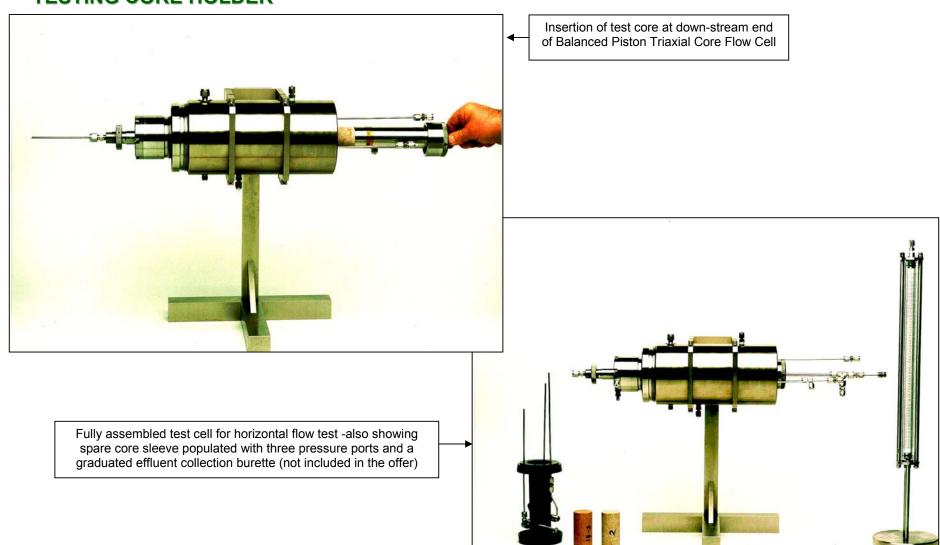


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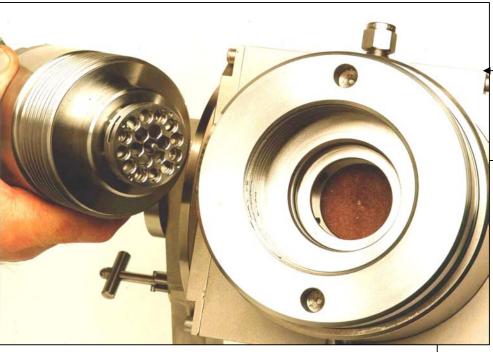
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Balanced Piston Module unscrewed to exposed inlet face of test core for mechanical and visual examination with stereo microscope and probes

Cell mounted on purpose designed stand for easy assembly and for sample loading/unloading





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#### **Design Principles**

The ErgoTech Modular construction variable face support mud filtrate testing core holder has an advanced design with three separate modules. The coreholder's essential components and assembly method are fully illustrated in the operating manual.

#### Key design features are:-

- The Modular design The cell body, mud chamber module and balanced piston module which allows direct inspection of the "mudcake" after taking certain confining pressure limitations to avoid the front face of the sample sample spalling off or failing in tension.
- The Ø110mm bore cell with its 'O' ring adapter rings allows use of a small very high integrity triaxial jacket in Fluoroelastomer 'B'.
- The cell is mounted in a custom built swivel unit with 90° indexing (spring loaded latch stop) stand allowing easy assembly, jacket loading and sample loading.
- The sample jacket with its 3 push in sites 2 large 90° to the sample and one angled 5mm away from the core face is intrinsic to the functioning of the core holder. The push-in pressure ports are removable and replaceable.
- The anti extrusion ring seals the front of the core sample whilst allowing the Fluoroelastomer
  jacket to function during long term exposure to full pressure and temperature.
- The piston allows mounting of variable face support configurations
- The core face axially mounted core has its end face extending only 0.3mm into the mud chamber which give total confinement of the rubber part of the anti extrusion ring

The axial position of the front face can be verified by simple extension rod - dial gauge set up which can be simplified into a combined position measurement and flow

#### **Technical Specifications:**

- Maximum allowable working pressure: 34.5MPa (5,000PSIG)
- Maximum allowable working temperature: 150°C (302°F)
- Sample size: Ø38.1mm (Ø1.5") with a length accommodation range of 25.4mm (1") to 101.6mm (4")





WORKING PRESSURE: 5,000PSIG / 34.5MPa WORKING TEMP: 150°C ESTIMATED WEIGHT: 20kg

### **ASSEMBLY DRAWING**

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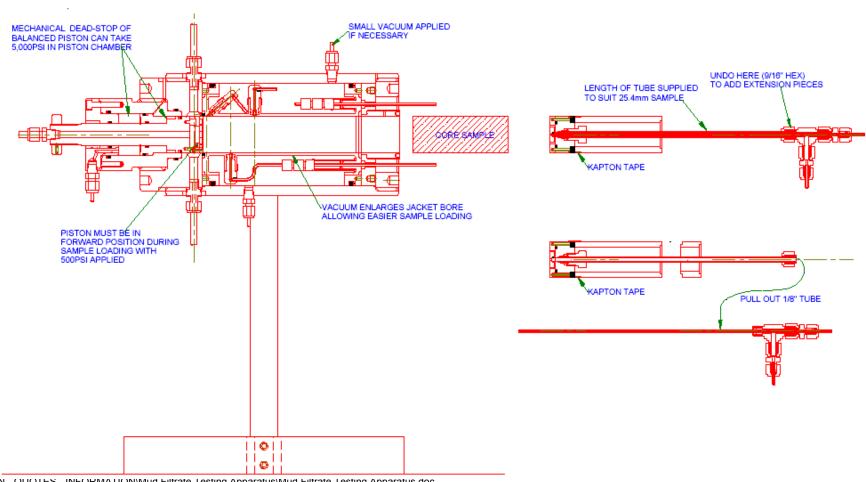
4Nm MAXIMUM TIGHTENING TORQUE 101.6 MAX. SAMPLE LENGTHS (46B)(45)



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#### SAMPLE LOADING - ASSEMBLY STEPS 5



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**ENLARGEMENT OF BALANCED PISTON & MUD CHAMBER** 5 SEGMENT "IRIS" ACTION INTERNAL ANTI-EXTRUSION RING PEEK & FLUOROELASTOMER EXTERNAL ANTI-EXTRUSION RING SOLID PEEK PISTON IN FORWARD DEAD-STOP POSITION CORE SAMPLE EXTENDS 0.3mm INTO MUD CHAMB FACE SUPPORT PLATE FIXED TO INTERMEDIATE RING BY M2.5 SOCKET HEAD CAP SCREWS M3 COUNTERSUNK SCREW SCREWED IN THROUGH HOLES IN FACE SUPPORT PLATE TO FIX INTERMEDIATE RING AND FACE SUPPORT PLATE TO PISTON FRONT DEAD-STOP POSITION

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### SETUP USED DURING TEST OF AXIAL POSITIONAL STABILITY OF CORE SAMPLE WITH BALANCED PISTON RETRACTED

