

DYWA Dynamic weighbridge



Certified weighing of vehicles entirely automatically and without stopping!



1. Description

A weighbridge has been developed for monitoring vehicle weights, which can be built into the road surface. It differs from the classic weighbridge, which records at one time the complete weight of the vehicle, and which has to be at least as long as the wheelbase of the vehicle (up to 12 m), by the fact that the proposed weighing platform is only 80 cm wide. The total weight is determined by the automatic addition of the loads from each axle. This happens while the vehicle crosses the weighbridge at low speed.

The system checks automatically if the weighbridge has been crossed at a correct and constant speed, and on the right track.

2. Application

The dynamic weighbridge has its application where :

- The information about the weight of axles is required
- there is not enough space for placing a conventional weighbridge
- the time available for weighing is limited
- the measurement process has to be automatic

3. System

- Standard:
 - Weighing platform with load cells
 - Computer with display, keyboard and power supply
 - Software
- Options:
 - Printer
 - Traffic lights
 - Semi-automatic identification with chip cards and reader
 - Entirely automatic identification with ground antenna and chip on the vehicle
 - Standard PC for data handling, right up to invoicing
 - Large remote display

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4. Measurement Process

The weighbridge is initiated by the simple passage automatic or manual identification of the vehicle. Now the weighbridge can be crossed at slow and constant speed. During the crossing of the vehicle, the gross weight of each axle appears on the screen. After one minute the weighbridge is ready for the next vehicle. If the vehicle with the same identification passes the weighbridge again on its way back (after loading or unloading) within a determined time period, the difference of the two weights, the net weight, is calculated, displayed and saved. The weighbridge can be crossed in either direction.

5. Technical Specifications

- Maximum load (sum of the axle loads): 45t (according national law, higher maximum load is possible)
- Maximum load per axle: 12'000kg
- Minimum load: 100kg
- Overload: 150 %
- Accuracy: certifiable : accuracy class 0.5
(OIML R76 and TC9/SC2, as well axed as total weight of vehicle are certifiable)
- Scale interval: 10kg
- Limits of permitted crossing speed: 0.5 m/s - 1.2 m/s
- Working temperature: -10 °C to 40 °C
(within specified precision)
- Maximum survival temperature: -30 °C to 60 °C
- Weighing computer: keyboard, display, 3 serial interfaces, 8 discrete in- and outputs.
- Dimensions: 2900 x 800 x 250 mm

Drawing of the mounting pit :

