

High Performance Ultrasonic Transducers

For Ultrasonic Contact / Immersion Testing, Thickness Measurement, Concrete Testing, Material Evaluation / Characterisation

COMPREHENSIVE & PRECISE ULTRASONIC SYSTEM

The success of Ultrasonic technique depends heavily upon the capability of a transducer to function in accordance with a particular application. RTUL has truly evolved reliable high performance transducers for all Ultrasonic applications. Realising the need for high efficiency transducers and inspired by the sheer dedication to the improvement of ultrasonic testing standards, RTUL proudly announces a series of high efficiency ultrasonic transducers. RTUL offers one of the most comprehensive selection of ultrasonic transducers that encompasses all non-destructive testing, medical and process applications. These are some of the highlights of RTUL transducers.

DESIGN : To cover all applications distinct series are offered. Each series is characterised by its own unique set of optimum acoustic and electrical parameter. A novel dual damping concept is featured in each transducer type.

MATERIALS : The selection and formulation of each transducer undergo strict laboratory criteria of testing and assembly. This has eliminated problems such as weak housing, weak bonding etc. RTUL transducers surpass all other commercially available units in wear and impact resistance. RTUL transducers are not only longer lasting but also are highly suitable to rugged application.

FABRICATION : For precise location of discontinuities special techniques have been developed that assure perfect alignment of geometric and acoustic centres.

Transducers in the following series are available

W-SERIES : W-Series represents wide frequency. The transducer of this series represents high signal to noise ratio, high resolution and narrow initial pulse. W-Series transducers are recommended for thickness gauging and close surface material inspection.

K-SERIES : K Series stands for characteristic transducers. Transducers of this series have high sensitivity, moderate signal to noise ratio and high penetration. They are tuned to a particular frequency and are suggested for deep material penetration, bulk body defects resolution, shearwave applications and investigation of attenuative media.

P-SERIES : P Series represents Panacea Transducers. P series transducers have response falling between W and K series. They have sensitivity closer to K series and Resolution closer to W Series making them ideal for all general purpose NDT applications.

N-SERIES : This new series has features like low initial ringing offering better near surface resolution, sharp echos for higher overall resolution, high signal to noise ratio in coarse material and high reserve gain.

ACCESSORIES

RTUL offers wide selection of transducer accessories. It includes Wedges of different angles, Radiused Wedges for inspection of curvature objects, Cables with numerous connector combinations, Connector adaptors, Testing and calibrating blocks, Reference standards, Step blocks, Search tubes for immersion testing and various types of couplants.

Types of Transducers.

1) High Efficiency Straight Contact Transducers (W,P,K, Series).

For all thickness gauging, flaw detection, dimensional analysis and general purpose NDT, RTUL offers a wide variety of straight contact hard face transducers from 2mm to 50mm diameter in frequency range of 25 KHz to 25 MHz. Typical feature of these devices are hard corrosion resistant stainless steel cases and low loss pure alumina wear faces



2) Replaceable Face Straight Contact Transducers (P,K Series)

Replaceable face transducer from RTUL are designed to solve the majority of contact applications. Three different interchangeable facings are feasible with the same basic transducer. The option includes a flexible membrane, for rough surface, a delay line for thickness gauging and high temperature application and wedge for angle beam testing. The replaceable transducers are available from 10mm to 50mm diameter and in frequency range of 0.4MHz to 5 MHz. The transducer handling has been made easy with the built-in metal flare.

3) Anglebeam and Shearwave Transducers (P,K, Series)

RTUL offers a wide variety of anglebeam transducers for the inspection of welds, plates and pipes. These include standard, miniature and built-in wedge type anglebeam. For economy, the standard and miniature transducers are used with removable plexiglass refracting wedges.

4) Delay Line Transducers

For thickness gauging of plates and, flaw detection of spot welds and bond testing RTUL presents a wide variety of delay line transducers in which disturbances from initial pulses are significantly reduced. Delay lines for ambient and high temperature use are separately available. Continuous use of high temperature delay line transducer is recommended to about 200°C, while intermittent operation

6) High Efficiency Immersion Transducers (W,P,K, Series)

For the inspection of tubes, pipes, plates, bars, raw and finished components in the immersion media, RTUL presents the most comprehensive selection of submersible ultrasonic transducers. Each immersion transducer is most skillfully crafted by the application of highest grade components, thus yielding the ultimate transducer performance and unsurpassed service life even under rough environment.

7) Zero Degree Shearwaves Transducers

RTUL offers nearly perfect and pure shearwave transducers for materials research, velocity measurement and so on. Transducers are available both in direct contact.

8) High Temperature Transducers

RTUL offers various types of high temperature transducers for flaw detection, thickness gauging, corrosion monitoring etc. Contact transducers available up to 200°C, dual & angle probes up to 400°C, and delay line probes up to 1000°C.

9) Dry Coupling Transducers

To meet application of thickness gauging and bond testing in plastics, glass, composites, teflon etc. and where couplants may be objectionable. RTUL offers a wide range of dry coupling transducers.

Apart from above RTUL designs and supplies custom built Transducers for specific applications.

NOTE: Technical specifications are subject to change without prior notice, due to continuous upgradation.

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