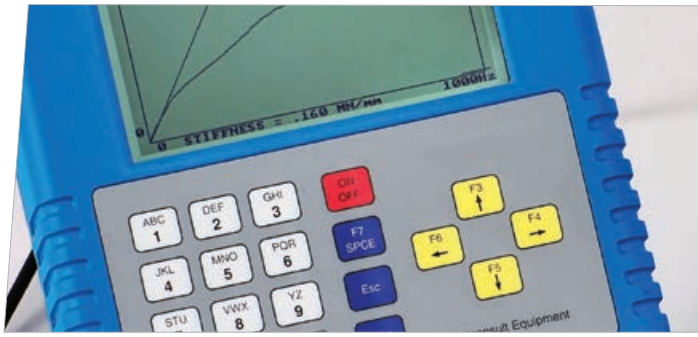
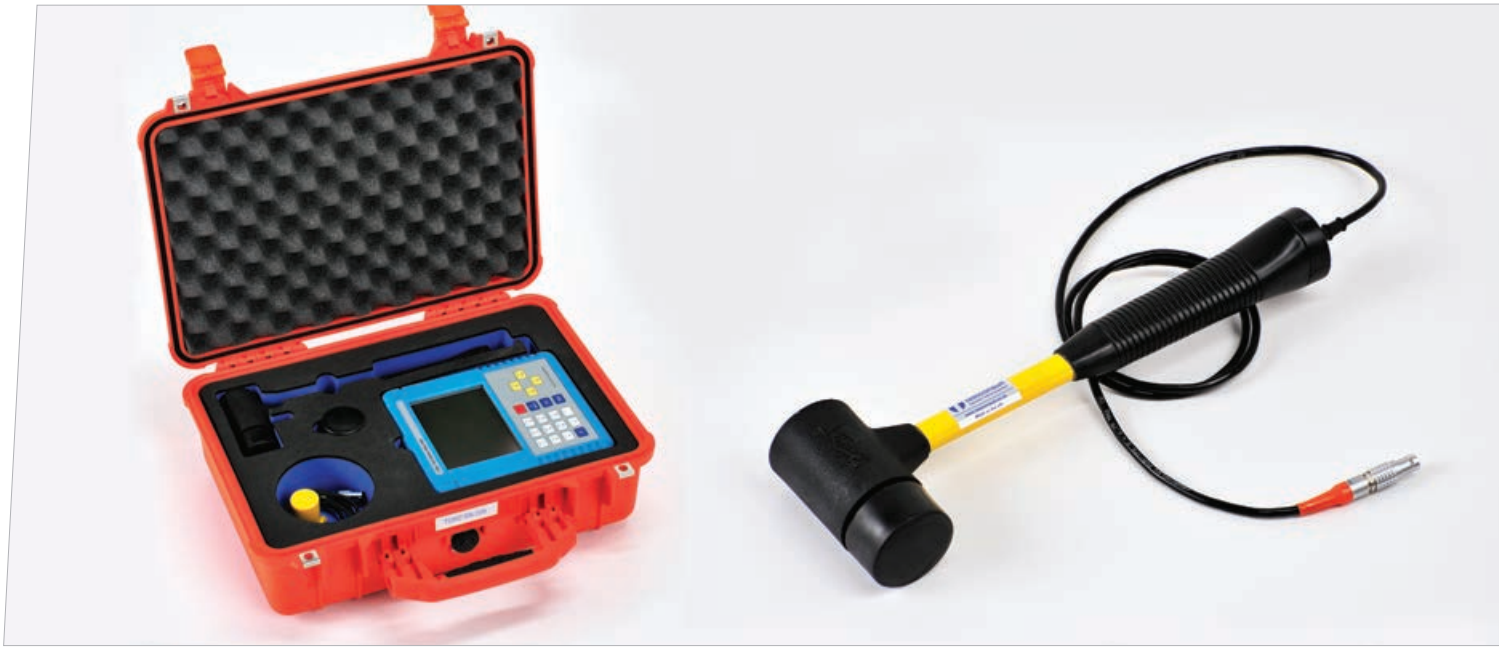
TDR2-2

Concrete slab tester





The TDR2-S is a rugged and lightweight system used to assess the condition and support of concrete flooring slabs.

The TDR2-S unit uses solid state memory with a user friendly menu system that is easy to navigate for a rapid display of data in an easy to comprehend format. Data is transferred to the systems TPAP Windows based, analysis software through a USB interface.

Built for security and speed of operation the unit is housed in a tough ABS plastic casing with high quality waterproof connectors, and a handy carry pouch is supplied as standard.

Typical applications include checking for voids under factory floor slabs or highways and also monitoring grouting.

Software

The TPAP-slab software provides an easy to navigate platform for analysing results and reporting.

Slab tests are tabulated and automatically sorted into numerical order, from which test results can be directly accessed. All data can be exported in ASCII format for further analysis and contour plotting.

Benefits

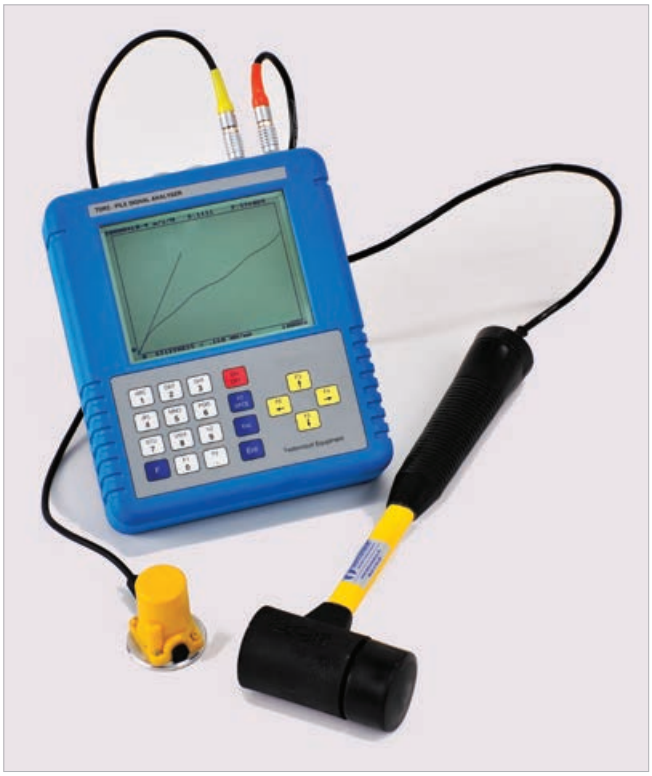
- Rapid mapping of subsurface voids and areas of delamination
- On-site analysis of concrete slab stiffness
- Software for calculating stiffness and mean mobility of slab
- Operates for up to 8 hours on full charge
- Storage for over 700 results
- James Fisher Testing Services complete test service available

How it works

This frequency response method is based on measuring the harmonic response of a slab to a point of impulse of known magnitude. The mobility of the slab at low frequency and the general form of the response is a direct function of slab support and integrity.

The TDR2-S system excites the slab with a known impulse and measures the response with a velocity transducer.

The signals are processed using a fast fourier transform and analysed for dynamic stiffness and mean mobility. The results can then be mapped out to locate voiding or poor support.



All of our equipment is supplied fully calibrated to UK national standards.

TDR2-Slab unit	
Features	Twin channel hand held spectrum analyser Daylight viewable screen Tactile large keys for operating with gloves Low power with long battery life Flash memory for instant start up and power down On site length and stiffness measurement Rugged lightweight unit with waterproof connectors
Keypad	Sealed, colour coded and full alphanumeric keypad, tactile and audio feedback
Operating temperature	0°C to +50°C
Display	Monochrome LCD transflective with backlight Contrast keypad adjustable Display area 122mm x 70mm Protective anti-reflective glass
Acquisition	2 channel, 16 bit acquisition at 25KHz sample rate Pre-trigger on both channels, auto-ranging gain feature
Frequency range	0Hz to 5000Hz
Storage	700+ results, 3 data sets per test with full header information including site, test no, operator, transducers and date/time stamp
Displays	Velocity vs time Force vs time Force vs frequency Mobility vs frequency
Accuracy - black tip	Frequency: 0-1000Hz ±0.5% Mobility: 20-800Hz ±15% Mobility: 800-1000Hz ±50%
Power	Battery: 1.2V NiMH rechargeable AA cells Auto power off and battery indicator
Battery life	8 hours + on full charge
Charge time	Approx 6 hours
Charging	External wall plug-in charger for 100/110/250VAC inputs (trickle charge) External cigar plug-in charger 12VDC inputs (fast charge)
Dimensions	L 21mm x W 187mm x D 55mm
Weight	1.35kg

Impulse hammer	
Type	Constant current load cell
Weight	1.2kg with fibre glass shaft
Nominal ou put	0.15 volts/N8 hours
Frequency range	0-1000Hz (black tip) 500-5000Hz (aluminium tip)
Range	0-10,000N

Geophone	
Type	Vertical SM-6
Natural frequency	4.5Hz
Nominal output	30 volts/m/sec
Operating temperature	-30°C to +60°C

TDR2-S user training

We provide full training for all equipment purchased from JFTS. Our training sessions are created and led by our in-house experts, providing you with the skills and knowledge needed to operate the equipment safely, efficiently and with confidence.

We offer classroom and site training within the UK, on-site training overseas and virtual classroom training. No matter what your needs or technical experience we can provide the right training solution for your requirements.