

**SOLUTIONS  
FOR WEIGHING  
CONTAINERS**

**SOLAS**  
SAFETY OF LIFE AT SEA





# WHAT IS SOLAS?

SOLAS stands for Safety of Life at Sea, and is an international convention of the International Maritime Organisation (IMO), which has been protecting shipping safety since 1912, with explicit reference to the safeguard of human life in the sea. In July 2016 SOLAS will begin introducing new, important regulations that will make it compulsory to weigh containers before loading them onto ships.

**THE CHECK CAN BE CARRIED OUT IN TWO WAYS:**



**BY WEIGHING THE ENTIRE  
CONTAINER** once it is loaded on



**WEIGHING THE CONTENTS**  
during the container loading phases

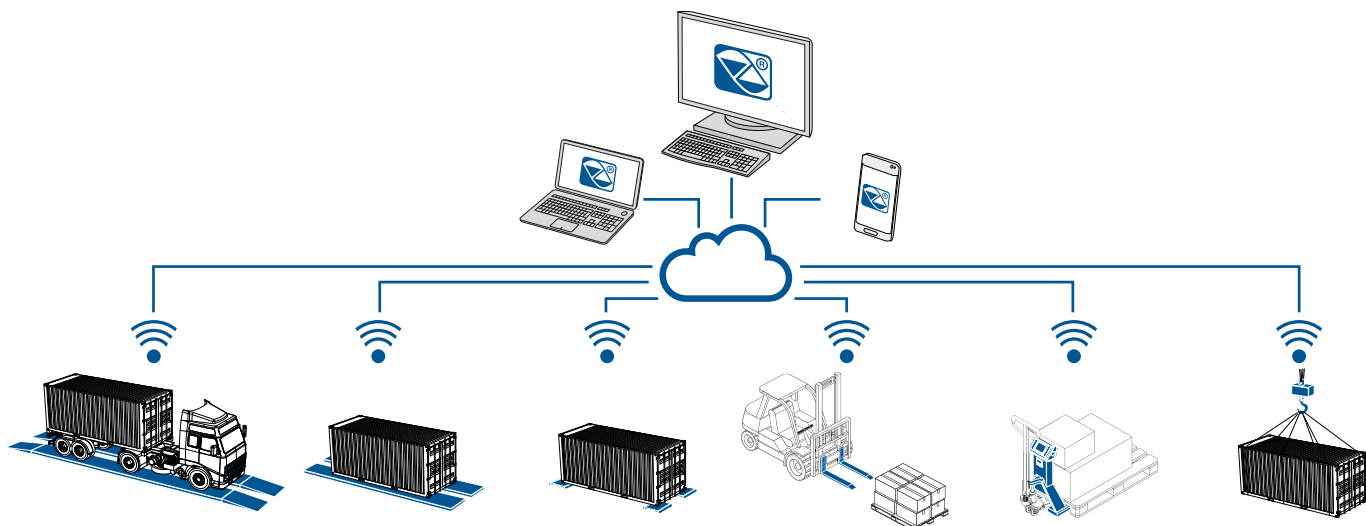
It is forbidden to declare an "estimated" weight.



# DINI ARGEO SOLUTIONS

Dini Argeo is a company that specialises in designing and building weighing instruments, and offers a complete range of approved solutions to weigh containers:

- ✔ **WEIGHBRIDGES** MOBILE OR FIXED
- ✔ **PORTABLE SCALES** WITH MULTIPLE SUPPORTING POINTS
- ✔ **CRANE SCALES** FOR SUSPENDED WEIGHING
- ✔ **PALLET TRUCK SCALES** MANUAL
- ✔ **LIFT TRUCK/FORK LIFT SCALES**







## SCALES

# DTW

## DUAL TRUCK



**MODULAR  
AND EASY  
TO MOVE**

*with a fork lift*

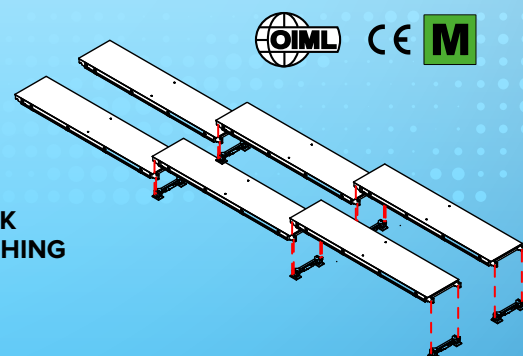


**QUICK  
INSTALLATION, NO  
CONSTRUCTION  
WORK REQUIRED**

*at all*



**QUICK  
WEIGHING**



### VERSIONS

	LOADING SURFACE (m)	LOADING CAPACITY (kg)	DIVISION (kg)
<b>4.5m</b>			
2 BRIDGES + 4 BARS *	2x (4.50x1.00x0.22)	15000	5
		30000	10
<b>9m</b>			
4 BRIDGES + 6 BARS *	2x (9.00x1.00x0.22)	30000	10
		60000	20
<b>13.50m</b>			
6 BRIDGES + 8 BARS *	2x (13.50x1.00x0.22)	30000	10
		60000	20
<b>18m</b>			
8 BRIDGES + 10 BARS *	2x (18.00x1.00x0.22)	60000	20
		80000	50

\* optional up/down ramps

## TECHNICAL FEATURES

- Extremely compact: just 22 cm tall.
- **Striated sheet steel loading surface.**
- Highly corrosion resistance **sandblasting and varnishing process.**
- Weight detection system with patented oscillating load bars
- Dust and water-resistant loading cells.
- Dust and water-tight connecting cables.
- Modularity: it is possible to change the length by adding or removing module pairs.
- Supplied with standard 30 m cable for connection to weight indicator.

## ✓ MODULAR

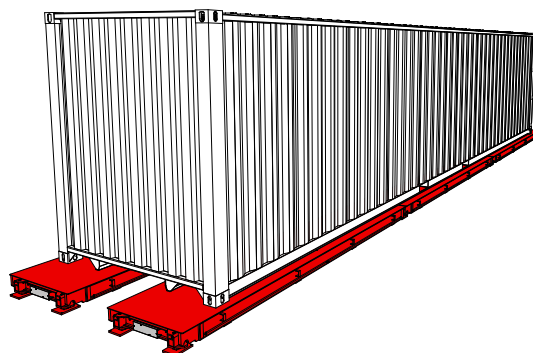
EVERY SYSTEM CAN BE EXTENDED WITH **ADDITIONAL MODULES** MEASURING 4.5m TO ACHIEVE THE REQUIRED LENGTH.

## ✓ SIMPLE TO INSTALL

**EASY TO INSTALL AND MOVE** WHERE NEEDED, THEY OFFER THE PERFORMANCE OF WEIGHBRIDGES WITHOUT REQUIRING ANY CONSTRUCTION WORK FOR INSTALLATION.

## ✓ VERSATILE

IT IS POSSIBLE TO WEIGH CONTAINERS AND VEHICLES.





SCALES

**WWS****EASY  
TRANSPORTATION**  
and set-up.**QUICK INSTALLATION,  
NO CONSTRUCTION  
WORK REQUIRED**  
*at all.*

VERSIONS	LOADING SURFACE (mm)	LOADING CAPACITY (kg)	DIVISION (kg)
<b>WWSB</b>	300x400x58	24000	10
		32000	20
<b>WWSC</b>	400x500x58	24000	10
		40000	20
		50000	20
<b>WWSE</b>	450x700x58	24000	10
		40000	20
		50000	20
<b>WWSD</b>	500x900x58	24000	10
		40000	20
		60000	20
		80000	50

## TECHNICAL FEATURES

- Sturdy structure, built with a special aluminium which guarantees lightweight and also makes them suitable for extreme operating conditions.
- IP68 STAINLESS STEEL loading cells.
- Support base made with special non-slip vulcanised rubber for maximum hold on every type of surface.
- Available in wireless version, without any connecting cables.
- WWS platforms are patented: num. 1.342.302.

## ✓ PORTABLE

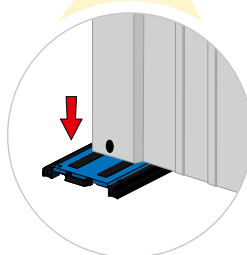
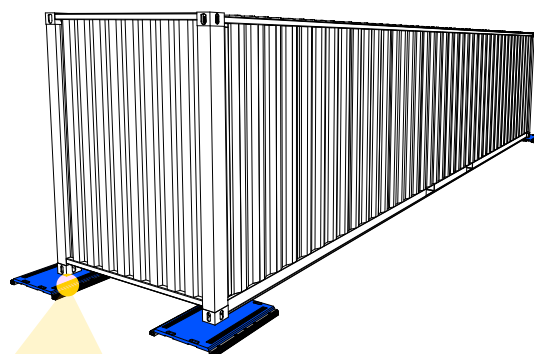
SCALES THAT ARE PORTABLE, EASY TO INSTALL DIRECTLY WHERE NEEDED. THEY CAN BE ANCHORED DIRECTLY TO THE GROUND BY OPTIONAL ACCESSORIES.

## ✓ UNIVERSAL

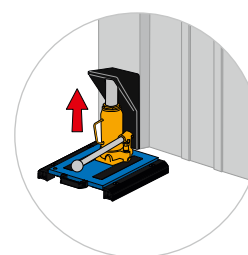
THEY ADAPT TO THE DIMENSIONS OF THE OBJECT BEING WEIGHED, INCLUDING IRREGULAR SHAPES OR ONES WITH MULTIPLE SUPPORTING POINTS.

## ✓ VERSATILE

IT IS POSSIBLE TO WEIGH CONTAINERS AND VEHICLES.



**SOLUTION 1**  
Weigh the container by setting it down on the platforms.



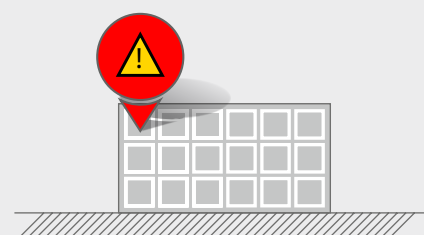
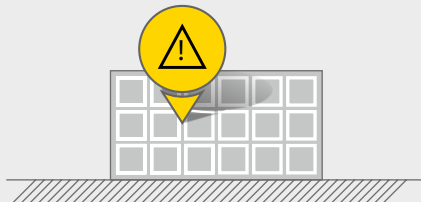
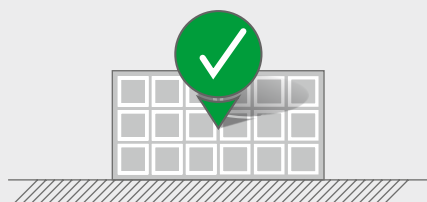
**SOLUTION 2**  
Weigh the container by lifting it, using the jacks standing on the platforms.



## ✓ CENTRE OF GRAVITY CONTROL

**A CRUCIAL ELEMENT FOR THE CORRECT DISTRIBUTION OF THE WEIGHT.**

This weighing system, in addition to the total weight, provides the position of the centre of gravity, which is crucial for loading each container correctly, in order to optimise loading onto ships.







## CRANE SCALES

# MCW HULK



### DESIGNED FOR WEIGHING AND HANDLING CONTAINERS

Most crane scales are designed only for weighing loads and cannot be used for handling them.

Thanks to its special reinforced structure MCW “HULK” is designed for precision weighing while handling loads in complete safety, saving time and optimising load handling operations.

LOAD CAPACITY (kg)	DIVISION (kg)	APPROVED DIVISION (kg)	SAFETY FACTOR
10000	2	10	K5
15000	2	10	K5
25000	5	-	K5
30000	10	-	K4

### TECHNICAL FEATURES

- **Display with RED LED LIGHTS**  
high luminosity, 40 mm.
- Waterproof keyboard.
- Protective screen made of plexiglass, for display screen and keyboard.
- Heavy duty design built with thermo-set coated steel, with IP67 protection against dust and spray.
- Weight detection with loading cell.
- Remote control for remote operation.
- Supply system with removable battery, with optional 24/24 kit.
- Operating temperature range -10/+40°C



## ✓ COMPACT

- THEY DO NOT OCCUPY TRANSIT AREAS.
- THANKS TO COMPACT DIMENSIONS THEY OFFER REDUCED VERTICAL OVERALL DIMENSIONS FOR OPTIMAL USE WITH LIFTING DEVICES (OVERHEAD CRANE, CRANE, ETC.).

## ✓ EFFICIENT

THEY WEIGHT THE SUSPENDED CONTAINER DURING LOADING AND UNLOADING OPERATIONS, THEREBY SAVING TIME.

## ✓ SAFE

**PRODUCTS THAT COMPLY WITH SAFETY REGULATIONS FOR HANDLING SUSPENDED LOADS.**



### MAIN ACCESSORIES



Wireless weight repeaters both fixed and portable.



Intelligent, multi-function wireless repeaters, with built-in printer.



Weighing app for smartphone/tablet, to share weighing data in real time with the company computer system.



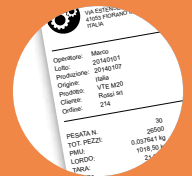
## FORK LIFT SCALES

**LTF - LTW****QUICK**

THEY MEASURE WEIGHT DIRECTLY DURING GOODS HANDLING AND LOADING PHASES, THEREBY SAVING TIME.

**EVOLVED**

- THANKS TO THE ACCUMULATION FUNCTION, THEY PROVIDE THE TOTAL WEIGHT AT ALL TIMES
- MODELS EQUIPPED WITH EVOLVED WEIGHT INDICATOR READ AND PRINT BAR CODES FOR COMPLETE TRACEABILITY OF HANDLING.

**ACCESSORIES****BAR CODE** reader

This issues **LABELS** and **RECEIPTS** with operator code, destination etc

**VERSIONS****LTF  
PLATE****LTF  
WEIGHING  
FORKS**

CLASS DIN 15173	LOAD CAPACITY (kg)	DIVISION (kg)	DIVISION PATENTED
FEM IIA	600/1500	0.2 /0.5	1/2
FEM IIA	1500/2500	0.5 /1	2/5
FEM IIA	500/1000/ 2500	1/2/5	-
FEM IIA	1000/2500	-	2/5/10
FEM IIIA	1000/2500/ 5000	2/5	5/10
FEM IIIA	2500/5000	-	-

**TECHNICAL**

- High thickness **coated steel** structure, with protection rating IP65.
- **Loading cell** mode.
- Equipped with **systems** to protect the loading cells from accidental impact.
- Power supply with **long battery operating life**.
- Programmable automatic switch-off and **energy saving functions**.
- **Multi-function weight indicator in the cabin** with built-in printer to issue receipts with company header, weights, date and time, master details, id details, bar codes etc.
- **Broad range of options and accessories** that communicate with the company computer system in real time.

## FORK LIFT TRUCK SCALES

# TPW

Dini Argeo offers a **complete range of fork lift trucks**, each one with specific characteristics, for every weighing application with goods on pallets.



### EASY TO USE

THE FORK LIFT TRUCK SCALE IS THE **EASIEST SOLUTION** FOR WEIGHING GOODS ON PALLETS, DIRECTLY WHERE NEEDED.

### BROAD RANGE OF ACCESSORIES

THANKS TO THE AVAILABLE OPTIONS, IT IS POSSIBLE TO:

- SEND THE WEIGHT.
- PRINT RECEIPTS.
- SAVE DATA ON USB STICKS.

#### VERSIONS

	LOAD CAPACITY (kg)	DIVISION (kg)
FOR INTERNAL USE	500 / 1000 / 2000	0.2 / 0.5 / 1
APPROVED FOR USE IN RELATION TO THIRD PARTIES	1000 / 2000	0.5 / 1
HIGH PRECISION	600 / 1500 / 2500	0.1 / 0.2 / 0.5
HIGH CAPACITY	1500 / 2500	0.5 / 1

#### FEATURES

- High thickness steel structure with thermo-set coating.
- **Guide wheels** and polyurethane **double loading wheels**, special wheels on demand.
- **4 loading cells**, IP68 STAINLESS steel, oversized for impact and accidental overloading resistance.
- **Multi-function weight indicator** with LCD, backlit, 25mm screen
- **Built-in printer** and **removable USB stick** for printing and saving weighing operations
- **Power supply** with long operating life battery.
- Programmable automatic switch-off and **energy saving functions**.
- Broad range of options and accessories.



TPWN



TPWLK



TPWE



TPWI

## SCALES AND WEIGHING SYSTEMS

# Production, design, quality control.

**Dini Argeo** is a company specialising in the design and manufacturing of scales and weighing systems worldwide-known for quality and reliability.

The solutions created by **Dini Argeo** are suitable for any industrial weighing application:

- reading, collection, processing and transfer of weight data
- simple, sequential, simultaneous dosage, in-loading or unloading, single or multicomponent dosage, continuous dosage on belt conveyors or loss-in-weight feeding.
- Weighing in areas endangered by potentially explosive atmospheres (ATEX)

- piece counting, labelling
- control of production lines, statistical check of prepackaged products
- logistics weighing (pallet scales, pallet truck scales, weighing forks for lift trucks, crane scales)
- vehicle weighing (weighbridges, wheel weighers, static and dynamic axle weighers).

A full range of interfaces and communication protocols is available as standard thus making Dini Argeo products easily integrable into industrial automation and processing for the development of OEM systems with customisable functions.



Dini Argeo, a company which has been producing scales and weighing systems since 1846, has been registered since 02/04/1906 at the Registry of Metric Manufacturers provided by the Royal Decree nr. 226 of 12/06/1902.



Dini Argeo has obtained the Quality Management System certification according to the UNI EN ISO 9001: 2008 for the design, manufacture and after sales service in respect of measuring instruments, scales and weighing systems, components and software.



The instruments produced by Dini Argeo are approved for legal-for-trade application according to the European standard EN 45501 - Directive 2009/23/EEC. The CE-M mark certifies that the instrument is supplied with the CERTIFICATE OF EC TYPE-APPROVAL issued by the Central Metric Office validating the suitability for legal-for-trade use.



Dini Argeo is a certified company pursuant to ATEX Directive 94/9/EC (Annex IV) and therefore authorised to produce and market equipment marked by Ex-symbol intended for use in potentially explosive atmospheres.



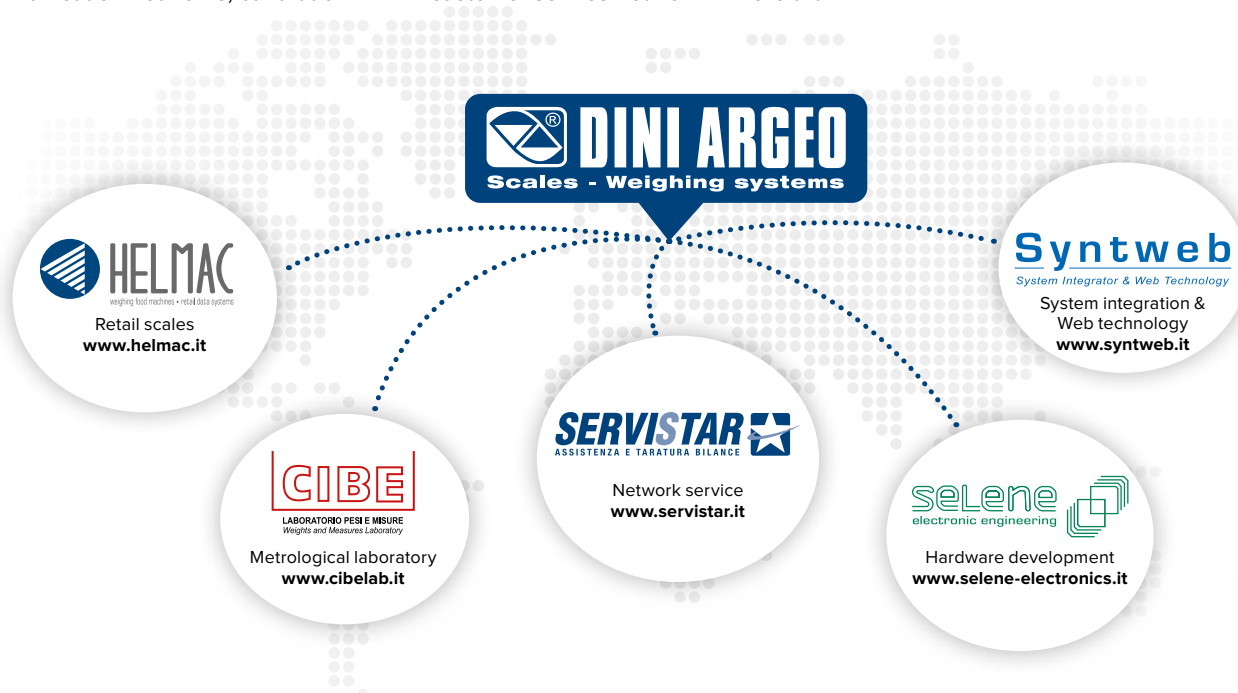
## A COMPREHENSIVE SERVICE

# Dini Argeo Group

Dini Argeo offers the customer a complete service ranging from the working out of customised solutions and supply of weighing components to the development of software for PC and communication networks, calibration

and approval services of OEM systems. Dini Argeo has grown into a group with a strong international calling, composed of subsidiaries in Europe and Asia, alongside a distribution and customer service network in more than

70 countries around the world. Dini Argeo works in cooperation with the other companies of the Group, which are market leaders in their specific field of activity:



Dini Argeo manufactures non-automatic weighing instruments in conformity with the 2009/23/EEC Directive. The DG0126 mark states the instrument is subject to the EC verification by the manufacturer according to the Certificate of EC approval of the Production Quality Assurance System.



Dini Argeo produces instruments in compliance with the requirements laid down by the recommendations of the International Organization of Legal Metrology (OIML):

- Load cells approved to OIML R60
- Non-automatic weighing instruments approved to OIML R76
- OIML R134 approved dynamic weighers for vehicle transiting at a low speed.
- OIML R51 approved "start/stop" automatic catchweigher on belt conveyors.
- Gravimetric filling instruments approved to OIML R61.



Dini Argeo obtained the GOST-R certification ensuring that its instruments comply with the regulations provided for by the Russian Federation.

FLOOR SCALES



PORTABLE MULTI-SCALE SYSTEMS



PALLET WEIGHING SCALES



WEIGHING AND QUALITY CONTROL OF PRE-PACKAGED PRODUCTS



WEIGHCHECKING FOR PRODUCTION LINES



ATEX area

Office

Raw materials

SPECIFIC WEIGHING KITS



FORKLIFT TRUCK SCALES



MODULAR ELECTRONIC WEIGHBRIDGES



LABORATORY BALANCES AND MULTIFUNCTION SCALES





#### SOFTWARE AND INTEGRATED SOLUTIONS



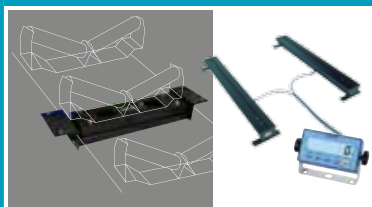
#### WEIGHT REPEATERS



#### CRANE SCALES



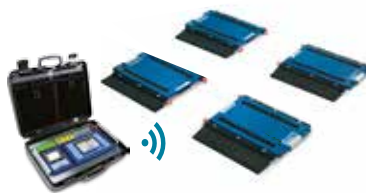
#### WEIGHING SYSTEM FOR BELT CONVEYORS



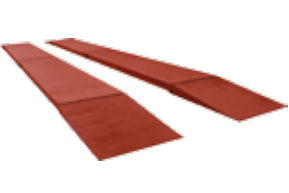
## Warehouse area

## Production area

#### SCALES FOR VEHICLE CHECKING AND WEIGHING



#### REMOVABLE WEIGHBRIDGES



#### PALLET TRUCK SCALES



#### WEIGHING, PIECE-COUNTING, TOTALISATION AND LABELING.





“YOUR WORLDWIDE PARTNER FOR WEIGHING”

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SALES AND TECHNICAL ASSISTANCE SERVICE