THERMAL OXIDATION STABILITY OF AVIATION TURBINE FUELS

Definitive Testing for Thermal Oxidation Stability

Falex 400 Thermal Oxidation Stability Tester

The robust, reliable Falex 400 meets the most rigorous standards set by ASTM Subcommittee DO2.J. Using the Falex Heater Tube, the compact, user-friendly instrument is built for long intervals and years of service using the most desired operational and safety features.

» Fast and easy, Pour-and-Go operation

ZALEX

- » Large, color touch screen (with fuel and solvent protection) and detailed on-screen reports and on-board result database
- » Automatic sample introduction (less than 600 ml) making it ideal for field applications and mobile laboratories
- » Simplified priming with a maintenance-free pump and rugged solenoid valves for easy access and processor control
- » Guaranteed method compliance with an automatic humidity sensor and automatic aeration
- » Optional certified differential pressure calibrator to efficiently verify or recalibrate the ΔP without using fuel.

» Automatic thermal fuses monitored by visual indicators to alert when fuses have been tripped. Eliminates downtime!

» Built-in, easily stored integral filter funnel holder reduces spills and drips for increased safety

» Automatic leak detection and shutdown system

» Fume absorbing carbon fibers.



Falex 430 Ellipsometer for Rating Deposits on ASTM D3241 Heater Tubes

The Falex 430 Ellipsometer was developed by Falex in cooperation with leading manufacturers and consumers of jet fuel. The fully automated unit contains a safe, completely enclosed laser light source with an optical detection system for measuring the film thickness of ASTM D3241 Heater Tubes. A large, color display simplifies reporting. Select express, detailed or custom measurement programs to minimize the need for operator interface.



The Falex ETR offers a simple one button operation for use with all aluminum heater tubes and all ASTM D3241 instruments.

Pass/Fail Determination of the 2.5mm² Average Film Thickness

- » As specified by ASTM D3241, Annex 3, Ellipsometric Method
- » ASTM D1655 Referee Method as per Table 1, Note M
- » Ellipsometer uses equivalent area evaluations
- » 5 mm to 55 mm along heater tube
- » Historical Ellipsometer data 85 nm = VTR Value 3
- » Software determination of maximum thickness and location
- » PASS or FAIL notification (Graphic Color Coded)
- » Test report data and test information

Used in Standard Test Methods

ASTM D3241	Thermal Oxidation Stability of Aviation Turbine Fuels
IP 323	Determination of Thermal Oxidation Stability of Gas Turbine Fuels
ISO 6249	Determination of Thermal Oxidation Stability of Gas Turbine Fuels



Test Temperature 180 – 380°C

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Differential Pressure 0 – 300 mm Hg

System Pressure 3.45 MPa (500 psi) ± 10%

Interfaces RS-232, USB (2) and Ethernet

USB is compatible with keyboards, printers, barcode readers and USB drives.

Power 115V, 10A or 230V, 5A, 47 - 63 Hz

Dimensions 406 x 508 x 711 mm / 80 kg

16 x 20 x 28 in / 175 lbs

Falex 430 Technical Data

Measurable Deposit Depth 0 - 330nm

Precision @85nm r: 1.55nm

R: 4.13

Analysis Time As fast as 12 min

Power 100-240 VAC, 250W

Dimensions 380 x 430 x 480 mm / 20.5 kg

15 x 17 x 19 in / 45 lbs

CLASS 1 LASER PRODUCT IEC 60825-1 Ed 2 2007 USA EN/IEC 60825-1 Ed 3 2014 non-USA



Ordering Information

400-001-003 Falex 400 Thermal Oxidation Tester, 115V, 60 Hz, includes start-up kit 400-001-004 Falex 400 Thermal Oxidation Tester, 230V, 50/60 Hz, includes start-up kit Ellipsometer and Tube Raters 430-001-002 Ellipsometer for Rating Deposits on ASTM D3241 Heater Tubes 420-001-001 Tube Rater, 115V 420-001-002 Tube Rater, 230V Options 650-201-024 Color Inkjet Printer Reference Tube Verification Kit 400-560-001 D3241 Heater Tube and Filter Start-up kit 400-018-003 Insulation Bushing Set (4 pcs) 400-025-002 Carbon Filters (5/pk) 400-025-002 Tube Rough G20-002 Tubing O-Ring (25/bag) 620-210-001 Pre-Filter O-ring (5/bag) 620-210-001 Pre-Filter O-ring (5/bag) 648-400-005 Box of Funnel Filters (100/box)	Part Number	Description		Consumables
## ## ## ## ## ## ## ## ## ## ## ## ##	400-001-003	Falex 400 Thermal Oxidation Tester, 115V, 60 Hz, includes start-up kit	400-560-001	
Ellipsometer and Tube Raters 430-001-002 Ellipsometer for Rating Deposits on ASTM D3241 Heater Tubes 400-025-002 Carbon Filters (5/pk) 400-027-003 Pre-filter screen 420-001-002 Tube Rater, 230V 620-005-002 Tubing O-Ring (25/bag) Options 650-201-024 Color Inkjet Printer Color Inkjet Printer Color Inkjet Printer	400-001-004	Falex 400 Thermal Oxidation Tester, 230V, 50/60 Hz, includes start-up kit		
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420-001-002 Tube Rater, 230V Options 620-005-002 Tubing O-Ring (25/bag) 620-210-001 Pre-Filter O-ring (5/bag) 648-400-004 Box of Funnel Filters (100/box)	430-001-002	Ellipsometer for Rating Deposits on ASTM D3241 Heater Tubes	400-025-002	Carbon Filters (5/pk)
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Options 648-400-004 Box of Funnel Filters 650-201-024 Color Inkjet Printer (100/box)	420-001-002	Tube Rater, 230V	620-005-002	Tubing O-Ring (25/bag)
650-201-024 Color Inkjet Printer (100/box)		0.11	620-210-001	Pre-Filter O-ring (5/bag)
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430-200-002 Reference Tube Verification Kit 6/8-//00-005 Rox of Prefilters (25/box)	650-201-024	Color Inkjet Printer		(100/box)
040 400 003 Box of Heritaria (23780X)	430-200-002	Reference Tube Verification Kit	648-400-005	Box of Prefilters (25/box)

Falex Corporation follows a policy of continuous product improvement. Specifications are subject to change without notice.

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