

CHANDLER ENGINEERING

All Chandler Engineering products are covered by a full one-year warranty against defects in materials and workmanship. Sales terms, conditions, and warranty statements are included with each quotation or confirmation of order.

More than 50 years ago, Chandler Engineering pioneered High Pressure and High Temperature Equipment. Today, Chandler Engineering is the leading manufacturer of a broad range of innovative and extremely reliable Measurement Instruments for the Energy Industry.

Chandler Engineering specializes in outfitting laboratories designed for testing cement, drilling muds and stimulation fluids. Through Research and Development, experienced manufacturing and worldwide logistic operations, Chandler Engineering provides for your complete laboratory requirements.

CHANDLER PRODUCTS

Drilling Fluids

Atmospheric Viscometers (6,12, and 16 speeds)
HPHT Rotational Rheometer
Mud/Cement Density Balances

Production Enhancement

Formation Response/Core Flow Systems
Reciprocating Capillary Viscometer
Low Shear Atmospheric Viscometers
HPHT Viscometer (automated)
Crosslink Time Detector
HPHT Correction Test Apparatus

Oil Well Cement

HPHT Consistometers
Atmospheric Consistometers
HPHT Curing Chambers
API Compressive Strength Testers

Cement Expansion/Shrinkage
API Constant Speed Mixers
HPHT Stirred Fluid Loss Tester
Ultrasonic Cement Analyzers (UCA)
Static Gel Strength Analyzers (SGSA)
Horizontal UCA
Gas/Fluid Migration Analyzers (FMA)
Mechanical Properties Analyzers (MPRO)
Portable Labs
Data Acquisition and Control (DAC) System & Software

Fluid Technology

Digital Gasometers
Positive Displacement Pumps
Phase Detection Systems
Phase Behavior (PVT) Systems
Sample Cylinders

One of a family of innovative solutions from AMETEK Process Instruments. Specifications subject to change without notice.

CHANDLER
ENGINEERING

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AMETEK

REGISTERED
ISO 9001
MANAGEMENT SYSTEM

CHANDLER
ENGINEERING

Deadweight

Deadweight Testers

PRIMARY STANDARD

The **CHANDLER** Deadweight Testers are the basic primary standard for the accurate measurement of pressure. Chandler Testers are used to measure the pressure exerted by a gas or liquid and can also generate a test pressure for the calibration of pressure gauges, electronic pressure calibrators, transducers, transmitters, recorders, etc. No other device can match the stability, repeatability and accuracy of the Deadweight Tester.



HIGH SENSITIVITY

When the weights are applied to the piston, the entire assembly is rotated slowly. This rotation minimizes frictional effects and permits vertical motion of the piston with extremely small variations in pressure. Measurements to 1/10 psi (1 kPa) can be made.

FEATURES

- **Accurate** - 0.05% of indicated pressure, traceable to the National Institute of Standards and Technology (NIST), 0.02% available.
- **Reliable** - hardened stainless steel pistons and corrosion resistant materials.
- **Screw Pump** - allows fine pressure adjustments
- **Certificate of Calibration**
- **Gas or Liquid** pressure measurement
- **Stock delivery** - repair service, and spare parts available.

THREE STYLES

- Portable Standard Series
- Precision Pressure Standard for Laboratory Applications
- Featherweight Series

OPERATION

The Chandler Engineering Deadweight Tester utilizes the well proven piston system consisting of a vertically mounted precision lapped stainless steel piston and sleeve with a metal to metal seal. This superior design eliminates friction and oil leakage created by o-ring seals used in lower cost testers. A bubble level and adjustable feet are provided to enable the operator to level the instrument.

HIGH ACCURACY

Deadweight Testers blend ruggedness with high accuracy. Variations over time typical of strain gauges or spring gauges are eliminated. Their operation depends only on balancing known area. The weights are applied manually until the piston is floating with no net vertical movement. Each piston's area is determined by comparison against a piston of known area traceable to the National Institute of Standards and Technology. The mass of the balancing weights is also traceable to NIST.

AMETEK

GENERAL SPECIFICATIONS

Accuracy: 0.05% of indicated pressure

Certificate of Calibration:

Furnished for 0.05%.

Optional 0.02% certificate available

Calibration Temperature: 77°F (25°C). Calibration based on standard gravity of 980.665.

Calibration Meets: MIL-C-45662A

Temperature Limit: 40° to 120°F

(4° to 50°C)

Humidity: 0 to 95% RH

Vibration: Small amplitude, high frequency only

Environment: Minimize dust and corrosive atmosphere

Piston Material: Hardened stainless steel

Pressure Tubing Material: Stainless Steel

Weight Materials: Brass or stainless steel

Smallest Weight Supplied: See Ordering Information

Fill Fluid: Non-toxic ISO Grade 68 Premium Oil, standard. Synthetic fluid optional for special requirements

Oil Flash Point: 425°F (220°C)

Oil Pour Point: -15° (-25°C)

Input Connector: 1/4 in. NPT

Seal Material: Buna-N

Furnished With Every Deadweight Tester:

- One Year Guarantee
- Carrying Case with Instruction Manual
- Set of Weights
- Operating Fluid
- Gauge Pointer Remover
- Gauge Pointer Driver
- 1/4 in. and 1/2 in. NPT Adapters
- Certificate of Calibration for 0.05% Accuracy

Furnished With Precision Pressure Standard Tester

- Vinyl Dust Cover in lieu of Carrying Case
- Wrench Set
- Spare-O-Rings and Seals
- Electric Motor to Spin Weights

Options:

- Stainless Steel Weights
- Dual Range Piston/Cylinder
- 0.02% Calibration
- Oxygen Service Cleaning
- Oil Water Separator
- Tripod
- Metric Adapters
- Synthetic Operating Fluid for O2, Water or Steam Service
- Local Gravity Calibration

ALL DATA AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SERVICE

For more than 60 years Chandler Engineering has provided full rebuild and calibration service. All Deadweight Testers are adjusted to the original manufactured accuracy and full certification is supplied with each instrument. All Deadweight Testers are returned promptly, minimizing downtime. Every instrument will meet the original specifications after leaving the Chandler Repair Center.

HYDROSTATIC TEST CONSOLE

This system has been designed primarily to give an accurate record of pressure during hydrostatic testing of pipelines or pressure vessels. It features an instrument package in a transportable weather-tight enclosure with removable legs and writing surface. A dial gauge and a oil-water separator, which prevents water from getting to the instrumentation, is installed in all of the following Hydrostatic Test Consoles:



Model #	High Pressure Gauge Range:	Pressure Recorder Range	Temperature Recorder Ranges
05-130-05	50-3000 PSI	0-3000 PSI	0-150°
05-130-01	50-3000 PSI	N/A	0-150°
05-130-35	50-5000 PSI	0-5000 PSI	

OIL-WATER SEPARATORS

Model 02-0071

The 02-0071 Oil-Water separator is rated for a Pressure of 5,000psi (34,500kPa) and is designed for use with the Model 02-001 and Model 23-001 Deadweight Testers. It will fit inside the tester case for transportation.

Model 05-0194

The 05-0194 Oil-Water Separator can be used with any Chandler Deadweight Gauge or Tester. It is rated for 5,000 psi (34,500 kPa) and is a stand-alone unit. It comes complete with inlet valve outlet valve, drain valve, and 10 feet of 1/8-inch diameter stainless steel tubing to connect it to the deadweight instrument.

Model 05-0071

The 05-0202 Oil-Water Separator is rated for 10,000 psi (69,000 kPa). It is similar to the Model 05-0194 and is supplied complete with valves and stainless steel tubing.

Model 55-0036

The 55-0036 Oil-Water Separator has been designed specially for use with the Model 55-100 Deadweight Tester. It can be mounted on the side of the tester case for transportation. The pressure rating is 6,000 psi (41,400kPa).