

mbp
weighers&packaging

C2
Series





C2
Series
100%
MADE
IN ITALY

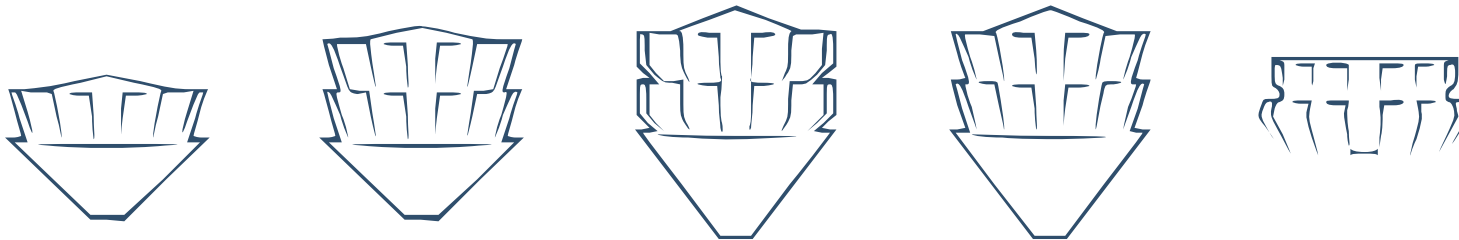


C2 SERIES: **THE VERY BEST IN HIGH-TECH** **MULTIHEAD WEIGHERS.**

Designed for high-speed, high-precision weighing of various types of granular products.

The outstanding speed/accuracy ratio ensures greater savings and operating safety.

A C2 for every need: from 10 to 24 heads.



The C2 series is a multihead combination weigher designed to weigh, at high speed and with extreme precision many products of different kinds.

The functioning principle is based on distributing the product on 10 – 14 – 16 – 20 – 24 weighing buckets. An advanced combinatorial algorithm calculates the best discharge combination.

The weigher can be customized according to the characteristics of the product.

The MBP software is developed entirely by our engineers and it is our exclusive property.

From 10 to 24 weighing heads, featuring mix, piece counting and multi-discharge functions.



WEIGHABLE PRODUCTS:

Biscuits and bakery products



Filled biscuits
Dry biscuits
Crackers
Wafers
Plumcakes
Mini croissant

Cheese



Shredded cheese
Cheese in cubes
Grated cheese
Mozzarellas

Cereals



Corn flakes
Roughage
Muesli

Pasta and rice



Cous cous
Fresh pasta
Dried pasta
Frozen pasta
Fresh filled pasta
Rice

Fresh cut vegetables



Pulses
Cut salad and fruit
Shredded vegetables
Sliced vegetables
Chopped vegetables
Steamed and grilled vegetables

Crisps



Chips
Popcorn
Corn extrudates

Candy



Sugar confectionery
Bare or wrapped chocolates
Bare or wrapped candies
Chocolates
Toffees

Snacks



Small crackers
Sweet snacks

Pet food



Croquettes
Snacks

A **C2** for every need: **from 10 to 24 heads.**



10C2
Series



14C2
Series



16C2
Series



20C2
Series

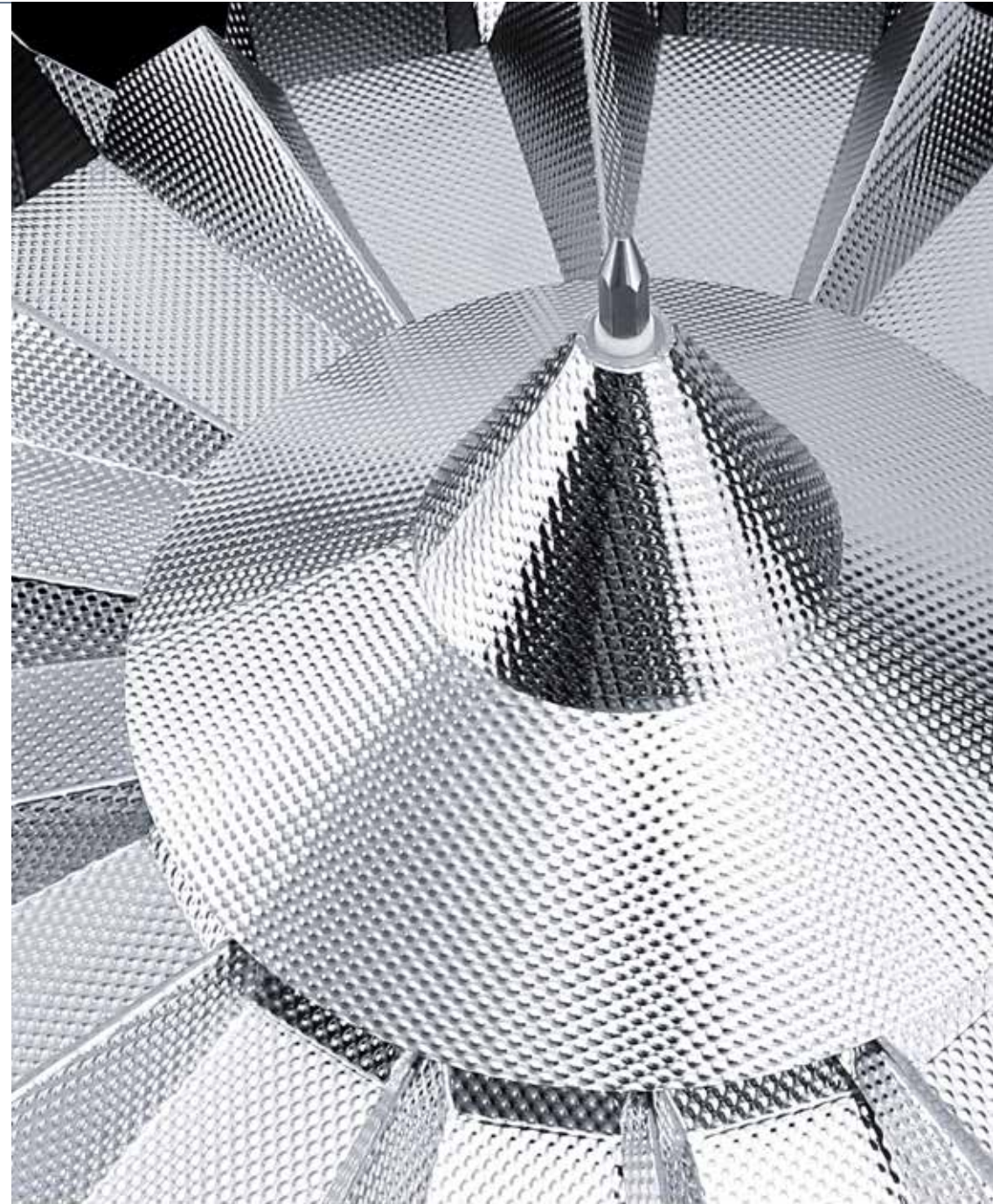


24C2DMA
Series



24C2DMATwin
Series

TECHNICAL AND MECHANICAL CHARACTERISTICS





MBP weighers are made in Italy.

All electronic components for weight acquisition, management of the vibrating bases and of the motorized opening of buckets are produced entirely in Italy, as well as all mechanical and structural parts.



IP66

WATERPROOF IP 66 DEGREE

Degree of protection:

Complete protection against dust and penetration of splashing liquids and water jets from all directions.

IP69 (optional):

Complete protection against dust and penetration of splashing liquids and high-pressure water jets from all directions. To ensure protection of the internal components from the moisture that can naturally form under certain circumstances, it is recommended to install a dehumidifier MBP (optional).



AISI 304 TUBULAR FRAME

AISI 304 tubular frame with smooth and radial welds, designed to facilitate cleaning operations and eliminate hidden or partially closed areas where bug traps may form. 304 AISI single electrical box with positive internal pressure and IP66 degree of protection (IP69 is optional).

AISI 316 for parts in contact with the product.



NO ALUMINIUM

All components made of AISI 304 stainless steel come from high-quality certified supply.



VIBRATING CONE

Central vibrating cone with a load cell dedicated to an even distribution of the product onto the vibrating channels. The product level is adjustable. The system is interfaced with the loading device (elevator belt and/or vibrating base) which enables product to be supplied proportionately and not on an “on-off” basis (as in traditional photocell or partially optimized systems).



VIBRATING BASES

Particularly powerful and precise vibrating bases allow a perfect adjustment of range angles thanks to the double inclination of leafsprings. The magnet can be removed from the lower side.



VIBRATING CHANNELS

AISI 304 vibrating channels, designed according to the specific characteristics of the product. They can be easily removed using a specific hook.



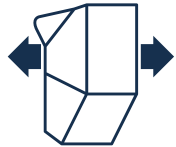
LOAD CELL

Cutting-edge load cell. Extremely compact and precise. It features an anti-stress mechanical device (limit switch) that operates both vertically and during torsion..



PRE-DOSING BUCKETS

Pre-dosing buckets (capacity of 3 or 5 liters), double door, made of AISI 304 stainless steel, which opening/closing is driven by step motors. Possibility to adjust opening/closing speed and acceleration/deceleration ramps.



DOSING HEAD

Removable and interchangeable dosing head
It includes No. 2 step motors for bucket opening, hardware system for motors control and data acquisition. Each head is resistant to corrosive elements, it is ideal for contact with food and it counteracts the formation of moisture.



DEHUMIDIFIER (OPTIONAL)

Dehumidifier (optional) placed inside the machine body. This system, which can be enabled and timed, works also when the machine is turned off. The dehumidifier, through an air recirculation system, removes the excess of humidity in the weigher and prevents the formation of moisture.

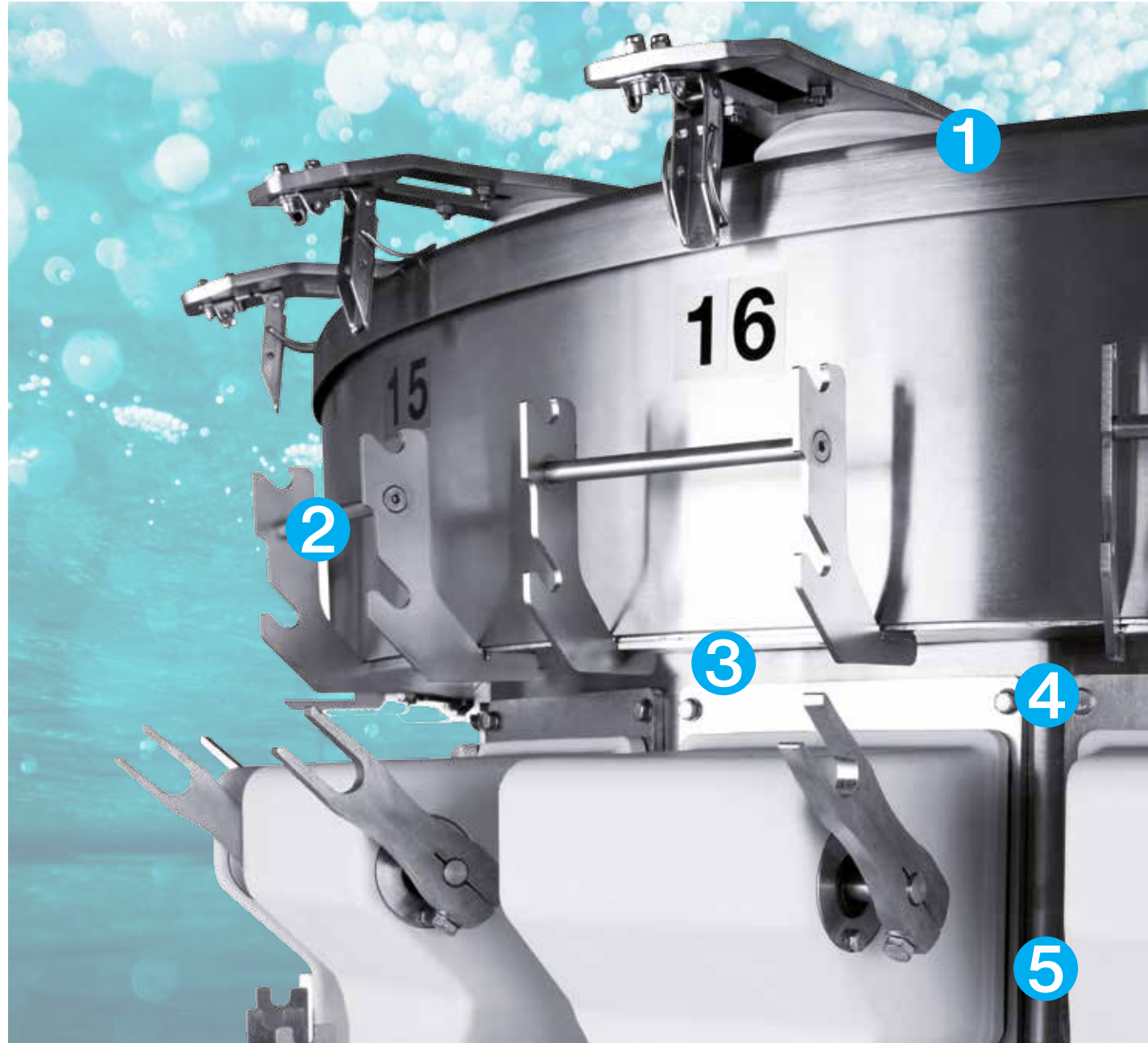


WEIGHING BUCKETS

Weighing buckets (capacity of 3 or 5 liters), double door, made of AISI 304 stainless steel and driven by step motors. Possibility to adjust opening/closing speed and acceleration/deceleration ramps.

EASY CLEANING AND SANITIZATION

- 1** Aisi 304 upper capote, without clamping screws.
This ensures the easiest sanitization.
- 2** Aisi 304 hooks, levers, hardware.
- 3** Upper gap, perfect for easy access and cleaning.
- 4** Fully Aisi 304 central body.
- 5** Side gap, perfect for easy access and cleaning.



SOFTWARE AND HARDWARE FEATURES



AVC SYSTEM **AUTOMATIC VIBRATION CONTROL**

Automatic Vibration Control.

Automatic adjustment of the best combination between width and vibration time, to dispense the exact amount of product required by the system into the pre-dosing buckets.

ARC SYSTEM **AUTOMATIC RANDOM CONTROL**

Automatic Random Control.

The weigher automatically decides how to manage the different weighs of the single buckets: this way, it is easier to determine the best discharge combination and, as a consequence, the speed/precision ratio.

VIB CONTROL **VIBCONTROL DEVICE**

VibControl Device.

(Optional) It can be installed on the central cone and/or the upper feeding vibrating channel. It reads the vibration range of the cone or the channel to which it is connected and maintains it in real time, according to the amount of product coming from the elevator belt. It is very useful in case of sticky products.

AVS SYSTEM **ADVANCE VIBRATION SYSTEM**

Advance Vibration System.

A recipe parameter allows to vary the power supply electrical frequency of each vibrating base. This guarantees an instantaneous restoration of the perfect vibration width, regardless of the product on the vibrating base. The specific parameter can also be modified via tele-service.

ADC SYSTEM **ADC SYSTEM**

Automatic Drop Control.

For automatic (or manual) adjustment of the number of buckets involved in the discharge. This feature is connected to the ARC function.

HPMC

HIGH PERFORMANCE LOADING CELL.

Loading cell with integrated AD board, anti-swing system unit.

EVA SYSTEM EVA SYSTEM

EVA System.

(Environment Vibrations Annulment) designed to cancel low-frequency environmental vibrations.



SELF-DIAGNOSIS

The AVC, ARC, ADC and EVA systems work simultaneously. Those kinds of cutting-edge software can make machine programming the easiest. They work in real time according to variations in environmental conditions and/or product.

CAN open CAN OPEN

CANopen type hardware setting.

CANopen is a CAN-based communication system. It includes higher-level protocols and profile specifications. CANopen was developed as a standardized integrated network with extremely flexible configurability.

DSC SYSTEM DSC SYSTEM

DSC System.

It allows sequential opening of buckets to avoid the obstruction of the forming tube and/or of the timing hopper or the product diverter.



WEBCAM

Each multihead weigher is equipped with a webcam.

The camera is placed on the central plate and allows to monitor the distribution of the product onto the central plate and the radial channels on the HMI. HMI features are password-protected, they can be unlocked manually or via RFID (optional).

34 PIECE-COUNTING FUNCTION

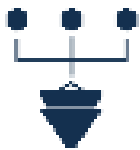
All MBP weighers can (optionally) feature a software for piece counting, which is essential when it is required to indicate the number of pieces inside a package. MBP weighers can also be used to count pieces at high speed and with great precision, which make them more efficient than traditional counting devices.



TOUCH SCREEN

The C2 Series includes a cutting-edge operating system.

It provides for a Multi-Touch user interface to reach every page in a maximum of two steps, but what is truly amazing is how simple it is to program. Thanks to the AVC, ADC, EVA and DSC functions, the operator only needs to set the final weight, the upper and lower limits and the speed (wpm). The Home Page displays all necessary information to get a complete overview of the operational status of the weigher.



NETWORK

Possibility of ethernet network connection.

To view, download, print statistical data, send/receive recipes and software or for remote assistance via the internet. LAN connectivity to remote the display.



ADVANCED INDUSTRIAL PC

The C2 Series employs an advanced industrial PC with a particularly powerful processor that can carry out complex calculations in less than 5 milliseconds. The employment of an Industrial PC and its computing power allowed to create a particularly advanced management software for the weigher, involving extremely advanced algorithms and machine features. The result is measured on the actual high weighing precision in relation to speed.



MIX FUNCTION

The mix by weight or piece function of MBP weighers allows you to combine different flavours while maintaining the guaranteed accuracy of the average weight. The flexibility of the MBP software and hardware makes it possible to divide up the number of heads required on one or more weighers and manage all the heads as a single and shared unit. The operator can also easily create new mix recipes.

ADVANCED SOFTWARE, SIMPLE PROGRAMMING.

The operator enters the parameters for the weight with upper and lower limits, production speed and central plate parameters. The weigher then automatically regulates the following on an individual basis:

- Amplitude and optimum vibration times of the side vibrating channels.

- Distribution of weight between the buckets.
- Optimum number of buckets involved in the discharge.
- Environmental vibration annulment function always activated and adjustable.
- As a result of these functions intervention by the operator is reduced to almost zero.

Over time the weigher learns to adapt to the product and working environment, using machine data systematically memorised in the specific recipe.

In addition, the weigher adapts continuously to changing conditions in its working environment.

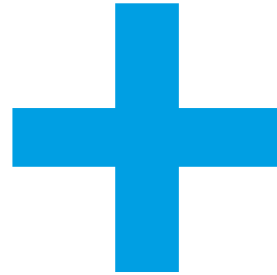
Monitor 15" (optional)



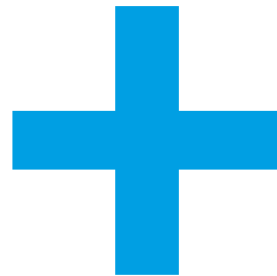
Monitor 10" (standard)

DMA:

Direct memory access



SPEED



PRECISION

TO OBTAIN MAXIMUM RESULTS FROM A COMBINATION WEIGHER.

DMA is a combinatorial calculation principle for managing the memory buckets which, along with the weighing buckets, enable the most effective weighing combination to be found. The memory buckets receive the weighed product directly from the weighing buckets. DMA can be applied to C2.

DMA perfects the concept of precision:

The number of combinations available increases, which as a result increases accuracy. The speed/accuracy ratio achieved is a direct result of the number of available combinations.

Using the DMA version, the number of possible combinations increases exponentially by 600 times (10 heads) compared with the 2-level standard version.

ADVANTAGES:

The buckets positioned along a vertical axis allow the product to fall directly onto the memory bucket without any obstacles.

It is therefore ideal for relatively bulky or difficult to manage products.

The buckets are also available in the double-door version. This solution is also ideal for sticky products.

The version with buckets at the end of the chutes breaks the fall preventing product breakage.

It is therefore ideal for relatively fragile products.

Greater number of combinations



Greater accuracy, higher savings.

Ideal for difficult to manage or bulky products.

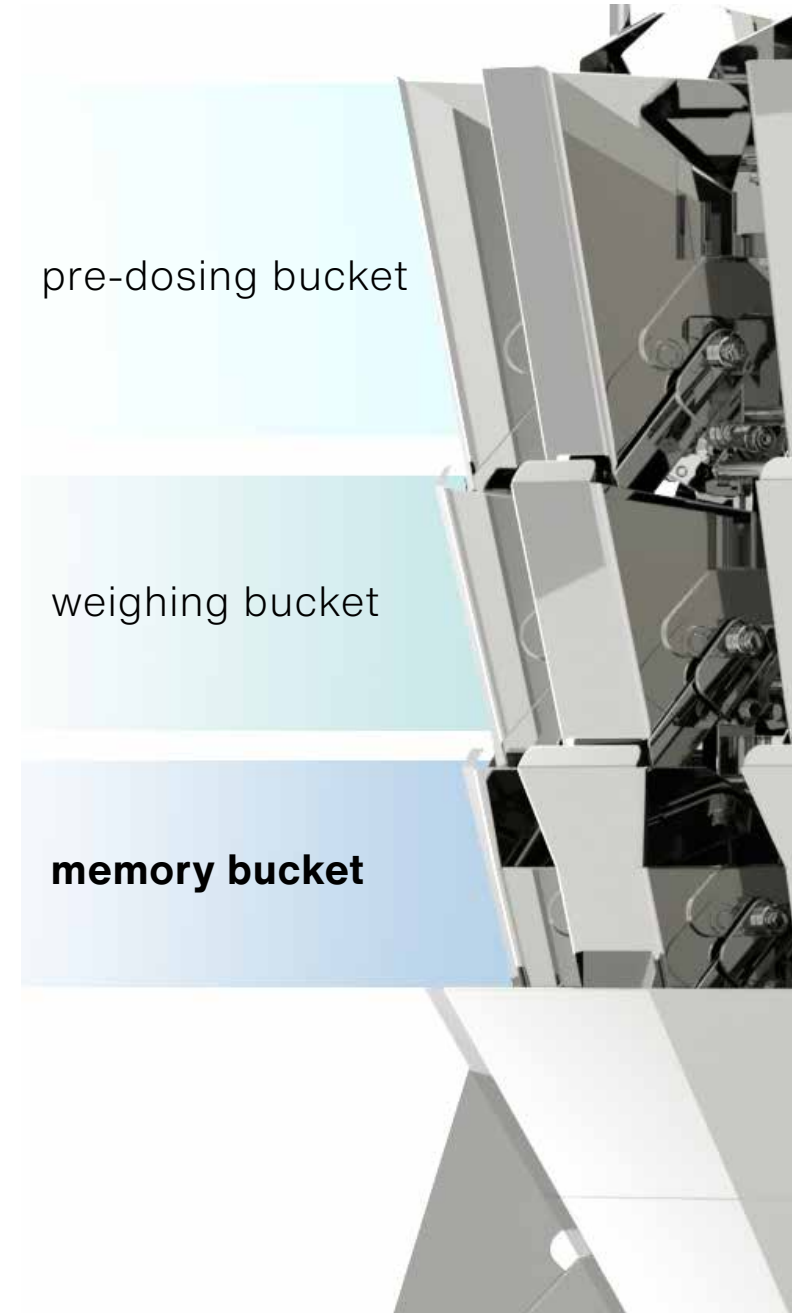
Ideal for fragile products.

Compact weigher dimensions are preserved.

pre-dosing bucket

weighing bucket

memory bucket



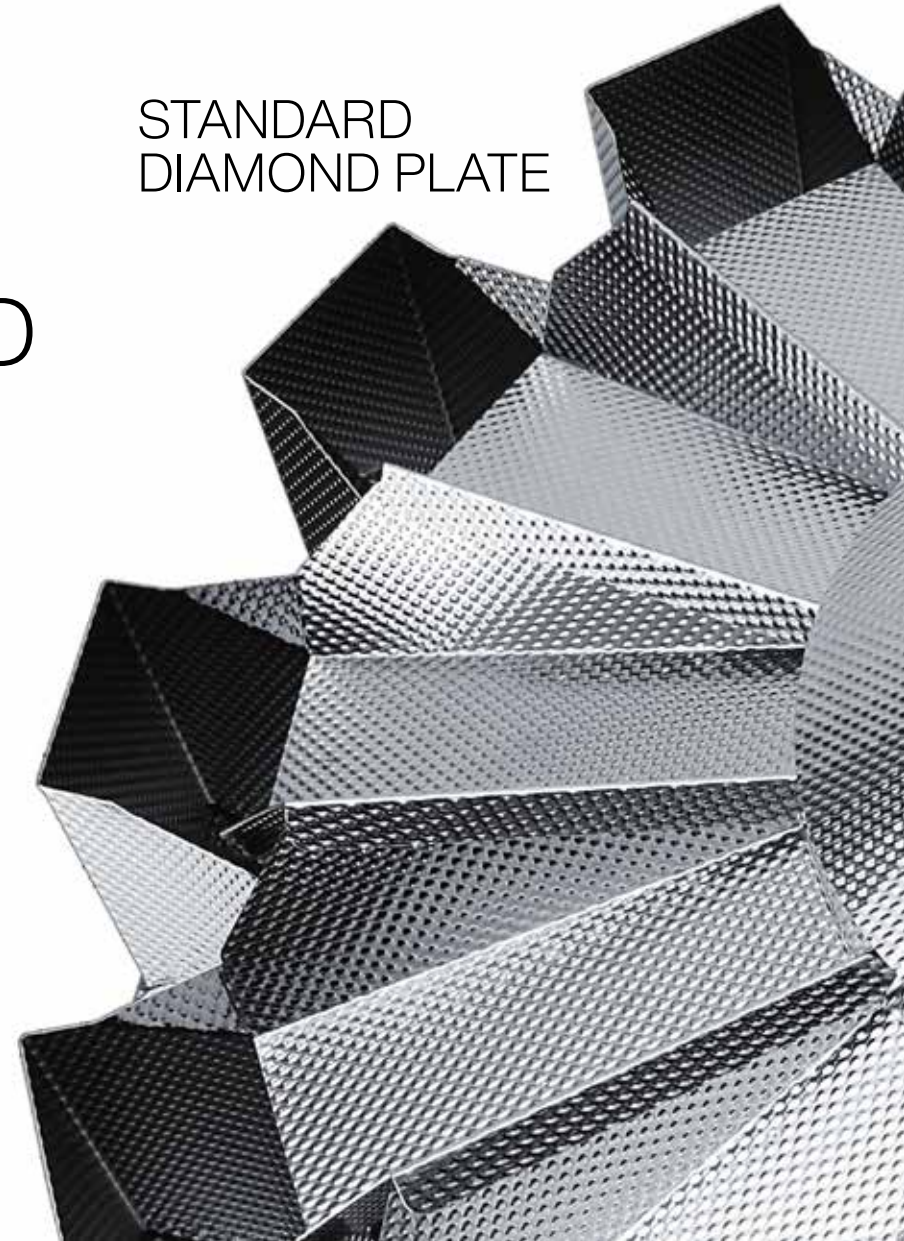
C2

Series

DIAMOND
PLATE
VERSION

STANDARD
DIAMOND PLATE

DP15:
VERY
LOW GRIP
VERSION





Complete line for biscuits in Steelo Bags and Pillow Bags, composed of No. 4 R700 and No. 4 multihead weighers (16 C2 DMA).

NUMBER OF HEADS	10 C2	14 C2	16 C2	20 C2	24 C	
Weighing range – basic version	50 - 1000 g	50 - 1000 g	50 - 1000 g	50 - 1000 g	50 - 1000 g	
Bucket volume – basic version	3 L	3 L	3 L	3 L	3 L	
Bucket volume – special version	5 - 9 L	5 - 9 L	5 - 9 L	-	-	
Max. ppm production *	120	180	200	230	330	
Combinatorial system ***	DMA Standard	Standard	DMA Standard	DMA Standard	DMA Standard	
Precision (on average weights)	0-500 gr X ~ 0,2 - 1,5 gr					
Precision (on average weights)	500-1000gr X ~ 0,5 - 2 gr					
Minimum resolution	0,1 gr					
Degree of Protection **	IP66 (IP69 optional)					
Monitor	12,2" - 15"					
Hardware	Industrial PC					
Structure	AISI 304 Stainless Steel					
Power	220 Volt 50/60Hz					

*it depends on target weight, product, etc.

**in case of direct washing, it is necessary to use the exclusive anti-moisture MBP internal dehumidifier.

***Standard: 2-level weigher composed of pre-dosing and weighing bucket.

DMA: Direct Memory Buckets: the weighing bucket discharges directly onto the memory bucket.

Memory: The weighing bucket discharges directly onto the memory bucket or the chutes.

MBP reserves the right to make changes without giving notice.





MBP S.r.l. MULTIHEAD WEIGHERS - PFM GROUP

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