

italmatic®

ACCESSORIES TPMS & EQUIPMENT



***ital*sensor®**
TPMS

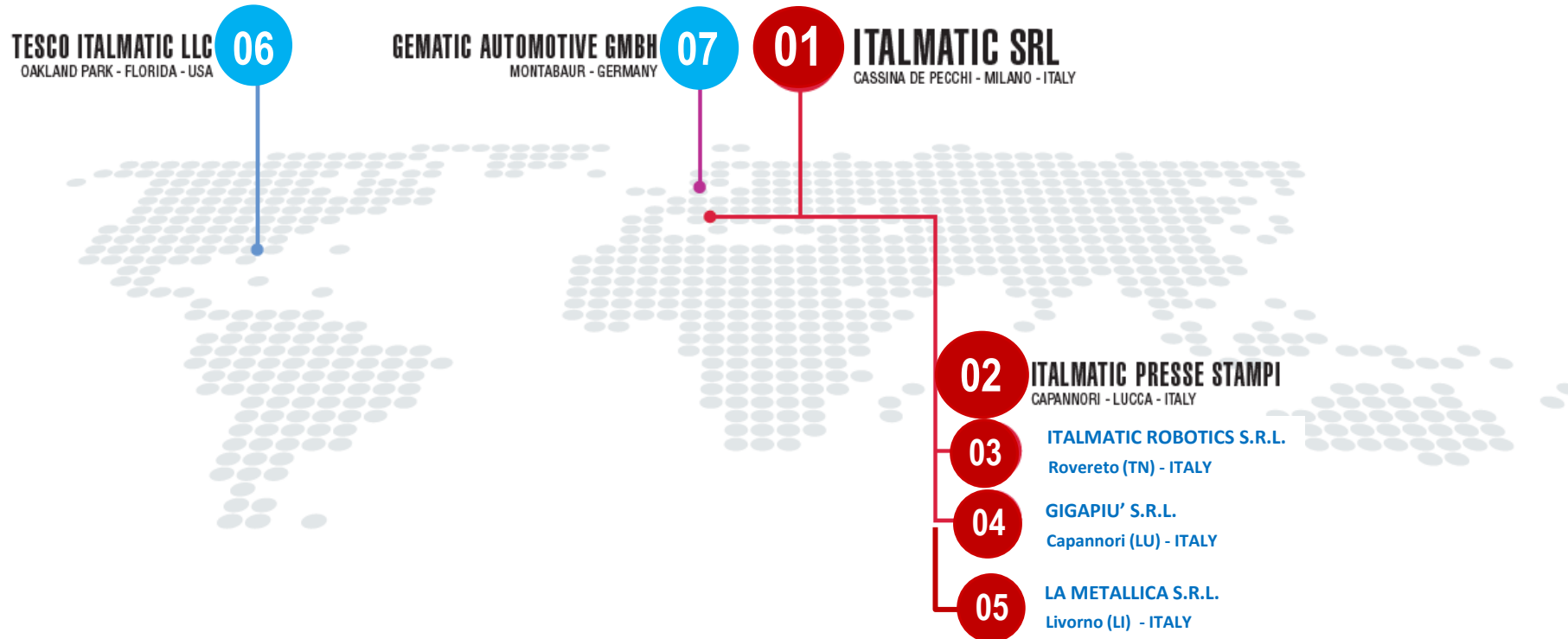
ITALSENSOR TPMS PRODUCT SUITE

APRIL 2023





- **Italian Private Group**, established in 1966, headquartered in Milano
- **Diversified**: historically, established in the tyre business, today Italmatic group is leading player in several other industries (glass, composites, robotics, ..)
- **DNA of Manufacturer**: Italmatic is above all manufacturer for high tech equipments and accessories, with own skills from Engineering to Order
- **In-house Verticalization**: to ensure control, quality, efficiency and competitiveness and to exceed quality standards in Design/Engineering, Software PLC, Production efficiency (mechanical, electrical, robotic)
- **International presence**: through local subsidiaries, and network of partners and distributors
- **Synergies among specialized production sites**: to maximise value to customer
- **Shared services across group companies** (accounting, payroll, procurement..)



● HEAD OFFICE & PRODUCTION PLANTS

● SALES SUBSIDIARIES

CONSUMABLES

TYRE SHOP ACCESSORIES

WHEEL
BALANCING
WEIGHTS

TYRE SHOP
CONSUMABLES

TYRE REPAIR
MATERIAL

RETREADERS ACCESSORIES

BUFFING BLADES,
CARBIDE WHEELS

MINIGUN
PORTABLE
EXTRUDERS

ENVELOPES AND
OTHER ACCESS.

TPMS

ITALSENSOR[®]

TPMS TOOLS

TRAINING AND
SERVICES

ROLLER COVER SERVICES

ROLLERS RUBBER
& POLYURETHANE
COVER SERVICE

TYRES

SUPERELASTIC
TYRES

INDUSTRIAL

RETREADED & NEW TYRES EQUIPMENT

TYRE RETREADING
EQUIPMENT

PRESSES & TYRE
MOULDS

INDUSTRIAL SOLID
TIRES EQUIPMENT

INTACT[®]
SHEOGRAPHY
TIRE INSPECTION

AUTOCLAVES, PRESSES & OVENS

RUBBER INDUSTRY

GLASS INDUSTRY

AEROSPACE AND
COMPOSITE
INDUSTRY

OTHER
INDUSTRIES

ROLLERS EQUIPMENT

EQUIPMENT FOR
ROLLERS COATING

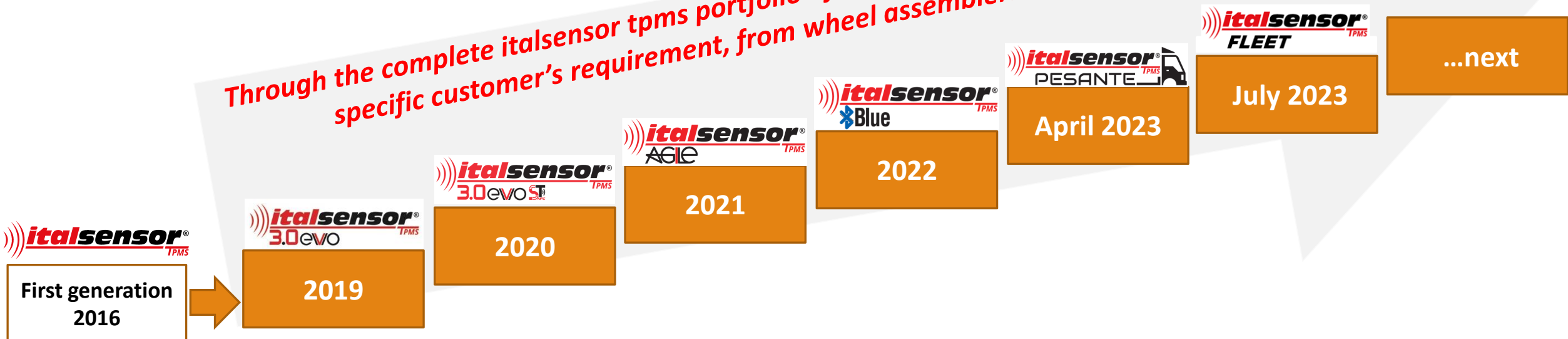
RUBBER
COMPOUNDS

ROBOTICS AND AUTOMATION SYSTEMS
FOR TYRE INDUSTRY LOGISTIC AND OTHERS

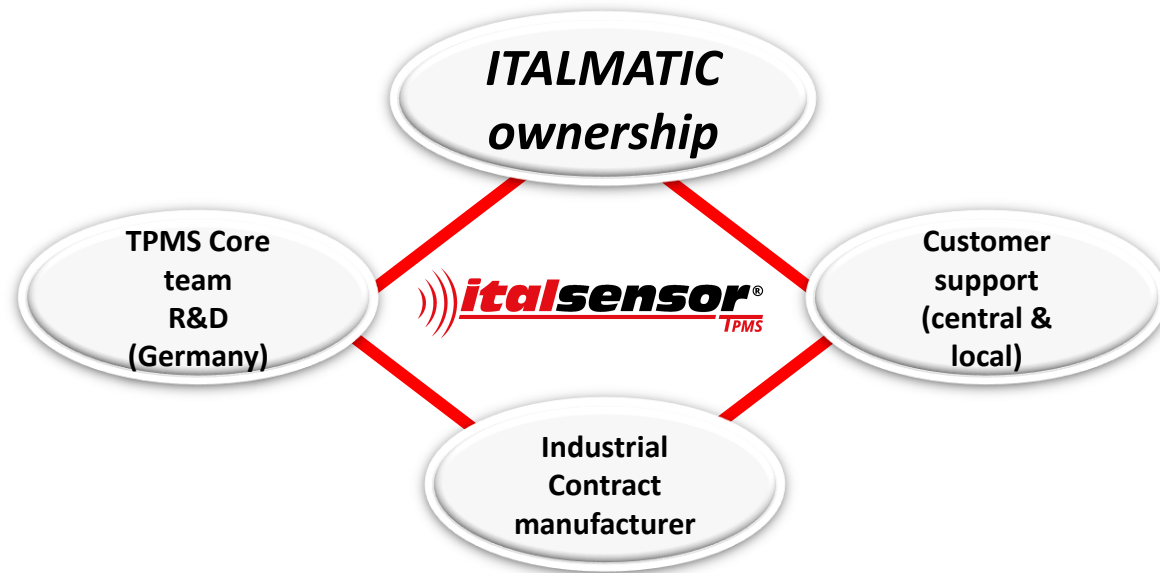
SOFTWARE DEVELOPMENT, ELECTRIC
CABINETS, ELECTRIC BOARDS, DOMOTIC,
PHOTOVOLTAIC

- Italmatic launched the Italsensor program and brand in Jan 2016 with first generation of programmable sensor
- During the last years the italsensor evolved in products and technologies, and the brand is widely recognized in the European tpms aftermarket as synonymous of quality, performance and reliability.
- Currently the Italsensor product portfolio includes 5 variants of products which have the purpose to satisfy in the best and most flexible way the needs from different market segments and customers, and 1 solution for fleets management

Through the complete italsensor tpms portfolio of solutions, italmatic is able to meet any specific customer's requirement, from wheel assemblers to small shops.



Italsensor is our own product, engineered by our own team and assembled through industrial partner network under our specs and control.



Key Success Factors

- *Italmatic experience in TPMS after market as reference partner for wholesalers, wheel assemblers, car importers, tyre shop chains.*
- *Our core TPMS team (located in Germany) is composed of highly trained engineering professional with specific experience in OE TPMS industry, sensing and wireless communications.*
- *Rapid connection to industry leaders and decision makers*
- *Access to independent best in class technologies*
- *Reliable and cost effective industrial partners selection*
- *Application list at the highest levels in market (>99,8%)*
- *Customer support (central and local) to provide best service to customers*



| 3 Sec Configurable Configurable 2-3 seconds | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> |
|--|--|-------------------------------------|-------------------------------------|--|---------------------------------------|
| Programmable Programmable approx 10 sec | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> |
| NFC NFC enabled /smarphone free App (Android & iOS) | <input checked="" type="checkbox"/> | | | | |
| Bluetooth enabled | | | | <input checked="" type="checkbox"/> | |
| READY 4 Pre-programmed for 200+ vheicles | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> Tesla | |
| PC App for NFC massive programming (for wheel assemblers) | <input checked="" type="checkbox"/> | | | | |
| 1 to 16 sensors programming | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | |
| Application list | Common vehicles application list (top coverage 99,8%+) | | | Tesla vehicles With BLE OE tpms | Truck application list (top coverage) |



P
R
E
M
I
U
M

- High Tech innovation
- NFC enabled
- No interferences
- Top speed (< 1 sec)
- Free APP Android /iOS
- Industrial PC solution

➔ **Engineered for industrial wheel assemblers**



E
N
H
A
N
C
E
D

- Configurable and programmable at same time
- Configurable in 2-3 seconds
- Ready4 enabled (200+vehicles ready)

➔ **Good for professional players demanding strong performances**



S
T
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D
A
R
D

- Traditional standard technology
- Programmable in 15-20 seconds
- Great quality/price mix

➔ **Designed for after-market normal replacement to meet standard needs**

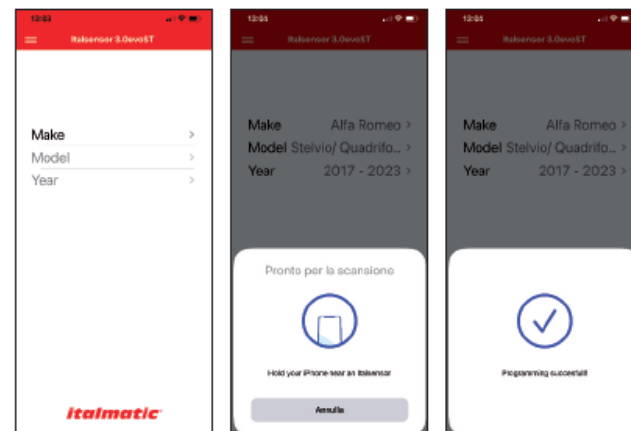


Part numbers:

- ST-130 (rubber valve),
- ST-230 (silver valve),
- ST-230B (black valve)
- ST-230T (titanium grey valve)



- Configurable and programmable and **by NFC** (near field communication) technology in milliseconds **and by traditional radio frequency** (LF/RF) in 2 seconds
- Free App available for download in Android and iOS environment, to program sensor through smartphone
- Possibility to program through italmatic special PC application /PAD NFC
- Ready4 multi-protocol (ready to fit on 200+ vehicles auto-relearning without need of configuration at all.
- Supported by Ateq, Tecnomotor, Texa, Snap-on
- Coverage 99.8%



Free app



<https://play.google.com/store/apps/details?id=nfc.italmatic.app&hl=en&gl=US&pli=1>



<https://apps.apple.com/it/app/italmatic-nfc-tpms/id1617999508>



- Tyre shop professionals and TPMS re-sellers can take advantages because of the new and Smart ways to program the sensor:
 1. **In traditional way**, using a tpms tool RF/LF
 2. Using NFC, simply installing the **free of charge Italsensor3.0evoST App** on NFC enabled Android or iOS devices
 3. Using NFC, for wheel assemblers having the need to program many sensors during peak season, **by using a dedicated PC software connected to NFC PAD reader/writer**:
- **With NFC methods usage programming is simple and add a lot of benefits: just tap the sensor! NO interferences, TOP Speed (<1sec)!**
- **Watch the video** to compare of the 3 programming methods:
<https://youtu.be/4ol68KqZH2w>

3.0evo

Part numbers:

- IT-130 (rubber valve),
 - IT-230 (silver valve),
 - IT-230B (black valve)
 - IT-230T (titanium grey valve)
- Same features of 3.0evoST but without NFC
 - Configurable and programmable in 2/3 seconds by traditional radio frequency (LF/RF)
 - Supported by Ateq, Tecnomotor, Texa, Snap-on
 - Ready4 multi-app
 - Just approx 3 seconds needed to configure the sensor
 - Coverage 99.8%



AGILE



Part numbers:

- AG-101 (rubber valve),
- AG-201 (silver valve),
- AG-201B (black valve)

- Programmable by traditional radio frequency (LF/RF) using tool Ateq
- Approx 10 seconds necessary to program the sensor
- Coverage 99.8%
- Part numbers: AG-101 (rubber valve), AG-201 (metal valve), AG-201B (black metal valve)

The extremely rich and enhanced features incorporated into 3.0EVO and 3.0EVO SMART TOUCH might be «oversized» for a basic usage in the normal replacement daily activities from standard tyre shop.

As implied by the name, Agile variant of the product has been **designed keeping the focus on what is essentially needed to carry out the replacement activity in a professional way: resulting in an “agile” solution with an extremely interesting price-quality ratio.**



Part numbers:

- BT-4150-C (Silver valve),
- BT-4150-B (Black valve),
- BT-4150-T (Titanium valve)

- Pre-programmed for direct replacement 1:1 of Tesla Bluetooth OE sensor
- Bluetooth technology inside
- Possibility to update firmware by app (over the air) in case of Tesla changes in system
- Larger battery, same as OE, to ensure long last of sensor despite Tesla requirement to ask sensor to transmit 10 times/sec)

| | | | | | |
|-------|---------|--|---------|---------|------------|
| Tesla | Model 3 | | 2020-10 | 2027-12 | 149070101B |
| Tesla | Model S | | 2021-6 | 2031-3 | 149070101B |
| Tesla | Model X | | 2021-10 | 2029-9 | 149070101B |
| Tesla | Model Y | | 2020-10 | 2031-3 | 149070101B |

- «private label» can be used to personalize the product for customer and to allow customer to give value to its own brand
- Different levels of personalization are possible which affect lead time for first order delivery and complexity of implementation
- The new sensor brand need to be added into tools database (open database , e.g. VT57)
- Personalized tools can also be developed and delivered based on MOQ

Example: NFC branded sensor



| # | LEVEL OF PERSONALIZATION | COMPLEXITY | REMARKS |
|---|--|------------|---|
| 1 | laser marking on sensor enclosure | EASY | una-tantum set-up requiring approx 1 week from when layout of the texts have been agreed |
| 2 | white neutral packaging with just labels applied | EASY | una-tantum set-up requiring approx 1 week for labels |
| 3 | colourful personalized packaging | EASY | una-tantum set-up requiring approx 3 weeks from when art works have been agreed |
| 4 | sensor enclosure plastic colour | MEDIUM | same enclosure is adopted but different material colour (e.g. blue instead of black) |
| 5 | sensor enclosure shape | HIGH | requires shape engineering and might have impacts on the internal electronic components layout as well as valve |



(p/n IT-130-V1)



(p/n IT-230-V1)



(p/n IT-230-V1B)



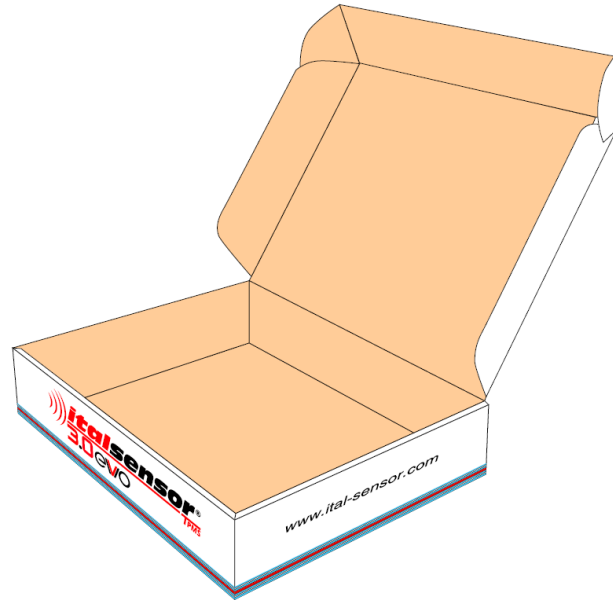
(p/n IT-230-V1T)

- All supplied in boxes containing 10 single pieces
- Interchangeable between italsensor product variants

Individual boxes containing 1 sensor



30 x

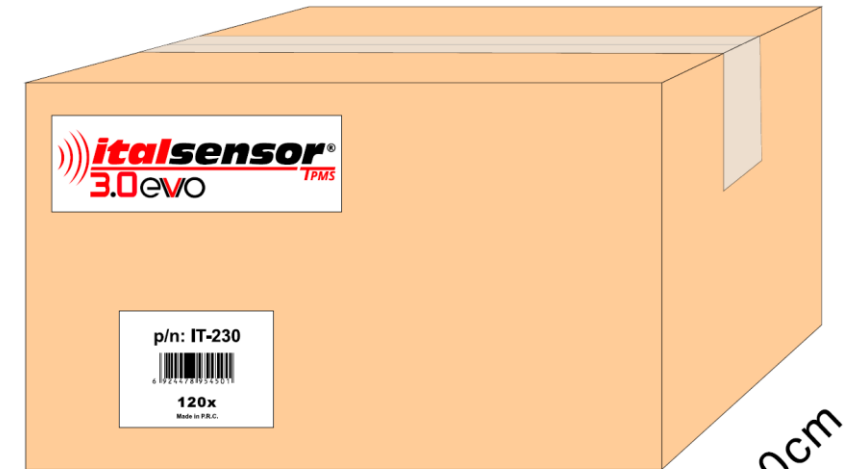


Master box containing 30 individual boxes

4 x



Brown outer carton containing 4 master boxes x 30 = total 120 sensors



33cm

30cm

Italsensor: 7 years of successful history

The complete italsensor tpms portfolio of solutions, matches any specific customer's requirement, from wheel assemblers to small shops.

italsensor[®]
TPMS
First generation
2016

italsensor[®]
3.0evo
TPMS
2019

italsensor[®]
3.0evo ST
TPMS
2020

italsensor[®]
AGILE
TPMS
2021

italsensor[®]
Blue
TPMS
2022

italsensor[®]
PESANTE
TPMS
April 2023

EU R141 regulation made TPMS legally mandatory for commercial vehicles, buses, trailers and semi-trailers, with a 2-years phase-in period:

- **since July 2022** TPMS for all new M1 vehicles & all new type approvals for M2, M3, N1, N2, N3, O3, O4 vehicle categories.
- **from July 2024** a working TPM system will be mandatory for all new registrations for the following vehicle categories: M1, M2, M3, N1, N2, N3, O3, O4.



The TPMS replacement **after-market demand** for truck, trailers, commercial vehicles **will grow up significantly and quickly** during the next few months because of the EU regulation.

Italsensor Pesante is the best solution for the replacement of tpms which will be easy and will fit seamlessly into truck tyre changing and maintenance processes through a very professional and robust solution, same as OE.

In combination with a bespoke receiver, Italsensor Pesante **can also be a valid solution for trailer and semi-trailer manufacturer to comply with the provisions of EU regulation**

PESANTE



- Programmable universal sensor 433Mhz for truck, trailers, buses
- Wide application list coverage; newly developed protocols automatically added to the sensor database as they become available, preventing any obsolescence issue)
- Easy and seamless fit into truck tyre changing and maintenance processes through a professional and robust solution, same as OE
- Engineered to be assembled with metal valve fitted into the rim valve hole, following the same standards adopted by OE makers
- The enclosure design makes the sensor compatible with both OE and aftermarket Truck TPMS valves.
- Availability of 6 different type of spare metal straight and bended valves, to offer best flexibility and match to existing rims

| make | model | year_from | year_from_ month | year_to | year_to_ month | oe_ref |
|---------------|--------|-----------|---------------------|---------|-------------------|--------------|
| DAF | CF | 2018 | | 2023 | | 2120641; |
| DAF | LF | 2018 | | 2023 | | 2120641; |
| DAF | XF | 2018 | | 2023 | | 2120641; |
| Mercedes-Benz | Actros | 2016 | October | 2021 | May | A0105429918; |
| Mercedes-Benz | Actros | 2021 | June | 2023 | | A0125425418; |
| Mercedes-Benz | Antos | 2016 | October | 2023 | | A0125429918; |
| Mercedes-Benz | Arocs | 2016 | October | 2021 | May | A0105429918; |
| Mercedes-Benz | Arocs | 2021 | June | 2023 | | A0125425418; |
| Mercedes-Benz | Atego | 2018 | | 2023 | | A0125429918; |

MECHANICAL

| | |
|------------------|--------------------------|
| Dimensions | 63mm L * 29mm W * 20mm H |
| Weight | 36 g |
| Housing material | PA66+GF30% |

ENVIRONMENTAL

| | |
|----------------------------------|----------------------|
| Operating temperature | -40~85°C |
| Storage temperature | -40~85°C |
| Temperature and Humidity Cycling | ISO16750 |
| Thermal Shock | ISO16750 |
| Water proof | IP67,IP69K |
| Vibration | ISO16750 |
| Mechanical Shock | ISO16750 |
| Salt Spray | ISO 14690 / ISO16750 |

COMMUNICATIONS

| | |
|-----------|---------|
| Radio | FSK |
| Bandwidth | ± 40KHz |
| Max Power | < 10dbm |

ENERGY STORAGE

| | |
|--------------|-------------------|
| Battery type | Lithium Coin Cell |
| Battery life | > 7years |

SENSING

| | |
|----------------------|--------------------------|
| Pressure range | 100~1400kpa / 1 ~ 14 Bar |
| Overpressure | 2000kpa / 20 Bar |
| Pressure accuracy | ± 20kpa / ± 0,2 Bar |
| Temperature range | -40~85°C |
| Temperature accuracy | ± 3°C |

CERTIFICATION

| | |
|-------------|-----------|
| RF approval | CE & UKCA |
|-------------|-----------|

Assortment Italsensor PESANTE

p/n: PE-001



p/n: PE-99Z



p/n: PE-93F



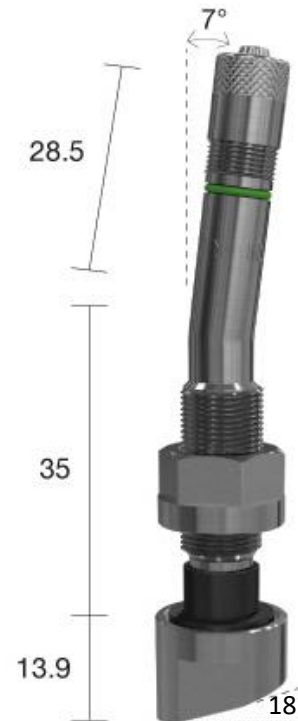
p/n: PE-93T



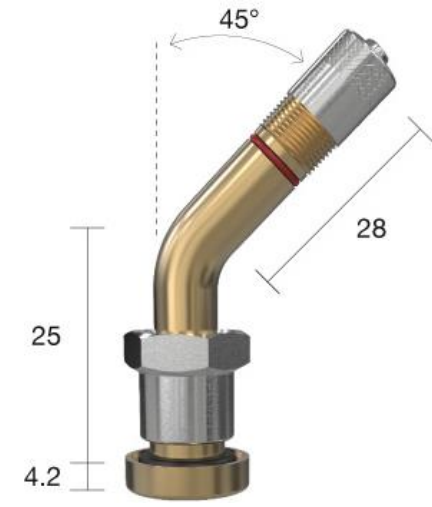
p/n: PE-93V



p/n: PE-93H



p/n: PE-93L



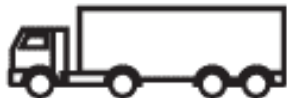
p/n: PE-93C



(p/n IT-7941-5Y)



- **IT 41/OBD tool (powered by Ateq VT41)**
- OBD module incorporated in the tool
- 3.5" LCD screen
- 5 years free updates included (only italsensor programming)
- Full instructions for re-learning sensors
- Information about OE sensors and service kit part numbers
- Possibility to manually enter sensor ID



- **VT TRUCK 2 /OBD tool** (*powered by Ateq*)
- OBD module incorporated in the tool 12v/24v
- 3.5" LCD screen
- 3 years free updates included (only italsensor programming)
- Full instructions for re-learning sensors
- Information about OE sensors and service kit part numbers
- Manage up to 26 wheels /tpms



- **VT 56/OBD tool** (*powered by Ateq*)
- OBD module incorporated in the tool
- 3.5" LCD screen
- Full passenger vehicles database
- Full sensors brand database
- **Possibility for UPGRADE TRUCK database + OBD 12v/24v adaptor kit (optional)**

IT-7927-UPG
UPGRADE TRUCK DATABASE





- **IT 57/OBD tool (powered by Ateq VT57)**
- Full sensors brand database
- OBD module included
- Wi-fi enabled
- 4.3" touch-sensitive display and improved graphics.
- 3 years free updates included (all sensor brands)
- Possibility to connect tool to TTD gauge
- Soft Touch key board
- VIN bar code reader
- SD card storage
- Program sensor from historical data
- Full instructions for re-learning sensors
- **Possibility for UPGRADE TRUCK database + OBD 12v/24v adaptor kit (optional)**



(p/n IT-7957-3Y)



IT-7927-UPG
UPGRADE TRUCK DATABASE





(p/n IT-7967)



VT 67/OBD tool *(powered by Ateq)*

- OBD module
- 8" LCD screen
- Car and Truck database
- Cloud services
- Advanced features and complete process flow
- **Possibility for UPGRADE TRUCK database + OBD 12v/24v adaptor kit (optional)**



AUTOMATIC
DOT CAMERA
RECOGNITION



FULL SENSOR & SERVICE
KIT IMAGE LIBRARY



INTERACTIVE
MANUAL &
OBDII RELEARN
PROCEDURES



LIVE WIFI UPDATING
& REGISTRATION



COMPLETE TPMS & TIRE
EMAIL REPORTING



(p/n IT-7931-5Y)



- **IT 31** (powered by Ateq VT31)
- Black text screen
- Compact design
- 5 years free updates included (only italsensor programming)
- Displays all sensor data in seconds: ID, tire pressure, tire temperature, battery status, etc.
- Selects vehicles via Make Model Year look-up
- User friendly navigation and command buttons

Coming soon

Italsensor: 7 years of successful history

The complete italsensor tpms portfolio of solutions, matches any specific customer's requirement, from wheel assemblers to small shops.

italsensor[®]
TPMS
First generation
2016

italsensor[®]
TPMS
3.0evo
2019

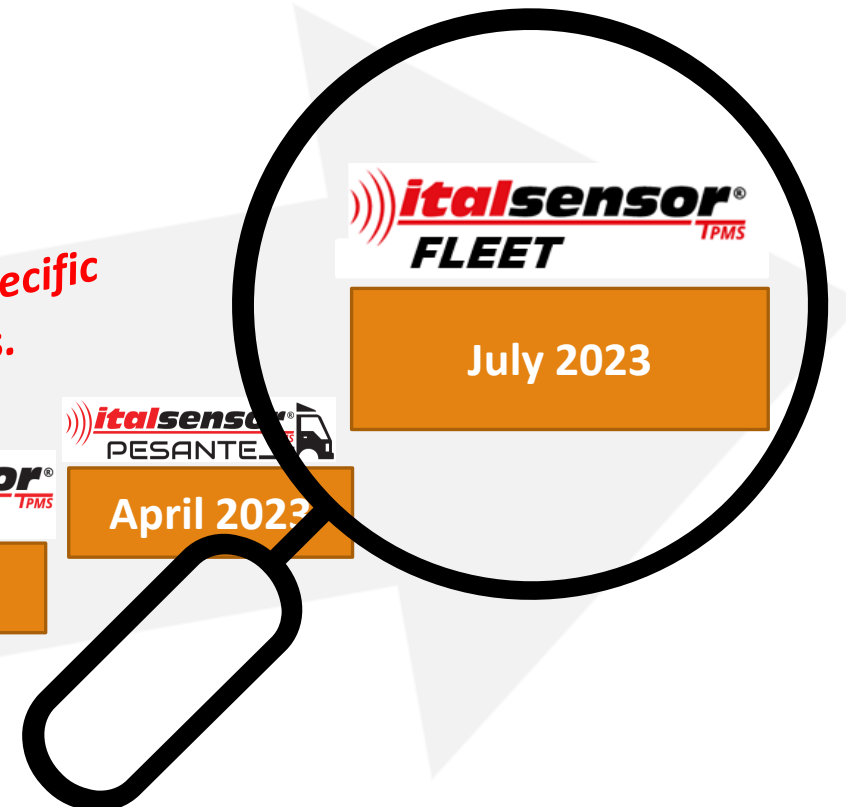
italsensor[®]
TPMS
3.0evoS
2020

italsensor[®]
TPMS
AGILE
2021

italsensor[®]
TPMS
Blue
2022

italsensor[®]
TPMS
PESANTE
April 2023

italsensor[®]
TPMS
FLEET
July 2023



Why tpms is important for fleets

- We know that finishing your trip safely and on time is of the utmost importance to you.
- TPMS for fleets enhance safety by preventing blow-outs, improving breaking distance and handling.
- Correct tire management reduces operating costs by avoiding downtime, using less fuel and extending tire lifetime.
- Last but not least, less fuel and fewer tires reduces the fleet's carbon footprint

- The EU has made TPMS mandatory for all new heavy-duty vehicles starting in 2024.
- Internal sensor installation is too costly to retrofit the rest of your fleet.
- By solving the installation problem we can enable you to extend the benefits of TPMS to your entire fleet.

**Quick fleet adoption is key
for the system success**

OEM designed external sensor allows for an installation time of one minute per wheel



- No need to remove wheels
- No need to dismount tires
- No special tools required

Now with NFC. Just tap on top of the sensor the read its unique ID.



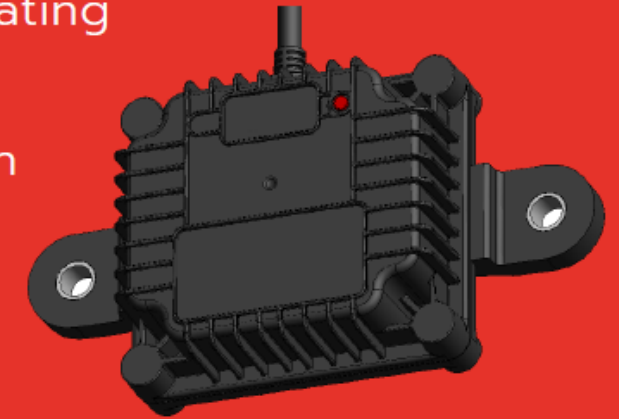
More about our sensor

- Flow through design allows for inflation without dismounting the sensor
- Transmits temperature and pressure up to 12 Bar
- Battery life of 5+ years (adjustable to customer needs)
- Alert mode detecting leakages
- Automotive qualified with robust brass body and stem

- Our intelligent receiver can be integrated with any existing Telematics and can transmit the data directly to any smartphone or tablet.
- Provides transparent Drop & Hook functionality for Trailers, to cover all your assets.

More about our receiver

- CAN, RS232, RS485 and 2.4GHz comms
- Automotive qualified with IP69 rating
- Temperature range -40C to 85C
- Configuration and usage through smartphone or tablet
- TPMS intelligence and warning strategy included



- All solutions may include a **display**
- Real-time interaction with the driver
- Preemptive maintenance by checking all pressures before a trip



- Visual and audible warnings
- Backlight for night drives
- Rechargeable battery included

- A gateway will be installed on each vehicle (Truck or Trailer).
- This unit can integrate a Telematics Box or communicate with a third-party Telematics unit through CAN.



- Automotive-qualified device
 - To survive the harsh heavy-duty environment.
- Waterproof
 - Enables installation closer to the sensors.
- Integrated Antenna.
 - Avoids multiple antenna cables.

- For Fleet Management, there is only one solution you want:



Flow-through

- Transmitting at 433MHz
- Battery lifetime 5+ years

QUALITY

- Proved designed at several fleets in Australia and North America
 - Millions of sensors and miles driven
- Valve extension and 2nd Valve-core prevents leakages
 - The sensors provides an additional protection
- Automotive qualified and OE qualified
 - Bench and field testing by market leaders in the automotive industry

- For Fleet Management, there is only one solution you want:

ALTERNATIVE



Flexi

- Transmitting at 433MHz
- Battery lifetime 5+ years

- Same characteristics as the Flow-through Version
- Allow for an easier installation on internal wheels.
 - Provides also an easy access to inflate the tires
- Automotive proved installation
 - Clamps are well-known and well-used in the industry

- For Fleet Management, there is only one solution you want:



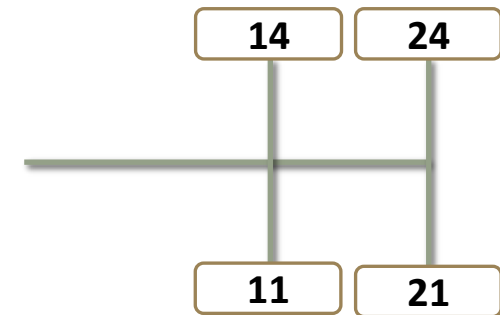
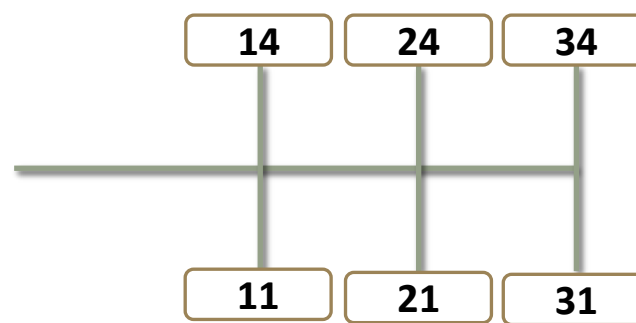
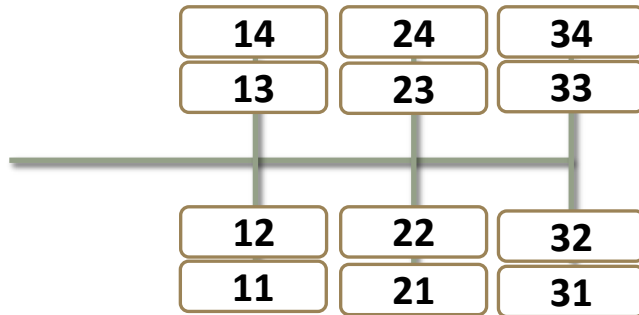
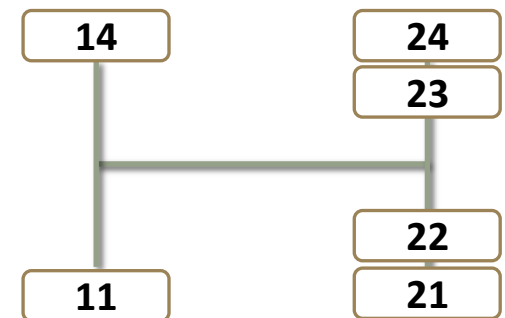
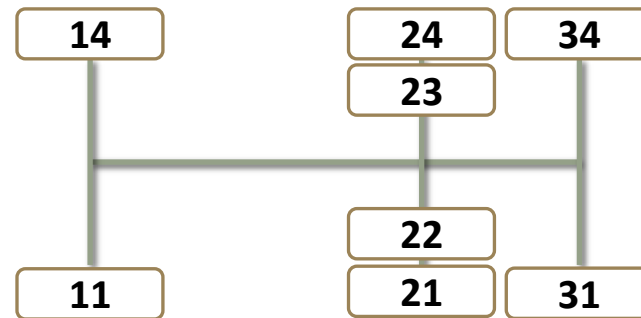
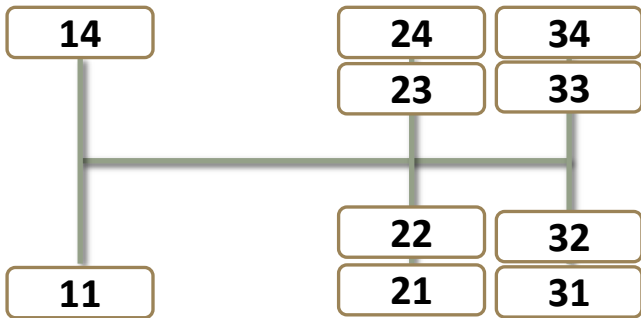
Screw-on

- Transmitting at 433MHz
- Battery lifetime 5+ years

ALTERNATIVE

- Solution for fleets used to sensor as the valve-cap
- Screw-on installation does not require special tools or training
- Easier fitment on a wider range of rims
- Sensor can be easily transferred between wheels or vehicles
- Automotive qualified

- Twelve (12) different Sensors will be provided to the fleet. Each sensor is pre-configured and numbered to a given position in the vehicle:



- NN – Indicates the Axle
 - First axle: 11, 12, 13, 14
 - Second axle: 21, 22, 23, 24
 - Third axle: 31, 32, 33, 34
- NN – Indicates the Position in the Axle
 - External Left: N1
 - Internal Left: N2
 - Internal Right: N3
 - External Right: N4

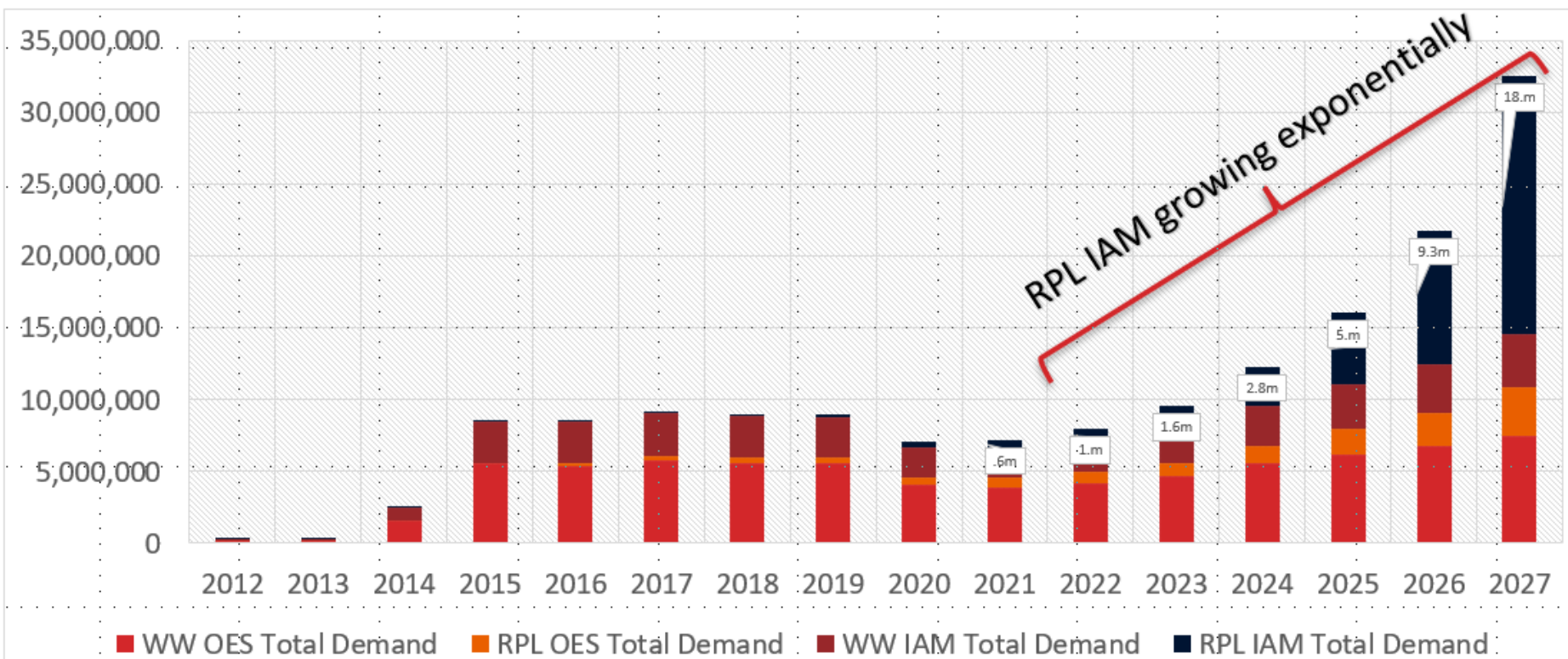
- The sensors will have a marking on the cap with the NUMBER assigned to that sensor.



- The sensors will transmit that information to the receiving unit.
- Upon having a warning, the driver will know the position with the issue.

Europe (Include UK):

- European Passenger Vehicles TPMS slowly transitioning from winter wheel market to exhausted sensor replacement which should see a step change increase due the Periodic Technical Inspection (PTI) demand boost effect.



- WW OES Total : Winter Wheel demand captured by official car dealers' network
- RPL OES : replacement demand captured by official car dealers' network
- WW IAM: Winter Week demand captured by independent after market tyre shops
- RPL IAM: Replacement demand captured by independent after market tyre shops.

Thank you

Choose Italmatic as your partner for TPMS to get best technical innovation, quality, service and the right product for your needs at the best price.

