The Solution to Achieving Traceable and Accurate Jet Fuel Testing

INTELLIGENT HEATER TUBE

PAC
www.paclp.com

Alcor by PAC

Revolutionary Advancement in Jet Fuel Thermal Oxidation Testing

- Introducing Detailed Traceability to JFTOT® Test Results
- Increasing Analysis Integrity by Minimizing Risk on Data Transcription Errors
- Improving Quality Audit Efficiency through Easy Data Access
- Compatible with Alcor's JFTOT® II and JFTOT® III Instruments
- In Full Compliance with ASTM D3241 and IP323

Intelligent Heater Tubes

GREATER ACCURACY. GREATER QUALITY CONTROL.

Jet fuel thermal oxidation tests (JFTOT®) are critical for determining the quality of jet fuels. With a critical test like JFTOT® it is crucial to have testing materials meeting strict dimensions and composition controls. Alcor by PAC has delivered this high level of quality and reliability for over thirty years. The Alcor heater tubes provide superior performance, produce reliable results, and are the highest quality tube available. Until now, archiving data meant keeping heater tubes and data separately. Quality audits require matching data with heater tubes. Audits can turn up mismatched data due to poor record keeping or simple transcription errors. In order to reduce record keeping issues, improve traceability, and reduce audit headaches, PAC developed the Intelligent Heater Tube, or IHT.

INNOVATIVE AND REVOLUTIONARY ADVANCEMENT IN JET FUEL THERMAL OXIDATION TESTING

The IHT is a revolutionary step in traceability and security for jet fuel testing. The IHT securely stores the important data associated with jet fuel thermal oxidation test in a small Radio Frequency IDentification (RFID) device permanently mounted on the end of an Alcor Heater Tube. This keeps tube and results data together inseparably, facilitating traceability, simplicity, and ensuring accuracy.

ALCOR´S GENUINE AND UNIQUE HEATER TUBES:
WELL-KNOWN QUALITY AND UNSURPASSED RELIABILITY

- **Alcor is the market leader in jet fuel thermal oxidation testing**
- **More than 3 million Alcor Heater Tubes have been commercially produced and used successfully for the jet fuel thermal oxidation test**
- **Have been available to customers for more than 30 years**
- **Are consistent in quality, thoroughly inspected, and made of the highest quality materials**
- **Are made with using a proprietary process that cannot be duplicated (Patent pending)**

Alcor Heater Tubes are completely reliable and that peace of mind knowing your reputation is not at risk using Alcor Heater Tubes you can trust your professional reputation to their quality and dependable performance.

Alcor by PAC

INTRODUCING DETAILED TRACEABILITY OF JFTOT® TESTS RESULTS AND EASY ACCESS TO STORED DATA

The Alcor Intelligent Heater Tube is the only heater tube on the market that can electronically store all the important data from your JFTOT® instruments directly onto the heater tube, reducing translation errors. With the IHT Reader-Writer, a unique electronic identification device, the IHT allows detailed traceability of tests and easy access to stored data.

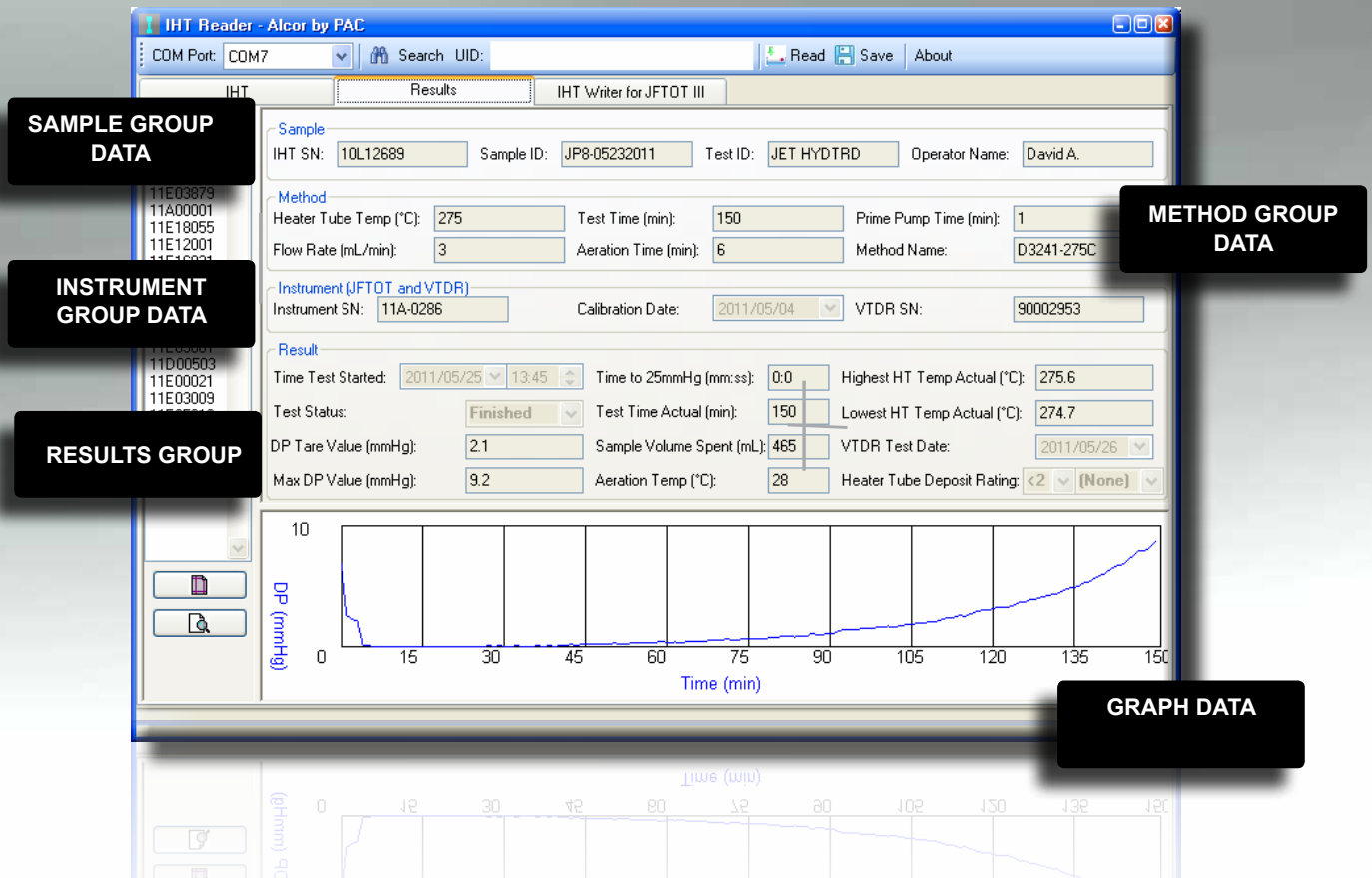
- Analysis Integrity by Minimizing Risk on Data Transcription Errors
- Improving Quality Audit Efficiency through Easy Data Access
- IHT saves time and money. Fewer errors mean less time lost finding and correcting them, and thus more productive time

- No heater tube preparation required; IHTs are used right from the box like current Alcor heater tubes

Helps prevent heater tubes from being re-used accidently

- Fully meets specifications outlined in ASTM D3241 and IP323
- Compatible with Alcor's JFTOT® II and JFTOT® III

The information that can be stored on the IHT is shown below. Data can be transferred from the JFTOT® instruments either directly or via computer interface, or can be entered directly through MS Windows® based application. All the data items in the file will be automatically loaded and filled into the tab fields, including the DP chart data. JFTOT® III data will automatically populate the fields including the DP Chart. JFTOT® II data will load in real time through a PC connected to the serial port of the JFTOT® II.



solidpartners
provensolutions

U.S.A.
PAC, LP | 8824 Fallbrook Drive | Houston, Texas 77064
T: +1 800.444.TEST | O: +1 281.940.1803 | F: +1 281.580.0719
sales.usa@paclp.com | service.usa@paclp.com

FRANCE
BP 70285 | Verson | 14653 CARPIQUET Cedex
T: +33 0 231 264 300 | F: +33 0 321 266 293
sales.france@paclp.com| service.france@paclp.com

GERMANY
Badstrasse 3-5 | P.O.Box 1241 | D-97912 Lauda-Königshofen,
T: +49 9343 6400 | F: +49 9343 640 101
sales.germany@paclp.com| service.germany@paclp.com

SINGAPORE
61 Science Park Road | #03-09/10 The Galen
Singapore Science Park III | Singapore 117525
T: +65 6412 0890 | F: +65 6412 0899
sales.singapore@spaclp.com | service.singapore@paclp.com

The NETHERLANDS
P.O.Box 10.054 | 3004 AB Rotterdam
Innsbruckweg 35 | 3047 AG Rotterdam
T: +31 10 462 4811 | F: +31 10 462 6330
sales.netherlands@paclp.com | service.netherlands@paclp.com

RUSSIA
Shabolovka Street | 34, Bldg. 2 | 115419 Moscow
T: +7 495 617 10 86 | F: +7 495 913 97 65
sales.russia@paclp.com | service.russia@paclp.com

CHINA
Room 1003, Sunjoy Mansion | No. 6 RiTan Rd.
Chao Yang District | Beijing 100020
T: +86 10 650 72236 | F: +86 10 650 72454
sales.china@paclp.com | service.china@paclp.com

INDIA
1036 Regus | Trade Center, Level 1
Bandra (E) - 400 051 | Mumbai
T: +91 22 40 700 447 / 700 | F: +91 22 40 700 800
sales.india@paclp.com | service.india@paclp.com

MIDDLE EAST
Villa #8/1, Street #9 | POBox 1009174 | Abu Dhabi
T: +971 2 446 9671 | F: +971 2 446 9672
sales.middleeast@paclp.com | service.middleeast@paclp.com

SOUTH KOREA
#621 World Vision Building | 24-2, Youido-dong
Seoul 150-010
T: +82 2785 3900 | F: +82 2785 3977
sales.southkorea@paclp.com | service.southkorea@paclp.com

THAILAND
26th Floor, M. Thai Tower | All Seasons Place
87 Wireless Road | Lumpini, Phatumwan | Bangkok 10330
T: +66 2627 9410 | F: +662627 9401
sales.thailand@paclp.com | service.thailand@paclp.com

PAC Authorized Representatives are also located in most countries worldwide. For more information visit www.paclp.com

SPECIFICATIONS

Ordering Info	The new part number for the IHT is 101300, which is still the original AL-91652 tube but with the additional RFID memory button.	
Tube Dimensions	Tube length, mm	161.925 +-0.254
	Center section length, mm	60.325 +-0.051
	Outside diameters, mm Shoulders : Center Section :	 4.725 +-0.025 3.175 +- 0.051
	Inside diameter, mm	1.651 +-0.051
	Total indicator runout, mm, max	0.013
	Mechanical surface finish, nm	50 +-20
Standards	ISO 15693 RF protocol at 13.56 MHz	
Transmitting Power	90 mW +/- 2 dB	
MMI/Display	None. User interface is provided by accompanying PC software program	
Interface	USB (with type B connector)	
Operating Temperature	0°C to +40°C	
Relative Humidity	20% to 90% non-condensing	
Compliance	Radio license: Europe EN 300 330; USA FCC 47 CFR Part 15 EMC EN 301 489; Safety EN 60950	
Reading Distance	Less than 1 cm	
Storage Temperature	-40°C to +85°C	
Dimensions and Weight	11.5 cm W x 8.7 cm D x 7.5 cm H 0.15 Kg	
Power supply	From standard USB interface, 5 V DC +/-5%	

Continuing research and development may result in specifications or appearance changes at any time

Alcor

Alcor is a global supplier of advanced petrochemical, fuel and lubricant research and testing solutions for aviation. Alcor's high-quality instruments exceed global standard specifications and are recognized worldwide as the leading technology for precision fuel analysis. Alcor products include jet fuel thermal oxidation testers, heater tubes, microcarbon residue testers, and visual tube raters. The line includes the JFTOT® III, MCRT, and VTDR systems.

DL by PAC · ac Analytical Controls by PAC · Alcor by PAC · herzog by PAC · PetroSpec by PAC · PSPI by PAC · ANTEK by PAC

USA · FRANCE · GERMANY · NETHERLANDS · UAE · RUSSIA · CHINA · SINGAPORE · SOUTH KOREA · THAILAND · INDIA