

High-speed pressure peak capture in hydraulic systems scan and record 10,000 readings per second, advanced peak capture triggers

Pressure peaks or sudden spikes are very damaging to hydraulic systems. Understanding when they occur and what happened in the run up to a system spike can help eliminate the root cause which in turn will lead to a more reliable system and can help prevent premature system and component failures.

Rapid opening and closing of valves and solenoids in hydraulic systems can generate rapid high frequency pressure spikes and transients that may last from a few microseconds to hundreds of milliseconds. The amplitude of these fast moving transients can be up to 20 times the rated pressure of a system, and can lead to fractured pipework, damaged valves, leaking seals and other critical component failures.



PR400 series high speed pressure sensor
10,000 readings/second (10 KHz)

High-speed data capture can reveal a whole new level of data insight into the performance of complex hydraulic systems.

Hydrotechnik have launched a new high speed pressure transducer and associated logging equipment to enable the capture of pressure peaks as well as parameters such as flow rates, temperatures etc. at the same time as the pressure peak.

The new PR400 transducers offer a 10 fold increase in response time, they have a scanning and transmission rate of just 0.1 milliseconds (ie. 10,000 readings per second).

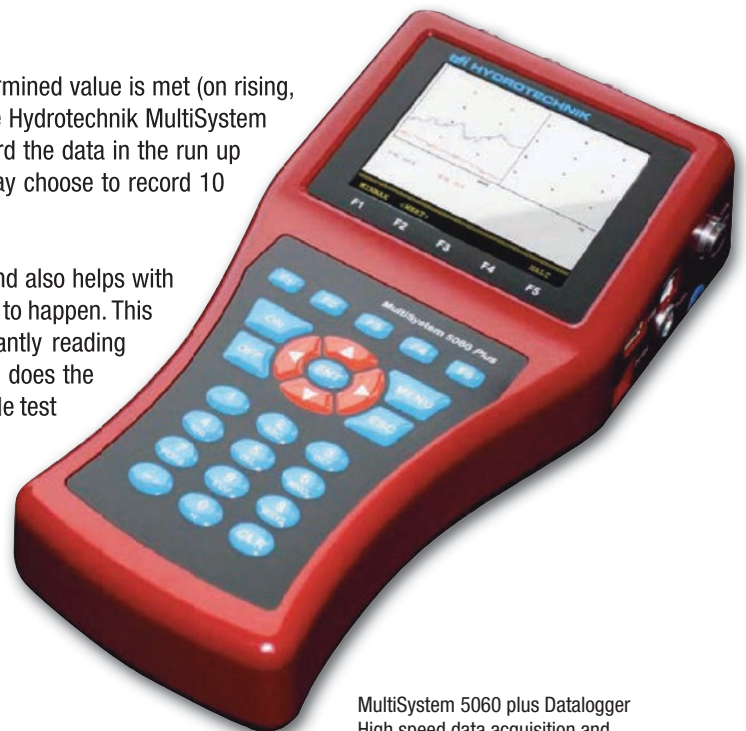
Stainless steel construction and available in 60, 200, 400 & 600 bar versions (burst pressure rated at 2.5x max working pressure), all with 10kHz response time are part of this advanced measurement range developed for the hydraulics market.

Advanced scanning and trigger functions

Recording can be programmed to start automatically when a pre determined value is met (on rising, falling, greater or lower than a selectable pressure value etc.) with the Hydrotechnik MultiSystem 5060 or 8050 series of datalogger. Cleverly, the system also can record the data in the run up to the event so the entire episode is captured. For example a user may choose to record 10 seconds before and 10 seconds after the trigger point is reached.

This will prevent the engineer having to read through reams of data and also helps with memory storage as well as saving on time, waiting around for an event to happen. This innovative technology is very smart, as the datalogger unit is constantly reading and recording data all the time, but only when the trigger is breached does the instrument commit it to the stored memory. This can be saved as a single test or with cyclic recording.

Being able to capture data at these incredibly high, faster scanning rates gives engineers a deeper understanding of their hydraulic systems and can highlight higher pressure & faster occurring peaks than previously thought.



MultiSystem 5060 plus Datalogger
High speed data acquisition and
advanced trigger functions

High-speed pressure peak capture in hydraulic systems

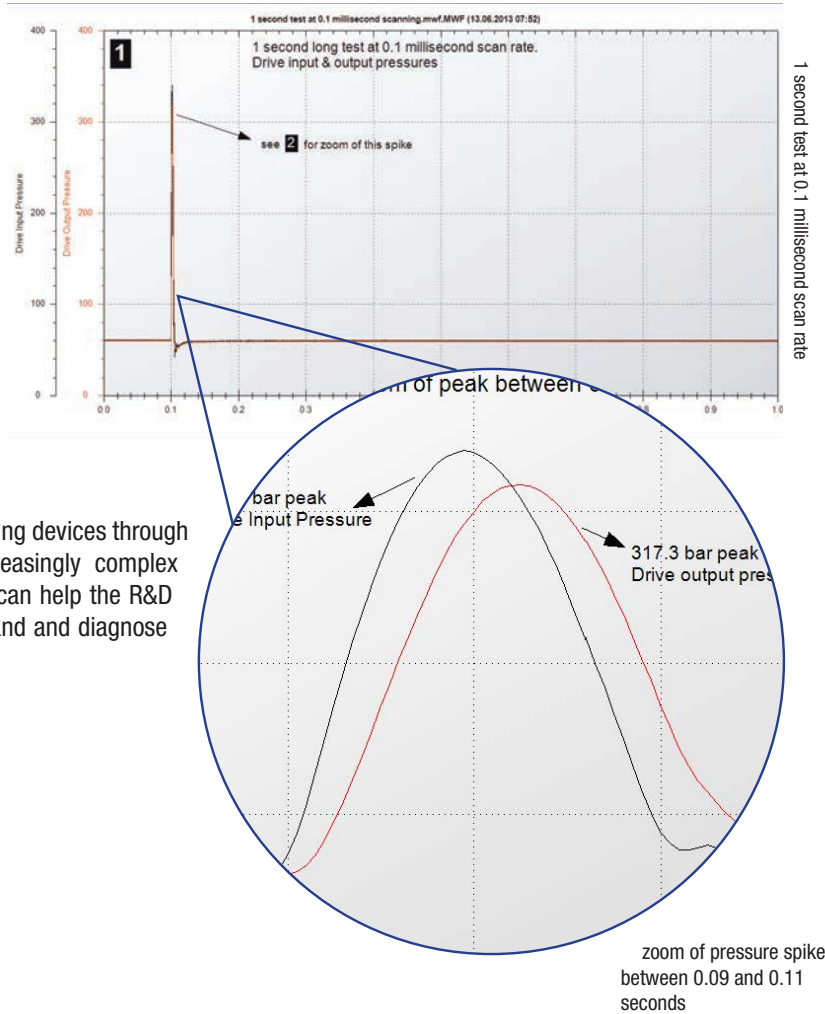
scan and record 10,000 readings per second, advanced peak capture triggers

All Hydrotechnik equipment is supplied with our highly renowned software analysis program HYDROcom 6 which allows Engineers to analyse, diagnose and report on the performance of their systems.

Data can be viewed in graphic, tabular & statistical formats with drag and drop functionality with simple windows explorer file management.

Peaks and system events can be zoomed for deep analysis and test results can be overlaid on top of one another to check for consistency or against a performance benchmark. All raw data can be exported to excel, presentations copied to clipboard for quick pasting in to word and pdf's or reports created from HYDROcom 6 itself.

Applications from aerospace, formula one and destructive testing devices through to agricultural and earth moving machinery all have increasingly complex hydraulic systems and data capture with pin point accuracy can help the R&D Service Engineer or end of production Test Manager understand and diagnose issues more quickly.



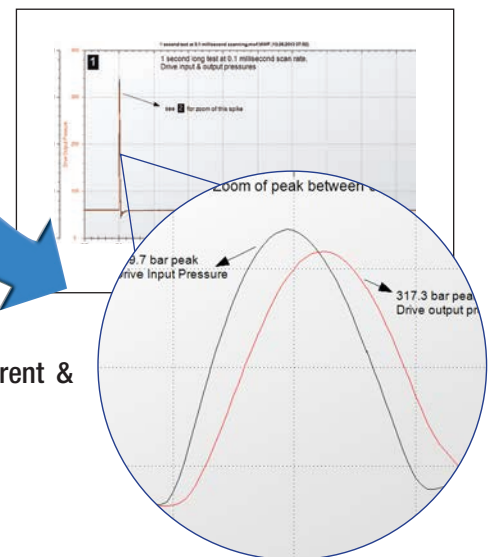
PR400 series high speed pressure sensor



MultiSystem 5060 plus Datalogger



HYDROcom 6 analysis software



Hydrotechnik have over 25 years experience in the test & data acquisition of hydraulic systems. Digital instruments from 1 channel up to 48 channels are available with a constantly expanding range of measurement sensors for pressure, flow, temperature, RPM, displacement, force, vibration, oil cleanliness, voltage, current & much much more. Pressure datalogging kits start as low as £500 now live.