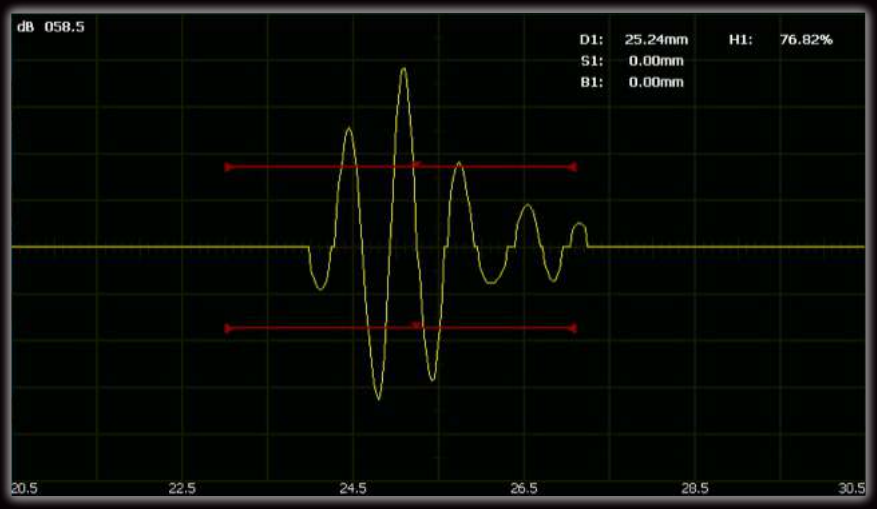
LEVERAGE THE POWER OF
FLAW DETECTION
DIGISCAN DS-702

eeci

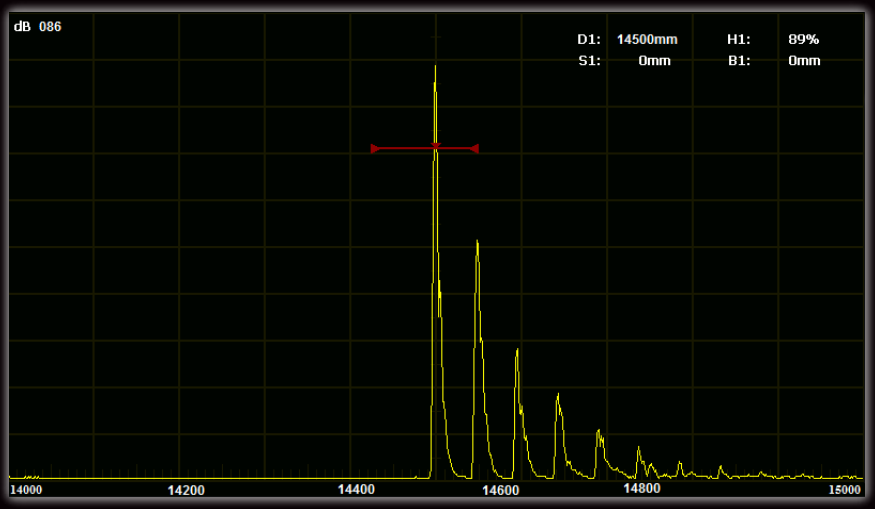


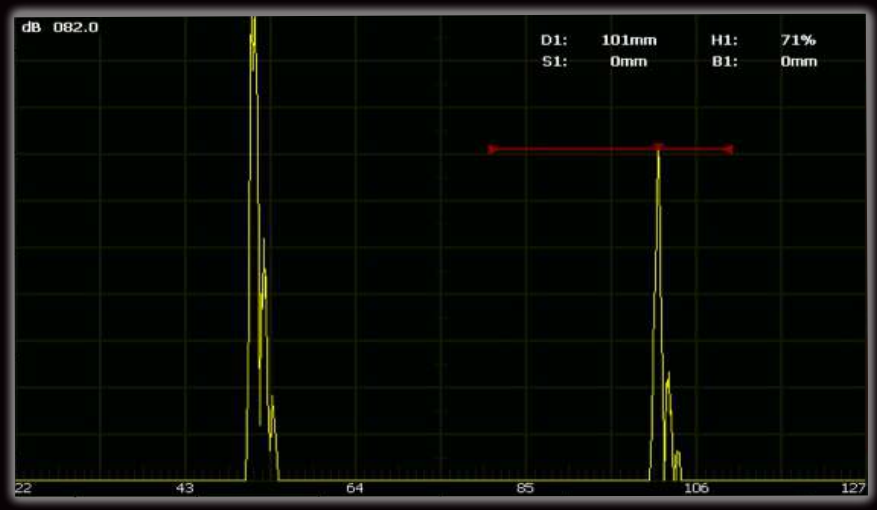
RF DISPLAY MODE WITH ZERO CROSSING MEASUREMENT

RF display mode can be used for high precision measurements along with zero crossing measurement mode for thickness gauging and corrosion mapping. By using the point where the echo crosses the base line rather than the gate threshold, a more stable and accurate reading can be achieved, even at higher gains.

TUNABLE HIGH VOLTAGE PULSER FOR HIGH PENETRATION APPLICATIONS

Using the tunable pulser with impulse mode and a 450V high voltage to achieve enhanced penetration of up to 15 meters, special applications for large volume jobs can be achieved.



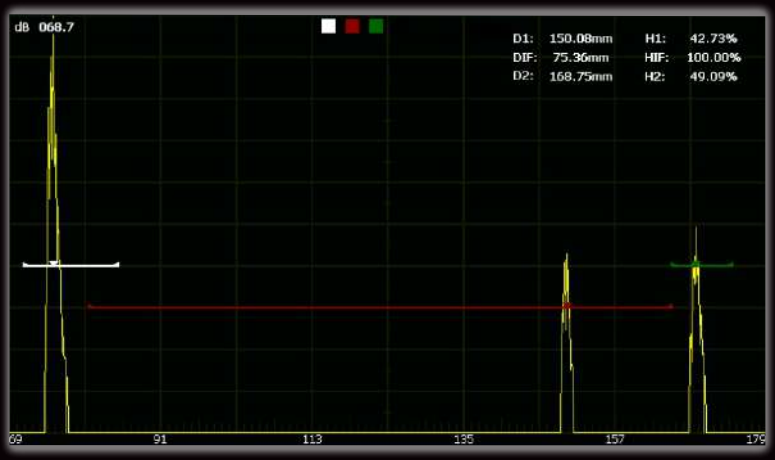


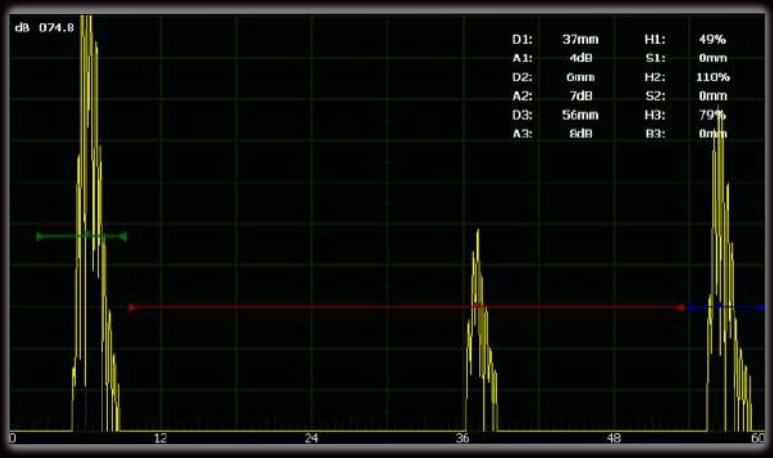
DIGITAL FILTERING

Adjustable Band-pass filter with provision to set lower and higher frequency limits, useful for filtering out undesired frequencies to improve signal to noise (S/N) ratio

INTERFACE GATE(IF) FOR IMMERSION TESTING

All 3 measurement gates can be set to trigger on the IF gate along with automatic adjustments for shifting of IF echo. This leads to higher accuracy readings as well as elimination of manual calculations.



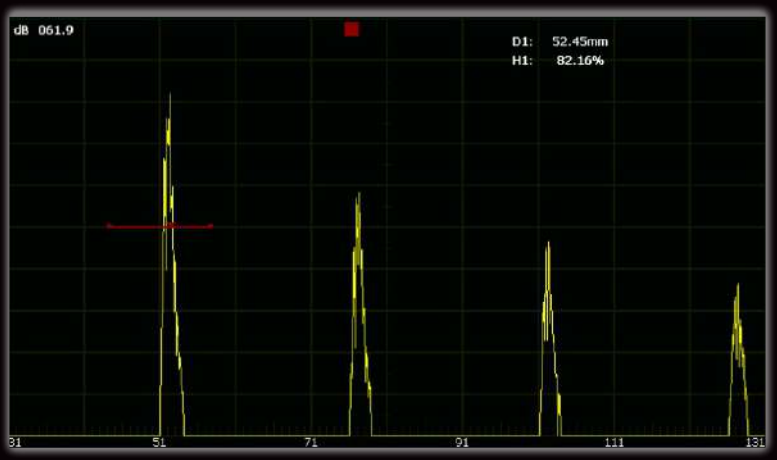


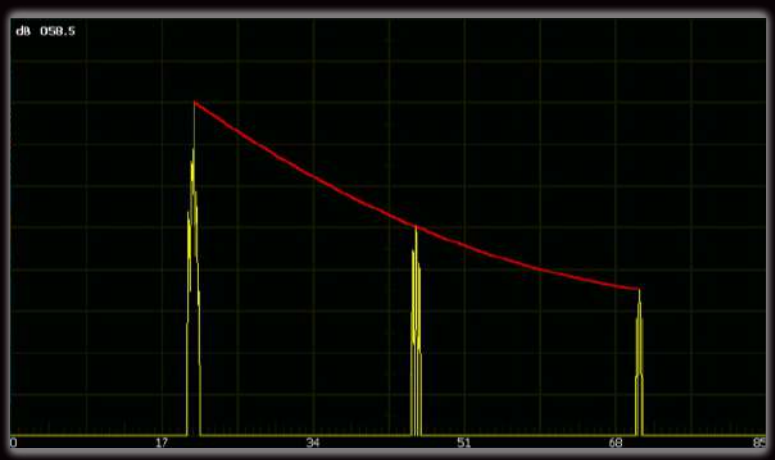
3 MEASUREMENT GATES WITH ADVANCED MEASUREMENT MODES

3 user selectable gates for flaw detection, wall thickness measurement, decoupling with individual settings for measurement mode, location and alarm settings. User customizable trigonometric values for all 3 gates, 12 screen locations to display height(H), maximum height(+h), minimum height(-H), depth(D), maximum depth(+D), minimum depth(-D), beam path(B), surface distance(S), attenuation(A), echo to echo distance calculation(E-E), DH1, DH2 -Measure Distance between echo height and curve As per the gain (only used for DAC in Static mode

ENHANCE MEASUREMENT MODE

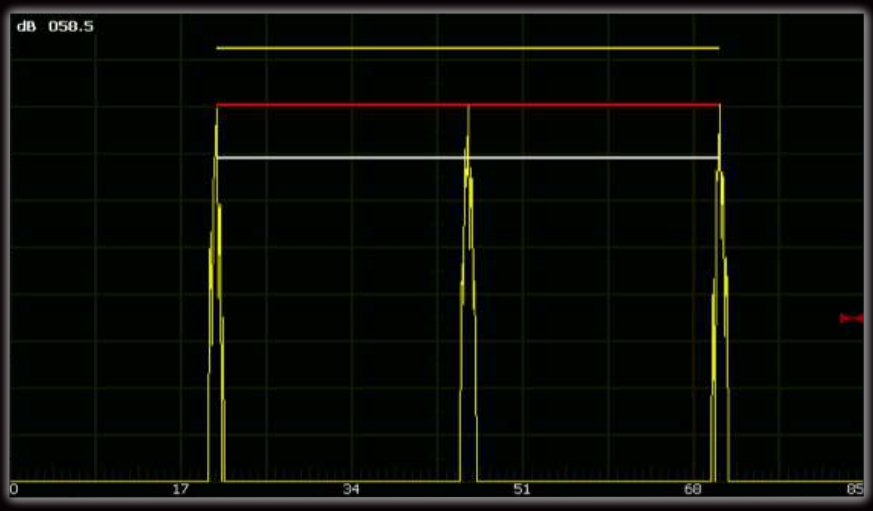
3 adjustable levels to improve the signal to noise (S/N) ratio for more accurate testing





DISTANCE AMPLITUDE CURVE (DAC)

Defect evaluation by plotting upto 15 point custom DAC curve with either a smooth parabolic curve or a simple point-point curve. 6 settable offset curves upto ±100 dB.

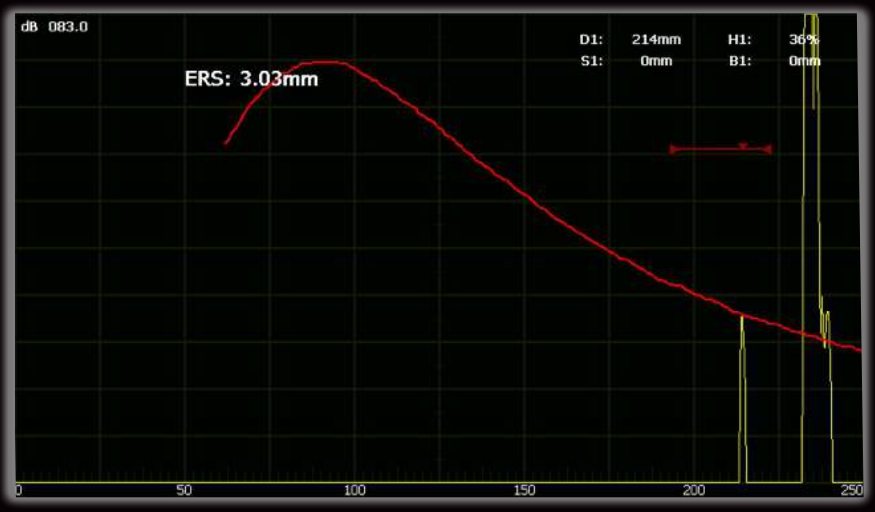


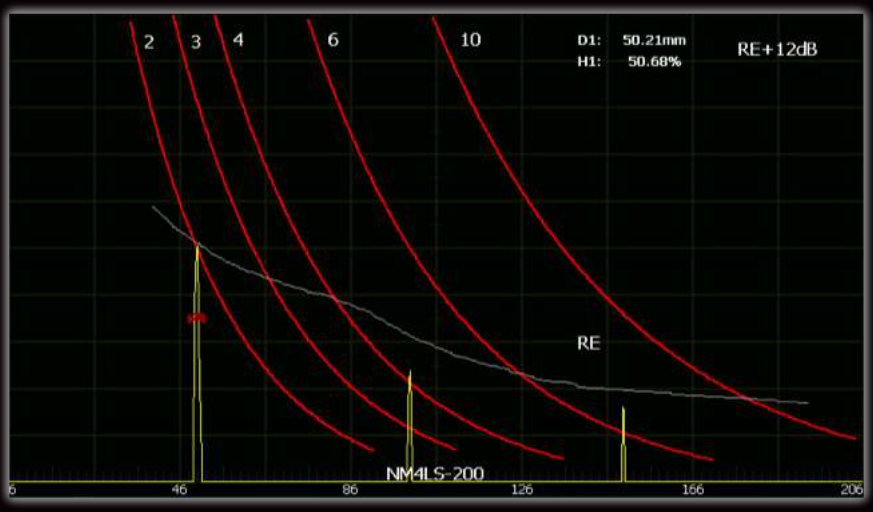
TIME CORRECTED GAIN (TCG)

TCG is used to normalise responses at various depths to the same % of FSH. Easily switch between DAC and TCG with one click.

UNIVERSAL DGS

Plot universal DGS pattern against Standard DGS curve for a any type of probe. It can be plotted by choice of reflector type option including BW, SDH, FBH, K1 and K2. Flaw size occurring above or below the curve is easily visible in ERS parameter.



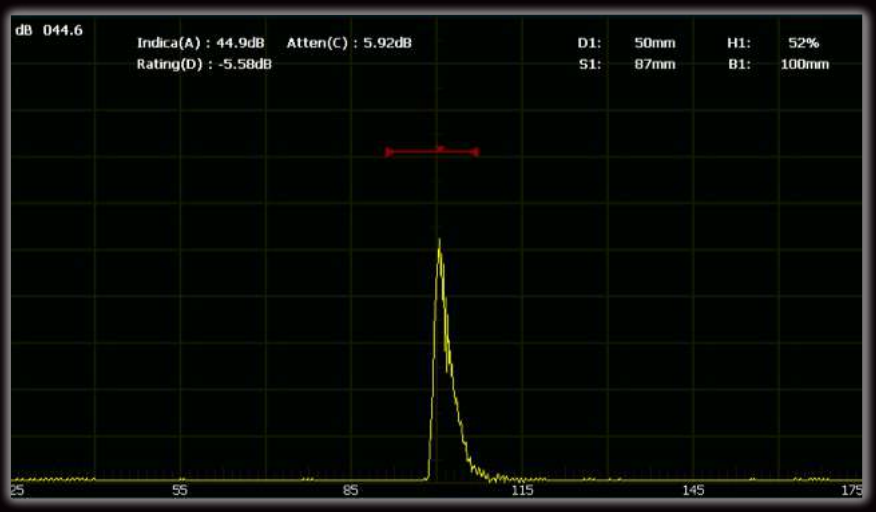


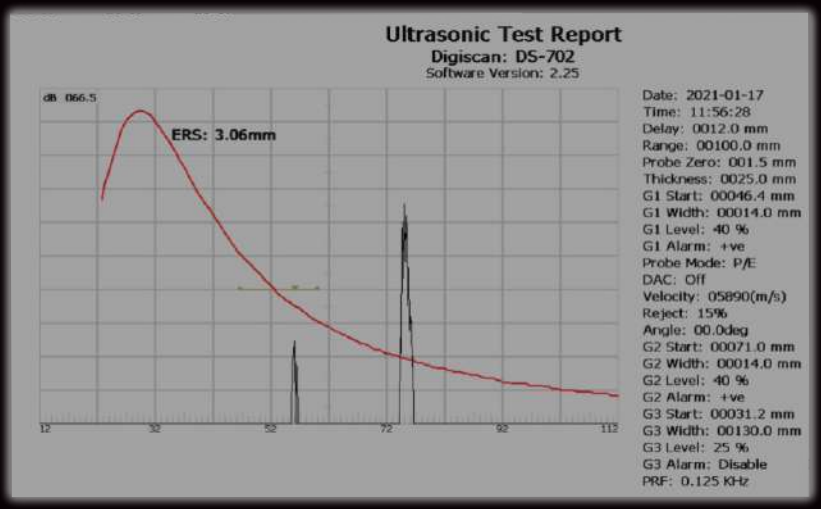
FlexiDGS

Used for comparison & evaluation of echoes against standard DGS curve for a particular type of probe. The DGS curve represents relation between echo height, defect size & distance from transducers. DGS option sets the scale as per the test range, so no more compromising to fixed scale.

AWS D1.1/D1.5

Provides a dynamic reflector indication rating for various AWS weld inspection applications. This allows more efficient inspections by eliminating manual calculations.



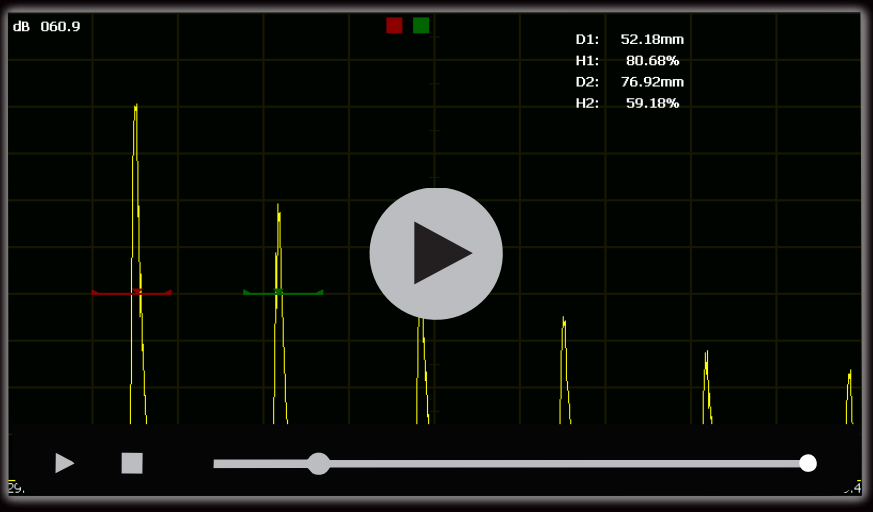


CONVENIENT ON-BOARD REPORTING

On-board PDF reporting with custom logo, remarks/job details. Transfer this directly on-site to a flash drive for printing, without a need of a PC software.

CONTINUOUS VIDEO RECORDING

Continuous A-Scan recording for review playback, either on the device or export to a MP4 file on the device and transfer on a flash drive for immediate playback. Optional PC software for review and exporting.



Carry Case

Ease Of Operations

Large 7inch &
High Brightness Display

IP 65

Rugged Design

Back stand

Ergonomical Design

ULTRASONIC FLAW DETECTOR

Display	Display Type	7" high brightness LCD
	Touch Screen	Yes
	Display Brightness	1000 nits, variable from 0% to 100%
	Display Update Rate	60 Hz
	HDMI video output	Yes (HDMI supported resolution for Monitor (1024X768, freq: 60Hz))
	Range	2 to 15,000 mm, in 0.1 mm steps
	Velocity	250 to 16,000 m/s, in 1 m/s steps
	Zero Offset	0 to 1000 μs, in 0.01 μs steps
	Display Delay	-60 to 15,000 mm, in 0.1 mm steps
	Units	millimeters, inches, μs, %
	Rectification	Full wave, positive half-wave, negative half-wave
	Horizontal Grid	100% or 110%
	Reject	0% to 99% FSH with visual indication
	Skip Distance	Visual indications based on thickness and angle
	A-Scan	Active freeze, freeze, filled
	Real Time Clock	Date and time for saved records
Data acquisition	Digitizing Frequency	100 MHZ
	Data Storage	32 GB SD card
	Single A-Scan Storage	$>$ 6 million A-Scans
	Report Generation	On-board PDF report with custom logo, PNG A-Scan
	Continuous A-Scan Recording*	onboard file generation, $>$ 200 hours
	Calibration Sets	10,000 calsets
	Data Export	SD card, USB flash drive, PC connection
Receiver	Dynamic Range	0 to 120 dB, in 0.1 dB steps
	Receiver Bandwidth	0.5 to 20 MHZ wide band amplifier
	Digital Filter Settings	0 to 20 MHz, in 0.1 MHZ steps
	Enhance Mode	Off, low, mid, high
	System Linearity	Horizontal: $\pm$ 1% FSW Vertical: $\pm$ 2% FSH
Gates	Measurement Gates	3 gates + 1 interface gate*
	Measurement Mode	Max peak, flank, j-flank, first peak, zero crossing
	Start	0 to 20,000 mm, in 0.1 mm steps
	Width	0 to 20,000 mm, in 0.1 mm steps
	Threshold	0% to 100%, in 0.1% steps
	ToF Resolution	Selectable 1/0.1/0.01 mm
	Alarms	Positive and negative threshold, wall thickness
	Alarm Indication	Audio and visual indicators with vibration
	Gate Width Zoom	For gates 1, 2, 3
	Amplitude Measurement	0% to 110% FSH, with 0.1% resolution
	Measurement Rate	Equivalent to PRF
	Automated Calibration	• Velocity, Zero Offset • Straight Beam (first back wall or echo-to-echo) • Angle Beam (Soundpath or Depth)

Pulser	Pulser Types	• Square wave • Spike
	PRF	10 to 2000 Hz, in 1 Hz steps
	Voltage	50V - 450V, in 25V steps
Pulser	Pulse Width	0.5 - 20 MHz, in 0.1 MHZ steps
	Damping	50 Ω, 400 Ω
	Impulse Mode	0 to 7
	Test modes	Pulse echo, dual, through transmission
Instrument Inputs/Outputs	USB Ports	USB C - charging, storage access USB A - flash drive
	Transducer connections	LEMO 00
	SD Card	32 GB
Environmental Ratings	IP Rating	IP 65
	Operating Temperature	-10° C to 55° C
	Storage Temperature	-20° C to 60° C
	Battery Recharge Temperature	0° C to 40° C
Measurements	Measurement Display Locations	12 user defined blocks
	Trigonometric	Beam path, flaw depth, surface distance, min/max depth, gate2-gate1
	Threshold	Echo height in %, attenuation in dB, min/max threshold
	Trigger	Initial pulse, IF gate
	Job Thickness	0.1 to 999.9 mm, in 0.1 mm steps
	Refracted Angle	0° to 90°, in 0.1° steps
	DAC	Point-point and parabolic curve, 2 additional curves with ±20 dB offset, up to 15 point curve
	TCG	15 point, 18 dB/10 ns slope
	Curved Surface Correction	Tube, bar
	AWS	D1.1/D1.5
	DGS	Universal DGS* FlexiDGS
General	Overall dimensions (W x H x D)	205 mm x 130 mm x 60 mm
	Construction	IP 65 Compact, Rugged Molded ABS, Soft Touch
	Weight With Battery	1 kg
	Operation	5 button navigation Keypad + 1 gain key, ambidextrous operation
	Battery Type	Single rechargeable inbuilt lithium-ion 7.4v 40W
	Battery Life	Upto 8 hrs
	Power Requirements	USB C fast charger, 100 - 240 VAC, 50-60 Hz, 1.5 A
DS-702 Test Details	Bump Test	- IEC:60068-2-27
	Resistance to vibration Test	- IEC:60068-2-6
	Tropicalisation and Humidity Test	- IEC:60068-2-30
	Electromagnetic Interference (EMI)Test	- IEC:61000-4-3
	Power frequency magnetic field immunity test	- IEC:61000-4-8
	Equipment Protection IP 65 test	- IEC:60529

Warranty	1 year
Standard Accessories	USB C 30W Fast Charger 32 GB SD Card Instrument Carry Case
Optional Accessories	Portable powerbank upto 30 hours operation • Protective cover • Neck support strap • Wrist strap Extended warranty for additional 2 years PC communication cable ISO 22232-1 certificate
Optional Software	Universal DGS IF gate Video recording HDMI Touch

ELECTRONIC & ENGINEERING CO. (I). P. LTD

+91 22 6150 3800 • ndtsales@eecindia.com • www.eecindia.com