

Hoek cells and sample extruder

ASTM D5407

GENERAL DESCRIPTION

The Hoek triaxial cells are offered in four models of different size; each one consists of the following: (please refer to the drawing)

- A cell body (1), complete with two quick release self sealing couplings, for the introduction of the hydraulic oil and cell pressure, and for air outlet and saturation of the chamber respectively.
- Two end caps (2), screwed into the cylindrical cell body.
- Upper (3) and lower loading caps (4) with spherical coupling.
- Two female spherical seating (5) connected to the loading caps (3) and (4) for the correct transmission of the axial load from the loading frame of the compression machine to the specimen.
- A rubber sealing sleeve (6) to separate the specimen from the cell fluid.

Although each sleeve can be used for several tests, an order of five spare sleeves is recommended. See accessories.

Measurements of axial and radial strain are carried out with the use of electric strain gauges (7), both in vertical and horizontal direction, directly glued on the lateral surface of the specimen. The wiring connections are passed within the rubber sleeve through the cell body and loading cap. Each strain gauge must be connected to a proper device (see 82-P0398) to complete and balance the Wheatstone bridge. The strain gauge measurements can be performed by automatic testing systems (see [Automatic Uniaxial and Triaxial test system](#)), or by a suitable datalog (see Datalog, multipurpose data logger). The cell pressure and saturation pressure for permeability tests are carried out by the use of appropriate equipment. See [Rock permeability equipment](#).

It is also recommended the use of a Specimen extruder, to extrude the rock sample from its jacket thus avoiding to empty the confining fluid. See accessories.

TECHNICAL SPECIFICATIONS

Code	D.C.D.M.A. Reference	Specimen size d x h (mm)	Total height mm	Weight kg
45-D0553	AX	30.10x60	213	2.50
45-D0554	1.5 in.	38.10x75	264	4
45-D0555	BX	42.04x85	263	6.50
45-D0556	NX	54.74x100	304	13



ORDERING INFO

45-D0553

Hoek cell, AX, for dia. 30.10x60 mm

45-D0554

Hoek cell, 1.5 in., for dia. 38.10x75 mm

45-D0555

Hoek cell, BX, for dia. 42.04x85 mm

45-D0556

Hoek cell, NX, for dia. 54.74x100 mm

ACCESSORIES

Accessories for compression test

45-D0556/A

Pair of load spreader for uniform load distribution

45-D0556/B

Distance pad to reduce the vertical clearance of the compression machine

45-D0556/H

Hoek cell holder

Rock sample extruder

45-D0577/A

Rock specimen extruder

Used to extrude the rock sample from its jacket thus avoiding to empty the confining fluid. It consists of a steel frame with a rack and pinion mechanism. Supplied without adapters. See the following table.

Extruder adapters set, comprising two support cell body and shaft head.

Adapter set code	For specimen size	For use with cell	Weight approx.
45-D0577/1	AX	45-D0553	1.7
45-D0577/2	1.5 in.	45-D0554	1.7
45-D0577/3	BX	45-D0555	1.5
45-D0577/4	NX	45-D0556	1.5

Spare rubber sleeves

45-D0553/1

Spare rubber sleeve, AX, for specimen dia. 30.10x60 mm

45-D0554/1

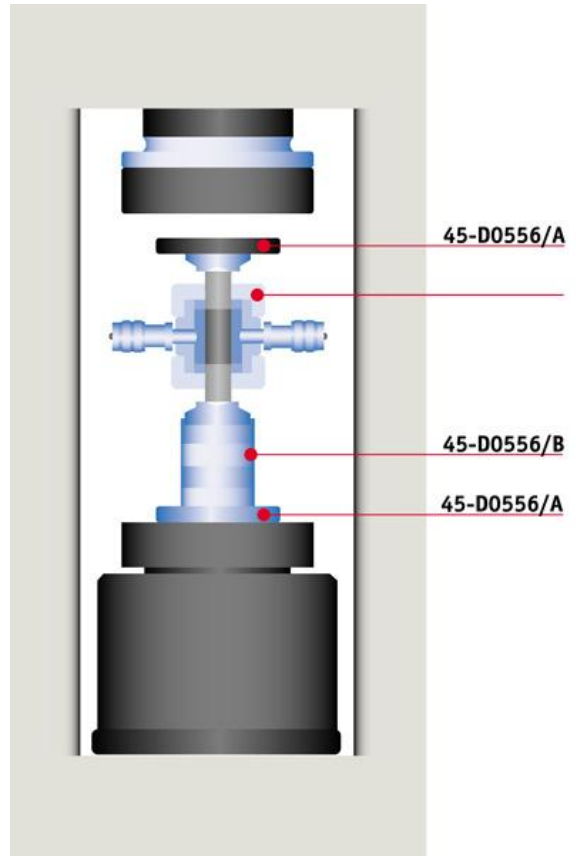
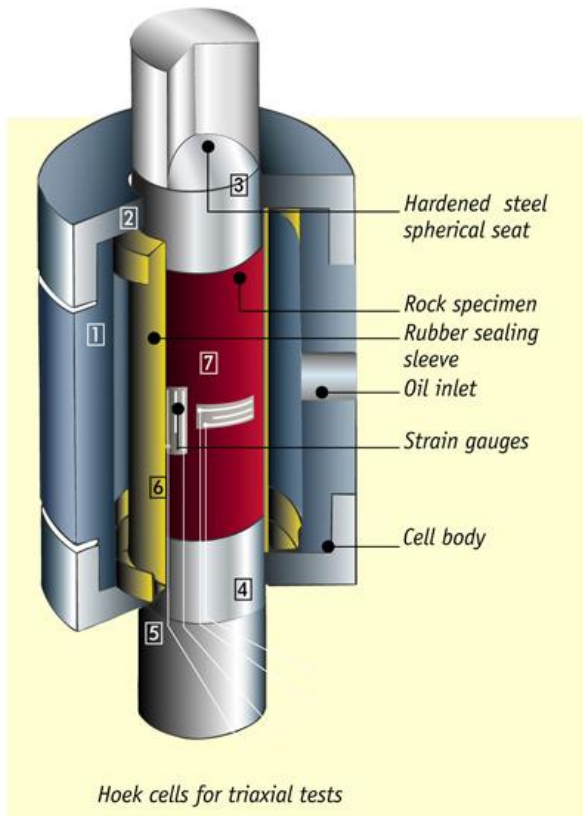
Spare rubber sleeve, 1.5 in. for specimen dia. 38.10x75 mm

45-D0555/1

Spare rubber sleeve, BX, for specimen dia. 42.04x85 mm

45-D0556/1

Spare rubber sleeve, NX, for specimen dia. 54.74x100 mm



Schematic view of the Hoek cell with load spread and distance pads within the compression platen of the testing frame

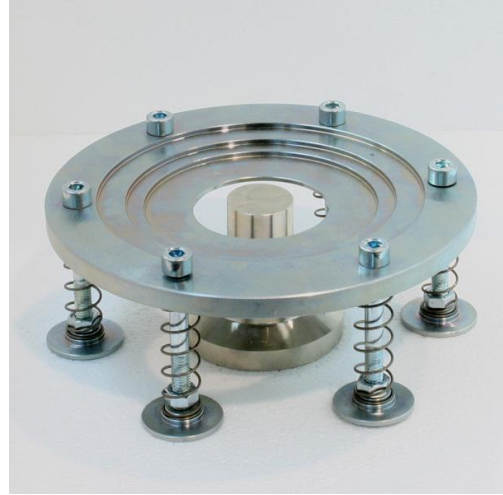


Hoek cells for triaxial tests

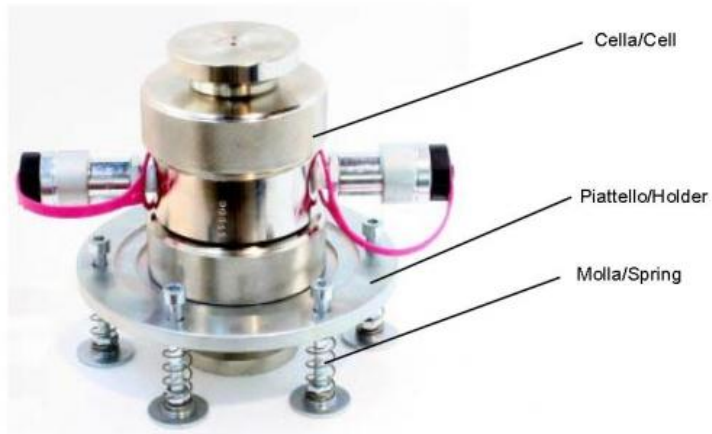




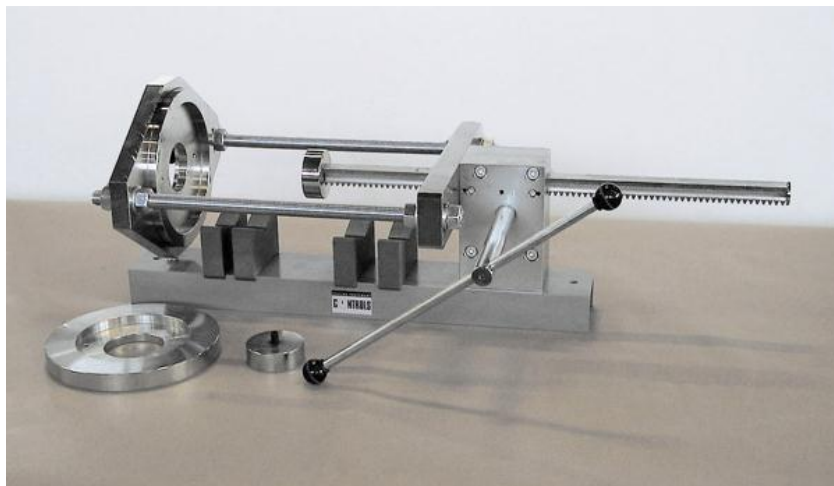
45-D0556/A, 45-D0556/B



45-D0556/H



Hoek cell supported by Holding device model 45-D0556/H



Specimen extruder model 45-D0577/A

