



LeghornGroup



SEALS FOR WATER, GAS AND ELECTRICITY METERS

PROTECTION - CONTROL - IDENTIFICATION - TRACKING

All the water, gas and electricity utility companies use meters to quantify the energy delivered.

It is necessary to seal the meters to avoid tampering.

Leghorn's technical team have designed a range of solutions suitable for protecting meters against attempts of tampering.

Our wire seals for meters are reliable, with a good quality/price ratio and available in different colours.

The latest security seals for meters are equipped with RFID and NFC tags that can be read through smart phone.



WHAT WE OFFER



PROTECTION: LeghornGroup can protect your goods and assets with security seals and various products for tamper protection. The company can create bespoke, technical solutions to meet client's requirements.



CONTROL: LeghornGroup ensures goods and people can be monitored using security products and integrated complete hardware and software solutions that allow the operator to monitor and intervene in real time, even remotely.



IDENTIFICATION: LeghornGroup's understanding of authentication along with their innovative technical products and solutions allow users to uniquely and securely identify, goods, vehicles, containers, animals and people.



TRACKING: LeghornGroup's real time GPS tracking devices allow users to monitor location, status and movements of vehicles and people.

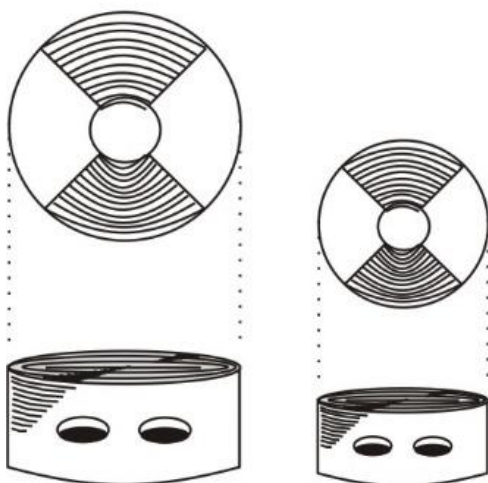
PLOMBEX 9 mm – PLOMBEX 13 mm WIRE SEAL TO BE USED WITH PLIERS

003



13 mm

9 mm

**PACKING:****PLOMBEX 09 (diam: 9 mm)**

- Quantity per carton 10.000 pcs
- Carton size: 21x15x15 cm
- Carton weight: 3

PLOMBEX 013 (diam: 13 mm)

- Quantity per carton: 10.000 pcs
- Carton size: 35x24x22 cm
- Carton weight: 6

DESCRIPTION:

The plastic seals “PLOMBEX” can be used with any kind of rope or metallic wire:

[galvanised wire](#),
[custom string](#)

Custom seals' closure is guaranteed by using the suitable [pliers](#).

Apart from being an efficient security seal for fire extinguishers or first aid kit, Plombex is used for decorative purposes in the food and cosmetics sector.

Plombex is also available in silver, gold and bronze colours.

SIZES:

- Diameter : 9 mm or
- Diameter : 13 mm

CUSTOMISATION:

Using suitable press.

MATERIAL:

POLYSTYRENE

Our products do not contain any of the following substances:

Cadmium
Lead
Mercury
Hexavalent chromium
Polybrominated biphenyls (PBBS)
Polybrominated diphenyl ether (PBDE)

AVAILABLE COLOURS:

Red – Yellow – Blue – Green – White – Black - Orange - Light blue – Grey – Pink
Brown – Silver – Gold – Light Green

PLIERS FOR PLOMBEX 9 mm – PLOMBEX 13 mm



Art 464 without plastic handle

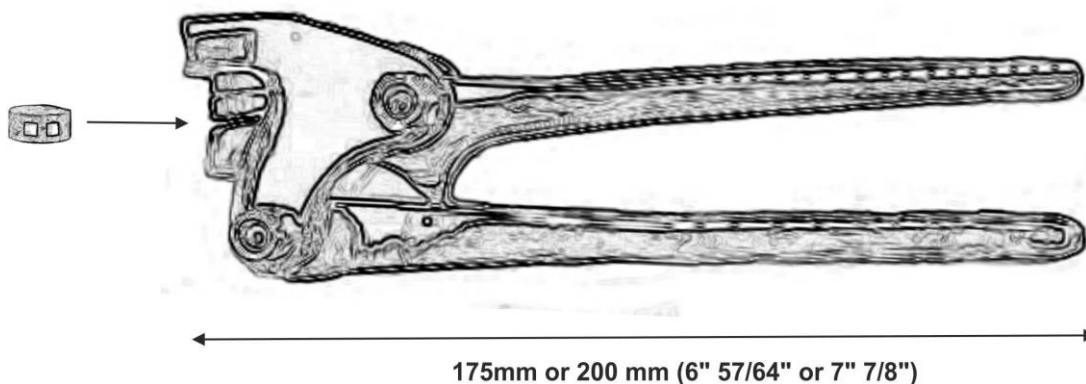
Pliers suitable for lead and plastic seal.
Made of galvanised iron. It has a good quality/price ratio and it is easy to handle.
The two punches can both be customised.

Art 464/175: for lead seals up to 12 mm .

Art 464/200: for lead seals up to 15 mm

SIZE:

- ART 464/175 Length : 175 mm
- ART 464/200 Length : 200 mm



Art 466 with plastic handle

Plastic handles are made of a very sturdy plastic housing.
The two punches can both be customised.

Art 466/175: for lead seals up to 12 mm.

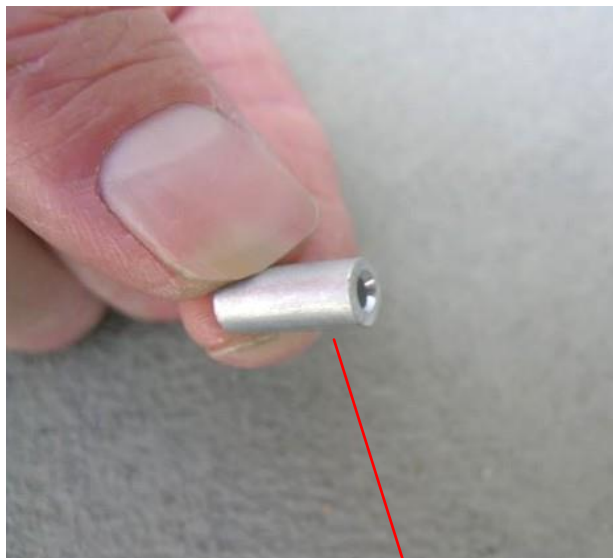
Art 466/220 : for lead seals up to 15 mm.

SIZE:

- ART 466/175 Length : 175 mm
- ART 466/200 Length : 200 mm

ALUSEAL : ALUMINIUM SEAL WIRE SEALS TO BE USED WITH PLIERS

005



DESCRIPTION:

Completely aluminium seal.
ALLUSEAL is used with:
galvanised wire,
custom string,

Closure is guaranteed by using the suitable pliers.

SIZES:

- External diameter: mm 5
- Internal diameter: mm 2
- Length: mm 12

CUSTOMISATION:

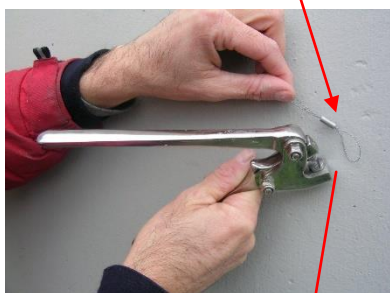
A suitable pliers is required

MATERIAL:

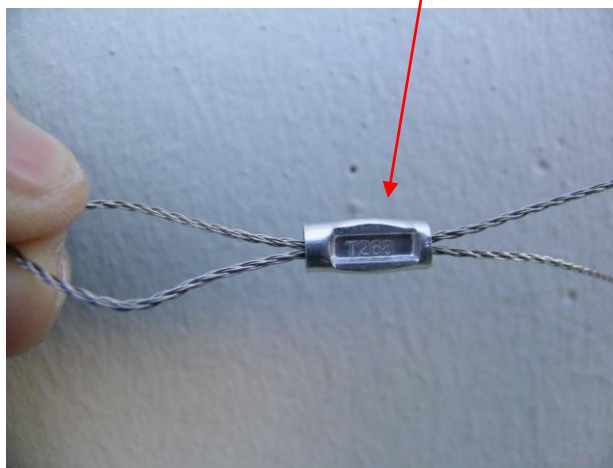
Seals 99,9 % pure aluminium

PACKING:

- Quantity per carton 15.000 pcs
- Carton size: cm 26x19x22 cm
- Carton weight: kgs7,4 kg



Art: 464/200 page 004



CRALUSEAL; WIRE SEAL TO BE USED WITH CRALUPLIER

006



STANDARD AVAILABLE COLOURS:

- Natural aluminium
- Golden aluminium (galvanized)
- Green aluminium (galvanized)
- Blue aluminium (galvanized)



DESCRIPTION :

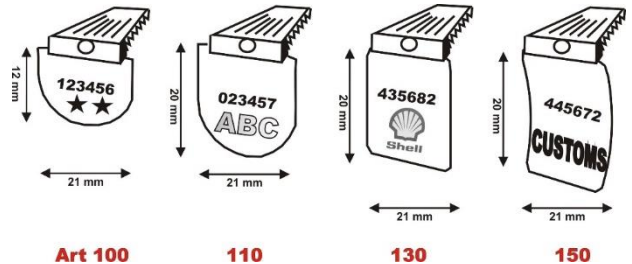
The Craluseal is a sturdy seal that has a good quality/price ratio.

Once the seal's flag has been pressed around the wire using the pliers, it is impossible to reopen the seal without destroying it.

Completely aluminium security seal with progressive numbering

The following sealing wires may be used with CRALUSEAL:

- Galvanised
- Copper
- Brass
- Nylon-copper



SEQUENTIAL NUMBERING AND CUSTOMISATION:

- Sequential numbering up to 6 digits
- Customisation up to 12 characters
- Logo available upon request

MATERIAL.:

Plated Aluminium

PACKING TYPE FOR CRALUSEAL 100:

- Quantity per carton 10.000 pcs each
- Carton size: 30x22x20 cm
- Carton weight: 5,5 kg

PACKING TYPE FOR CRALUSEAL 130:

- Quantity per carton 10.000 pcs each
- Carton size: 57x33x30 cm
- Carton weight: 6,5 kg

**DESCRIPTION:**

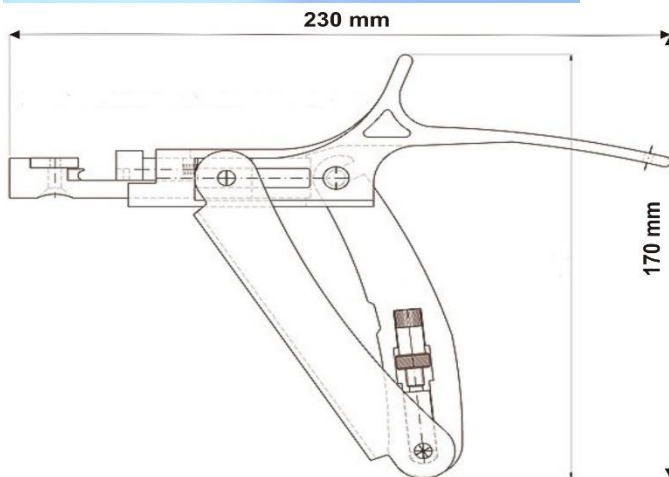
The pliers (CRALUPLIER) is suitable just for Craluseal and it is used by rolling the CRALUSEAL around the wire.

SIZES:

230x170mm

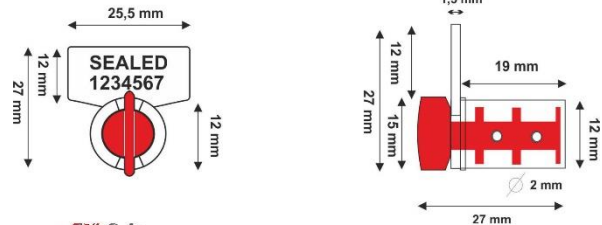
CUSTOMISATION:

Customisation can be made on the punch of the pliers (up to 7 characters)

**PACKING:**

- Quantity per carton 1 pcs
- Carton size: 28x11x4cm
- Carton weight: 0,7 kgs

TWISTSEAL: WIRESEAL SELF LOCKING SEAL



 LeghornGroup property

DESCRIPTION:

Completely plastic seal with incorporated sealing wire. The transparent plastic material with which the seal is realized allows to check the correct closing mechanism. To close it, turn the handle of the seal 360°. Once closed it is advisable to snap off the handle. It is impossible to tamper the seal once it is secured.

The following sealing wires may be used with TWISTSEAL:

Galvanized
Stainless steel
Brass
Copper
Nylon- copper

SEQUENTIAL NUMBERING AND CUSTOMISATION:

- LASER PRINT
- Sequenced numbering up to 15 digits.
- Bar-code possibility
- Customised up to 20 characters on one line .
- Logo available upon request
- For special orders, logo printing in relief.

MATERIAL:

- Polycarbonate
- ABS

AVAILABLE COLOURS:

Red – Yellow – Blue – Green – White –
Black – Orange – Light blue – Grey – Brown
– Lilac.

PACKING:

- Quantity per carton 1000 seals in bags of 100 pieces numbered in sequence
- Carton size: 40x40x15 cm
- Carton weight: 4 kgs

- Quantity per carton 5000 seals in bags of 100 pieces numbered in sequence
- Carton size: 60x40x35 cm
- Carton weight: 18 kgs

TWISTSEAL RFID: WIRE SEAL SELF LOCKING SEAL

009



DESCRIZIONE:

RFID Twistseal is a security seal made of very strong plastic material. The completely transparent outer casing allows to check the correct locking system.

It is equipped with RFID UHF inlay, compatible with ISO18000-6 and has a unique code which is impossible to clone (available also in HF/NFC operating frequency) since it is embedded in the seal.

HOW TO USE IT:

Insert the cable in one of the two holes on the body of the seal, paying attention to insert the same cable in the corresponding hole in the inner plastic cylinder.

To close it, turn the handle of the seal 360°. Once closed, it is advisable to snap off the handle. It is impossible to tamper the seal once it is secured.

SEQUENTIAL NUMBERING AND CUSTOMISATION:

- LASER PRINT
- Sequenced numbering up to 15 digits.
- Customised up to 20 characters on one line .
- Logo available upon request
- Same EPC code than the outer laser marking

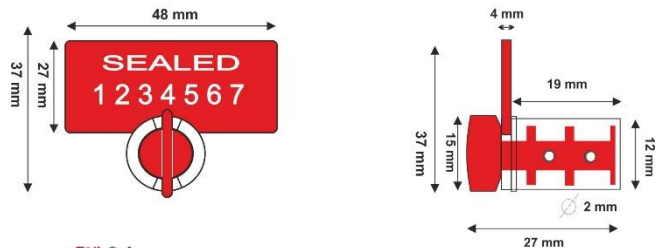
Available in different RFID operating frequency

AVAILABLE COLOURS:

Red – Yellow – Blue – Green – White – Black – Orange – Light blue – Grey – Brown – Lilac – Silver - Gold

PACKING:

- Quantity per carton 500 seals
- Carton size: 56x24x46 H cm
- Carton weight: 3/4 kgs



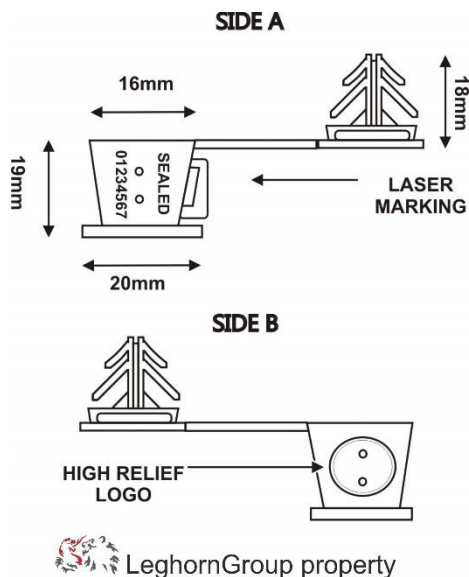
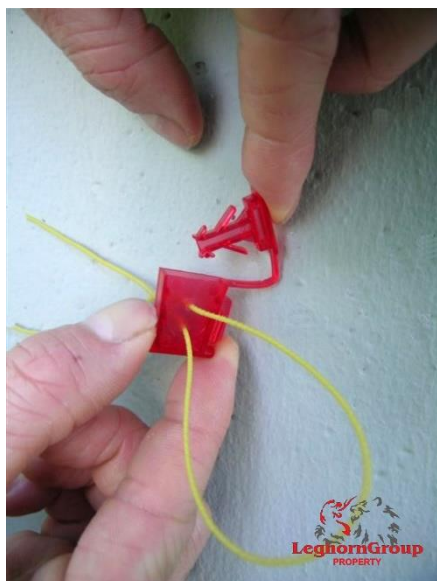
LeghornGroup property

RFID UHF TWISTSEAL

Protocol	EPC Class 1 Gen2 – ISO/IEC 18000-6C
Chip	ALIEN 9620
Memory	EEPROM
Operating frequency	860 – 960 MHz - UHF
Global	
Protection	IP65
Operating temperature	-20°C a +80°C
Storage temperature	-20°C a +80°C
Tag size	mm 15x30
Resistance to critical external agents	
Typical reading range: from 5 to 15 cm (depending on the type of reader used)	

Available also in the following versions: RFID HF ISO 15693, HF ISO 14443A MIFARE, HF NFC NTAG

ANCHORCLICK: WIRE SEAL SELF LOCKING SEAL



DESCRIPTION:

Completely transparent plastic seal which allows to better control the locking mechanism.

HOW TO USE:

Insert the wire in the holes on the seals' body

Push and press the "anchor" part in the hole.

If the seal clicks by closing this means that it is correctly closed.

MATERIAL:

- Polycarbonate

SEQUENTIAL NUMBERING AND CUSTOMISATION:

- LASER PRINT
- Sequenced numbering up to 15 digits.
- Customised up to 20 characters on one line
- For special orders, logo printing in relief.

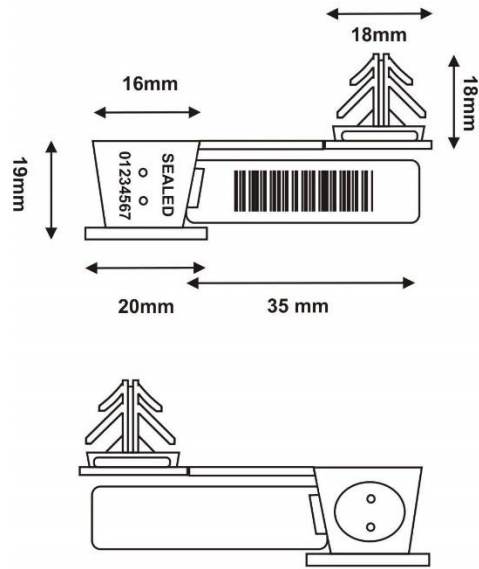
AVAILABLE COLOURS (TRANSPARENT)

Red – Yellow – Blue – Orange – White - Grey – Green.

PACKING:

- Quantity per carton 5000 seals
- Carton size: 56x24x46 H cm
- Carton weight: 10 kgs

ANCHORFLAG: WIRE SEAL SELF LOCKING – BAR CODE POSSIBILITY



LeghornGroup property



DESCRIPTION:

Completely transparent plastic seal which allows to control the locking mechanism.

HOW TO USE:

Insert the wire in the holes on the seals' body
Push and press the "anchor" part in the hole.
If the seal clicks by closing this means that it is correctly closed.

MATERIAL:

- Polycarbonate

SEQUENTIAL NUMBERING AND CUSTOMISATION:

- LASER PRINT
- Sequenced numbering up to 15 digits.
- Bar-code possibility
- Customised up to 20 characters on one line
- Logo available upon request
- For special orders, logo printing in relief.

AVAILABLE COLOURS

(TRANSPARENT)

Red – Yellow – Blue – Orange – White - Grey – Green

PACKING:

- Quantity per carton 4000 seals
- Carton size: 56x24x46 H cm
- Carton weight: 12 kg

RFID ANCHORFLAG: WIRE SEAL SELF LOCKING SEAL

012



DESCRIPTION:

Completely transparent plastic seal which allows to better control the locking mechanism.

HOW TO USE:

Insert the wire in the holes on the seals' body
Push and press the "anchor" part in the hole.
If the seal clicks by closing this means that it is correctly closed.

MATERIAL:

- Polycarbonate

SEQUENTIAL NUMBERING AND CUSTOMISATION:

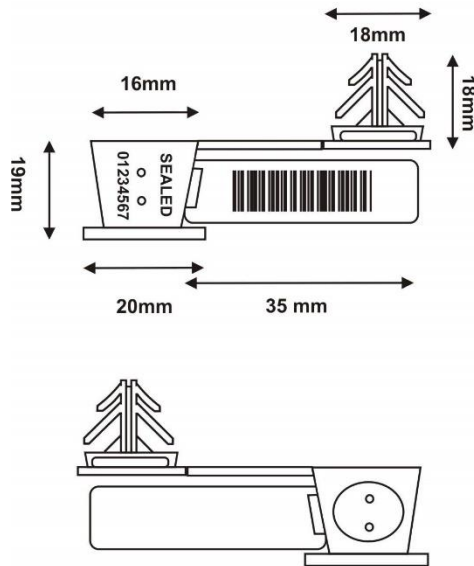
- LASER PRINT
- Sequenced numbering up to 15 digits.
- Bar-code possibility
- Customised up to 20 characters on one line
- Logo available upon request
- For special orders, logo printing in relief.
- RFID tag available

AVAILABLE COLOURS (TRANSPARENT)

Red – Yellow – Blue – Orange – White - Grey – Green

PACKING:

- Quantity per carton 4000 seals
- Carton size: 56x24x46 H cm
- Carton weight: 12 kg



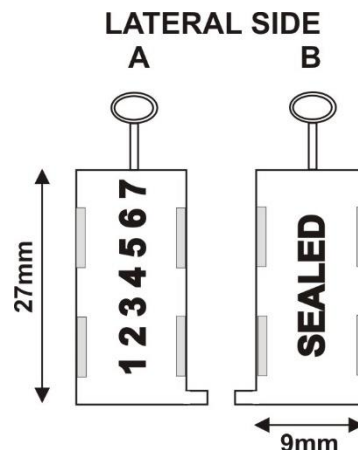
LeghornGroup property



RFID UHF ANCHORFLAG

- Operating frequency 860-960 MHz - UHF Global
- Protocol EPC Class 1 Gen2 - ISO / IEC 18000-6C
- Chip ALIEN H3
- EEPROM memory
- IP66 Protection
- Operating temperature -20 ° C to + 80 ° C
- Storage temperature -20 ° C to + 80 ° C
- Tag size 12x30 mm
- Resistance to critical external agents
- Typical reading range: from 5 to 15 cm
(depending on the type of reader used)

TRITON SEAL: WIRE SEAL SELF LOCKING SEAL



DESCRIPTION:

TRITONSEAL is a very safe seal.

Once positioned and closed, there is no possibility to open it again.

Easy to be closed with one hand.

The following sealing wires may be used with TRITONSEAL:

Galvanized

Copper

Brass

Stainless steel

Nylon-copper

SIZES:

- Width : 9 mm
- Length : 13 mm
- Height : 27 mm

SEQUENTIAL NUMBERING AND CUSTOMISATION:

- HOT PRINT/LASER PRINT
- Sequenced numbering up to 7 digits.
- Customised up to 20 characters on one line

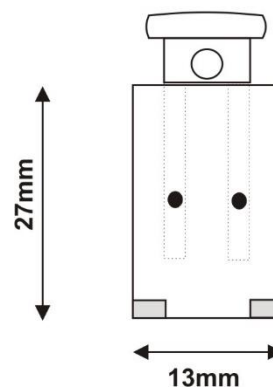
AVAILABLE COLOURS:

Red – Yellow – Blue – Green – White – Orange – .

PACKING:

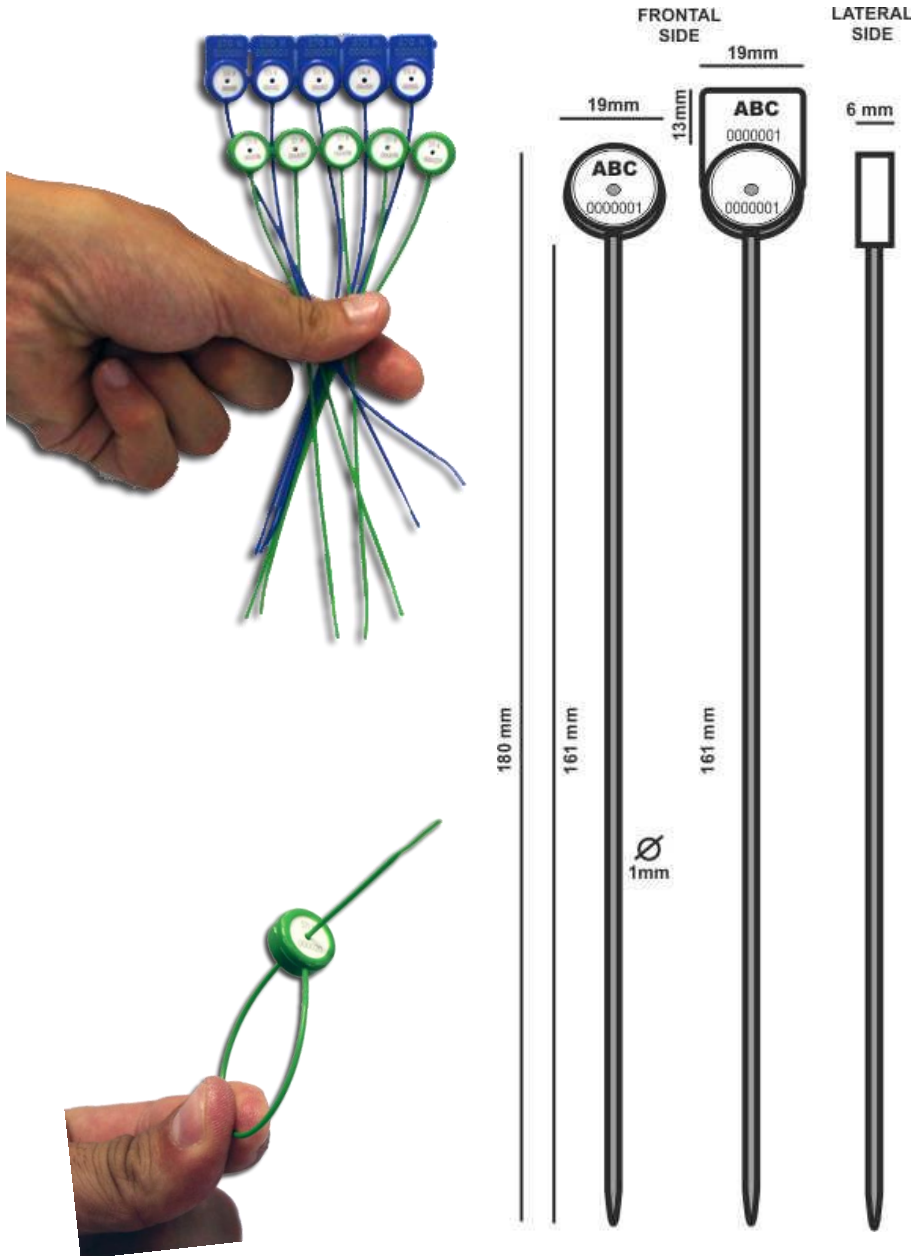
- Quantity per carton 1000 seals packed in boxes with each 100 pieces
- Carton size: 40x22x15 cm
- Carton weight: 5 kgs

FRONTAL SIDE



MEROPE SEAL AND ALCYONE SEAL SELF LOCKING SEAL

014



DESCRIPTION:

MEROPE SEAL and **ALCYONE SEAL** are two nylon seals suitable for utility meters.

The closure system of the seal is made up of a small metal ring that grips the tail of the seal when it is threaded through. Once the seal is applied and closed the only way to open or remove it is by snapping it off.

MEROPE SEAL: without the label on the head of the seal
ALCYONE SEAL: with the label attached to the head of the seal

NUMBERING AND CUSTOMISATION:

- Laser print
- Numbering up to 7 digits
- Customisation up to 3 letters on line.

AVAILABLE COLOURS:

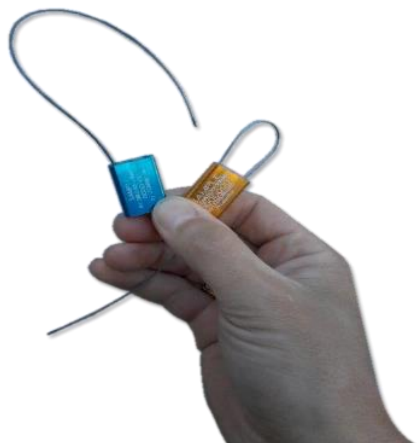
Red – Yellow – Green – White – Light blue

PACKING:

- Quantity per carton: 1000 pieces
- Carton size: 34x30x13 cm
- Carton weight: 2 kg

CABLESEAL 1x180 mm SELF LOCKING SEAL WITHOUT WIRE

015



DESCRIPTION:

It is the most used security seal.
Thanks to its 1mm cable diameter, it can be used in any locking situation. It is particularly suitable to control counter meters of electricity, water and gas.
The body is completely made of anodised aluminium (*) and a steel cable comes out of it.
Once the opposite end of the cable is inserted into the hole, by pulling it to the maximum possible extent, there will be no way to open the seal unless by breaking it with good shears.

(*) Anodizing is a non- spontaneous electrochemical process by which a protective oxide layer forms on the surface of the treated metal and protects it from corrosion.

DIMENSIONS:

Cable seal (diameter x length): 1x180 mm
Different cable lengths are available on demand.

NUMBERING AND PERSONALISATION:

- Laser etching marking
- 15 digits sequential numbering
- Bar-code possibility
- Up to 20 alphanumeric characters per line
- Customer's logo

MATERIAL:

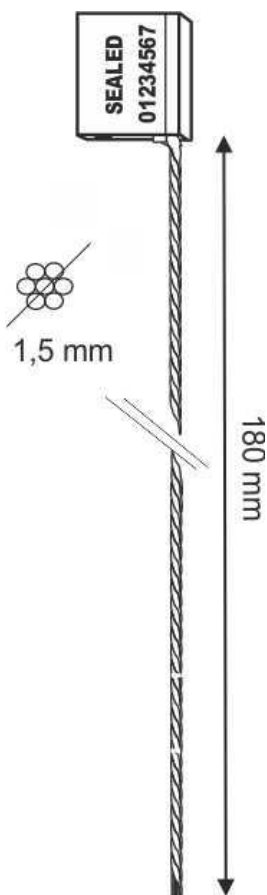
Body: Coloured aluminium (anodized)
Steel cable, diameter 1 mm
On demand: stainless steel cable

STANDARD COLOURS:

Red - Green - Light Blue - Gold

PACKAGE:

- Quantity per carton: 1000 pieces
- Carton size: 30x28x15 cm
- Carton weight: 8 kg



**DESCRIPTION:**

Connectionlock is a protection system for fittings of water and gas supply, simple to apply, which operates as a seal; it is composed of two semi-circular parts which fit together in a permanent way – one inside the other – and that cannot be separated without prior split them. The transparent plastic material with which the seal is realized allows to check the correct closure of the valve. There is no way to remove Connectionlock without breaking it.

Once positioned on the pipe-fitting, it is possible to ensure it with a consequentially numbered wire seal. (TWISTSEAL)

By this way maximum security is achieved.

SIZES:

ART 311 : L:26mm R1: 16mm R2: 22mm

Fit to DN20 (3/4") meters

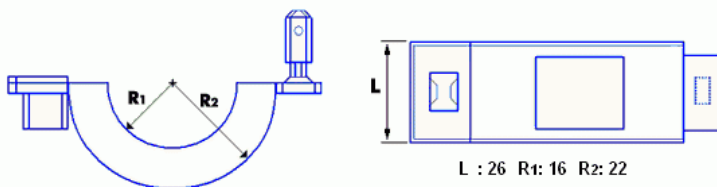
ART 312 : L:30mm R1: 16mm R2: 24,5mm

Fit to DN20 (3/4") bold fittings

ART 313 : L:28mm R1: 19mm R2: 27mm

Fit to DN25 (1") meters

ART 314 : L:38mm R1: 29mm R2: 39mm

**PACKING:****Art: 311**

- Carton with 500 seals
- Carton size: 40x60x35 cm
- Carton weight: 13 kgs

Art: 312

- Carton with 500 seals
- Carton size: 40x60x38 cm
- Carton weight: 13 kgs

Art: 313

- Carton with 500 seals
- Carton size: 40x60x35 cm
- Carton weight: 14 kgs

Art: 314

- Carton with 250 seals
- Carton size: 40x60x35 cm
- Carton weight: 9 kgs

MATERIAL:

Polycarbonate (PC)

SEQUENTIAL NUMBERING AND CUSTOMISATION:

- Laser print
- Sequenced numbering up to 6 digits.(Not necessary)
- Customized up to 20 characters on one line
- Logos available upon request.
- For special orders, logo printing in relief

TRANSPARENT COLOURS:

RED – GREEN – LIGHT BLUE - YELLOW

RFID CONNECTIONLOCK: PROTECTION SYSTEM FOR PIPES



DESCRIPTION:

RFID CONNECTION LOCK is an identification and protection system for fittings of water and gas supply.

RFID CONNECTION LOCK mounts an RFID tag whose electronic chip has its own unique coding system and cannot be cloned. This feature enables a safe and reliable automatic identification of the seal, or meter / user associated with it.



MATERIAL:

The outer casing of the seal, made of high-impact resistant polycarbonate can be customized with marking and numbering (alphanumeric code with inkjet printing technique, laser engraving, or in quantity also embossed lettering).

SIZES:

ART 311 : L:26mm R1: 16mm R2: 22mm
Fit to DN20 (3/4") meters

ART 312 : L:30mm R1: 16mm R2:
24,5mm

Fit to DN20 (3/4") bold fittings

ART 313 : L:28mm R1: 19mm R2: 27mm
Fit to DN25 (1") meters

ART 314 : L:38mm R1: 29mm R2: 39mm
Fit to DN40 (1½") meters

TRANSPARENT COLOURS:

RED – GREEN – LIGHT BLUE - YELLOW

PACKING:

Art: 311

- Carton with 500 seals
- Carton size: 40x60x35 cm
- Carton weight: 13 kgs

Art: 312

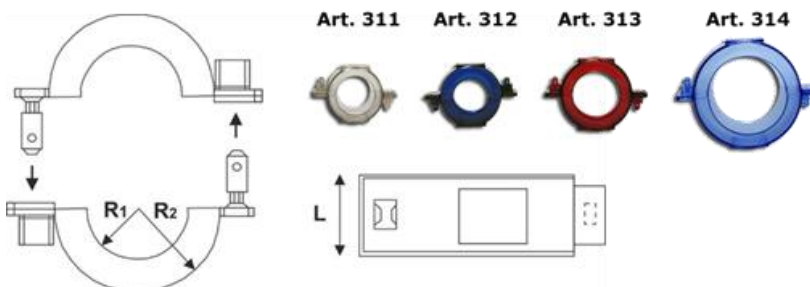
- Carton with 500 seals
- Carton size: 40x60x38 cm
- Carton weight: 13 kgs

Art: 313

- Carton with 500 seals
- Carton size: 40x60x35 cm
- Carton weight: 14 kgs

Art: 314

- Carton with 250 seals
- Carton size: 40x60x35 cm
- Carton weight: 9 kgs



Radiofrequency communication

- Frequency: HF/NFC 13.56 MHz; UHF 860 – 960 MHz – UHF EPC Global
- RF Standard: HF/NFC: ISO/IEC 15693; UHF: ISO/IEC 18000-6
- Technology: Passive
- Tag: NXP ICODE series/NTAG213; NXP, Alien, Impinj.
- Read/Write User memory: yes
- Password Protection: yes
- Read/Write cycles: 10000
- Data retention: 20 years

EPR AT880 Hand-Held RFID UHF Reader

EPR AT880 is a PDA WM 6.5 full option, provided with both UHF and HF RFID frequency, which allows to develop a solution based on personal application requirements.



Main technical specifications:

- Windows CE 5.0 / Windows Embedded handheld 6.5
- Processor Marvell PXA 320 806MHz
- Memory RAM: 256 MB (optional 512 MB)
 ROM: 512 MB (optional 1 GB)
- RFID UHF 900 MHz GEN2, ISO / IEC 18000-6C / 18000-6B (optional)
- RFID HF 13.56 MHz ISO15693, MIFARE, ISO14443 A / B (optional)
- Barcode Engine 1D Laser o 2D Imager Scanner (2D long-range barcode reading)
- WLAN IEEE802.11 b / g / a (a / b / g / n, optional)
- Bluetooth Class II, v2.1 + EDR
- Camera with Flash
- GPS

EPR AT880 Hand-Held RFID UHF Reader



SPECIFICATIONS

- Physical Characteristics (LxWxH): 159 x 79 x 27,7 (35,2) mm
- Weight: 280 g (PDA only, without battery)
- Reading range: 0M ~ 5M (according to Tag & Environment)
- Protocol: GEN2, ISO / IEC 18000 - 6C / 6B (optional)
- Frequency range: CE ETSI 865 MHz ~ 868 MHz, FCC 902 MHz ~ 928 MHz
- Operating temperature: -20 ° C ~ 60 ° C;
- Storage temperature: -30 ° C ~ 70 ° C
- Humidity: 95% non-condensing
- Power:
 - Main Battery lithium-Ion Polymer 3,7 V 2,970 mAh (rechargeable).
 - Backup Battery lithium-Ion Polymer 3.7 V 80 mAh (rechargeable).
 - Power adapter input AC100V ~ 240 V / output DC 5V 3A

ACCESSORIES

Adapter
AC CableProtection
Film

USB Cable



Handstrap



Stylus Pen

OPTION



Cradle



GUN Handle

PROCESSOR AND MEMORY

- Processor: Marvell PXA 320 806MHz
- Memory: 256 MB (512 MB optional) RAM / 512 MB (1 GB optional) ROM

Applications:

Distribution:	Provisions general monitoring
Healthcare:	Monitoring and healthcare inventory
Warehouse:	Provisions monitoring and inventory
Logistics:	Shipping and receiving
Transport:	Transport routes accounting
Production:	Production progress control

EPR CM398 Hand-Held RFID NFC Reader



EPR-CM398 is a high speed Quad-core industrial Android smart phone. It integrated UHF RFID reader and NFC for easy data capture. It supports Wi-Fi, Bluetooth, GPS, GSM / 3G, which make communication conveniently. With protection rate of IP65, it can withstand use in all kinds of rough environment.

Main technical specifications:

O / S: Android v4.1.2 operative system

Processor Qualcomm MSM8625Q, Quad-Core 1.2GHZ

Memory : Flash ROM 1G RAM + 4G; Expansion (microSD) 32G (maximum)

Display: 3,8 " capacitive multi-touch screen; Resolution: 800 * 480 dpi

Data entry method: handwriting, keypad; 12 alpha/numeric keys; 2 telephone keys

Port: USB 2.0, support OTG

Power: 3,7 V Li-Polymer battery 1900 mAh, 4000 mAh (optional); Standby time: 72 ore; Charging time: 5-6 hours

Communication: WLAN: Wi-Fi IEEE802.11b / g - GSM / GPRS / EDGE 850/900/1800 / 1900MHz - WCDMA 2100MHz, CDMA2000 - Bluetooth 4.0

NFC, HF: 13,56 M (ISO14443A / B, Protocol 15693), reading distance 4 cm.

RFID UHF, UHF: 920-925 MHz (EPC C1 / G2, 18000-6C Protocol), reading distance up to 40-50 cm according to different tags.

Camera: 5.0 Mega Pixel, auto focus, with LED light

Barcode: 1D barcode that can be decoded via camera

Scanner: 2D image : readable QR code via camera

GPS: built-in GPS SIRF, support A-GPS

Size (L x L x A): 135 x 69 x 16 mm; Weight: 150g (battery included)

Colour: black

3301 a

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LeghornGroup – Italy
www.leghorngroup.it

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www.leghorngroup.com

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www.leghorngroup.be
www.leghorngroup.nl

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www.leghorngroup.sa

LeghornGroup – Czech Republic
www.leghorngroup.cz
www.leghorngroup.pl

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