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
- » 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

Falex Corporation • 1020 Airpark Drive, Sugar Grove, IL 60554 USA • phone: (630) 556 3669 • fax: (630) 556 3679 • email: Sales@Falex.com

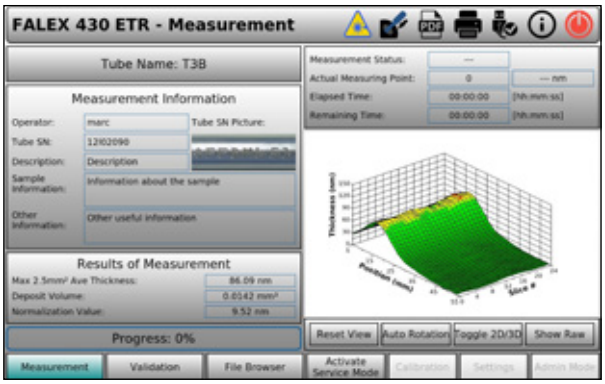
Falex 400 Technical Data

Test Temperature	100 – 380°C
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

Part Number	Description
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
430-200-002	Reference Tube Verification Kit

	Consumables
400-560-001	D3241 Heater Tube and Filter Kit, 12/pk
400-018-003	Insulation Bushing Set (4 pcs)
400-025-002	Carbon Filters (5/pk)
400-027-003	Pre-filter screen
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)
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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