

# DA Series Probes

## Ultrasonic Wall Thickness Probes

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# Part Numbers and Technical Specifications



Probe	Order number	Meas. range in mm steel	Contact face dia. in mm	Frequency in MHz
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## For standard applications

DA 301	56904	1.2 - 200	12.5	5
DA 311	57566	1.2 - 200	12.5	5
DA 401	58637	1.2 - 200	12.5	5
DA 411	58857	1.2 - 200	12.5	5
DA 451	59167	1.2 - 200	12.5	5
DA 461	59170	1.2 - 200	12.5	5



## With small wall thicknesses

DA 312	56906	0.6 - 50	7.5	10
DA 412	58638	0.6 - 50	7.5	10
DA 462	59171	0.6 - 50	7.5	10



## With very large wall thicknesses

DA 303	56905	5 - 300	16.1	2
DA 403	58639	5 - 300	16.1	2
DA 453	59168	5 - 300	16.1	2



## With high sound attenuation

DA 0.8G	66501	5 - 60	28.5	0.8
DA 408	58644	5 - 60	28.5	0.8
DA 458	59169	5 - 60	28.5	0.8



## With special requirements

DA 312 B16	66934	0.7 - 12	3.0	10
DA 312 B29	68120	0.7 - 12	3.0	10
KBA 525	100058	0.6 - 25	5.0	10
FH 2 ED REM	100059	0.75 - 50	9.6	7.5
TC 560	100619	1.5 - 200	15.9	5



## With high component temperatures

DA 305	56911	4 - 60	16.0	5
DA 315	57167	5 - 150	16.0	2
DA 317	57168	2 - 80	12.5	5
DA 319	57169	1.0 - 15	7.5	10
HT 400	14774	1.2 - 250	12.7	5
HT 400 A	14775	1.0 - 300	12.7	5

### Especially recommendable with:

- Applications including documentation (dialog probe with individual serial number, V-path correction)
- Wall thickness measurements through paint coating (DualMulti) using the DM 4
- Measuring accuracy requirements despite angled wear of the sole (zeroing on both sides)
- Measuring and repeat accuracy requirements (linearity and temperature compensation)
- Measurements on plastics (zeroing with probe uncoupled)
- rough or curved coupling faces (zeroing with probe uncoupled)

Operating temp. in °C	Cable	Zeroing				Operating conditions
-20 – +60	DA 231	ON-Block	•	•		
-20 – +60	DA 233	ON-Block	•	•		Connection on top
-20 – +60	DA 231	OFF-Block	•	•	•	•
-20 – +60	DA 233	OFF-Block	•	•	•	•
-20 – +60	DA 231	ON-Block	•	•	•	•
-20 – +60	DA 233	ON-Block	•	•	•	•
						Connection on top
-20 – +60	DA 235	ON-Block	•	•		
-20 – +60	DA 235	OFF-Block	•	•	•	•
-20 – +60	DA 235	ON-Block	•	•	•	•
						for thin-walled materials
						for thin-walled materials
						for thin-walled materials
-20 – +60	DA 231	ON-Block			•	
-20 – +60	DA 231	OFF-Block	•		•	•
-20 – +60	DA 231	ON-Block	•	•	•	•
						with average sound attenuation
						with average sound attenuation
						with average sound attenuation
-10 – +60	DA 231	ON-Block			•	
-10 – +60	DA 231	OFF-Block	•		•	•
-10 – +60	DA 231	ON-Block	•	•	•	•
						with high sound attenuation
						with high sound attenuation
						with high sound attenuation
-20 – +60	fixed 1.5 m	ON-Block	•	•		
-20 – +60	fixed 1.5 m	ON-Block	•	•		
-10 – +55	fixed 1.2 m	OFF-Block			•	
-10 – +55	fixed 1.2 m	OFF-Block	•		•	•
-10 – +55	KBA 531 A	OFF-Block			•	•
						with heavy backwall corrosion
						with heavy backwall corrosion
						with heavy backwall corrosion
						with integrated SEND key
						Auto-C and TopCOAT (only DMS 2TC)
10 – +600	DA 235	ON-Block		•		
25 – +300	DA 233	ON-Block		•		
25 – +300	DA 233	ON-Block		•		
25 – +300	DA 233	ON-Block		•		
10 – +530	KBA 535/536	OFF-Block			•	•
10 – +530	KBA 535/536	OFF-Block			•	•
						with extremely high temperatures
						with high temperatures
						with high temperatures
						with high temperatures
						large measuring range with very high temperatures
						as with HT 400, only for DMS 2 (incl. A-scan)

**ON-Block:** Zeroing with probe coupled

**OFF-Block:** Zeroing with probe uncoupled

**Auto-C:** Automatic determination of sound velocity  
(special function with the DMS 2TC)

**TopCOAT:** Determination of paint coating thickness and of  
wall thickness of the base material in one operating step  
(special function with the DMS 2TC)

**DualMulti:** Determination of the base material's wall  
thickness under a paint coating by means of a multiple  
echo sequence (DM 4, DM 4DL, DMS 2, DMS 2TC)

# A great number of probes - A great number of applications.

## The tasks...

...of wall thickness measurements vary greatly in the individual applications. They include both components subject to wear and precision parts of all kinds – made of the most different materials. Corrosion, for example, is measured on pipelines, pressure vessels, storage tanks, materials handling systems, pumps, bridges, cranes, shipbuilding and structural steel engineering facilities. Additional precision measurements are carried out in the field, for example in the automotive industry, as well as in the plastic, ceramic, and sheet metal production. Only to mention a few examples.

## ... and the probe range.

The large variety of applications is made possible by the vast selection of probes that we have tailored to each application case.

### For example: dialog probes.

Intelligent dialog probes are automatically identified by the corresponding instruments and ensure optimum settings as well as an improved test reliability.

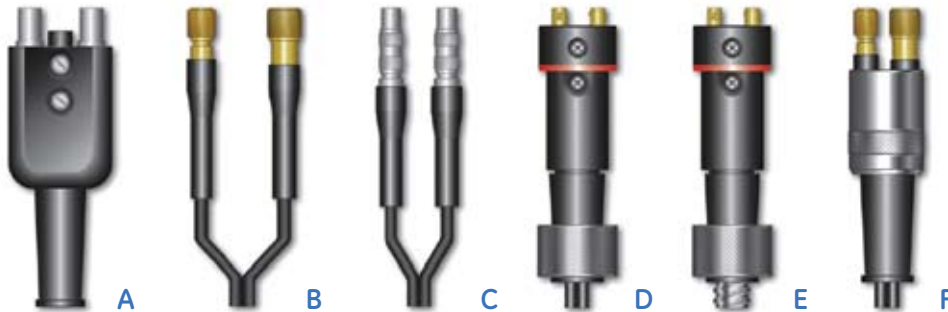
### For example: high-temperature probes.

Our program includes special probes for thickness measurements on hot components, suitable for temperatures up to 600°C – so that your readings remain stable and accurate.

## Other probes ...

- For materials showing high sound attenuation (cast materials, plastics, rubber)
- With reduced contact face and of small design for complicated geometries
- For the measurement of very small wall thicknesses and individual corrosion spots
- With integrated remote-control key for the direct storage of readings
- For special applications on request: e.g. immersion technique, shaped housings, etc.
- For use in hazardous areas

## Cables and Connections



Cable	Code	Length
DA 231	A --- A	1.5 m
DA 233	A --- C	1.5 m
DA 235	A --- B	1.5 m
KBA 535	A --- E	1.2 m
KBA 536	A --- D	1.2 m
KBA 531 A	A --- F	1.2 m

## Couplants and Calibration Blocks

ZG-F (2.5 kg)	Universal coupling paste	Thixotrope paste, non-drip, washable, non-corrosive, neutral in reaction; temperature range: -20°C to +100°C (-4°F to +212°F); in a 2.5 kg container. Also in batches of 5 bottles, each containing 200 cm <sup>3</sup> , refillable
ZGT	Multi-grade coupling paste	Medium viscosity paste, water-resistant, non-corrosive, universally applicable; temperature range: -30°C to +250°C (-22°F to 482°F); in 100 g tubes.
ZGM	High-temperature coupling paste	High viscosity paste, with solid filling, specially made for wall thickness measurements on hot parts; temperature range: +200°C to +600°C (+392°F to +1112°F); in 100g tubes.
VW	Stepped calibration block	For the function control of thickness gauges, also including certificate.



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