



Universal Pre-commissioned Fuel & Hydraulic System Test Facilities

For Multi-Purpose Repair and Overhaul Capabilities



Aerotest Limited have designed, developed and supplied a range of Multi-Purpose Universal, Test Facilities. Each facility is pre commissioned prior to delivery on a "TURNKEY" basis, for the repair and overhaul of aerospace related accessory components.

Aerotest's main aim is to provide our customers with high quality, "state of the art" easily maintainable test solutions.

The Aerotest range of universal aero engine component test facilities provides inherent flexibility as a pre-requisite during the design stage.

Our multi component test facilities are designed for a wide range of flows, pressures and drive speeds. An optional high speed real time data acquisition system for production versatility and improved quality of test recording is available.

A Turnkey Multi-purpose Universal, pre-commissioned fuel system accessory test facility includes the following:

- A multi-adaptable component drive head, with variable speeds up to 15,000 RPM, thus providing true long term flexibility.
- Low cost, life of type adaptability, via easy to adapt universal drive head.
- Ergonomically designed brushed stainless steel panels for durability, eliminating FOD risks associated with painted surfaces.

- Self sealing, stainless steel panel couplings for fast adaptability and cleanliness.
- Digital controls for the DC Thyristor drive speed, for enhanced productivity and test quality.
- The Aerotest Supervisory Control and Data Acquisition (SCADA) system using National Instruments globally supported 'LabView' software to run within the well proven and reliable MS Windows-7 operating environment.
- The software code at the heart of the system is designed to for any customer specified engine test procedures.
- Integral mains power distribution panel, with low voltage 24 Volt D.C contactor control for personnel safety.
- Cabinet lighting both front and rear for test component adjustment and plant maintenance.
- Well proven, reliable equipment, providing low cost of ownership.
- Slide away winch system for component, installation eliminating personnel lifting hazards.
- Optional integral slave oil system for FCU spline lubrication configurations.
- Optional high accuracy torquemeter power performance measurement, for HP pump component running in tests-reducing test rejects and saving valuable production time.
- End to end calibrations, over twenty points prior to commissioning and cross correlation, using our NAMAS traceable instrument calibration equipment.
- The pre-proven test systems are available with and without fuel burner patternization cabinets, preformed base frames and altitude temperature simulation.
- Aerotest fuel control unit and burner patternization facilities are designed, pre-commissioned and cross correlated prior to delivery on a "TURNKEY" Basis.



A Turnkey Multi-purpose Universal, Pre-commissioned Fuel Burner Patternization Cabinet provides the following advantages:

- A fast localised test method for burner irregularities, reducing the risks and costs of early combustion chamber overhauls.
- The localised control of repair, test and support activities.
- The adaptability to support other aircraft types.

The ingenuity of the Nozzle Patternization Test System provides:

- Unique 3D flow visualisation.
- The instant recognition of nozzle streaking and pattern irregularity.
- Interchangeable target plates and nozzle mounting cradles on a common test platform.
- Mixed fleet test adaptability from small turboprop to medium sized turbofan burners.



A Turnkey Multi-purpose Universal, Pre-commissioned Hydraulic System Test Facility includes the following:

- Ergonomically designed brushed stainless steel panels for durability, eliminating FOD risks associated with painted surfaces.
- Self sealing, stainless steel panel couplings for fast adaptability and cleanliness.
- Integral 28 Volt D.C variable precision power supplies and 400 Hz
- 110 Volt A.C systems to support a wide range of hydraulic control test requirements.



Test cabinet assembly (Left), Hydraulic pressure power unit. (Right)

- The facility may be used to test aircraft hydraulic items and assemblies and determine the suitability of those items and assemblies for future use.
- Provides the maximum return on investments by optimising the facility production output.
- Integral mains power distribution panel, with low voltage 24 Volt D.C contactor control for personnel safety.
- Cabinet lighting both front and rear for test component adjustment and plant maintenance.
- Well proven, reliable equipment, providing low cost of ownership.

Hydraulic Test Facility comprises of three main elements:

- Test cabinet assembly,
- A hydraulic pressure power unit.
- A chiller unit.

Features Contained:

- Control of the complete facility is carried out from the test cabinet front and side panels, within which are mounted the hydraulic, electrical and air control systems components.
- Alarm indications are included to give adequate warnings of temperatures and oil levels when they are outside pre-set limit values, thus allowing the test operators to shut down the facility before damage may occur.
- The hydraulic pressure power unit assembly constitutes a support framework, main oil pressure pump and tank unit designed to supply hydraulic oil to the test cabinet at the required pressures and flows.
- The operational capabilities are nominally designed to provide hydraulic oil at pressures and flows up to 5000psig, 40 Lt/min flows, with temperature control between 10 to 45° C at an ambient temperature of 50° C.
- A high pressure, 10000psig, low flow 0.4Lt/ min facility capability.
- A static test capability of up to 10000 psig.
- End to end calibrations, over twenty points prior to commissioning and cross correlation, using our NAMAS traceable instrument calibration equipment.



Test cabinet (Left), Chiller Unit. (Right)



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Aerotest Limited is an ISO BS EN 9001: 2008 registered company with a quality approval certificate, number FM66648.

Ordering Information:

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