![MARPOSS]

WAVE
LINE

WIRELESS HANDLES FOR HAND HELD GAUGES

Bore Gauges

The Marposs wireless handles overcome cable management issues in manual measurement instruments with Bluetooth® wireless technology. Wireless offers following advantages: no cable entanglement or breaks, ergonomic operations, measuring directly at the machine.
The signal is sent from an electronic or mechanical gauge head to one of the Marposs data display and processing units.

Displacement
Sensors

**Bore
Gauges**

Forks and
Ring Gauges

Bench
Gauges

Indicators and
Electronic
Display Units

Interface
Boxes for Data
Acquisition

Software

Product **features**

Marposs product portfolio offers a full line of wireless handles which offers maximum flexibility and operating freedom while the measurements are performed, even in the most hostile environments. The Marposs wireless handles with or without display, send the signal from mechanical or electronic gauge head (see M1Star catalogue) to a Marposs electronic display unit, or commercial PC with Marposs Software or SW Drivers (DLL) installed.

The handles for M1Star MBG gauge heads accomodate a pencil probe that reduces the measuring error to the minimum. The handles for M1Star EBG gauge heads (with single transducer) feature a connector, that merges safety of connection and ease of retooling. By simply pressing the button on top of the handle, they can communicate in real time with the electronic display, showing the measured value. With the same button it is possible to acquire data in order to perform statistical operations and to control advanced cycles or guided sequences.

IWAVE2
WAVE2

I-Wave2™ and **Wave2™** are equipped with a 1.8" TFT color screen.
By integrating a computer into the gauging handle, they achieve an unprecedented level of convenience and performance in manual gauging technology.

IWAVE
M1WAVE

I-Wave™ and **M1Wave™** are available both with inductive Li-Ion batteries and with disposable alkaline batteries, allowing approx. 40 or 220 hours continuous working time, respectively.

MINIIWAVE
MINIWAVE

Mini I-Wave™ and **MiniWave™** are the small wireless handles suitable for the measurement of small bores with M1Star gauge heads for countersink, and of shafts with M3Star forks or M4Star rings.
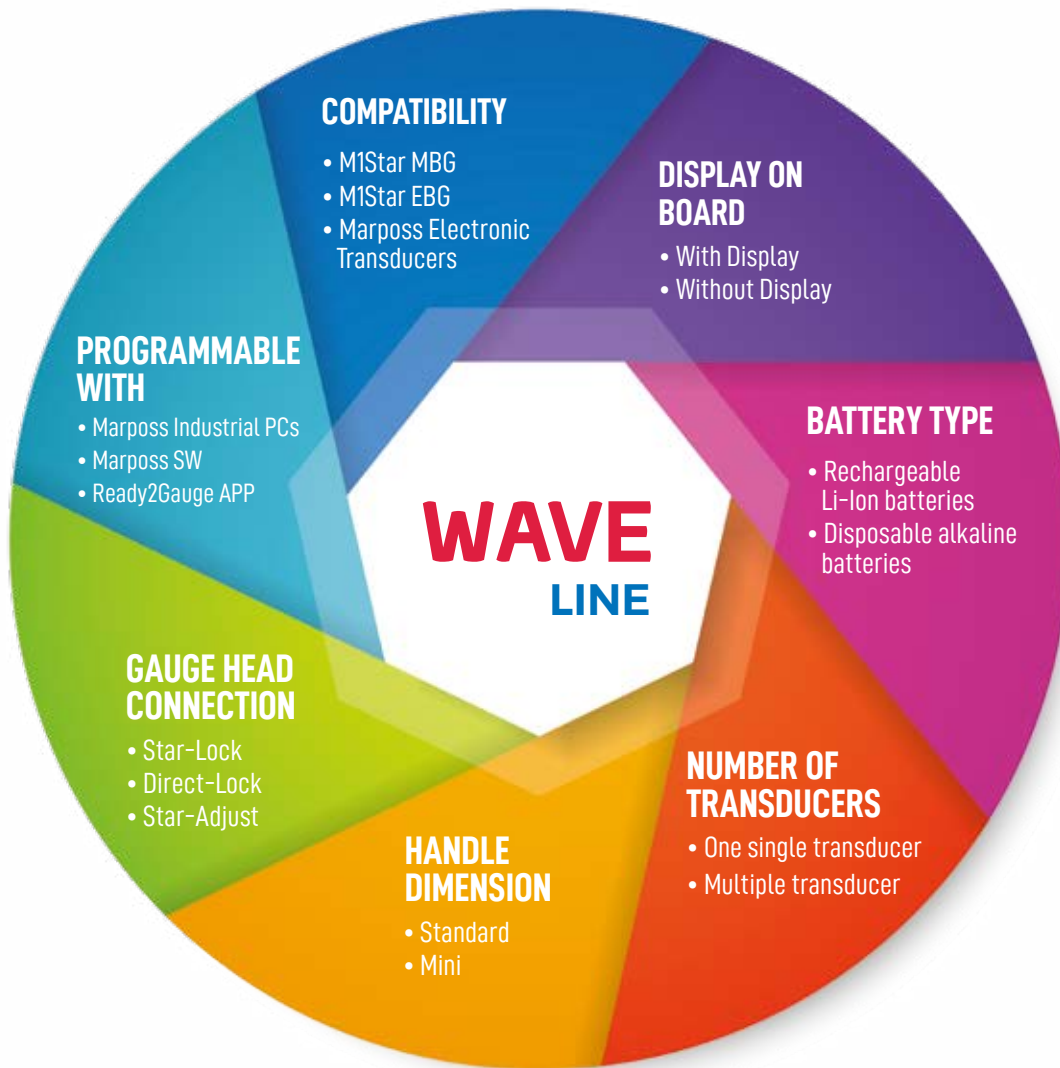
MULTIWAVE

MultiWave manages multi-transducer electronic gauge heads for the simultaneous measurement of multiple sections, to check diameters and other geometries of a bore (ovality, taper, etc.) or shafts.
It can program the number of transducers to be used (max 7) or to set other important parameters with a specific software.

Product mix

The scheme below shows an overview of the options available in the Wave Line product mix.

COMPATIBILITY
- M1Star MBG
- M1Star EBG
- Marposs Electronic Transducers

DISPLAY ON BOARD
- With Display
- Without Display

PROGRAMMABLE WITH
- Marposs Industrial PCs
- Marposs SW
- Ready2Gauge APP

WAVE LINE

BATTERY TYPE
- Rechargeable Li-Ion batteries
- Disposable alkaline batteries

GAUGE HEAD CONNECTION
- Star-Lock
- Direct-Lock
- Star-Adjust

NUMBER OF TRANSDUCERS
- One single transducer
- Multiple transducer

HANDLE DIMENSION
- Standard
- Mini

Displacement Sensors

Bore Gauges

Forks and Ring Gauges

Bench Gauges

Indicators and Electronic Display Units

Interface Boxes for Data Acquisition

Software

WIRELESS HANDLES WITH DISPLAY

I-Wave2 and Wave2 are the rechargeable, wireless handles with integrated 1.8" TFT color screen.
Ergonomic design, dual buttons, display orientation mode, a gauge stand with inductive charging and a high degree of coolants and dust protection, make the I-Wave2 and Wave2 the ideal solution for dimensional inspection on the shop floor

- Intuitive 1.8" TFT graphic color display with automatic orientation allows immediate visualization of the measurement value to the operator from any direction.
- Live measurement is simultaneously displayed on the handle and the gauge computer via Bluetooth. By simply pressing one of the two buttons, it is automatically saved in the computer for statistical purpose.
- Seamless synchronization with the gauge computer.
- Possibility to operate in stand-alone mode with the Ready2Gauge (R2G) App that allows configuration settings, data storage and export. The virtual keyboard function is available in the Windows version.
- 24/7 usability thanks to the long life, fast recharging Li-Ion battery and the inductive charging stand.
- Software Drivers are available to connect the I-Wave2 to Marposs industrial computers of the E9066 Line as well as to any commercial and industrial PC with Marposs software installed.
- Directly compatible with Nemo and Merlin Line Marposs industrial PCs.

I-WAVE2

I-Wave2 features a ±2,5mm pencil probe, digitized and linearized in the full measuring range, granting the best metrological performance. Compatible with any M1Star MBG, M3Star MRG or Countersink gauge head, with M10, M6 or M3,5 thread, that can be screwed directly in the Direct-Lock version, or can be mounted very quickly by means of an adapter in the Star-Lock version. It is very easy to change the measuring head to convert the handle to a bore gauge, snap or depth gauge.

Direct-Lock for the safest connection in dedicated gauges

Star-Lock for frequent gauge head changeover
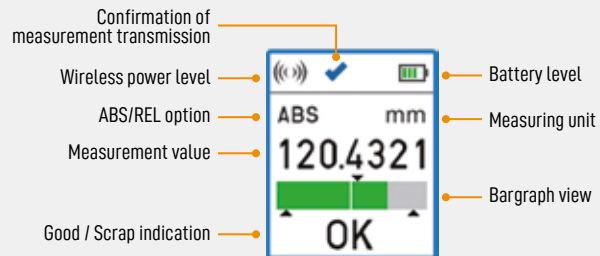
WAVE2

Compatible with any M1Star EBG gauge heads as well as other Marposs LVDT or HBT transducers.
Programmable to correct errors of the gauge head (function available in the advanced "full" version).
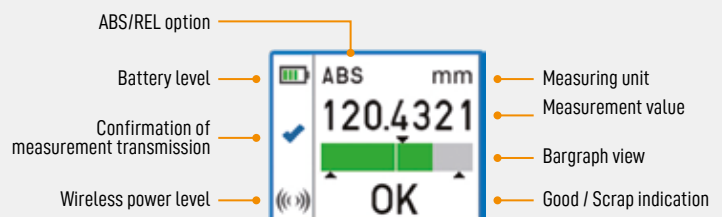

DISPLAY

PORTRAIT

- Confirmation of measurement transmission
- Wireless power level
- ABS/REL option
- Measurement value
- Good / Scrap indication
- Battery level
- Measuring unit
- Bargraph view

LANDSCAPE

- ABS/REL option
- Battery level
- Confirmation of measurement transmission
- Wireless power level
- Measuring unit
- Measurement value
- Bargraph view
- Good / Scrap indication

WIRELESS HANDLES WITH DISPLAY

Displacement Sensors

Bore Gauges

Forks and Ring Gauges

Bench Gauges

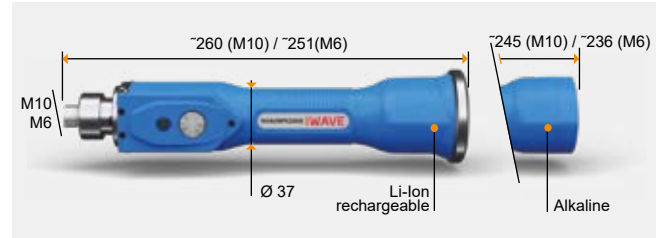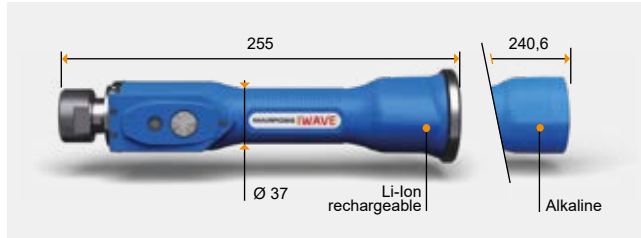Indicators and Electronic Display Units

Interface Boxes for Data Acquisition

Software

Technical specifications	I-Wave2	Wave2
Compatibility	Mechanical Gauge Head M3.5/M6/M10	Electronic Gauge Head/RedCrown2/A124
Display	1.8" full color	
Wireless transmission technology	Bluetooth Smart	
Communication distance	10 m	
Ergonomic handle design	Dual buttons Line	
Compatibility with Marposs Electronic Display Units	Nemo, Merlin Line, E9066 Line	
Software for Windows OS	Easy Acquisition, Merlin Plus SW, Quick SPC, DLL	
Programming for stand alone use	by Ready2Gauge (R2G) APP for IOS or Android phone/tablet or Windows PC (FREE)	
Auto switch on	by accelerometer	
View display aspect	Portrait/Landscape-selectable	
Programmable auto shut down time	√	
Settable acoustic feedback	√	
IP rating	67	65
Weight	540 g	500g
Battery type	Li-Ion rechargeable	
Wireless charging system	Inductive	
Performance	Linearity deviation < 0.0003 mm over 5 mm travel	Accuracy error < (0.5% displayed value + resolution)
Maximum resolution	0.0001 mm	

I-WAVE2

	Description	Order code
	I-Wave2 Handle with Direct-Lock interface – M18 thread	B3TJ5SDI000
	I-Wave2 Handle with Direct-Lock for plug heads with M10 thread	B3TJ5SDI100
	I-Wave2 Handle with Direct-Lock for plug heads with M6 thread	B3TJ5SDI060
	I-Wave2 Handle with Direct-Lock for plug heads with M3.5 thread	B3TJ5SDI035
	I-Wave2 Handle with Starlock system for plug heads (adapters for plug heads with M6 and M10 thread are included in the supply) (*)	B3TJ6SDI000

(*) M3.5 and third-party gauge head adapters are available on request.

WAVE2

	Description	Order code
	Wave2 display handle	B3TJESDI000
	Wave2 display handle – full*	B3TJFSDI000
	Interface adapter to fix EBG plug heads to Wave or Wave2 handle	B2TIESF0000
	Interface adapter to fix LVDT probes with SV50/6 connector to Wave or Wave2 handle	B2042421960
	Interface adapter to fix HBT probes with SV50/6 connector to Wave or Wave2 handle	B2042421959
	Interface adapter to fix LVDT probes with SV50/6 connector to Wave or Wave2 handle with flange Ø 59	B2042421966
	Interface adapter to fix HBT probes with SV50/6 connector to Wave or Wave2 handle with flange Ø 59	B2042421965

(*) Transducer compensation function available.
Other interface adapters to fix probes to Wave or Wave2 handles are available on request.

ACCESSORIES

	Description	Order code
	Nose-Up stand with battery charger	B2T0IRBS030
	Nose-Down stand with battery charger	B2T0IRBS031
	Power supply unit for one stand with battery charger	B2T0IRCS010
	Power supply unit and junction box for up to four stands with charger	B2T0IRSS010
	Cable for connecting the stand charger to junction box (length 1m)	B2T0IRCS001
	Power supply cable with CE plug (L=2m)*	B4709009001
	I-Wave2 BT SMART USB dongle	B6872020044

Nose-Up   Nose-Down

(*) Other options available on request.

I-WAVE

- I-Wave features a ±2mm pencil probe.
- It is compatible with any M1Star MBG, M3Star MRG or countersink gauge head with M10, M6 or M3,5 thread.
- The Star-Lock system grants the easy and quick gauge head assembly, by means of an adapter.
- The Star-Adjust system allows to assemble the gauge head with the mechanical zero close to the electric zero of the probe.
- I-Wave is available with both Li-Ion rechargeable or standard «C» alkaline batteries.

M1WAVE

- M1 Wave is composed of a standard M1Star EBG (Electronic Bore Gauge) plug head with built-in transducer and the Wave handle, containing the Bluetooth® transmitter and the power supply batteries.
- By simply replacing the plug head, the M1 Wave can be easily retooled to measure different diameters.
- M1Wave is available with both Li-Ion rechargeable or standard «C» alkaline batteries

MINI I-WAVE

- Mini I-Wave is a very compact handle with Bluetooth® transmission to manage mechanical plug heads, such as M1Star MBG with M10, M6 or M3,5 thread.
- The small dimension, light weight and double push bottons, make it suitable for small bores and countersink gauges.
- The Star-Lock system grants the easy and quick gauge head assembly, by means of an adapter.
- The two buttons have the same functionality.

MINI WAVE

- Mini Wave is a very compact handle with Bluetooth® transmission to manage electronic plug heads, such as M1Star EBG:
- The small dimension, light weight and double push buttons, make it suitable for Marposs M3 Star ESG snap.
- Marposs wireless versions of M4Star ERG rings for big diameters are equipped with Mini Wave.
- The two buttons have the same functionality.

MULTI WAVE

The MultiWave handle manages multi-transducer gauge heads that can be used to measure various sections and diameters at the same time inside the same bore or on the same shaft.

OTHER
WIRELESS
HANDLES

Displacement
Sensors

Bore
Gauges

Forks and
Ring Gauges

Bench
Gauges

Indicators and
Electronic
Display Units

Interface
Boxes for Data
Acquisition

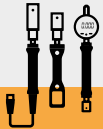Software

TECHNICAL SPECIFICATIONS	I-Wave		M1Wave		Mini I-Wave	Mini Wave	Multi Wave
Compatibility	M1Star MBG M10 M6 M3.5, M3Star MSG (by means of an adapter)*		M1Star EBG		MBG M10 M6 M3.5 M3Star MSG (by means of an adapter)*	M1Star EBG M3Star ESG	Marposs electronic transducers
Wireless transmission technology	BT 2.0						
Communication distance	10m						
Compatibility with Marposs Electronic Display Units	Nemo, Merlin line, E9066 line						
Software for Windows OS	Easy Acquisition, Merlin Plus SW, Quick SPC						
Max. Number of manageable signals	N/A		1		N/A	1	7
IP rating	67		67 (with the EBG installed)		54		65 (with a Marposs multiple gauge head installed)
Weight	750g	730g	600g	580g	390g	340g	745g
Battery type	Li-ion Recharg.	Alkaline "C"	Li-ion Recharg.	Alkaline "C"	Li-ion Recharg.		
Battery min. duration	40 hours**	220 hours**	40 hours**	220 hours**	36 hours**		
Time to reach the full charge of the battery	5-6 hours	N/A	5-6 hours	N/A	3 hours		5-6 hours
Time to reach 80% of full charge	2 hours	N/A	2 hours	N/A			2 hours
Order code	B3TJ0SFI000	B3TJ0SFB000	B2TW0SFI000	B2TW0SFB000	B3TJ2SDJ000	B3TJ1SDJ000	B3942432007

(*) The order code includes adapters for M10 and M6. M3.5 and third-party gauge head adapters are available on request.

(**) The duration of the battery can be further increased up to several months in normal operating conditions by means of the programmable auto shutdown option (Power safe mode)

ACCESSORIES

	Description	Order code
	StarAdjust interface (M10 and M6)	B2TIMSMT600
	Interface adapter to fix EBG plug heads to Wave handle	B2TIESF0000
	"Clip On" manual charger for I-Wave, Wave and MultiWave handle with Li-Ion Batteries (without PSU)	B2T0IRMS001
	Stand with battery charger for I-Wave and Wave handles with Li-Ion Batteries (without PSU)	B2T0IRBS001
	Stand with battery charger for MultiWave handle (without PSU)	B2T0IRBS005
	Power supply unit for one stand with battery charger	B2T0IRCS010
	Power supply unit and junction box for up to four chargers.	B2T0IRSS010
	Cable for connecting the stand charger to the junction box (length 1m)	B2T0IRCS001
	I-Wave/M1Wave/Mini I-Wave/MiniWave/MultiWave BT USB dongle	B47013J0101
	Stand with battery charger for Mini I-Wave and MiniWave handle (PSU included)	B2T0IRBS004

Displacement Sensors

Bore Gauges

Forks and Ring Gauges

Bench Gauges

Indicators and Electronic Display Units

Interface Boxes for Data Acquisition

Software

Application examples

EV Transmission case

I-WAVE2

MINI**WAVE**

Combustion Engine Crankcase

MULTIWAVE

Truck Differential case

All Wave Line handles are compatible with Nemo, Merlin Line and E9066 Line industrial PCs.

Wave Line