

Hydraulic & Hydrostatic Test Rigs

End of production test & data acquisition test rigs

Proof pressurising & deformation measurement of different hose or pipe assemblies

Performance testing of flow, pressure, temperature, rpm, torques, oil cleanliness & much more

Complete data logging and reporting

Customisable software to end user requirements

Complete turnkey service - from consultation to training



Hydrotechnik UK Ltd is one of the UK's leading test and measurement equipment distributors and manufacturers, servicing a wide range of industries since 1990.

We have extensive experience in the design, development, manufacture and commissioning of fluid power test rigs for end of production sign off or component testing. Our test rigs are used in demanding and 'mission critical' applications including defence, manufacturing quality control, plant maintenance and research and development. Users of Hydrotechnik test rigs rigorously test pumps, hydraulic hoses, moulded coolant hoses, pipes, manifolds, tanks, accumulators, valves and many other components to ensure they are fit for purpose.

Our deep understanding of pressure, temperature, flow, RPM, vibration, cleanliness & torque test and logging gives us a great insight when it comes to designing cost effective solutions for testing & proving components and systems. Our systems can easily record at the rate of 10,000 readings per second.

We can test multi channels simultaneously and provide archiving software and graphical reports. The software can be written to give simple operator led control of the test procedures and simple green/red pass or fail warnings. The operator can add testing notes, serial numbers etc, for accurate traceability.

Our engineers take a full brief from the client and tailor make a test rig and software that ensures the finished product is efficient to use and enhances productivity. Whatever your application, Hydrotechnik will deliver the right testing and measurement solution for you.



Hydrotechnik UK supply specialist test rigs to:



THE COMPLETE TURNKEY SOLUTION FROM CONSULTATION TO STAFF TRAINING

Hydrotechnik UK are here to ensure that the process from the initial discussion to installation and staff training is smooth. Our deep understanding of testing and measuring will allow us to commission the right test rig no matter what the application. You can visit the test rig at our factory whenever you please and our team will keep you up to date with the progress to ensure we meet your timeline.



INITIAL CONSULTATION

From the initial conversation with the customer our technical engineers will get a broad understanding of what you require. From the layout of your facility, your application and most importantly your testing requirements.



DESIGN & FULL BRIEF

Following on from the initial consultation we will gather key information such as planning your required workspace using our in-house 3D CAD systems. A comprehensive brief will then be put together to ensure clarity between both parties before installation takes place, including a full risk assessment.



BUILDING & INSTALLATION

The test rig will be manufactured under ISO 9001 procedures to the highest engineering standards. We will then install the test rig on site and carry out proof tests to ensure that the test rig is fully functional to agreed specifications, full electrical test, complete risk assesment and safety check.



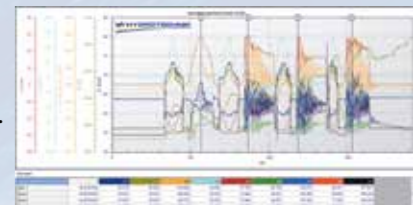
STAFF TRAINING

After installation our technical team will spend a day training users on how to operate the test equipment safely and take them through the full hardware & software procedures as required.



SERVICE

Hydrotechnik UK offer additional service programs to ensure the system is kept running smoothly and is operating at its optimum level.



End of production data logging test rig



Brief

Hydrotechnik started this project with detailed discussions with the client on the specific requirements of the testing system. The next stage of the process involved a specific brief sent through to our engineering team. They required a testing rig capable of measuring pressure, temperature, flow rate, torque and RPM for finished machine testing of the hydraulic operations.

Testing capabilities

The testing rig displays the pressure, temperature, flow rate, torque and RPM providing continual monitoring and data acquisition for the production quality team. The testing system has multi-channel connectivity with up to 16 channels, any combination of data can be recorded and archived through our HYDROcom6 software for further analysis. With universal connections fitted to the test rig a whole range of data logging equipment and instrumentation can be connected providing the manufacturer with further data and added convenience.

Data logging capabilities

Since installation the system has provided an all in one test and measurement solution, giving real time analysis to the production line enabling a traceable and efficient quality management solution. One of the unique features of the system is that the rig can be set to run but doesn't start writing data to the memory until certain key trigger points have been met, eg. a rising pressure or flow rate.

The logger will capture the data leading up to this trigger point and also record all the data after the trigger. This means the operator only captures the key information required during a test and the data is accurately recorded. This helps the operator of the rig get into position before starting the machine on test and cycling the hydraulics.

Design

All Hydrotechnik test rigs are designed using a 3D CAD system, and manufactured under ISO 9001 procedures to the highest engineering standards.



KEY FEATURES

- Bespoke fluid power test solutions
- Test rig and software design
- Measures multiple process parameters
- Fully user programmable
- Powerful diagnostic capability
- Expandable at a later date



EXAMPLE APPLICATIONS

- Production acceptance
- End of line quality testing
- Plant maintenance tests



ADVANTAGES

- Easy to use
- High quality data / reports
- Reduced downtime, increased production flow
- Rugged and reliable
- More channels can be added easily

Hydrostatic component proving test rig



Brief

After consultation with a manufacturer of formed hoses Hydrotechnik custom made a dynamic water driven hydrostatic test rig capable of both R&D and batch testing of production hoses. The rig is operator led via a touch screen control, each step is carefully controlled and all data archived for future repeatability tests.

Testing capabilities

The hydrostatic test rig was able to test the following for R&D and production purposes:

- Unified rate of rise in pressure
- Proportional control of pressure
- Endurance testing
- Burst test to capture all of the key information
- Dynamic destructive testing

Data logging capabilities

The test rig is controlled via a PLC/HMI control unit mounted on the side of the test bay. Fully calibrated sensors logging flow, pressure, temperature and hose expansion all provide signals to a real time data logging module which in turn gives in-depth analysis of the results. Development Engineers are given extra insight into to their product's behaviour. The water tank has an integral automatic feed to main water supply.

Design

All Hydrotechnik test rigs are designed using a 3D CAD system, and manufactured under ISO 9001 procedures to the highest engineering standards.

Result

After successful installation the hose manufacturer has gained a greater understanding and faster testing of the hoses they produce. This in turn has helped them win more business and rapidly proof test new product developments.



KEY FEATURES

- Unified rate of rise in pressure
- Proportionally control pressure testing
- Customised software to proof test the pressure in hoses
- Dynamic destructive testing
- Fully calibrated sensors logging flow, pressure & temperature
- Controlled via a PLC/HMI control unit mounted on the side



EXAMPLE APPLICATIONS

- Hydraulics & Pneumatics
- Industrial Machinery
- Plant Engineering
- Refrigeration & HVAC
- Automotive



ADVANTAGES

- User friendly operation
- Analyse data trends for proof component testing
- Display and processing of several channels or measurement series
- Full traceability of tested parts
- Fast acquisition of measurement values

Manual pressure test rig

Brief

Hydrotechnik were briefed to design, build and commission a water pressure test rig for testing & data logging of valve leakage & pressure integrity up to 15,000psi for a UK based plumbing, heating & engineering product manufacturer. The rig is now an integral part of their development testing.

Testing capabilities

Manual pressure build up with coarse, fine & super fine pressure adjustments. Two pumps work to provide accurate testing, the hand pump with a dual output displacement is used to purge and bleed through the test piece. The second screw type pump has a very fine pressure increase allowing for more accurate pressure controls. Both pumps installed in the testing rig allow the engineers to test the equipment to extreme pressures ensuring that every product meets rigorous safety checks.

Data logging capabilities

With the vast amount of pressure testing needed for these products, a large volume of data is analysed and archived for future tests. With full data logging capabilities, the Hydrotechnik MultiHandy 3020 three channel data logger provided is able to measure and record in a user friendly manner in fitting with the simple operation of the rig itself.

Design

All Hydrotechnik test rigs are designed using a 3D CAD system, and manufactured under ISO 9001 procedures to the highest engineering standards.



KEY FEATURES

- Component and hydrostatic test solutions
- Test rig and software design
- Measures customised process parameters
- Fully user programmable
- Portable/Fixed data logging instrumentation
- Low cost



EXAMPLE APPLICATIONS

- Production acceptance
- End of line quality testing
- Plant maintenance tests



ADVANTAGES

- Easy to use
- High quality data / reports
- Low Cost
- Rugged and reliable

High pressure hydrostatic test rig

Brief

After initial discussions with our client it was confirmed that the pressure test rig required 3 test bays for component testing. Each of these test bays would be supplied by one pump and therefore will have the same pressure in each. On top of these requirements the rig needed to be housed in a lockable room during tests. The test rig is controlled from outside of the test facility for safety reasons.

Testing capabilities

The test rig's primary function is to control the water and the air supplied to the pump for testing components. Hydrotechnik supplied a high pressure test rig capable of measuring 15,000psi in various stages up to a maximum of ten cycles up and down allowing to test water and 90psi air to the pump. Data is logged continually during the tests at 10,000 readings per second to ensure all pressure spikes and events are captured.

The stand-alone frame with a high pressure pump provides proportional air control via an advanced PLC/HMI remotely mounted outside of the test room.

Data logging capabilities

Hydrotechnik pressure transducers and data logger certified to national standards, provides powerful operational data to archive and use for repeatability tests and provided valuable traceability for tested products.

Design

All Hydrotechnik test rigs are designed using a 3D CAD system, and manufactured under ISO 9001 procedures to the highest engineering standards.



KEY FEATURES

- Cyclical pressure testing for water and air in pumps
- Telemetry controlled via a PLC/HMI mounted outside of the test room
- Online recording mode for real time display and logging of tests to a PC
- Data is logged continually during the tests at 10,000 readings per second



EXAMPLE APPLICATIONS

- Hydraulics & Pneumatics
- Industrial Machinery
- Plant Engineering
- Refrigeration & HVAC
- Automotive



ADVANTAGES

- User friendly operation
- Analyse data trends for proof component testing
- Display and processing of several channels or measurement series
- Cyclical testing for product proof testing
- Fast acquisition of measurement values

Specialists in high performance test & measurement solutions



Pressure



Flow turbines



Gear flow meters



Load



Infra red RPM



Inductive RPM



Temperature



Tension



Torque



Displacement



Particulate



Triaxial Vibration



Repair & Calibration

We offer a full repair service and calibration / certification using UKAS certified test equipment.

Call us on **0800 068 4134** for more information and to obtain our other brochures:



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