

A range of simple instruments for a variety of industries and applications



ARW



CATALOG

2025 / 2026

MISURE

Experience accumulated in over 25 years

MORERA
instruments

Instrumentos
Laboratorio
Metrológicos
Calibraciones ENAC

Digital thermometer

ARW 610 B For order **220121173**

With this instrument you can measure the temperature of any object, liquid, air or gas with extreme simplicity and easy. Depending on the use, you can choose the most appropriate probe from those illustrated below.



- Provided with an input for connection of "K" type thermocouples with high response speed
- Measurement range $-50 \div +1300^{\circ}\text{C}$ with resolution 0.1°C up to 199.9°C
- Accuracy $\pm 1.5\%$ of reading or $\pm 1^{\circ}\text{C}$
- **Large $3 \frac{1}{2}$ LCD display with backlight**
- $^{\circ}\text{C}$ or $^{\circ}\text{F}$ selection
- MAX-HOLD function for detecting the maximum temperature value
- Provided with the automatic power-off function (after 15 minutes of inactivity)
- Low battery warning
- Dimensions $162 \times 76 \times 38.5 \text{ mm}$ - Weight 210 g
- Supplied complete with vinyl case, protective shell, general purpose wire temperature probe (max 150°C), battery and user manual

EMC
EN: 50081-1, 50082-1

Type "K" thermocouple temperature probes



Contact surface probe max 600°C
Stem Size $\varnothing 15 \times 200 \text{ mm}$ "50mm bend"

For order

221120955



Penetration probe for liquids and semi-solids
Stem size $\varnothing 5 \times 180 \text{ mm}$ max 800°C

For order

221120346



Probe for liquids and semi-solids max 150°C
Stem size $\varnothing 3 \times 80 \text{ mm}$

For order

221120964



Surface contact probe $\varnothing 6 \times 130 \text{ mm}$ max 600°C

For order

221120519



Steel mesh wire probe for general use $\varnothing 3 \times 1000 \text{ mm}$ max 600°C

For order

221120098



Probe for high temperature surfaces ideal for measuring the temperature of grills, plates, moulds, castings, etc.

Very fast response time. Maximum temperature 1000°C . $\varnothing 12 \times 130 \text{ mm}$.

For order

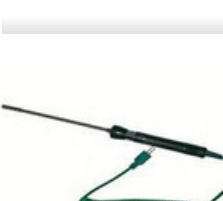
221120112



Wire probe for general use max 150°C (air - gas)
Wire $\varnothing 1.5 \times 1000 \text{ mm}$

For order

221120963



Probe for Air/Gas $\varnothing 6 \times 160 \text{ mm}$ max 250°C

For order

221120300

Digital thermometer

ARW 612 B For order **220121174**

Version with double input channel for "K" type thermocouples with the possibility of carrying out readings individually or in differential mode.

- Measurement range $-50 \div +1300^{\circ}\text{C}$ with resolution 0.1°C up to 199.9°C
- Accuracy $\pm 1.5\%$ of reading or $\pm 1^{\circ}\text{C}$
- Supplied complete with a shockproof protective shell

- **Large $3 \frac{1}{2}$ LCD display with backlight**
- $^{\circ}\text{C}$ or $^{\circ}\text{F}$ selection
- MAX-HOLD function for detecting the maximum temperature value
- Provided with the automatic power-off function (after 15 minutes of inactivity)
- Low battery warning
- Dimensions $162 \times 76 \times 38.5 \text{ mm}$ - Weight 210 g
- Supplied complete with vinyl case, **2 general purpose wire temperature probes** (max 150°C), battery and user manual

INFRARED THERMOMETERS



ARW-835A For order **220122831**

Infrared thermometer "IR"

The ARW-835A Optical Pyrometer is the latest born in the ARWMisure house. This instrument is able to measure the temperature remotely with a measurement range from -50°C to +800°C with a resolution of 0.1°C. Thanks to a circular laser pointer, it allows you to precisely locate the measurement area without having to make special calculations of the size of the tested object. The modern design and ergonomic handle make it a practical and easy to use. The important factor is certainly the sensation of sturdiness given by the instrument and the provision of a highly visible display.



- Selectable unit of measure °C - °F
- **Circular laser pointer**
- Automatic locking of the "Data Hold" reading
- Auto power off function
- **New Luminescent Display for optimal vision in any situation**
- "Trigger Lock" continuous measurement function
- **Input for K-type thermocouple probe**
- Optical resolution: Report distance / measuring point ratio D:S 16:1 (Distance/Spot)
- **Wide range of measurements from -50.0 °C to 800 °C**
- Modern design
- IP54 waterproof protection
- Display of Max/Min/DIF/AVG values
- Presettable Hi/Low alarms
- Adjustable emissivity value



TECHNICAL SPECIFICATIONS

IR temperature range	-50°C ~ 800°C / -58°F ~ 1472°F
IR response time	Less than 150ms
Resolution	0.1°C
IR accuracy	+/-2.0% of reading
Spectral response	8 ~ 14 um
D:S Report	16:1
Emissivity	Adjustable 0.10 ~ 1.0
Temp. range thermocouple	50°C ~ 1370°C / -58°F ~ 2498°F +/-2.5°C (4.5°F) -50 a 0°C (-58 a 32°F)

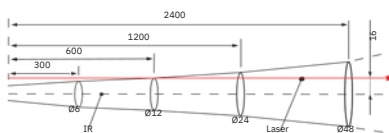
Power supply	9V batteries
Autonomy	About 4 hours of continuous use
K-type accuracy	+/-1.5% +/-1.5°C (2.7°F) 0 to 1370°C (32 to 2498°F) +/-2.5°C (4.5°F) -50 to 0°C (-58 to 32°F)
Charging time	About 2 hours with AC adapter or USB connection
Dimensions	170x50x95mm
Weight	248 g
Supply kits	Battery, K-type wire probe (max 250°C), case and user manual.

ARW - 8859H For order **220121338**

Infrared thermometer

This IR thermometer is capable of taking non-contact (infrared) temperature measurements of various objects at the touch of a button. The built-in laser pointer allows you to locate the measuring point precisely, while the backlit LCD display and the push-button panel for selecting the various functions are housed in a practical and comfortable ergonomic handle. It can be used to measure the surface temperature of objects even at a distance and at high temperatures thanks to the extended measurement range up to 1600 °C.

- D:S measurement report (Distance:Measurement Spot) very focused "50:1". at a distance of one meter we can measure objects with a dimension of 20 mm
- Built-in single laser pointer



- MAX, MIN, DIF, AVG functions shown directly on the display with backlight function
- Read lock function and set high and low alarms
- Supplied complete with ABS case, support tripod, user manual



TECHNICAL SPECIFICATIONS

Temperature range	-50°C ~ 1600°C / -58°F ~ 2912°F
R:S (Distance:Spot)	50:1
Display resolution	0.1° Up to 1000°, 1° beyond
Response time	150 ms
Spectral response	8 ~ 14 um
Emissivity	Adjustable from 0.10 to 1.0
Polarity	Automatic
Laser diode	output <1mW, Wavelength 630 ~ 670 nm, Class 2(11) laser product
Relative humidity	10% - 90%RH operating, <80%RH storage
Power supply	9V battery NEDA 1604A or IEC 6LR61 or equivalent
Weight / Size	290 gr (10.2 oz.) / 100 X 56 X 230mm (3.9 X 2.2 X 9.0")
Precision:	-50°-20°C (-58°F-68°F)
Temperature from 18°C to 28°C	20°C-500°C (68°F-932°F)
(64°F ~ 82°F)	500°C-1000°C (932°F-1832°F)
Humidity < 80% RH	1000°C-1600°C (1832°F-2912°F)
	±3.0°C (5.4°F)
	±1.0% ±1.0°C (1.8°F)
	±1.5%
	±2.0%

BODY TEMPERATURE THERMOMETER



ARW-8806S For order **220122950**

Non-contact forehead infrared thermometer

The non-contact forehead infrared thermometer is specially designed to measure a person's body temperature, regardless of the ambient temperature.

- Color Purple
- Non-contact measurement
- Selection of unit of measurement °C or °F detection of heat on the forehead
- **Selector for body and surface temperature (body/surface)**
- Acoustic alarm setting function
- Data memory for 32 readings
- Automatic reading block "Data Hold" Auto power off
- Autorange
- Display resolution 0.1°C (0.1°F)
- LCD display backlight



Supplied complete with case and packaging

TECHNICAL SPECIFICATIONS

Measuring range (In body mode)	32.0°C ÷ 42.5°C/89.6°F ÷ 108.5°F
Measuring range (In surface mode)	0°C ÷ 60°C/32°F ÷ 140°F
Resolution	0.1°C/0.1°F
Basic accuracy	32 ÷ 35.9°C/93.2 ÷ 96.6°F (±0.3°C/±0.5°F)
	36 ÷ 39°C/96.8 ÷ 96.6 to 102.2°F (±0.2°C/±0.4°F)
	39 ÷ 42.5°C/102.2 ÷ 108.5°F (±0.3°C/±0.5°F)
Distance measurement	5-15cm (standard on handle)
Response time	0.5 seconds
Power supply	2x1.5V "AAA" batteries not included



Security Compliance:

- ASTM E1965-1998
- EN 980: graphic symbols to be used in the labeling of medical devices
- EN104: information provided by the manufacturer with medical devices
- EN 60601-1: Medical electrical equipment Part 1: General requirements for safety (IEC: 60601-1: 1998)
- EN 60601-1-2: Medical electrical equipment Part 1-2: General requirements for safety Collateral standard Electromagnetic compatibility Requirements and tests (IEC 60601-1-2: 2001)

FINE DUST METER "Particle Counter"

ARW-96B For order **220122690**

Particle counter ARW-96B with backlit 2.0" TFT LCD color display for fast, easy and accurate readings of fine dust concentration in two measurement levels (PM2.5/PM10). The instrument also has the detection of ambient temperature and humidity. The ideal solution for carrying out an air quality control in any environment.

FINE DUST METER "PARTICLE COUNTER"

Particle counter		
Measurement channels	2.5,10µm (PM2.5/PM10)	
Concentration level	PM2.5: 0~500ug/m3 PM10: 0~500ug/m3	
Measurement method	The determination of the concentration of particles suspended in the	
Resolution	air by the weight method (PM2.5 / PM10)	
	1ug/m3	
Air temperatures and humidity		
	Range	Resolution
Temperature	0 to 50 °C/32 to 122 °F	±1 °C/2 °F
Relative Humidity	0 to 100%RH	±5%RH @0 to 20%RH and 80 to 100%RH
		±3.5%RH @20 to 80%RH
Data memory	5000 data	
Display	Backlit graphic LCD, 2.0" TFT 220*176 pixels	
Functions	Date and time shown on the display	
Operating conditions	0 -50°C (32 -122°F) <80% RH max altitude 2000m (7000ft)	
Power supply	3.7V rechargeable Li Battery	
Dimensions	185mm x 55mm x 38mm	
Weight	139g	



Bluetooth interface for simple and fast data transfer to Smartphone or Tablet
(Free downloadable "Application" available)



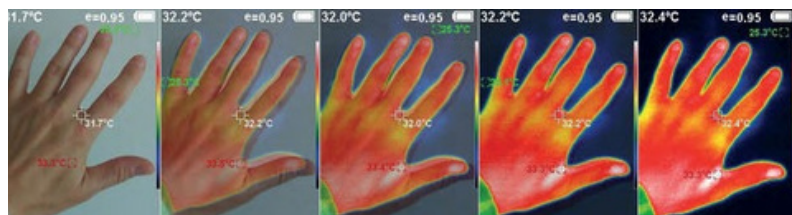
INFRARED CAMERA

Part number **ARW 322** 320123114

Thermal imaging camera

The infrared camera ARW-322 is a compact and handy digital camera, designed for non-contact temperature detection and professional thermal imaging. Thanks to a large color LCD screen, it allows you to clearly view the various problems and defects. To increase the temperature differentiation, the ARW-322 thermal imaging camera is equipped with a visible light camera for fusion (visible/Infrared). Thermal images are stored in the instrument and can be read by connecting with a USB cable (supplied) and PC for viewing or printing.

- Large high definition display
- **The emissivity index** can be adjusted to increase the accuracy when measuring the temperature on a reflective surface
- A cursor allows you to **instantly identify the highest and lowest temperature** within the measurement area by displaying it on the thermal image
- Selectable color palette (Rainbow, red iron oxide, cool colors, black and white)
- Equipped with a **visible light camera to display the real image (with the possibility of managing different overlapping levels with thermographic image)**



Applications:

- Control of electronic equipment, transmission lines and transformers
 - Search for hidden heat sources and thermal dispersion
 - Search and rescue personnel at the scene of the fire
 - Analysis of heat losses in heating systems and installations
 - Control of machinery and machines in the field of preventive maintenance.
- Locating the point of failure
- Indispensable instrument in the electrotechnical and electronic sector for the control and monitoring of systems, switchboards and electronic equipment (components and boards)
 - Night monitoring in security departments

Other fields of application:

- Localization of building pathologies and construction quality assurance (in particular: humidity of windows and doors)
- Simple verification of heating systems and installations
- Secure location of broken pipelines



USB cable connection with thermal imager



packaging

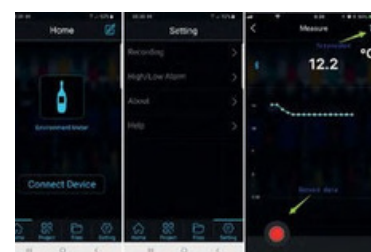
TECHNICAL SPECIFICATIONS

Display screen	2.8° full angle TFT screen
Infrared image resolution	220x160
Field angle	35°x26°
Temperature measurement range	da -20 °C a 450 °C (da -4°F a 842 °F)
Visible image resolution	300.000 pixel
LCD resolution	320x240
Shortest focusing distance	0.5 m
Thermal sensitivity	70 mk
Emissivity	Adjustable from 0.01 to 1.00
Frame rate of thermal images	9Hz
Wavelength coverage	8-14 µm
Focus mode	Fixed
Color palette	Rainbow, red iron oxide, cool colors, black and white, black and white
Memory	Integrated 3G (over 20 thousand images stored)
File format	JPG
USB	Micro USB 2.0
Power supply	Built-in rechargeable 18650 battery
Usage time	2-3 hours
Automatic power-off time	Selectable: 5 minutes / 20 minutes / non-automatic
Setting command	Unit, language, date, time, info
Language	English / Chinese / Italian / German
Operating temperature	0° ~ 45°C
Storage temperature	-20C ~ 60C
Relative humidity	< 85% RH



The new series of compact instruments for environmental analysis "The right solution at a low cost"

The ARW-90-92-95-96 series of instruments offers a valid solution for measuring parameters such as brightness, air speed, noise and concentration of fine dust "Particulate". The robust, modern and small-sized structure has been designed for professional use and is particularly suitable for frequent and fast use. The ARW-90/92/95 versions are equipped with a Bluetooth interface for a simple and fast data transfer to a Smartphone or Tablet able to satisfy the needs of measurement and data analysis.

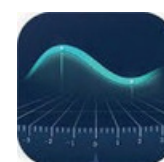


Compact Anemometer

ARW-90 For order **220122687**



TECHNICAL SPECIFICATIONS				
		Range	Resolution	Accuracy
Air speed	m/s	1.10 - 25.00 m/s	0.01 m/s	± (3,5% + 0.20 m/s)
	km/h	1.4 - 54.0 km/h	0.1 km/h	± (3,5% + 0.8 km/hr)
	ft/min	80 - 2980 ft/min	1 ft/min	± (3,5% + 40 ft/m)
	mph	0.9 - 33.0 mph	0.1 mph	± (3,5% + 0.4 mph)
	knots	1.10 - 25.00 knots	0.01 knots	± (3,5% + 0.20 knots)
Temperatures		-10 - 60°C (14 - 140°F)	0.1°C/F	2.0°C (4.0°F)
Display	Backlit on double line, 4 digit LCD			
Functions	Min. values and max and Hold for reading block			
Sampling time	2 readings per second (approx.)			
Automatic power-off time	After 10 min. of inactivity			
Operating conditions	0 - 50°C (32 - 122°F) < 80% RH / max altitude 2000 m (7000 ft)			
Power supply	9V battery (low battery indication)			
Dimensions	213mm x 54mm x 36mm			

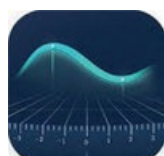


Meterbox Pro

Free
"Application"
available for
download

Compact Sound level meter

ARW-95 For order **220122689**



Meterbox Pro

Free
"Application"
available for
download

TECHNICAL SPECIFICATIONS	
Measurement range	35 - 130 dB
Resolution	0.1 dB
Accuracy	± (3.0dB (ref 94dB @1kHz)
Frequency	31.5 - 8kHz
Frequency weighting	A, C
Display	Double line backlit, 4 digit LCD
Functions	Min. values and max and Hold for reading block
Microphone	½" electric condenser
Automatic power-off time	After 10 min. of inactivity
Operating conditions	0 - 50°C (32 - 122°F) < 80% RH / max altitude 2000 mt (7000 ft)
Power supply	9V battery (low battery indication)
Dimensions	213mm x 54mm x 36mm

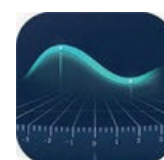


Compact Luxmeter

ARW-92 For order **220122688**



TECHNICAL SPECIFICATIONS			
Functions	Range	Resolution	Precision
Brightness	40,000Lux /Fc	0.1Lux/0.01Fc	±5% ±10d (<10,000Lux)
Sampling time	1.5 times per second (approx.)		
Display	Backlit, 4 digit LCD with bar graph display		
Functions	Min. values and max. and Hold to block reading		
Automatic power-off time	After 10min. of inactivity		
Operating Conditions	0 - 50°C (32 - 122°F) <80% RH max altitude 2000m (7000ft)		
Power supply	9V battery (low battery indication)		
Dimensions	213mmx54mmx36mm		



Meterbox Pro

Free
"Application"
available for
download

ANEMOMETERS



ARW-907 For order **220123112**

Digital Air Flow Thermo-anemometer

Portable digital anemometer used for measuring air flows with simultaneous detection of speed, temperature and humidity parameters with calculation of the volumetric flow rate. Instrument equipped with numerous functions, such as the measurement of the maximum/minimum and average values of the air flows, blocking of data reading via the HOLD key and large display for visibility of multiple values at the same time. It is ideal for monitoring air conditioning and conditioning systems (HVAC) in various environments such as factories, companies, public buildings, offices, homes, etc...

TECHNICAL SPECIFICATIONS

Operating Temperature	0 ~ 50°C (32-122°F)
Storage Temperature	-40 ~ 60°C (-40 ~ 140°F)
Operating Humidity	40 ~ 80%RH
Storage humidity	≤80%RH
Power supply	AAA 1.5V alkaline battery *4
Instrument dimensions	Instrument: 73x38x194mm
Weight	vane probe: 74x35x540mm (fully stretched out)
	instrument weight: 212.9 g (without battery)
	probe: 180g

- Equipped with a six-blade wind wheel with an extendable telescopic rod (540mm fully extended)
- Large backlit display with simultaneous visibility of speed and temperature values
- Measurement of minimum, maximum and average values
- HOLD function for reading block
- Large memory with recording up to 960 data (Single value or automatic saving mode with sampling interval setting from 0 data 9999 sec)
- Auto power off function
- Low battery warning
- Selectable units of measure, m/s, km/h

- Fan direction display from 0 to 360° with N/E/S/O cardinal points indication
- Equipped with USB data interface with PC software

MEASUREMENT PARAMETERS

Unit of measure	Measuring range	Resolution	Accuracy
m/s (meters to second)	0.3 - 45.0 m/s	0.01 m/s	±3%± 0.1
ft/min (feet to minute)	60-8800 ft/min	0.0101.1 ft/min	±3%± 0.2
knots (nautical knots)	1-140.0 km/h	0.01 knots	±3%± 0.4
MPH	0.7-100 mph		
km/h (Kilometers/hour)	0.01 km/h		
mph (miles per hour)	0.01 mph		±3%± 0.2
Range	Measurement Range	Resolution	Area
CFM (cubic ft/min)	0-999900 ft ³ /min	0.001-100	0.001 a 9999ft ²
CMM (cubic meters/min)	0-999900 m ³ /min	0.001-100	0.001 a 9999m ²
Temperature	Measuring range	Resolution	Accuracy
°C	0-45 °C	0.1	±1.0 °C
°F	32-113°F	0.18	±1.8 °F
Humidity	MIN/MAX	Resolution	Accuracy
%RH	10-90	0.1	±5%

ARW 8893 For order **220121597**

Vane Thermo-Anemometer

The ARW-8893 vane anemometer is a portable and digital instrument that allows you to measure air flows by detecting speed, flow rate (volume) and temperature and is ideal for controlling air conditioning and extraction systems.

It is equipped with a large backlit display which offers easy and immediate reading with simultaneous indication of the detected speed and temperature values and numerous other functions such as the calculation of the minimum, maximum and average values, the Hold button for blocking the reading and indication of the average measured value (AVG).

- Equipped with a large display with backlight and simultaneous reading of the temperature, speed and flow rate of the air
- The Anemometer is equipped with a separate interchangeable vane
- Calculation of minimum, maximum and average values
- Hold function for blocking the reading and indicating the average measured value (AVG).
- Auto power-off after about

- 20 min. of inactivity
- Custom LSI microprocessor circuit
- Sensor: Speed/Flow: With ball bearing low friction angled impeller.
- Temperature: NTC-type precision thermistor



MEASUREMENT PARAMETERS

Speed	Measuring Range	Resolution	Accuracy
m/s (metri al sec.)	0.40 - 30.00 m/s	0.01 m/s	± (3% + 0.20 m/s)
km/h(kilometri/ora)	1.4 - 108.0 km/h	0.1 km/h	± (3% + 0.8 km/hr)
ft/min (feet per minute)	80 - 5900 ft/min	1 ft/min	± (3% + 40 ft/m)
mph (miglia per ora)	0.9 - 67.0 mph	0.1 mph	± (3% + 0.4 MPH)
knots (nodi nautica MPH)	0.8 to 58.0 knots	0.1 knots	± (3% + 0.4 knots)
Range	Measurement Range	Resolution	Area
CMM (metri cubi/min)	0-999900 m ³ /min	0.001 to 100	0.000 to 999.9m ²
CFM (ft cubi/min)	0-999900 ft ³ /min	0.001 to 100	0.000 to 999.9ft ²
Range	Resolution	Area	
Temperatura	-10°C - 60°C (14 - 140 °F)	0.1 °F/C	4.0 °F (2.0 °C)

ARW-8880 For order **220121900****Hot wire Thermo-Anemometer ARW-8880**

The ARW 8880 hot wire thermo-anemometer is able to measure the speed and temperature of the air flows. The large backlit display offers easy reading with the simultaneous indication, on two lines, of the speed and temperature values as well as providing various indications. Thanks to the small telescopic probe, it is easy to use for measurements inside ducts. Supplied complete with extendable telescopic probe (from 300mm fully closed to max. 1100mm fully extended), data management software and usb cable. All inside a sturdy ABS carrying case.

Thanks to the so-called "Hot Wire" measurement technology, the anemometer allows you to have a small measuring probe that is particularly suitable for reading inside the ducts in heating, air conditioning, extraction and ventilation systems. A small inspection hole is sufficient to insert the probe and measure.

Another important feature is the sensitivity of this measuring principle that allows you to measure the speed of air flows with very low values with a starting point of 0.2m/s, unlike the fan measuring principle which, being a rotary motion, requires a starting point of 0.4-0.5m/s.

- The 300mm telescopic probe extendable up to 1100mm becomes an important

advantage in measuring ducts, grates and diffusers that are not always easy to reach.

- The instrument is equipped with a function for calculating the volumetric flow rate, simply enter the duct data (dimensions) and the expressed value of m³/h will be displayed directly on the display.
- MINIMUM, MAXIMUM AND AVERAGE READINGS calculation function.
- The ARW-8880 hot wire anemometer is supplied complete with a USB DATA INTERFACE AND SOFTWARE for managing and transferring the memory with the possibility of saving all the data on your PC.
- Multifunction with direct reading in different selectable speed measurement scales: m/s, meters per second | km/h, kilometers per hour | ft/min, feet per minute | MPH - miles per hour.
- Equipped with a microprocessor circuit that ensures maximum precision and repeatability of the measurements.
- Equipped with a "Thermistor" sensor for fast and precise temperature reading with selectable measurement scale °C / °F.

APPLICATIONS OF THE ARW-8880 HOT WIRE ANEMOMETER

The ARW-8880 hot wire anemometer is particularly suitable for industrial measurement, installation and maintenance of air conditioning, extraction, heating and ventilation systems in general.

- Environmental measurements in general for the analysis of HVAC microclimatic comfort.
- Measurements of air flows and flow rates in the plant sector, on diffusers, grilles and ducts for air conditioning, heating and ventilation.
- Measurement of paint booths, extractor hoods, air speed produced by cooling fans

**TECHNICAL SPECIFICATIONS**

Speed	0.2 - 25.0 m/s
Resolution	0.01 m/s
Accuracy	± (3% + 0.20 m/s)
Temperature	0°C - 50°C (32 - 122°F)
Resolution	0.1°C / 0.1°F

TECHNICAL SPECIFICATIONS

Circuit	Hot wire microprocessor circuit for air velocity measurement. Particularly suitable for low speed measurements with high precision
Sampling	1 reading per second (approx.).
Automatic power-off	Auto power off after approximately 20 minutes of inactivity
Operative temperature	0/50°C
Power supply	9V battery.

IMPORTANT NOTES TO KEEP IN MIND FOR THE USE AND CARE OF THE ARW-8880 HOT WIRE ANEMOMETER

- The resistance thermometer sensor for measuring the speed of air flows is very

delicate, so be careful not to subject it to very high speeds (over 25m/s) or to air flows with transport of dust or impurities, contact with these particles at high speed could damage or even break the sensor.

- Pay attention to the operating temperature which must be within the range of 0°±50°C

Supplied as a complete kit: ready to use for your air flow velocity and volumetric flow measurements

The ARW-8880 Hot Wire Thermo Anemometer is supplied complete with a telescopic speed and temperature measuring probe (from 300mm to 1100mm), battery, ABS carrying case, USB interface cable and Software.

MICROMANOMETER ANEMOMETER



ARW-8920 For order **220122118**

Pitot tube Anemometer Micromanometer

The ARW-8920 micromanometer/anemometer allows simultaneous measurement of both pressure and flow rate in a duct. Easy to handle and equipped with a large backlit LCD display for fast and precise reading. Used to monitor HVAC (Heating, Ventilation and Air Conditioning) systems to ensure good quality indoor air distribution, ensuring proper airflow balance for a comfortable environment. Particularly suitable in cases where there are particular measurement conditions, such as, for example, high temperatures, high speeds, suction ducts with transport of dust or material residues, etc.



- Large LCD display with backlight
- Date-Time and MAX MIN and Average AVG functions
- Reading of the pressure, speed and flow rate of an air flow
- Zero adjustment before each measurement
- Simple setting for calculating the area of a rectangular or circular duct
- **USB interface and software for real-time data analysis with the instrument connected directly to the PC (included in the supply)**
- Low battery indication and sleep mode function
- **Possibility of measuring air flows with high temperatures, up to 600°C** (On the condition of carrying out measurements quickly in order to avoid overheating the pitot tube and the tubes connected to the instrument)

Delivery kits:

Battery 9V battery, USB cable, software, Pitot tube $\varnothing 8 \times 300\text{mm}$, ABS case and user manual.

MICROMANOMETER

Accuracy	$\pm 0.3\%$ FSO (25°C)
Repeatability	$\pm 0.2\%$ (Max. $\pm 0.5\%$ FSO)
Linearity/Hysteresis	$\pm 0.29\%$ FSO
Pressure range	$\pm 5000\text{Pa}$
Max pressure	10psi
Response Time	0.5 Seconds Typical
Out of scale indication	OL
Subscale indication	-OL

Unit of measure	Range	Resolution
PSI	0.7252	0.0001
mbar	50.00	0.01
inH2O	20.07	0.01
mmH2O	509.8	0.1
Pa	5000	1

PITOT TUBE ANEMOMETER (AIR SPEED)

	Range	Resolution	Accuracy
m/s (meters/second)	1-80.00	0.01	$\pm 2.5\%$ of reading (at 10.00m/s)
ft/min (feet per minute)	200-15733	1	Accuracy may vary depending on the size of the duct
km/h (kilometers per hour)	3.5-288.0	0.1	
MPH (miles per hour)	2.25-178.66	0.01	
Knots (nautical miles per hour)	2.0-154.6	0.1	

PITOT TUBE ANEMOMETER (RANGE)

	Range	Resolution
CFM	0-99.999ft ³ /min	0.0001 a 100
CMM	0-99.999m ³ /min	0.001 a 100

TEMPERATURES (INTERNAL INSTRUMENT SENSOR)

	Range	Resolution	Accuracy
C°	0 a 50.0°C	0.1	$\pm 1.0^\circ\text{C}$
F°	32.0 a 122.0°F	0.1	$\pm 2.0^\circ\text{F}$

THERMO-HYGROMETER

ARW 8892 For order **220121596**

Digital Thermohygrometer

This instrument is able of measuring air temperature, relative humidity, "dew point" and wet bulb air temperature. Incorporates a number of useful features including, auto power off, min./max. reading and Hold function for reading lock.

- Small size
- Fast response time
- High accuracy
- Data-Hold and Max-Hold function
- Dual backlit displays
- Calculation of dew point
- Wet-Bulb function
- (Wet bulb temperature)



TECHNICAL SPECIFICATIONS

Display	Dual LCDs
Response time	<15 seconds (90% of final air movement value)
Sensor: Humidity	High precision capacitive sensor / Temperature: Thermistor
Absolute humidity	0 - 500g/m ³ , 0 - 218.5gr/ft ³ (calculated from the ratio between RH value and air temp)
Operating conditions	32 ÷ 122 °F (0 ÷ 50 °C); < 80% RH non-condensing
Power supply	9 Volts
Battery life	Approx. 48 hours
Dimensions / Weight	300x75x50(mm) / 400g
Humidity measurement range	0~100%RH, Accuracy $\pm 2\%$ RH
Temperature measurement range	20~60°C, --4~140°F, accuracy $\pm 1^\circ\text{C}$ / 1.8°F
Dew point temperature	30~100°C, -22~199°F, accuracy $\pm 0.5^\circ\text{C}$ / 0.9°F
Wet bulb temperature (Wet Bulb)	0~80°C, 32~176°F, Accuracy $\pm 0.5^\circ\text{C}$ 0.9°F



APPLICATIONS



TECHNICAL SPECIFICATIONS

Reference standard	GB/T 3785.1-2010, IEC 60651:1979, IEC 60804:2000 IEC 61672-1:2013, ANSI S1.4-1983, ANSI S1.43-1997
Spectral analysis (Octave band)	average frequencies of a 1/1-octave filter: 31.5 Hz to 16 kHz GB/T 3241-2010, IEC 61260-1:2014 ANSI S1.11-2004
Microphone	MPA231T: prepolarized measuring microphone 1/2", class 1: sensitivity: 50 mV/Pa frequency range: 10 Hz to 20 kHz
Microphone socket	TNC connector with ICCP power supply (4mA)
Integration time	integration time defined by the user in the range from 1 sec. at 24 hours.
Protocol cycle	repetition time: infinite or from 1 to 9999 0.1 sec., 0.2 sec., 0.5 sec., from 1 sec. at 24 hours
Statistical acoustic parameters (percentile levels)	LXY(SPL), LXeq, LXYS, LXSEL, LXE, LXymin, LXPeak, LXN. Where: "X" indicates the frequency correction: A, B, C, Z "Y" indicates the time constant: F, S, I and "N" indicates the statistical measurement: L1 to L99 from 1 to 99; 3 profiles and 14 user-defined measurements calculated in parallel with different frequency/time constant correction
Frequency weighting	parallel A, B, C, Z
Time constant	Fast, Slow, Impulse and Peak
Linearity field	22dB(A) to 136dB(A)
Dynamic field	123dB (11dB(A) to 134dB(A))
Peak-C field	45 dB(A) a 137 dB(A)
Electric input	The measurement meets the requirements of GB/T3785 and IEC 61672 maximum input voltage 5 Veff (7.07 V peak) preamplifier input impedance > 6 GΩ
Field setting	1 field covering the entire dynamic range
Resolution	24 bits
Sampling frequency	48 kHz(Sampling interval for LN: 20ms)
Time Profile	Screen with visualization of noise characteristic as a function of time. (three selectable profiles: measurement duration: 1 minute, 2 minutes, 10 minutes)
Display	160 × 160 backlit LCD with white light 14 levels of contrast, display update every 1 sec.
Mass memory	4 GB capacity microSD (TF) card
Final report	Through the VA-SLM Software program it is possible to read and analyze the data with the generation of reports based on the saved data
Data export	Direct connection to a PC in order to read the contents of the memory card (as a USB drive)
Output	AC voltage output (5 VEFF maximum, ±15 mA), DC voltage output (10 mV/dB, 15 mA maximum), RS-232 serial interface and USB slot (USB drive mode or modem mode)
Alarm	Index alarm threshold LED for user-defined alarm status display
Power supply	4 1.5 V alkaline batteries (LR6/AA/AM3), are sufficient for about 10 hours (depending on the battery) it is also possible to supply the operating power using a direct current source (7-14 V, 500 mA) and a USB slot (5 V, 1 A)
RTC	Integrated buffer battery was factory adjusted (calibrated) with an error < 26 sec. in 30 days (< 10 ppm, (25 ±16)°C). It guarantees the working continuity of the system clock even during the replacement of the main batteries
Menu language	English, Chinese, Portuguese, Spanish, German, French
Program update	Firmware update using the USB slot with connection to our Server
Ambient conditions	temperature: -10°C to 50°C humidity: 20-90%, relative humidity
Real time temperature	real-time temperature indication on the main screen
Dimensions	70 × 300 × 36 (L × A × P)
Supply kits	sound level meter instrument complete with amplifier CCP with a TNC connector and class 1 microphone Microphone windscreen microSD memory card with a capacity of 4 GB for saving data 9V/500mA power supply unit data management software downloadable directly from our website "www.arwmisure.com" USB cable for PC connection supplied in a sturdy carrying case About 620 g with the 4 alkaline batteries
Weight	ARW2020, Class 1, 94dB/114dB, 1kHz
Acoustic calibrator	



SOUND LEVEL METERS



ARW 8850 For order **220121180**

Sound level meter "Phonometer"

Instantaneous sound level meter "SPL", ideal for checking and monitoring the noise pollution of plants, machines, engines, moving parts, transmission parts, industrial and civil environments and any source of noise that needs to be controlled. Equipped with a "CAL" function that allows calibration with the use of an internal oscillator that simulates 94 dB at 1KHz.



- Complies with IEC 651 type 2 standards
- Instantaneous measurement range LOW 35 ÷ 100 dB - HI 65 ÷ 130 dB
- Resolution 0.1dB
- Accuracy +/- 1.5dB
- MAX-HOLD function for detecting the maximum noise level
- Selectable slow-fast integration time (fast - slow)
- A and C frequency weighting
- Low battery indicator
- Dimensions 251x63.8x40 mm
- Weight 250 g
- Supplied complete with vinyl case, windshield, battery and user manual



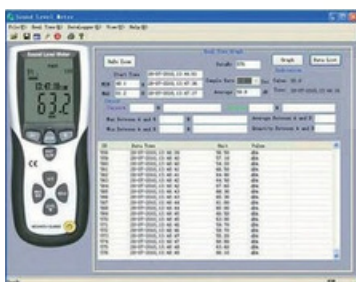
EMC
EN: 50081-1, 50082-1

ARW 8852 For order **220121479**

Sound level meter "datalogger"

Instant sound level meter "SPL" with data logger function. This feature allows you to make recordings with the choice of the time interval indicated directly on the display and with the relative transfer to a PC using the USB cable and the supplied software. The large LCD display allows the simultaneous display of all the information so as to facilitate reading by the operator and simplify its use.

- Complies with IEC61672-1 class 2 standards
- Data logging function (data logger) with storage of min. values. and max.
- Out of range indication
- Selectable A and C weightings
- Selectable Fast/Slow weighting
- AC/DC analog output: AC=1Vrms, DC=10mV dB
- Pre-settable alarm thresholds
- Resolution 0.1dB
- Frequency range: 31.5Hz ÷ 8kHz
- Accuracy +/-1.5dB
- Measurement dynamics: 50dB
- Selectable scale fields:
LO 30dB÷80dB, MED 50dB÷100dB,
HI 80dB÷130dB, AUTO 30dB÷130dB.
- Microphone: 1/2 inch electric condenser
- Dimensions: 278mmx76mmx50mm
- Weight: 350gr.
- Supplied accessories: adjustment screwdriver, wind screen, software CD, USB cable, DC9V external power supply, case and user manual



software



EMC
EN: 50081-1, 50082-1



DIFFERENTIAL PRESSURE GAUGES



ARW 8890 For order 220121432



The ARW 8890 is a differential pressure gauge that allows you to measure pressures in 11 different selectable scales. Particularly suitable in the plumbing and heating sector, in the air conditioning and heating fields.

TECHNICAL SPECIFICATIONS

Accuracy	± 0.3 % FSO
Repeatability	±0.2% (Max +/- 0.5% FSO)
Linearity	± 0.29% FSO
Measuring range	± 5psi (±138.3 in H ₂ O ± 345 mbar)

Resolution	in H ₂ O	0.1
	psi	0.001
	mbar	0.1
	kPa	0.01
	inHg	0.001
	mmHg	0.1
	ozin ²	0.01
	ftH ₂ O	0.1
	cmH ₂ O	0.01
	kgem	0.001
	bar	0.1

Dimensions	210 mm x 75 mm x 50 mm
Weight	280g

EMC
EN: 50081 - 1, 50082 - 1

- Large backlit display
- Data hold function
- Function ,max, min, average
- Zero value setting
- Low battery indication
- Auto power off function

Supplied complete with silicone tubes, software complete with USB cable, ABS case and user manual.



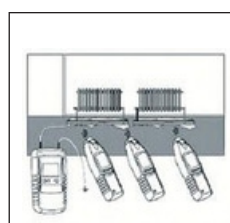
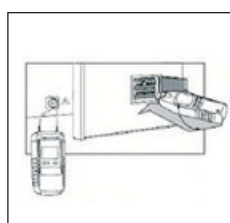
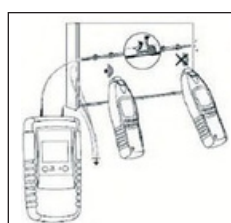
PIPES AND CABLES LOCATOR

ARW-1012 For order 220121759

The ARW-1012 service finder is a portable digital instrument used in various application sectors for the search and location of pipes, electric and telephone cables, as well as the identification of the path of the service or the electric/telephone line with search for any interruption or break.



- Search and locate pipes and cables in the wall, open circuits, short circuits in conductors
- Identification of the path of the pipe and power line in the ground
- Identification of protective devices and correlation to electrical circuits
- Search and locate accidentally plastered sockets and distribution boxes
- Identification of interruptions and short circuits in underfloor heating and radiant panels
- Search and trace the route of metallic water and heating pipes
- All fields of application (isolated and live) are covered without ancillary devices
- The display in the transmitter indicates the transmission level, the transmission code, as well as the stray voltage
- The display in the receiver indicates the reception level, the transmission code as well as the detection of the mains voltage
- Automatic and manual sensitivity setting
- Reception acoustic signal can be deactivated



RECEIVER

Cable search sensitivity	0...2.5m (wall/underground)
Main voltage	0...0.4 m
Dimensions	128x68x30 mm
Weight	About 185g

TRANSMITTER

Operating range	12V, 50V, 120V, 230V, 400V
Frequency range	0...60 Hz
Transmission frequency	125 kHz
Voltage	Up to 400V AC/DC
Temperature range	0° C ~ +40°C
Dimensions	190x60x37 mm
Weight	229 gr

ARW 1301 For order **220121182**

Light meter "luxmeter"

Compact and simple instrument, with a single switch for choosing the measurement scale.

TECHNICAL SPECIFICATIONS

Measurement range from 0.01 lux to 50,000 lux
Accuracy +/-5% of reading or +/-10 dgt
Integration time 1.5 times per second
MAX-HOLD function for detecting the maximum brightness value
Low battery warning
Dimensions 120x64.5x24.5 mm - sensor dimensions 115x60x27 mm - Weight 160 g
Supplied complete with case, measurement sensor, battery and user manual



ARW 8809 A For order **220121577**

Light meter "luxmeter"

Professional digital portable luxmeter equipped with an external sensor capable of detecting brightness up to 400,000 Lux. The visualization takes place through a large backlit display for numerical visualization and with an analogical bar of the measured value. Particularly suitable for environmental control in the workplace, in industrial applications, in public and private environments, in the photographic sector, in floriculture and in various professional fields for determining the degree of brightness of any environment. Equipped with a USB data output for connection to a PC and a software for downloading and managing data.

- Display capacity 4000 points
- Automatic range selection
- Peak hold function
- Detection of max/min values and "Hold" reading lock
- Auto power off function
- Low battery indication
- HR/Lux selectable unit of measurement
- Memory capacity 99 data, using a PC, real - time acquisition function



EMC
EN: 61326

TECHNICAL SPECIFICATIONS

Measuring range	400.000 Lux +/-5% - +/-10dgt
Precision	(<10.000Lux) +/-10% - +/-10dgt (>10.000Lux)
Resolution max.	0.1Lux (up to 400Lux) « Display 4000 points »
Sampling time	1.5 sec
Tool dimensions	203x55x70mm
Sensor size	115x60x27mm
Weight	280gr



MATERIAL MOISTURE METERS



ARW 125-G For order **220122354**

Moisture meter

Hygrometer for materials used to detect the level of humidity present on wood and building materials (plaster, concrete, mortar, gypsum, expanded polystyrene, cement, etc.) by selecting different groups. It is also possible to carry out measurements on cardboard and paper using the special accessories supplied. This simple, compact and ergonomic instrument with a non-slip handle offers a large graphic display with indication of the humidity value of the material in % with respect to the dry mass.



EMC
EN: 61326

- Large backlit graphic display
- Supplied complete with separate electrodes for various applications
- Direct reading also through built-in electrodes



Supplied complete with: instrument with built-in electrodes, connector for connecting external probes, hammer electrode, blade electrode and electrode extensions.



TECHNICAL SPECIFICATIONS

Measurement principle	By electrical resistance 8mm
Length of the electrodes	Integrated, replaceable
Electrodes	Wood 1÷75%; Construction 0.1±2.4%
Measurement range	-40 to 70°C
Room temperature	0~100% 0~30% = ±1%
Ambient relative humidity	30~60% = ±2%
	60~75% = ±4% ±0.5% -40°C ~ -10°C and
Accuracy - Wood	+40°C ~ +70°C = ±2°C
	-10°C ~ +40°C = ±1°C
Accuracy - Other materials	
Ambient temperature measurement	

Room relative humidity measurement	0~20% e 80°C ~ 100% = ±5.0%
Auto power off	20~80% = ±3.5%
LCD backlight	after about 3 minutes of non-use
Battery	automatic shutdown after about 10 seconds of non-use
Custody	3 × CR 2032, replaceable
Operating conditions	impact resistant plastic
Ambient relative humidity	160x60x28
Ambient relative humidity	0~40°C
Dimensions	0~85%RH
Weight	160x60x28 mm
	203 g

ARW-63 For order **220123118**

Non-destructive Wood hygrometer

Induction hygrometer for wood used to measure the degree of humidity present in the wood without damaging its surface. Compact and simple to use instrument, equipped with a large backlit graphic display and 8 selectable measurement scales to accurately detect the presence of humidity in all types of wood. Ideal and indispensable tool for floor and building engineers and all those who want to perform a complete check and identify any signs of leaks, deterioration of humidity or any parts damaged by water. Ideal in the production sector of the construction industry, the woodworking industry, in industrial sawmills and in all cases of non-destructive measurement of the finished product.

- Compact and handy instrument, equipped with a large backlit display
- Non-destructive measurement by simply placing it on the surface (measurement depth 5cm)
- 8 measurement scales selectable according to the density of the wood (measurement depth 5cm)
- Temperature measurement and unit conversion
- Setting the limit value of humidity: when the humidity value is greater than or equal to the limit value, the "x" icon will be displayed, otherwise the "v" icon will be displayed.
- Auto power off function
- Battery level indication
- Very precise zero setting function in case of significant changes in ambient temperature



- 8 kind of Geardensity adjustable
- Moisture limit value setting, icon "X" "v" reminder
- Built-in induction chip Protect work surfaces
- Data hold function



TECHNICAL SPECIFICATIONS

Humidity measurement range	0.5% ~ 79.5 %
Temperature measurement range	0 °C ~ 50 °C/32 °F~ 122 °F
Measurement error/humidity value	± 1.5%
Temperature value	± 2 °C / ± 3.6 °F
Wood density range	0.27 g/cm 3 - 1.05 g/cm
Detection depth	0mm ~ 50mm
Dimensions	63.6*31*125.8mm
Weight	146g

COATING ADHESION TEST, PULL-OFF



ARW-T05 For order **220122885**

Pull-off coatings adhesion test

The ARW-T05 pull-off adhesion tester is a manually operated portable instrument which, using hydraulic pressure, allows to measure the force necessary to "tear off" a portion of the coating from its substrate, determining the degree of adhesion of the coating to the base material. compliance with ISO 4624 specifications.

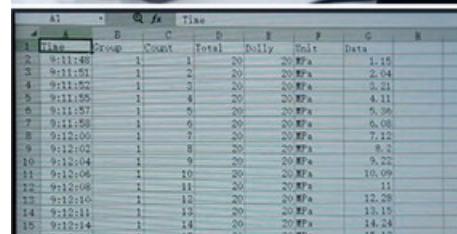
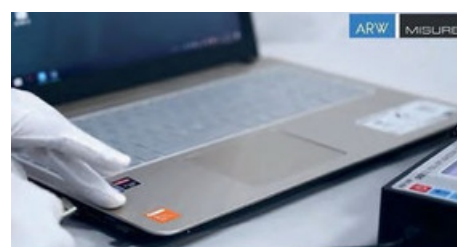
- **Portable design**, can be used anywhere quickly and easily
- **Built-in rechargeable lithium battery**, don't need any external power source
- **Flexible**, with direct selection of four different dolly sizes for different resolutions and test ranges (Standard 20mm)
- Visualization of the result directly on the LCD display
- **Complete supply kit**: instrument body equipped with display and controls, 20mm platforms (Dolly) n° 20 pieces, circular saw, 3M platform bonding adhesive, micro USB cable for PC connection, calibration certificate, user manual and ABS case
- **High accuracy**, each pressure system is calibrated with 1% accuracy against NIST traceable load cells
- Equipped with a high-precision professional sensor that guarantees a resolution of 0.01 MPa
- Hook and pull system ensures reliable test results for smooth or uneven surfaces
- **Complies with ASTM D4541, ISO 4624, ASTM D7234, ISO 16276-1 standards**
- Automatically stores all test results that include max power. achieved, pull-off power, jerk rate, dolly size and time
- Two selectable units of measure, MPa and PSI which can be converted automatically.
- **No software is required**, the ARW-T05 Pull-off test, once connected to the PC with the supplied interface cable, is automatically recognized as a "U" disk, and the data recorded during the test can be read automatically
- **Extremely rugged construction** and waterproof, dustproof, and shockproof design meets



even the most hostile operating environment



Supplied in a sturdy plastic case



TECHNICAL SPECIFICATIONS

Measurement scale	0÷3000 PSI / 0÷20 MPa resolution
Resolution	1 PSI / 0.01MPa
Precision	± 1% full scale
Platform size "Dolly"	20mm standard (10/14/50mm optional)
Custody	360x75x115mm
Power supply	Lithium rechargeable batteries
Weight	3 Kg

KIT ARW-2/1C 0÷60µm (1mm blade space) For order **220122702**

KIT ARW-2/4C 60÷120µm(2mm blade space) For order **220122703**

IT ARW-2/6C 120÷250µm(3mm blade space) For order **220122704**



"Cross Hatch" Coating Adhesion Test

Compact tool with ergonomic handle with a simple and quick coupling system of the cutting blade, no additional key needed. Complies with ASTM D3359 - ISO 2409 standards.

8 POSITIONS BLADE BLOCK: Equipped with 8 blade positions, this means the possibility, once the cutting edges are worn out, to rotate the blade block in 8 different positions offering a longer life than models with single blade or 2/4/6 blade positions. (duration equal to 8 times the single blade version)

CROSS HATCH TEST

This method specifies a procedure for determining the resistance of paints and coatings to separation from substrates when a cross-grain is made at right angles across the paint all the way to the substrate.

The method can be used for a pass/fail test. In the case of multilayer systems it is possible to determine the adhesion between the different layers.



TEST METHOD

- Make a cross incision on the coating until it reaches the substrate, a checkerboard will be created made up of small squares of 1, 2 or 3mm size, depending on the model used.
- Brush diagonally 5 times each, using a brush, or apply proper tape to the carved grid and remove.
- Observe the grating area using a magnifying glass verifying the degree of adhesion according to ISO2409.

TECHNICAL SPECIFICATIONS

Model	ARW 2/1C	ARW 2/4C	ARW 2/6C
N° blades	8	8	8
Blade distance	1 mm	2 mm	3 mm
Coating thickness	0÷60µm	60÷120µm	120÷250µm
Reference standard	BS 3900 E6 BS/EN ISO 2409 ASTM D 3359 D 3302		



Change blades



Test method

VISCOSITY CUP

ARW-125/4 For order **220122919**

Viscosity Cup

Ford ARW-125/4 viscosity cup is used to quickly and easily determine viscosity in liquids, built entirely in aluminum with anodic oxidation completed with removable stainless steel orifice is manufactured in accordance with international standards ASTM D1200, D333 and D365. The Ford 4mm version is most commonly used for quick and easy viscosity measurement of paints, inks, lacquers and other liquids.

- Entirely built in anodized aluminum with stainless steel nozzle
- Complies with international standards ASTM D1200, D333 and D365
- High manufacturing tolerance ±2%
- Optional support tripod
- Other sizes also available on request



TECHNICAL SPECIFICATIONS

Internal diameter	50 mm ± 0,05 mm
Outer diameter	86 mm ± 0,1 mm
Internal vertical height	43 mm ± 0,1 mm
Orifice length	10 mm ± 0,1 mm
Internal	

ARW-130

Viscosity cup support stand with built-in level



How do you use the viscosity cup?

- Bring the liquid sample and cup to the temperature required to perform the test
- Make sure the cup is perfectly clean and free from marks and impurities
- Place the viscosity cup on a suitable support making sure it is perfectly level
- Close the nozzle opening with your finger.
- Fill the cup to the brim making sure that the sample is free of bubbles or any other impurities.
- Use a glass plate by pushing it from one side to the other in order to eliminate the excess liquid in the border and close by sealing the cup and close the cup with the glass plate.
- Place a container to collect the sample under the cup.
- At this point remove your finger from the hole underneath
- Equip yourself with a stopwatch and prepare for the test
- Clear the hole and place the cup on the pedestal
- Remove the glass plate by sliding it and start the stopwatch at the same time, the timeliness of starting the stopwatch as soon as the flow starts is essential
- Promptly stop the stopwatch at the end of the flow and you will get the result

ARW- 265 For order **220122798**

Colorimeter Spectrophotometer

*The ARW-265 Colorimeter has been designed to provide a stable and precise color comparison ensuring the reliability of the result obtained without the danger of personal interpretations. Visual assessment is certainly not the way to go today and even using traditional colorimeters or pantone color swatches is no longer sufficient in some situations. The measurement technology based on the CIE L*A*B* guarantees a reliability of the measurement with the certainty of the final result without questionable interpretations. Let's avoid complex, unwieldy and often complicated to use instruments and let's rely on a simple, compact device suitable for measuring in every situation.*

Don't underestimate color quality control! The benefits you can get are:

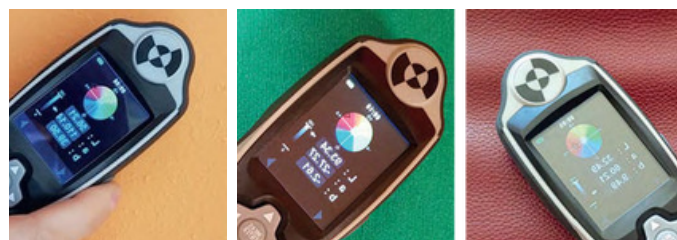
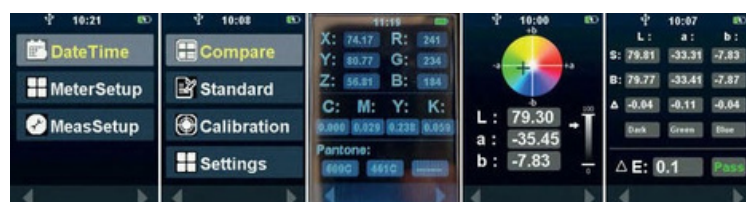
- Check and compare variations of color formulas in the production phases
- Verify batch-to-batch variations of final products
- Effectively monitor your suppliers by creating a single standard
- Obtain a homogeneous production process guaranteeing color stability and quality
- Eliminate personal visual interpretations, all are based on concrete results provided by the device without errors of evaluation
- Generate color variations and maintain the reference standards for production. Technology and practicality at the service of innovation



The fields of application of the ARW-265 spectrophotometer can be many, It can be used for evaluation in the plastic sector, in printing, in painting, weaving and dyeing, in household appliances and household goods, in building materials, in consumer electronics, in food items, toys and more. The measurement of Lab, RGB, CMYK, color difference ΔE and ΔLab color sample data according to the CIE color space for a color comparison

TECHNICAL SPECIFICATIONS

Color management software	Free to download	Short-term repeatability	$\Delta E < 0,1$
Memory capacity	For 5 standard samples and 1000 reading records	Measurement geometry	45°/diffuse lighting
Repeated accuracy	$\Delta E < 0,1$	Light source	D65/RGB LED
Display	LCD TFT true color 2,0 inch 320x240	Sensor	RGB Silicon Photoelectric diode
Interface	USB 2.0 Full Speed	Observation angle	CIE 10°Standard
Real Time Data Management Software	Time	Measurement range	1.5Sec
Color space	CIELAB CIEXYZ RGB	Power supply	Li-ion battery, USB charging support, (duration about 1000 measures)
Color difference formula	ΔE^*Lab (CIE76/CIE94)	Operating conditions	0÷40°C / Humidity <80%RH without condensation
Measurement area	$\varnothing 8mm$	Equipment	3.7V Li battery, Carrying case

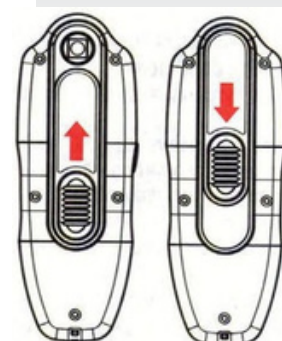
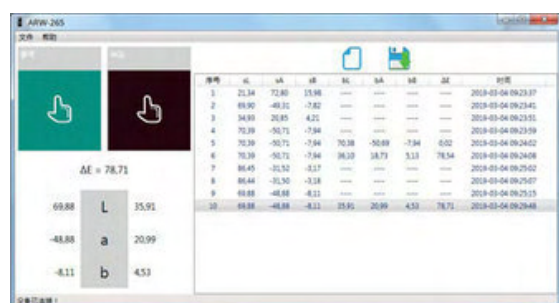


SOFTWARE

DOWNLOAD DIRECTLY FROM OUR WEBSITE

"www.arwmisura.com"

Equipped with a built-in calibration plate



SPECTROPHOTOMETER COLORIMETER



ARW 3-10 For order **220123256**

ARW 3-20 For order **220123257**

ARW 3-60 For order **220123170**

Spectrophotometers Series

Instruments with high precision and are designed for color matching, color measurement and analysis protocols, and for formulating matrices to define color. It features a modern design but at the same time is equipped with advanced features that make it extremely simple to use.

THE MODELS IN THE SERIES ARE:

- **ARW 3-60 Spectrophotometer** equipped with special UV illumination to measure samples and complete illuminants, 8mm and 4mm apertures, SCI & SCE, Bluetooth communication and is equipped with very high precision and extended functions with management software via PC. It represents a fundamental tool for responding to the most advanced needs in industrial color measurement management.
- **ARW 3-20 Spectrophotometer** with multi-illuminants, Customized aperture: 4mm standard, Optional 8mm/4mm/1×3mm, equipped with SCI & SCE, Bluetooth connection and very high accuracy (PC software included).
- **ARW 3-10 Spectrophotometer** equipped with 4 illuminants, 8 mm aperture, SCI & SCE and excellent precision (PC software included).



- The spectrophotometer features an **innovative design with high functionality** that makes it practical and simple to use.
- Equipped with D/8 geometric optics and **compliant with CIE No.15 standards, GB/T 3978, GB 2893, GB/T 18833, ISO 7724/1, ASTM E1164, DIN 5033 Teil 7.**
- Large memory capacity with **over 20,000 measurement data**
- Equipped with a **graphic LCD touch screen display** with concave grating, 256 dual matrix image elements and CMOS image sensor.
- **Standard white calibration plate, very stain-resistant, supplied.**
- The combination with the **LED light source** allows long autonomy of use and low energy consumption.
- Color spectrum measurement with high accuracy, can be used for comparison and evaluation of color transmission.
- Equipped with a camera that allows you to view and center with precision the exact point of the measurement
- **Supplied with USB output and data management and processing software.**
- Single 8mm aperture that supports both SCI and SCE modes simultaneously.
- **Numerous functions available** such as two standard viewing angles, a variety of illuminants and color indices, complies with numerous standard colorimetric data and is the ideal instrument to meet color measurement requirements.

TECHNICAL SPECIFICATIONS			
Models	ARW 3-60	ARW 3-20	ARW 3-10
Optical geometry	Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle)		
Integration of the sphere size	48mm		
Source of light	Combined LED light, UV light	Combined LED light	
Spectrophotometric mode	Concave grating		
Sensor	256 Image Element Double Array CMOS Image Sensor		
Wavelength Range	400÷700 nm		
Wavelength Interval	10nm		
Semiband Width	10nm		
Measured Reflectance Range	0÷200%		
Measuring Aperture	Dual Aperture: 10mm/8mm & 5mm/4mm	Customized Aperture: 8mm/4mm/1×3mm	Single Aperture: 8mm/10mm
Specular Component	SCI&SCE		
Color Space	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter LAB		
Color Difference Formula	ΔE^*_{ab} , ΔE^*_{uv} , ΔE^*_{94} , $\Delta E^*_{cmc}(2:1)$, $\Delta E^*_{cmc}(1:1)$, ΔE^*_{00v} , $\Delta E(\text{Hunter})$ WI (ASTM E313, CIE/ISO, AATCC, cacciatore),		
Other Colorimetric Index	YI (ASTM D1925, ASTM 313), TI (ASTM E313, CIE/ISO),		
Observer Angle	Metamerism Index MI, Staining Fastness, Color Fastness, Color Strength, Opacity,		
Illuminant	8° Glossiness		
Displayed Data	2°/10°		
Measuring time	D65, A, C, D50, D55, D75,	D65, LA, C, D50, D55, D75,	D65, LA, C, D50
Repeatability	F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12	F2, F7, F11	
Inter-instrument Error	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph,		
Measurement Mode	PASS/FAIL Result, Color Offset		
Locating Method	2.6s		
Battery	Camera View Finder Locating		
Dimensions	MAV/SCI: $\Delta E^* \leq 0,03$	MAV/SCI: $\Delta E^* \leq 0,05$	MAV/SCI: $\Delta E^* \leq 0,06$
Weight	MAV/SCI: $\Delta E^* \leq 0,15$	MAV/SCI: $\Delta E^* \leq 0,2$	MAV/SCI: $\Delta E^* \leq 0,4$
Illuminant Life Span	Single Measurement, Average Measurement		
Display	Li-ion battery. 5000 measurements within 8 hours		
Data Port	L*W*H=184*77*105mm		
Data Storage	600 g		
Language	5 years, more than 3 million times measurements		
Operating Environment	3.5-inch TFT color LCD, Capacitive Touch Screen		
Storage Environment	USB, Bluetooth 4.0		
	Standard 2000 Pcs, Sample 20000 Pcs		USB
	English		
	0~40°C, 0~85%RH (no condensing), Altitude < 2000m		
	-20~50°C, 0~85%RH (no condensing)		



Supplied with USB output and data management and processing software



STANDARD ACCESSORIES FOR ALL MODELS

Power Adapter, Built-In Li-ion Battery, User Guide, PC Software, White and Black Calibration Cavity, Dust Cover



ARW-H60 ARW-H2068S ARW-H2068T

ARW-H60 For order **220122792**

ARW-H2068S For order **220122793**

ARW-H2068T TOUCH For order **220122794**

Glossmeters Series

The ARW Professional Portable Glossmeter Series offers a complete solution for any surface gloss measurement application and need. The various models are distinguished by the measuring optics, single-angle 60° and multi-angle 20°/60°/85°, as well as by the technical and functional specifications. The ARW-H60 version of the portable glossmeter reads at an angle of 60°, while the versions ARW-H2068S and ARW-H2068T are able to

measure in all three angles in the same time (glossmeters three angles 20°/60°/85°). The ARW-H2068T portable glossmeter model is the top-of-the-range triangle version with a Touch screen display and a simple and intuitive internal navigation menu with setting and setting functions.

Thanks to the supplied software it is possible to transfer and store data for the creation of detailed analysis reports with graphical and statistical functions. For all versions it is used to set the various parameters of the instrument.

Fields of application: The glossmeter is an instrument used to measure the degree of gloss of surfaces, they can be used for measurements applied to paints, inks, drying varnishes, coatings, wood products, marble, granite, glazed polished tiles, ceramics, brick and porcelain, plastic, paper and more.

- Compact and solid structure with ergonomic handle
- Simple to use with a single function key
- Large backlit display (Touch screen for the ARW-H2068T version)
- Data transfer and management software
- Date time function
- Supply kit

- Instrument
- Adapter for recharging
- USB interface cable
- Calibration plate
- Not Present | o Supplied as standard
- Cleaning cloth
- Software CD
- Carrying case



SOFTWARE



FUNCTIONS			
	ARW-H60	ARWH2068S	ARW-H2068T
Measurement optics	Mono Angle 60°	Triangle 20° - 60° 85°	Triangle 20° - 60° 85°
Internal menu	-	-	0
Touch screen display	-	-	0
Backlight Display	0	0	0
Date and time	0	0	0
Calibration basis	0	0	0
Memory	1000 readings	1000 readings	Advanced Memory: Basic 1000, Statistics: 5000 Continued: 5000
Data statistics	-	-	0
USB cable	0	0	0
Test certificate	-	-	0
Internal accumulator rechargeable	0	0	0
N. of readings displayed on the angle display	5	5 for each corner	-
Software	0	0	5 for each corner
		0	0

TECHNICAL SPECIFICATIONS			
	ARW-H60	ARWH2068S	ARW-H2068T
Measure angle	60°	20° 60° 85°	20° 60° 85°
Measurement area	9x15 0-300GU	20°:10x10, 60°:9x15,85°:5x36	20°:10x10, 60°:9x15,85°:5x36
Resolution		0,1GU	
Repeatability		±0,2GU (0-100GU) ±0,2%GU (100-2000GU)	
Accuracy		Complies with JJG696 first class gloss meter working requirements	
Color match		Corresponding with CIE 1931 (2nd) under CIE C light source.	
Measurement time		0.5sec	
Display			
Operating conditions	3.5inch TFT, resolution 320*480	3.5inch TFT, 320*480 resolution	3.5inch TFT, Touch screen, 320*480 resolution
Interface			
Rechargeable power supply		0~40 °C (32~104°F) / <85% Non-condensing relative humidity	
Reference standards		USB	
Dimensions		3200mAh Li-ion Battery, >5000 readings (about 8 hours)	
Weight		ISO 2813, GB/T 9754, ASTM D 523, ASTM D 2457	
Software		160x75x90mm 350g	
		GQC6 Quality Control Software with QC Report Printing Function (More extensive functions for model ARW-H2068T)	

DUROMETER FOR COATINGS



ARW-506/2 For order **220123044**

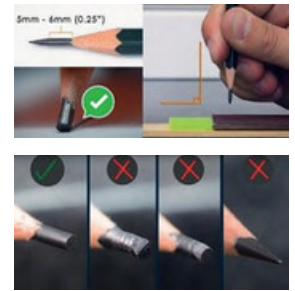
ARW-506/3 For order **220123045**

Wolff Wilborn Pencil

Coating Durometer

This instrument offers a quick and easy method for determining the film hardness of a coating applied to a flat substrate according to the Wolff Wildorn method. The test consists in the use of pencils of different degrees of hardness dragged on the surface through a specially designed trolley at an angle of 45° and pushed with a uniform pressure on the sample, all in compliance with the reference standards governing this method of measurement. ASTM D 3363, ISO 15184.

• **Complies with international reference standards** ASTM D 3363, EN 13523-4, ISO 15184:2012, JIS K 5600-5-4 • **Built-in level** located on top of the cart, convenient for checking level during testing. • Test angle 45° and thrust with uniform pressure on the sample • **2 different models available**, Pencil lead pressure: 750g/1000g. • Only three points of the surface are touched (cartwheels and pencil).



TECHNICAL SPECIFICATIONS

Models available	ARW-506/2 ---- (750g / 7,35 N ± 0,1 N)
Pencil opening angle	ARW 506/3 ---- (1000g) 45°

Supply Kit:

- Trolley instrument body
- Set of 12 pencils (4B - 3B - 2B - B - HB - H - 2H - 3H - 4H - 5H - 6H)
- Special pencil sharpener
- Sandpaper, 400 grit
- Manufacturer's calibration certificate

"PIG" COATING THICKNESS GAUGE

ARW- S548 For order **220122912**

ARW-S548 is a mechanical Thickness Gauge used for coating layer thickness measurement in destructive mode, suitable for use in all cases where conventional electromagnetic measurement techniques are ineffective. Specifically, it finds particular application in measuring the thickness of paint on substrates such as wood, concrete, plastic and other non-metallic substrates.

The ARW-S548 test is based on the standard wedge cutting procedure, the coating is cut by dragging a blade specially inclined at a defined angle, so that the cut penetrates the coating up to the substrate. The thickness or thicknesses of the different coating layers are visually identified and calculated based on the conversion factor of the blade used. The visualization and measurement of the layers is done using the built-in microscope equipped with an illumination source and a metric graticule for measuring the size of the cut for each single slice.

- Solid and sturdy, made of a black painted aluminum block which houses the following elements
- Equipped with a practical selector for choosing the cutting blade (4 cutting blades supplied with the instrument)
- N°1 cutter: measuring range: 20-2800µm (Conversion factor: 20)
- N°2 Cutter: measuring range: 10-1400µm (Conversion factor: 10)
- N°3 Cutter: measuring range: 5-700µm (Conversion factor: 5)
- N°4 Cutter: measuring range: 2-280µm (Conversion factor: 2)
- Built-in measuring microscope with a magnification of 30X and a metric reticle for measuring

(2.8 mm with 1/140 division), also useful for any inspections

- Equipped with two sliding wheels to increase stability and sliding making the cut more precise and uniform.
- Battery compartment for 1.5 V battery pack. Combination of LED and fiberoptic light guide for optimal illumination of the sample at low power consumption.
- Built in compliance with ASTM D 4138, AS 1580 Meth 408.1 standards



TECHNICAL SPECIFICATIONS

Measuring range	2 ÷ 2800 µm (depending on the selected blade)
Light source power supply	1 x 1,5V AAA
Dimensions	110x85x25mm
Weight	500g
Reference standards	ASTM D 4138, AS 1580 Meth 408.1

Supply Kit:

- 4 cutting blades
- Highlighter pen
- ABS case
- Hex key for blade assembly

THICKNESS GAUGES FOR COATINGS



ARW-2300 For order 220123117

Instrument able to measure the thickness easily, quickly, non-destructively and accurately of the non-magnetic coating on magnetic and non-magnetic metallic substrates. At the same time, the ARW-2300 automatically identifies magnetic metal substrate and non-magnetic metal substrate. Equipped with a large high-definition color display, it allows you to identify the values clearly and precisely. The ARW-2300 finds particular application in the coating industry, industrial painting, car bodywork, electroplating industry, metal working industry, chemical industry, product inspection and testing and other verification areas.

- Menu operation and large HD color screen display
- **Dual technology**, measuring the thickness of the non-magnetic coating on the

surface of the magnetic metal substrate and the non-metal coating on the non magnetic metal substrate

- **Two measurement methods:** single measurement and continuous measurement
- Basic calibration and zero point calibration available
- **Setting of limit values (alarm)**, with indication of exceeding also through the distinction of color of the visualization on the display both on the direct reading and within the memorized data to make identification more evident and quicker
- Selection of metric/imperial units of measure (micron/inch)
- **Screen rotation function**, allows you to read easily at any angle of measurement
- Charging protection, multi interface display, screen brightness selection
- Internal data memory (viewable only directly from on the instrument)
- **Data statistics function and graphic visualization** of the measurements directly on the display
- Auto power off function



Supply Kit:
 - Instrument
 - User manual
 - USB cable for charging
 - 5 sample thicknesses
 - 2 Zero Bases (F/FN)
 - ABS case

Memory	Unit	Measure group	Unit	Measure data	Unit
Measured data	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001
Measure group	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001
Delete group	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001
	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001
	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001
	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001
	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001
	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001
	FILE 001	FILE 001	FILE 001	FILE 001	FILE 001



TECHNICAL SPECIFICATIONS

Measuring range	0~1300 µm/51mil
Resolution	(0.1µm (100µm).1µm (≥ 100µm))/0.1mil
Measurement error	≤150µm±(3%H+1µm)
Minimum diameter of the magnetic metal substrate	12 mm
Minimum thickness of magnetic metal substrate	0.5 mm
Minimum radius of curvature for convex magnetic substrate	2 mm
Minimum bend radius for concave magnetic substrate	11 mm
Minimum diameter of non-magnetic metal substrate	50 mm
Minimum thickness of non-magnetic metallic substrate	0.5 mm
Battery	DC 3.7V (1000mAh lithium battery capacity)
Dimensions	52,9x26x117mm
Weight	102.4 g (including battery)

THICKNESS GAUGES FOR COATINGS

Coating Thickness Gauges

ARW 826 FN For order 220121335

For coatings on ferrous and non-ferrous (magnetic and non-magnetic) materials



Ideal for any type of coating (paint, plastic, zinc, chromium, rubber, ceramic, etc.) on "FE" magnetic metal bases (versions 826 F - 826 FN), the 826 FN version also allows you to measure coatings (paint, plastic, anodization, chrome, rubber, ceramic, etc.) on non-magnetic metal bases "NFE".

TECHNICAL SPECIFICATIONS

Measuring range	0-1200 µm FE (FE-NFE version 826 FN)
Resolution	0.1 µm up to 100 µm - 1 µm up to 1200 µm
Accuracy	3% of reading or ± 2 µm
Operating temperature	0 + 50°C
Operating humidity	< 80%
Power supply	4 x 1.5V batteries (AA-UM3)
Instrument size	161 x 69 x 32 mm
Probe size	Ø 15 mm - H 55 mm

Optional accessories for ARW 826 F - ARW 826 FN

- Additional reference thicknesses (values on request)



- High value for money
- **Complete with separate probe with extensible cable suitable for any type of flat or round surface**
- Simple and fast calibration with the supply of 4 reference thicknesses (50 - 100 - 200 -500 µm)
- Large 4-digit LCD display
- Low battery warning
- Supplied complete with ABS case, **measuring probe (2 for the 826 FN version)**, zeroing base, 4 calibration foils and user manual.



THICKNESS GAUGES FOR COATINGS



ARW-159 For order 220123320

Digital Coating Thickness Gauge ARW-159 with dual "FN" technology that allows non-destructive, rapid and precise measurement of the thickness of a non-magnetic coating (painting, galvanizing, chromium plating, anodizing, etc.) on magnetic and non-magnetic metal substrates (ferrous and non-ferrous). The instrument is equipped with a single probe (Fe/NFe) capable of automatically measuring the type of substrate and setting the measurement principle, greatly simplifying the control phases allowing greater detection speed and immediate identification of the type of base metal.

- **Large 2.4" TFT color LCD display with 10 adjustable LCD illumination levels** for clear and precise visibility of the measured values.
- Compact and solid structure of the thickness gauge with dual technology probe (Fe-NFe) with the possibility of selecting the FE principle for ferrous metals, NFE for non-ferrous metals (non magnetic) or "AUTO" for automatic identification of the type of substrate.
- **Screen rotation function**, allows the user to read easily at any measurement angle. The LCD screen can automatically rotate with 0°, 90°, 180°, 270°.
- **Setting of alarm values with multi-mode**

signaling: via an acoustic signal and backlight flash or via 3 color LED indication (LED on the front of the instrument).

- Automatic shutdown function
- Stability test and continuous test
- Menu operating system



- **Three operating modes are available:** DIRECT mode, GROUP mode and SSPC mode:
 - **DIRECT mode** is recommended for simple, quick and occasional measurements. Provides statistical analysis, individual values are not saved, the statistical analysis program can evaluate 80 readings.
 - **GROUP mode** allows measurement and storage of readings in an internal programmable memory, a maximum of 400 readings and 4 series of measurements can be analyzed based on various statistical criteria.
 - **SSPC Mode:** Spot and area averaging mode to comply with SSPC (Society of Protective Coatings) methods, the minimum number of measurements per spot is 3, the minimum number of measurements per area is 5.
- AVG, MAX, MIN, Stand and Deviation (S.DEV) display.
- Measurement of temperature, humidity and dew point temperature
- **Internal data memory, 50 groups of data selectable with max. 50 measurement for each group**
- Equipped with USB interface for PC analysis software
- Low battery indication, error signal
- Basic mode calibration, one point and SSPC
- **Language selection:** English, German, Italian, French, Chinese, Japanese



SUPPLY KIT

Meter with two 1.5 V AA batteries, plastic case, instructions for use, steel and aluminum zeroing bases, 5 calibration thicknesses (50/100/250/500/1000 microns "indicative values"), USB connection cable, connection software for PC analysis.

TECHNICAL SPECIFICATIONS		
Probe sensor	F	N
Principio di funzionamento	Magnetic induction	Eddy Current principle
Operating principle	0-2000 µm	0-2000 mm
Guaranteed tolerance (reading)	(±2%+2) µm	(±2%+2) µm
Repeatability	(±1%+1) µm	(±1%+1) µm
Low field accuracy	0.1 µm	0.1 µm
Minimum bend radius	1.5 mm	3 mm
Minimum area diameter	7mm	5 mm
Basic critical thickness	0.5 mm	0.3 mm
Temperature range	0 to 50 °C/32 to 122 °F	
Basic accuracy	±1°C/1.8°F	
Humidity field	0 to 100%	
Basic accuracy	±3%	
Dimensions	120mm x 60mm x 40mm	
Weight	120 g	



COMB THICKNESS GAUGE

ARW-1150 For order 220121056

ARW-1701 For order 220122846

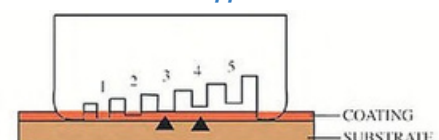
ARW-1701
version in
steel

ARW-1150
aluminum
version



This comb thickness gauge is used for measuring the coating thickness of wet film even before drying. Simply place the toothed surface perpendicularly on the wet coating and then visually check the maximum value reached. The wet film thickness gauge is a very useful item in situations where immediate thickness control is required. Particularly used in the field of building paints, in road signs and in industry for measuring the depth of a coating of paint, enamel, lacquer, adhesive or other materials that have been applied on a smooth surface.

- Simple to clean
- Compact dimensions
- ARW-1150 range 25 ÷ 2000 µm in aluminium
- ARW-1701 range 25 ÷ 3000 µm in steel



THICKNESS GAUGE FOR COATINGS



ARW-1920S For order 220123151

The "FN" ARW-1920 dual technology coating thickness gauge is able to automatically detect the type of substrate (magnetic and non-magnetic) and set the measurement principle. This functionality simplifies the control phases allowing for greater detection speed and 'immediate identification of the type of base metal.

The instrument is equipped with a large backlit color TFT display with comprehensive graphical illustrations and complete data statistics with graphical display and data logging function with USB interface and data transfer and management software.

It represents the solution for any measurement of the coating layer such as painting, enamelling, galvanizing, chrome plating, anodizing on aluminium, etc. and on any metal substrate.

- The instrument is equipped with a **large backlit color TFT display** with complete and graphic illustrations, all the most important information is collected on the main screen
- It has a solid and compact structure with a single dual technology probe (Fe - NFe) capable of selecting the FE principle for ferrous metals, NFE for non-ferrous metals (amagnetic) and "AUTO" for automatic identification of the type of substrate
- Internal data memory (500 groups of 15 values each)
- **Statistical function with indication of values: Minimum, Maximum, Average, No. of readings and standard deviation**



- Two measurement modes, single and continuous (scan function)
- **High resolution selectable from the menu 0.01μm, selectable from the menu with three configurations: Low (1μm), medium (0.1μm), high (0.01μm)**
- Limit value entry function (low and high alarm displayed directly on the main screen with red indication of the measured value if exceeded)
- Auto power off function
- Date and time setting
- 5 sample reference thicknesses included in the delivery (48.5μm, 99.8μm, 249μm, 513μm, 1024μm - indicative values)
- **Supplied complete with software and interface cable for data transfer and management to PC**



MEASUREMENT PRINCIPLE, SINGLE DUAL TECHNOLOGY PROBE:

- **Magnetic Induction (Fe):** measures non-magnetic coating layer on magnetic ferrous metal bases As paint, zinc, aluminum, chromium, copper, rubber on iron substrates, cast iron, magnetic steel alloys
- **Eddy Current (NFe):** measures non-conductive coating layer on non ferrous non-magnetic metallic bases such as rubber, plastic, paint, oxidation (anodizing) on substrates in aluminium, copper, zinc, tin, etc.

TECHNICAL SPECIFICATIONS

Measuring range	Magnetic Induction (Fe) & Eddy Current (NFe)
Measuring range μm	0 - 1500 μm FE/NFE
Probe	Double technology (Fe/NFe)
Instrument body	In plastic material
Accuracy	± (2% measured value + 1) μm
Resolution μm	0,01 μm
Minimum bending radius mm	Convex 1.5 Concave 9
Minimum diameter (mm)	ø7
Minimum Substrate Thickness (mm)	0,5 mm
Data storage	500 groups of measures
Dimensions	163x78x33 mm
Power supply	3 1.5V batteries
Operating temperature	0+50 °C
Operating humidity	<80%
Supply kits	Instrument, Probe (Fe - NFe), 2 zero bases (Fe - Nfe) Software and USB cable, 5 sample thicknesses, user manual, ABS case



DATAVIEW SOFTWARE COATING THICKNESS GAUGE ARW-1920S



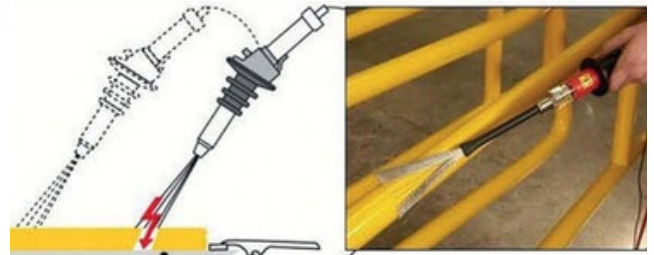
ARW-DJ6A For order **220123350**

Porosity detector

The ARW-DJ6A porosity detector, called "Scintillograph", is a high-voltage intelligent measuring instrument designed to verify the integrity of a protective coating for an anti-corrosion process.

The ARW-DJ6A detection method consists of placing and sliding the conductive brush directly on the coated surface to be inspected. During the operation, if there are imperfections, porosity, cracks or other similar problems, we will be faced with the generation of sparks due to the contact of the brush with the underlying conductive metal substrate. The defect detection warning is also issued via an audible and luminous alarm. The Porosimeter is equipped with many functions such as intelligent anti-interference chip, anti-interference LCD screen and digital control circuit, which make the high voltage output of the instrument more accurate, which can be controlled within the range of $\pm (0.1KV + 3\% \text{ reading})$, and the appropriate measured voltage can be output automatically according to the thickness of the anti-corrosion coating. In addition, the ARW-DJ30 Porosimeter is a lightweight instrument, small in size and thanks to the large-capacity lithium battery power supply, it is suitable for field operation.

- Microprocessor control, real-time monitoring of high voltage output to ensure stable and accurate high voltage.
- Automatic detection of suitable high voltage pulse discharge according to anti-corrosion materials and thickness.
- Low current, multiple alarm methods to avoid secondary damage to anti corrosion layer.
- Equipped with numerous functions such as sound and light alarm, headphone input in noisy environment, precise positioning and diversified probing.
- Circular handle probe and external anti-corrosion coating, suitable for various applications on complex workpieces.
- Easy and simple to use with a wide scale range of 0.6K~31.5KV to test coating thickness from 0.05 to 10/12mm.
- The instrument is equipped with a large capacity lithium battery power supply, ensuring a long outdoor operating time.



TECHNICAL SPECIFICATIONS

Test voltage range	0,05~10mm
Suitable for testing thickness	Impulse
High voltage output mode	The 3-digit number is shown
Measure voltage display	0,1 KV
Display accuracy	$\pm (0,1 \text{ kv} + 3\%)$
Voltage accuracy	The largest 999
Lease count	Headphone, peak phone alarm, light alarm
The alarm way	Manual shutdown, automatic shutdown
Shutdown mode	128 * 64 dot-matrix LCD with backlight display
Display screen	$\leq 6 \text{ W}$
Consumed power	240 mm*165 mm*85 mm
Host size	12 V 4400 mA
Battery specifications	Admit 12 hours
Continuous service time of the battery at a large voltage	Admit 4,5 hours
Charging interval	Input AC 100-240V Outputs 12.6V 1A
Adapter voltage	The standard length is close to 1.5m
Probe line	2 set / set winding coil 1
Ground lead	1 A
Fuse	



SUPPLY KIT

Porosimeter ARW-DJ6A, High-Pressure probe rod, Test rod connection line, 1 x fan-shaped brush, 1, grounding cable, 1 x flat brush 250mm, Brush connection rod, Battery charger, Carrying strap, Magnetic grounding, ABS carrying case, Instruction manual, Fuse.



ULTRASONIC THICKNESS GAUGES



ARW-1300 For order **220123115**

Ultrasonic Thickness gauge for materials

The ARW-1300 uses ultrasound technology to measure the thickness of a material by simply placing the probe on the surface. This thickness gauge is able of quickly and accurately measuring the thickness of various materials or industrially manufactured parts, as well as monitor piping and pressure vessels of manufacturing equipment and the degree of corrosion of various parts in use. The large HD color display enables clear and precise reading of the measured values, even in low light conditions.

It is widely used in manufacturing, metal processing, commodity inspection, and other inspection areas.

- Menu operation and **large color backlight HD display** for clear and precise readings
- **Two calibration modes** (speed of sound calibration, basic calibration)
- **Wide selection of materials** for a correct calibration of the ultrasound speed in a simple and fast way (selectable list from the menu containing the most common materials, also available the "Custom" function to insert the speed of materials of your production)
- **Data memory** with archiving function (can be viewed directly from the instrument with a color graphic display)
- **Data statistics function** directly on the display (min. max., average values)
- Setting function of the **limit values** (alarm values) with acoustic and visual signaling

through the color distinction on the display

- Graphic display of measures
- Auto-off function
- Probe supplied 5MHz (diameter 10mm)



- SUPPLY KIT**
- Instrument body
 - Operative Manual
 - ABS case
 - USB cable only for charging
 - Companion gel
 - Ni-MH rechargeable battery
 - 1Probe supplied 5MHz (diameter 10mm)



TECHNICAL SPECIFICATIONS	
Measuring range	1.00 ~ 300.0mm 1500 v
Data archive	5MHz/2.5 MHz
Probe selection	± (0.5% H+0.05)mm
Operating frequency	0.01mm (1.00 a 99.99)
Measurement error	0.1mm (100 a 300mm)
Resolution	ø 20x3mm (steel)
Lower limit of measurement of tube	1000 ~ 9999m/s
Speed of sound adjustment range	0 ~ 40 °C
Operating temperature range	3 1.2V Ni-MH rechargeable batteries
Battery	5V 1A
USB change	65x146x30mm
Dimensions	130g Measurement parameters
Weight	1.00 ~ 300.0mm (Supplied)
Probe	1.2 ~ 50.0mm (Optional)
5MHz (10mm diameter)	1.2 ~ 300.0mm (Optional)
5MHz (6mm diameter)	1.2 ~ 300.0mm (Optional)
2.5MHz	
5MHZ or for high temperatures	



OPTIONAL ACCESSORIES	
Code	Description
22011045	Multivalve calibration block (1-3-5-10-15 20mm)
221120792	Coupling liquid (1000 ml)



ULTRASONIC THICKNESS GAUGES



ARW-N

For order **220122926**

Ultrasonic Thickness Gauge

Portable digital ultrasonic thickness gauge for measuring the thickness of materials. Ergonomically designed for comfortable positioning in your hands, the ARW-N brings together all the necessary functions to satisfy any need.

Equipped with internal data memory and a built-in calibration plate for Probe, it allows fast and precise measurement both on a single point and in continuous mode with the SCAN function.

Supplied complete with 5 MHz probe and delivered in a sturdy carrying case



PROBE 5MHz



PROBE 7MHz



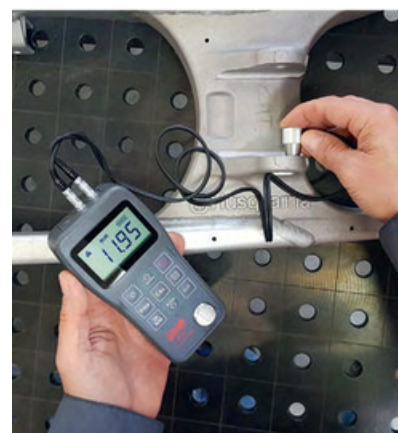
TECHNICAL SPECIFICATIONS

Measuring range	0.7...200 on steel and depending on the probe used (1.2...200mm with the supplied 5MHz probe)
Ultrasound speed	1000-9999m/sec
Resolution	0,1 mm
Accuracy	0,5% of the measurement + 0,04 mm
Selectable units of measure	mm, inch
Dimensions	150mm x 74mm; H 32mm
Weight	245g
External probe	5 MHz ø 14 mm (lungh. del cavo: 1m) 7 MHz ø 6 mm (lungh. del cavo: 1m) opzionale
Power supply	2x1.5V AA batteries
Data output	RS-232
Internal data storage	For 20 files (100 values for file)
Auto shut-off function	Automatic
Scan function	Scan mode (10 measurements for sec.)



OPTIONAL ACCESSORIES

Code	Description
ARW-04	Software and cable for 7MHz probe ø 6 mm for thin thicknesses
ARW-US02	Measuring range 0.75-80.0 mm (steel reference) 5 MHz ø14 probe for high temperatures up to 300°C
ARW-US03	Measuring range 3.0-200.0 mm (reference steel)



OPTIONAL ACCESSORIES

Code	Description
220111045	Multi-value calibration block (1-3-5-10-15-20mm)
221120792	Coupling liquid (1000ml)

ULTRASONIC THICKNESS GAUGES



ARW-1930 For order **220122890**

Ultrasonic Thickness Gauge

This digital thickness gauge for materials uses the ultrasonic operating principle to measure the thickness of various types of metals and more, it is able to detect the thickness on metals such as steel, cast iron, aluminum, copper, brass, etc ... and non-metallic such as plastic, glass, ceramic and more. In the case of non-metallic materials it is advisable to first check the possibility and the range of measurement according to your needs after contacting our technical staff. The measuring range depends on the type of material and the probe used, the support starts quickly and easily from one side only without the need for feedback on the opposite side.

- High quality and precision with 0.01 mm resolution.
 - Two Standard probe included, 5MHz diameter 10mm for measurements from 0.80 to 250mm (on steel base).
- Integrated probe calibration block.
Double selectable measurement unit.
Equipped with **double 5MHz measuring probe (90 ° and Straight)**.
Icon showing the pairing status.
Ultrasound speed measurement function with adjustment of the value according to the thickness and recognition of the material; possibility of self-calibration of the speed according to the thickness.
Equipped with an interface cable for data transfer and management to PC
Power off function after 3 min. of inactivity.



SUPPLY KIT

Instrument, 2 Probes (5MHz), Ultrasonic coupling Gel, 2, USB cable and software, User manual, ABS case.



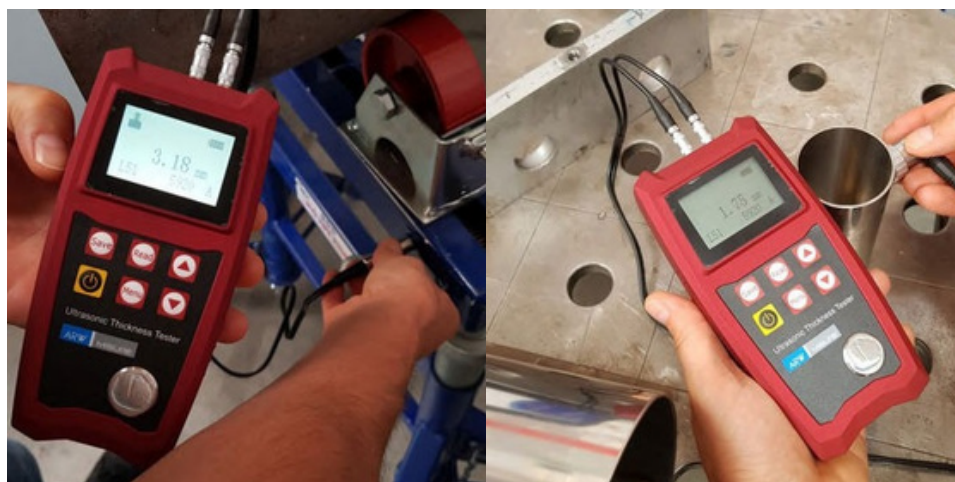
DataView Software ARW-1930 Ultrasonic Thickness Gauge



2 Probes (5MHz)

TECHNICAL SPECIFICATIONS

Measuring range	0,75 - 350mm (depends on the probe used and the material measured)
Velocity range	1000-9999m/sec
Resolution	0,01 mm
Accuracy	0.5% of measurement + 0.01 mm (calibrating material specific US speed)
Selectable measurement units	Metric/Imperial unit selectable
Dimensions	163mm x 78mm; H 33mm
Weight	200 g
Power supply	2x1.5V AA batteries
Data output	USB
Storage	2.000 measurements (can be divided into 4 groups A/B/C/D)
Scan function	Scan mode (10 measurements fo sec.)



MULTI-MODE ULTRASONIC THICKNESS GAUGE



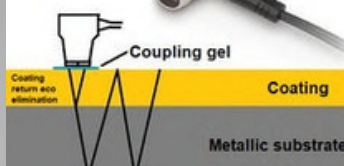
ARW-N600 For order **220123230**

Ultrasonic material thickness gauge Multi-Eco

The ARW-N600 ultrasonic gauge is a compact and robust device designed to determine the thickness of a material with high precision by simply placing the probe on one side without the need for any feedback on the opposite side.



Double probe with EE function (Eco - Eco)



THE INSTRUMENT IS EQUIPPED WITH DUAL MEASUREMENT MODES TO

DETECT THE THICKNESS OF THE MATERIAL:

- **Eco-eco (E-E) mode** (2.5 ~ 100mm* determination of the actual thickness of the "substrate" material without having to remove the thickness of the paint or coating that may be present "Thru-paint function")
- **Pulse-echo (P-E) mode** (0.65 ~ 600mm* depending on the chosen probe "standard probe supplied 2 ~ 300mm - material thickness detection)

*Indicative data taken on steel material at ultrasound speed set at 5920m/s

- Equipped with a **large color TFT display (320x240 TFT LCD)** with excellent visibility and adjustable backlight to allow the user to work in job sites with poor visibility.
- **Optional probes available:** 7MHz Φ 6mm for thin thicknesses - 2.5MHz Φ 14mm for porous materials (Cast Iron) - 5MHz Hi-Temp for high temperatures (Max. 300°C).
- **Menu language selection in different languages (English, German, French, Spanish, Italian, Polski)**
- Particularly useful for measuring the thickness of sheets, pipes, ducts, even coated ones, without having to remove the coating. The measured value shown on the display will already be the correct value regardless of the thickness of the coating.
- **Large internal data memory:** 100 groups of data with 100 individual values for each group
- **Dual probe technology with high resolution:** switchable reading accuracy 0.1 mm / 0.01 mm / 0.001 mm
- Battery powered (2 x AA) with continuous operation period of no less than 100 hours (standard brightness setting). Energy saving (Standby mode) and automatic shutdown (Auto power off) functions are available to optimize the battery.
- **Alarm function for high and low limit values** with audible and visual signaling when exceeded
- Equipped with **IP65 protection rating** against dust and water splashes



SUPPLY KIT

Instrument body, Multieco standard probe (P5EE-5MHz), ultrasonic coupling, ABS case, 2 AA alkaline batteries, USB communication cable and DataPro Software



TECHNICAL SPECIFICATIONS

Measuring range	*0.65-600 mm (PE), *2.5-100 mm (E-E) 5MHz EE Multieco probe supplied as standard: *2-600 mm (PE), *2.5-100 mm (E-E)
Working Frequency	(2.5 ~ 7) MHz
Probe Diameter	Standard probe P5EE 5MHz: 10 mm
Min. Pipe Diameter	Φ 15mmx2.0mm
Resolution	0.1/0.01/0.001 selectable
Accuracy	± 0.04 mm (<10mm); $\pm 0.4\%$ Hmm (>10mm) * Depending on the calibration of the instrument relating to the set ultrasound speed, the type and thickness of the material measured
Display	320x240 TFT color LCD screen, adjustable backlight brightness
Single /Scan Mode	Single mode, Scan Mode, and and diff mode
Probe Calibration	Zero calibration, two-point calibration, automatic error correction system
Velocity Range	1000-9999 m/s
Unit	Metric/Imperial unit selectable
Language	English
Memory	0 groups (100values for each group) of stored values
Communication Port	USB
Data Printing	Yes
Power supply	Two "AA" size, 1.5 Volt alkaline batteries
Minor consumo energetico	Yes
Operating Temperature	-20°C~+60°C
Relative Humidity	$\leq 90\%$
Material	ABS plastic
Dimensions	50mmx76mmx38mm
Weight	295g

*Indicative data taken on steel material at ultrasound speed set at 5920m/s

PROBE SELECTION

Probe	Frequency	Diameter	Measuring range*	Lower limit	Description
N05	5MHz	10mm	1mm ~ 600.0mm (in steel)	20mm x 3.0mm	Straight standard probe for normal
N05/90°	5MHz	10mm	1mm ~ 600.0mm	$\emptyset$ 20mm x 3.0mm	Standard 90° probe for normal
N07 HT5	7MHz	6mm	0.65 ~ 50.0mm	$\emptyset$ 15mm x 2.0mm	measurement (without E-E function)
N02	5MHz	12mm	1mm ~ 600.0mm (in steel)	$\emptyset$ 20mm	For measuring thin tube walls or tube walls with small curvature
	2.5MHz	14mm	3.00 ~ 300.0mm (on steel) max. 40mm (in gray cast iron)		For high temperature measurements (below 300°C).
P5EE	5MHz	10mm	P.E: 2 ~ 600mm (in steel) E.E: 2.5 ~ 100mm (in steel)	20mm x 3.0mm	For thick, highly attenuating or porous materials (Gray Cast Iron)

*Indicative data taken on steel material at ultrasound speed set at 5920m/s

Standard probe supplied with P-E / E-E function

Data management software

Equipped with Datapro software for data transfer and management to PC with statistical analysis and printing of the measurement report.



ARW-1962 For order **220123310**

High Precision Ultrasonic Thickness Gauge (E-E)

The ARW-1962 ultrasonic thickness gauge is a portable digital gauge designed to determine the thickness of a material with a high resolution of 0.001 mm/0.0001 inch by simply placing the probe on one side without the need for any feedback from the opposite side. Thanks to the 15MHz Delay line DTM15 probe supplied as standard, it can detect thicknesses from 0.3 to 20mm (measuring range depending on the material being measured).

The ARW-1962 is equipped with a large 3.5-inch backlit color screen, a large storage capacity of 100,000 thickness values (100 groups in total, 1000 thickness values per group in the Digital screens), plus 500 groups of data with A-scan images and 500 groups of data with B-scan images. Equipped with , automatic shutdown, presettable alarms and graphic display of the ultrasound waveform. Measurement function automatically selectable (depending on the probe used (E-E, P-E, Thin, Thin EE) with a special mode that allows the instrument to detect the actual thickness of a material regardless of the presence of a coating, such as an anti-corrosion coating, fillers, paint, plastic and other filler material.

ARW-1962 ULTRASONIC THICKNESS GAUGE SCREENS

- DIGITAL diagrams (thickness measurement, Standard

Deviation, Max and Min, average of 5 values)

- A-Scan and B-Scan Screens

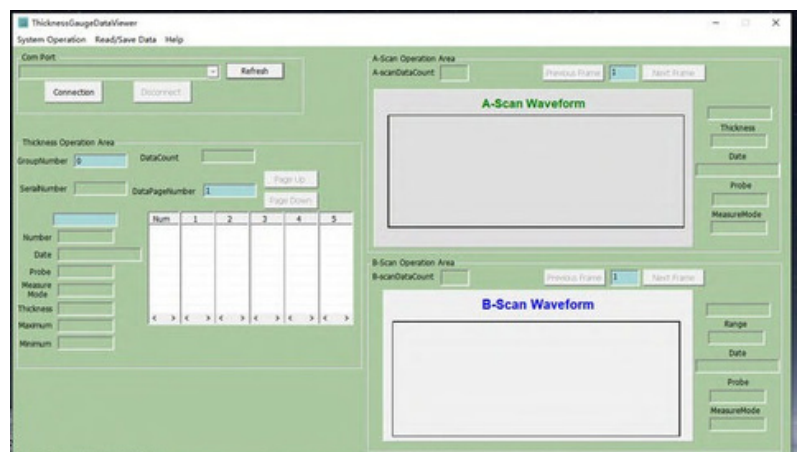


MEASUREMENT MATERIALS

Adapted to different types of materials, as long as they are good conductors of ultrasonic waves, such as metals (steel, cast iron, aluminum, copper and so on), non-metallic materials such as plastic, ceramic, composites, epoxy, glass, fiberglass and so on (In the case of non-metallic materials there must be parameters of compactness and homogeneity to be respected to obtain an optimal result, furthermore the reference of the measuring field varies, which could be significantly reduced, and the choice of the probe, which in some materials is mandatory).



- High precision:** the maximum resolution can reach 0.001 mm (only with the use of a single element probe such as the standard probe supplied in the DTM15 kit, 15 MHz with delay line for thicknesses from 0.30 to 20 mm on steel). The measurement repeatability can reach ± 0.002 mm.
- Wide measuring range of 0.30 mm - 600 mm (depending on the probe used and the material being measured)
- Multiple display modes:** A-scan, B-scan, digital display with 4 different screens. Echo-Echo (E-E) mode: allows the instrument to detect the actual thickness of the material regardless of the presence of a coating, such as an anti-corrosion coating, fillers, paint, plastic and other filler material. (only with optional double crystal probe)
- Multiple measurement modes:** AUTO, E-E, THIN. To meet the requirements of ultra-thin, ultra-thick and complex workpieces.
- It can measure multi-layer composite materials and measure the thickness of each layer at the same time. The thickness value of each layer can be switchable (only with optional probes).
- Optional probes:** Dual probes, single probes and high-frequency probes up to 20 MHz.
- Waveform display adjustments** in the A-Scann screen to highlight imperfections and defects with automatic and manual gain setting and functions of GATE, RANGE, DELAY, BLANK, E-BLANK (Settings subject to technical knowledge of ultrasonic flaw detection)
- Large memory capacity:** 100,000 thickness values can be stored simultaneously in 100 groups with different settings depending on the activated screen. 500 A-Scan images and 500 B-Scan images are added.
- The instrument supports multiple calibration methods:** sound velocity calibration (settings on standard materials on table reference); zero position calibration of the probe on the built-in calibration block (4mm), 1 and aude point calibration on a known material with auto-adjustment of the ultrasonic speed
- Units in mm and inches are available.**
- The instrument is supplied with software for transferring and displaying stored data.**



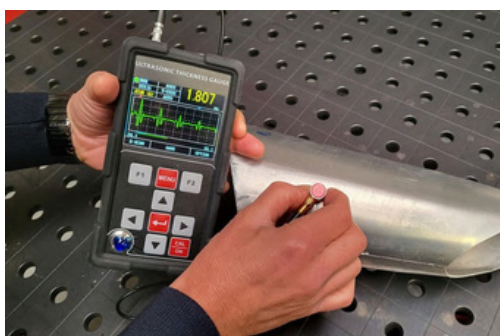
SOFTWARE ULTRASONIC THICKNESS GAUGE ARW-1962

TECHNICAL SPECIFICATIONS

Probe type	Single Crystal/Double Crystal (Single Probes and Double Probes)
Measuring range (steel)	0.25 mm–600 mm (depends on probes used and materials measured), Standard probe DTM15 MHz 0.30 - 20mm on steel
Measurement frequency	4 Hz, 8 Hz, 16 Hz
Resolution	0.1 mm, 0.01 mm, 0.001 mm (0.01 inches, 0.001 inches, 0.0001 inches)
Pulsator	Negative square wave, pulse width and voltage automatically matched to probes
Speed range	400-19999 m/s
Standard calibration block	4 mm (steel)
Automatic power off	After 5, 10, 20 min or manual
Probe Calibration	one point, two points, manual
Gain	Automatic, manual
Gain range	0~80 dB
Rectification	full wave, RF, positive half wave or negative half wave
Measurement mode	(1) AUTO: Automatic transfer I-E, ME-E (multiple echo) and MB-E mode
	(2) E-E: Full coating, available with Em– En echo
	(3) THIN: For testing thin parts
Data mode	Thickness, differential mode/reduction rate mode, min./max. value mode
A-scan	Yes
B-scan	Yes
Mating status	Yes
Battery indicator	English
Language	mm/inch
Unit	Yes
Menu operation	Dynamic gate setting, blank setting (Blank), echo blank settings (E-Blank), echo freeze, echo pan and zoom in/out
Software function	100,000 thickness measurements (100 groups, 1000 per group) and 500 A-scans, 500 B-scans
Storage	Available
Machine update	3.5 inch color screen
Display	Via USB port to PC
Data transfer	10°C~+50°C, Special requirements available up to -20°C
Operating temperature	AA batteries, low voltage indication
Power supply	184 x 85 x 32 mm
Dimensions	250 g
Weight net	Probes for various applications, tips for delay lines
Optional accessorie	

STANDARD ACCESSORIES

- Thickness gauge ARW-1962
- Probe DTM15
- Power adapter
- Protective case
- ABS case
- Software
- PC connection cable
- Manual



PORTABLE ROUGHNESS TESTER



ARW-BT300 For order **220122857**

ARW-BT300 Roughness Tester, Innovative separable translator group and Mobile APP connection

The ARW-BT300 portable roughness tester is a high-precision instrument for measuring surface roughness. Its innovative construction features allow it to be used in various applications where other instruments fail to satisfy. It can be used on a variety of machining and surfaces, not only flat but also external conical, external cylinder, internal, curves, through holes, grooves and more. Numerous functions, including the large color graphic touch screen display and the innovative Bluetooth interface with APP connection, make it a practical, modern and reliable instrument.



- Mechatronic and ergonomic design, small size, light weight, ease of use
- **Roughness feeler complete with translator unit that can be separated from the body** of the instrument can and be used separately for more flexible measurements in a smaller space. **Or connected directly to the main unit** creating a single instrument body for standard measurements. The hooking and uncoupling operation can be performed quickly and easily
- DSP chip control and data processing, high speed, low power consumption
- **As many as 22 roughness parameters: Ra, Rz, Rq, Rt, Rp, Rv, R3z, R3y, Rz (JIS), Rs, Rsk, Rsm, Rku, Rmr, Ry (JIS), Rmax, RPe, Rk, Rpk, Rvk, Mr1, Mr2**
- High measuring range (320µm)
- 3.5-inch color graphic **TFT touch screen display**, wide viewing angle, excellent readability and equipped with backlighting to improve visibility in dark environments
- Commands accessible via keyboard and Touch screen display
- **Equipped with Bluetooth data interface for connection to APP and portable printer**
- Built-in Li-ion rechargeable battery with control circuit
- **Large data memory**, 100 values and curves (Graph) can be stored



OPTIONAL ACCESSORIES	
Code	Description
220122879	Portable printer

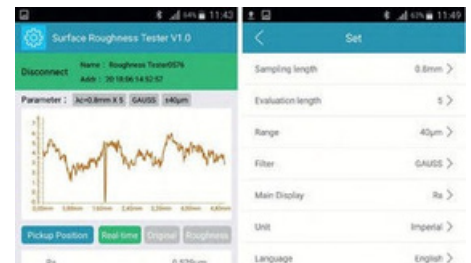
Parameters	Measuring range
Ra, Rq	0.005µm ~ 30µm
Rz, R3z, Ry, Rt, Rp, Rm	0.02µm ~ 320µm
Sk	0 ~ 100%
S, Sm	1mm
tp	0 ~ 100%

TECHNICAL SPECIFICATIONS			
Measuring range	Z axis (vertical)	±160 µm	20mm
Measuring range	X axis (transversal movement)	Ra, Rz, Rq, Rt, Rp, Rv, R3z, R3y, Rz (JIS), Rs, Rsk, Rsm, Rku, Rmr, Ry (JIS), Rmax, RPe, Rk, Rpk, Rvk, Mr1, Mr2 ISO, ANSI, DIN, JIS	
Specifications	Standard	Bearing area curve, roughness profile, primary profile	
Specifications	Graphic view		
Specifications	RC, PC-RC, Gauss, D-P		
Filter	0.25, 0.8, 2.5mm		
Sampling length (lr)	Ln=lr×n n=1~5		
Evaluation length (ln)	feeler		
Probe	Force		
Probe		Diamond, 90° angled cone, 5µmR	
Power supply		<4mN	
Dimensions	internal rechargeable Lithium ion battery, Charger: DC5V, 800mA		
Weight (instrument body)	instrument body: 64x53x160mm	Probe: 23x27x115mm	
Operating conditions	About 380g		
Standard supply	Temperature: - 20°C ~ 40°C Humidity: < 90% RH		
	instrument body - Probe with translation unit		
	diamond feeler tip - roughness sample - adapter - power supply		
	for recharging - software - USB cable - small stand - carrying case - user manual		

SOFTWARE INCLUDED IN THE SUPPLY



APP THAT CAN BE INSTALLED ON YOUR OWN DEVICE



COMPACT ROUGHNESS TESTER



ARW-100 For order **220122362**

Digital portable roughness tester



- **Ra Rz, Rq, Rt** parameters
- Pocket-sized & affordable
- **Wide measuring range** suitable for most materials
- Measurement of roughness on flat, cylindrical and inclined surfaces
- **Calibration function** with supplied external sample supplied as standard
- Standards compliant with ISO and DIN standards
- Equipped with **rechargeable Li-ion batteries**
- **Backlit display with OLED technology** for a clear view from every angle
- **DPS** processor with high calculation efficiency



TECHNICAL SPECIFICATIONS	
Roughness parameters	Ra, Rz, Rq, Rt
Tracer stroke	6 mm
Selectable cut-offs	0.25/0.8mm/2.5mm
Measuring range	Ra: 0.05 - 10.0 µm Rz: 0.1 - 50 µm
Accuracy	±15 %
Repeatability	<12%
Feeler	diamond, radius 10±2,5 µm, angle 90° (+5° or 10°)
Operating Humidity	<90% RH
Operating temperature	0 °C÷40 °C
Power supply	3.7 V Li-Ion rechargeable battery
Charging time	3 hours
Dimensions	110x70x24mm
Weight	200 g

SUPPLY KIT

- Instrument
- Tracer cover system
- Roughness sample

- Battery charger
- Instruction manual
- ABS case

BARCOL DUROMETER

ARW 934-1 For order **220122361**

Barcol hardness tester is a hardness tester based on simple, fast and almost non-destructive operation. The test is obtained by measuring the penetration resistance of a steel needle pushed by a spring with a preload, the sample is placed under the needle of the instrument and a uniform pressure is applied to the sample until the indicator reaches a value. The depth of penetration is converted into the Barcol hardness value on a scale from 0 to 100. Compliant with ASTM B648 standards
Application: The Barcol hardness tester is mainly used to check the hardness of aluminum alloys, it also finds its place to measure the hardness of plastic products, glass fiber and coatings, such as paint, etc.



TECHNICAL SPECIFICATIONS	
Penetrator	26° truncated cone Diameter 0.176mm
Range	0-100HBa equivalent to 25-150HB
Resolution	0.5HBa
Precision	hardness range 42-52HBa ±2HBa hardness range 84-88HBa ±1HBa
Repeatability	hardness range 42-52HBa ±2HBa hardness range 84-88HBa ±1HBa
Weight	0.5kg

- Small, compact and easy to use
- **Wide measurement range**, from 25 to 150HB
- **High sensitivity**, Thanks to the graduated scale from 0 to 100, it offers greater sensitivity than the Webster method (0-20 scale).
- It does not require any support, it can be positioned directly on the piece to be tested

SUPPLY KIT
 Instrument, spare indenters (2pcs), calibration blocks (2pcs), calibration key, support foot, carrying case



DUROMETER FOR METALS



ARW-220 For order **220122727**

Impact hardness tester for metals

Compact and easy to use portable digital hardness tester, particularly suitable for measuring hardness on solid surfaces, even large ones, which are difficult to access with other instruments. It uses the rebound measurement method (Leeb test) with an impact tester (probe) able of detecting the hardness on various types of material and converting the value into the main measurement scales (Rockwell B, Rockwell C, Brinell, Vickers).



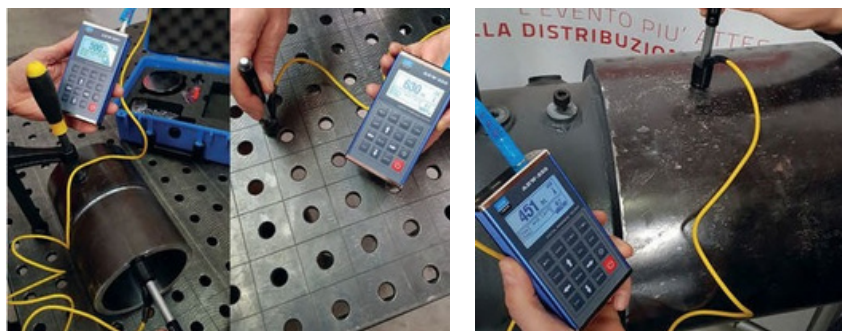
- **Calibration block included in the supply**
- Rebound measurement system (Leeb Test), **Standard "D" type impact probe included**
- Selectable measurement scales: Rockwell (B & C), Vickers (HV), Brinell (HB), Shore (HSD) Leeb (HL)
- **Strong metal** external structure
- Large **backlit LCD screen** (128x64), with all functions and parameters
- Internal menu in "English"
- **Internal data memory for 500 measurement groups, with 32 single values for each group**
- **Mini statistics function:** indicates the measured value, average value, direction of measurement, date and time
- **Data interface, cable and software included in delivery**
- Limit value function: A visual and acoustic signal helps the measurement
- Automatic recognition of the type of sensor used
- Ability to measure in any direction, vertical, diagonal, horizontal and upside down
- Auto power off for energy saving

TECHNICAL SPECIFICATIONS

Measurement range	170 to 960 HLD (Standard "D" type probe)
Measurement direction	all directions possible, 360°
Resolution	1 HL, 1 HV, 1 HB, 0.1 HRC, 0.1HRB, 1 HSD
Accuracy	1 % with 800 HLD
Minimum bending radius of the test object	50mm (concave/convex) using the adapter ring
Minimum thickness of the tested sample	30mm (type "D" probe) lower in case of use low impact "C" type impact tool
Data memory	For 500 measuring groups, with 32 individual values for each group, from which the average value is calculated
Display	Backlit LCD (128x34mm)
Conditions of use	Ambient temperature -10°C/40°C, Humidity ≤90%
Power supply	1.5V AA batteries (autonomy approx. 100h without backlight)
Dimensions	132x82x31mm
Weight	600g. (probe excluded)



Calibration block included in the supply



MEASUREMENT FIELDS

Materials	Stairs	MIN	MAX
Steel and steel alloys	HRC	19,8	68,5
	HRB	59,6	99,6
	HSD	26,4	88,5
	HB	140,0	334,0
	HV	83,0	976,0
Cutting tools	HRC	19,8	68,5
	HV	83,0	976,0
	HRBH	59,6	99,6
Stainless steel	RC	19,8	68,5
Cast iron	HB	140,0	651,0
Ductile iron	HV	83,0	976,0
Aluminum alloys	HB	140,0	334,0
Brass	HB	140,0	387,0
	HB	30,0	159,0
(copper and zinc alloys)	HRB	40,0	173,0
Bronze (alloys of copper, aluminum, tin)	HB	60,6	290,0
Copper alloys	HB	45,0	315,0

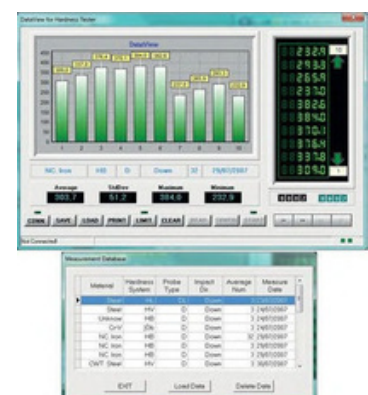
OPTIONAL ACCESSORIES

Support rings for spherical, concave, convex surfaces



SUPPLY KIT

- Body Instrument
- Standard "D" type impact probe
- Standard calibration block
- Probe cleaning brush
- User manual
- ABS case
- Software and interface cable



ARW-1000 For order **220123171**

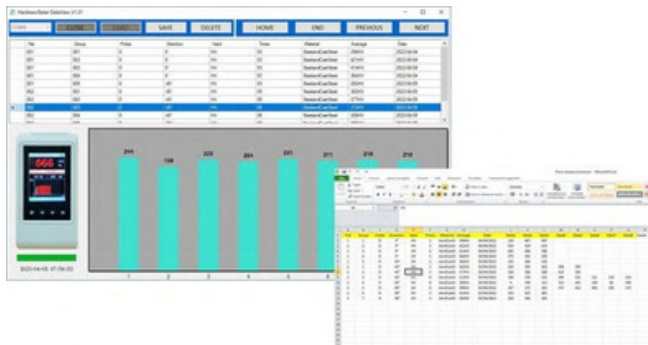
Impact hardness tester for metals

The ARW-1000 digital hardness tester is a compact and handy instrument able to quickly and accurately measure the hardness of any metallic material. It uses the rebound measurement method (Leeb test) and combined with the impact probe it has the possibility of detecting the hardness on numerous types of material and converting them on the main hardness scales (HRB, HRC, HV, HB, HS, HL). The instrument features a compact structure, portable and easy to operate, equipped with a large 2.8" 320*240 pixel TFT color display with rich information, simple and complete setting and configuration menu, large memory function (max 510 files)



- Rebound measurement method (Leeb Test) and **standard "D" type impact probe included.**
- Equipped with a large **2.8" color TFT display, 320*240 pixels** with numerous functions and parameters.
- Simple and complete setup and configuration menu.
- **Direct display of hardness conversion scales HRB, HRC, HV, HB, HS, HL.**
- **Large memory** with 510 files, 47-341 groups of data depending on the setting of the number of beats (measurements) for the average value calculation (selectable setting from 1 to 32 beats).
The higher the data value set for the calculation of the average value, the more the number of data SETs saved in the File will be reduced. Saved data: single measurement value, average value, measurement date, impact direction, times, material, hardness system and other information.

- It can be equipped with **6 different impact devices** for different applications (optionals). It does not need to be recalibrated during replacement, and the type of probe can be identified automatically.
- The instrument is built with large capacity **Li-ion rechargeable battery** and charge control circuit which enables it to work for a very long time.
- Equipped with **pre-settable alarms**, the upper and lower limits of the hardness value can be set with immediate indication and the automatic alarm will sound when the set hardness value is exceeded.
- **Software program for data transfer to PC with Excell file creation**



ARW-1000 HARDNESS TESTER SOFTWARE PROGRAM (included)

TECHNICAL SPECIFICATIONS

Hardness scale	HL, HRC, HRB, HRA, HV, HB, HS
Memory	510 file, 47 ~ 341 groups (Impact times: 32 ~ 1) per file
Measuring range	HLD (170 ~ 960), HRA (59 ~ 85), HRB (13 ~ 100), HRC (20 ~ 68), HB (19 ~ 651), HV (80 ~ 967), HS (30 ~ 100)
Tensile strength U.T.S. range	374 ~ 2652 MPa
Accuracy	±6HLD (760±30HLD) error of displayed value 6HLD (760±30HLD) repeatability of displayed value
Standard Impact Device	D
Data Interface	USB 2.0, Bluetooth
Optional Impact Devices	DC / D+15 / G / C / DL
Max. Workpiece Hardness	996HV (For Impact Devices D / DC / DL / D+15 / C) 646HB (For Impact Device G)
Min. Radius of Workpiece (convex/concave)	Rmin = 50mm (with special support ring Rmin = 10mm)
Min. Workpiece weight	2 ~ 5kg on stable support 0.05 ~ 2kg with compact coupling
Min. Workpiece thickness	5mm (Impact Devices D/DC/DL/D+15) 1mm (Impact Device C) 10mm (Impact Device G)
Min. thickness of hardened layers	0.8mm
Power	Rechargeable Li Battery, 3.7V, Li(2000mAh)
Continuous Working time	About 30h
Charging time	4 ~ 5 hours
Operating temperature	0 ~ 40°C
Humidity	≤ 90%
Overall dimensions	212 × 80 × 35 mm
Weight	320g

SUPPLY KIT

- Main unit
- Type D impactor
- Small support ring
- Nylon probe cleaning brush
- High value Leeb calibration block
- Power supply for charging
- USB communication cable for connection to PC and charging



ARW-K100 For order **220123306**

Digital Ultrasonic Hardness Tester "UCI"

The ARW-K100 portable hardness tester is an easy-to-use, compact instrument with an all-aluminum structure that uses the ultrasonic method to detect the degree of hardness of metals in the various measurement scales (Rockwell, Brinell and Vickers) with high precision even in particular conditions, such as small spaces or areas that are difficult to access.

The Ultrasonic hardness tester is equipped with a large graphic LCD display with backlighting to clearly and precisely display the parameters and a diamond probe positioned on a spring for rapid and precise measurement of metal hardness. This instrument is equipped with an RS-232 interface and it is possible to connect the device to a PC and read or print the data obtained. Furthermore, thanks to the calibration function, the user has the possibility of calibrating the instrument after use. For example, calibration should be performed when: the device is not used for more than three months, if a substantial change in environmental conditions has occurred, if the probe has made a large number of measurements or if a different calibration is necessary during the measurement.



- The instrument takes measurements using a diamond tip probe, which is compressed on the test piece by applying a predefined force. It allows obtaining measurements with high precision in areas that are difficult to access or small spaces such as small pieces or thin thicknesses.
- **The instrument body is entirely made of aluminum.**
- **Simple instrument calibration option.**
- RS-232 interface with the ability to connect the device to a PC for management and printing of measured data. **There is no dedicated software program, transmission occurs only using serial communication programs such as "Hyper Terminal" or equivalent.**
- Measurement of statistical values, this allows the user to have an overall view of the results obtained during the measurement.



SUPPLY KIT

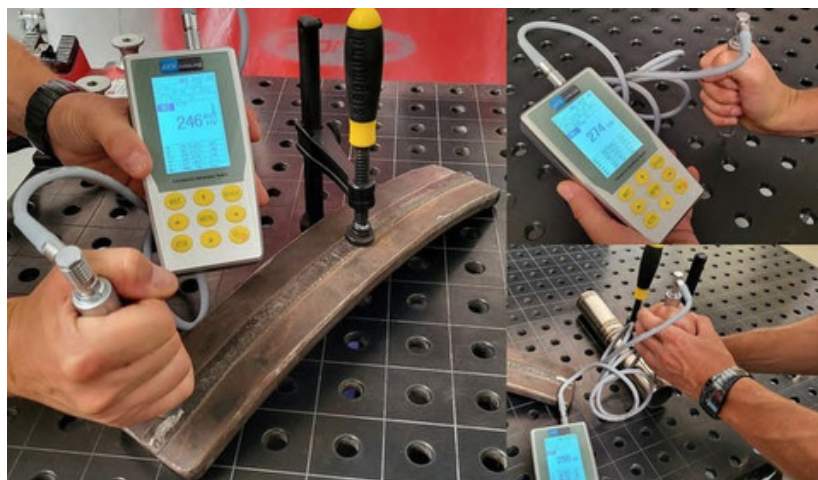
- 1 x ARW-K100 Ultrasonic Hardness Tester
- 1 x 50N Probe (Standard)
- 1 x Probe Cable
- 1 x 4.2V Battery
- 1 x USB Battery Charging Cable
- 1 x USB Power Supply
- 1 x Screwdriver
- 1 x Silicone Protective Cap for Probe
- 1 x RS-232 Interface Cable
- 1 x Hard Carrying Case
- 1 x Instruction Manual

TECHNICAL SPECIFICATIONS

Rockwell	20,3 ... 68,0 HRC 41,0 ... 100,0 HRB 61,0 ... 85,6 HRA
Brinell	76 ... 618 HB
Vickers	80 ... 999 HV
Tensile resistance	255 ... 2180 N/mm ²
Precision	±1,5
Rockwell HR	±3%
Brinell HB	±3%
Vickers HV	
General Technical Specifications	Ultrasonic Sonic Impedance
Measuring principle	360°
Direction of measurement	2 sec.
Measuring time	HRC, HV, HB, optional: HRA, HRB, MPa
Indication of units of measurement	Backlit graphic LCD
Display	2 mm
Minimum material thickness	Up to 2,000 sets of data
Memory	Up to 20 calibration data
Probe	Standard probe force 20 N
Cable length	1,5 m
Statistics	Single value, min./max., average value
Power supply	4.2V battery, 4800 mAh (rechargeable)
Operating life	About 10 hours (without backlight)
Dimensions	162 x 81 x 31 mm (digital indicator)
Operating temperature	-10 ... +40 °C
Storage temperature	-20 ... +60 °C
Relative humidity of the air	≤ 85%
Weight	Approximately 755 with probe included

AVAILABLE MODELS

- **ARW-K100 10N** (Complete with 10N probe "1kg") For smooth surfaces, molds and finely machined metal parts, even with thin wall thicknesses and surfaces, gear faces, bearings and pipes.
- **ARW-K100 20N** (Complete with 20N probe "2kg") For smooth surfaces, molds and finely machined metal parts, even with thin wall thicknesses and surfaces, gear faces, bearings and pipes.
- **ARW-K100 50N** (Complete with 50N probe "5kg") For metal surfaces with low roughness, surface treatments, gears, molds and pipes, even thin wall thicknesses.
- **ARW-K100 100N** (Complete with 100N probe "10kg") For measuring small matrix parts,; To check welds, heat affected zones (HAZ), or for low roughness requirements.



DUROMETER FOR RUBBER AND PLASTIC



ARW HBA For order **220121721** **Analog shore hardness tester**

ARW HB0 For order **220121760**

ARW HBD For order **220121722**

• Shore A, C, D hardness measurement • Accuracy 1% of the measured value • Peak Hold function (max. value identification hand) • **Reference standards: DIN 53505 - ASTM D2240 - ISO 868**

Measurement Mode:

Position the max pointer indicator hand to zero (Red Pointer), then grip the instrument in the lower base, resting it on the piece to be tested and exerting a slight pressure so that the support base does not adhere completely to the surface of the object, at this point it is possible to read the instantaneous value on the main pointer and the value of max peak on the red hand.



Supplied complete with wooden case and test specimen.



STAND FOR BENCH TESTS

Version for SHORE A/O

For order **220121792**

Version for SHORE D

For order **220121854**

Measuring range Mod. HBA 0...100 Shore A with resolution 1.0
Mod. HBC 0...100 Shore C/O with resolution 1.0
Mod. HBD 0...100 Shore D with resolution 1.0
Accuracy 1% of the measured value
Dimensions L 115xB60xH25 mm
Weight 160 g

Typical applications of the different measurement scales:

- **Shore A:** rubber, elastomers, neoprene, silicone, vinyl, soft plastics, felt, leather and similar materials.
- **Shore C/O:** soft materials such as foam rubber, sponge, etc.
- **Shore D:** plastic, formica, epoxy resins, plexiglass, etc



DYNAMOMETERS, CRANE SCALES

ARW-50K For order **220123123**

Manual dynamometer

Practical and useful manual dynamometer for lifting and weighing suitcases, bikes or other objects quickly and easily. Equipped with an ergonomic handle and a large backlit LCD display with a capacity of up to 50kg and 10g resolution. Indispensable for weighing luggage during travel. Can be used to weigh any object such as suitcases and bikes.



- High precision sensitive measurement for accurate reading, MAX 110 lb / 50 kg with 35 oz / 0.02 lb / 10 g resolution
- Large clear and readable LCD display with backlight
- Single button with on, off and tare function. This lifting and weighing dynamometer automatically turns off after 60 seconds to save energy and the tare function allows you to read the net weight of your luggage easily and accurately.
- Equipped with a practical, very resistant fabric band to avoid any scratches or marks on objects lifted during the weighing phase
- Possibility to select 4 interchangeable units of measurement, pounds, grams, kilograms and ounces (lb, g, oz, kg)
- Useful and indispensable as a luggage and suitcase scale to take with you on every trip thanks to its extremely compact dimensions and very low weight (less than 90g) to avoid incurring fines linked to exceeding the weight allowed for transport
- T-shaped design with ergonomic handle and very small dimensions and weight (less than 90 grams total)



Fields of application:

- Suitcase and baggage scales
- Weighs any bags or containers shape and size
- Weighs any object with lift from the ground up to a maximum capacity of 50kg

TECHNICAL SPECIFICATIONS

Flow rate	50 kg (110lb)
Resolution	10 g
Dimensions	145x30x50mm
Power supply	1x CR2032 battery
Display	Backlit LCD
Weight	90g. (including battery, strap and hooks)

VIBROMETER, ACCELEROMETER

ARW-630B For order **220123116**



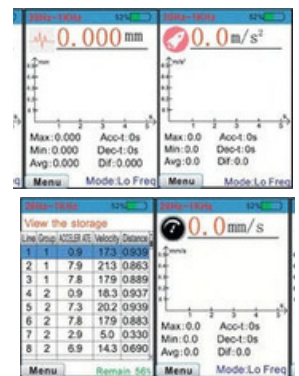
Vibration Meter, Accelerometer

The ARW-630B vibration meter is based on the piezoelectric effect which converts the vibration signal into an electrical signal, then, by analyzing the input signal, the displacement, speed and acceleration values are detected. Equipped with graphic display and data memory with direct visualization on the display. The ARW-630B is suitable for vibration measurement of mechanical equipment, especially for rotary and reciprocating machines. It is widely used in machinery manufacturing, electrometallurgy, engineering and aerospace.

- **Large backlit color display** with simultaneous display of the three parameters
- Measurement of acceleration, speed and displacement, **with graphic display** in the three different modes
- Surveys according to ISO 10816-1 standard with selection of the 4 reference classes
- **Internal memory** for filing and saving data in 7 groups of measurements (visible only on the instrument)
- Equipped with a **front LED** to illuminate the measurement area in case of poor lighting
- **Display adaptation mode according** to measurement orientation
- **Double measurement button** to facilitate measurement in vertical position
- **Battery charge level indicator on display**
- Selection of **high and low frequency measurement range**: High frequency (1KHz...10KHz)/ low frequency (20Hz-1KHz).
- **Complies with ISO 10816-1** which establishes the general conditions and procedures for vibration measurement and evaluation. The general evaluation criteria have been provided mainly to ensure reliable, safe and long-term operation of the machine, minimizing the negative effects on the associated equipment (Setting of the 4 reference classes from the menu)



Display adaptation mode according to measurement orientation

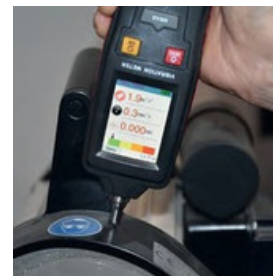


TECHNICAL SPECIFICATIONS

Technical parameters	Technical indicators
Sensor	Piezoelectric ceramic accelerometer sensor (shear type)
Measuring range	
Acceleration	0.1~199.9 m/s ²
Speed	0.1~199.9 m/s
Displacement	0.1~199.9 mm
Precision	
Vibration shifts	0.01-0.02 mm
Vibration speed	≤±10%≥2.0 mm ≤±5%
Vibration acceleration	0~2.0mm/s, ≤±10%≥2.0mm/s, ≤±5%
Frequency range	0~2.0 m/s ² ≤±10%≥2.0 mm ≤±5%
Acceleration	High Frequency: 1KHz~4KHz (HI)
Speed	Low Frequency: 10Hz~1KHz (LO)
Displacement	20Hz~1KHz (LO)
Display LCD	Color display
Data display interval	2 seconds (1 second in single parameter measurement)
Maximum group number for data storage	5 groups (Files G1 - G5)
Power supply	1.5V AAA battery*2
Operating temperature	0~40 °C
Operating humidity	30~90% RH
Dimensions	180x54x30 mm
Weight	250 g (with batteries)

APPLICATIONS:

- Electromechanical sector: plant control and maintenance to identify any defects and anomalies of machines, engines and plants
- Iron and steel: all kinds of rotating equipment in steel and rolling mills
- Electrometallurgical
- Aerospace industry



20Hz~1KHz		Vibration intensity (ISO 10816-1)				
		Machinery	Class I small machine	Class II medium machine	Class III large hard base	Class IV large soft base
	Vibration speed Vrms	mm/s				
	0.28					
	0.45					
	0.71			Good		
	1.12					
	1.80					
	2.80			Satisfactory		
	4.50					
	7.10			Unsatisfactory		
	11.20					
	18.00					
	28.00			Unacceptable		
	45.90					



ARW-808AL

For order **220123243**

“Boroscope” Video Endoscope for inspections

The ARW-808AL digital borescope is a video inspection system equipped with a mini camera mounted on the articulated cable with external movement which allows you to carry out rapid inspections in areas that are normally difficult to access. It is equipped with numerous features such as 4 LEDs with adjustable intensity on the camera head, an easy-to-use ergonomic design and the ability to save images and videos on SD Card support (Max.64GB)

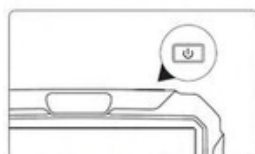
- Featuring a **portable 5-inch HD color monitor** that can be easily detached, stored, and transported with convenience.
- Lightweight construction and an **ergonomic handle** provide **enhanced flexibility for usage**.
- Inspections are conducted using a small-diameter 1080P HD camera with a CMOS sensor, a 4-LED lighting source with adjustable intensity, and IP67 protection rating.
- **Saving and transferring images to PC, videos and through SD card (up to 64 GB, SD memory card slot included).**
- The video-endoscope has a built-in temperature sensor that allows you to alert if the temperature exceeds 80°C (176°F). The warning line is 75°C (167°F), if it exceeds 80°C (176°F) the

camera will stop working automatically.

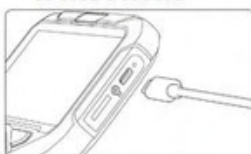
- The default language is English, the system also supports Simplified Chinese, Japanese, English, Korean, French, German, Italian, Spanish, Russian, Polish.
- **The joystick integrated into the instrument has the ability to move and control the camera from the outside quickly and easily in any direction with a bending angle of 720°.**
- Auto power off function.



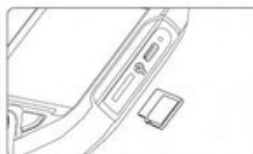
ISTRUCTIONS



Press and hold " " for 3 seconds to power on / off



Use the type-C charging cable to charge the device



Insert the Micro SD card while the device is powered off

Product details



01
Anti-slip and wear-resistant
Small smesh non-slip surface on the back of the handle



02
Screen separation
Detachable screen easy to store and carry



03
Anti-bending protection
Metal spring protection uniform force

TECHNICAL SPECIFICATIONS

Camera	
Camera diameter	6 mm
Camera resolution	2 Megapixels
Viewing angle	70°
Auxiliary lighting	4 LEDs with adjustable brightness
Focusing area	20-100mm
Turning radius	30mm
Display	
Screen type	5,0 inch color display
Support camera probe resolution	2 MP
Video resolution	1920*1080
Screen resolution	1280 * 720
Photo resolution	1920*1080
Port	Type-C charging port
Operating temperature	
Battery	
Battery life	32°F - 113°F (0°C - 45°C)
Battery charging time	2000 mAh Lithium ion
	3,5 hours 3,5 hours

1080 HD Probe
CMOS Sensor Chip



5.0 Inch IPS Screen
Bright and delicate colors



IP 67 Probe Waterproof
Flexible Coil



720°
Adjust any angle

SUPPLY KIT

Endoscope ARW-808AL, ortable carrying case, User manual, ype-C charging cable



VIDEOINSPECTION

ARW-703 PLUS

For order **220122252**



SD Recording

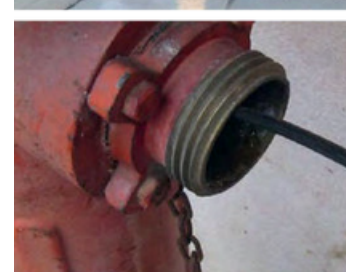


- 1/3 inch Sony CCD camera, **135°** (wide viewing angle)
- Camera in **stainless steel** with high resistance and small dimensions, **IP 68** water proof level
- Front transparent sapphire glass, 12 white LEDs
- Camera diameter: 23mm
- 30mt of fiberglass cable with steel reel
- Swivel cord reel on housing
- "One touch" button for video recording,
- **7" TFT LCD** monitor with DVR
- Rechargeable accumulator with high autonomy

- Li-battery (6600mA) for 8 hours of continuous use
- Sturdy waterproof ABS case
- Version with meter counter function available on request**



Internal cable winding system

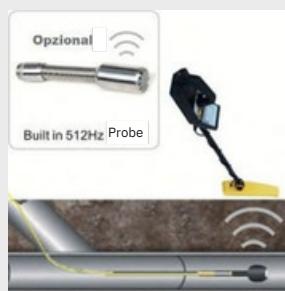


CAMERA TECHNICAL SPECIFICATIONS

Sensor	1/3" Sony CCD
Dimensions	23mm(dia.)x45mm(length)
Material	304# stainless steel
Visual angle	135° wide angle
Protective lens	Transparent sapphire crystal
Lighting	12 high brightness LEDs
Water Proof	IP68
LCD Display and DVR	800*480 pixels
LCD Resolution	MPEG-4
Video Compress	Video and audio recording
Registration	Picture shot function
Picture	

PUSH CABLE TECHNICAL SPECIFICATIONS

Material	Glass fiber
Winder	Stainless steel
Cable length	30mt.
Connector	Golden contact points
Wrapping	Rotating cord reel
Wheel diameter	33cm
Cable diameter	5.4mm
LCD Display and DVR	7 inch
LCD Dimensions	9 selectable languages
Language	Front setting keys
Control Panel	SD Card (Max. 32GB)
External memory	



Camera localization and tracking system (optional on request) consisting of:

- Camera with 512Hz frequency transmission
- Search services

VIDEOENDOSCOPE



ARW-5500 For order **220122797**

Pocket video endoscope

This is a true pocket video endoscope camera, its compact design allows 1 meter of camera cable to be wound directly inside the instrument body. Thanks to the high resolution 5.9mm diameter camera combined with a one meter semi-flexible cable, it is suitable for various applications in the civil and industrial fields. All functions are managed through a setting menu and a keyboard with 7 practical and intuitive function keys.



- Pocket sized video endoscope with **fully retractable** camera cable in the back of the product
- High Resolution HD 720P
- **5.5mm semi-flexible** camera cable
- "Flip display" function to rotate the image display
- **Lighting** with 6 white LEDs with 4-level intensity adjustment
- Display of date and time
- 1.5X and 2X image magnification key
- Large 3" LCD display
- **MicroSd card slot** for capturing images and recording videos (Max.32 GB)
- **Practical torch** positioned on the back and activated from the keyboard.
- Rugged construction with impact protection
- Delivery includes **very useful adapters** - Hook, side view mirror and magnet



TECHNICAL SPECIFICATIONS

Display	3-inch diagonal color TFT LCD
Monitor controls	180° rotation, 1.5X to 2X zoom, brightness +/-
Camera head diameter	5.5 mm
Resolution	720 HD
Camera field of view	55°
Shallow depth of field camera	30cm (approx)

Focal distance	3 cm (approx)
Camera light source	6 white LEDs with adjustable brightness
Probe length and type	1 mt. Semi-flexible
Degree of camera protection	IP67
Power supply	(duration approx. 3 hours), not included
Operating temperature / humidity	32° to 113°F (0° to 45°C) @ 5 to 95% RH
Dimensions	139 x 83 x 30 mm
Input	Slot MicroSD card (max.32GB)

TACHOMETER

ARW AT-8 For order **220121480**

Optical Mechanical digital tachometer

Optical/mechanical version, through the simple connection in the upper end of the interlocking detail equipped with push rod and wheel, the speedometer is transformed from optical to mechanical. Equipped with a laser pointer to facilitate the centering of the object to be measured (in optical reading).

- Large double-line backlit LCD display
- Equipped with tip for measuring g/min "RPM"
- Wheel for linear measurements "m/min" (in mechanical reading)
- Sampling time 0.5 sec. (over 120RPM)
- Time base: Quartz crystal
- Low battery indication
- Battery: 9V.
- Absorption: Approx 45mA
- 40 reading memories



Supplied complete with ABS case, reflective adhesive strips, wheel, contact adapters, batteries and user manual.



TECHNICAL SPECIFICATIONS

Display	5 digits LCD display ±
Accuracy	(0.05%+1 digits) 2 -
Range (Contact)	20,000RPM 2 -
Range (optical)	99,999RPM
Range (Total count)	1 - 99,999
Resolution	0.1 RPM (2 - 9999.9 RPM). 1 RPM. (over 10000 RPM)
Operating distance	50mm - 500 mm
Operating temperature	0° - 50°(32 - 122° F)

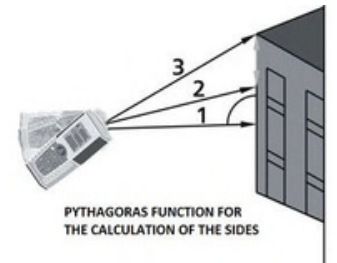


LASER DISTANCE METER



ARW-100H For order **22012172**

ARW-100H is a laser distance measurer designed to satisfy any kind of high precision professional use. Thanks to its innovative technology, distance and size estimation can be detected by a single operator. In addition, the ARW-100H is equipped with calculation functions for measuring areas and volumes with the built-in Pythagoras function. Thanks to the latest generation sensors with which it is equipped, it is also possible to measure horizontal or vertical measurements that are somehow "obstructed" by an object.



TECHNICAL SPECIFICATIONS	
Range	0.05 to 100 mt
Measurement accuracy	± 1.5 mm
Unit of measure	mt, in, ft
Laser	Class II
Type of laser	635nm, <1mW
Auto Bias™ technology	Yes
Simple Pythagoras functions	Yes
Addition and subtraction	Yes
Max and min distance	Yes
Measurement on 3 axes	Yes
Automatic horizontal distance	Yes

Multifunction illuminated display	Yes
Buzzer	Yes
Degree of protection	IP54
Storage	last 20 measurements
Operating temperature	-10°C to +50°C
Keyboard	Super Soft Touch
Battery life	over 4,000 measurements
Power supply	2 1.5V AAA batteries
Laser auto-off	after 30 seconds of inactivity
Auto power off of the instrument	H 110 x L 48 x P 28 mm
Dimensions	150 g.
Weight with batteries	

GAUSSMETER

ARW-196 For order **220123280**

Gaussmeter for measuring AC/DC magnetic fields

The ARW-196 Digital Gaussmeter is an instrument used to perform accurate measurements of AC and DC magnetic fields. It is a portable instrument equipped with a backlit LCD display with automatic power off and equipped with a transverse uniaxial Hall effect probe with automatic temperature compensation.



- Using Hall sensor with automatic temperature compensation.
- **LCD display with backlight** and automatic shutdown mode.
- **X,Y and Z axes vector summing functions.**
- **Selectable units of measurement: G (Gauss), TESLA and Ampere/meter.**
- Equipped with alarm with high/low limit signal.
- Data Hold & Maximum/Minimum record function.
- **Manual memory stores up to 99 data.**
- DC Zero & AC Trms function.



APPLICATIONS

- DC magnetic field meter measuring static magnetic strength.
- AC magnetic field meter measuring the wave motion of the electromagnetic field (EMF).
- After machine component are processed, remain the magnetism to measurement.
- Magnetic force measurement of the magnetisable material.
- Magnetic application products, the intensity of magnetic field measurement.
- Electrical home appliances products, the magnetic field intensity measurement of the motor.
- Magnetic field intensity measurement of the permanent magnet.
- Various steel products brought magnetic measurement naturally.

MEASUREMENT	RANGE	RESOLUTION	ACCURACY(23±5°C)
DC	3000.0G	0.1G	±(3%rdg+10d)
	30000G	1G	
	300.00mT	0.01mT	
	3000.0mT	0.1mT	
AC	2000.0G	0.1G	±(4%rdg+20d) (20Hz ~ 20kHz)
	20000G	1G	
	200.00mT	0.01mT	
	2000.0mT	0.1mT	
Number of axis	Uniaxial traverse probe		
Hall Sensor TC	Probe head build the temperature sensor for automatic temperature compensation the hall sensor.		
Manual memory	Maximum 99 data can be stored and read manually		
Operating temperature	0 to 50°C, max. 90%RH		
Storage	-25°C to 70°C, max. 70%RH		
Power requirements	4 IEC 46 (size AA), AC adapter 6V (option)		
Battery life	Approx. 8 hours		
Dimensions / weight	158(L) x 78(W) x 40(H)mm / Approx. 287g		
Accessories	Instruction manual, battery, carrying case, zero gauss chamber		



ELECTROMAGNETIC FIELD DETECTORS



ARW-1394 For order **220121497**

Low frequency magnetic field detector

The ARW 1394 magnetic field (EMF) meter has been designed to provide the user with a quick and reliable use, which allows you to easily measure the levels of pollution produced by power lines, household appliances and all devices operating with bandwidth from 30Hz to 2000Hz.

- The field of detection includes the industrial currents at 50/60Hz and also the respective harmonics
- Equipped with 2 selectable units of measurement "micro Tesla & milli Gauss"
- Complete with RS-232 data interface and software.
- Datalogging with 999 storable records
- Data hold, Peak hold functions
- Easy to use
- Min/Max functions.
- Three axis measurement (X,Y,Z)

TECHNICAL SPECIFICATIONS	
Display	3-1/2 digits, maximum indication 1999
Measuring range	20/200/2000 mG (milli gauss) 2/20/200 μ T (micro tesla)
Resolution	0.01/0.1/1 milli Gauss 0.001/0.01/0.1 micro Tesla
Measurement mode	triaxial (X,Y,Z)
Bandwidth	30Hz $\div$ 2000Hz
Accuracy	$\pm(3\% + 3d)$ at 50Hz or 60Hz $\pm(5\% + 3d)$ at 40Hz to 200Hz
Range overflow	-3dB at 30Hz to 2000Hz
Memory	the Display shows «OL»
Sampling interval	999 reads
Power supply	approx. 0.5 sec.
Autonomy	6 AAA 1.5V batteries
Operating conditions	approx. 100 hours
Storage conditions	0-50°C (32-122°F) with humidity below 80% RH
Weight	10 $\div$ 60°C with humidity lower than 70% RH
Dimensions (LxWxH)	approx. 165g 154 x 72 x 35 mm
Supplied accessories	operating manual - batteries software in windows environment - USB cable



ARW-90EMF For order **220122898**

High Frequency Electromagnetic Wave Tester

The ARW-90EMF electromagnetic field meter is a device designed for broadband monitoring of high frequency electromagnetic radiation in the range of 50 MHz to 8 GHz. The instrument features a built-in isotropic probe for measuring electric fields from 20 mV/m to 200 V/m, has a large, easy-to-read color display, and includes features such as data logging, adjustable thresholds for alerts, and connectivity options for transferring data to other devices for further analysis.

- Measuring range from 50 MHz to 8 GHz.
- The instrument features a large color LCD display for clear display of measured parameters.
- **Three-axis isotropic** measuring probe (x-y-z) with the possibility of selecting each individual

axis ("X-axis" - "Y axis" - "Z-axis").

- Adjustable alarm thresholds and data memory function with detection of min./max. and average values
- Automatic switch-off function (You can choose between 5 minutes, 30 minutes and 1 hour.)
- OL overload display.
- Data transfer to the PC via USB (CSV or EXCEL file)



GENERAL SPECIFICATIONS	
Measurement Method	Digital display, triaxial measurement
Measurement system	Continuous
Reaction time	1s
Acoustic warning	Buzzer
Unit	μ W/m ² , mW/m ² , W/m ² , μ W/cm ² , mW/cm ² , mV/m, V/m
Displayed value	Average maximum average
Operating temperature	0°C-50°C
Operating humidity	0%-75%RH
Storage temperature	-10°C-60°C
Storage humidity	0%-80%RH

ELECTRICAL SPECIFICATIONS	
Measurement mode	Isotropic, Three-axis
Measurement application	High frequency electric field
Display resolution	0,1 mV/m 0,1 μ W/m ² 0,001 μ W/cm ²
Frequency range	50 MHz-8 GHz
Measuring range	1 μ W/m ² -26,52 W/m ² , 0 μ W/cm ² -2,652 mW/cm ² 20 mV/m-100 V/m
Dynamic range	45 dB
Frequency response	$\pm 1,0$ dB (da 50 MHz a 1,9 GHz), $\pm 2,4$ dB (da 1,9 GHz a 8 GHz)
Overload limit	2,652 mW/cm ² (100 V/m)



RADIOACTIVITY DETECTOR



ARW - 9501 For order 220122233

This radiation detector comes from the latest development and design research. Light, robust and small in size, it offers remarkable performance in the measurement of Alpha "A", Beta "β", Gamma "γ" and "X-ray" radiations.

Equipped with a large LCD display, it allows the measurement and recording of data with transfer to a PC via a Bluetooth connection and a management software supplied.

APPLICATIONS

This nuclear radiation detector can be widely used in pharmaceutical plants, laboratories, power plants, quarries, metal processing plants, oil fields and pipelines, landfills, etc. In environmental protection, in nuclear radiation pollution, in the control of soil, water, building materials, stones and in the medical field for X-ray control.

- Large LCD display
- Compact, light and particularly robust structure
- Detection of Alpha "A", Beta "β", Gamma "γ" and "X-ray" radiation
- High precision sensor
- Internal data memory
- Bluetooth connection and data processing software



Delivery kits:

Instrument, software interface, case and user manual.

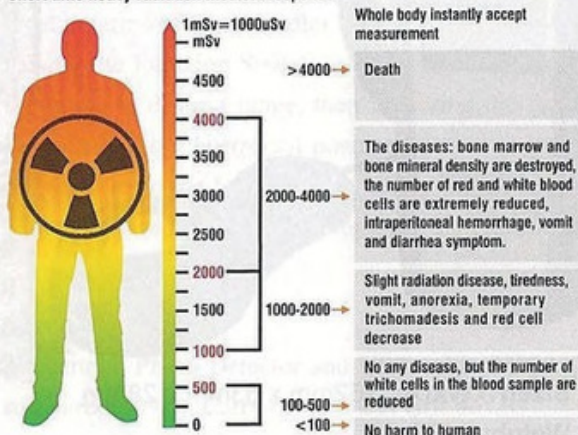


Rotating selector for Alpha "A", Beta "β", Gamma "γ" and "X-ray" radiation detection

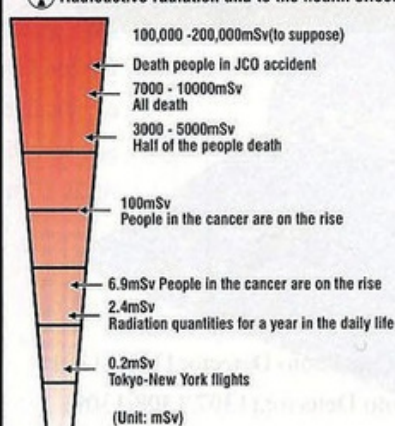
TECHNICAL SPECIFICATIONS

Measurement scales	Alpha "A", Beta "β", Gamma "γ" and "X-ray" radiation Radiation dose: 0.01μSv/h-1200μSv/h
Measuring range	Pulse Measurement :0-30000cpm ,0-5000cps Radiation dose Val. accumulated: 0.001μSv-9999Sv Pulse measurement val. accumulated: 0-9999
Sensitivity	0-999999: 1μSv/h of Co-60, 108 pulses or 1000cpm/mR/hr
Sensor	Halogen filled detector
Data output	Bluetooth
Display	LCD with graphic bar indication
Alarm	freely set the alarm value, default is set to 5μ Sv/hr
Accuracy	Typical 15% (source of Co-60-ray): <10% (<500μSv/h) <20% (>500 μ Sv/h)
Data memory	It can store 1000 data, manually or automatically 0°C ÷ 50°C (-40°C ÷ +75°C
Operating temperature	during measurement)
Dimensions	200x70x45mm
Weight	206 gr

Short time heavy radiation medical response



Radioactive radiation and to the health effects



RADIOACTIVITY DETECTOR



ARW-800Plus For order **220123127**

Radioactivity detector dosimeter

The Ray-Detector ARW-800Plus is a small high-range radiation detector Dosimeter used to monitor the exposure level in an instantaneous and cumulative way (accumulated radioactive dose). The main function is to monitor X-rays, γ-rays and β-rays through the use of a GM Tube sensor (Geiger Muller counter) capable of offering accurate measurements in a high measurement range.

This Dosimeter uses a microprocessor and is equipped with a large LCD display, simple to use, it is equipped with an audible and visual alarm with double adjustable threshold, when the alarm threshold is reached an alarm is emitted to remind staff to pay attention to safety. The large display simultaneously displays the instantaneous and cumulative radiation dose, switchable in different measurement scales (μSv/h, μGy/h, mR/h). The main counting indicators of the instrument comply with international standards.



FIELDS OF APPLICATION

This product can be widely used in radiation testing in radiation control and monitoring enterprises, health and epidemic prevention, radiotherapy, nuclear laboratories, nuclear power plants, import and export goods inspection, in building materials, iron and steel scrap, industrial non-destructive testing, etc.



- Measure dose in real time and record cumulative dose at the same time.
- **High sensitivity and measurement precision** thanks to the GM tube sensor (Geiger muller counter)
- Three selectable radiation measurement units, μSv/h, μGy/h, mR/h
- **Large backlit display** with simultaneous display of the instantaneous and cumulative dos
- Real-time dose **alarm threshold** and cumulative dose alarm threshold can be set and adjusted.
- Visual, acoustic and vibration indication
- Accumulated dose value, dose alarm threshold and dose alarm threshold data will not be lost after power off

TECHNICAL SPECIFICATIONS

Measurement mode	Beta "β", Gamma "γ" and "X-ray" rays
Measuring range	Real-time dosing: 0.08–99999 μSv/h (maximum: 100 mSv/h) Cumulative dosage: 0.00μ Sv–999.0 mSv
Sensibility	80 CPM/μSv/h (compared to Co-60)
Sensor	Energy compensation GM tube (Geiger counting tube)
Energy response	50keV~1.5MeV
Relative innate error	≤ 10 % (a 1 mSv/h)
Alarm	freely set the alarm value, default is set to 5 uSv/h
Alarm values	• Real-time dosing: Selection between 0.5, 1.0, 1.5, 2.0, 2.5, 5.0, 10.0, 50.0, 100.0μSv/h. • Cumulative dosing: Selection between 0.05, 0.5, 1.0, 1.5, 2.0, 5.0, 10.0, 20.0, 50.0, 100.0 m Sv available
Unit of measure	μSv/h, μGy/h, mR/h
Response times display	the dosing rate is displayed per second; the alarm response is less than 5 seconds
Operating temperature	Temperature: - 10 °C — + 45 °C Relative humidity: ≤ 95 % (+ 45 °C)
Power supply	Two batteries (AAA)
Dimensions	100x70x25mm
Weight	300gr.



CONVERSION OF UNITS OF MEASUREMENT OF RADIOACTIVITY CONCENTRATION

- Sievert (Symbol is Sv, unit:1Sv=100 rem)
- rem (roentgen equivalent man)
- μSv/h (unit of ray radiation dose rate)
- 1SV=100Rem
- 1 rem=1cSv=10mSv
- 1uR/h=10uSv/h
- 1mR/h=10mSv/h



ARW-UV180 For order **220123035**

Led wood lamp kit

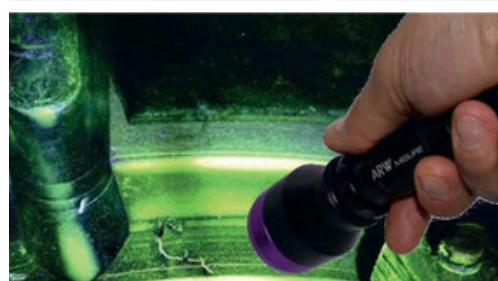
ARW-UV180 ultraviolet lamp is also called Wood's Spotlight, Black Light Lamp, UV Lamp and Fluorescent Leak Detection Lamp!

It is a small flashlight equipped with lithium batteries with LED cold light technology that offers a duration of approximately 50,000 hours of use. ARW-UV180 UV lamp produce a powerful concentrated and constant ultraviolet light, the on/off button is positioned behind the lamp to prevent accidental start-up and the battery is charged for about 6 hours using normal power outlets.

ARW-UV180 lamp black light spectrum is pure, a saturated UV-A component and black light filter, completely eliminate visible light, harmful light, for fluorescence detection in the field of non-destructive testing "NDT" for material and weld flaw and crack detection, oil spot contamination detection, leak detection, and mineral exploration.



- **Quick start**, on and off, without preheating
- **Screenshot from electromagnetic interference**, can work in strong magnetic field
- Compact and extremely robust, low energy consumption and long life low temperature operation
- **Long life** of the LED lamp of about 50,000 hours
- Change the design in the tail, prevent accidental startup, more safe and stable
- Lithium battery can be used continuously for more than 2 hours, equipped with power supply and car charger, easy to charge
- **Safety and spectral purity**, free from UV-B and UV-C components
- 380mm illumination is 30000 uw/cm2, LED technology illumination stability is high, ultraviolet light decay can be ensured
- High intensity ultraviolet energy is released and previously invisible fluorescence can be seen in sunlight and beyond
- Complies with **IP65** degree of protection, dustproof
- Equipped with a current regulator which **keeps the UV intensity constant** even if the battery runs out
- All components, including the Torch, are RoHS certified according to 2002/9



Kit Standard configuration Wood spotlight ARW-UV180

- UV LED flashlight
- 2 Batteries complete with recharging system
- UV protective glasses
- Portable carrying case with belt holster
- ABS case
- User manual



TECHNICAL SPECIFICATIONS

Light source	1 LED UV-A 365NM
UVA wavelength	290-390 nanometers (Peak 365 nanometers +/- 5nm)
UVA irradiation intensity	30,000uw/cm2 at 38cm from (15in)
Irradiation area	Ø30 mm (1.2 in), Ø70 mm (2.8 in) beam center beam at a distance of 38 cm (15 in)
Lamp style	flashlight handle
Dimensions	Length: 15.9cm (6.3in)
Weight	226g (9,402 Oz)
t visible (380-780 nm)	≈10 Lux, with black filter 38cm of visible light intensity less than 10 lux
Power supply	1 X 3,350 mAh lithium battery, 3.6 volts DC
Duration	3 hours (+/- 5%), 2 operating cycles with the two batteries supplied, approximately 6 hours
Charging time	2 hours of 90% charge, about 8 hours full charge
External charger	One 100-240V AC charger, you can charge two batteries at the same time
Degree of protection	IP 65



Fluorescent Penetrating Spray 4455 (400cc)

Fluorescent Liquid Penetrant (5lt. tank)

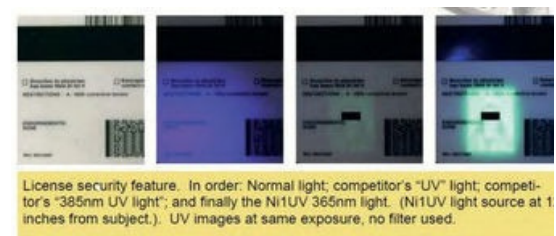
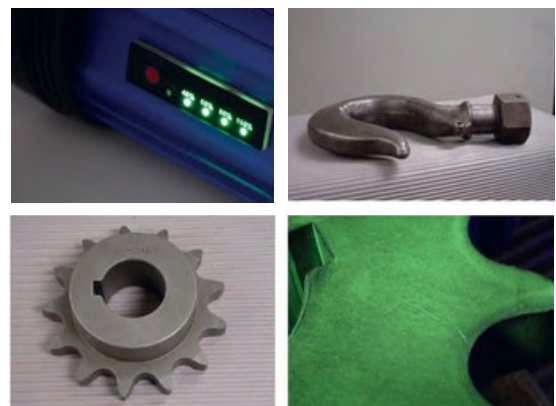
Fluorescent Liquid Penetrant (Tank 25lt.)

ARW-UV103D For order **220123036**

Wood spotlight

The ARW-UV103D Wood Light Spotlight is a portable UV lamp with LED technology featuring Three UV LEDs and one visible white light LED that offers the optimal solution for all Non-Destructive Testing (NDT) tests, which we know with the Italian acronym CND (non-destructive testing) for the control of defects and cracks on materials and welds in combination with fluorescent penetrant liquids and inspections with fluorescent magnetic particles in the case of combination with the magnetoscopy method. Defects such as fine cracks on load-bearing structures, sealing details or in many other critical components can be extremely dangerous for safety and are enhanced during inspection by means of contrast with the fluorescent liquid.

- **Minimizes time** by accelerating inspection times with powerful UV light beam with the widest and most uniform beam on the market
- Eliminates the need for a separate flashlight to check visible spots by featuring a built-in white light LED with over 1500lux power
- **Improves energy and operational efficiency** thanks to the low consumption offered by LED technology, a reduction of up to 82 compared to 400 W halogen lamps and up to 45 compared to mercury vapor lamps
- Long-life LEDs are more reliable and require less maintenance over time
- Compact and rugged aluminum alloy construction with ergonomic handle, fully sealed high-strength housing and a cooling system and non-fogging lenses for reliable and consistent inspections
- There is a **battery charge indicator** on the top of the lamp. Press the test button and the charge is displayed at 20%, 40%, 60%, 80% and 100% respectively. When the charge is close to 20%, charge the battery as soon as possible
- Safer working conditions, eliminates the possibility of operator burns thanks to cold LED technology
- **Eliminate hazardous mercury vapor waste disposal** for safer working conditions
- Meets national requirements of GB/T 15822 and international magnetic particle inspection standards ASTM E2297 and ASTM-E3022
- **Black color filter**, compliant with ASTM E3022 standard
- The built-in fan keeps the LEDs cool to maintain optimal light output during extended use
- Rubber guard with glass lens protects LEDs from damage
- **UV-absorbing goggles** are included in the delivery



License security feature. In order: Normal light; competitor's "UV" light; competitor's "385nm UV light"; and finally the Ni1UV 365nm light. (Ni1UV light source at 1 inches from subject.). UV images at same exposure, no filter used.



Living gecko under normal illumination (above) and demonstrating skeletal fluorescence under 365nm illumination (below).

TECHNICAL SPECIFICATIONS

Light source	3 UV-A 365NM LEDs 1 visible light LED (1500lux)
UVA wavelength	290-390 nanometers (Peak 365 nanometers)
UVA irradiation intensity	UVA 4500 uW/cm ²
Irradiation area	at 38cm it is about 200mm
Lamp style	pistol grip
Dimensions	150x140x250mm(6 x 5.5x10 inch)
Weight	0.9kg approx
White light LED intensity	300 candles (3,229 lux)
Power supply	24V 3000mA rechargeable battery pack (100 260v AC power, 50/60 Hz)
Autonomy	5 hours (Charging time is about 2-5 hours)
Degree of protection	IP 64
Power cord length	About 3m
Operating conditions	Altitude up to 2,000 m (6,562 ft.); Temperature 5°C to 40°C (41°F to 104°F); Maximum relative humidity 80% for temperatures up to 31°C (88°F)



**Fluorescent Penetrating Spray
4455 (400cc)**

**Fluorescent Liquid Penetrant
(5lt. tank)**

**Fluorescent Liquid Penetrant
(Tank 25lt.)**

ARCHEM PENETRANT LIQUIDS



ARW-ARCHEM

Cleaner

For order **110010010**

Penetrant

For order **110007450**

Developer

For order **110007451**

Price each (package min. 10pcs)

Penetrant liquids are a product used in non-destructive testing of materials; they give the name to the control technique itself. The examination with penetrant liquids is aimed at ascertaining the existence of discontinuities that emerge on the surface to be examined. Some classes of production processes (heat treatments, surface finishes, welding, etc.) can produce surface defects which are very dangerous since the heaviest stresses are precisely those that act on the surface. The check is mainly carried out on metallic materials, but it can also be performed on materials of other nature, provided they are inert with respect to the products used for the investigation and are not excessively porous. The analysis is based on the penetration of a liquid with certain characteristics of capillarity, viscosity, wettability and density inside a discontinuity emerging on the surface.

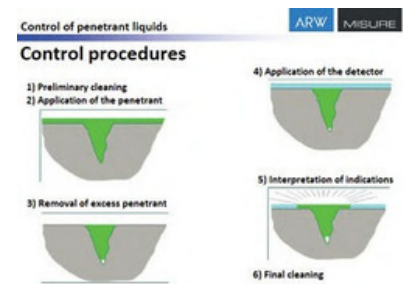
After the removal of the excess liquid and the application of a detector (an absorbent liquid usually based on amorphous silica "Developer") every single discontinuity (Crack) is highlighted. The LPI method covers the 1st level of NDT (non-destructive testing) and is often used in a complementary way to other superficial non-destructive techniques (magnetoscopy in particular) and volumetric (ultrasound and radiography).

Type of liquids:

- **Solvent (PRE-CLEANER)** For cleaning the surfaces to be examined and for removing excess penetrant. Absolutely free from chlorides and sulphides
- **Liquid penetrant (PENETRANT RED)** With high sensitivity and a high content of colored pigments. Certifiable on request for current regulations. The penetrant is washable with water or removable with the cleaner.
- **Developer (WHITE DETECTOR)** In a mixture of highly volatile alcohol. To be applied by spray only. Examine immediately after complete drying of the layer. Absolutely free from chlorides and sulphides.

Regulations

- UNI 8374 (1982) "Products for testing with penetrant liquids: classification, characteristics and tests"
- UNI EN 571-1 (1998) "Examination with penetrant liquids: general principles"
- UNI EN ISO 3452-4 "Examination with penetrating liquids: equipment"



PERMANENT MAGNET YOKE



ARW-H1

For order **220122498**

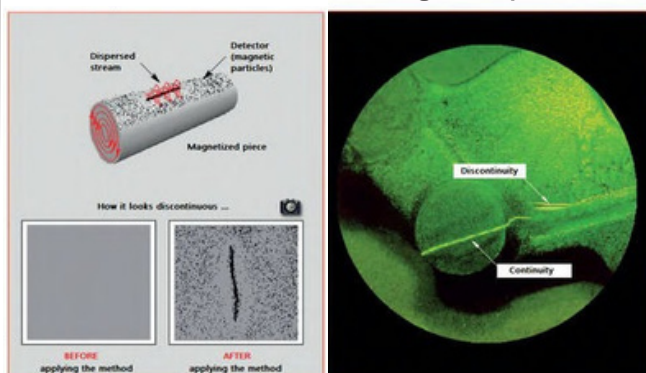
Yoke with magnet permanent

The ARW-H1 yoke is particularly suitable for use in places where there is no connection to the electricity plugin and for use inside closed tanks and containers where the electrical supply can create a dangerous condition

TECHNICAL SPECIFICATIONS

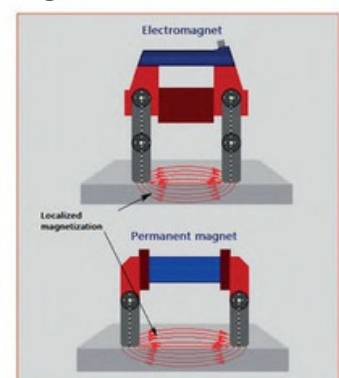
Pole diameter	30mm.
Dimensions	175x160x45mm
Weight	2,25Kg.
Distance of the poles	From 20 to 200mm (Adjustable and rotatable joints)
Lifting force	> 18Kg. (Norm. ASTM E1444/E1444M-12)

The Magnetoscope Method (MPI)



- ✓ The technique involving the use of these devices produces a localized longitudinal magnetization
- ✓ Induction lines are produced near the poles of the magnet or electromagnet
- ✓ Both in the permanent magnets and in the electromagnets the pole pieces are articulated to allow greater adaptability to the particular geometric configuration of the piece

Magnetization on the surface



ARW-OME200 AC/DC For order **220122860**

Electromagnetic yoke, CND Defect detector

The electromagnetic yoke is an instrument used in the "CND" sector of non-destructive testing. Its application consists in the search for surface and sub-surface defects such as cracks, inclusions, flaking, and more mainly aimed at checking welding or manufacturing of manufactured articles in ferromagnetic material. The "Magnetoscopy" method is one of the most used NDT checks and consists in creating a magnetization of the examined surface, on which magnetic liquid or magnetic powder will then be placed with the function of signaling the position and extent of any defects found. The system consists of a feeder connected to a yoke with articulated arms to adapt to the geometry of the piece.

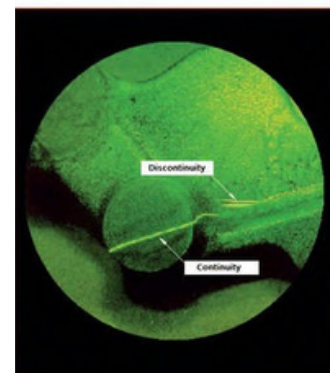
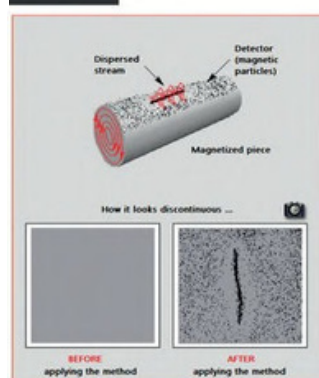


Black Magnetic Spray (400cc)
White Contrast Lacquer (400cc)

TECHNICAL SPECIFICATIONS

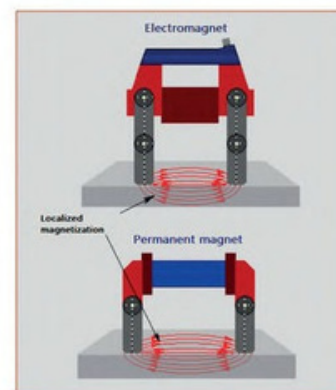
Power supply	AC 220V±10% 50HZ
Operation	AC/DC with selector
Lifting power	≥ 6kg (58.8N) in AC and ≥18.1kg (177N) on DC
Power supply dimensions	260×140×170mm
Total weight	ca. 9kg
Jointed yoke	It is also called a horseshoe probe or welding probe and features a movable angled magnetic head. The pole distance is 10-210mm; weight: 2kg.

The Magnetoscope Method (MPI)



Magnetization on the surface

- ✓ The technique involving the use of these devices produces a localized longitudinal magnetization
- ✓ Induction lines are produced near the poles of the magnet or electromagnet
- ✓ Both in the permanent magnets and in the electromagnets the pole pieces are articulated to allow greater adaptability to the particular geometric configuration of the piece



ULTRASONIC FLAW DETECTOR



ARW-981S For order **220123203**

ARW-9810 For order **220123204**

Ultrasonic Flaw Detector

The ARW-981 Ultrasonic Flaw Detector is a digital instrument designed to make a fast and precise measurement of various defects in the workpiece using ultrasonic technology. This instrument features a portable, ultra-slim design and high signal-to-noise ratio making it the perfect tool for tough working conditions. It is also equipped with a large color LCD display, IP 65 protection and meets the requirements of EN22232-1, EN12668-1 standards.



The ARW-981 flaw detector is widely used in steel industry, electric power industry, petrochemical industry, boiler and pressure vessel industry, rail transportation industry, automotive industry, machinery industry and other fields. Its field of application is the search for defects on materials and welds using the ultrasonic NDT verification method.

- Featuring a portable, ultra-thin design and a high signal-to-noise ratio, ratio, perfect for tough working conditions.
- Equipped with **IP65 protection rating against dust and water splashes.**
- **Compliant with requirements of EN22232-1, EN12668-1**
- High numbers of digital filters, suitable for nearly any application
- **Battery life ≥ 10 hours**, with fast independent charging control
- **Video recording** (ARW-9810 Optimum version only) in ".rec" format with direct recall and display on the instrument
- **Language: English** (expandable: German / Turkish / Korean / Spanish / Italian and etc)
- **Bluetooth connection** (ARW-9810 optimum version only) for connection to mobile application (Only on Android)
- Square wave pulser, PRF up to 3 kHz for fast scanning / detecting
- High-speed sampling for clear and stable echo diagram with all details
- With standard DAC / TCG / DGS / AVG function, Color B-Scan, C-Scan
- Built-in standards, AWS D1.1/D1.5. tools, flaw detection video recording
- **Reports can be automatically formed and viewed on the equipment, or be transferred to the USB stick in PDF**

format and viewed on a PC

- **Storage: 1000 groups of data** (expandable); External USB for directly storage (unlimited memory)

TECHNICAL SPECIFICATIONS		
Models	ARW-981S	ARW-9810
Scan Range(mm)	0~10000 mm	0~12000 mm
Velocity Range(m/s)	1000~15000	1000~18000
Gain Range(dB)	110 dB	120dB
Operating Frequency	0.2~20MHz	0.2~25MHz
Pulse Repetition Frequency	10~1500Hz	10~2500Hz
Vertical linearity error		≤2,0%
Horizontal linearity error		≤0,2%
Sampling Frequency	150MHz	200MHz
Transducer Frequency Max.	15MHz	20MHz
Dynamic Range		≥38 dB
Resolution		≥40 dB
Testing sensitivity		≥65 dB
Pulse amplitude		100V~500V
Pulse Width		0.03~0.51μs
Transducer Damping		50Ω~400Ω
Interface for Probe cable		BNC (optional LEMO)
Working mode	modes: Straight / Angle / Dual crystal probe, Penetrating detection and etc.	
Power Supply	100-240V 50-60Hz; DC 9V Rechargeable Li-ion battery, 10+ hours life	
Dimension & Weight	Dimension 240×153×38mm; Net weight 0.98kg (with Li-ion battery)	
Environment	Temperature -10~50°C, Humidity 20~ 95%RH	
Ultrasonic inspection - test report		



DELIVERY KIT

- Main unit x1
- Probe and cable x2
- Power Adapter & Battery x1
- Carry Strap x1
- Manual x1
- USB stick
- ABS instrument box x1

CONFIGURATION

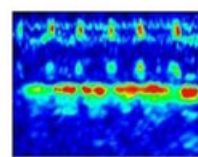
Models	ARW-981S ARW-9810
Square wave pulser	
DAC/DGS/AVG diagram	
AWS	
TGC	
Color B-Scan	
Automatic calibration (V2)	
PC connection	
Bluetooth connection (only for APP connection)	
External storage (USB)	
Detection Video (.rec format viewable by the instrument)	



Menu



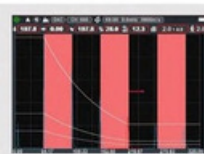
Main interface



Color B scan



AVG interface



DAC interface



Automatics Reports