

Technical Specifications

The Wavemaker® G4^{MINI} packs exceptional sampling power in a smaller and lighter package. Available in multiple configurations, the Wavemaker® G4^{MINI} can be tailored to match your applications.

TECHNICAL SPECIFICATION SUMMARY *(Subject to change)*



MODEL	Wavemaker® G4 Mini – Base ⁽¹⁾	Wavemaker® G4 Mini - Fully Loaded
Application Areas		
Designed for	Bare (or painted) pipe using standard rings	All pipe and tube applications
Physical Characteristics		
Dimensions W x D x H (approx.) ⁽²⁾	22 x 30 x 13 cm [8.5 x 12 x 5 inches]	
Weight (approx.)	4.4 kg [9.7 lbs]	
Screen	7" colour LCD touchscreen (800x480 pixels)	
Transmitter ⁽¹⁾		
Transmitter frequency range	10 to 40 kHz	7 to 400 kHz
Maximum output drive voltage	200 Vpp	400 Vpp
Maximum rep-rate	5 Hz	20 Hz
Receiver ⁽¹⁾		
Convertor sampling frequency	200 kHz	100 to 2500 kHz
Receiving gain range	10 to 60 dB	10 to 90 dB
Analog band pass filter range (Variable)	10 to 90 kHz	7 to 600 kHz
Maximum sample range	30 m	400 m
Maximum number of averages	16	256
Channels		
Number of transducer channels	16	
Diagnostics		
Dedicated Diagnostic Interface	Built-in diagnostic connection to verify instrument and cable performance	
Communication Interfaces		
USB	USB 2.0 (Both device and Host)	
LAN	-	10/100 Base-T Ethernet <i>(using supplied cable)</i>
Software		
Controlling Software	Wavemaker® WavePro4™	
Supported Operating Systems	Windows 7 to Windows 11	
Processing Options		
Unrolled Pipe (EFC) ⁽³⁾	Total Full Matrix Focusing with C-Scan type display. (Requires EFC option)	
Absolute Calibration ⁽⁴⁾	Automatic DAC Calibration. (Requires CAL option)	

⁽¹⁾ These Base Model specifications are without any extended packages applied. See packages section below.

⁽²⁾ Dimensions without removable handles.

⁽³⁾ GUL patented: Method and apparatus for inspecting pipes (US8356518B2, GB2437547B, WO2007125308A2).

⁽⁴⁾ GUL patented method: Processing signals acquired during guided wave testing (US9927405B2, EP2598866B1, WO2012013942A1).

Power Ratings	
Battery type (Removable)	6.6 Ah, 14.8 V Li-ion
Typical battery life	At least 150 standard tests
External power supply to charge instrument	18-20 VDC (60W min)
Other Features	
Transducer Ring Identification	Detects transducer ring type, size and serial number
Transducer Ring Capacitance	Measures transducer capacitance (0.1nF precision)
Transducer Ring Pressure	Able to read pressure sensors in HD / HT rings
Inspector Identification	Reads and updates inspector 'iButton' ID keys
GPS	20 channel SiRF Star IV GPS module

RING COMPATIBILITY AND CONFIGURATIONS

Model	Base	Full
Ring		
Standard Solid (R2F) and Inflatable (R2B) Rings	Yes	Yes
Compact™ Rings (R3D)	Yes	Yes
Claw Small Diameter Rings (R2G)	Requires PLANT package	Yes
HD Solid (R2F-HD) and HD Modules (R2MHD) in inflatable rings	Requires PLANT package	Yes
HT Solid (R2F-H) and Inflatable (HT-R2B) Rings	Yes	Yes
gPIMS® Sensors (R2P)	Requires GPIMS package	Yes
Lowest frequency setting in Variable Modules	Requires BURIED package	Yes
Longitudinal Mode (with 4 rows)	Requires L02 package	Yes
Special Configurations		
Joining Two Rings	Requires BIGPIPE package + convertors	Requires convertors
Joining Three or Four Rings	Not currently supported	
Pitch-Catch collections	Requires BURIED package + convertors	Requires convertors

WAVEMAKER G4 MINI OPTIONS

Models	
WM-G4M-FULL	A fully loaded G4mini (configured to support all of the packages listed below). Supplied with a pair of 2.5m transducer cables, a battery, USB umbilical, charger, soft bag, and case.
WM-G4M-BASE	A base level G4mini suitable for collection of data on bare (or painted) pipe using only standard rings. Extra packages (listed below) can be added to extend the base system.
Packages	
<i>These can be added to the G4M-BASE to extend functionality. They are all included in the G4M-FULL.</i>	
WE-G4MPKG-BURIED	400Vpp output, lower frequency collection, Pitch-catch configurations (4 rows).
WE-G4MPKG -PLANT	400Vpp output, higher frequency collection, support for HD, HT, R2G (claws) rings.
WE-G4MPKG -GPIMS	Supports all required collections for gPIMS® sensor (including interface for ATEX rings & untrained operators).
WE-G4MPKG -BIGPIPE	Supports joining rings together for large pipes.
WE-G4MPKG -SPEED	Increase the maximum possible rep-rate and sample length.
WE-G4MPKG -L02	Supports required functionality for using the longitudinal mode.
WE-G4MPKG -UPGRADES	Access to new versions of WavePro4™ as they are released.
Software Options	
WM-EFC	Allows for the unrolled pipe (C-Scan) display for data collected from an instrument.
WM-CAL	Allows for the absolute calibration of reflection amplitudes from an instrument.