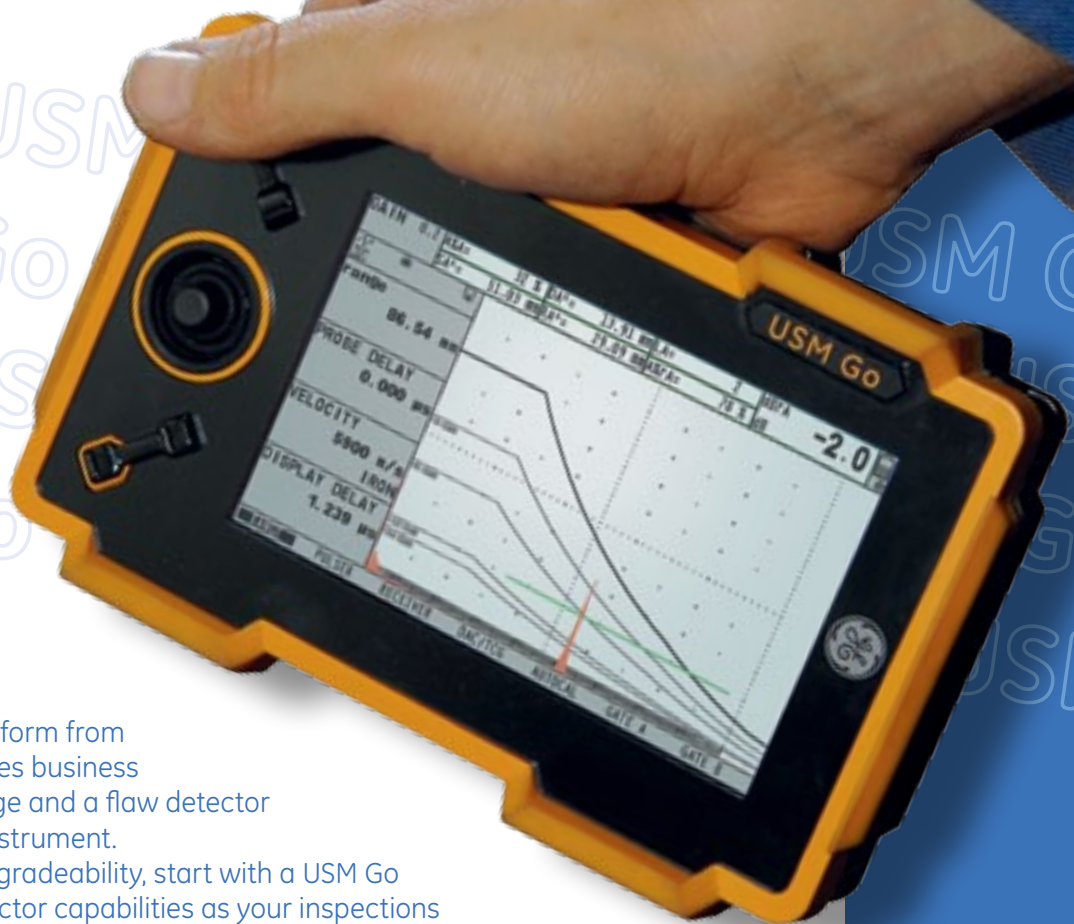


USM Go

A flexible Flaw Detector that can be a Thickness Gauge

Now with New Features



The new ultrasonic Go platform from GE's Inspection Technologies business combines a thickness gauge and a flaw detector in one single lightweight instrument.

With fast field software upgradeability, start with a USM Go and add DMS Go flaw detector capabilities as your inspections demand, or buy both initially.

The choice is yours!

See other side of the brochure for more information about the DMS Go.



USM Go - Setting New Standards in Flaw Detection Instrumentation



Ergonomically Designed with the User in Mind

The USM Go ultrasonic portable flaw detector has been ergonomically designed to provide an instrument that is light, small and easy to use in the harshest of inspection environments. Its ergonomic features include:

Portability

- Small size, lightweight, robust, dust- and waterproof construction allow the instrument to be easily operated in confined spaces, areas of difficult access, and in harsh environments.
- Can be operated with one hand, leaving other hand free for other tasks, such as maintaining probe in optimum position or holding on to ladders.
- Light enough to be carried throughout a whole day's shift.
- Battery provides up to 6 hours operation. Can be recharged on- or off-board.
- Several accessories to improve mobility are available: wrist strap, shoulder harness, belt holster.

Easy-to-Read Screen

- A display screen that is the same size as those in other GE flaw detectors, even though the instrument is much smaller than other instruments in the range.
- An 800 x 480 pixel display, which is better resolution than a standard DVD.
- A screen with an optimized aspect ratio to ensure highly defined echo separation.
- A screen that can be easily viewed, whether hand-held or desk-mounted.
- A screen that has been ergonomically sized to help reduce eyestrain.
- An integrated stand allows the user to optimize the viewing angle, when the instrument is desk- or bench-mounted.
- AutoGate Threshold for faster measurement with optimum accuracy.
- NEW** A-scan freeze mode function (for gate A and B) facilitates working in difficult ergonomic conditions.
- NEW** Display measurement indicators show both amplitude and distance to reduce risk of error.

Ease of Use

- Pressure-sensitive joystick imported and adapted from the successful range of remote visual inspection and ultrasonic equipment offered by GE.
- All controls within fingertip reach. User can dedicate function keys according to preference.
- A "Flip" function allows the instrument to be used equally well by left-handed and right-handed people.
- A standard USB connection to allow data to be downloaded from the flaw detector for further analysis or storage.
- The instrument's 2 GB memory can be easily exchanged by SD cards up to 16 GB.
- Reports are produced in jpeg format so there is no need for special reading software.
- NEW** Printable summary list of all parameters.
- NEW** Easy directory management on SD cards.
- NEW** Built-in menu customization tool allows to adapt the menu structure to two levels of users.
- NEW** Yearly calibration reminder for efficient quality management.
- NEW** Smart notes function increases reporting efficiency.



Increasing Productivity

The USM Go features intuitive operation so there is virtually no time-consuming, learning curve.

You are productive from the moment you pick it up!

There is no need to refer to the manual, as clear instructions are provided as you go along. Navigation is simplified using the proven graphical user interface (GUI) and the innovative joystick, allowing one-handed operation for fast and accurate adjustment.

Other features allowing increased productivity are:

- A robust molded rubber casing to withstand the harshest environments and significantly reduce downtime. The instrument is dust- and water-proof to IP67 and is tested to withstand shock and vibration.
 - A simple on-board data logger to collect and save thickness measurements or eventually attach the corresponding A-scan image.
- NEW** Backwall Echo Attenuator (BEA) helps to find very small defects improving detectability.
- NEW** Automatic Gate Threshold for the 2 gates ensuring accurate measurements made under the same conditions.
- NEW** Video recording upto 8 minutes allows live reporting.

High UT Performance

- State-of-the-art electronics, including digital amplification, for a wide range of application benefits.
- A wide Pulse Repetition Frequency range allows use at low PRF to inspect forged parts without any “ghost” echoes and to inspect welds at high PRF when fast and regular scanning movement is required.
- Optional square wave pulser for more demanding applications.

NEW Precise Time of Flight indication in μ s.

NEW TrueDGS compatible.

Versatile and Upgradeable

Customized versions of the USM Go are also available, specially adapted to meet specific inspection codes or applications. For example, an optional square wave pulser can be supplied for applications involving the inspection of highly attenuative material. The versions shown in the table are currently available. For more detailed information, please contact your local GE representative or visit www.ge-mcs.com.

All the **NEW** features of the USM Go are accessible to existing USM Go customers.

| USM Go Options | USM Go Base | USM Go AWS | USM Go DAC AWS | USM Go Advanced |
|---------------------------------|-------------|------------|----------------|-----------------|
| The Instrument | • | • | • | • |
| 1 Battery | • | • | • | • |
| Battery Charger | • | • | • | • |
| Power Cable | • | • | • | • |
| Transportation Case | • | • | • | • |
| Brief Instruction Card | • | • | • | • |
| Operating Manual on CD | • | • | • | • |
| Manufacturer Certificate | • | • | • | • |
| Hand Strap | • | • | • | • |
| AWS | option | • | • | • |
| DAC / TCG | option | option | • | • |
| DGS | option | option | option | • |
| Phantom PRF | option | option | option | • |
| Square Wave Pulser | option | option | option | • |
| DMS Go Thickness Gauge Features | option | option | option | option |
| Backwall Echo Attenuator (BEA) | option | option | option | option |

A Wide Range of Applications



The USM Go has been designed to provide flaw detection capability in inspection situations throughout the industrial and process spectrum, from aerospace to power generation and from the automotive sector to the oil and gas industry.

These include:

Weld Inspection:

- Trigonometric projections
- AWS
- DAC
- DGS

Inspection of Composites:

- RF Display
- 2 gates with B-start triggered with echo in gate A
- TCG correction with high slope 120 dB/μs
- Reflector depth indicated in layer



Inspection of Forgings and Castings:

- Manual PRF adjustment
- Phantom echo indicator
- DGS
- NEW** Backwall Echo Attenuator (BEA)

For more demanding applications:

- Narrow band filters
- Low noise digital amplifier
- Optional square wave pulser
- TCG correction with high slope 120 dB/μs
- NEW** Backwall Echo Attenuator (BEA)

Inspection of rails:

- High PRF (up to 2000 Hz)
- Lightweight: 850 g (1.87 lb)
- Small size and ergonomics

USM Go - Technical Specifications



Water-, dust- and shockproof

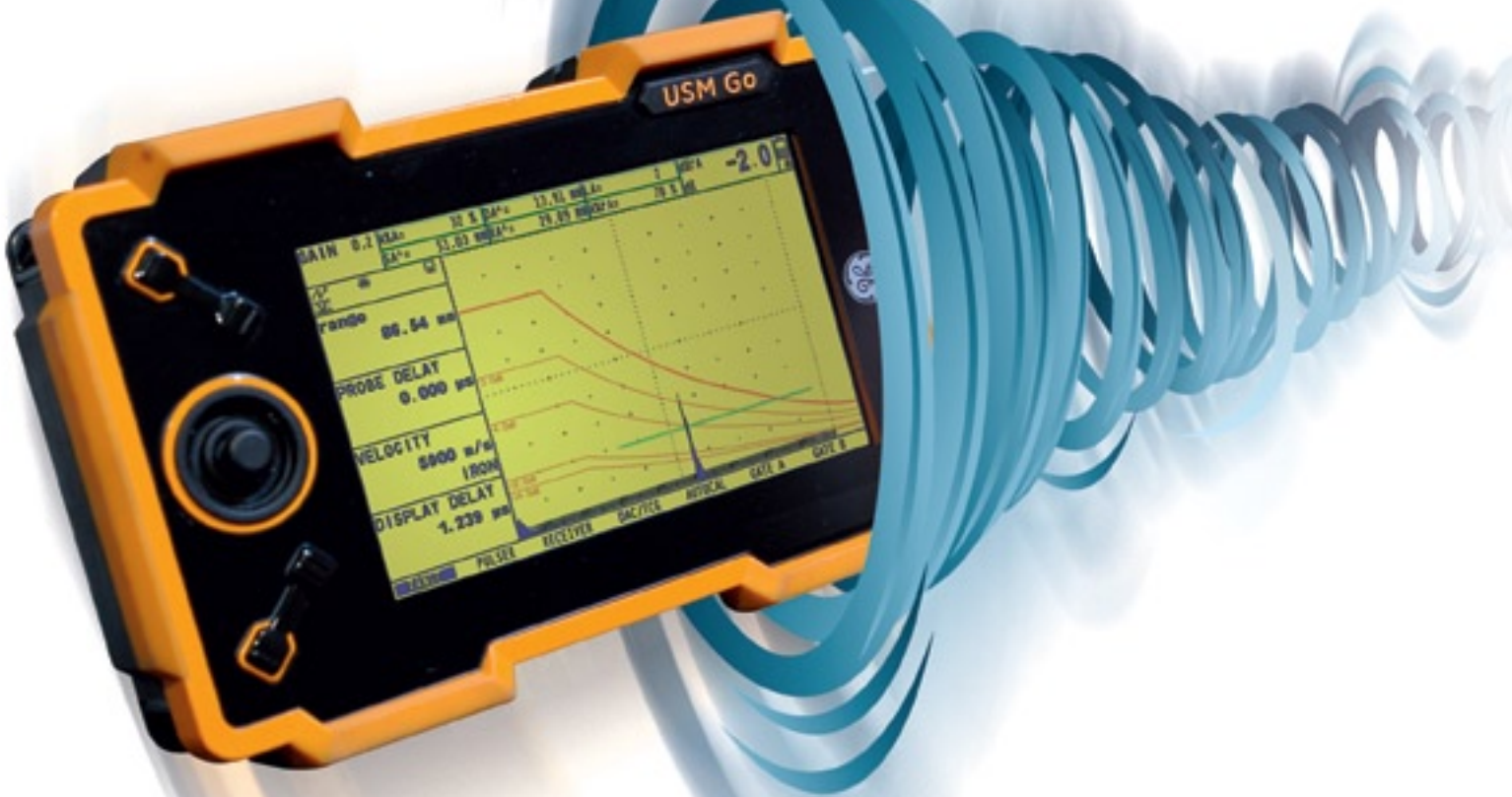
| LCD Display | |
|--|--|
| Active Area | W x H: 108 mm x 64.8 mm (4.25" x 2.55") |
| Screen Diagonal | 5.0" |
| Pixel Resolution | W x H: 800 x 480 pixels |
| Connectors | |
| Probe Connectors | Two LEMO-00 |
| UT Output Connector | SAP output, alarm |
| USB Interface | Micro USB connector |
| SD Card Connector | Full size SD card slot to accommodate standard SD cards |
| Pulser - All pulser measurements taken according to EN12668 specifications | |
| Pulser Mode | Simulated spike standard, uni-polar square wave optional |
| Pulser Voltage (SQ Mode) | 120 V to 300 V with 10 V steps |
| Pulser Width (SQ Mode) | 30 ns to 500 ns with 20 ns steps |
| Pulser Amplitude (Spike Mode) | Low : 120 V High: 300 V |
| Damping | 50 or 1000 Ohms |
| PRF | Automatically optimized between 15 Hz to 2000 Hz, 3 automatic adjustment modes : AutoLow, AutoMed, AutoHigh - Manual Control of PRF from 15 to 2000 Hz |
| Receiver | |
| Range | 14016 mm at steel longitudinal wave (557") |
| Digital Gain | Dynamic range of 110 dB, with 0.2 dB step |
| Analog Bandwidth | 0.2 MHz - 20 MHz |
| Filters | Broad band Narrow band filters 1; 2; 2.25; 4.5; 10; 13; 15 MHz |
| Gate | |
| Independent Gates | 2 Gates (A and B), Gate B can support triggering by Gate A |
| Rectification | Full Wave (FW) Positive (POS) RF Negative (NEG) |
| Measurement | Peak Flank JFlank |
| Measurement units | TOF in, mm, μ s Amplitude % dB |
| Memory | |
| Capacity | 2 GB SD card. Up to 16 GB memory cards can be used |
| Report | Jpeg and BMP reports |
| Data Logger | Option for thickness or A-scan recording, compatible with UltraMATE |

| Environmental | | |
|--------------------------------------|--|--|
| Battery | 6 hours battery life | |
| | On board charging | |
| | Off board charging with optional adaptor | |
| | Proportional battery gauge indicating remaining operation time | |
| Charger | "Universal" AC (100-240 V, 50-60 Hz) | |
| | Meets CCC, CE, UL, CSA and PSE requirements | |
| Size | 175 mm x 111 mm x 50 mm (6.8" x 4.3" x 1.9") | |
| Weight | 845 g (1.87 lb) with the battery | |
| Languages | Bulgarian, Chinese, Czech, Dutch, English, French, German, Hungarian, Italian, Japanese, Portuguese, Polish, Russian and Spanish | |
| Protection as per Mil-Std-810F | | |
| Damp Heat and Humidity (Storage) | 10 cycles: 10 hrs at 60°C (140°F) down to 30°C (86°F), 10 hrs at 30°C (86°F) up to 60°C (140°F), transition within 2 hrs, 507.4 | |
| Temperature Shock (Storage) | 3 cycles: 4 hrs at -20°C (-4°F) up to 60°C (140°F), 4 hrs at 60°C (140°F), transitions within 5 minutes, 503.4 Procedure II | |
| Vibration | 514.5-5 Procedure I, annex C, figure 6, general exposure: 1 hr each axis | |
| Shock | 6 cycles each axis, 15 g, 11 ms half sine, 516.5 Procedure I | |
| Loose Cargo (In Shipping Container) | 514.5 Procedure II | |
| Transit Drop (Packaged for Shipment) | 516.5 Procedure IV, 26 drops | |
| Operating Temperature Range | 0°C to 55°C (32 to 131°F) | |
| Storage Temperature Range | -20°C to 60°C (-4 to 140 °F) with battery, 24 hrs | |
| Dustproof / Waterproof | As per IEC 529 specification for IP67 classification | |
| Compliance | EMC/EMI | EN 55011 EN61000-6-2:2001 |
| | Ultrasound | EN 12668 ASTM E1324 E317 ANSI/NCSL Z 540-1-1994 MIL STD 45662A MIL STD 2154 |
| | Options | |
| | Backwall Echo Attenuator | Allows improved defect detectability |
| | USM Go AWS Option | AWS sizing tool according to AWS D1.1 structural welding code |
| | USM Go DAC Option | DAC sizing tool 16 points compliant with |
| TCG: 110 dB/ μ s slope | | |
| USM Go DGS Option | DGS sizing tool compliant with EN 1712 NEW Including new <i>true</i> DGS technology | |
| USM Go Embedded Data Logger Option | Custom linear and grid file creation | |
| USM Go Square Wave Pulser Option | Allows pulser parameters fine tuning | |
| | Voltage adjustment from 120 V to 300 V per 10 V steps | |
| | Pulse width adjustment from 30 ns to 500 ns per 10 ns steps | |
| USM Go Phantom Indicator Option | Phantom PRF will help to identify ghost echo due to multiple reflections in low materials | |

Upgrade your USM Go to the DMS Go Thickness Gauge

The USM Go uses the same operating and navigating platform as the DMS Go portable thickness gauge. By means of a simple software purchase your USM Go can benefit from all the DMS Go functionalities and perform advanced thickness measurements.

This means that NDT personnel now need to carry only one inspection instrument to perform accurate and dependable thickness measurement and flaw detection. A further benefit of this dual modality is a significant reduction in operator training times.



Build your own instrument !

An extensive range of upgrade possibilities is available. Choose any of the DMS Go options and add it to your USM Go package.

For more information contact your local GE representative or visit www.gesensinginspection.com