches) 101.6 mm (4 inches)
Specimen length:	Twice the diameter
Wetted part material:	Stainless steel
Sleeve material:	Polyurethane or Viton
Pore port:	1/8 inch
Confining port:	3/8 inch

## ACCESSORIES AVAILABLE

- Cell holder
- Rock specimen extruder
- Polyurethane sleeves for ambient temperature
- Viton sleeves for high temperature
- Permeability platens
- Acoustic platens
- Heating jacket
- Strain gauges
- Confining hand pump

