

# SAFER TRANSPORT VIA FAST AND RELIABLE WEIGHING INSTRUMENTS IN THE TRANSPORT SECTOR

Weighing instruments are used in various situations in the transport sector. They are important to identify the weight of the vehicle and, consequently, the weight of the goods transported. This can be needed to be in compliance with legislation, safety of the shipping, avoid damage to the road infrastructure or identify the weight of the goods transported and consequently the shipping costs. Dedicated instruments such as static and dynamic weighbridges, wheel or axle load scales and on-board weighing systems are developed to deal with each specific situation in the transport sector.



## EXAMPLES OF WEIGHING INSTRUMENTS IN THE TRANSPORT SECTOR

Overloaded vehicles can cause damage to the road infrastructure. Legislation is in place that limits the weight of a vehicle depending on its characteristics. To control compliance with the legislation static and dynamic weighbridges and wheel and axle load scales are used to accurately weigh the vehicles and give fines if needed. Modern weighing instruments make it possible to make this process faster and avoid as much as possible disruptions for drivers and still get accurate total weights and individual axle weights.

For the safety of a ship it is important that the weight of the containers is well spread of the ship. Standards from the International Convention for the Safety of Life at Sea (SOLAS) make the weighing of each packed container on a ship mandatory. Various weighing instruments make it possible to find out what the weight is in easy and reliable manner. This increases safety since transporting companies are aware of the weight of each container and can load the ship accordingly.

Verified weigh bridges are also used to measure the weight of goods transported by vehicle. Not all goods can easily be weighed the moment they are loaded on the truck. Weighbridges allow for the measurement of the truck before and after loading to guarantee the buyer knows the exact weight. More often, less accurate axle weighing system or wheel load scales are also used for internal overload control or fleet management purposes.

A specific case where on-board weighing systems are used is household garbage collection. On-board weighing systems are installed on vehicles and can measure the exact weight of the load of the vehicle. In towns where households pay a tax per kilo of waste it is necessary to weigh the garbage of each household in a reliable and fast manner. On-board weighing systems or dynamic catchweighers on garbage trucks allow for such tax collection as it can be measured exactly how much garbage each household produces.

## HOW WEIGHING INSTRUMENTS CAN BE USED IN THE TRANSPORT SECTOR IN THE FUTURE

Weighing vehicles on statics weighbridges takes time as each vehicle needs to stop and does not offer axle weights. Modern systems such as dynamic weighbridges and axle load scales can already provide measurements with the right accuracy when vehicles can go over the weighbridge without stopping providing total weight, individual weights for truck and trailer as well as individual axle weights. Weighing-in-motion systems are also constantly improving to become more accurate.

On-board weighing systems can be used in more and more cases where weight is important. It is an easy way of precisely measure the load and the goods added to or taken from the truck. This increases the opportunities for companies and municipalities. However, the verification of on-board and dynamic systems for legal of trade still poses a major challenge that needs to be solved in the near future.

