



## DRILLING FLUIDS EQUIPMENT

For over 30 years OFI Testing Equipment (OFITE) has provided instruments and reagents for testing drilling fluids, well cements, completion fluids, and wastewater. In addition to these product lines we also offer a range of instruments for core analysis. From our manufacturing facility in Houston, TX we provide customers all over the world with quality products and exceptional service.

Our drilling fluids product line includes innovative designs such as the Model 900 Viscometer, which showcases our ability to develop new technology to meet customer and industry demands. We also offer Retorts, Aging Cells, Roller Ovens, Mud Balances, Filter Presses, and all other instruments required to evaluate drilling fluid properties according to API Recommended Practice 13B-1 and 13B-2.

As an independent manufacturer and supplier, OFITE has one priority, our customers.



## HTHP Filter Press, 500 mL, Threaded Cell, Mud

OFITE has designed a new cell with safety in mind. This modular design is much safer and more convenient. The two-piece cap is threaded, and cannot be opened while the cell is pressurized. And interchangeable caps make it easy to reconfigure the cell for testing with different filter media (filter paper, ceramic disks, or cement screens) with a single cell body. All cells are provided with pressure certification, unique serialization, and material certification which provides true traceability.



## Features

- **Safety:** Cell cap cannot be removed if pressure is trapped inside the cell
- **Versatility:** Interchangeable cell caps enable testing with filter paper, ceramic disks, and cement screens with the same cell body. Fits all standard heating jackets.
- **Pressure:** Ability to add a piston allows for testing above 3,000 PSI

## Technical Specifications and Requirements

- #171-191 115 Volt
- #171-191-1 230 Volt

### Specifications

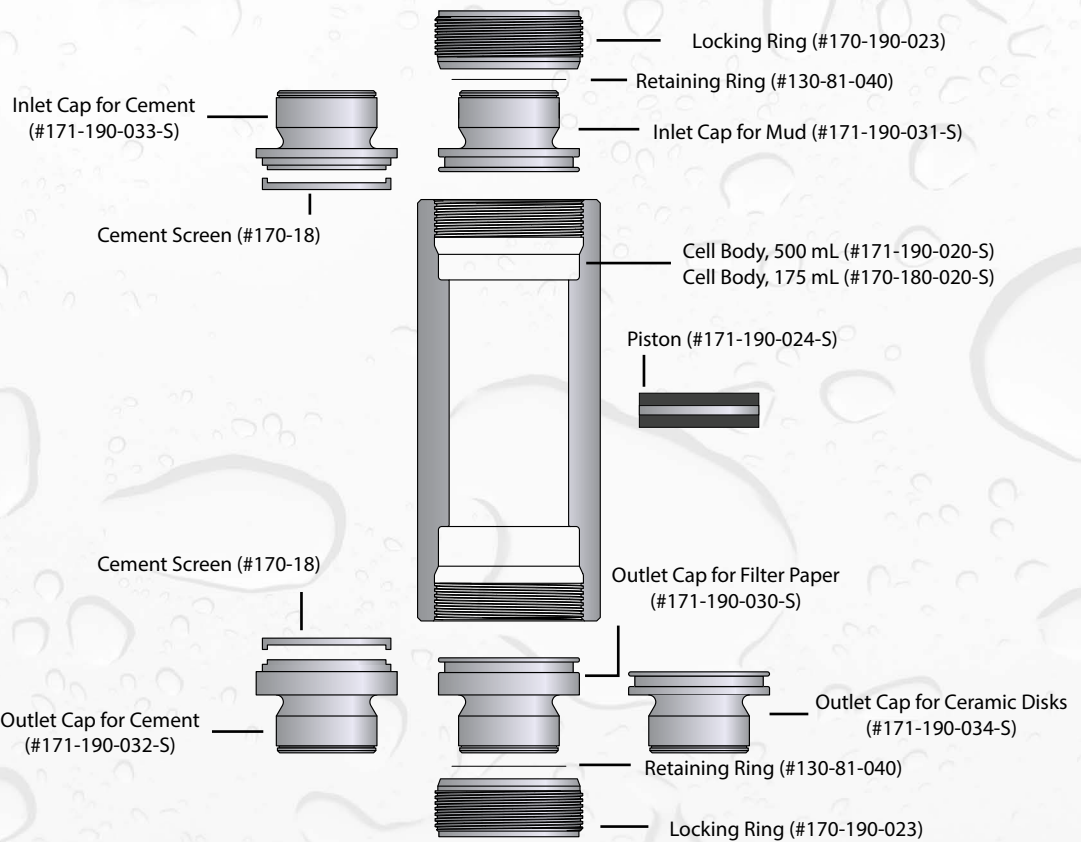
- Maximum Temperature: 500°F (260°C)
- Maximum Pressure (Cell): 5,000 PSI (34.5 MPa)
- Cell Caps:
  - Inlet: 60 Mesh Screen
  - Outlet: 60 Mesh Screen (for filter paper)
  - Outlet: Scribed (for ceramic disks)



	171-191-S HTHP Filter Press Cell with Threaded Cap, 500 mL, Mud	171-192-S HTHP Filter Press Cell with Threaded Cap, 500 mL, Cement	171-193-S HTHP Filter Press Cell with Threaded Cap and Piston, PPT	170-181-S HTHP Filter Press Cell with Threaded Cap, 175 mL, Mud	170-182-S HTHP Filter Press Cell with Threaded Cap, 175 mL, Cement
171-190-020-S Cell Body, 500 mL	✓	✓	✓		
170-180-020-S Cell Body, 175 mL				✓	✓
171-190-031-S Inlet Cap for Mud	✓		✓	✓	
171-190-030-S Outlet Cap for Filter Paper	✓		✓	✓	
171-190-024-S Piston			✓		
171-190-034-S Outlet Cap for Ceramic Disks	✓		✓	✓	
171-190-033-S Inlet Cap for Cement		✓			✓
171-190-032-S Outlet Cap of Cement		✓			✓
170-18 (2) Cement Screen		✓			✓
171-190-023 Locking Ring	✓	✓	✓	✓	✓
130-81-040 Retaining Ring	✓	✓	✓	✓	✓
171-190-027 Rupture Disks	✓	✓	✓	✓	✓

- All cells come with two complete sets of o-rings:
  - Viton 75D (Black) - For tests up to 400°F (204°C)
  - Viton 90D (Green) - For tests up to 500°F (260°C)

### HTHP Filter Press Cell with Threaded Caps



## ***Intro***

The OFI Testing Equipment (OFITE) High Temperature High Pressure (HTHP) Filter Press is designed to evaluate the filtration characteristics of drilling fluids, cement slurries, fracturing fluids, and completion fluids under elevated temperatures and pressures. Evaluating fluids under HTHP conditions similar to the downhole environment is of paramount importance. Fluid properties must be monitored while under high temperatures and pressures as filtration behavior and wall cake building characteristics of permeable formations change with changing environments. These characteristics are affected by the shape, type, and quantities of solids present in the fluid and their physical and electro-chemical interactions, all of which are affected by changing temperatures and pressures. The complete assembly consists of the following:

- A controlled pressure source (Not included)
- Two Nitrogen pressure regulators (primary and back pressure)
- A high-pressure test cell
- A heating jacket for heating the test cell
- A suitable stand

## ***Specifications***

Size:	10" × 18" × 42" (25.4 × 45.7 × 106.7 cm)
Weight:	53 lbs (24.1 kg)
Shipping Size:	29" × 12" × 16" (74 × 30.5 × 41 cm)
Shipping Weight:	65 lbs. (29.5 kg)
Maximum Temperature:	500°F (260°C)
Maximum Pressure:	5,000 PSI (13,880 kPa)
Pressure Source:	Nitrogen (at least 1500 PSI / 10,343 kPa)
Test Cell Capacity:	500 mL
Heater:	800 Watt

# Components

- #153-12 Graduated Cylinder; 100 mL × 1 mL; Glass
- #154-20 Thermometer with Metal Dial, 8" Stem, Dual Scale: 50° - 500°F / 0° - 250°C
- #165-44-2 Anti Seize Compound, Silver, 7g Pouch
- #170-13-3 O-ring for Test Cell, Viton®
- #170-17 O-ring for Valve Stem, Viton®
- #170-19 Filter Paper; 2½" (6.35 cm); Specially Hardened for Filter Presses
- #170-35 6" Adjustable Wrench
- #170-53 Ceramic Disk, 50 Micron, 15 Darcy
- #171-00 Heating Jacket (115 Volt)
- #171-01 Heating Jacket (230 Volt)

## **#171-10 Back Pressure Receiver; 100 mL:**

- #170-32 ⅛" × ⅛" NPT Male Needle Valve
- #171-11 O-ring for 100-mL Back Pressure Receiver
- #171-12 Receiver Body
- #171-23-1 Safety Pin with Lanyard

## **#171-191-S Test Cell, Stainless Steel (For Mud Testing)**

- #120-910-028 O-ring for Rupture Disk, Viton
- #130-81-040 Retaining Ring, Qty: 2
- #170-13-3 O-ring for Cell, Viton, Qty: 4
- #170-16 Valve Stem, Qty: 2
- #170-17 O-ring for Valve Stem, Viton, Qty: 4
- #171-190-020-S Cell Body
- #171-190-023 Locking Ring, Qty: 2
- #171-190-027 Rupture Disk, 7500 PSI
- #171-190-029 Cell Cap Wrench
- #171-190-030-S Cell Cap with 60 Mesh Screen for Filter Paper, Outlet
- #171-190-031-S Cell Cap with 60 Mesh Screen, Inlet
- #171-190-034-S Cell Cap, Scribed for Ceramic Disks, Outlet
- #171-190-057 O-ring for Valve Stem, Viton 90D, Qty: 4
- #171-190-058 O-ring for Rupture Disk, Viton 90D, Qty: 1
- #171-190-060 O-ring for Cell, Viton 90D, Qty: 4

## **#171-24 Dual Nitrogen Manifold, 1350 & 750 PSI**

- #170-20 Manifold Block
- #170-32 Needle Valve, Male, ⅛" × ⅛" NPT
- #171-23-1 Safety Pin with Lanyard
- #171-24-001 Regulator, Modified, Qty: 2
- #171-25-1 Relief Valve, Set at 750 PSI
- #171-25-2 Relief Valve, Set at 1,350 PSI
- #171-26 Hose, 5000#, ⅜" × 3'
- #171-28 Body
- #171-38 Gauge, 1000 PSI
- #171-40 Gauge, 1500 PSI
- #171-42 Gauge, 3000 PSI

**Optional:**

- #170-37 Nitrogen Cylinder, 21" × 7", Right-hand Thread
- #170-33 Cell Cap Removal Tool
- #170-40 Carrying Tool for HTHP Cell
- #170-91 HTHP Pressure Relief Tool
- #171-06 Safety Shield

<b>#171-191-SP Spare Parts Kit:</b>		
Part Number	Description	Qty.
#130-81-040	Retaining Ring	2
#143-00-1	Diaphragm For Airco Regulator	2
#143-07	Repair Kit for Regulator (#143-00)	2
#153-12	Graduated Cylinder, 100 mL × 1 mL	2
#153-14	Graduated Cylinder; 50 mL	2
#154-20	Dial Thermometer, 8" Stem, 50° - 500°F and 0 - 250°C	1
#165-44-1	High Temp Thread Lubricant 4 Oz.	2
#170-05	Thermostat For HTHPFP 50-500	1
#170-10	Thermostat Pilot Light	1
#170-11	Heating Element 115V-200W	2
#170-13-3	O-ring for Test Cell, Viton®/Fluorocarbon (FKM)	50
#170-16	Valve Stem	4
#170-17	Valve Stem O-ring	100
#170-19	Filter Paper, 2½" (6.35 cm), Hardened for Filter Press	10
#171-11	O-ring, -028, Nitrile 70D	6
#171-23-1	Safety Pin with Lanyard	2
#171-190-057	O-ring for Valve Stem, Viton 90D	100
#171-190-060	O-ring for Cell, Viton 90D	50

**Note**

Spare parts listings are intended to be used as a reference for future purchases. Everyone's consumable requirements will be different, and replacement quantities needed will depend upon the number of test performed on a daily and/or weekly basis.