

Fuel Components Test Stand

>FATS2<



The test stand is developed to test fuel-supply pumps (e.g. fuel booster pumps) and heat exchangers in accordance with ATA Chapter 28

It can be used for various fuel components, heat exchangers and pumps.

- > The test stand is fitted with pump and component test stations and a number of fuel circuits and connections enabling easy adaption for the UUTs
- > A swivelling reservoir (180°) enables the UUT to be easily mounted without fuel spillage. When the UUT is mounted the reservoir can then be positioned as required
- > The control panel is mounted on an adjustable arm enabling the operator to position as required
- > The test stand is explosion proofed in accordance with ATEX Directive 94/9/EG
- > The original suction lines from the main reservoir enable special tests of fuel booster pumps

APPLICATION RANGE

> Fuel Booster Pump Units

<u>Designation</u>	<u>Part Number</u>	<u>Designation</u>	<u>Part Number</u>
Lightweight Fuel Boost Pump	568-1-26713-xxx	Fuel Boost Pump	60-755 Series
Canister Fuel Pump	568-1-28301-xxx	Fuel Boost Pump	60-989 Series
Fuel Pump	568-1-28300-xxx	Pumping Unit ENG Fuel	60-847-3
Fuel Pump	568-1-27202-xxx	Pumping Unit ENG Fuel	60-847-4
Canister Fuel Pump	568-1-27244-xxx		

> Heat Exchangers

<u>Designation</u>	<u>Part Number</u>	<u>Designation</u>	<u>Part Number</u>
IDG Oil Cooler	45731-1391	Servo Fuel Heater	160482-6
IDG Oil Cooler	45731-139x	Main Fuel Oil Heat Exchanger	11-841193-x

GENERAL INFORMATION

- > The test stand is fitted with forced ventilation, gas warning system, warning and shutdown functions as well as additional secondary and organizational explosion protection measures
- > One special test circuit for hot test medium up to a max. temperature of 60°C (140°F) is provided - special security measures to comply with explosion protection are built-in
- > Leakage warning switches are fitted in drip trays in the test stand frame. The switches indicate leaking medium during maintenance and in the event of an error
- > Drip trays under the test area direct leaking medium (e.g. during UUT disassembly) to a reservoir, from there this medium is pumped back into the main reservoir
- > Freely connectable pressure transducers and temperature sensors are fitted
- > The sliding protective cover is manufactured from laminated safety glass which protects the operator, enables accessibility, direct view during tests as well as assembly plus disassembly of UUT's by means of an on-site crane

TECHNICAL DATA

> Electrical supply (requirements):

- Power supply

Mains connection:	3/N/PE AC 50Hz 400V
Connection:	via terminals
Power:	51.9kVA
Nominal current:	max. 75A
Back-up fuse:	80A gl

- 400Hz supply

Mains connection:	3/N/PE AC 400Hz 200V
Connection:	via terminals
Power:	21.8kVA
Nominal current:	max. 63A
Back-up fuse:	63A gl

TECHNICAL DATA

<p>> Pneumatic supply (requirements):</p> <p>Pressure: 5 to 10bar (72.5 to 145psi) Air quality: ISO 8573-1 ISO Code 1-4-2 Air temperature: max. 50°C (122°F)</p>	<p>> Inlet air and exhaust air system (requirements):</p> <p>Air change (operation): min. 2,000m³/h Air change (standstill): min. 500m³/h Temperature: min. 15°C (59°F) max. ambient temperature</p>
<p>> Cooling water supply (requirements):</p> <p>Temperature: max. 20°C (68°F) Pressure: max. 10bar (145psi) Flow: max. 170l/min (44.9US gpm) Water quality: industrial grade</p>	<p>> Measurement range:</p> <p>- <u>Pressure</u></p> <p>(1-off) -1 to +2.5bar (-14.5 to +36.3psi) (7-off) 0 to 16bar (0 to 232.1psi) (1-off) 0 to 25bar (0 to 362.6psi) (4-off) 0 to 250bar (0 to 3625.9psi) ±0.5% measurement range</p> <p>- <u>Flow</u></p> <p>(4-off) 1 to 40l/min (0.3 to 10.6USgpm) (4-off) 4 to 200l/min (1.1 to 52.8USgpm) (2-off) 10 to 400l/min (2.6 to 105.7USgpm) ±1% measurement range</p> <p>- <u>External pressure sensors</u></p> <p>(1-off) 0 to 4bar ± 4 to 20mADC (0 to 58.0psi) (2-off) 0 to 6bar ± 4 to 20mADC (0 to 87.0psi) (1-off) 0 to 16bar ± 4 to 20mADC (0 to 232.1psi) (1-off) 0 to 50bar ± 4 to 20mADC (0 to 725.2psi) (1-off) 0 to 250bar ± 4 to 20mADC (0 to 3,625.9psi) ±0.4% measurement range</p>
<p>> Hydraulic parameters:</p> <p>- <u>General</u></p> <p>Medium: MIL PRF 7024 Main reservoir: approx. 700l (185USgal) stainless steel Purity grade: class 18/16/13 (NAS 1638 class 7) Temperature: max. 33°C (91.4°F) measurement max. 51°C (123.8°F) in the spec. measurement Filter: 6µ in the supply and measurement 10µ in the return circuit</p> <p>- <u>Hydraulic circuits</u></p> <p>Low pressure circuit 1: max. 200l/min (52.8USgpm) max. 16bar (232.1psi) Measuring circuit 1: max. 400l/min (105.7USgpm) max. 16bar (232.1psi) Measuring circuit 2: max. 200l/min (52.8USgpm) max. 16bar (232.1psi) Measuring circuit 3: max. 40l/min (10.6USgpm) max. 250bar (3,625.9psi) High pressure circuit: max. 20l/min (5.3USgpm) max. 250bar (3,625.9psi) Hot measuring circuit: max. 20l/min (5.3USgpm) max. 16bar (232.1psi)</p>	

TECHNICAL DATA

<p>- <u>Temperature sensor</u></p> <p>(13-off) 0 to 100°C (32 to 212°F) (1-off) -40 to +150°C (-40 to +302°F) ±1°C abs. (±1.8°F abs.)</p> <p>- <u>Current</u></p> <p>(3-off) 0 to 100AAC ±0.5% of full scale</p> <p>- <u>Voltmeter</u></p> <p>(3-off) 0 to 150VAC (3-off) 0 to 250VAC ±0.5% of full scale</p> <p>- <u>Frequency</u></p> <p>(1-off) 0 to 500Hz ±0.5% of full scale</p> <p>- <u>Angle (swivel reservoir)</u></p> <p>(1-off) 0 to 360° ±1° abs.</p> <p>- <u>Level (swivel reservoir)</u></p> <p>(1-off) 0 to 250mm (0 to 9.8in) (1-off) 0 to 600mm (0 to 23.6in) ±3mm abs. (±0.1in abs.)</p>	<p>- <u>Level (main reservoir)</u></p> <p>(3-off) 0 to 650mm (0 to 25.6in) ±3mm abs. (±0.1in abs.)</p> <p>- <u>Gas concentration</u></p> <p>(5-off) 0 to 100% UEG ±4% abs.</p> <p>> Dimensions and weight:</p> <p>- <u>Test stand</u></p> <p>Length: approx. 4,000mm (157.5in) Width: approx. 2,200mm (86.6in) Height: approx. 2,300mm (90.6in) Weight: approx. 4,550kg (10,031lb) excl. operating media</p> <p>- <u>Electrical cabinet</u></p> <p>Width: approx. 1,250mm (49.2in) Depth: approx. 700mm (27.6in) Height: approx. 2,200mm (86.6in) Weight: approx. 380kg (838lb)</p> <p>> Operating conditions:</p> <p>Ambient temperature: +5 to +33°C (+41 to 91.4°F) Storage temperature: 0 to +60°C (-32 to +140°F) Altitude: up to 1,000m (3,280ft) above MSL rel. humidity: 10 to 95% (non-condensing) installation in non-Ex-zone</p>
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OPTIONS

Various options are available to meet our customers' requirements
e.g. adaptations for other aircraft types, etc.