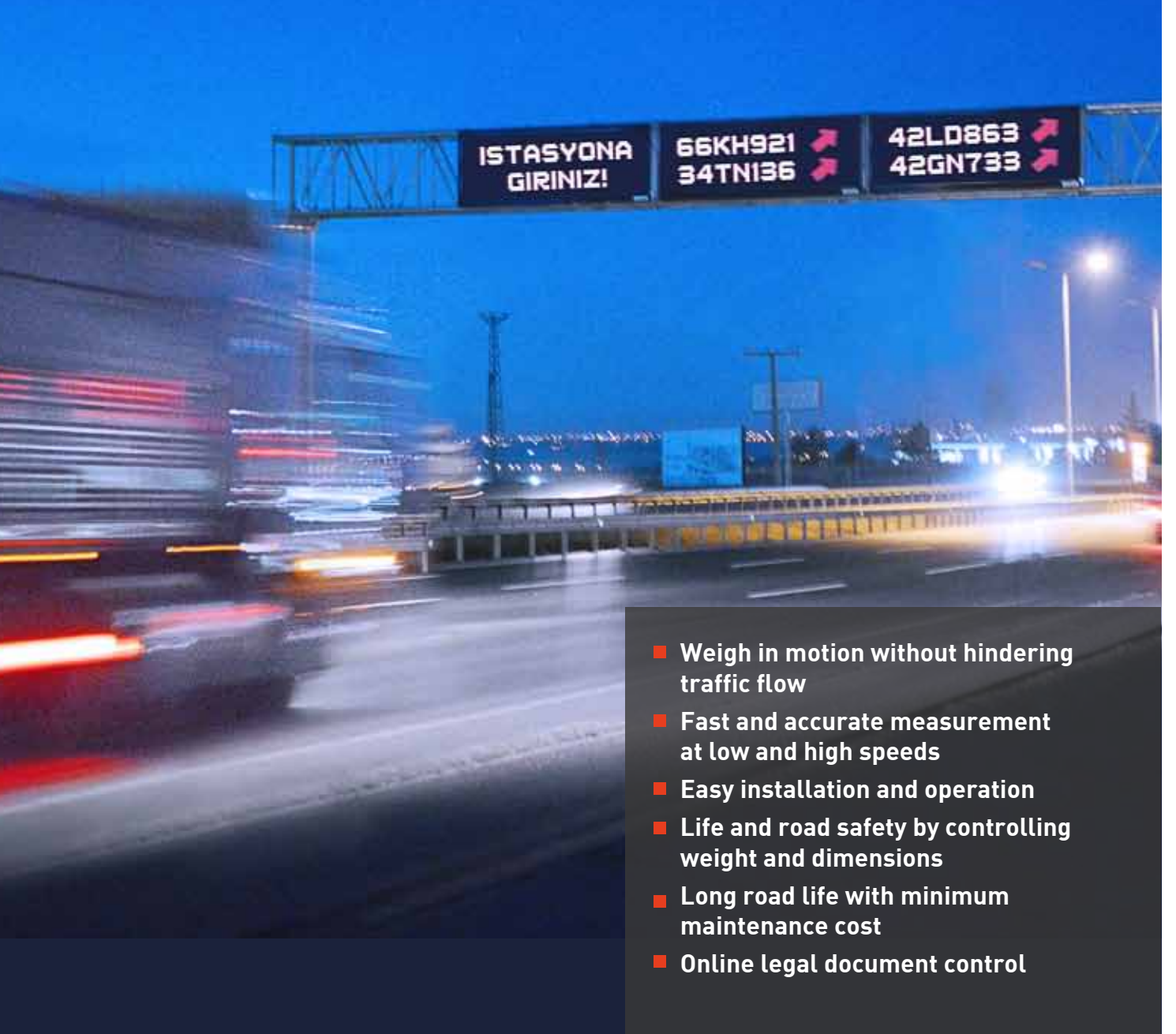




Management
System
ISO 9001:2008
www.tuv.com
ID 9105038809

WIM

WEIGH IN MOTION SYSTEM



- Weigh in motion without hindering traffic flow
- Fast and accurate measurement at low and high speeds
- Easy installation and operation
- Life and road safety by controlling weight and dimensions
- Long road life with minimum maintenance cost
- Online legal document control

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TUNAYLAR

WIM

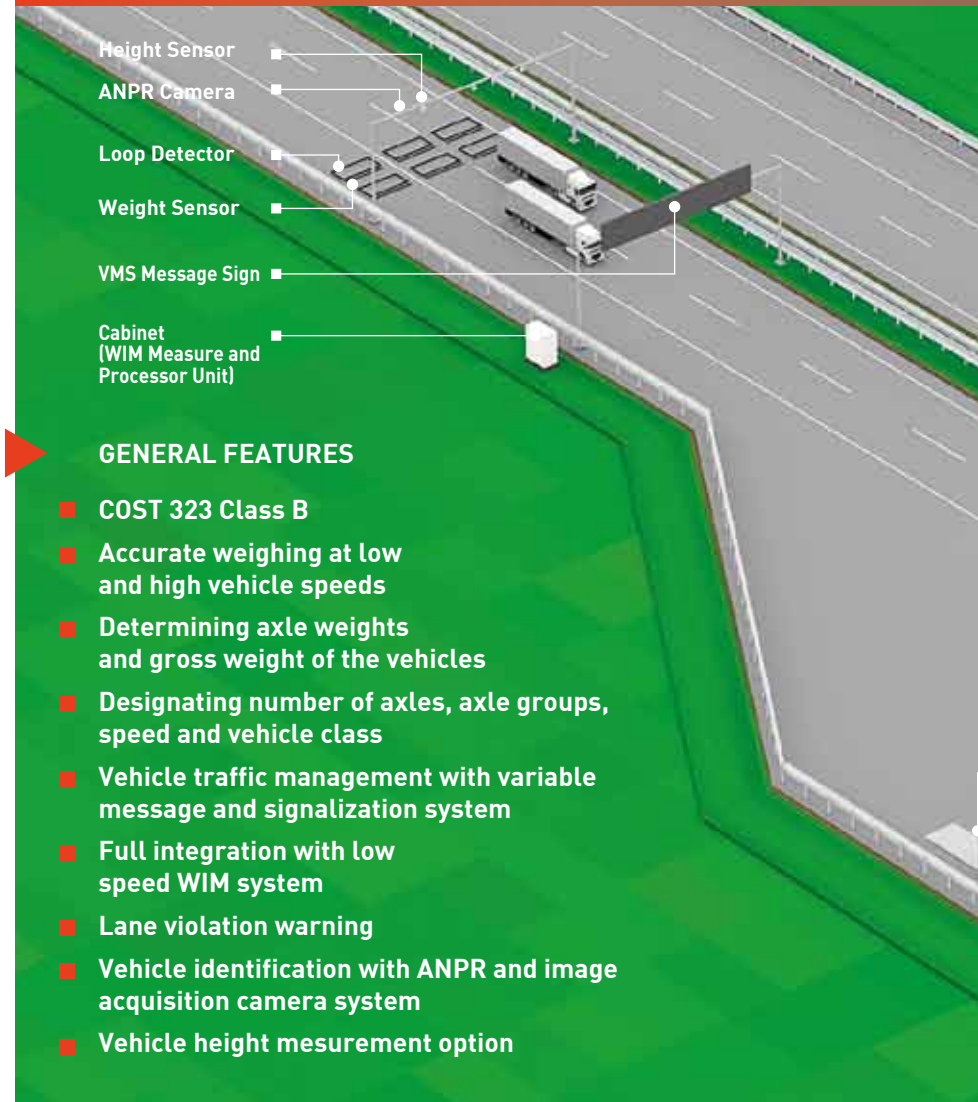
HIGH SPEED



High speed weigh in motion system (WIM) system is generally used as pre-selection system for low speed WIM stations. The system comprises the weight measurement sensors, loop detectors, VMS (variable message sign) and control unit located into a cabinet placed beside the road. It enables weighing of the vehicles while they are enroute without hindering traffic stream.

The system rapidly determines axle weights and gross weight of the vehicles as well as number of axles, axle groups and axle distances. Vehicle class is designated by using gathered information and compared with the legal limits. Potential overloaded vehicles are directed to low speed weigh in motion system through VMS message system while other vehicles continue their route. Accordingly vehicle density in low speed WIM stations are reduced. Numberplate recognition and image of acquisition camera system which enables recording overloaded vehicles, and dimension measurement system which enables measuring height of the vehicles can be integrated to the system.

High Speed Weigh in Motion



GENERAL FEATURES

- COST 323 Class B
- Accurate weighing at low and high vehicle speeds
- Determining axle weights and gross weight of the vehicles
- Designating number of axles, axle groups, speed and vehicle class
- Vehicle traffic management with variable message and signalization system
- Full integration with low speed WIM system
- Lane violation warning
- Vehicle identification with ANPR and image acquisition camera system
- Vehicle height measurement option

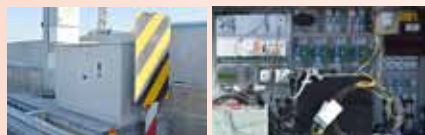
COMPONENTS OF HIGH SPEED WIM SYSTEM

Weight Sensors



They are piezoelectric type sensors used in high speed WIM systems. They have various length options for different lane widths. Sensors are easily installed and taken into operation in a short period of time.

High Speed WIM Measurement Unit



It indicates the unit for the vehicles which are passing through the system that calculated very accurate according to the information passing from piezoelectric and loop sensors. Electronic measurement equipment's of high speed WIM system to take part in this control cabinet. It can be mounted on a colon or can be located on an appropriate place beside the road.

HSWimScale Management and Reporting Software



All High Speed WIM processes are performed by HSWimScale management and reporting software. The measurement values of vehicles that pass through the system such as Number Plate, Class, Weight, Height, Certificate and Inspection status, Speed, Lane Violation etc. can be viewed instantly from weighing menu screen. Detailed reports can be monitored or printed. Reports can also be saved as Excel files.

VMS Variable Message Sign



It is a graphic and message panel manufactured based on LED technology. They are used to demonstrate weight and dimensions of the vehicles and to direct vehicles to low speed WIM system if required. Numberplate, vehicle class, vehicle dimensions and other information can be added to message system.

ANPR/LPR Camera System



ANPR/LPR camera system is used to recognize numberplates, to determine identification and to record general views of the vehicles. Camera system is managed by image processing unit, which includes ANPT/LPR software mounted into cabinet

Vehicle Dimension Measurement System



Heights of vehicles into the roadway can be measured with height measuring sensors, which is added into to the high-speed WIM system optionally. Vehicles exceeding the maximum height limit determined with those sensors and directed to low-speed WIM system.

Low Speed Weigh in Motion

GENERAL FEATURES

- OIML R134:2006 Class 1, 2 Certificate
- Dynamic weighing with high accuracy
- Determining of axle weights and gross weight
- Designating number of axles, axle groups and vehicle class
- Directing vehicles by message panel and traffic signalization system.
- Automatic vehicle identification by ANPR camera system
- Determining vehicle dimensions owing to optional automatic vehicle dimensioning system
- Easily managable weighing processes by WimScale software.
- Data communication with central information system

- Camera for escaped vehicles
- Rear ANPR camera
- Sensors for Height and Width measurement
- Automatic Vehicle Classification System
- AXLELINE WIM Dynamic Axle Scale
- Length measurement sensor
- Front ANPR and general view camera
- Message Panel

WIM

LOW SPEED



Low speed WIM system are widely used in applications in which vehicle weights must be determined accurately such as road side control stations provided by legal authorities, customs transition points, vehicle inspection stations operated by public or private establishments and logistics industry.

It can be integrated to high speed WIM system which is used as pre-selection system, or it can be used stand alone as well.

The system, which is mounted on a special concrete platform, comprises AXLELINE-WIM dynamic axle scale determining axle weights, gross weight, automatic vehicle classification system, Message panel used for informing the drivers and WimScale software managing all weighing and measurement processes.

ANPR, general view, escaped vehicle and security camera systems with automatic vehicle dimensioning system can be integrated to the system.

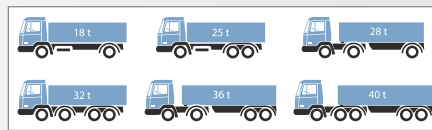
COMPONENTS OF LOW SPEED WIM SYSTEM

AXLELINE® WIM Dynamic Axle Scale



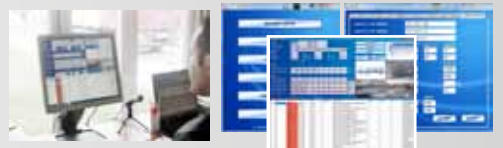
AXLELINE®-WIM series dynamic axle scale is the most important part of low speed WIM system in which the axle weights and gross weight of vehicles are determined. Weighing process is performed by passing the vehicle through axle scale with a constant speed. Weight values are accurately determined and can be monitored from Load Line - 2 digital weight display.

Vehicle Classification System



Maximum permissible weights and dimensions of the vehicles are specified by legal authorities with respect to vehicle class. CLASSAX vehicle classification system provides number of axles, axle distances and speeds. Vehicle class is automatically designated by using these data transferred to central computer.

WimScale Management and Reporting Software



Determination of weight values, vehicle classes, vehicle dimensions and all other high speed and low speed WIM processes are performed by WimScale management and reporting software loaded to central computer. Its user friendly interface provides fast and easy management of WIM processes. Detailed reports can be monitored or printed. Reports can also be saved as Excel files.

Vehicle Dimension Measurement System



Width, height and length of the vehicle are automatically determined and 3d profile is generated as the vehicle is passing through axle scale and AVC systems.

ANPR/LPR Camera System



Owing to ANPR camera system integrated to low speed WIM system, front and rear numberplates of the vehicles are automatically recognized and general view is designated. Thanks to escaped vehicle cameras photos of the vehicles which are not entered to the system can be taken and recorded into the database in central computer.

Message Panel



It is used to demonstrate weight and dimension values to drivers. It enables reading values from long distances because of its Anti-reflector LED display and ergonomic design. It is designed to run outside.

WIM

WEIGH IN MOTION SYSTEM



TECHNICAL FEATURES

High Speed WIM

Accuracy Class	: COST 323 Class B
Sensor System	: Piezoelectric
Operating Temperature	: -25°C ... +55°C
Measurement Accuracy	: Total Weight = ± %10 Axle Weight = ± %15 Speed = ± %4
Protection Class	: IP 68
Power Supply	: 110 - 220 V AC

Variable Message Sign (VMS)

Type	: Graphic LED
Communications	: RF / TCP-IP / Internet / RS-485
Dimensions (mm)	: 3440 x 1307 x 200 mm
Protection Class	: IP66

AXLELINE® WIM Dynamic Axle Scale

Accuracy Class	: OIML R134:2006 Class 1, 2
Maximum Capacity	: 30000 kg
Power Supply - Power	: 12 VDC / 5 W (Max)
Operating Temperature	: -10 ... 40°C - %85 RH
Protection Class	: IP 54 / IP 65

Vehicle Classification System

Type	: Fiber Optic
Operating Speed (km/h)	: 1 ... 250
Operating Temperature	: -30 ... 85°C
Power Supply	: 12...24 VDC
Communication	: RS-232

Message Panel

Type	: LED Display
Power Supply	: 220V AC
Operating Temperature	: -20°C...+ 55°C

Vehicle Dimension Measurement System

Measuring Technique	: Laser Sensor
Laser Class	: Class1 (IEC 60825 F1)
Power Supply	: 220 V DC / 24 V AC
Communication	: Ethernet, TCP-IP

ANPR/LPR Camera System

Type	: CCTV
Power Supply	: 220V AC - 2A
Operating Temperature	: -50°C...+ 55°C
Protection Class	: IP68



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