BISON

WEIGHS FAST. BORN TO LAST.

BY iWiM

www.iwim.it

OIML R134 CERTIFIED

WEIGH IN MOTION SYSTEM
FOR VEHICLES IN MOVEMENT

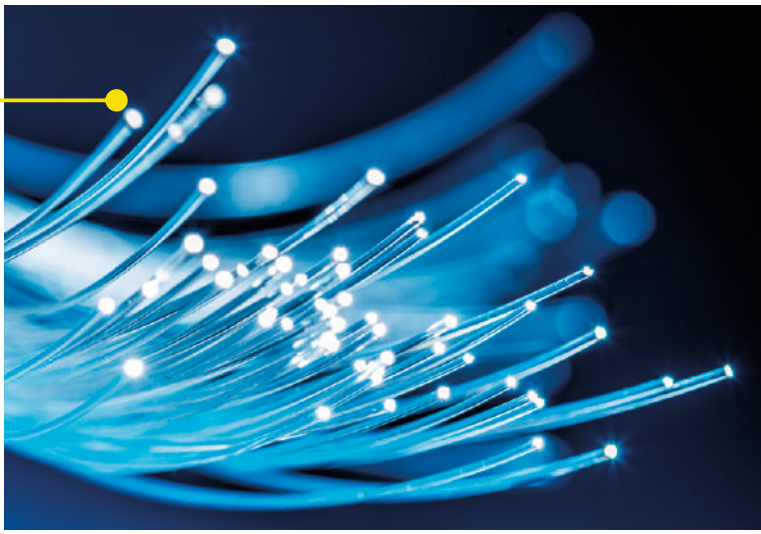
BISON

ABOUT BISON

The WIM system BISON is composed of 2 plates in stainless steel equipped with fiber optic sensors connected to a datalogger.

The bending plates are installed flush with the road surface and can be placed on urban and suburban roads, motorways / highways, bridge and toll booths.

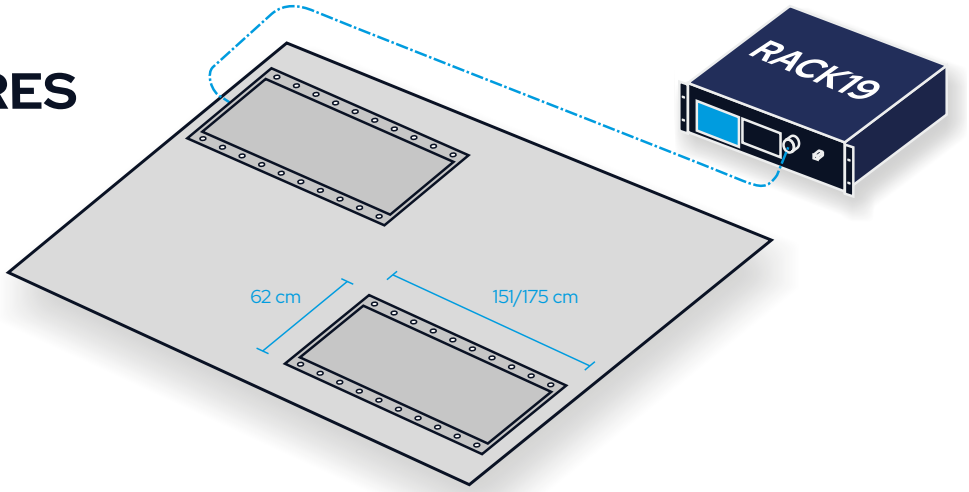
The data acquisition unit (data logger), processes, and stores all information collected in a database. All the transit information is made available to the user through a web interface easily accessible from every device.



THE SYSTEM

- High durability and reduced maintenance
- Easy movement of the system to a new installation site
- Re-use of bending plates in case of maintenance work on the road surface
- Insensible to temperature variations
- Datalogger can be installed even at long distances (up to 10 km) without the measurement being affected
- Immunity to electromagnetic fields
- Works even in extreme conditions (snow or mud)
- Approved by the Italian Ministry of Economic Development
- Calibration only every 2 years
- No electric cable or electronic device under the bending plates

TECHNICAL FEATURES



COST 323 B+(7)	
Accuracy class	**7%**
Maximum weight per axle	**20 t**
Speed range	**5-110 km/h**
Transit directions	**Both**

OIML R134 CERTIFICATE	
Accuracy class	**10%**
Maximum weight per axle	**20 t**
Speed range	**5-90 km/h**
Transit directions	**Both**

BENDING PLATE	
Technology	**Optical fibre sensor**
Dimensions WxHxD	**151/x175x62x5 cm**
Power supply	**Not required**
Digging	**From 7 up to 24 cm**
Material	**Stainless steel**

DATA LOGGER	
Connection to bending plate	**Fiber optic cable**
User interface (web)	**PC, tablet or smartphone**
Power supply	**110-230 VAC**
Optional	**Printer**

DATA COLLECTED

BISON, in addition to the weight, is able to supply the following data without additional devices:

- Gross vehicle weight (GVW)
- Transit speed
- Vehicle counting and classification
- Number of axles
- Single wheel weight
- Axle spacing
- Axle width
- Vehicle length
- Twinned wheels
- Alert transit out of one bending plate

LICENSE PLATE	ACCELERATION	AXLE NUM	DIRECTION	SPEED
AB837FW	-1.0 m/s²	5	EXIT	26 km/h

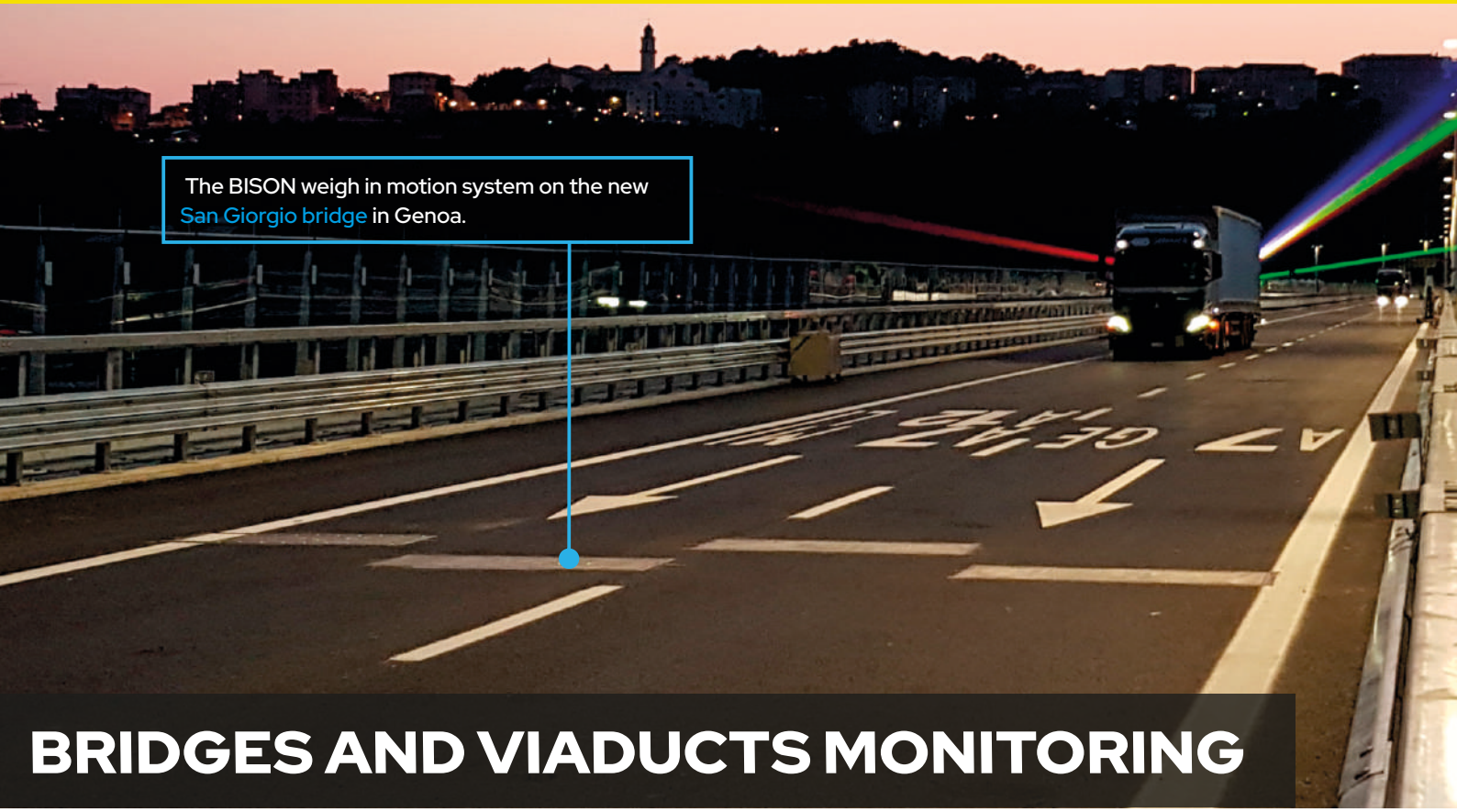
WIDTH (m)	LENGTH (m)	CLASS	WEIGHT	OVERLOAD
1.94	12.1	(5) trailer truck	52.400 kg	19.5%

SOFTWARE

The software is designed directly from iWIM, it has simple and intuitive interface and it is able to provide all information of interest to the user.

The system can be interfaced with other ITS systems such as ANPR cameras for license plate recognition.

BISON



The BISON weigh in motion system on the new San Giorgio bridge in Genoa.

BRIDGES AND VIADUCTS MONITORING

Protect and monitor our infrastructure, such as bridges or viaducts, requires a monitoring system state-of-the-art that ensures continuous control.

BISON is the modern and highly solution technology able to provide all the data on the load traffic induced, important information for preserve infrastructure investments and manage in safety even the oldest bridges.

Weigh in motion systems (WIM) are among the recommended sensors for a structural monitoring also from the Guidelines for safety assessment and monitoring of existing bridges, issued by the Superior Council of Public Works in Italy.

Identify and at the same time discourage transits in overload increases road safety, reduces accident and protects infrastructure from rapid wear.

ADVANTAGES

The system consists of plates in **highly resistant** stainless steel even to the most aggressive environments and from fiber optic sensors, insensitive to variations in temperature and fields electromagnetic.

BISON guarantees great performance even in extreme weather conditions!

The installation of the plates of the WIM system BISON can take place both on the concrete slab already present at the toll booths or areas equipped at the stop, or even on the lane where there is no foundation:

in this case a solution has been prepared with prefabricated reinforced concrete which reduces shutter speed.

ROAD OWNERS AND OPERATORS

The weight is only one of the data collected by BISON, in fact we have others available important information such as number of axles, weight of each individual axles, speed and more.

Detecting the type of vehicles and their weight allows you to know precisely the type of traffic in transit and its temporal distribution, useful data for an optimal management of traffic and road maintenance.

Furthermore, the BISON system can be integrated with ANPR cameras for license plate detection.

The BISON weigh in motion system represents a long-lasting investment thanks to the high quality of the materials used.

AISI 316L steel is in fact also suitable for extremely aggressive environments. The system also, in case of work on the road pavement is easily repositionable in a different site.

These peculiar characteristics combined with the reduced maintenance requirements, make the BISON system highly competitive!

LAW ENFORCEMENT

Police authorities can find in the weigh in motion system BISON a valid ally to identify in real-time overloaded vehicles to be intercepted and checked.*

* The system can be used for the purpose sanctions in the countries where the law allows it.

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ABOUT US

iWIM is a company with over 10 years of experience in the production of weigh in motion systems.

It has developed, certified and approved the first weigh in motion system in Italy, which is BISON: a system born to last, with the aim of guaranteeing the monitoring, the protection of our roads e infrastructures.

The product obtained the important certification international OIML R134 through the Dutch laboratory NMi and subsequently formal recognition as measuring instrument from the Ministry of Economy.

BISON among his important installations was also chosen for the new San Giorgio Bridge in Genoa.

ITALIAN TYPE APPROVAL

It certifies the legalization of Bison as an automatic weighing system for moving road vehicles in Italy.

OIML R134 CERTIFICATE

The OIML certificate certifies compliance with the requirements of the Recommendation of the International Organization of Legal Metrology.

LATVIAN TYPE APPROVAL

Ilt certifies the legalization of Bison as an automatic weighing system for moving road vehicles in Latvia.

ISO 9000 CERTIFICATION

Corporate Quality Management Systems Certificate.