

Product book

Weighbridges

Weighbridge Automation

Industrial Weighing



**J. Dimitriou L.T.D**  
Kataskeuastiki

**WeighingEngineering**  
industrial weighing & process automation





■ **KATASKEVASTIKI J. DIMITRIOU** has an extensive experience in industrial steel constructions and large scale project management. During 30-year experience, the performance of our company has been constantly excelling, managing an increased number of major construction projects of the private and public sector, both in Greece and abroad.



**WeighingEngineering**  
industrial weighing & process automation

Given our large production capacity, quality standards and excellent relations with our customers, in the year 2013 we created a new department ,specialized on all types of weighbridges called **WEIGHING ENGINEERING**.

Highly Experienced engineers provide our company with a competitive advantage through innovation in the fields of weighbridges and weighbridge automation systems, axle weighing platform, scales, and turn key systems.

Our weighbridge production amounts now to more than 250 pieces per year exporting weighbridges , weighing equipment and weighbridge automation in more than 60 countries







## ■ PRODUCTION CAPACITY AND STANDARDS

The group KATASKEVASTIKI J. DIMITRIOU LTD owns a private facility of 24.000 m<sup>2</sup> (4.000 m<sup>2</sup> indoor) at the industrial zone of Magoula, as well as a private owned facility of 60.000 m<sup>2</sup> (6.000 m<sup>2</sup> indoor) in the region of Prokopi in Northern Evia island. In its possession there is available modern technological equipment and software for design-construction of shop drawings and for works related to the assembly – punching – cutting – configuration, as well as technically skilled personnel, experienced, qualified and continuously trained. This combination constitutes the guarantee and security for our company's ability to provide high quality products at competitive prices following closely the production schedules.

## ■ EMPLOYEES ARE A KEY FACTOR

The friendly and stable work environment, the ongoing training and technical expertise of our staff as well as our specialized partners, are key factors to the continuous growth of our company, despite the adverse market conditions, both domestic and international.

## ■ WEIGHBRIDGE PRODUCTION EQUIPMENT

We follow closely all new developments in the steel machining sector and we acquire the most modern production machinery.

### Our present machinery includes:

- 23 Overhead travelling cranes from 3t to 20t
- 1 Tower crane 8t
- 4 Shear cutting for steel sheets. Thickness 2mm to 16mm
- 3 Plates rolling machines max capacity
- 25mm thickness X 3000mm width
- 3 Plates forming machines max capacity
- 12mm thickness 4000mm width
- 3 Punching machines drilling holes until 35mm diam.
- 1 Boring milling machine, travel length 1500mm
- 20 Automatic welding machine (KEMPI)
- 3 Plasmacut and oxycut machines
- 2 Drilling machine for beams (CONTROLLED AUTOMATION, DRL 344)
- 1 Automatic punching machine (DARLEY MPP1 10)
- 2 Benders for plates
- 1 Cutting machine (CNC TITAN 40140)
- 2 Turning lathe until 800mm diam.
- 1 CNC Drilling machine for plates V200
- 1 Punching machine for plates IMC







## ■ WEIGHBRIDGE PROJECT INDUSTRIALISATION

Quality for us is not a general statement, but specific documented actions. For weighbridge and weighbridge automation projects we follow strict standards to assure that all works and stages that are related to the steel weighbridge, (whether is a stand alone unit, or part of a larger project including weighbridge automation), such as project analysis, calculations, project management, construction, painting, numeration, transportation of steel weighbridges consisting of different pieces on site, will be executed according to the project's specifications and applicable norms. Strict standards are applied to all stages and parts of the structure of the steel weighbridge elements.

The works that it refers to, are the following:

- Material acquisition, construction, antirust protection and painting including the painting methodology, parts numeration, loading and transportation at worksite including the auxiliary and connecting materials.

## ■ MATERIALS

All construction materials come from suppliers having ISO certification and their production is according to specifications of EN10025, steel quality S235-S275-S355 and CE marked where required. Material are of first quality without defections, damages or deformations, controlled by EN 1090. Tolerances are according to EUROCODE III, chapter 3 following DIN 10034.

Bolts, welding materials, etc. comply with requested specifications.

Specifically bolts, rings and nuts are of quality 8,8 and 10,9 electrolytically galvanized.

Welding materials are stored and preserved in good conditions



## ■ MANUFACTURING

For the construction of steel items the required material is mostly beams of standard sections, as HEB, HEA, IPE and flats according to EN10025. Cold extruded tubes or rectangular pipes comply with EN 10219. The entire steel structure follows the specifications of EN 1090-2 and the long experience of the company in similar steel structures and projects.

Cutting and drilling of the beams and flats are made by automatic production machines (CNC) which are controlled electronically via Construction Management Software (STRUCAD).

The steel construction will be composed of longitudinal or lateral parts from steel beams or flats, steel plates, rods, bolts, rings, nuts etc and generally whatever is considered necessary for the completion of the construction. We follow EUROCODE III chapter 7 which defines the minimum requirements for the correct execution of the steel treatment, satisfying all requirements of project calculations and dimensioning.

## ■ PAINT (ANTIRUST PROTECTION)

All steel parts are sandblasted according to ISO 8501 at a clarity degree of Sa 2.5 and are painted according to the painting methodology of SMALTOLIN as following:

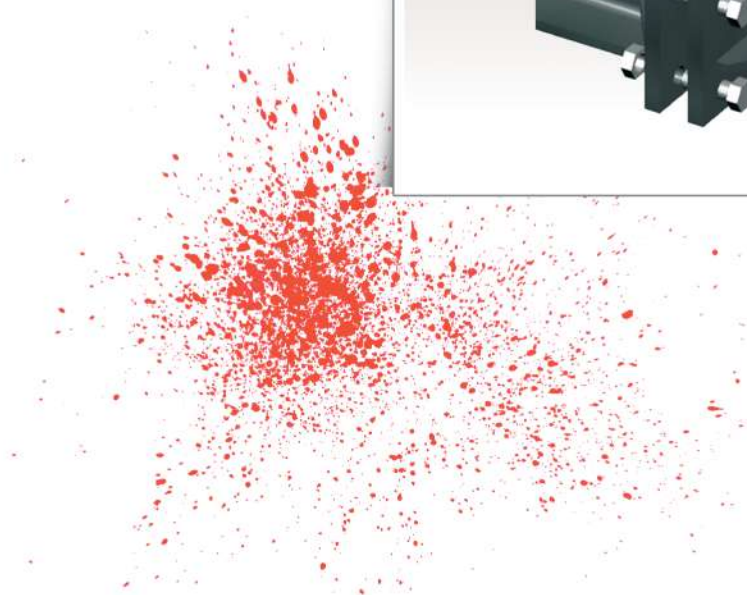
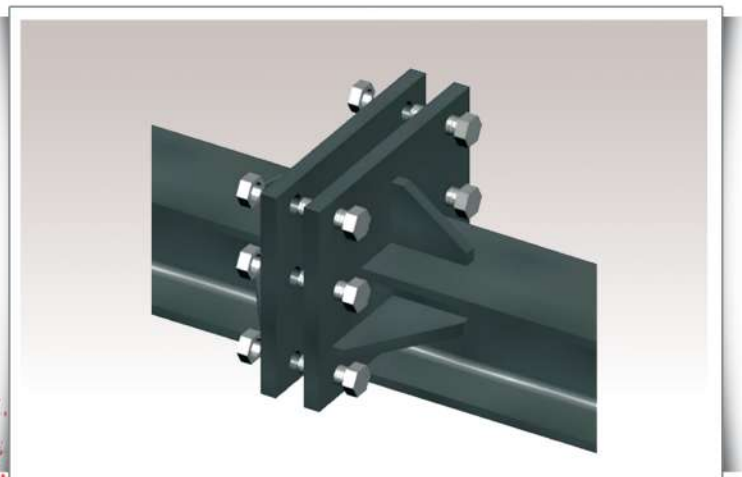
a) Application of epoxy primer of dry thin membrane thickness (D.F.T)  $\approx 60\mu\text{m}$

b) Application of epoxy primer of dry thin membrane thickness (D.F.T)  $\approx 60\mu\text{m}$

Total painting thickness (D.F.T)  $\approx 120\mu\text{m}$

Thicker painting is possible on demand.

Hot galvanization is possible on demand





## ■ CUTTING - DRILLING

All cutting is executed according to the cutting schedule which is formed electronically by the drawing/ design software. Cutting of beams is made through saws automatically adjusting the cutting length via PC. Operators are inspecting each part after the cut as to length and cut orthogonality and in parallel they are they drilled in a high precision machine with automatic forwarding and drilling from the 3 sides of each beam.

Cutting of simple shaped and relatively small length plates is made to shear cutting machines.

Cutting of complex, thick plates, especially for achieving high precision, is performed in an automatic oxygen-cut machine.

The machine is controlled by software fed by PC and carries out piece cutting with the ability 5 simultaneous cuttings, having same characteristics.

Normal streaks and rust residues occurring after drilling/ cutting are removed by grinding for better adhesion of the paint or galvanizing.



## ■ WELDING

All welding is made according to EN1090-2 CLASS EXC: 2.

Welding is performed in such a way so to assure the melting of the welding and base material to achieve a homogenous material form throughout the length of the welding.

For plates of thickness exceeding 30mm, the material is preheated in the welding area and throughout the length of the welding.

All welding is performed according to the Welding Procedure Specification (WPS/WPAR) – as per EN 288-2 / ENISO 15614-1.

Welding methods are:

a) Through electrode SWAM/111

b) Semi-automatic welding with wire and gas protection (semi –automatic) GMAW/135.

All welders have been certified as per EN-287-1 and all welding made within the factory is inspected by certified technicians level III following the nondestructive procedures:

100% Visual control

Use of penetrating magnetic liquids (depends on project specs)

Ultrasonic controls (UT) liquids (depends on project specs)

### Dimensional control 100%

The acceptance criteria of the non destructive inspections are described at DINEN 25817 category B for internal welding and C for external welding.





## ■ TRANSPORTATION and MATERIAL ARRIVAL

Arrival of goods at the erection site is made in numerated parts complete in a degree allowing transportation. All constructions are accompanied by all necessary inspection protocols, such as certificates of materials, welding, paint, etc.



## ■ COMPANY CERTIFICATIONS

Our company has been evaluated and certified according to the requirements of:

1. Quality procedures to ISO 9001: 2008
2. Certification for welded structures following DIN 18800 - EN ISO 3834
3. Certification to ENISO 1090-2 up to CLASS EXC:3

## ■ 1.9 RELATED DOCUMENTS

1. Quality system ISO 9001:2008
2. Manufacturing Inspection and Test Plan
3. Certificate of Conformity of the Factory Production Control according to EN 1090-2

## ■ WEIGHBRIDGE PRODUCTION QUALITY STANDARDS

Below is the list of standards adopted during manufacturing and testing of the weighing equipment supplied by our company:

Manufacturing procedure and quality textbook is described in our ISO 9001:2008.

### Structures:

weighbridge loading Regulations: DIN 8119, DIN 1072  
EN1090-2

Eurocode 1: Actions on structures

Eurocode 2: Design of concrete structures

Eurocode 3: Design of steel structures

Eurocode 4: Design of composite steel and concrete structures

hot galvanization: according to ISO 1461

### Welding:

EN 288-2 / ENISO 15614-1



### **Weighing Electronics:**

Correspond to the production model described in the EC Type-Approval Certificate EU-Type DK0199.62 Rev. 05 and to the requirements of the following directives:

2009/23/EC, 89/336/EEC, 73/23/EEC

### **By application of the harmonized standards:**

- \* EN 45501:1994 The Metrological Aspects of Non-Automatic Weighing Machines.
- \* EN 55022:1987 Limits and methods of measurement of radio interference characteristics of information technology equipment.
- \* EN 60950:1992 Safety of Information Technology Equipment  
OIML R76

Load cells: R60

Barriers: 73/23/CEE, 93/68/CEE, 89/336/CEE, 93/68/CEE

### **Control System for Barriers:**

- \* EN 61000-6-3
- \* EN61000-6-1 EN 60950-1
- \* EN-ETSI 301 511
- \* EN-ETSI 301 489-7

Traffic Lights: EN12368:2006 & HD 638





## Weighbridge models and prices







## ■ WEIGHBRIDGES AND ACCESSORIES, GENERAL NOTES

- We have designed a wide range of weighbridge models covering almost every need met in different markets. All our weighbridge structures are calculated using FINITE ELEMENT analysis. All our weighbridges have the following characteristics in common:

- Direct installation ,without the need of additional concrete foundation works on an existing horizontal concrete surface, where trucks already circulate, there is no need of extra foundations as our loadcell foundation plates are large and thick enough to reduce the loading pressure on the existing concrete surface.

In any other case, a full range of products manufactured in our factory are available, i.e. steel or concrete foundations and ramps for pit or pitless applications. Alternatively, a full set of detailed drawings are provided for local preparation of concrete foundations.

- Our weighbridges are calculated to withstand 10ton per truck axle (+20% dynamic load), according to the DIN8119 specifications. However, our team of civil engineers and designers has studied and designed many models for heavier loading such as 15ton 20ton/axle, even 60-100ton / axle which allow for a higher total capacity of the weighbridges (e.g. 80ton or 100ton or 200ton).

- In most models ,Load cells are top accessed by easily removable covers

- Variety of different lengths and other dimensions – Special sizes and constructions can be designed and quoted upon request.

- Finish is industrial paint, with 2 coats of RAL 7016 GREY for main weighbridge body, 2 coats of RAL 1003 YELLOW for auxiliary parts and 1 coat of primer for both. Optionally, steel parts can be hot galvanized. Epoxy coating is also available upon request.

- In most cases, unloading and installation can be done with a small capacity forklift and/or crane.

- All weighbridge accessories conform with European Directives and OIML requirements for legal for trade applications.



## WEIGHBRIDGES PLATFORMS

### ■ NT 31 STEEL PIT OR PITLESS MOUNTED WEIGHBRIDGE

General description: all steel structure for all capacities and different dimensions.

- Load cells are supported by sturdy steel flanges, located into the weighbridge structure, thus offering low height and easy access.

#### Features:

Loadcells are supported by a sturdy connection mechanism, not allowing any torques to be transmitted from one modul to the next one.



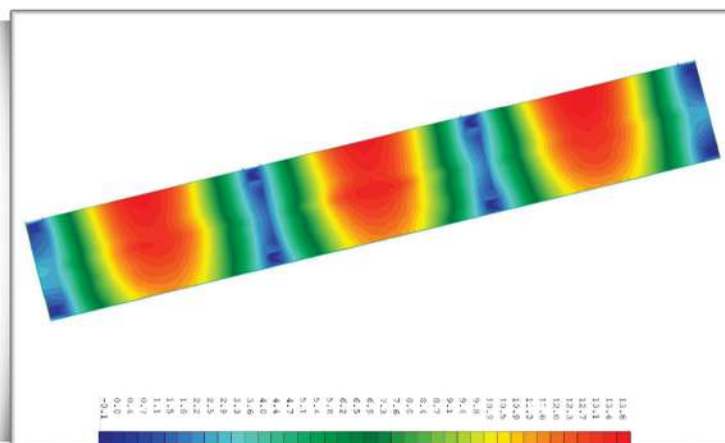
Load cell support detail



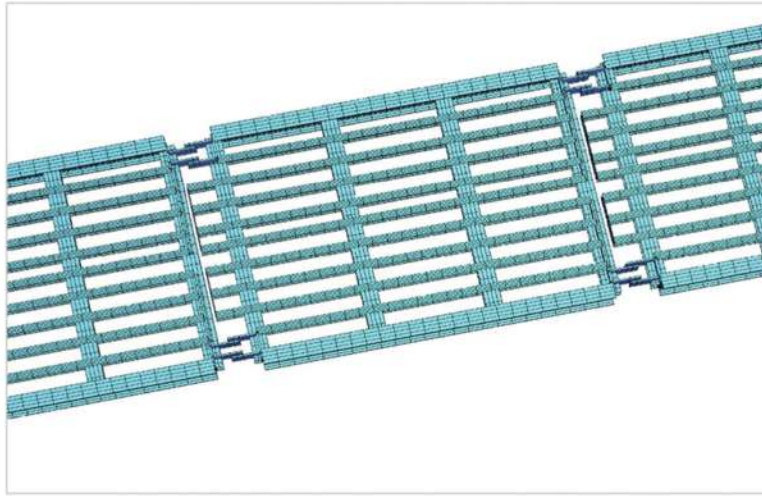
Middle connection. Load cells

### ■ FINITE ELEMENT OPTIMIZED STRUCTURE

All weighbridge platforms are analysed by our experienced engineers, match market demands, with technical solutions. Finally calculations are made based on finite elements



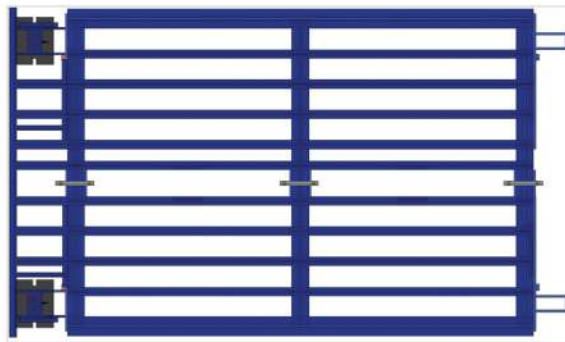
■ NT31 WEIGHBRIDGE. Nodal displacement diagram of structural analysis.



NT31 weighbridge. Structural analysis

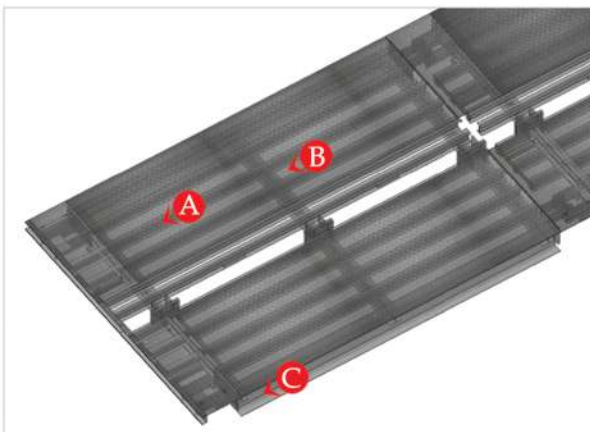
- Grid structure for maximum rigidity and strength.

All platforms are designed on grid principle to improve the weight/rigidity ratio.



- NT31 weighbridge top view detail.

NT31 weighbridge bottom view



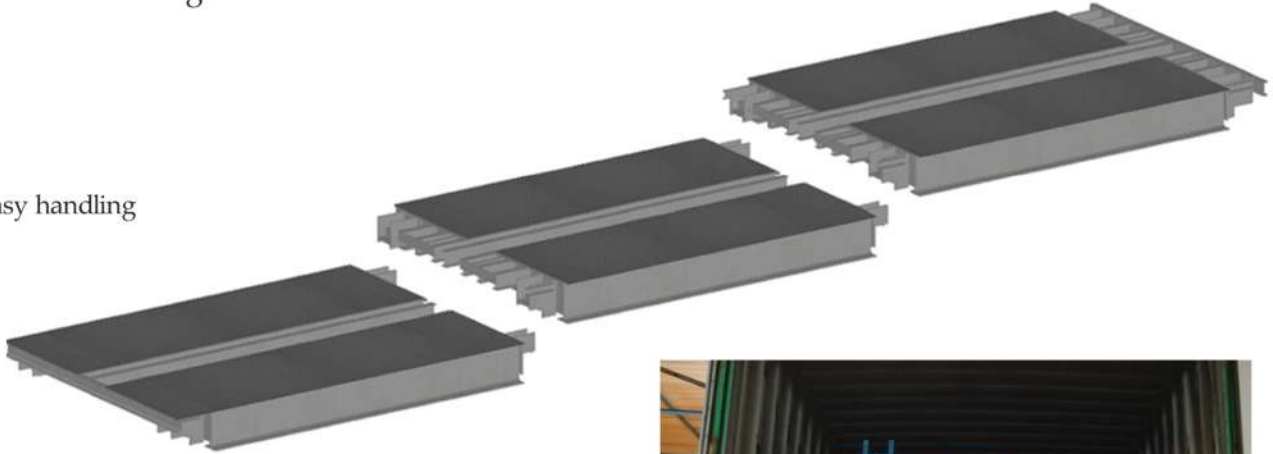
- A. Longitudinal beams
- B. Transverse beams
- C. Longitudinal external beams





- Modular design for easy transportation and handling.  
No need for large cranes to handle NT31 model

Easy handling



Easy transportation  
(container)



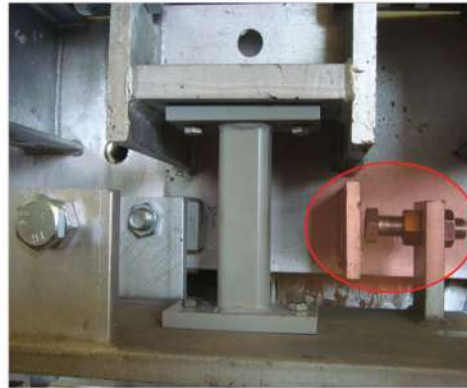


• Tear Drop plate for antislip surface



Load cell easy and direct access  
after top-plate removal

- 2 direction bumpers, at each load cell location prevents transmission of horizontal forces to the ramps or to the pit walls.



Buffering system.  
Cross direction



Buffering system.  
Longitudinal  
direction

Buffering system.  
Longitudinal  
direction



Buffering system.  
Cross direction







- Foundation plate of large dimensions.  
These can be fitted directly on existing horizontal 250 mm concrete surface without any civil work



Foundation plate

- Strong flanges with holes for strong connection in the middle, even when trucks drive upon this point.



Connection flanges

## ■ ALL STEEL PARTS ARE SANDBLASTED TO SA 2,5 & COVERED WITH PRIMER

- After weldings and grindings a second layer of primer is applied and then 2 layers of high quality industrial paint (HEMPEL). Painting is performed in a closed air conditioned area. An important point before applying paint is to remove all welding spatters, as these points could prevent the good application of the paint. As a result, paint remains intact and rust penetration is prevented to the maximum.
- Installation of protection side rails.



NT31  
pitless weighbridge  
with side rails



NT31 pit weighbridge  
with high ways type side rails



## ■ HOT GALVANIZATION OPTION

- Optionally steel parts can be hot galvanized to EN-ISO 1461. This process adds extra resistance to the structure when ambience is saline, acid or corrosive to steel parts.



NT31 pit weighbridge  
galvanized



NT31 pitless weighbridge galvanized

## ■ ONLY FOR PIT VERSION

- Trucks can drive vertically on the weighbridge.





## ■ NT31 PIT MOUNTED - VERTICAL CROSSING

- Removable covers throughout the length of the platform for easy access at each point of the pit for easy cleaning.



NT31 middle cover plate (close)



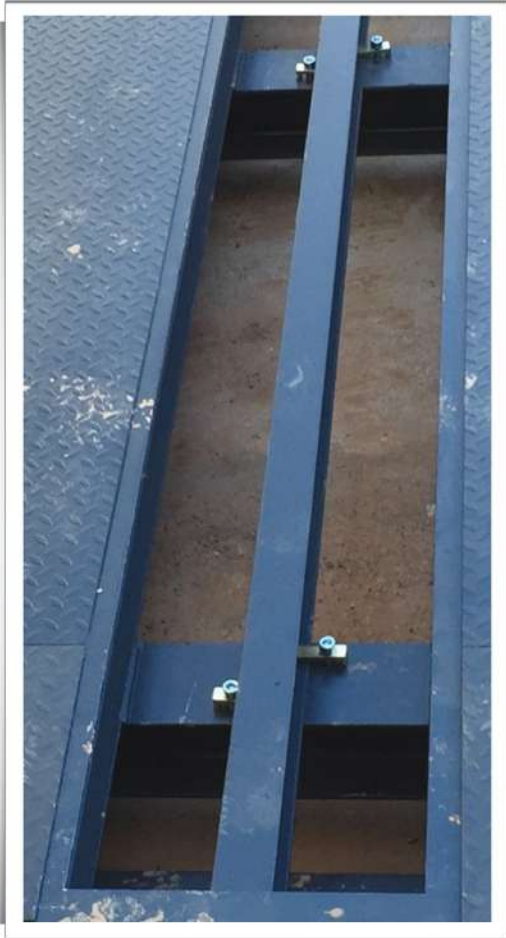
Feature: NT31 middle cover plate (open)



NT31 middle cover plate



- Removable beam in the middle to increase access space



- Low height pit



NT31 low - height Pit Weighbridge.



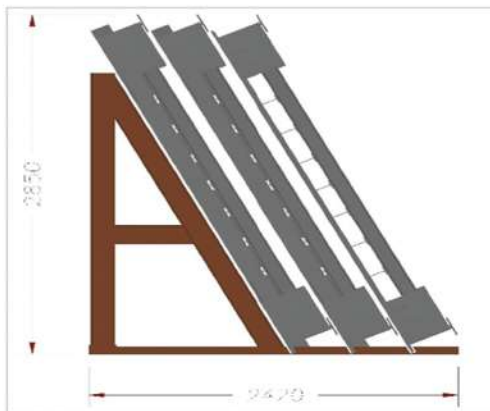
## ■ NT31-3

- NT 31-3 can be supplied as 3 pieces of 3 meters wide each

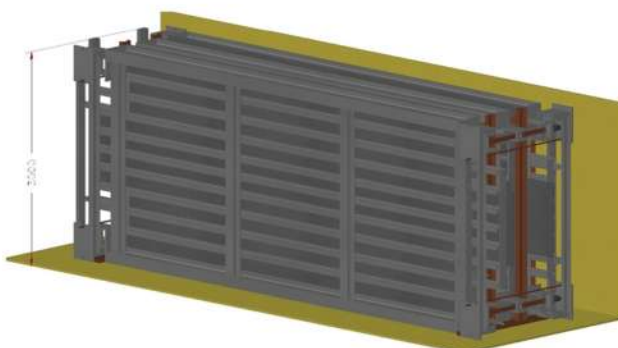
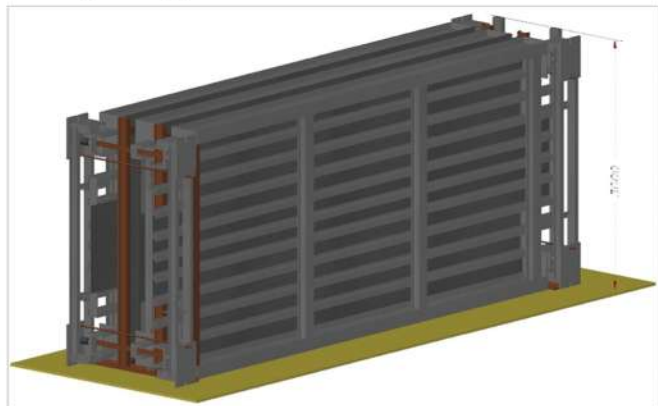
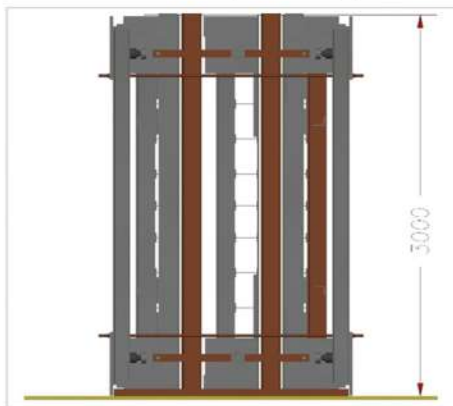


NT31-3 Weighbridge. Two entry/exit modules with four load cells and one middle

- Transportation is done laterally or vertically by a low bed truck.



NT31-3 lateral transportation (in case of one weighbridge)



NT31-3 vertical transportation  
(in case of two weighbridges)





NT31-3 horizontal transportation (in case of national/Greece transportations)

The advantage of this concept is that load cells can be factory pre-mounted and weighbridge is factory pre-calibrated. In addition to the pre-mounted load cells option, pre-mounted steel foundation and ramps can be fixed and easily installed, reducing installation time to the maximum.

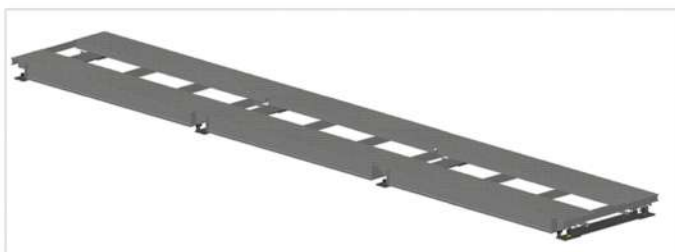


NT31-3 weighbridge. Easy installation

This feature turns the whole weighbridge easily relocatable, a very good solution for renting or leasing weighbridges as well for contracting and mining companies and finally for weighbridges on rented areas. For steel, steel entry exit plates or concrete foundations please have a look to our separate chapter (page 44 - 45). A lower cost version of NT31-3 is NT31-3-H which has all the characteristics of NT31-3 but load cells are side accessed (no removal top plates).

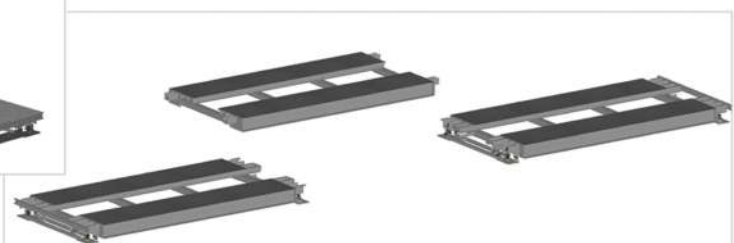
## ■ NT 31-3-1000

- Another option of NT31-3 is to have a 1000 mm gap in the middle, reducing the platform cost.



NT31-3 1000 Weighbridge

- The gap of 1000 mm is not a problem for large trucks (4-6 axles trucks).





NT31-3 1000 Weighbridge. Two entry/exit modules with four load cells and one middle.



NT31-3 1000 Weighbridge pit version.

- NT31-3 1000 can be also combined with steel foundation SF140 or SF15 and relevant ramps. A lower cost of NT31-3 version is the NT31-3-H, which has all main characteristics of NT31-3, but load cells are accessed from the side.



NT31-3 1000 Weighbridge with steel foundation SF140



NT31-3 1000 Weighbridge with steel foundation SF15.

NT SERIES EX WORK									
MODEL		LENGTH m	WIDTH m	MAX T/A	MAX W/B STATIC CAPACITY (TONS)	MAIN BEAMS	TOP DURBAR PLATE THICKNESS	NUMBER OF LOAD CELLS	TOTAL HEIGHT
NT31	PIT LESS MOUNTED	36,57	3,35	10	60	IPE 500	10-12	14	560
NT31	PIT LESS MOUNTED	18	3	10	60	IPE 360	6-8	8	420
NT31	PIT LESS MOUNTED	18	3	15	90	IPE 270	6-8	10	330
NT31	PIT LESS MOUNTED	18	3	20	120	IPE 360	10-12	10	420
NT31	PIT LESS MOUNTED	17	4,5	40	240	HEA 450	8-10	10	520
NT31	PIT LESS MOUNTED	16	3	10	60	IPE 360	6-8	8	420
NT31	PIT LESS MOUNTED	16	3	15	90	IPE 270	6-8	10	330
NT31	PIT LESS MOUNTED	16	3	20	120	IPE 360	10-12	10	420
NT31	PIT LESS MOUNTED	15	3	10	60	IPE 360	6-8	8	420
NT31	PIT LESS MOUNTED	15	3	15	90	IPE 270	6-8	10	330
NT31	PIT LESS MOUNTED	15	3	20	120	IPE 360	10-12	10	420
NT31	PIT LESS MOUNTED	14	3	15	90	IPE 270	6-8	8	330
NT31	PIT LESS MOUNTED	12,14	3	10	60	IPE 360	6-8	6	420
NT31	PIT LESS MOUNTED	12,14	3	15	90	IPE 270	6-8	8	330
NT31	PIT LESS MOUNTED	12,14	3	20	120	IPE 360	10-12	8	420
NT31	PIT LESS MOUNTED	9,2	3	15	90	IPE 270	6-8	6	330



MODEL		LENGTH m	WIDTH m	MAX T/A	MAX W/B STATIC C	MAIN BEAMS	TOP DURBAR PLATE THICKNESS	NUMBER OF LOAD CELLS	TOTAL HEIGHT
NT31	PIT LESS MOUNTED	9,2	3	20	120	IPE 360	10-12	6	420
NT31	PIT LESS MOUNTED	6,27	3	10	60	IPE 360	6-8	4	420
NT31	PIT LESS MOUNTED	6,27	3	20	120	IPE 360	10-12	6	420
NT31	PIT LESS MOUNTED	4,5	3	10	60	IPE 270	6-8	4	330
NT31	PIT MOUNTED	25	3,5	20	120	HEA 450	10-12	12	500
NT31	PIT MOUNTED	20	3,5	12	72	IPE 400	8-10	8	475
NT31	PIT MOUNTED	18	3	10	60	IPE 360	6-8	8	420
NT31	PIT MOUNTED	18	3	10	60	IPE 360	6-8	8	420
NT31	PIT MOUNTED	18	3	15	90	IPE 270	6-8	10	330
NT31	PIT MOUNTED	18	3	20	120	IPE 360	10-12	10	420
NT31	PIT MOUNTED	16	3	10	60	IPE 360	6-8	8	420
NT31	PIT MOUNTED	16	3	15	90	IPE 270	6-8	10	330
NT31	PIT MOUNTED	16	3	20	120	IPE 360	10-12	10	420
NT31	PIT MOUNTED	15	3	10	60	IPE 360	6-8	8	420
NT31	PIT MOUNTED	15	3	15	90	IPE 270	6-8	10	330
NT31	PIT MOUNTED	15	3	20	120	IPE 360	10-12	10	420
NT31	PIT MOUNTED	15	3,8	40	240	HEA 450	10-12	10	520
NT31	PIT MOUNTED	12,14	3	10	60	IPE 360	6-8	6	420
NT31	PIT MOUNTED	12,14	3	15	90	IPE 270	6-8	8	330
NT31	PIT MOUNTED	12,14	3	20	120	IPE 360	10-12	8	420
NT31	PIT MOUNTED	9,2	3	15	90	IPE 270	6-8	6	330
NT31	PIT MOUNTED	9,2	3	20	120	IPE 360	10-12	6	420
NT31	PIT MOUNTED	6,27	3	10	60	IPE 360	6-8	4	420
NT31	PIT MOUNTED	6,27	3	20	120	IPE 360	10-12	6	420
NT31	PIT MOUNTED	4,5	3	10	60	IPE 270	6-8	4	330
NT31-1000	PIT LESS MOUNTED	18	3	10	60	IPE 360	6-8	8	420
NT31-1000	PIT LESS MOUNTED	18	3	15	90	IPE 270	6-8	10	330
NT31-1000	PIT LESS MOUNTED	18	3	20	120	IPE 360	10-12	10	420
NT31-1000	PIT LESS MOUNTED	12	3	10	60	IPE 360	6-8	6	420
NT31-1000-H	PIT LESS MOUNTED	18	3	10	60	IPE 360	6-8	8	420
NT31-1000-H	PIT LESS MOUNTED	18	3	15	90	IPE 270	6-8	10	330
NT31-3	PIT LESS MOUNTED	20	3	20	120	HEA 400	10-12	8	475
NT31-3	PIT LESS MOUNTED	18	3	10	60	IPE 330	6-8	8	420
NT31-3	PIT LESS MOUNTED	18	3	15	90	IPE 400	6-8	8	460
NT31-3	PIT LESS MOUNTED	18	3	20	120	IPE 360	8-10	10	420
NT31-3	PIT LESS MOUNTED	15	3	10	60	IPE 330	6-8	8	420
NT31-3	PIT LESS MOUNTED	15	3	15	90	IPE 400	6-8	8	460
NT31-3	PIT LESS MOUNTED	15	3	20	120	IPE 360	8-10	10	420
NT31-3	PIT LESS MOUNTED	12,14	3	10	60	IPE 330	6-8	6	420
NT31-3	PIT LESS MOUNTED	12,14	3	15	90	IPE 400	6-8	6	460
NT31-3	PIT LESS MOUNTED	12,14	3	20	120	IPE 360	8-10	8	420
NT31-3	PIT LESS MOUNTED	6	3	10	60	IPE 330	6-8	4	420
NT31-3	PIT MOUNTED	18	3	10	60	IPE 360	6-8	8	420
NT31-3	PIT MOUNTED	18	3	15	90	IPE 270	6-8	10	330
NT31-3	PIT MOUNTED	18	3	20	120	IPE 360	10-12	10	420
NT31-3	PIT MOUNTED	16	3	10	60	IPE 360	6-8	8	420
NT31-3	PIT MOUNTED	16	3	15	90	IPE 270	6-8	10	330
NT31-3	PIT MOUNTED	16	3	20	120	IPE 360	10-12	10	420
NT31-3	PIT MOUNTED	15	3	10	60	IPE 360	6-8	8	420
NT31-3	PIT MOUNTED	15	3	15	90	IPE 270	6-8	10	330
NT31-3	PIT MOUNTED	15	3	20	120	IPE 360	10-12	10	420
NT31-3	PIT MOUNTED	12,14	3	10	60	IPE 360	6-8	6	420
NT31-3	PIT MOUNTED	12,14	3	15	90	IPE 270	6-8	8	330
NT31-3	PIT MOUNTED	12,14	3	20	120	IPE 360	10-12	8	420
NT31-3	PIT MOUNTED	9	3	15	90	IPE 270	6-8	6	330
NT31-3	PIT MOUNTED	9	3	20	120	IPE 360	10-12	6	420
NT31-3	PIT MOUNTED	6	3	10	60	IPE 360	6-8	4	420
NT31-3	SEMI-PITLESS MOUNTED	20	3	20	120	HEA 400	10-12	8	475
NT31-3 1000	PIT LESS MOUNTED	18	3	10	60	IPE 330	6-8	8	420
NT31-3 1000	PIT LESS MOUNTED	18	3	15	90	IPE 400	6-8	8	460
NT31-3 1000	PIT LESS MOUNTED	18	3	20	120	IPE 360	8-10	10	420
NT31-3 1000	PIT LESS MOUNTED	15	3	10	60	IPE 330	6-8	8	420
NT31-3 1000	PIT LESS MOUNTED	15	3	15	90	IPE 400	6-8	8	460
NT31-3 1000	PIT LESS MOUNTED	15	3	20	120	IPE 360	8-10	10	420
NT31-3-H	PIT LESS MOUNTED	18	3	10	60	IPE 330	6-8	8	420
NT31-3-H	PIT LESS MOUNTED	18	3	15	90	IPE 400	6-8	8	460
NT31-3-H-1000	PIT LESS MOUNTED	18	3	10	60	IPE 330	6-8	8	420
NT31-H	PIT LESS MOUNTED	18	3	10	60	IPE 360	6-8	8	420
NT31-H	PIT LESS MOUNTED	18	3	15	90	IPE 270	6-8	10	330
NT31-H	PIT LESS MOUNTED	18	3	20	120	IPE 360	10-12	10	420



## ■ DIY STEEL PITLESS MOUNTED WIGHBRIDGE

- General description: all steel structure for all capacities and different dimensions.



DIY Weighbridge

- Side rails is a standard feature being part of the weighbridge structure



DIY Weighbridge. Side rails

- Load cells are factory pre-mounted and weighbridge is pre-calibrated.



DIY Weighbridge. Pre-mounted load cells



- Load cells are supported by sturdy steel flanges, located into the weighbridge structure, thus offering low height and easy access.



DIY Weighbridge suport keys

- Easy transportation and handling as it has been designed in 2 parts:
  - Main body consists of 3 pieces, each having dimensions:  
Length: 6000 mm (for 18m length)  
Width: 2300 mm
  - Side platforms (yellow colored parts), preventing trucks from driving out, are bolted on site.  
Width: 350 mm x 2 = 700 mm  
Total platform's width: 2300 mm + 700 mm = 3000 mm



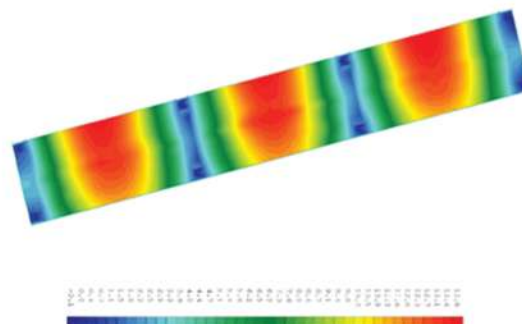
DIY Weighbridge.  
Installation of main body



DIY Weighbridge.  
Installation of side rails

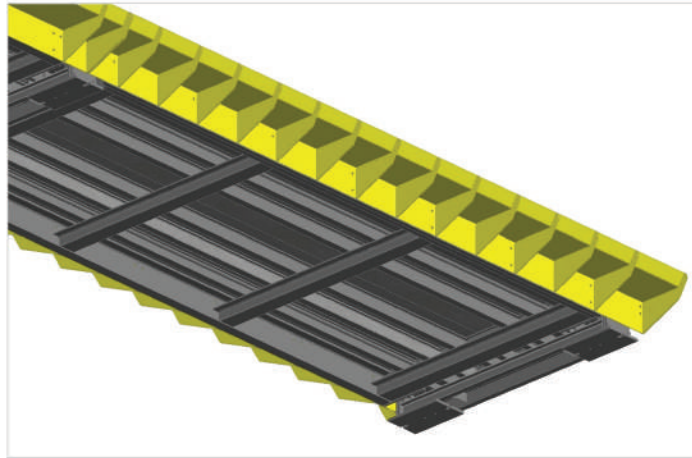
- Finite element optimized structure.

DIY weighbridge.  
Nodal displacement diagram  
of structural analysis



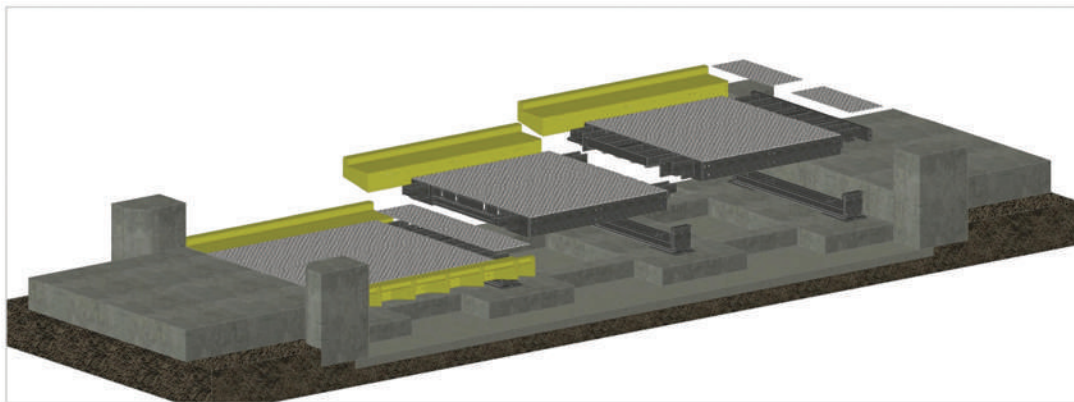


## ■ GRID STRUCTURE FOR MAXIMUM RIGIDITY AND STRENGTH



DIY Weighbridge  
Bottom view

- Modular design for easy transportation and handling.



DIY Weighbridge. Easy handling

- Tear drop plate for antislip surface
- Load cells: top accessible by easily removed plate



Tear drop plate



Load cell access.



## ■ 2 DIRECTION BUMPERS, AT EACH LOAD CALL LOCATION

- This buffering system prevents transmission of horizontal forces to the ramps or to the pit walls

- All steel parts are sandblasted to SA 2,5 and covered with primer

After weldings and grindings a second layer of primer is applied and then 2 layers of high quality industrial paint(HEMPEL). Painting is performed in a closed air conditioned area.

An important point before applying paint is to remove all welding spatters, as these points could prevent the good application of the paint. As a result, paint remains intact and rust penetration is prevented to the maximum, elongating the structure lifespan.

- Hot Galvanization option

Optionally steel parts can be hot galvanized to EN-ISO 1461. This process adds extra resistance to the structure when ambience is saline, acid or corrosive to steel parts.



DIY weighbridge. Hot Galvanized

- In addition to the pre-mounted load cells option, pre-mounted steel foundation and ramps can be fixed and easily installed, reducing installation time to the maximum.



DIY Weighbridge with steel foundation SF15

- This feature turns the whole weighbridge easily relocatable, a very good solution for renting or leasing weighbridges as well for contracting and mining companies and finally for weighbridges on rented areas. For steel, steel entry exit plates or concrete foundations please have a look to our separate chapter (page 78)



## ■ DIY-1000

- Another option of DYI is to have a 1000 mm gap in the middle, reducing the platform cost



DIY-1000 Weighbridge

- The gap of 1000 mm is not a problem for large trucks (4-6 axles trucks)



DIY-1000 Weighbridge





DIY-1000  
Weighbridge.  
Gap in the middle

- DYI - 1000 can be also combined with steel foundation SF140 or SF15 and relevant ramps



DIY-1000  
Weighbridge  
with ramps

DIY SERIES EX WORK									
MODEL		LENGTH m	WIDTH m	MAX T/A	MAX W/B STATIC CAPACITY (TONS)	MAIN BEAMS	TOP DURBAR PLATE THICKNESS	NUMBER OF LOAD CELLS	TOTAL HEIGHT
DIY	PIT LESS MOUNTED	18	3	10	60	UPN 240	6 - 8	8	360
DIY	PIT LESS MOUNTED	18	3	15	90	UPN 260	8 - 10	8	360
DIY	PIT LESS MOUNTED	18	3	20	120	UPN 260	10 - 12	12	360
DIY	PIT LESS MOUNTED	15	3	10	60	UPN 240	6 - 8	8	360
DIY	PIT LESS MOUNTED	15	3	15	90	UPN 260	8 - 10	8	360
DIY	PIT LESS MOUNTED	14	3	10	60	UPN 240	6 - 8	8	360
DIY	PIT LESS MOUNTED	14	3	15	90	UPN 260	8 - 10	8	360
DIY	PIT LESS MOUNTED	12	3	10	60	UPN 240	6 - 8	8	360
DIY	PIT LESS MOUNTED	12	3	15	90	UPN 260	8 - 10	8	360
DIY	PIT LESS MOUNTED	8	3	10	60	UPN 240	6 - 8	6	360
DIY	PIT LESS MOUNTED	8	3	10	60	UPN 240	6 - 8	6	360
DIY	PIT LESS MOUNTED	8	3	15	90	UPN 220	8 - 10	8	360
DIY-1000	PIT LESS MOUNTED	18	3	10	60	UPN 240	6 - 8	8	360
DIY-1000	PIT LESS MOUNTED	18	3	12	72	UPN 260	8 - 10	8	360
DIY-1000	PIT LESS MOUNTED	18	3	20	120	UPN 260	10 - 12	12	360
DIY-H	PIT LESS MOUNTED	18	3	10	60	UPN 240	6 - 8	8	460
DIY-H	PIT LESS MOUNTED	18	3	15	90	UPN 260	8 - 10	8	480
DIY-H-1000	PIT LESS MOUNTED	18	3	10	60	UPN 240	6 - 8	8	460
DIY-H-1000	PIT LESS MOUNTED	18	3	12	72	UPN 260	8 - 10	8	480

- A lower cost of DIY is the DIY-H wich has all the main characteristics of DIY but load cells are accessed from the side.



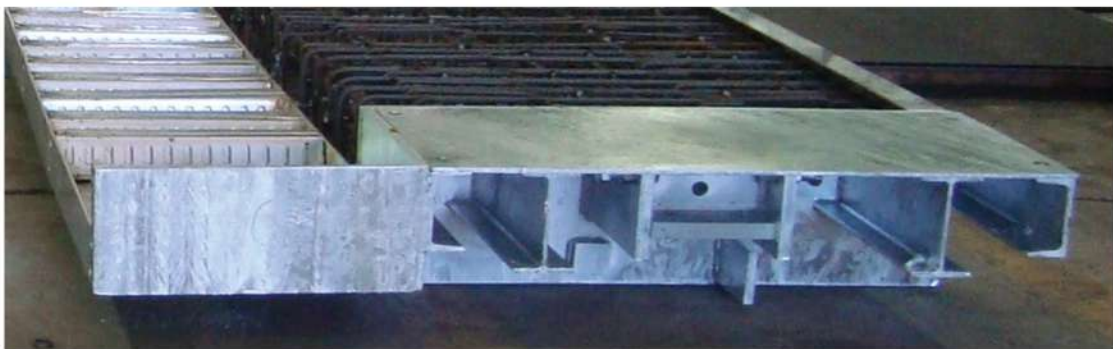
## ■ CP 3000-SC EASY STEEL PITOR PITLESS MOUNTED WEIGHBRIDGE

- General description: composite steel concrete structure for all capacities and different dimensions



CP3000-SC weighbridge

- Load cells are supported by sturdy steel flanges, located into the weighbridge structure, thus offering low height and easy access



CP3000-SC weighbridge. Load cell support

- CP 3000 SC pit mounted weighbridge is an economical, modular composite weighbridge that delivers great performance and durability at a low budget



CP3000-SC weighbridge



- Platform consists of a steel structure formwork, quality steel reinforcements, foundation plates with movement retainers.



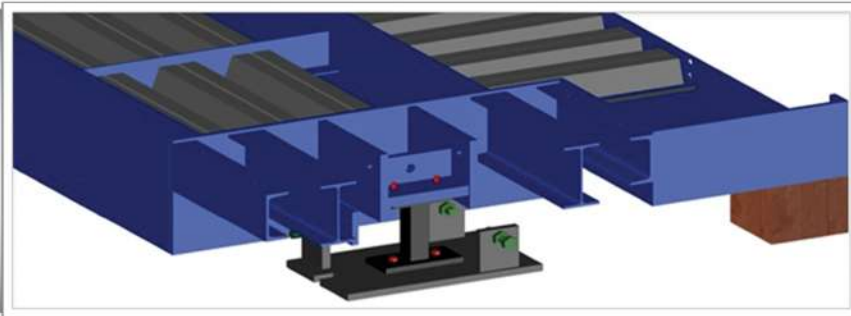
CP3000-SC weighbridge

- One of the advantages of CP 3000 SC is that the concrete deck has its own rigid formwork attached to the main body, which contributes to the overall structural integrity of the weighbridge. The main steel frame together with the reinforcing is delivered in parts easily bolt and assembled on site; for example, the 20x3m model, it is composed of 5 pcs of approximate dimensions 4x1,6m and 5 pcs of approximate dimensions 4x1,4m. So when bolted together they compose a structure of 20x3m. This process reduces on-site large crane requirements (a fork lift is also enough) and also reduces transportation costs. The concrete can be poured on site even with the load cells already installed.



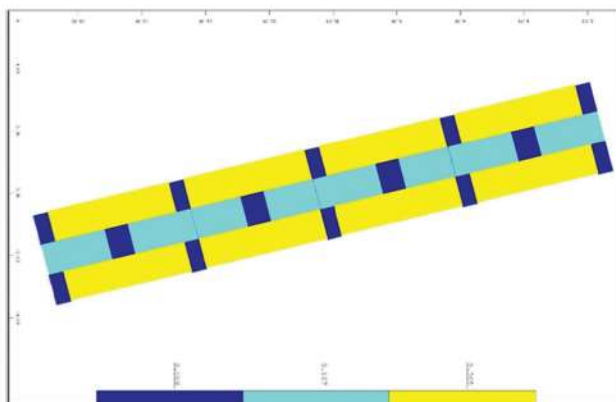
CP3000-SC weighbridge with concrete

- Deck is assembled directly on load cells or temporary columns at final position. No need of extra forming works, and no need to place the deck on the floor and lift it once the concrete is dry, as it was used to be until now. Just some wood supports under the frame during curing period of concrete.

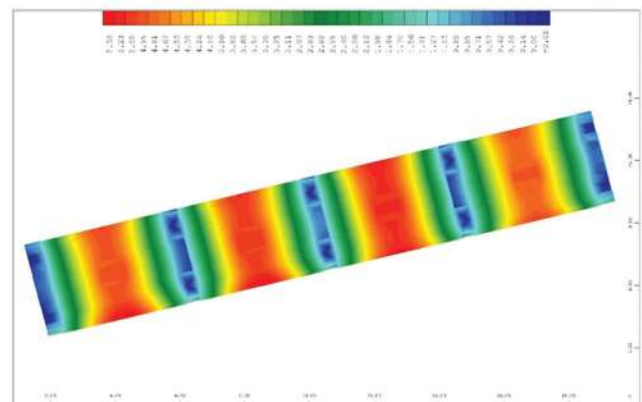


CP3000-SC weighbridge

- Top access to load cells and junction box through removable steel covers, and throughout the length of the w/b there are access hatches for pit accessibility.
- Modular construction for easy installation
- In many cases two visits for installation are not necessary, but only one.
- Finite element optimized structure.



CP3000-SC weighbridge



CP3000-SC weighbridge. Nodal displacement diagram of structural analysis

- Steel parts, steel mold and reinforcements come as one piece and concrete is very easily poured on site



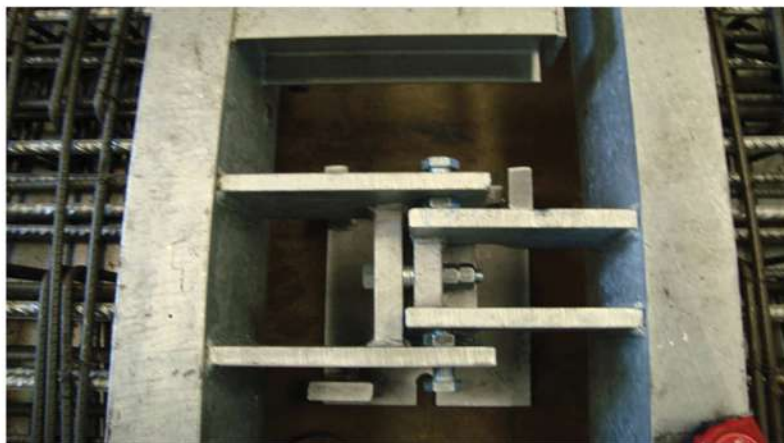
CP3000-SC weighbridge



- Modular design for easy transportation and handling



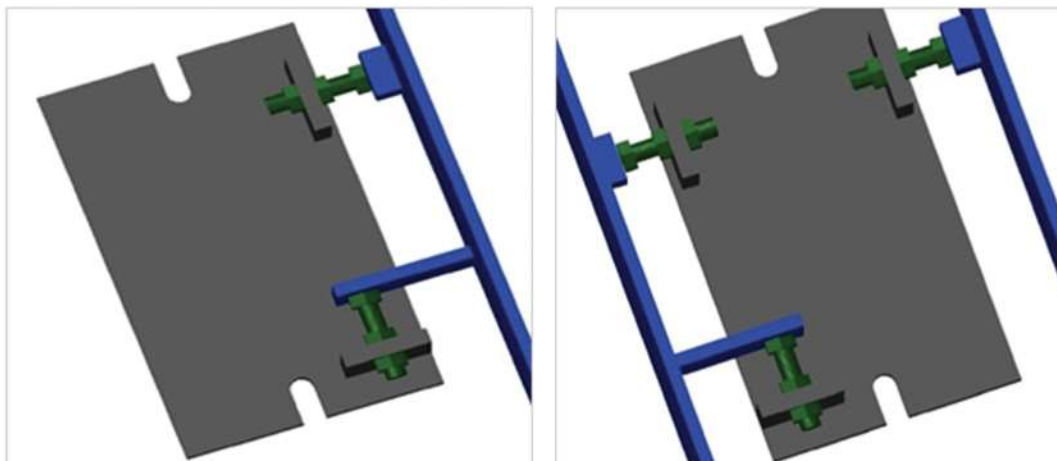
CP3000-SC weighbridge handling



- Load cells: top accessible by easily removed plate

CP3000-SC weighbridge

- 2 direction bumpers, at each load cell location. Prevents transmission of horizontal forces to the ramps or to the pit walls.



CP3000-SC weighbridge. Buffering system of 2 directions



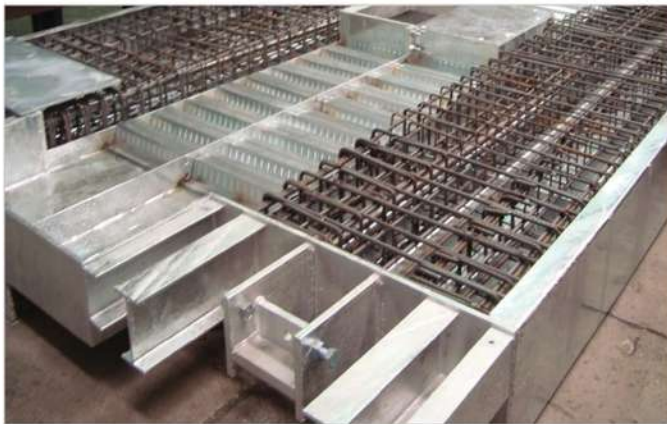
- All steel parts are sandblasted to SA 2,5 and covered with primer.

After weldings and grindings a second layer of primer is applied and then 2 layers of high quality industrial paint(HEMPEL). Painting is performed in a closed air conditioned area.

An important point before applying paint is to remove all welding spatters, as these points could prevent the good application of the paint. As a result, paint remains intact and rust penetration is prevented to the maximum, elongating the structure lifespan.

- Hot Galvanization option.

Optionally steel parts can be hot galvanized to EN-ISO 1461. This process adds extra resistance to the structure when ambience is saline, acid or corrosive to steel parts

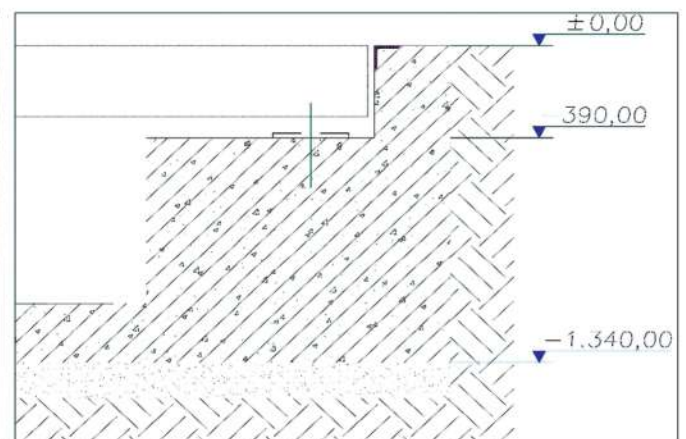


CP3000-SC weighbridge. Hot Galvanised

- Only for pit version:
- Trucks can drive vertically to the weighbridge.
- 100 cm high pit for easy access into the pit.



CP3000-SC weighbridge.  
Pit version



CP3000-SC weighbridge.  
Pit foundation for easy access



## CP 3000 -3 SC Easy

- CP 3000-3SC Easy can be supplied as 3 pieces of 3 meters wide.

Transportation is done vertically by a low bed truck

The advantage of this concept is that installation time is minimum and comes at a lower price.

MODEL		LENGTH m	WIDTH m	MAX T/A	MAX W/B STATIC C	MAIN BEAMS	NUMBER OF LOAD CELLS	TOTAL HEIGHT
CP 3000-3 SC EASY	PIT LESS MOUNTED	18	3	10	60	PL5	8	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	18	3	20	120	PL5	10	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	15	3	10	60	PL5	8	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	15	3	20	120	PL5	10	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	12	3	10	60	PL5	6	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	12	3	20	120	PL5	8	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	9	3	10	60	PL5	6	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	9	3	20	120	PL5	8	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	6	3	10	60	PL5	4	390
CP 3000-3 SC EASY	PIT LESS MOUNTED	6	3	20	120	PL5	6	390
CP 3000-SC EASY	PIT LESS MOUNTED	18	3	10	60	PL5	8	390
CP 3000-SC EASY	PIT LESS MOUNTED	18	3	20	120	PL5	10	390
CP 3000-SC EASY	PIT LESS MOUNTED	15	3	10	60	PL5	8	390
CP 3000-SC EASY	PIT LESS MOUNTED	15	3	20	120	PL5	10	390
CP 3000-SC EASY	PIT LESS MOUNTED	12	3	10	60	PL5	6	390
CP 3000-SC EASY	PIT LESS MOUNTED	12	3	20	120	PL5	8	390
CP 3000-SC EASY	PIT LESS MOUNTED	9	3	10	60	PL5	6	390
CP 3000-SC EASY	PIT LESS MOUNTED	9	3	20	120	PL5	8	390
CP 3000-SC EASY	PIT LESS MOUNTED	6	3	10	60	PL5	4	390
CP 3000-SC EASY	PIT LESS MOUNTED	6	3	20	120	PL5	6	390
CP 3000-3 SC EASY	PIT MOUNTED	18	3	10	60	PL5	8	390
CP 3000-3 SC EASY	PIT MOUNTED	18	3	20	120	PL5	10	390
CP 3000-3 SC EASY	PIT MOUNTED	15	3	10	60	PL5	8	390
CP 3000-3 SC EASY	PIT MOUNTED	15	3	20	120	PL5	10	390
CP 3000-3 SC EASY	PIT MOUNTED	12	3	10	60	PL5	6	390
CP 3000-3 SC EASY	PIT MOUNTED	12	3	20	120	PL5	8	390
CP 3000-3 SC EASY	PIT MOUNTED	9	3	10	60	PL5	6	390
CP 3000-3 SC EASY	PIT MOUNTED	9	3	20	120	PL5	8	390
CP 3000-3 SC EASY	PIT MOUNTED	6	3	10	60	PL5	4	390
CP 3000-3 SC EASY	PIT MOUNTED	6	3	20	120	PL5	6	390
CP 3000-SC EASY	PIT MOUNTED	18	3	10	60	PL5	8	390
CP 3000-SC EASY	PIT MOUNTED	18	3	20	120	PL5	10	390
CP 3000-SC EASY	PIT MOUNTED	15	3	10	60	PL5	8	390
CP 3000-SC EASY	PIT MOUNTED	15	3	20	120	PL5	10	390
CP 3000-SC EASY	PIT MOUNTED	12	3	10	60	PL5	6	390
CP 3000-SC EASY	PIT MOUNTED	12	3	20	120	PL5	8	390
CP 3000-SC EASY	PIT MOUNTED	9	3	10	60	PL5	6	390
CP 3000-SC EASY	PIT MOUNTED	9	3	20	120	PL5	8	390
CP 3000-SC EASY	PIT MOUNTED	6	3	10	60	PL5	4	390
CP 3000-SC EASY	PIT MOUNTED	6	3	20	120	PL5	6	390



## ■ TS-300 (TRANSPORTABLE STEEL WEIGHBRIDGE)

- General description: Surface steel weighbridge, with pre-mounted load cells, for applications with increased mobility needs

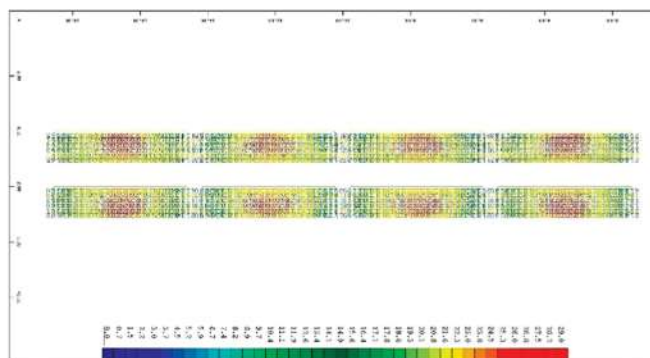


- Due to the spacing of the driving sections beams, is a perfect solution for ATEX applications as gases do not accumulate below the platform



- Finite element optimized structure

TS-300 weighbridge.  
Nodal displacement diagram  
of structural analysis





- Pre-mounted load cells. Standard feature which reduces installation time



TS-300 weighbridge.  
Pre-mounted load cell

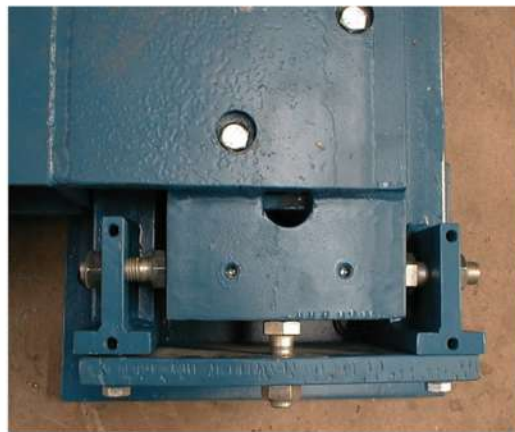


TS-300 weighbridge. Weigh module

- 2 direction bumpers, at each load cell location.  
Prevents transmission of horizontal forces to the ramps, or to the pit walls.



TS-300 weighbridge. 2 direction buffering system



- All steel parts are sandblasted to SA 2,5 and covered with primer  
After weldings and grindings a second layer of primer is applied and then 2 layers of high quality industrial paint(HEMPEL)  
Painting is performed in a closed air conditioned area.  
An important point before applying paint is to remove all welding spatters, as these points could prevent the good application of the paint. As a result, paint remains intact and rust penetration is prevented to the maximum, elongating the structure lifespan.

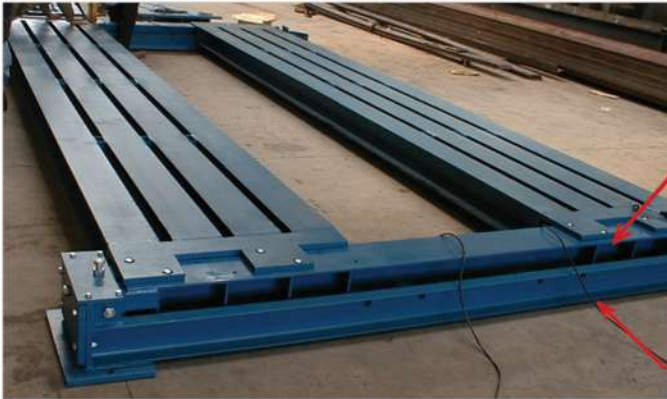


- Hot Galvanization option

Optionally steel parts can be hot galvanized to EN-ISO 1461. This process adds extra resistance to the structure when ambience is saline, acid or corrosive to steel parts.

- Unique Modular Design

Consists of 3 modules. Weigh modules, drive modules and ramps (optional).



Drive Section

TS-300 weighbridge.  
Drive modules with  
relevant weigh module.

Weigh module

TS-300 weighbridge.  
Ramp versions.



- Drive modules Characteristics.

Consist of beams spaced between them letting a space of 50 mm between them (a fact that does not harm the wheel trucks yet adding surface rolling resistance).

In the middle of the drive sections of the platform a gap of 1100 mm exists, a fact that does not cause any problem to large trucks (4-6 axles).



TS-300  
weighbridge



- **Absolute Mobility**

Ability to be dismantled and relocated to a new site very quickly. Can be installed on a concrete or asphalt surface within a day with the use of a small forklift.



TS-300 weighbridge. Easy relocation

- **Versatile**

Constructed in standard sizes (Length: 6 to 18m and Width: 3m). It can be also manufactured in different sizes and be accompanied with various options according to your special needs



TS-300 weighbridge of different dimensions

- **Easy Service & Maintenance**

Practical access to load cells and junction box through the removable covers at the side of the platform



TS-300 weighbridge. Practical access to load cells



- **Low Profile**

This weighbridge has the lowest profile of its category, only 300mm yet 100mm free space between the platform



TS-300 weighbridge. Low profile and sufficient space below the drive modules

- In addition to the pre-mounted load cells option, pre-mounted steel foundation and ramps can be fixed and easily installed, reducing installation time to the maximum. This feature turns the whole weighbridge easily relocatable, a very good solution for renting or leasing weighbridges as well for contracting and mining companies and finally for weighbridges on rented areas



TS-300 weighbridge.  
Weigh modules placement  
/installation



TS-300 weighbridge.  
Drive section placement  
/installation

D1



TS-300 weighbridge. Installation



## ■ TS-300 HD (HEAVY DUTY)

D1

- TS-300 HD is a more reinforced version of standard model TS-300, with smaller middle gap (600mm instead of 1000mm)



TS-300 HD weighbridge



TS 300 SERIES EX WORK									
MODEL		LENGTH m	WIDTH m	MAX T/A	MAX W/B STATIC C	MAIN BEAMS	GAP IN THE MIDDLE mm	NUMBE OF LOAD	TOTAL HEIGHT
TS 300	PIT LESS MOUNTED	18	3	10	60	HEA 200	1100	8	300
TS 300	PIT LESS MOUNTED	16	3	10	60	HEA 200	1100	8	300
TS 300	PIT LESS MOUNTED	15	3	10	60	HEA 200	1100	8	300
TS 300	PIT LESS MOUNTED	12	3	10	60	HEA 200	1100	6	300
TS 300	PIT LESS MOUNTED	10	3	10	60	HEA 200	1100	6	300
TS 300	PIT LESS MOUNTED	6	3	10	60	HEA 200	1100	4	300
TS300 HD	PIT LESS MOUNTED	18	3	12	72	HEA 200	600	8	300



## ■ CC 9915 (CONCRETE PREFABRICATED WEIGHBRIDGE) PITLESS & PIT MOUNTED

- General description:

A full prefabricated heavy duty concrete weighbridge

- Finite element optimized structure

**Basic Characteristics:**

- o Composed of 2 modules of 9x3m.

- o Factory pre-fabricated.

- Concrete Quality C40/50.

- Each module has 4 load cells.

- Height 500mm.

- Needs only 1 low bed Megatrailer truck for transportation.

- Suitable for surface mounted installations.

- Load cells are side accessed as they are placed below the weighbridge platform, in case of pitless

- 2 direction bumpers, at each load cell location. Prevents transmission of horizontal forces to the ramps or to the pit walls.

- All steel parts are sandblasted to SA 2,5 and covered with primer

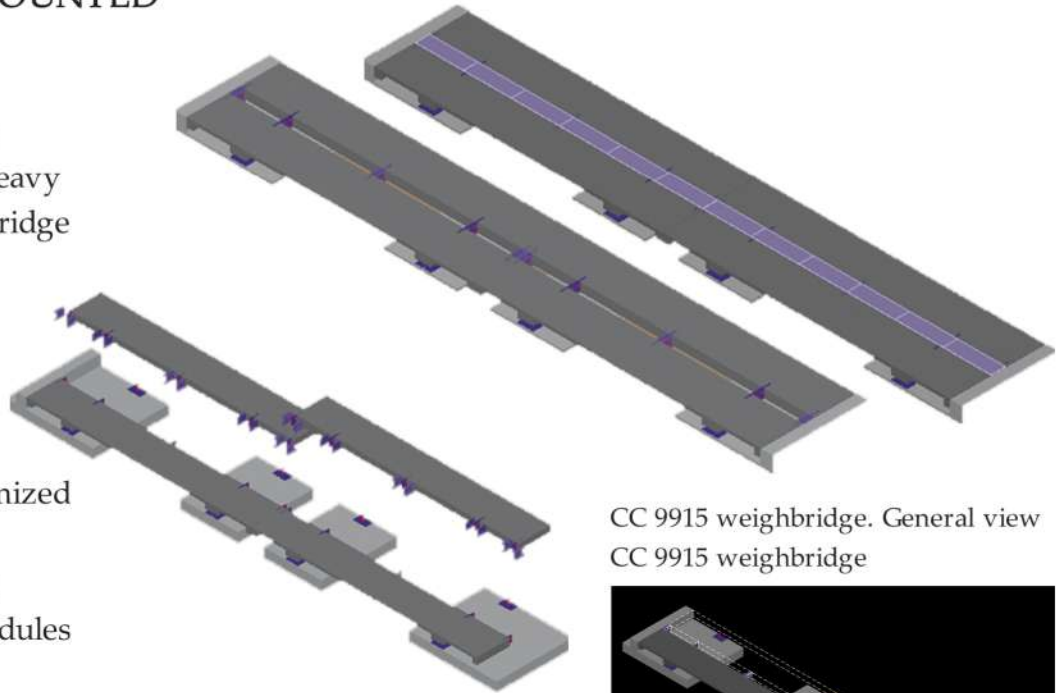
After weldings and grindings a second layer of primer is applied and then 2 layers of high quality industrial paint(HEBEL).

Painting is performed in a closed air conditioned area.

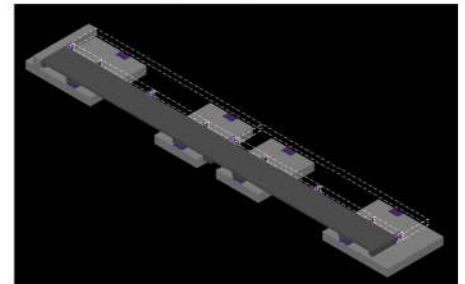
An important point before applying paint is to remove all welding spatters, as these points could prevent the good application of the paint. As a result, paint remains intact and rust penetration is prevented to the maximum, elongating the structure lifespan.

- Hot Galvanization option

Optionally steel parts can be hot galvanized to EN-ISO 1461. This process adds extra resistance to the structure when ambience is saline, acid or corrosive to steel parts.

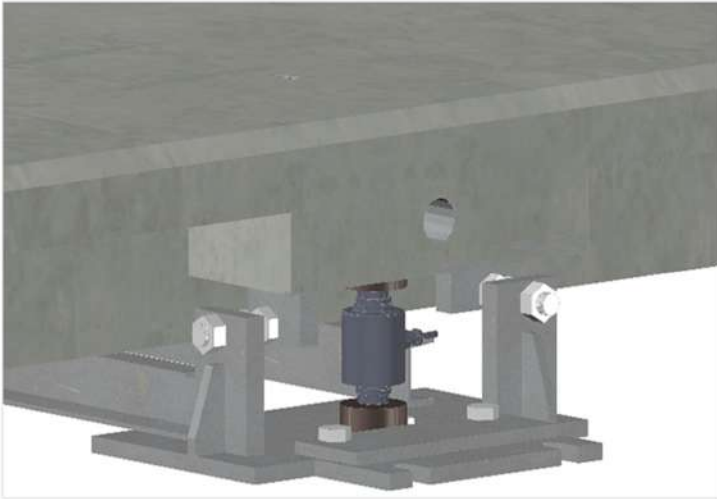


CC 9915 weighbridge. General view  
CC 9915 weighbridge





- Pre-mounted load cells



CC 9915 weighbridge.



For steel or concrete entry exit plates or concrete foundations please have a look to our separate chapter (page 45 - 46)

Extra advantages

- o Ideal solution for application with heavy traffic.
- o Standard static capacity of 70tn (12t/a + 20% dynamic loading).
- Pitless mounted CC9900 can be complemented with optional concrete foundations and ramps.

CC 9915 SERIES EX WORK									
MODEL		LENGTH m	WIDTH m	MAX T/A	MAX W/B STATIC C	MAIN BEAMS	GAP IN THE MIDDLE mm	NUMBE OF LOAD	TOTAL HEIGHT
CC 9915	PIT LESS MOUNTED	18	3	12	70	-	-	8	500
CC 9915	PIT LESS MOUNTED	12	3	12	70	-	-	8	500



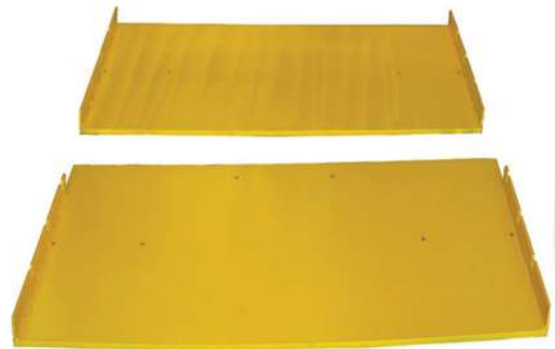
## ■ STEEL OR/AND CONCRETE RAMPS AND FOUNDATION OPTIONS

- How to use this page:

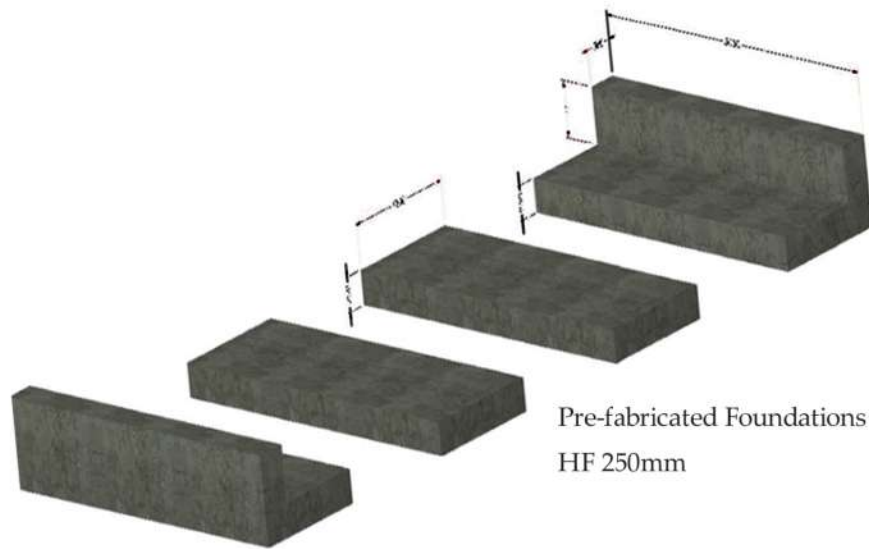
1. First choose the weighbridge model and the length you are interested for
2. Note the height of the platform placed on load cells
3. Choose the type foundation of the foundation your application requires



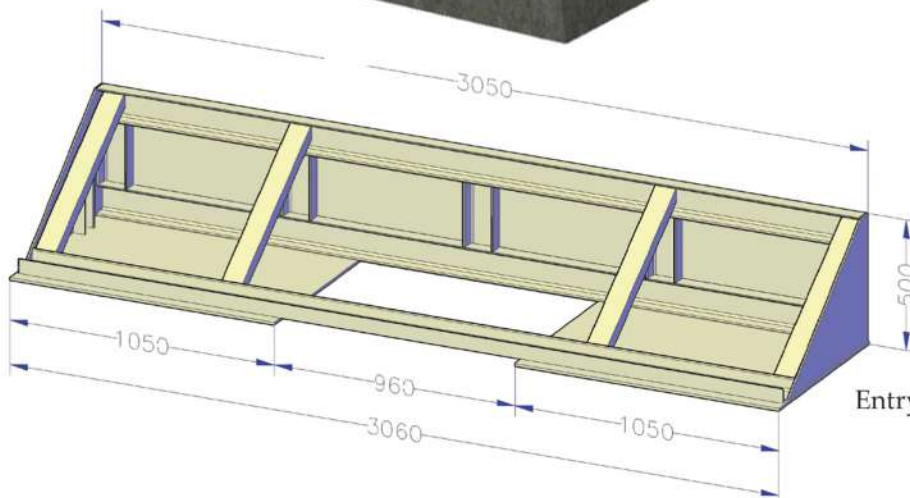
Steel Foundation SF 140  
HF=140mm



Steel Foundation SF 15  
HF=15mm



Pre-fabricated Foundations CF 250  
HF 250mm



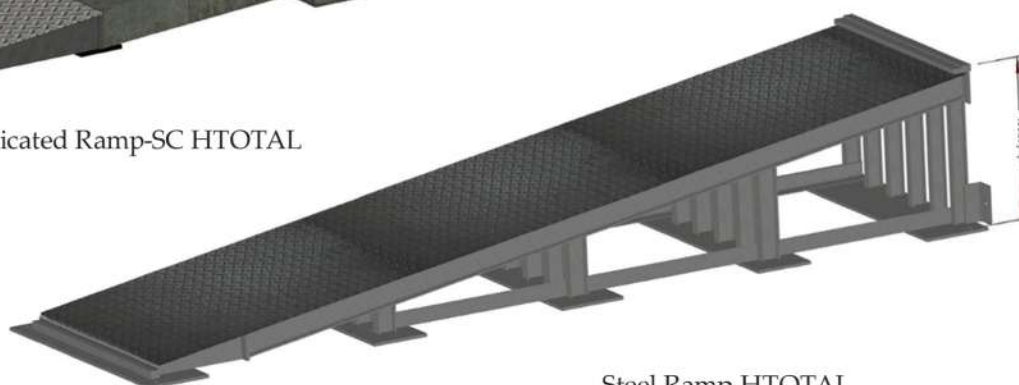
Entry - Exit vertical steel plate



4. Add this number to the height under paragraph 2.  
And this number is your required ramp height (HTOTAL).
5. Choose the right ramp for your application based on height.



Pre-fabricated Ramp-SC HTOTAL



Steel Ramp HTOTAL

6. Calculate the total weight (adding individual weights) of your choice and this gives you the transportation cost and crane required

FOUNDATION & RAMPS EX WORK PRICES			
STEEL RAMPS		SHIPPING WEIGHT kg	
	H		
	300		2470
	330		2040
	360		2250
	375		2500
	420		2040
	500		2840
		SHIPPING WEIGHT kg	
VERTICAL STEEL ENTRY EXIT PLATE			780
STEEL FOUNDATION SF 140 FOR A PAIR OF LOADCELLS			350
STEEL FOUNDATION SF 15 FOR A PAIR OF LOADCELLS			480
		SHIPPING WEIGHT kg	
CONCRETE RAMPS			
	steel entry ramp H2=200		230
	H1=300		3.370
	330		3.990
	360		5.170
	375		5.490
	420		6.670
	500		8.850
		SHIPPING WEIGHT kg	
VERTICAL CONCRETE ENTRY EXIT PLATE			
	H1=300		4.125
	330		4.238
	360		4.350
	375		4.406
	420		4.575
	500		4.875
2x LOAD CELL CONCRETE BASE			1.875



## ‘How to choose the right tones per axle weighbridge model’

### Introduction:

Many times customers do not clearly have an understanding of their weighbridge loads.

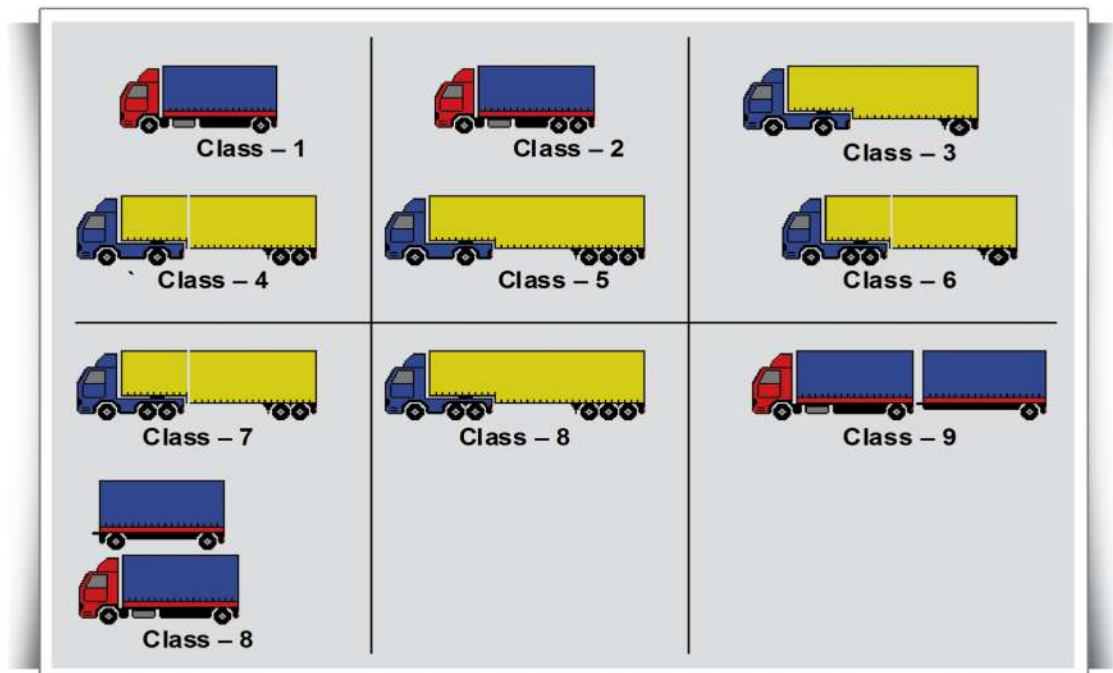
They usually use a total weighbridge capacity number

ie: 80t/ 100t /120t, but miss the major point which is the axle weight.

We tend to focus on axle weighing in order to understand if loads are concentrated or not.

So in order to help customers decide on max axle load we use the following procedure:

1. Ask your customer what is maximum truck weight (i.e.60t /70 or even 120t)
2. Ask your customer to define from below chart which type of truck he is referring to



### Calculation example

#### Data

- Customer asks for 80 t weighbridge capacity
- Max truck weighing is 65 t
- Truck class 8 (from above diagram)

#### Calculation steps

- First you have to abstract the first axle of truck
- Then divide the number of axles with maximum truck weight (in this case 5 axles) resulting the max axle loading.  $65 / 5 = 13\text{t}$  per axle
- Now choose the right WEIGHING ENGINEERING model based on the max axle weighing

We advise to take into account following remarks

1. Building industry usually weights heavy loads (sand, gravel)
2. Be very careful on off road trucks, get model number Google it and find out exact axle loads.
3. In case of frequent daily weighbridge use, such as 60 weightings and more, its better to select 8mm top plate



### Inclined Weighbridge Solution

A weighbridge, according to a common belief, should be installed above a horizontal surface in order to produce reliable results. We can study your application and design a solution, that allows the installation of a weighbridge on a sloping surface, with a maximum inclination of  $10^\circ$ . Considering a weighbridge of 18m long, this means that the height difference between the entry and the exit point would be at maximum 1.8m.

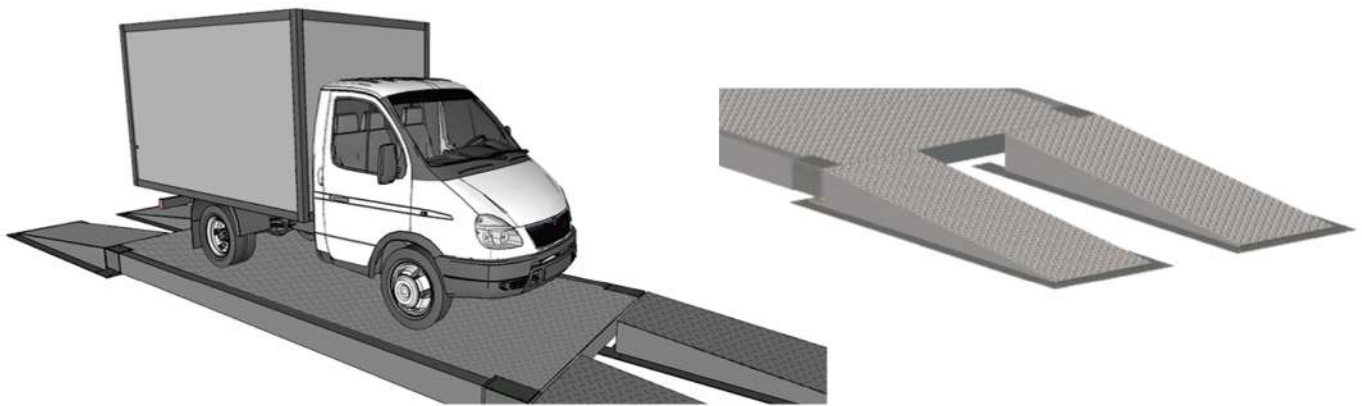




## 10t Capacity – Small Truck – Weighbridge

### Description

- A completely steel, robust weighbridge consisting of a single drive deck
- Suitable for surface installations
- Low profile of only 245mm
- Can weigh vehicles with two truck axles of 5t each
- Minimum yard space is demanded for the installation of the whole weighbridge
- Light construction, easy to relocate; a standard 2t forklift truck will do for the loading/unloading
- Optional galvanization to protect scale against deterioration
- Perfect addition to applications, such agriculture and logistics



**Standard Dimensions**

Tons/ Axle	Model	L (m)	W (m)	H (mm)	No of LC
5	SMALL-TRUCK	5	2.2	245	4

### Options

#### Prefabricated Steel Transportable Ramps

A set of four steel entry and exit ramps with durbar top plate are available as an option with the following specifications (DIN8119): Width: 950mm - Height: 245mm - Length: 2500mm



# Weighbridge spare parts Weighbridge automation systems & accompanied equipment





## Weighing Indicators

### Weighing Indicator VT300



Aluminum housing



Stainless steel housing

- Aluminum or stainless steel AISI 304 housing
  - LCD, 16 digit, 14.5mm display
  - 27 key alphanumeric and functions keyboard
  - Two opto isolated weight setpoints
  - Alibi (Flash) memory and programmable database of transaction records
  - Aluminum enclosure (IP40) or Stainless steel enclosure (IP65)
  - OIML R76 (10000 divisions) and EU Type approval
  - Excitation for up to 10 strain gauge load cells, 350 each (or more)
  - Real time clock
  - Two serial ports with printing and networking
  - Weighing and counting operation modes
- Mains electricity supply

### Weighing Indicator VT300D



Aluminum housing



Stainless steel housing

- Supports digital and analog load cells
  - LCD, 16 digit, 14.5mm display
  - 27 key alphanumeric and functions keyboard
  - Two opto isolated weight setpoints
  - Alibi (Flash) memory and programmable database of transaction records
  - Aluminum enclosure (IP40) or Stainless steel enclosure (IP65)
  - OIML R76 (10000 divisions) and EU Type approval
  - Excitation for up to 10 strain gauge load cells, 350 each (or more)
  - Real time clock
  - Two serial ports with printing and networking
  - Weighing and counting operation modes
- Mains electricity supply



### Remote Display RD10



Aluminum housing

- LED, 6 digit, bright and highly visible, 57mm red display
- Digit for digit replication from the transmitting VT indicator
- Stainless steel construction, IP65
- RS232 or RS485 or 20m A.C.L. Interfaces
- Low power consumption
- Baud rate and data format DIP switch selectable

### Remote Display



- LED, 2 Line, 8 digit, bright and highly visible, 120mm yellow display
- Auto light adjustment
- Weight and driver information display
- Aluminum construction, IP54
- RS485 Interface
- Low power consumption

### Remote Display RD650i



Aluminum housing

- LED, 6 digit, bright and highly visible, 57mm red display
- Connection with LD5218i
- Stainless steel construction, IP65
- RS232 or RS485 or 20m A.C.L.
- DIP switch selectable serial interface / continuous data output
- Power supply 12Vdc/ 250mA



### Analogue Junction Box (AJB)



- Connection of 4, 6, 8 or 10 load cells
- Aluminum enclosure (IP66) or Stainless steel enclosure (IP65)
- Integrated surge protection
- Cable ST. ST. GLANDS PG9 (cable diameter 3-9mm) or PLASTIC GLANDS PG11 (cable diameter 6-12mm)
- Strain relief cable fittings
- EMI/ RFI safe

### Digital Junction Box (DJB 4)



- Connects up to 4 analog load cells, offering the advantages of a digital load cell configuration
- High performance A/D Conversion
- Conversion rate up to 40 measurements per second, analogue and digital filtering
- Stainless steel (IP65) enclosure
- Serial interface RS485 with networking capability
- Windows based software for scale parameter setting and calibration



# Load Cells

## RC3 Stainless Steel Load Cells

### RC3



- Self centering rocker column analog load cell
- Wide range of capacities from 7,5T to 300T
- Stainless steel, IP68 with complete hermetic sealing
- Self restoring design
- High input resistance
- Integrated surge protectors
- OIML approval to C1 (Y=5000), C3, C3 MI8 and C4 (Y=15000)
- NTEP approval to 10000 intervals, Class III L (for 7,5 to 100T)
- ATEX hazardous area approval for Zone 0, 1, 2, 20, 21 and 22
- FM hazardous area approval

## RC3D Stainless Steel Load Cells

### RC3D



- Digital version of RC3 rocker column load cell
- Capacities of 30, 40 and 50T
- Stainless steel, IP68 with complete hermetic sealing
- Self restoring design
- Built in microcontroller and A/D conversion
- Easy communication (RS485) and fast system setup
- Individual load cell communication independently from others
- Improved handling of corner adjustment, system calibration, fault finding and load cell replacement
- OIML approval to C1 (Y=5000), C3, C3 MI8 and C4 (Y=15000)



### ASC Stainless Steel Load Cells

ASC



- Self aligning single column analog load cell
- Capacities of 30, 40, 50 and 60T
- Stainless steel, IP68 with complete hermetic sealing
- Built in surge protection tubes (GTDs)
- OIML approval R60, 6000d, NTEP class IIIIL, 10000 divisions

### DSC Stainless Steel Load Cells

DSC



- Digital version of ASC load cell
- Capacities of 30, 40 and 50T
- Stainless steel, IP68 with complete hermetic sealing
- Internal lightning protection
- Internal diagnostics
- Digital output via RS485 or RS422 interface
- Maximum transmission distance 1200m
- OIML approval R60, 4000d



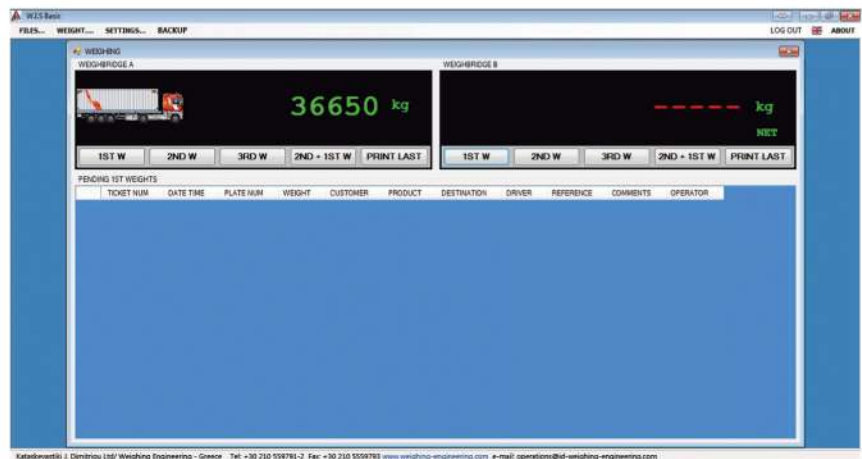
# Weighbridge software & automation systems

## W.I.S.: Weighbridge Informa on Software

A flexible, simple to use, yet powerful, weighbridge operation software, which will instantly provide you with valuable informa on on any load that passes over your scale, whether you are receiving raw materials, dispatching finished products or operating commercial weighing stations.

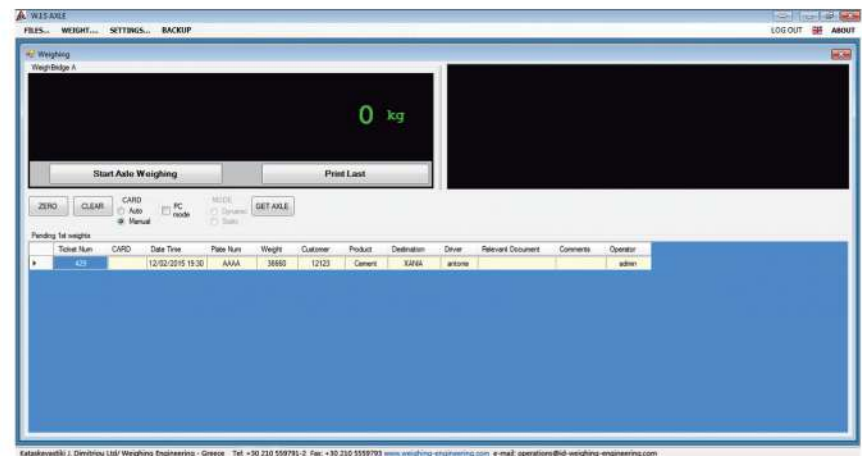
### W.I.S. B

- Windows based
- Connectivity up to 2 weighbridges
- Basic functions: collection, display and registration of weighing data
- Master of Customers, Vendors, Trucks, Carriers, Products, Destination
- User login with different password and security levels
- Programmable weightickets
- File/ Report extract to csv format
- Multilanguage selection



### W.I.S. AXLE

- Windows based
- Connectivity of 1 axle weigher
- Static or In Motion Weighing (set up selectable)
- Semi automatic/ Manual weighing operation (RFID Reader)
- Basic functions: collection, display and registration of weighing data
- Master of Customers, Vendors, Trucks, Carriers, Products, Destination
- User login with different password and security levels
- Programmable weigh Tickets
- Printing Total and/or Axle Weight
- File/ Report extract to csv format
- Multi - language selection





## W.I.S.: Weighbridge Information Software

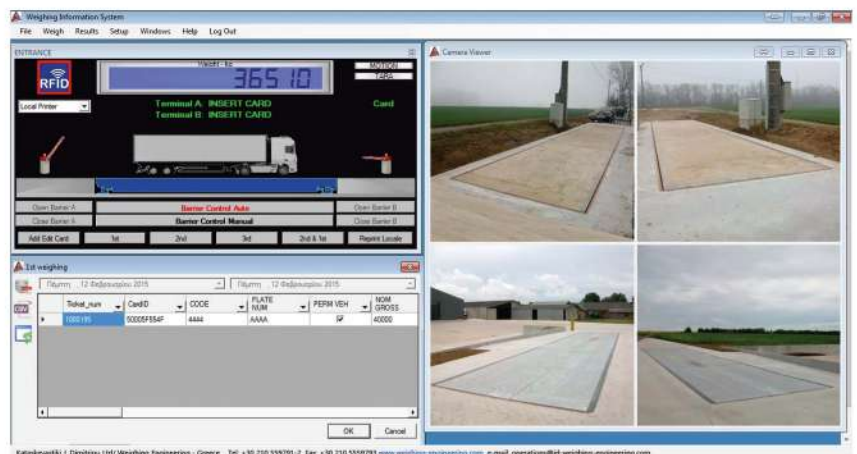
### W.I.S. C

- Windows based
- Connectivity up to 2 weighbridges
- Connectivity up 2 cameras per weigh-bridge (total 4pcs)
- Weigh snapshots are saved in the data-base in the corresponding weighing file
- Basic functions: collection, display and registration of weighing data
- Master of Customers, Vendors, Trucks, Carriers, Products, Destination
- User login with different password and security levels
- Programmable weigh tickets
- File/ Report extract to csv format
- Mul language selection



### W.I.S. PLUS

- Windows based Connectivity up to 2 weighbridges
- Connectivity up 2 cameras per weigh-bridge (total 4pcs)
- Connection of up to two Entry/ Exit Gate Barriers Connection of Traffic Lights Automatic Weighing via Terminals or Semi Automatic (RFID Reader), Or Manual Weighing
- Basic functions: collection, display and registration of weighing data
- 5 Programmable Files (e.g. Customers, Vendors, Trucks, Carriers, Products, Destination)
- 9 Programmable Fields (e.g. commentary, Invoice nr., etc)
- User login with different password and security levels
- Programmable weigh tickets Alibi Printing in local printer
- Error log and User Edits registration Available weigh data in Network via SQL Server Database File/ Report extract to csv format
- Multi language selection





## SUPER INSPECTOR Monitoring System



Super Inspector is an operator prompting Weighbridge Monitoring System adaptable to any new or existing weighing facility providing image information throughout the weighing procedure.

The system offers:

- Continuous supervision of weighing procedure from the operator
- Truck identification
- 2 Snapshots of the truck, front and rear, through a high resolution IP camera
- Reporting options and Weigh Ticket customization through WIS software
- Different security levels
- Reporting (weighing tickets and user defined reports)
- Ability to upgrade to an Unmanned



### Components:

- PC with pre programmed Windows 7/8 and 22" Monitor
- WIS Vision and Licence key
- Surge Protection Panel
- Multiple socket power plug (secondary protection)
- 2 x IP Cameras with Junction Box
- Laser Printer
- Cable Kit system

### Options:

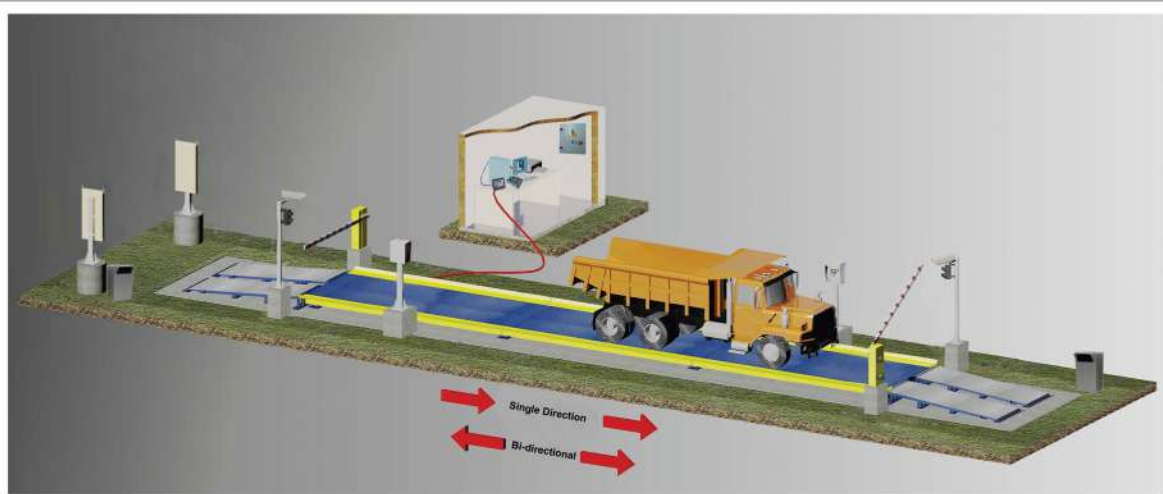
- Gate Barriers
- Induction Loops
- Traffic Lights
- ANPR System
- Surveillance Cameras
- Unattended Terminals
- RFID Reader



## Unmanned Weighing Systems

Unmanned Weighing Systems is the most effective solution to ensure maximum efficiency and security of your weighing installation. Customized with many add ons they can be applied to any weighing facility and suit any requirement. Such systems are easily used by truck drivers allowing 24/7 operation without the need of permanent operator, minimize the time of use as weighing is achieved faster and prolong the overall weighbridge available working period.

Standard package includes connection of up to 2 weighbridges per site upgradeable to a larger number.



### Benefits:

- Provides access and traffic control
- 1st and 2nd weighing may be performed in the same or separate weighbridges
- Reduced manpower/ operation expenses
- Monitor the weighing in real time (when cameras are included)
- Ensure security; loaded material verification, vehicle validation, human error elimination

### Applications:

- Agriculture - Aggregate - Asphalt
- Cement - Feed Mill - Food
- Manufacturing - Mining - Recycling
- Oil and Gas Industry - Transfer stations
- Transportations - Waste management

### Systems may incorporate:

- Gate Barriers
- Traffic lights
- Induction loops
- Position check photocells
- Unattendant terminals
- RFID readers
- Intercom
- IP cameras
- ANPR System
- Radio Active detector



### RDT 18 Unattended Weighing Terminal



Unattended weighing terminal RDT 18, allows 24/7 weighing operation without the need of weighbridge operator.

Basic features include:

- 16 character, LCD backlit display
- Numeric/ Alphanumeric keyboard of 27 keys with tactile feedback
- FIFO Memory of 400 weighing records
- Standard RS232 for PC Connection and RS232/RS485 interface with

Network capability

Add ons:

- RFID Reader
- Kiosk Printer Presenter (RDT 18 P)
- Operator/ Driver prompting
- Intercom (RDT 18 IN)
- Digital Opto isolated I/O
- Front Panel Lighting

Optional features:

- Traffic light for traffic control
- Data recorder (up to 4 million weighing records)
- Ethernet connection
- Supporting Pole/ Column

### RDT 90 Unattended Weighing Terminal



Unattended weighing terminal VT500, allows 24/7 weighing operations without the need of weighbridge operator. More advance option than RDT 18, capable of taking more add ons.

Basic features include:

- 9 digit, LED display with status annunciators and operator dialogue
- LCD display (2x40 characters)
- Alphanumeric keyboard of 33 keys for data entry and flexible operator dialogue
- FIFO Memory of 1000 4000 weighing records
- 4 serial and 1 centronics printer output ports
- RFID Reader



#### Add ons:

- Kiosk Printer Presenter (RDT 90 P)
- Intercom (RDT 90 IN)

#### Optional features:

- Traffic light for traffic control
- Photocells
- Data recorder (up to 4 million weighing records)
- Ethernet connection
- Gate Barriers
- Induc on Loop
- Supporting Pole/ Column

### TPC Unattended Weighing Terminal



Unattended weighing terminal TPC, allows 24/7 weighing operations without the need of weighbridge operator.

Features include:

- Touch SVGA TFT LCD Display Size 12.1"
- COM (RS 232), USB 2.0, LAN (10/100/1000), PS/2
- Weighing Software
- RFID Reader
- Panel mounted Printer

The terminal is manufactured on project basis and is appropriate for multiple weighbridge automatic weighing systems such as waste plant, receiving, quarries etc.

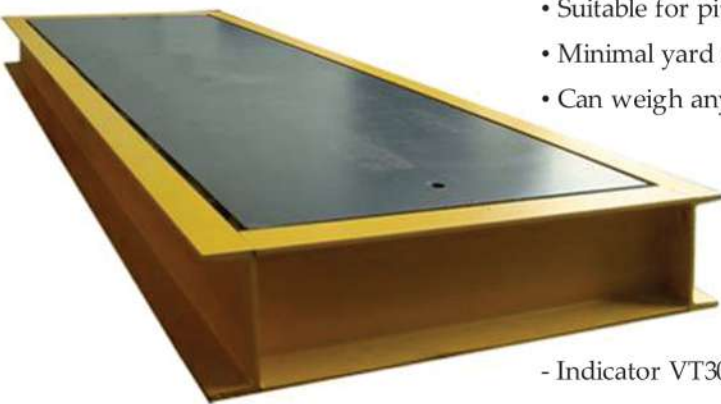


# Axle weighing systems

## LESIM - In Ground Axle Weigher

### Description

- Static / Dynamic Weighing in stationary applications
- A solid construction, suitable for weighbridge operations (1'' & 2'' weighing) or weighing of axles for loading control purposes
- Suitable for pit mounted installations
- Minimal yard space required
- Can weigh any type of truck and is ideal for large multiaxle and articulated vehicles
- Completely self contained with:
  - S teel pit
  - 4 compression type load cells
  - Stainless steel junc on box
- Indicator VT300 aluminium with axle weigh so ware.



### Standard Dimensions

Tons/ Axle	Model	L (m)	W (m)	H (mm)	No of LC
15	SMALL - TRUCK	5	2.2	245	4

### Indicator Features

- Desk Mounted, powder coated aluminium (IP40)
- Dimensions (mm):206(L) x 140(H) x 135(W)
- 16 character, LCD, backlit display, 14.5mm digit height
- Pseudo alphanumeric membrane keyboard of 27 keys, with tactile feedback
- RS232, RS485 standard ports
- 1 x digital input, 2 x digital outputs (programmable as set points or other control outputs)
- Axle weights are registered and transmitted automatically





## Group Axle Weighbridge



### Description

- Static weighing of axle groups – group weights are summed to provide total truck weight.
- A solid, robust construction that costs much less than a full length weighbridge and occupies less space.
- Can be a surface or pit mounted weighbridge, from 4m up to 8m long, dependant on the type of trucks to be weighed.
- Optimum solution for large multi axle



```
DATE:26-09-13 10:17 N:00261
VEHICLE : AD123      MP:001
CARD I.D :
CLIENT :
PRODUCT :
Axle 01 Gross: 10000kg
Axle 02 Gross: 10000kg
1st WEIGHT:<20000kg>
DATE:26-09-13 10:17:53 N:00262
VEHICLE : AD123      MP:001
CARD I.D :
CLIENT :
PRODUCT :
Axle 01 Gross: 15000kg
Axle 02 Gross: 15000kg
1st WEIGHT: 20000kg
2nd WEIGHT:<30000kg>
NET WEIGHT: 10000kg
```

### Weight Indicator

Group Axle weighbridge is coupled with weighing indicator model LD5218 with dedicated software for group axle weighing.

Weighing is performed in static weigh mode, group by group of axles

- Desk Mounted, powder coated aluminium (IP40)
- Dimensions (mm): 206(L) x 140(H) x 135(W)
- 16 character, LCD, backlit display, 14.5mm digit height
- Pseudo alphanumeric membrane keyboard of 27keys, with tactile feedback
- RS232, RS485 standard ports
- 1 x digital input, 2 x digital outputs

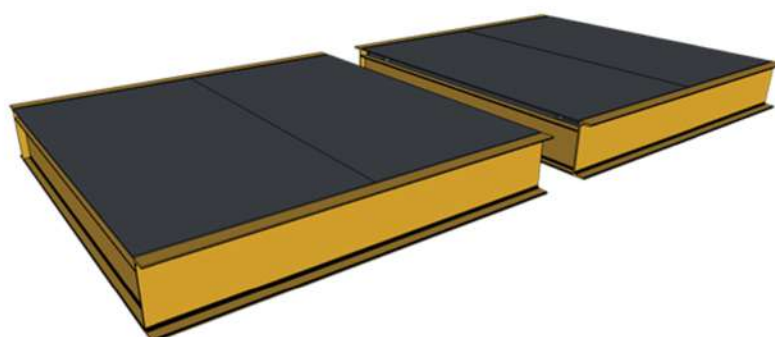


## JUMBO truck dumpers -Axle Weigher



### Description

- Portable – Easy to relocate system
- Long lasting heavy duty construction
- Static/Dynamic Weighing; High accuracy: Static:0,03% and Dynamic:0,5-1%
- Automatic/Operator and Static/Dynamic operation modes available
- Flintec OIML approved load cells
- Stainless steel analogue junction box



### Standard Dimensions

Truck Type	Pad Capacity (t)	Total Capacity (t)	L (mm)	W (mm)	No of Pads
Volvo A40	60	120	3300	1600	2
Cat 777F	100	200	3000	2200	2



## WEIGHBRIDGE COMPONENTS AND SPARE PARTS

We have a wide range of components to combine with your weighbridge, axle weigher of industrial scale. Whether you need a printer for the printing of the weighing tickets or a more complex system to protect your weighbridge against deterioration, we can assist you with your request.

### Printers & Weighing Tickets

#### EPSON LX-350



- Power efficient with an energy use of 27W on operation mode.
- Ribbon yield of 4m characters makes it a highly economical printer.
- Many possibilities of integration: Parallel, Serial and USB interfaces.
- Compact design that fits neatly onto desks.



- Available dimensions:
  - 3.66 x 5.99"
  - 5.5 x 5.99"
- White CB paper 56gr
- White or Canary CF paper 57gr
- Unperforated
- No breaks and clarity in printing



- Available dimensions:
  - 3.66 x 5.99"
- White CB paper 56gr
- White or Pink CFB paper 53gr
- White or Canary CF paper 57gr
- Microperforated
- No breaks and clarity in printing



## WEIGHBRIDGE COMPONENTS AND SPARE PARTS

### CITIZEN CT-S310



- Reliable printer with thermal head life of 100 million pulses and auto cutter life of 1 million cuts.
- High speed, 150 mm/sec, two-colour or monochrome thermal printing.
- Many possibilities of integration: USB and serial, parallel, or Ethernet.
- Versatility



- Thermal paper with width 80mm
- Core is 13
- Color: White
- Provides crisp, clear, black printings

### EPSON TM-U295



- Highly reliable printer with mean time between failures of 180.000 hours and mean cycles between failures of 7 million lines.
- Four print sizes and four printing directions.
- "Page mode" feature allows printing anywhere on the slip.
- Small sized printer requiring little desk space, with operator-friendly features.



#### Two (2) Part Color NCR Paper

##### Available dimensions:

- - 100 to 190mm (W x L)
- White & Canary CS paper
- Perforated and unprinted
- Sets of 250 sheets

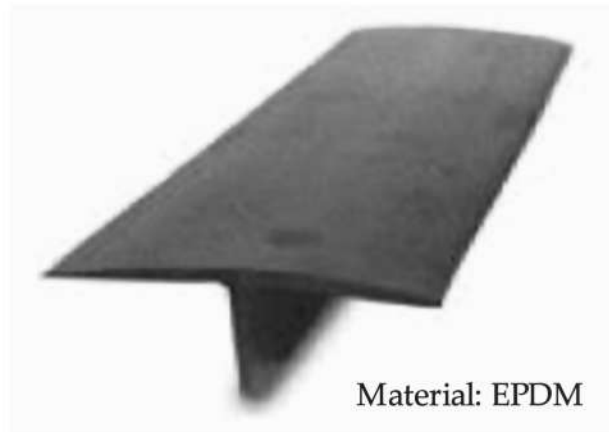
#### Three (3) Part Color NCR Paper

##### Available dimensions:

- - 100 to 190mm (W x L)
- White, Canary & Pink CS paper
- Perforated and unprinted
- Sets of 250 sheets

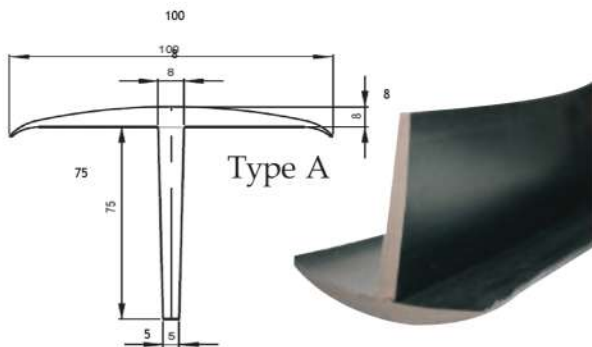


## T-Profile Rubbers

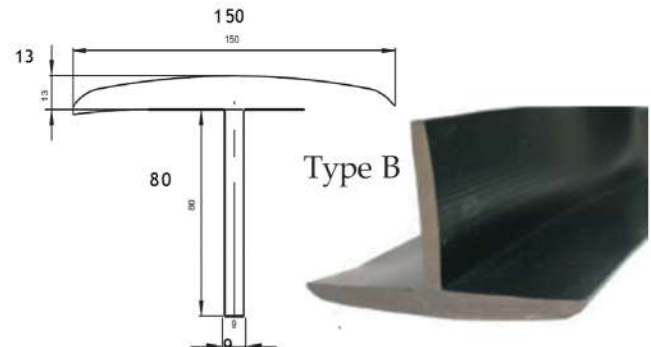


Material: EPDM

Available in 2 different types, the T-rubbers are recommended for the pit and surface mounted weighbridges to fill the gap between deck and pit walls or foundations, to protect deck against deterioration, to prevent dirt from entering the pit and prevent any mistakes during the weighing procedure. They are flexible, robust, heat and weather-resistant EPDM rubber in black color and available in standard lengths depending on weighbridge dimensions.



(Recommended for the longitudinal sides)



(Recommended for the transversal edges)

## Temporary Columns

Temporary columns are used to facilitate weighbridge installation whether in pit or pitless version, avoiding misuse or damage of the weighing instruments.







## Heating Cables

- Especially designed round, twin conductor cables, with one cold lead.
- 100% coverage, aluminium foil with tinned copper drain wire covered with flexible PVC sheath.
- 300 W/m<sup>2</sup> heat output
- The heating cables are connected to an external thermostat with LED indications that adjusts temperature.
- The cables start heating when temperature drops below +5°C degrees. Thus, the surfaces of the weighbridge and ramps remain above 0°C degrees, causing the snow and ice to melt.
- They can be installed on both pit and surface weighbridges, either concrete or steel.

## ■ LSPD



- Protects Power supply, Loadcell, Junction Box, Indicator and Communications.
- Reliable primary-secondary protection high surge capacity.
- Does not affect weighing accuracy.
- Auto-resetting; No preventive maintenance needed.
- Weather proof industrial enclosure with rail terminals and Equipotential bonding.
- Standard package comprises of a lightning protection panel that consists of a heavy duty industrial panel, with rail terminals.



## Radiation Detection System

VRDS identifies the gamma rays emitted by the presence of radioactive material loaded in vehicles while these are in motion. The recommended speed of the vehicle is 4-10 km/h.

The measurement system consists of:

- Two plastic scintillation detectors (IP65) of high sensitivity with integrated electronics for signal processing placed on concrete blocks, around 1 meter before the weighbridge. The detectors are managed by the LB112 evaluation unit, usually installed inside a weighing room, along with the other electronics.
- The evaluation unit LB112 for monitoring. A stainless steel wall unit with environmental protection IP65. The sound and lights alarm built into the unit of assessment is activated, when the pre-set thresholds are being exceeded. The permitted thresholds are set during the commissioning of the system.

- The VRDS can store up to 4000 measurement data sets, without the use of a computer.

It can be connected directly to:

- a local network by an Ethernet card, or
- a PC through a RS485 or RS232 link or a weighing system to link the measurement files to the weight ticket, or
- a printer.



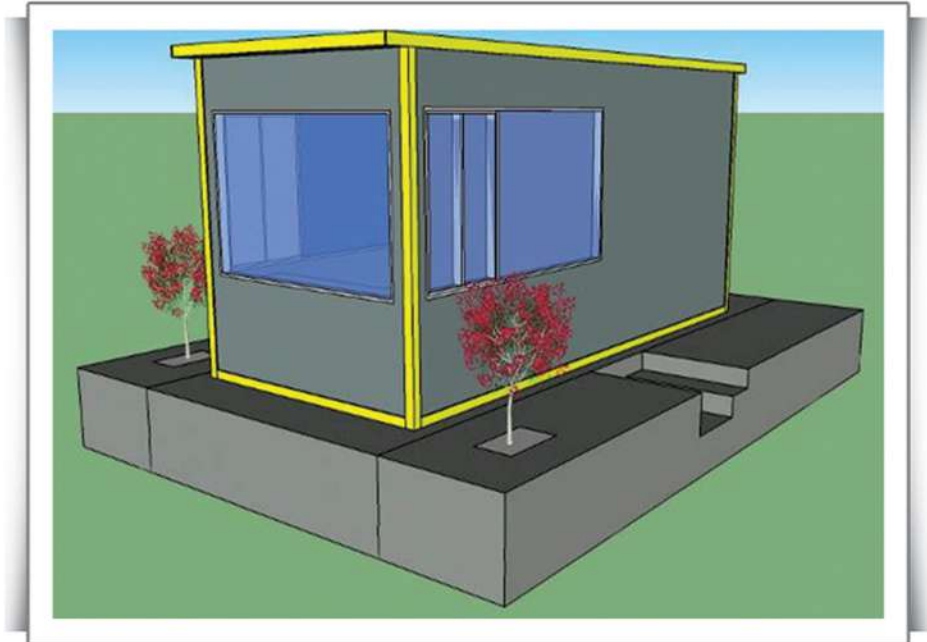
## Benefits to your weighbridge:

- Automatic connection to the weighbridge
- Prohibits radioactive materials from entering a site
- Prevents radioactive contamination of soil, waste, recycling, scrap, products and personnel
- VDRS is easily operated with minimal training.





## CONTROL ROOM



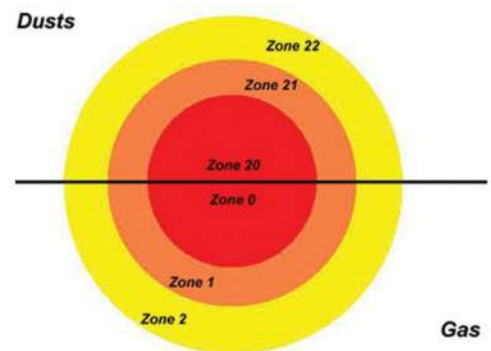
- Preassembled control room ready for immediate operation
- With overall dimensions: 2 x 2.2 x 2.45m (LxWxH), it can be easily transported into a single container
- Wide aluminum windows with, with impact and heat isolated double glass and anti-sun filters
- Energy efficient design, with corrosion resistant finish
- Door with locker
- Electric panel with possibility of expansion
- Panel polyurethane 8cm thick with anti-flame foam
- 6 plugs around the room
- Indoors and outdoors lights and lighted exit / emergency sign
- Wooden floor covered by plastic tiles



## ATEX WEIGHBRIDGE APPLICATIONS

• A Hazardous Area is an area in which an explosive atmosphere is or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of equipment. Hazardous areas are classified into 2 categories depending on the environment of use: dusts or gas-vapour-mist and 3 zones based upon the frequency of the occurrence and duration of an explosive atmosphere, as follows:

Zones	Definition
Zone 0 / Zone 20 (red)	An area in which an explosive mixture is continuously present or present for long periods
Zone 1 / Zone 21 (orange)	An area in which an explosive mixture is likely to occur in normal operation
Zone 2 / Zone 22 (yellow)	An area in which an explosive mixture is not likely to occur in normal operation and if it occurs it will exist only for a short time.



- Oil & gas production and processing plants
- Oil and gas tankers, drilling ships
- Oil refineries
- Petrochemical and Chemical plants
- Gas pipelines and distribution centres
- Re-fuelling stations or petrol stations
- Underground coal mines
- Printing industries, paper and textiles
- Surface coating industries
- Sewerage treatment plants
- Grain handling and storage and processing (flour-milling industry)
- Sugar refineries
- Light metal working, where metal dust and fine particles can appear
- Woodworking areas

Weighing Engineering can offer fully ATEX- compliant weighbridges available in steel or concrete having many sizes and capacities. Our models feature stainless steel stoppers and holes throughout the surface of the weighbridge (steel weighbridges) or solid construction without hollow surfaces (concrete weighbridges) achieving spark prevention and a clear airflow underneath the weighbridge deck. All the electronics used are also fully compliant with applicable norms and safety regulations per environment of use.



## SILO WEIGHING



For actual weight of the silo material.

Examples of materials measured are: cement, sand, aggregates, flour, grains such as corn, rice or wheat, chemicals etc.

The load cells are bolted onto each of the silo legs and measure the stress and hence the weight in the vessel. The load cells suitable for silo weighing, instead of measuring force, are clamped onto a surface and measure the extension or compression in the surface.

It is based on metal foil strain gauges, which consist of a pattern of resistive foil printed onto a backing material. These are bonded onto the metal of the weigh sensors. They operate on the principle that as the foil is stretched or compressed, the resistance of the foil changes in a defined way. These resistance changes are extremely accurate and stable, allowing the result to be displayed digitally as the weight in the vessel.



### Applications

A wide range of applications, featuring one of the following specifications can be covered:

- Applications with restraining system
- Indoors or outdoors process control applications
- Applications in explosive environments requiring ATEX equipment
- Applications in environments with vibrations
- Applications requiring equipment with IP68 environmental protection
- Applications requiring load cells with 3000 or 6000 accuracy divisions
- PLC automation applications



## Batch Weighing & Dosing Automation

We design, manufacture and install weighing and dosing systems for solids and liquids.

The capacities of our weighing systems range from the dosing of a few grammars to the weighing of large silos and tanks. Included in the systems we provide, there are micro-dosing systems of various types for different kinds of materials. Also, we provide weighing systems that can be combined with various applications, such as bagging systems, check weighing and loss-in-weight systems. Except for the weighing systems, we also provide complete volumetric systems, either with flow-meters and dosing pumps



Examples of Batch Weighing and Dosing Automation Systems



Examples of Batch Weighing and Dosing Automation Systems



Examples of Batch Weighing and Dosing Automation Systems



Examples of Batch Weighing and Dosing Automation Systems / Αυτοματισμοί Δοσομέτρησης Υλικών

Examples of Batch Weighing and Dosing Automation Systems / Αυτοματισμοί Δοσομέτρησης Υλικών





## ■ TRUCK AUTOMATIC WHEEL WASHER SYSTEM



### Developmental Background

Rising dust and the track-out created by the trucks entering a construction site, which soils the road and causes the second rising dust, emerged as a serious environmental issue.

The site workers and the neighboring residents improvised various ways of resolving this health-threatening problem.

Sprinkling the water repeatedly on the road or washing out the truck wheels manually with a high - pressure washer were some examples. However, high cost was inevitable for those methods because they involve the mobilization of a great deal of water and manpower.

It was concluded, therefore, that the most effective way is to prevent the dirt source from escaping from the construction site by maintaining the wheels of incoming and outgoing trucks in clean condition.





As the result, governments, around the world, enacted Environment Preservation Law which requires all the trucks entering and leaving the construction site to wash their tires.



In this context, Weighing Engineering in cooperation with international partners decided to present a full automatic wheel washer product line which conform to various kinds of overseas specifications as a drastic solution thanks to continuous efforts in the development of new technology and new products.

We supply also turn key jobs comprising wheel washers working in series with weighbridges.





## DK-G01EX



Basic version of the DK-Grating. Not self-supporting, simple and durable model for elementary functions in a fixed location.

Dimensions	L 2.200 x W 5.340 x H 1.000 (mm)
Applicable vehicles	Truck width max. 2.800 mm
Main power	15,80 Kw
Gross weight	4.000 Kg
Sensing	Single photo sensor
Submersible pump	15 Kw x 380/460 V x 3 Ø x 50/60 Hz
Scraper motor	0,75 Kw x 380/460 V x 3 Ø x 50/60 Hz
Water spraying pressure	2,5~3 Kg/cm <sup>2</sup>
Water tank volume	6.000 L

### Standard equipment:

- ☒ Scraper conveyor
- ☒ Emergency stop
- ☒ Single photo sensor
- ☒ Simple installation thanks to four lifting lugs

< 150  
per day

Dirt level ++



**GOWELL**  
**DK-G01 EX**

## DK-G03EX

Price conscious entry-level model for light applications in sandy environments. Available in galvanized version for increased durability.



### Standard equipment:

- ☒ Emergency stop
- ☒ Single photo sensor

### Optional:

- ☒ Ramps
- ☒ Zinc galvanizing (see picture)

Dimensions	L 2.200 x W 4.390 x H 1.895 (mm)
Applicable vehicles	truck width max. 2.800 mm
Main power	12,50 Kw
Gross weight	3.500 Kg
Sensing	Single photo sensor
Submersible pump	11 Kw x 380/460 V x 3 Ø x 50/60 Hz
Scraper motor	1,5 Kw x 380/460 V x 3 Ø x 50/60 Hz
Water spraying pressure	2,5~3,0 Kg/cm <sup>2</sup>
Water tank volume	2.400 L

< 100  
per day

Dirt level +

**GOWELL**  
**DK-G03 EX**





## DK-Grating 220



Most prized installation in many countries because of its powerful cleaning. Equipped with automatic waste removal scraper for the toughest applications. Monolithic construction and ingenious all-in design with built-in compressor and pump filter.

### Standard equipment:

- ☒ Scraper conveyor
- ☒ Self-cleaning pump
- ☒ Emergency stop
- ☒ Double foto sensor
- ☒ Simple installation thanks to four lifting I

### Optional:

- ☒ 15 Kw Submersible pump

Dimensions	L 2.200 x W 5.748 x H 2.076 (mm)
Applicable vehicles	Truck width max. 2.800 mm
Main power	15,80 Kw
Gross weight	4.500 Kg
Sensing	Double photo sensor
Submersible pump	11 Kw x 380/460 V x 3 Ø x 50/60 Hz
Scraper motor	0,75 Kw x 380/460 V x 3 Ø x 50/60 Hz
Water spraying pressure	2,5~3 Kg/cm <sup>2</sup>
Water tank volume	6.000 L

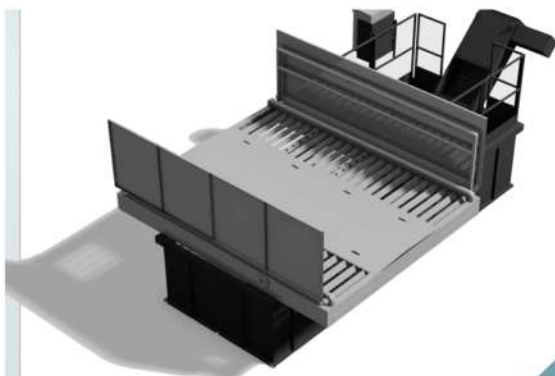
< 500  
per day

Dirt level +++



**GOWELL**  
DK-Grating 220

## DK-Econobridge



Economical standardized model for heavy soiling and intensive traffic.

Available in 400, 600 and 800 drive-through length.

### Standard equipment:

- ☒ Scraper conveyor
- ☒ Emergency stop
- ☒ Single photo sensor
- ☒ Galvanized drive-through basis

Dimensions	L 7.178 x W 4.000 x H 3.063 (mm)
Applicable vehicles	Truck width max. 2.800 mm
Main power	12,25 Kw
Gross weight	3.200 Kg
Sensing	Single photo sensor
Submersible pump	2 x 5,5 Kw x 380/460 V x 3 Ø x 50/60 Hz
Scraper motor	0,75 Kw x 380/460 V x 3 Ø x 50/60 Hz
Water spraying pressure	2~2,5 Kg/cm <sup>2</sup>
Water tank volume	13.700 L

< 300  
per day

Dirt level ++



**GOWELL**  
DK-Econobridge



## DK-Bridge



The Bridge series is your choice if customization is required. Length, width, wall height, number of nozzles and pumps are all modular to your specific needs.

The DK-Bridge is usually part of your purpose-built cleaning system.

Available in 400, 600, 800 and 1200 drive-through length.

### Standard equipment:

- ☒ Emergency stop
- ☒ Double photo sensor
- ☒ Zinc galvanizing

### Optional:

- ☒ Scraper conveyor
- ☒ Self-cleaning pump

Dimensions	L 4.420 x W 6.455 x H 3.088 (mm)
Applicable vehicles	Truck width max. 2.800 mm
Main power	36,07 Kw
Gross weight	8.000 Kg
Sensing	Double photo sensor
Submersible pump	15 Kw x 380/460 V x 3 Ø x 50/60 Hz
Scraper motor (optional)	0,75 Kw x 380/460 V x 3 Ø x 50/60 Hz
Water spraying pressure	3-3,5 Kg/cm²
Water tank volume	Up to 14.000 L

> 500  
per day

Dirt level +++

**GOWELL**  
DK-Bridge



## And more...



### ☉ HEATER

For continuous operation, even in winter conditions, a heater is advised. A sensor switches the heater on when the temperature drops below the temperature of your choice.



### ☉ DAKMI FLOCCULANT INJECTOR

In heavy traffic dirt should fall rapidly. Therefore flocculant may be added by means of an injector. This is connected to the control panel of the tyrewasher and therefore operates automatically.



### ☉ CUSTOMIZATION

We offer solutions for every question. Do you need a specific (concrete) structure, ramps or additional nozzles to spray your truck with a certain product? We will discuss with you how to integrate your need in the tyrewasher.



## GWC 10/60/80

Usable water is getting more and more scarce and therefore more expensive. Yet in the past it was often impossible to use your excess water. Until now. The Geocle - treatment plants purify your water up to 10 - 20 NTU. They can optionally be equipped with automatic pH-measuring and chemical mixing for your acid or basic water to become pH-neutral. Also in combination with your wheel washing system the Geocle-system comes to value as it spares expensive concrete works.



Contaminated water



Before



Under treatment



After

## GWC 60

Mid-range model with a processing capacity of up to 60 m<sup>3</sup> per hour if you want to process large volumes of wastewater.



## GWC 80

Top model for intensive use with flow up to 80 m<sup>3</sup> per hour.

	<b>GWC 20</b>	<b>GWC 60</b>	<b>GWC 80</b>
Dimensions	L 1.500 x W 2.260 x H 2.600 (mm)	L 2.200 x W 5.748 x H 2.076 (mm)	L 2.200 x W 5.748 x H 2.076 (mm)
Capacity	10~20 m <sup>3</sup> /h	40~60 m <sup>3</sup> /h	60~80 m <sup>3</sup> /h
Gross weight	550 kg	2.800 kg	3.200 kg
Main power		6,5 Kw/u (400V)	
Sludge discharge		Auto sludge discharge by motor valve (adjustable frequency)	
Purity level		10~20 NTU	
No. chemical tanks		2	
Optional		Automatic pH-measuring NaOH system (Chemical tank, motor, dosing pump)	







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