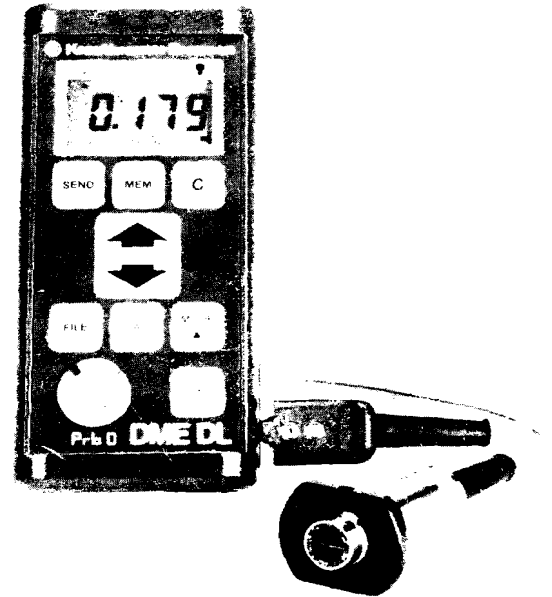




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# **DME DL**

## **Operating Manual**

## 5.1 DME DL Specifications

Operating Principle:	Ultrasonic, pulse-echo measurement method
Thickness Measuring Range:	0.025 inch to approximately 12.00 inches; 0.60 mm to approximately 300.0 mm; depending on probe selection and material under test
Material Velocity Range:	39,400 to 393,662 in/s; 1000 to 9999 m/s
Displayed Resolution:	Four options, selectable via the keypad: <ol style="list-style-type: none"><li>1) 0.001 inch from 0.025 to 9.999 inches Over range indicator when greater than 9.999 inches</li><li>2) 0.01 inch over entire range</li><li>3) 0.01 mm from 0.60 to 99.99 mm Not available in HI SPD mode Over range indicator when greater than 99.99 mm</li><li>4) 0.1 mm over entire range</li></ol>
Reading Stability:	Nominal measured value $\pm 0.001$ inch (0.025mm) over the temperature range of the instrument
V-path Error Correction:	Automatic, microprocessor controlled
Linearity with KBA560 Probe:	$\pm 0.002$ inch ( $\pm 0.05$ mm) when calibration point is $\leq 1.0$ inch (25 mm); $\pm 0.004$ inch ( $\pm 0.1$ mm) when calibration point is $> 1.0$ inch (25 mm)
Probe Zero Adjustment:	Push-button, keyed to built-in probe zero block
T-minimum Set Range:	OFF or 0.020 inch to 9.999 inches; 0.5 mm to 300.0 mm

## 5.0 Specifications

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Calibration:	One point, off block, with known thickness calibration standard of same material and velocity as material to be measured; probe zero required
Display Update Rate:	4 Hz in 0.001 inch, 0.01 inch, and 0.1 mm resolution modes 3 Hz in 0.01 mm resolution mode
Measurement Rate:	4 Hz in 0.001 inch, 0.01 inch, and 0.1 mm resolution modes 3 Hz in 0.01 mm resolution mode 16 Hz in High Speed Minimum Capture (HI SPD) mode
Receiver Gain Level:	Three options, selectable via the keypad: Automatic: High gain will be enabled for material velocities up to 246,000 in/s (6,248 m/s). Low gain will be enabled for velocities over 246,000 in/s. Manual Low: Low gain will be enabled over the entire velocity range. Manual High: High gain will be enabled over the entire velocity range.
Data Logger Capacity:	1200 readings maximum; 999 readings if number of files is set to 1; readings are stored sequentially
Number of Data Files:	1 to 99; memory is divided by number of files, i.e. one file of 999 readings, two files of 600 readings each ... 99 files of 12 readings each.
Serial Protocol:	1200 baud; 8 data bits; 1 stop bit; no parity
Data Transfer:	Via SEND key or optional Remote SEND Switch
Memory Retention:	Typically 10 years

Display Type:	Four digit, 0.5 inch (12.7mm) high, Liquid Crystal Display with electroluminescent backlight
Power Requirements:	3 each 1.5 volt, AA alkaline cells
Battery Life (Operating Time):	Up to 300 hours at 25% duty cycle, without backlight; up to 150 hours when the backlight is enabled
Automatic Shut-off:	3.5 minutes after last probe couple or last press of any key
Temperature Range:	+10°F to +120°F (-10°C to +50°C)
Dimensions (LxWxD):	6.5 inches x 3.0 inches x 1.6 inches (165.1mm x 76.2mm x 40.6mm)
Weight:	Approximately 14.5 ounces (0.4 kg), including batteries
Transducer Connectors:	Dual, Lemo #00
Serial I/O Interface Connector:	7 pin, Lemo #0B

*NOTE: DME DL specifications are subject to change without notice.*

## 5.0 Specifications

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### 5.2 Probe Specifications

Model	Probe Description	Nominal Frequency	Contact Diameter	Meas. Range	Temp. Range
FH2E	High Sensitivity Fingertip	8 MHz	.38" 9.6mm	.030 to 2.0" .75 to 50mm	<130°F <54°C
KBA560	General Purpose	5 MHz	.625" 15.9mm	.060 to 8.0" 1.5 to 200mm	<450°F <230°C
KBA570H	High Temperature	5 MHz	.44" 11.2mm	.100 to 4.0" 2.5 to 100mm	<900°F* <480°C*
DA312	Thin Materials	10 MHz	.30" 7.6mm	.030 to 1.0" .75 to 25mm	<130°F <54°C
KB550FH	Fingertip	5 MHz	.375" 9.5mm	.060 to 2.0" 1.5 to 50mm	<130°F <54°C
KB550BTH	Boiler Tube	5 MHz	.375" 9.5mm	.060 to 2.0" 1.5 to 50mm	<130°F <54°C
DA301/DA311	General Purpose	5 MHz	.475" 12.1mm	.050 to 8.0" 1.2 to 200mm	<140°F <60°C
DA303	High Penetration	2 MHz	.635" 16.2mm	.20" minimum 5.0mm minimum	<140°F <60°C

\* Actual temperature range depends upon surface condition, and couplant.

NOTE: Probe specifications are subject to change without notice.