



ACCURATE HIGH-FLOW HEATED TESTING

The Test-Fuchs PP250 pneumatic high-flow, high-heat test stand raises the bar for high-flow test systems around the world

// ISRAEL RICHMOND

Having passed its customer acceptance test with flying colors in June, the most advanced pneumatic high-flow, high-heat test stand yet is now being installed in Tulsa, Oklahoma. The PP250 High Flow Pneumatic Test System, manufactured by the Austrian company Test-Fuchs, is reliable and highly accurate, and designed for multiple scenarios that require a broad range of air flows. The system supports the testing of electrical and pneumatic control valves for bleed air and trim air applications for a multitude of aircraft and strictly follows the directives outlined in the maintenance manuals. Moreover a range of tests on various connectors and anti-icing valves can be performed with little effort, thanks to the test stand's user-friendly operation.

The overall system consists of high and medium-pressure air systems, the

electrical heater and the test system itself. The compressed air supply gives the test system either high- or medium-pressure air flow, which is electrically heated and sent through the controlled testing loop.

The advantages of the PP250 include a compact and sophisticated design for reliable testing with excellent accessibility for operation and maintenance. The unit features a user-friendly interface and operation with customization possibilities, and benefits from custom in-house designed high-performance control valves.

The sleekly designed PP250 boasts features including 800°F (427°C) operating temperatures, 315psi (22 bar) operating pressures and flow rates of 250 lb/min (114kg/min). All three parameters are separately controllable, to support a variety of test objects with different test requirements and even at different supply pressures. The performance of the test

“THE PP250 IS DESIGNED FOR MULTIPLE SCENARIOS THAT REQUIRE A BROAD RANGE OF AIR FLOWS”

1 // The air intake and 1200kW electric heater

2 // The clean design of the Test-Fuchs PP250

3 // Customer acceptance tests at Test-Fuchs' headquarters in Austria



2

system and the precise accuracy of the parameters are greatly improved by the in-house designed valves. These operate with positioners and replaceable valve disks and feature excellent position feedback, <40ms valve actuation, 1/10,000th positioning accuracy over the operational range (a 20mm operating displacement would result in an accuracy of 2µm) and an integrated superimposed feedback control loop.

Both pneumatic and electrically controlled bleed and trim air platforms are supported. The interchange among the broad range of compatible components is fast and friendly. The designers of the PP250 engineered ways to quickly cool off the units under test (UUT) and capture the heat to reduce downtime and increase energy efficiency. They also found unique ways to improve the connection clamps to reduce risk of injury due to captured heat.

This is all evidence that operator interests and user experience have been at the forefront of this design.

The initial operation and customer acceptance test took place at Test-Fuchs' headquarters north of Vienna. This gave the advantage of fast fine-tuning by qualified technicians and resulted in acceptance within two days and a consequently short delivery period.

The aerospace industry has few limits on ambitions to push the envelope and Test-Fuchs is one of a few premium-level suppliers that has shown it provides superior aerospace test capability all over the world. Test-Fuchs has nine additional service offices in Europe and Asia and in 2017 started a second production line in Cleveland, Ohio. \

Israel Richmond is head of sales region Americas at Test-Fuchs

safety in test > safety in flight **TEST-FUCHS**

Test Equipment for Aerospace

MOBILE AND FIXED TEST SYSTEMS FOR CIVIL AND MILITARY AIRCRAFT COMPONENTS

WWW.TEST-FUCHS.COM