



WB 70-1

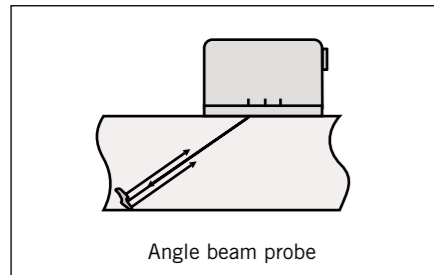
Angle Beam Probes

These probes operate with one transducer which transmits pulses (transverse waves) into the test object at a defined angle to the surface and receives the



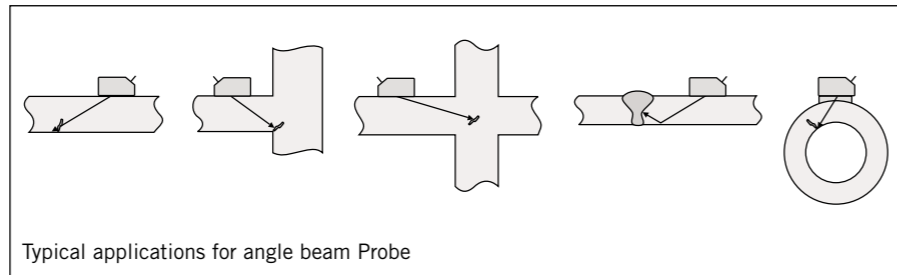
MWB 45-4

reflected pulses at the same angle (fig. 5). They are suitable for detecting and evaluating inclusions, as well as flaws which are located vertically or at an angle to the surface, within the complete volume of the test object; this especially applies to weld testing (fig. 6). The angle of incidence must be selected according to the flaw location (generally angles of 45°, 60° and 70° are used).



Angle beam probe

Fig.: 5



Typical applications for angle beam Probe

Fig.: 6

Type	* Frequency (MHz)	Transducer size (mm x mm)	Case size		
			length	width	height (mm)
WB 35-*	2, 4	20 x 22	53.5	29	45
WB 45-*	1, 2, 4		53.5	29	45
WB 60-*	1, 2, 4		53.5	29	45
WB 70-*	1, 2, 4		53.5	29	45
WB 80-*	2, 4		53.5	29	45
WB 90-*	2	53.5	29	45	
MWB 35-*	2, 4	8 x 9	27	15	22
MWB 45-*	2, 4		27	15	22
MWB 60-*	2, 4		27	15	22
MWB 70-*	2, 4		27	15	22
MWB 80-*	2, 4		27	15	22
MWB 90-*	4		27	15	22

If the probes mentioned are not suitable for the test job we can offer, mostly from stock, other types of probes, e.g. highly damped probes, immersion

probes, longitudinal wave angle beam probes etc., or even produce a special probe. Our product range contains thousands of different probes.

If it is possible to solve a problem, we have the appropriate probe for the job. Put us to the test, call us now!

Krautkramer Probes

for daily applications



Probes for reliable ultrasonic testing

This brochure gives an overview into the most widely used probes in everyday testing. The types mentioned here are classified as standard equipment for ultrasonic testing and should always be available.

They are characterized by having a high degree of reliability, ruggedness and

precision so that the narrow data tolerances stated in the data sheets can be guaranteed. All requirements are therefore met for a reliable test, especially regarding reproducibility of test results.

Each probe is subjected to stringent quality control tests. The data obtained are stored under the individual probe number

and, if required, a probe certificate (PZE) with these data can be supplied. On request, most of the probes can be delivered with technical data as specified in DIN 25450.

TR-Probes

These probes have two transducers, one for pulse transmission and the other for receiving the reflected pulses (fig. 1). This type of probe is used for detection and evaluation of near-to-surface flaws as well as for remaining wall thickness measurements on parts which are eroded on the rear or inside (fig. 2).

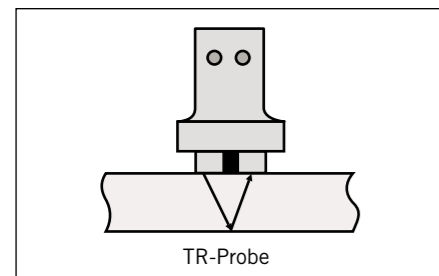


Fig.: 1

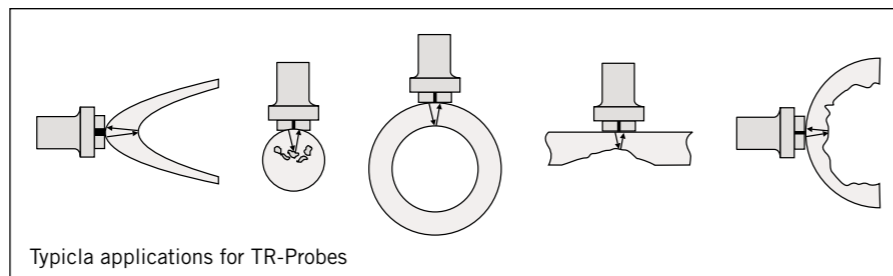


Fig.: 2

In addition to the handy **SEB*** and **MSEB*** series probes there are the fingertip probes of the **SEB*KF** series, which are flat and therefore suitable for testing in limited space.



Type	* Frequency (MHz)	Transducer size ¹⁾ (mm)	Case size Ø (mm) height (mm)	
SEB*	1, 2, 4	6 x 20 or 7 x 18	45	65
MSEB*	2, 4, 5	3 x 10 or Ø 8 (halved)	25	45
SEB*KF	2, 4, 5, 6, 10	Ø 7 or Ø 5 (halved)	13	17

¹⁾ Dependent on Frequency



B1S



B 2 F



MB 4 F



K 5 K



K 4 N

Straight Beam Probes

These probes have a single transducer which transmits the ultrasonic pulses (longitudinal waves) vertically into the test object and receives the returning reflections (fig. 3). They are suitable for detection and evaluation of flaws which are located vertically to the beam direction (cracks or bonding defects) (fig. 4).

Probes from the **B*S** and **MB*S** series are fitted with flexible protective membranes which are exchangeable and enable good coupling, even on rough surfaces. The **K*G**, **K*N**, **K*K**, **B*F** and **MB*F** series probes, with hard non-abrasive protective faces (e.g. aluminum oxide), have high signal amplitudes and short pulses (improved resolution). These characteristics are of special advantage when testing smooth surfaces. However, they are used on rough surfaces when, for example, the flexible protective membranes of the **B*S** and **MB*S** series probes would be cut by sharp edges on the test object.

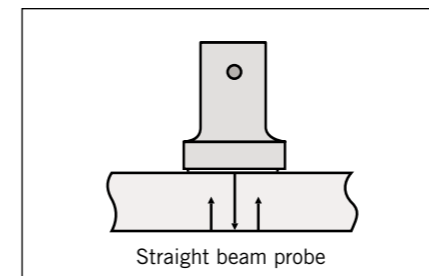


Fig.: 3

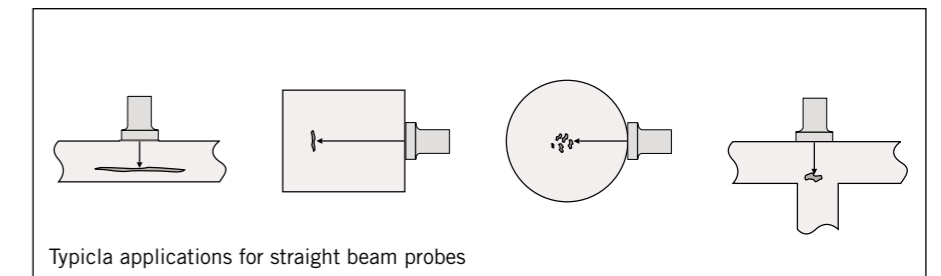


Fig.: 4

Type	* Frequency (MHz)	Transducer size Ø (mm)	Case size Ø (mm) height (mm)	
B+S	1, 2, 4, 5	24	45	59
MB*S	2, 4, 5	10	25	43
K*G	1, 2, 4, 6	24	45	60
K*N	2, 4, 6, 10	10	25	43
K*K	2, 5, 10, 15	5	11	17
B*F	1, 2, 4, 5	20	31	15
MB*F	2, 4, 5, 6, 10	10	19	15