

Hydraulic Test Equipment For A350 (Pre-Fal)

>HTE350<



>HTE350HAM<
Hamburg



>HTE350GTF<
Getafe



>HTE350SEL<
Saint-Éloi



>HTE350STD<
Stade



>HTE350BRE<
Bremen



>HTE350BRO<
Broughton



>HTE350SNZ<
Saint-Nazaire

Developed for testing hydraulic systems on the aircraft type AIRBUS A350.

Fully automatic operation of the following procedures:

- > pressure tests with hydraulic medium
- > pressure tests with air or nitrogen
- > flushing and cleaning
- > filling
- > emptying
- > drying

Can be adapted for aircraft types of very different manufacturers.

Main components:

- > HPU - Hydraulic Power Unit
- > HDS - Hydraulic Distribution System
- > HMI - Human Machine Interface

Accessories:

- > Tablet Panel-PC
- > Electrostatic precipitator
- > Return unit
- > Compressed air supply
- > Hose box and hose reels
- > Control unit for aircraft components and satellites
- > Transport trolley

Hydraulic Test Equipment For A350 (Pre-Fal) - Hydraulic Power Unit >HTE350=HPU<

- > Hydraulic Power Unit (HPU) for low and high pressure supply

MISCELLANEOUS

- > Particle measuring device to measure oil parameters ①
- > Internal gear pump and axial piston pump to generate the required pressure ②
- > Hydraulic filter with electrical contamination indication for test medium purity ③
- > Compressed air filter to clean and drain the compressed air ④
- > Oil/air cooler to cool the test medium ⑤
- > Chassis with turntable steering, solid rubber tyres and parking brake ⑥
- > Main tank with approx. 500l capacity and fill level monitoring ⑦
- > Easy accessibility for maintenance via access openings and cover ⑧
- > Drip pan to catch leaking medium during maintenance tasks or to catch any occurring leakage ⑨
- > Provided with openings for forklift and lashing points for transport by crane ⑩



Mobile frame with cover
large version (high flow)



Mobile frame with cover
small version (low flow)



Setup frame with HPU and HDS



Frame without cover



Mobile frame with cover and integrated HMI



Mobile frame with
stainless steel cover

TECHNICAL DATA

<p>> Hydraulic parameters:</p> <p>Medium: Skydrol Type V Fluid</p> <p>Pressure and flow ranges: max. 150bar (2,175psi) at 80l/min (21.1USgal/min) max. 420bar (6,090psi) at 40l/min (10.6USgal/min)</p> <p>Return pressure: max. 13bar (189psi)</p>	<p>> Dimensions and weight:</p> <p>Length: 3,800mm (149.6inch) with vertical towbar 4,800mm (189inch) with horizontal towbar</p> <p>Width: 1,790mm (70.5inch)</p> <p>Height: 1,740mm (68.5inch) cover closed 3,160mm (124.4inch) cover open</p> <p>Weight: approx. 2,050kg (4,520lb)</p>
<p>> Pneumatic parameters (requirements):</p> <p>Medium: compressed air</p> <p>Pressure: min. 6bar (87psi) to max. 8bar (116psi)</p> <p>Flow: max. 1,000NI/min (264USgal/min)</p> <p>Air temperature: max. 40°C (104°F)</p>	<p>> Measurements:</p> <p>Pressure: 2 x 0 to 600bar ± 0.5% o.f.s. (3-off) (0 to 8702psi ± 0.5% o.f.s.)</p> <p>1 x 0.8 to 1.2bar ± 0.5% o.f.s. (11.6 to 17.4psi ± 0.5% o.f.s.)</p> <p>Return: 0 to 16bar ± 0.5% o.f.s. (1-off) (0 to 232psi ± 0.5% o.f.s.)</p> <p>Flow: 0 to 80l/min ± 0.4l/min (2-off) (0 to 21.1USgal/min ± 0.1USgal/min)</p> <p>Temperature: 3 x 0 to 100°C ± 1K (4-off) (0 to 212°F ± 1K)</p> <p>1 x -40 to +80°C ± 1K (-40 to 176°F ± 1K)</p> <p>Air humidity: 0 to 100% ± 4% o.f.s. (1-off)</p> <p>o.f.s. ... of full scale</p>
<p>> Electric supply (requirements):</p> <p>Mains supply: 3/N/PE AC 50Hz 400V</p> <p>Nominal current: 100A</p> <p>Performance: 69.3kVA</p> <p>Prefuse: 250A GL</p>	
<p>> Operating conditions</p> <p>Operating temperature: 5 to 35°C (41 to 95°F)</p> <p>Storage temperature: 0 to 60°C (32 to 140°F)</p> <p>Altitude: max. 1,000m (3,280ft) above MSL</p> <p>Air humidity: 5 to 95% (non-condensing)</p>	

Hydraulic Test Equipment for A350 (Pre-Fal) - Hydraulic Distribution System >HTE350=HDS<

- > Hydraulic Distribution System (HDS) to supply the provided hydraulic circuits in the hydraulic system of the aircraft.
- > The distribution circuit divides the supply of the HPU into various outputs and connects the inputs to the return to the HPU.

MISCELLANEOUS

- > Electrically and pneumatically operated ball valves for opening or closing the inputs and outputs
- > Opportunity for internal flushing by means of a bypass
- > Pressure gauge in the supply and return line for analog pressure indication ①
- > Sight glass to monitor the return ②
- > Drip pan to catch leaking medium during maintenance tasks or to catch any occurring leakage ③
- > Easy accessibility for maintenance tasks via openings ④
- > Provided with openings for forklift ⑤



large version (high number of inputs and outputs)



small version (low number of inputs and outputs)

TECHNICAL DATA

> Operating conditions:

Operating temperature: 5 to 35°C
(41 to 95°F)

Storage temperature: 0 to 60°C
(32 to 140°F)

Altitude: max. 1,000m (3,280ft) above
MSL

Air humidity: 5 to 95%
(non-condensing)

> Dimensions and weight:

Width: 980mm (38.6inch)

Depth: 780mm (30.7inch)

Height: 1,000mm (39.4inch)

Weight: approx. 220kg (485lb)

Hydraulic Test Equipment for A350 (Pre-Fal) - Human Machine Interface >HTE350=HMI<

- > Human Machine Interface (HMI) to control and operate the test equipment and to print test reports

MISCELLANEOUS

- > Computer for central control and monitoring of the test equipment
- > Printer to print test reports ①
- > Keyboard with trackball for text input, to quit failure messages, to query commands and for software operation ②
- > Monitor to indicate and monitor all digital measurements and switching states of valves and control variables ③
- > Transport wheels with parking brakes ④



TECHNICAL DATA

> Operating conditions:

Operating temperature: 5 to 35°C
(41 to 95°F)

Storing temperature: 0 to 60°C
(32 to 140°F)

Altitude: max. 1,000m (3,280ft) above
MSL

Relative air humidity: 5 to 95%
(non-condensing)

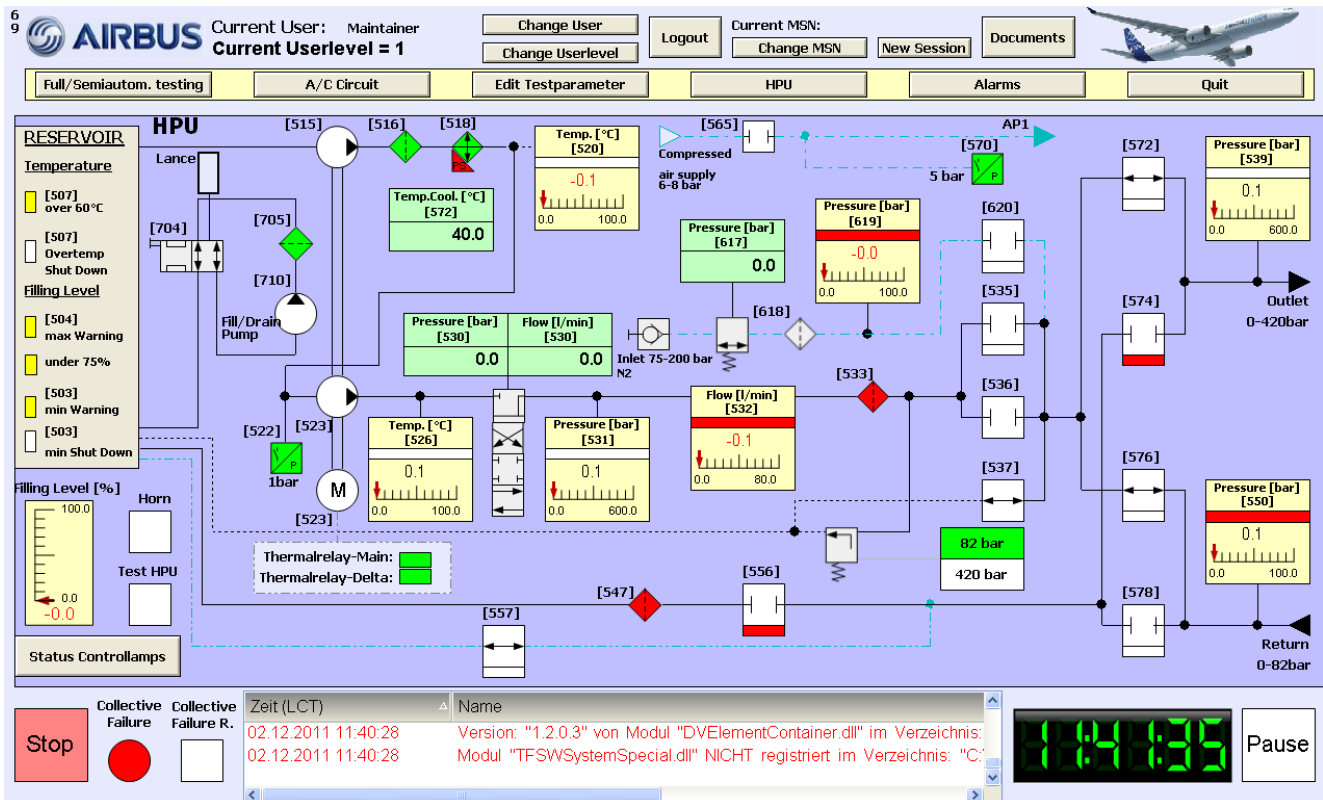
> Dimensions and weight:

Width: 830mm (32.7inch)

Depth: 750mm (29.5inch)

Height: 1,630mm (64.2inch)

Weight: approx. 100kg (220lb)



User Machine Interface of the Software

Accessories

Tablet Panel-PC

- > Tablet Panel-PC for cableless control and operation of the test equipment



Electrostatic precipitator

- > Electrostatic precipitator for precipitation of oil vapors out of the main tank of the HPU



Return unit

- > Return unit for returning the hydraulic medium into the main tank of the HPU



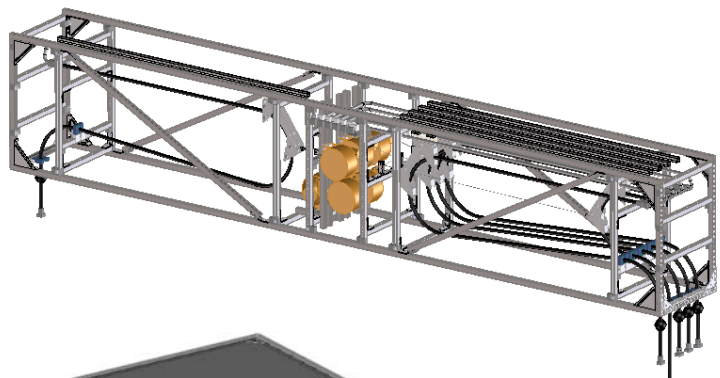
Compressed air supply

- > Compressed air supply consisting of a compressor, compressed air container and a switch cabinet to supply the HPU with compressed air up to 25bar



Hose box and hose reels

- > Hose box and hose reels for hydraulic connection of the test equipment components and to connect to the aircraft - hydraulic system



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Control unit for aircraft - components and satellites

- > Control unit to supply satellites and dummies and to store the test cables



Transport trolley

- > Transport trolley to transport and to store loop valves, satellites, dummies, cables and hoses



OPTIONS

A wide range of options is available to fulfil our customers' requirements.
e.g.: Adaption for different aircraft types, etc...

>HTE350<

Technical data are subject to change!