

# Quantum<sup>®</sup> Pro

## Oxidation Tester

**ASTM D2272, D2112, D4742, D7098, IP229**



### Principle

**Oxidation Stability:** Test material, placed in a stainless steel pressure chamber, is exposed to oxygen at a specific test temperature and pressure. As the antioxidants are consumed, the sample reacts with the oxygen and the pressure drops.

### History

Hot oil baths of varying sizes have long been used in the industry for running the Rotating Pressure Vessel Oxidation Test (RPVOT, formerly known as RBOT) and the Thin-Film Oxygen Uptake test (TFOUT). These bath types expose the operator to hot oil fumes and odors, are prone to leak, need regular maintenance, and are generally messy and potentially hazardous to operate.

As laboratory facilities strive to improve their workplace conditions and encourage healthy environments, alternative approaches to running these tests are necessary.

### Innovation

Tannas Co. sets a higher standard by eliminating the hazards and mess of hot oil baths. The *Quantum<sup>®</sup> Pro* Oxidation Tester is **the sole source of supply for ASTM D2272** when running critical oxidation tests. Our technology is simple, clean, and efficient.

### Features

- Front-loading, easily accessible pressure chamber.
- Small, bench-top footprint. No laptop or PC required.
- Non-liquid 'Dry-Cylinder' sample heating — eliminates hot, hazardous, liquid bath mess and odor.
- Automated fill and purge control.
- Integrated controls and data acquisition with touchscreen interface.
- Onboard test data storage.
- Integrated Water Calibration.
- Live graph of test data.
- LED lighting scheme based on operating condition.
- Closed loop motor speed control (no calibration required).
- Lower power usage (20 - 30%).
- Lower heat loss, improving external instrument temperature.
- USB ports to transfer records to flash drive or PC.
- Automated test report submission over Ethernet (full or restricted network).

### ASTM D2272, D2112, IP229

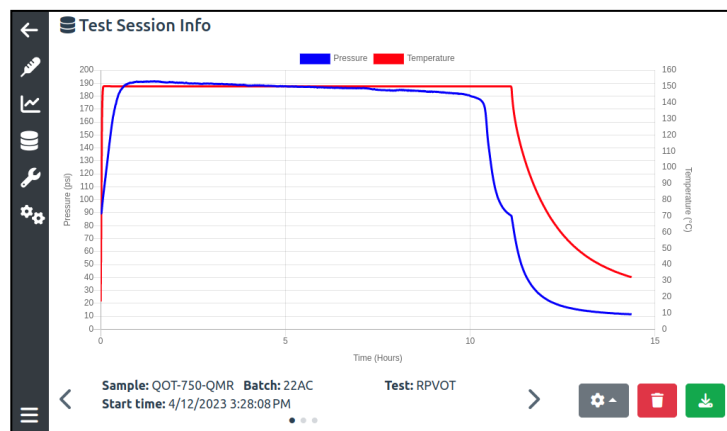
RPVOT: Rotating Pressure Vessel Oxidation Test

### ASTM D4742, D7098

TFOUT: Thin Film Oxygen Uptake Test

### Common Applications

- Steam Turbine Oils
- New & In-Service Oils
- Insulating Oils
- Gasoline Engine Oils



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## Instrument & Parts

### ASTM D2272 & D2112 (RPVOT):

200853: RPVOT Sample Beaker  
 200651: Copper Catalyst Coils  
 200910: Magnetic Sample Cup w/ Spring Clip  
 200480: Magnetic Sample Cup Tester  
 200035: Sample Extraction Device Assembly  
 040028: QMR Reference Oil (D2272 only)  
 040027: QHR Reference Oil (D2272 only)

### ASTM D4742 & D7098 (TFOUT):

200104: TFOUT Conversion Package  
 200106: TFOUT Segmented Glass Dish  
 010047: TFOUT Catalyst A Package  
 010049: TFOUT Catalyst B Package

### All Applications:

200916: Oxygen Regulator  
 200914: Certified Reference Oxygen Gauge  
 040045: VarClean Cleaner

## Instrument Specifications

<b>Dimensions</b>	23(w) x 50(d) x 41(h) cm   (9 x 19.65 x 16 in)
<b>Weight</b>	~ 15.9 kg   (35 lbs.)
<b>Voltage</b>	100-240 VAC
<b>Frequency</b>	50/60 Hz.
<b>Heating Medium</b>	Dry Cylinder' heating system - no hot oil bath
<b>Testing Capacity</b>	Single position stainless steel pressure vessel Designed for multi-unit alignment, each independent
<b>Test Parameter Capabilities</b>	Temperature: 160° ± 0.1°C recommended max. Oxygen Charge: 100 ± 0.1 psi recommended max. Vessel Rotation: Variable speed control
<b>Output</b>	Continuous temperature & oxygen pressure readout
<b>Safety</b>	Auto-Shutoff at end of test Current limiting fuses Over-pressure sensor & relief Over-temperature cutoff fuse CRN Approved & CE Marked Manual fill and purge control
<b>Shipping Weight &amp; Dimensions</b>	~26 kg (58 lbs.) approx. ~53 x 46 x 58 cm (21 x 18 x 23 inches) approx.

## Additional TANNAS CO. Precision Laboratory Instruments



### Tannas Foam Air Bath (TFAB)

- ASTM D892, D6082, D1881, D7840, IP146
- Non-liquid bath
- 24°C to 150°C range



### TBS 3000 HTHS Viscometer

- ASTM D4683, D6616, CEC L-36, IP370
- High-Temperature, High-Shear (HTHS)
- 80°C, 100°C, 150°C testing



### Noack S2® Volatility Test

- ASTM D5800, Procedure D, CEC L-40
- Phosphorus Volatility
- Non-Wood's metal heating system



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