

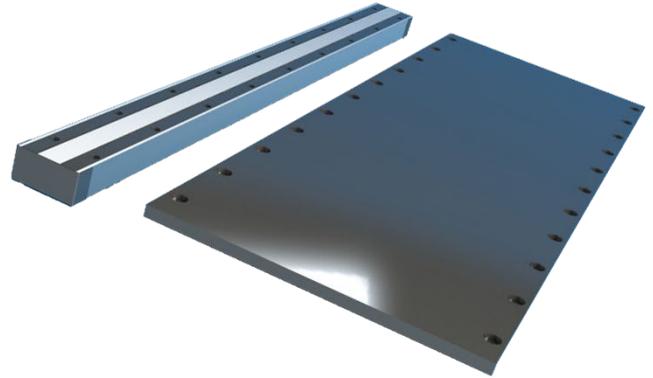
Model: BISON LS Control

The weigh-in-motion system (WIM) BISON model **LS CONTROL** is a solution developed for sites that require constant monitoring of heavy vehicles access end exit to optimize the logistic chains, supervise the data on the vehicles transporting goods and materials.

LS CONTROL is OIML R134 certified under 5 class of accuracy for speed up to 20 km/h and complies with COST 323 A(5) for weighing vehicles up to a speed of 25 km/h and permits high-accuracy data on the weight of transiting heavy vehicles in real-time.

Like all BISON products, the weighing technology uses fiber optic sensors, making it insensitive to temperature changes without the need for additional sensors.

The system configuration for one lane consists of two bending plates, two optical strips, and one data logger.



Technical data weighing system

THE WEIGH IN MOTION SYSTEM FOR VEHICLES IN MOVEMENT



Weighing technology	-	Optic fiber sensors
Material	-	Steel
Dimensions of plates	mm	1482/1732/1982 x 598 x 20/22/25
Dimension of strips	mm	1508/1758/2008 x 116 x 49
Axle weight range	kg	0 ... 25.000
Operating temperature range	°C	-30 ... +70
Accuracy class OIML	-	5
Detectable speed range according OIML	km/h	5 ... 20
Durability	years	> 10
Sensor number per lane	-	4
Compatible foundation	-	Asphalt or reinforced concrete slab
Influence from temperature conditions	-	Absent
Inductive loops necessity	-	Absent
Cables under road surface	-	Only optic fiber, no electricity
Installation	-	Reinforced concrete slim prefab or anchored on the floor

Datalogger technical data

Dimensions	mm	482 x 177 x 170
Weight	kg	6
Connectors on frontal panel	-	SC/APC (optic fiber), RJ45 (network), IEC (supply)
Mounting	-	Brackets standard rack 19" (EIA-310)
Supply voltage	VAC	110-230
Power consumption (average)	W	15
Operating temperature range	°C	-10 ... +70
Content	-	PC, fiber optic light source, spectrometer
Capacity HDD	GB	128 ... 1024
Local storage capacity	days	> 30 with context pictures, > 365 only text data
Network interface	-	Ethernet 1 Gbps (IEEE 803.3ab)
Distance from sensors	km	< 10



Software developed by iWiM

Data collected by the Software

Vehicle weight	Transit result
Transit speed	Traffic intensity
Vehicle counting and classification	Average vehicle flow/hour
Number of the axles	Daily, weekly, monthly and annual vehicle flow
Single axle load	Twin wheels
Distance between first/last axle	Average speed per hour
Axle lenght	Recurrent overloaded vehicles
Vehicle parametres (lenght, width)	Licence plate number
Alert of transit outside the plate	Load distribution on heavy vehicles
Alert overload	Direction
Monitoring 24/7	

The screenshot shows the BISON software interface. At the top, there's a navigation bar with 'Last Transit', 'Data', 'Settings', 'Systems', 'Info', and 'Log'. Below this, a summary card for vehicle ID 19912 shows a measured weight of 47200 kg, 5 axles, and a speed of 11 km/h. To the right, a diagram shows the vehicle's axle layout with weights: 3600, 5670, 5270, 5420, and 5623 kg, with distances of 3.87m, 5.63m, 1.3m, and 1.3m between axles. A table below lists recorded vehicles with columns for ID, Datetime, Measured Weight, Axle Num, Speed, Overload, Type, and Outcome.

ID	Datetime	Measured Weight	Axle Num	Speed	Overload	Type	Outcome
19912	2025-01-14 18:36:57	47200 kg	5	11 Km/h	7.3 %	(5) semi-truck (2+3)	OK
5470	2025-01-14 18:36:44	53800 kg	5	23 Km/h	22.3 %	(5) semi-truck (2+3)	OK
17216	2025-01-14 18:31:59	50800 kg	6	25 Km/h	15.5 %	(5) trailer truck (3+3)	OK
21058	2025-01-14 18:18:18	41000 kg	5	26 Km/h	0.9 %	(5) semi-truck (2+3)	OK

BISON LS Applications



The new BISON LS Control model has been specifically designed to **monitor 24/7 access to construction sites, logistics areas, ports, terminals** and for any case in which checking the weight of incoming/outgoing vehicles is essential. For further site security, for example, it is possible to use personalized statistics with a **daily traffic report**, including non-accredited license plate alerts. The installation of a **context camera** or a **LIDAR camera** guarantees **total entry/exit control of each vehicle**.

ANPR camera and LIDAR integration

