

TRANSDUCERS

Ultrasonic Transducers for Materials Testing



The world's widest range of ultrasonic transducers and accessories for ultrasonic pulse velocity materials testing applications.

Transducer frequency ranges from 24kHz to 1MHz.

Waterproof and underwater options available.

Wheel probes for continuous testing on site or in a production environment.

Transducers for general use

Use lower frequency transducers for large, dense, non-homogeneous samples and higher frequencies for smaller, less dense, more homogeneous samples. The general guidelines are:

- Concrete: 24-150kHz
- Timber: 150-220kHz
- Ceramics: 24-220kHz
- Graphite: 200kHz-1MHz
- Cast Iron: 1MHz

Standard Transducers

Manufactured from stainless steel and fitted with a BNC coaxial connector.

Stock Code	Nominal Frequency	Dimensions
UTR24KHZ	24kHz	50mm dia x 96mm long.
UTR37KHZ	37kHz	50mm dia x 50mm long.
UTR54KHZ	54kHz	50mm dia x 38mm long.
UTR82KHZ	82kHz	33mm dia x 34mm long.
UTR150KHZ	150kHz	25mm dia x 34mm long.
UTR200KHZ	200kHz	20mm dia x 34mm long.
UTR220KHZ	220kHz	6mm dia tip, 13mm dia body, 60mm long (including connector).
UTR500KHZ	500kHz	6mm dia tip, 13mm dia body, 60mm long (including connector).
UTR1MHZ	1MHz	15mm dia x 67mm long (including connector).

Operating temperature range for all the transducers is 0-70°C.

A waterproofed option is available on the 24, 37, 54kHz transducers by special order for applications requiring use in very wet conditions or immersion up to 1m depth.



37, 54 and 24kHz Transducers



150, 200 and 82kHz Transducers

Logging Transducers

With integrated switch to trigger data logging, for use with the PUNDIT*plus*. Manufactured from stainless steel and fitted with a two pin BNO coaxial connector.

Stock Code	Nominal Frequency	Dimensions
UTR24KHZA	24kHz	50mm dia x 112mm long.
UTR37KHZA	37kHz	50mm dia x 66mm long.
UTR54KHZA	54kHz	50mm dia x 54mm long.

Special Purpose Transducers

Manufactured from stainless steel and fitted with standard BNC coaxial connectors.

Stock Code	Nominal Frequency	Dimensions
UTR82KHZWP	82kHz	33mm dia, waterproof with 600mm long stem.
UTR150KHZWP	150kHz	25mm dia, waterproof with 600mm long stem.
UTR54EXTX UTREXRX	54kHz	Exponentially shaped probes for use on very rough or curved surfaces to avoid the need for surface grinding or the use of very thick couplants. 38mm dia x 120mm long. TX: 6mm dia flat tip. Should only be used with UTREXRX RX: 6mm dia rounded end. Supplied with amplifier and 0.5m cable and may be used with any other 54kHz transmitting transducer.
UTR1MHZ & BOX	1MHz	P&S wave (plane and shear) transducers for testing sedimentary or igneous rock samples in a compression test rig. 50mm dia x 50mm high, 2 x BNC connectors, Maximum load 220kN. A pair of P&S wave transducers is supplied complete with switching box and four 1.8m leads.
UTR370KHZWP	370kHz	80mm dia x 34mm wide rubber tyre.
UTR1MHZWP	1MHz	25mm dia x 10mm wide rubber tyre.

Other options are available to special order for alternative connectors, deep sea use, load bearing and many other applications.

ACCESSORIES

- A range of amplifiers and attenuator options is also available for use in early-age concrete testing applications and for use with long cables.
- Cables from 0.5m to 30m long can be supplied from stock but can be made to any length.
- Couplants for many applications can be supplied: gel, grease, rubber pads, and more.



54kHzA Transducer



Exponential Transmitter, Receiver and Amplifier



P & S Wave Transducer



370kHz and 1MHz Wheel Transducers

CNS Farnell Limited, Elstree Business Centre, Elstree Way, Borehamwood, Hertfordshire, England, WD6 1RX
Telephone: +44 (0) 20 8238 6900 Fax: +44 (0) 20 8238 6901
E-mail: sales@cnsfarnell.com Website: www.cnsfarnell.com