



## 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 for Drilling Fluid Testing

The HTHP (High Temperature, High Pressure) Filter Press is designed for testing drilling fluids and cement under elevated temperatures and pressures. It simulates various down-hole conditions and provides a reliable method for determining the effectiveness of the material being tested.



## Features

- Field portable for easy mobility
- A nitrogen pressure manifold with two regulators (primary and back pressure)
- High performance hoses, connections and valves
- A temperature controlled heating jacket for heating the test cell
- Gauges monitor nitrogen tank, primary, and back pressures
- A high-pressure test cell
- Back pressure receiver
- Safety retainer pins
- Safety valves protect against over pressurization
- Easily configured for other filter media and pressurization



## Technical Specifications and Requirements

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#170-00-3: HTHP Filter Press for Drilling Fluids Testing with 175 mL, Single Capped Cell, N<sub>2</sub> Pressuring Manifold (115 Volt)

#170-01-3: HTHP Filter Press for Drilling Fluids Testing with 175 mL, Single Capped Cell, N<sub>2</sub> Pressuring Manifold (230 Volt)

### Specifications

- Maximum Temperature: 400°F (204°C)
- Maximum Pressure: 2,000 PSI (10,343 kPa)
- Test Cell Capacity: 175 mL
- Pressure Source: Nitrogen (at least 1,500 PSI / 10,343 kPa) – Sold Separately
- Size: 7.5" × 11" × 23.5" (19 × 28 × 60 cm)
- Weight: 27 lb (12.3 kg)
- Shipping Size: 17" × 23.5" × 12.5" (43 × 60 × 32 cm)
- Shipping Weight: 38 lb (17.2 kg)
- Power Requirement: 115 Volt/230 Volt

### Optional Items

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#170-37 Nitrogen Cylinder 21" × 7" (shipped empty)

#170-33 HTHP Cell Cap Puller



#170-40 Test Cell Removal and Carrying Tool



#170-91 HTHP Pressure Relief Tool

#170-92 Safety Clamp for HTHP Fluid Loss Cells



# Specifications

Size:	7.5" × 11" × 23.5" (19.1 × 27.9 × 59.7 cm)
Weight:	27 lb. (12.3 kg)
Shipping Size:	17" × 23.5" × 12.5" (43.2 × 59.7 × 31.8 cm)
Shipping Weight:	38 lb. (17.2 kg)
Maximum Temperature:	400°F (204°C)
Maximum Pressure (Cell):	1,500 PSI (10,343 kPa)
Maximum Pressure (Receiver)	750 PSI (5,171 kPa)
Pressure Source:	Nitrogen Tank (Sold Separately)
Test Cell Capacity:	175 mL
Voltage:	115 VAC, 5 Amps, 50/60 Hz 230 VAC, 3 Amps, 50/60 Hz
Heater:	400 Watt

# Components

## Supplies:

- #153-14 Glass Graduated Cylinder; 50 mL × 1 mL
- #154-10 Metal Dial Thermometer; 5" Stem; Dual Scale: 50° - 500°F / 0° -250°C
- #170-19 Filter Paper, 2 ½" (6.35 cm), Specially Hardened for Filter Presses, 100/box
- #170-35 Adjustable Wrench, 6 inch

## #170-00-1 Heating Jacket (115V)

### #170-01-1 Heating Jacket (230V):

- #130-10-52 Jam Nut; ¾"-24; Stainless Steel; Qty: 2
- #164-32 Male Connector for Power Cable (For #170-01-1 230V ONLY)
- #165-40-4 Power Cable, 230 Volt
- #170-05 Thermostat
- #170-09 Insulation Board
- #170-10 Thermostat Pilot Light
- #170-11 Heating Element; 115V; 200W; Qty: 2
- #170-15 Base
- #170-21 Stand Support Rod; Qty: 2
- #170-25 Aluminum Well
- #170-30 Stainless Steel Thermostat Cover
- #170-44 Rubber Foot, ½"; Qty: 4
- #171-32 Midget Knob
- #171-82 Power Cord, 8', with Male Plug 8; 16/3 SJ; Round (For #170- 00-1 115V ONLY)

## Assemblies:

### #170-06-1 Back Pressure Receiver; 15 mL Stainless Steel Tube for N2

- #144-11 Street Ell, 90, ⅛"
- #144-15 Plate Brass Bushing; ⅛" NPT Male to ⅛" NPT Female
- #170-07 O-ring
- #170-28 Receiver Body
- #170-32 NPT Male Needle Valve, ⅛" × ⅛"
- #171-23-1 Safety Pin with Lanyard

### #170-12-1 175-mL, Single-End Test Cell; 1500 PSI (10,342.5 kPa)

- #170-12 Cell Body; 316 Stainless Steel, 500 PSI (1-0342 kPa)
- #170-13-3 Cell O-ring; Viton 75; Qty: 2
- #170-14 Cell Cap, 1,500 PSI (1-0342 kPa)
- #170-16 Valve Stem; Qty: 2
- #170-17 Valve Stem O-ring; Qty: 4
- #170-26-1 Stainless Steel Locking Screw, Hardened; Qty: 6
- #170-27 Allen Wrench, 5/32"
- #170-19 Filter Paper 2½" (6.35 cm); Specially Hardened for Filter Presses
- #170-35 Adjustable Wrench, 6 inch

### **#171-24 1350 / 750 PSI (9,308 / 5,171 kPa) Nitrogen Manifold**

#170-20	Manifold Block
#170-32	NPT Male Needle Valve, 1/8" x 1/8"
#171-22	Retainer Pin
#171-24-001	Regulator, Modified; Qty: 2
#171-24-1	Chrome Nut; R.H.; Reg Inlet CGA-580
#171-24-2	Nipple with Filter
#171-24-3	Flare x 1/8" to FNPT Female, 1/4"
#171-24-4	NPT Pipe Plug; 316 Stainless Steel, 1/4"
#171-24-5	NPT Street Tee; 316 Stainless Steel, 1/4"; Qty: 2
#171-25-1	Relief Valve set at 750 PSI (5171 kPa)
#171-25-2	Relief Valve set at 1350 PSI (9308 kPa)
#171-26	Hose, 5000#; 3/16" x 3'; Qty: 2
#171-28	Dual Manifold Body
#171-38	Gauge, 1,000 PSI; 2"; 1/4" NPT Bottom
#171-40	Gauge, 1,500 PSI; 2"; 1/4" NPT Bottom
#171-42	Gauge, 3,000 PSI; 2"; 1/4" NPT Bottom
#171-90-06	1/8" MNPT x 1/8" FNPT Reducing Bushing; 316 Stainless Steel
#171-90-07	Hex Nipple, 1/4" NPT; 316 Stainless Steel; Qty: 2
#171-90-13	Adapter, 1/4" Flare x 1/4" Male NPT

### **Optional:**

#170-37	Nitrogen Cylinder; 21" x 7"; Right-hand Thread
#170-13-3	Test Cell O-ring; Viton
#170-00-3-SP	Spare Parts for 170-00-3
#143-00-1	Diaphragm for Airco Regulator; Qty: 2
#143-07	Repair Kit for Regulator (#143-00); Qty: 2
#153-14	Graduated Cylinder; 50 mL x 1 mL; Qty: 2
#154-10	Dual-Scale Thermometer with Dial; 5" Stem; 50° - 500°F (0° - 250°C)
#170-05	Thermostat; 50° - 500°F (10° - 260°C)
#170-07	O-Ring
#170-10	Thermostat Pilot Light
#170-11	Heating Element, 115V, 200W; Qty: 2
#170-13	Cell O-ring; Buna N; Qty: 50
#170-16	Valve Stem; Qty: 4
#170-17	Valve Stem O-ring; Qty: 100
#170-19	Filter Paper; 2" (6.35 cm); Specially Hardened for Filter Presses; Qty: 10
#170-26	Stainless Steel Locking Screw; Qty: 24
#170-27	Allen Wrench; 5/32"
#171-22	Retaining Pin; Qty: 2
#171-32	Midget Knob

**Optional:**  
**#170-00-3-SP Spare Parts Kit**

Part Number	Description	Quantity
#143-00-1	Diaphragm for Concoa Regulator	2
#143-07	Repair Kit for Concoa Regulator	2
#153-14	Graduated Cylinder, 50 mL × 1 mL	2
#154-10	Dial Thermometer, 5" stem, 5-500°F & 0-250°C	1
#170-05	Thermostat	1
#170-07	O-Ring, Nitrile 70D	1
#170-10	Thermostat Pilot Light	1
#170-11	Heating Element 115 Volt – 200 W	2
#170-13-3	O-ring for test cell and cap, Viton 75D	50
#170-16	Valve Stem, for cell pressure and de-pressurization	4
#170-17	O-ring, for Valve Stem, Viton 75D	100
#170-19	Filter Paper, 2 ½" (6.35 cm), hardened for Filter Press, 100/box	10
#170-26-1	Locking Cap Screw, Hardened Alloy Steel	24
#170-27	Allen Wrench, 5/32"	1
#171-23-1	Safety Pin with Lanyard	2



**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.

**Optional Items for HTHP Filtration Testing:**

The items listed below are not included in the HTHP Filter Press, but they are items that will enable the technician to perform a more uniform and reproducible test while maintaining a high degree of safety. As optional items, the usage is not compulsory, but consideration should be given to these items when running tests at elevated temperatures and pressures. Some of the items will be used only on cell assemblies using set screws as fasteners, while others should be implemented when operating all filtration equipment.



Interval Timer, 60 minute  
(#155-20)



Cell Cap Removal Tool  
(#170-33)  
(Set Screw Cell Assemblies Only)



Cell Carrying Tool (#170-40)



HTHP Pressure Relief Tool  
(#170-91)  
(To release trapped pressure)



Safety Clamp (#170-92)  
(Set Screw Cell Assemblies Only)



Safety Shield (#171-06)



High Pressure Nitrogen Assy.  
(#171-31)



Thermocouple Assembly  
(#171-45-1)  
(Direct temperature measurement  
Of the fluid Inside the Cell)



Stand for HTHP Cell Assembly  
(#171-190-028)