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# Marine Scales

Motion-compensated scales

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# Contents

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Introduction .....	3
Marelec D100 .....	5
USPs .....	6
Marelec D6B .....	8
USPs .....	9
Applications .....	11
MATRIX .....	18
PR1 .....	20
PR2 .....	21

# Introduction

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MARELEC Food Technologies started with MARine ELECtronics when it created for the trawler industry in 1983. Soon after, robust and reliable weighing and sorting systems for the fish industry were developed for use on shore as well as at sea. Their unique features, including high speed, precision and custom design were then integrated into solutions for the meat and poultry industry. Now a days, MARELEC is the world-leading designer and manufacturer of highly advanced weighing and sorting systems as well as intelligent portioning machines.

We kindly invite you to browse through our brochure to find out more about the different marine scale models and applications. Additionally, this brochure will specify which model is best for your needs and products. Any questions you may have can be answered by our sales team.

MARELEC offers different kinds of weighing solutions. With a background in the fishing industry, the equipment is produce to a high quality standard. Its robust and waterproof construction means the equipment is extremely durable. This range of weighing indicators can be combined with weighing platforms that is suitable for the job. Speed, accuracy and flexibility are the key-words for our marine scales.

Choosing MARELEC, a worldwide leader in this technology, will ensure that you are working with a service-oriented company, one that listens to your specific needs and is a flexbile partner with a human approach. We look forward to a mutually profitable cooperation!







# Marelec D100

The MARELEC D100 Weight Indicator is an intelligent, robust and user friendly product selection. It can be connected to a scale to register the product weight. Products are identified by printing labels containing all the information in text form.

Connecting the MARELECD100 to a computer allows the process to be monitored from production to identification of every box.

The MARELEC D100 Weight Indicator allows you to weigh products with the best possible accuracy without compromising on robustness and user-friendliness. The touchscreen allows you to select the quality, size, and species. This data can be transferred to our MARELEC MATRIX software and can then be used to optionally print labels. It is also possible to create reports and integrate conversions such as weight/loss factors.



Platform	W50/50	W50C/60*	W50/100
Weighing range	0 - 50kg	2 - 60kg	0 - 100kg
Accuracy (e)	20g	100g	50g
Platform dimension (mm)	500 x 600	500 x 600	500 x 600

\*OIML R76 (III) - approved/110-230 VAC.



# Unique Selling Points

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## 1 // ROBUSTNESS

MARELEC has extensive experience in the fishing industry. All of our equipment is extremely well-built and durable to survive even the most demanding circumstances.

## 2 // VERY INTUITIVE GUI WITH TOUCHSCREEN

The fish species that are weighed can be selected by simply touching the screen. You can also select the quality, size, etc.

## 3 // PRODUCTION MANAGEMENT SOFTWARE

MARELEC C50 enables the weights to be recorded in a database and reports to be generated. The report can be displayed in tables or graphically.

Reports can be generated per species of fish and/or size. The total weight per species, date and size or trip can also be displayed.

## 4 // SPECIFICATIONS

- AISI 316L stainless steel housing. Resistive touch screen.
- Input supply voltage: 24VDC/35 W.
- Adjustable resolution.
- Static and dynamic weighing (weighing at sea).
- 48 standard species, unlimited letters (1 button/species) with the possibility to expand.
- 1500 species/size combinations.
- Direct species selection.
- Quality selection.
- Selection between different presentations.
- Size selection.
- Manual weigh input.
- Selecton to set number of chests.
- New haul selection.
- New trip selection.
- Completely waterproof: IP67.
- Programmable resolution.
- 15" display.
- Languages: English, Spanish, Italian, Dutch, French...
- Conditions: -10°C and +40°C.





# Marelec D6B

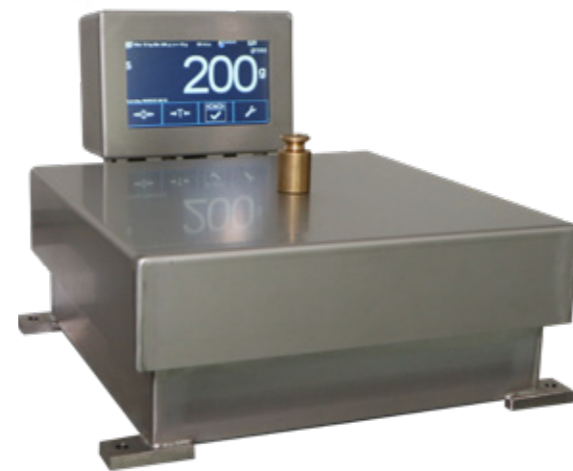
The MARELEC D6B Marine Weight Indicator is a simple and robust device that is able to withstand the harsh conditions typical at sea. Its user-friendly color touchscreen is connected to a motion-compensated scale.

Its compact design allows for mounting on a wall or on the scale. Requiring minimal maintenance, it is one of the fastest and most stable scales on the market.

The standard software caters for simple weighing, but a wide range of additional software functions can be installed: sample weighing, checkweighing, simple grading, forward or reverse grading, batching and hopper control being just a few examples.

The MARELEC D6B can be connected to a computer using MARELEC MATRIX software. Catch reports can be generated per batch, trip, shift, etc., and sent to shore. Sample weights in an aquaculture plant or on a fishing vessel can be exported to a .csv file.

In addition to data recording, the MARELEC D6B scale can also control various types of label printers.



## Platforms:

Platform	W3/3	W10/15	W10/30	W50/30	W50/50	W50/100
Weighing range	0-3kg	0-1kg 1-15kg	0-30kg	0-30kg	0-50g	0-100kg
Accuracy (e)	1g	1g 5g	10g	10g	20g	50g
Platform dimensions (mm)	250x250	350x350	350x350	500x600	500x600	500x600
Execution	<ul style="list-style-type: none"> <li>Platform in stainless steel type 316L.</li> <li>Loadcells hermetically IP67 protected.</li> <li>Security against mechanical overload integrated.</li> <li>Stainless steel read-out unit IP67 with integrated electronics.</li> <li>Indicator: LCD display with touchscreen selection.</li> </ul>					

# Unique Selling Points

## 1 // ACCURATE MOTION COMPENSATION

The scale will actively compensate from the ship's movement. The movement compensation is performed 100 times per second.

## 2 // FAST WEIGHING

The MARELEC D6B scale can be used for weighing product. When products are put on the scale, the indicator will show the weight of the product in no more than 0.5 seconds.

## 3 // ROBUST CONSTRUCTION AND WATERPROOF

MARELEC has extensive experience in the fishing industry. All of our equipment have a very sturdy and robust build in order to withstand the most demanding conditions.

## 4 // COMPUTER CONNECTIVITY

When weighing products on the scale, the indicator offers several possibilities for connecting to a database or for directly storing data on a USB stick (fish farm only).

## 5 // USER-FRIENDLINESS

The MARELEC D6B consists of a digital display with a touchscreen. The GUI is very intuitive and allows species and vessels to be selected on the indicator.

MARELEC W3, W10, and W50 platforms are designed to meet the most severe requirements to weigh at sea. Accuracy, flexibility, robust construction and user-friendliness are getting full attention.

The weighing systems can be equipped with a series of adjustable printers, data processing and report programs.

## 6 // FEATURES

- Accuracy: Movement compensation is carried out 100 times/sec.
- Construction: Stainless steel AISI 316L. All vulnerable parts are built in hermetically. The system does not contain any moving mechanical parts.
- Labelling: Each scale can be equipped with a printer adapted to your needs.
- Power supply: Single phase 230VAC and 24VDC.
- Protection: Protected against mechanic overload. Loadcells hermetically protected IP67. Option: protection frame against rough handling.
- Traceability: MARELEC weighing systems can easily be integrated in processing traceability data
- User-friendly: Easy to use, easy to clean.
- Languages: English, Spanish, Italian, Dutch, French...
- Conditions: -10°C and +40 °C.

- Construction: Stainless steel hermetically protected as per IP67 standards-integrated electronics.
- Indicator: LCD display 7".
- Selection: Touchscreen.

## 7// FUNCTIONS

- Actively compensated for ship's movement.
- Measurement of nominal weight-maximum up to 1.5 x nominal weight.
- Electronic digital indicator with high-low alarm on target value.
- Auto-tare function.
- Communication: As all data are saved in an accurate digital way, it is easy to send the data to shore. MARELEC MATRIX software integrated this transmission on board.

# Applications

Specifications	Checkweigher	Fish farm	Color Checkweigher	Grader	Package weigher
Remote update	X	X	X	X	X
Remote configuration	X		X	X	X
Local configuration	X	X	X	X	
Swell compensation	X	X	X	X	X
Label printing					X
MATRIX packing support			X		
MATRIX G support	X			X	X
MATRIX C10 support				X	
Remote weight retrieval and general purpose IO	X	X	X	X	X
Operable by foot switch				X	X
External signal (indication lamp, buzzer)	X			X	

// MARINE THAW CHECKWEIGHER (FOR FREEZING TRAWLERS)



The operator is first instructed to weigh a frozen box full of product and then proceeds to weigh each and every defrosted product contained in the box. This results in a detailed report dealing with the frozen gross weight, and the weight of each product.

PC software: Marelec C100 via Ethernet.

Matrix C100 attributes	
Weight	Weight of an individual product.
Fish number	Auto-incrementing ID of an individual product within batch.

// ROAMING SCALE (FOR FISH FARMS)



Meant to be used on sea or land based fish farms. The user weighs a sampling of a fish tank either on land or sea. A report is generated in .csv format on an USB thumb drive containing:

- Fish tank designation.
- Number of fishes and time of weighing.
- All used weight classes.
- Number of fishes and total weight belonging to each weight class.
- Detailed log of user actions.

Each report is saved on internal memory for later retrieval. A wizard guides you through the process of retrieval as soon as you present an USB thumb drive.

Does not print labels, no connection to PC.

PC software: any spreadsheet program supporting .csv format.

// COLOUR CHECKWEIGHER



Made specifically to function as an error correcting station in packing facilities, this module enables the user to set the confines (weight and number of items) of a package.

A scale with this custom module is usually interfaced with a remote database in the factory. After grading, all rejected trays end up on this scale for manual correction by an operator. The operator is aided by a visual representation of the current weight of the tray and the confines on said weight. This option can also be used in an offline way.

PC Software: MarpConfig, Marelec Matrix Packing via Ethernet.

Matrix Packing Attributes	
Product	Name of product
ProductNr	ID of batch (numerical)
Lower_limit	Maximum allowed gross weight
Upper_limit	Maximum allowed gross weight
Target_weight	Ideal gross weight
Tare	Weight of packaging
Weight	Measured gross weight
Lower_number	Minimum number of items in batch
Upper_number	Maximum number of items in batch
Number	Current number of items in batch
Batch_weight	Supplied gross weight
Operator	ID of operator

// GRADER



This mode allows the operator to define a set of weight ranges on the scale (operator can change species and classes on the MARELEC D6B which can be labelled). The scale will then proceed to assign a defined range to any current weight whenever the readout is stable.

Weight ranges are, in turn, associated with a product.

The scale can hold up to 50 products with 14 weight ranges each. The scale supports forward and reserves modes. The automatic mode of forward grading, called a hopper, is also featured, supporting direct control of a conveyor.

Only "auto-enter" functionality is supported.

Productname, classes and classname can be changed/added on the MARELEC D6B.  
PC software: MarpConfig, MARELEC MATRIX CG via Ethernet.

Matrix CG Attributes	
ProductName	Name of product
Class	Weight class
Class Name	Name assigned to a weight class
TargetWeight	Ideal net weight
Tare	Measured weight of packaging
Weight	Measure net weight
Type	A "batch" (multiple products) or "piece" (single product)
OutgoingLotNr	Lot number, auto-incremented
Operator	ID of operator
Number	Current number of items in batch
Batch_weight	Supplied gross weight
Operator	ID of operator



// PACKAGE WEIGHER



The package weigher allows you to register packages or single products to a database. No need to tare the scale with an empty crate or tray when you can link the tare weight of the package to your products remotely on PC.

Among its features:

- Remote configuration on-the-fly with MarpConfig. Each product can be linked to custom tare weight, labels, operators.
- Local control allows the operator to quickly select the desired product.
- Label printing with remote configuration.
- Configurable auto entering of weights.

Productname and targetweight can be changed by means of Marpconfig.  
PC software: MarpConfig, MARELEC MATRIX CG via Ethernet, D6B Label Manager.

MATRIX CG and label attributes	
ProductName	Name of product
TargetWeight	Ideal net weight
Tare	Measured weight of packaging
Weight	Measured net weight
Type	Will always read "piece"
Lot	Description of the lot
OutgoingLotNr	Lot number, auto-incremented
Operator	ID of operator
SERIAL (Label only)	Fixed serial of the scale
ID (label only)	Freely adjustable identification number

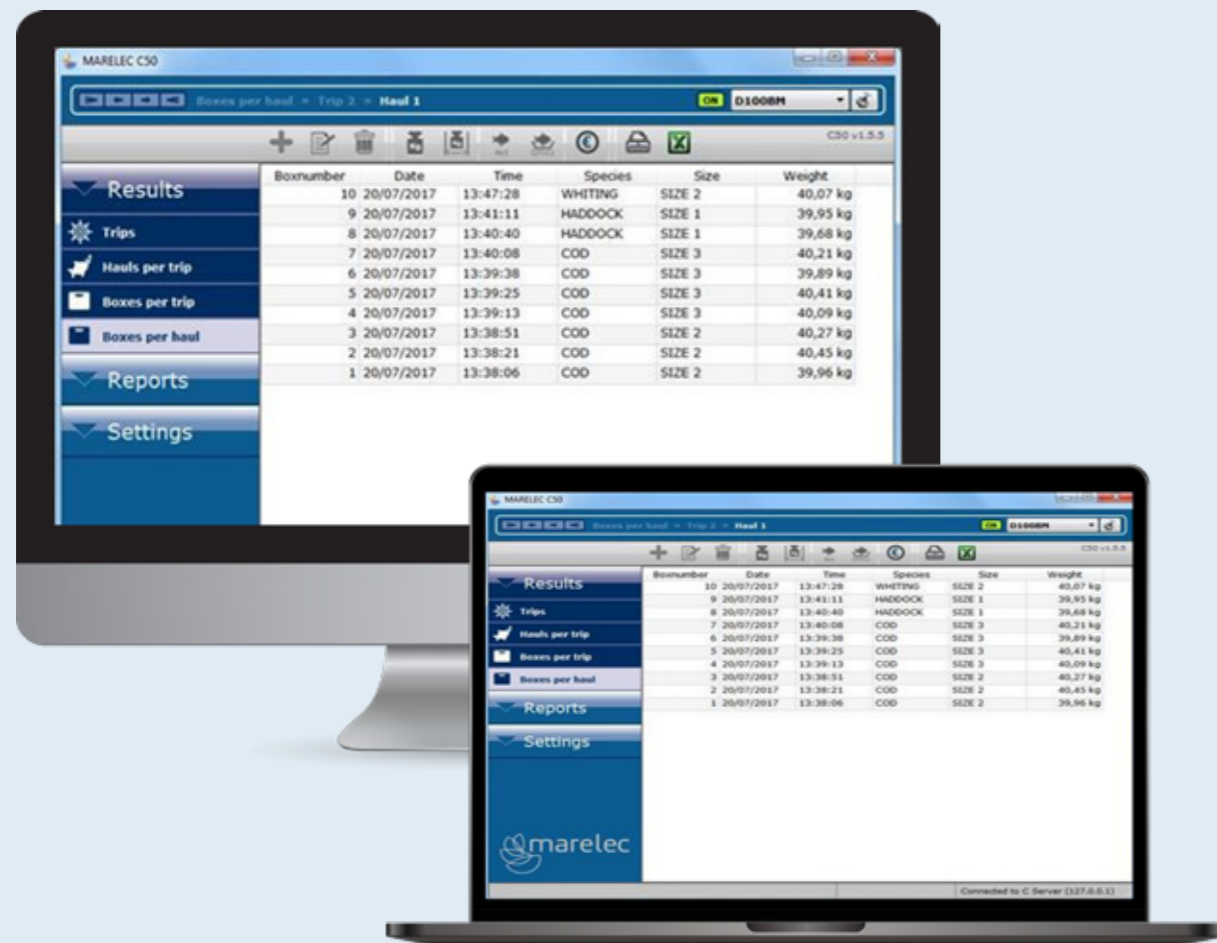




# MATRIX

## // MATRIX C50

The MATRIX C50 is used to monitor catch results from fishing. Its data comes from MATRIX D100 scales, which are used to weigh boxes of fish. MATRIX C50 can also create reports, such as the totals per species and size on a certain trip or day. These reports can be connected to spreadsheet and 'electronic log book' software.



## // MATRIX C100

The MATRIX C100 software is primarily used to monitor catch results from factory trawlers. Its data comes from MARELEC pack weighers. Each weighed pack on the pack weigher is assigned a packing code, which has a certain customizable format. A list of valid packing codes to be used during a trip can be created using the MATRIX C100 software. The active packing code can then be selected in the software or directly on the pack weigher. If any packing codes were forgotten, they can also be created manually on the pack weigher.

Additionally MATRIX C100 software can be used in combination with the MARELEC check weighers to perform thaw pack checks. In this check, a pack is weighed thawed, and then each individual fish from the pack is weighed. The data from performed check can be viewed in MATRIX C100. The software can also create reports, such as the total pack count and weight per packing code, for a specified trip or day. These reports can be displayed, printed or exported to spreadsheet-software.





# PR1

Customers can label weighed products with the MARELEC PR1 printer, which is a standalone printer that is completely compatible with weighing and grading systems. The PR1 is made of a robust construction for usage in humid environments, however the printer is built into a stainless steel protective shell, where the heating prevents condensation on the printer.

Furthermore, it has a flexible label design, high speed printing and is suitable for traceability.

Construction	Stainless steel protective case AISI 316L
Dimension (mm)	368 L x 346 W x 267 H
Labels per roll	1000 - 3 x 4"
Heating	Integrated

## 1 // FUNCTIONS

- Printing : Direct thermal printing, auto-calibration.
- Print speed : 127 mm/s.
- Resolution : 8 dots/mm.
- Max. print area : 108 mm (width), 2286 mm (max. length).
- Max. roll size : Ø127 mm O.D. on a roll with 25.4 mm or 38.1 mm I.D.
- (label and liner): 0.08 mm to 0.19 mm.
- Ribbon width : 40 mm to 110 mm.
- Sensors : Transmissive, reflective and paper detection sensors.



# PR2

The MARELEC PR2 printer, a stand-alone printer that is fully compatible with weighing and grading systems, allows customers to label weighed products. The PR2 is composed of a robust construction for operation in humid conditions, however the printer is built behind a stainless steel protective shell, where the heating prevents condensation on the printer.

It also provides high speed printing, versatile label design, and is traceability-friendly.

Construction	Stainless steel protective case AISI 316L
Dimension (mm)	640 L x 445 W x 450 H
Labels per roll	1900 - 3 x 4"
Heating	Integrated

## 1 // FUNCTIONS

- Printing : Direct thermal and thermal transfer printing, auto-calibration.
- Print speed : 152 mm/s.
- Resolution : 8 dots/mm.
- Max. print area : 104 mm (width), 25400 mm (max. length).
- Max. roll size : Ø203mm O.D. on a 38.1 mm - 76.2 mm I.D Core.
- (label and liner): 0.08 mm to 0.25 mm.
- Ribbon width : 25.5 mm to 114.3 mm.











MARELEC Food Technologies

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