SMAD
Weighing & Dosing Systems

DYNAMIC WEIGHING TECHNICAL CATALOGUE

WEIGHING IN-MOTION ON CONVEYOR BELTS

WEIGHING BELTS / WEIGHING SCREW CONVEYORS

LOSS-IN-WEIGHT GRAVIMETRIC FEEDERS: BY AUGER / BY BELT / BY VIBRATING

FIBC LOADING/UNLOADING SYSTEMS

SYSTEMS & INSTALLATIONS

WEIGHING & DOSING SYSTEMS

STAD is a designer and manufacturer of weighing and dosing systems, machines and automatic plants. Our strength derives from the professionalism of our founders and their many years of experience in the plant engineering sector. Our engineers target the development and customisation of machines according to the specific requirements of the Customer and features of the product to be dosed. This experience has led us to expand the market for STAD systems - already widely used with machines dedicated to different production cycles in the ceramics industry - to any industry with a need to handle products in bulk: dye works, cement factories, manufacturers of adhesives for the building industry, concrete mixing equipment, foundries, glassworks, equipment for ecology, plastics, detergents, food, zootechnics, fodder industry, etc. Flagship STAD products are weighing and dosing systems suitable for continuous duty cycles with capacity controlled via weighing belts or gravimetric dosing systems. The extreme flexibility of the STAD structure allows us to offer customised solutions to meet any dosing requirement: batch weighing, master-slave systems, dosing according to recipes managed by PLC and/or PC.

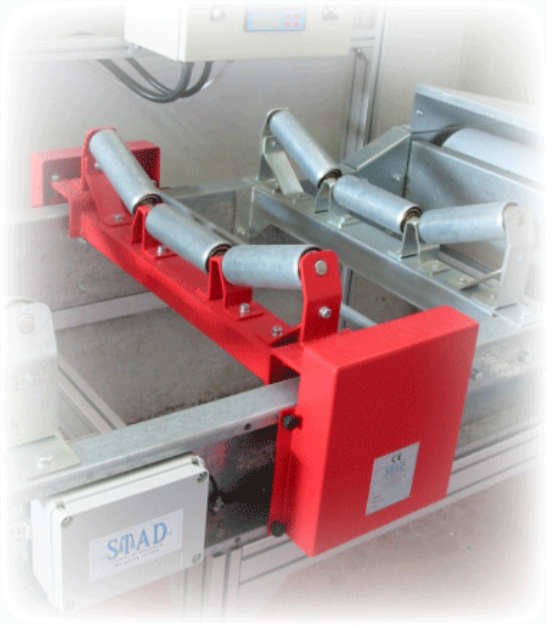
ON-SITE LAB

Our on-site lab can test your products and develop the best solution to the specific need.

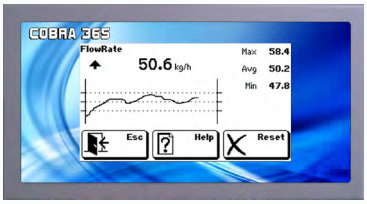
Made in Italy

PPS

WEIGHING PLATFORM FOR CONVEYOR BELTS



Made in Italy



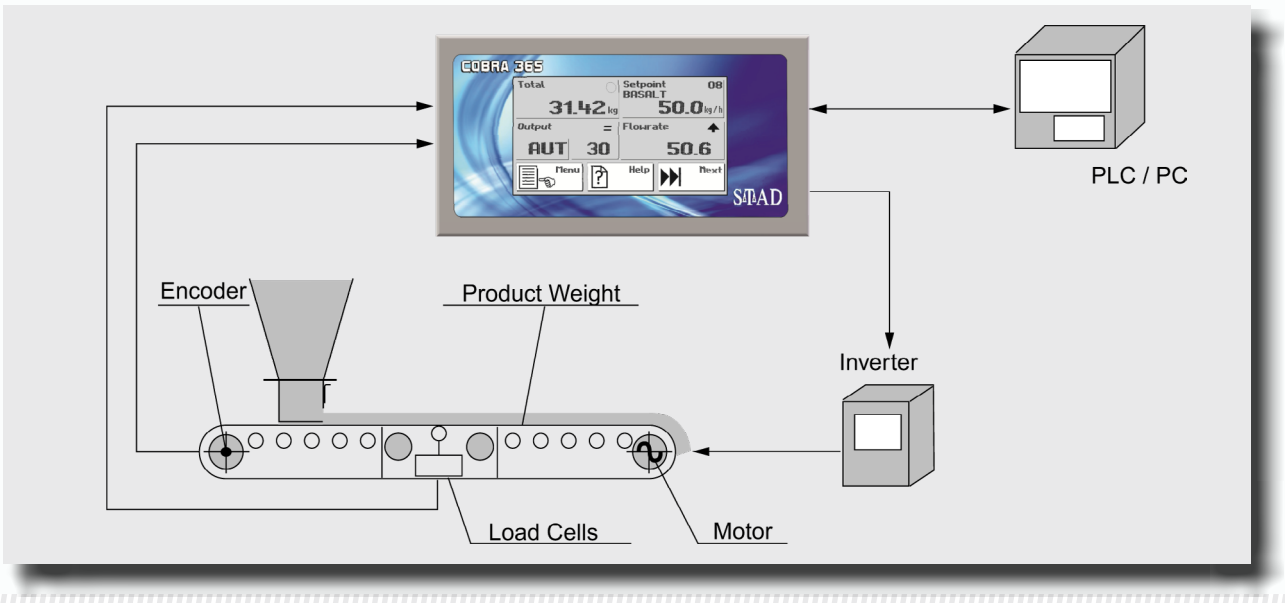
COBRA 365 ELECTRONIC CONTROL UNIT

- CUSTOM MADE
- HIGH ACCURACY
- HEAVY STRUCTURE
- MAXIMUN PRECISION

Belt scales are used to transform a conveyor belts into a weighing belts.
Belt scales help maximize the use of raw materials, control inventories or regulate feed rates.
Examples are feed rate for mills, crushers, screens or process output quantification.

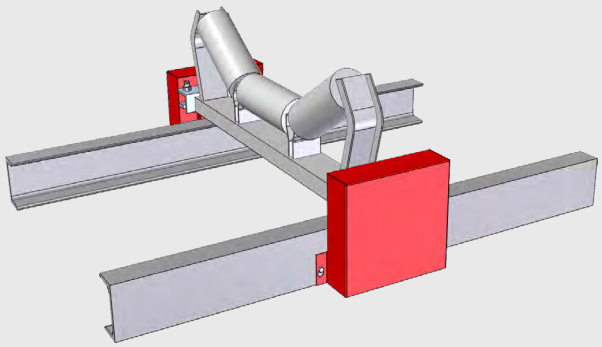
PPS belt scales are custom designed and produced to fit the specific belt structure.
This characteristic helps reduce the installation time, reduces modifications on the belt on site and guaranties the most favorable outcome in terms of accuracy and reliability.
PPS belt scales feature a heavy duty structure on which install the existing troughing set of rollers (modified according to our drawings), a junction box and a speed-detecting encoder.
Load cells with high overload factor for accidental load protection (available also, as an option, stainless steel load cells).

Coupled with the PPS belt scale, a COBRA 365 Controller provides both totalizer or flow regulator functions (extractor belts only).
Weight and flow rate can be transmitted in several ways (impulses, analogue output or serial port according to different protocols).

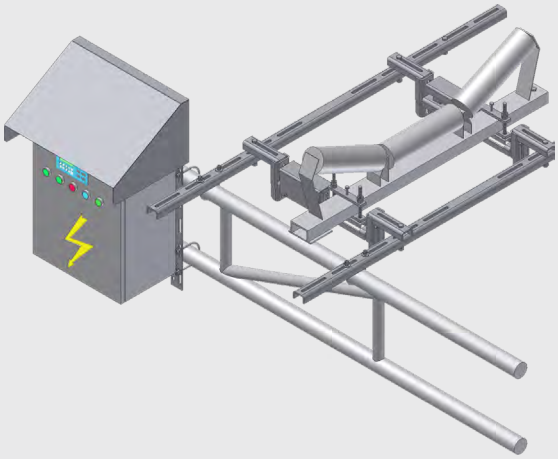


PPS

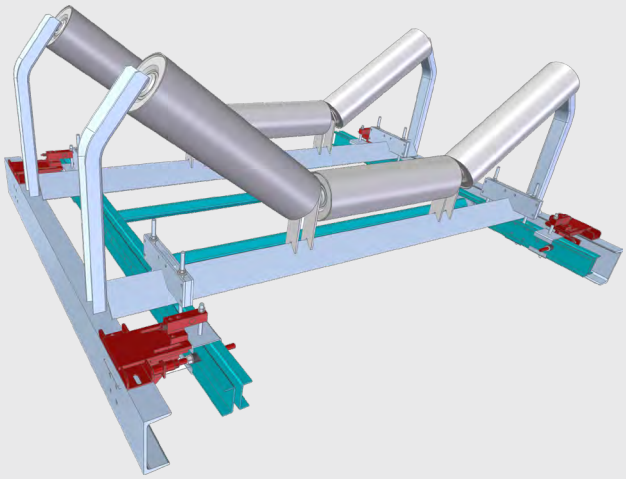
WEIGHING PLATFORM FOR CONVEYOR BELTS



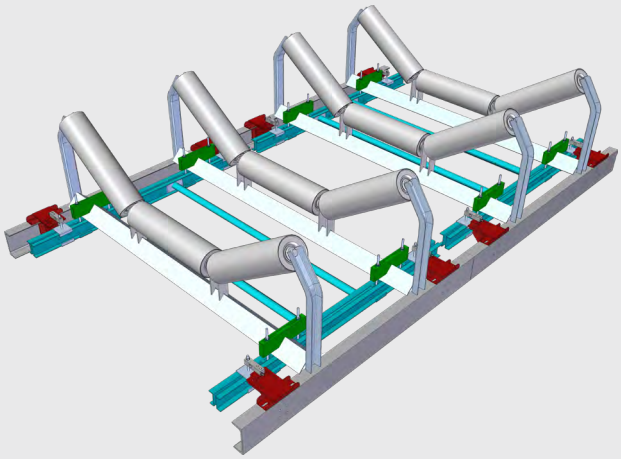
SINGLE WEIGHING STATION



WEIGHING STATION FOR TUBOLAR FRAMEWORK



DOUBLE WEIGHING STATION



QUADRUPLE WEIGHING STATION

TECHNICAL FEATURES

Main structure	Carbon steel or stainless steel
Surface treatment	Powder coating or/and galvanization
Load cells	Off center C3
Encoder	Incremental encoder 1000 pulses/round
Carters	Carbon steel or stainless steel
Weighing station height adjustment	Threaded bar
Load cell block system	Screw
Control electronic unit	COBRA 365
Electrical junction boxes	Available for load cells and encoder
IP protection of load cells	IP65 or IP67 (depending on application)
IP protection of encoder	IP 56 or IP66 (depending on application)
Local control panel	Available as an option
ATEX conformity	Available as an option for ATEX 22 zones

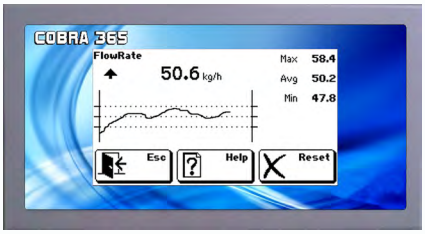
NPS

LIGHT-DUTY WEIGHING BELT

Made in Italy

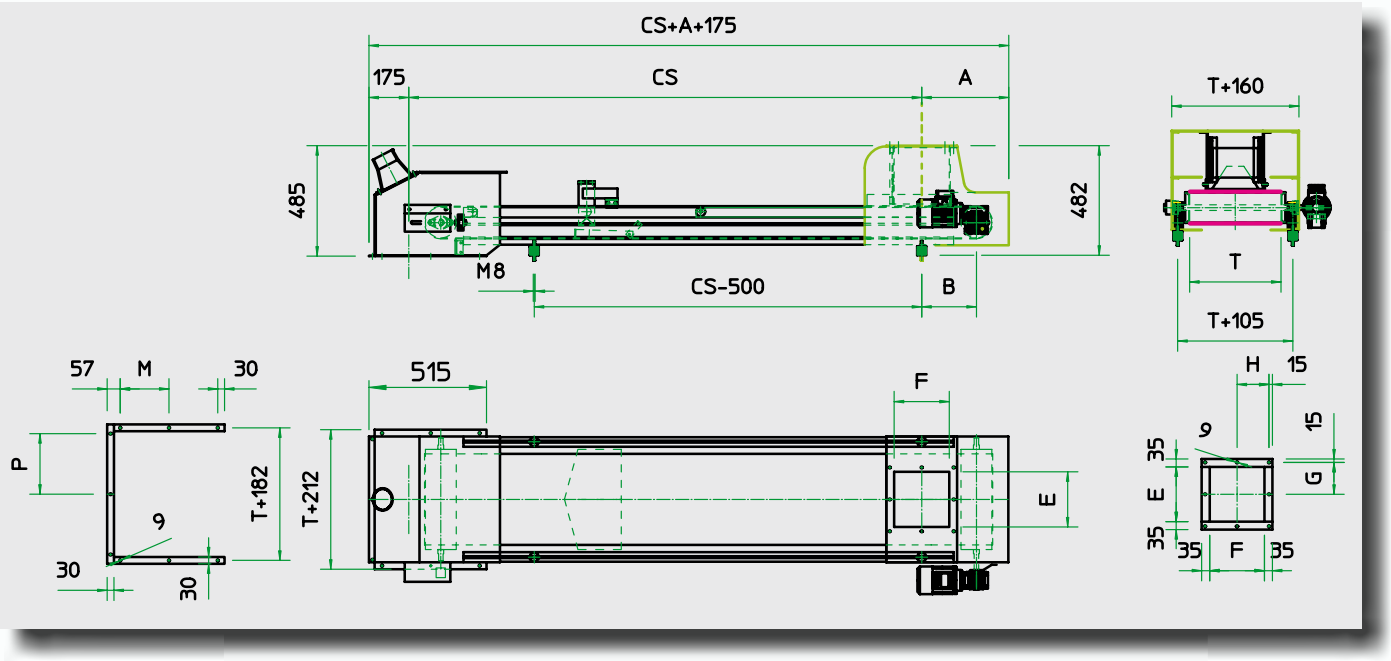
HIGH PRECISION

UP TO 50 t/h



COBRA 365 ELECTRONIC CONTROL UNIT

The NPS series weighing belt is suitable for dispensing powders or granular materials. It has an operating capacity between 300 and 50.000 kg/h approximately.
Apart from the standard model , customized versions of the base model are available upon request.
The belt can extract the material from storage bins or hopper and can be used as fixed capacity dispenser for continuous duty.
COBRA 365 control unit also allows its use as weight totalizator, set weight dispenser, percentage master/slave dispenser.



STANDARD MODELS DIMENSIONS (mm)

	T	CS	A	B	E	F	G	H
NPS 280	280	1550	336	195	150	150	95	95
NPS 400	400	1550	382	240	242	242	140	140
NPS 550	550	1700	461	320	400	400	220	220
NPS 650	650	1700	461	320	400	400	220	220
NPS 800	800	1900	461	320	500	400	270	220

REFERENCE MAXIMUM CAPACITY VALUES

Reference maximum capacity values specified below refer to the metering of material with small grain size and specific weight equal to 1 kg/dm³.
According to used motor drive, the allowed working range varies from 5 to 15 times.

BELT MODEL	SPECIFIC WEIGHT (kg/dm³)	MAX FLOW RATE (kg/h)
NPS 280	1.0	8.000
NPS 400	1.0	15.000
NPS 550	1.0	30.000
NPS 650	1.0	40.000
NPS 800	1.0	50.000

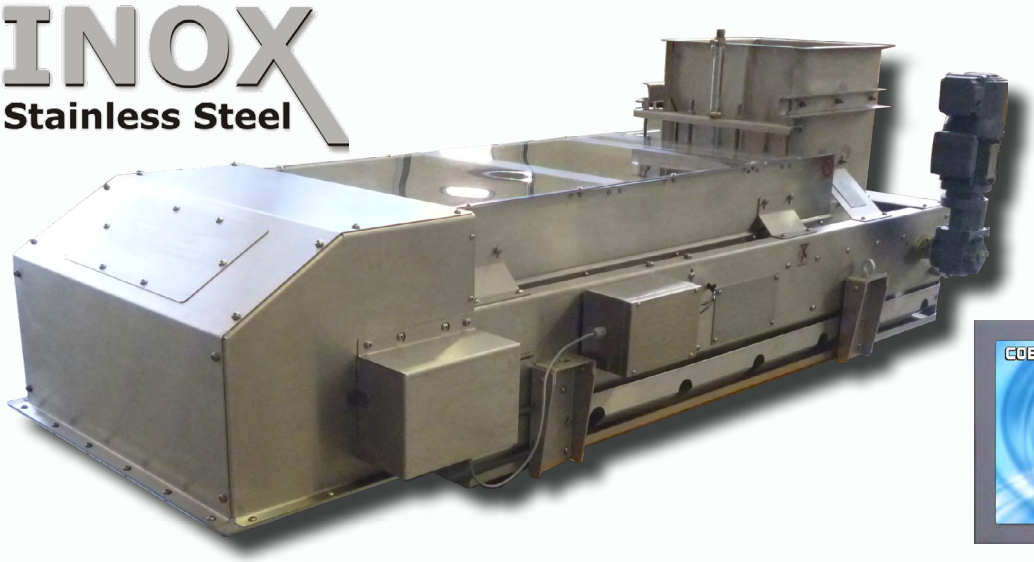
NPS: DETAIL OF THE LOAD CELL WITH HEIGHT ADJUSTMENT AND SAFE BLOCK

TECHNICAL FEATURES

Main structure	Extruded aluminum profiles
Heads	Stainless steel
Loading and unloading hoppers	Stainless steel (optional)
Belt	Calibrated junction in various materials depending on the application
Side rails	Steel and soft bands depending on the application (optional)
Hood	Polycarbonate (optional)
Weighing system	Double off-center load cells C3
Speed control	Incremental encoder 1000 pulses/round
Electrical junction boxes	Available for load cells and encoder
Motor	Asynchronous three-phase multi-voltage or brushless (optional)
Motor fan	Optional depending on the application
Anti-vibration mounts	Steel and rubber 60ShA
ATEX conformity	Available as an option for ATEX 22 zones

NPS-A

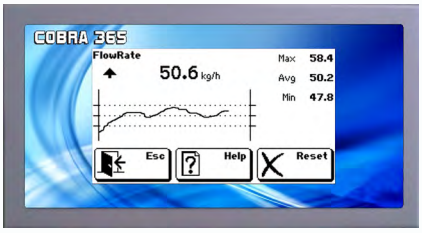
STAINLESS STEEL WEIGHING BELT



Made in Italy

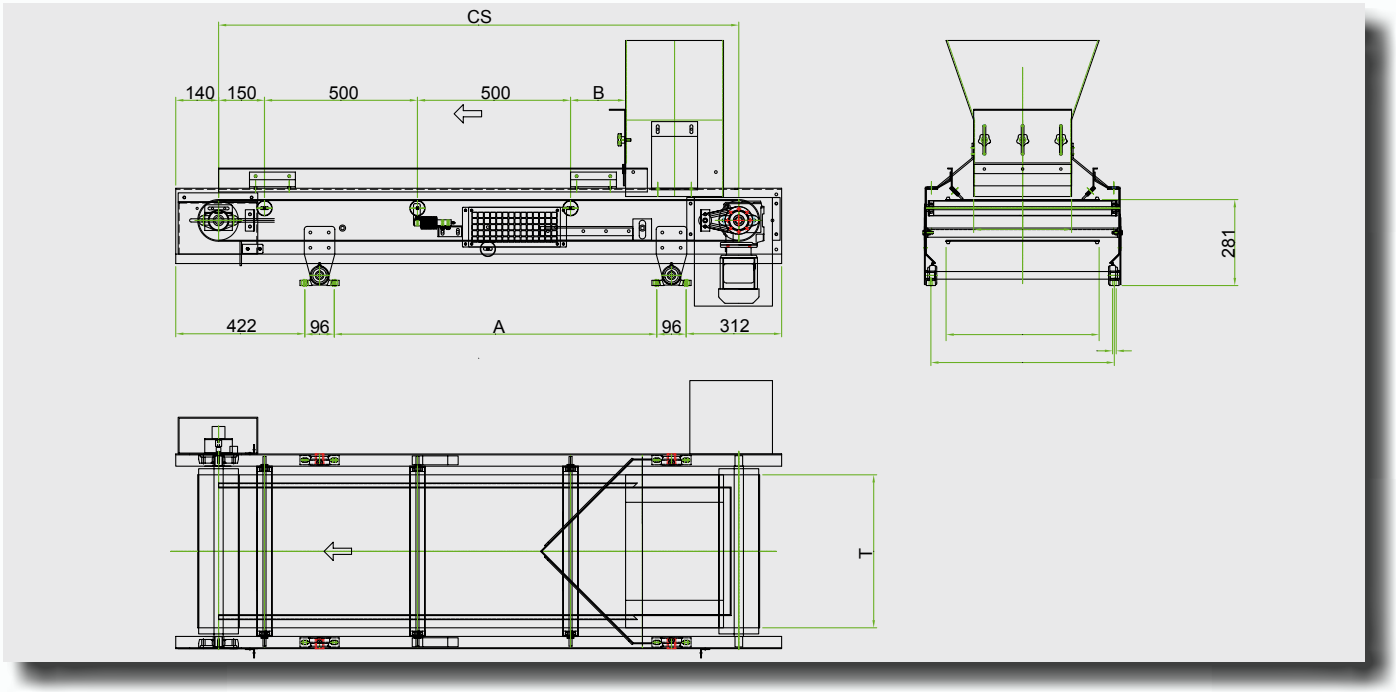
HIGH PRECISION

UP TO 30 t/h



COBRA 365 ELECTRONIC CONTROL UNIT

The NPS-A series weighing belt is suitable for dosing powders or granular materials. It has an operating capacity between 300 and 30.000 kg/h approximately.
This `A` version is fully made of stainless steel and equipped with IP67/66 electronic parts.
Food grade belting allows use in the food industry.
Customized versions of the base model are available upon request.
The belt can extract the material from storage bins or hoppers and can be used as fixed capacity dispenser for continuous dosing cycles.
COBRA 365 control unit also allows its use as weight totalizer, set weight dispenser, percentage master/slave dispenser.



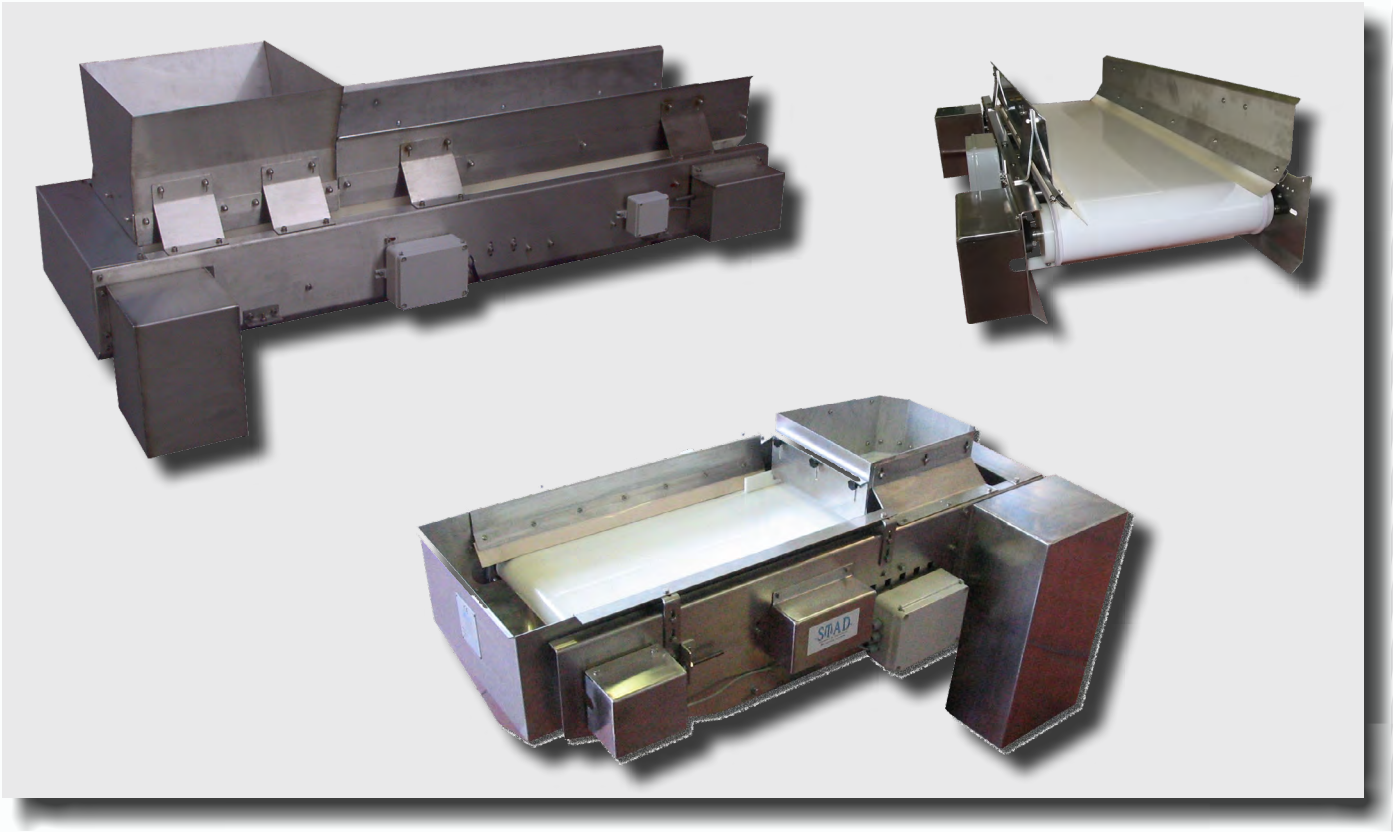
STANDARD MODELS DIMENSIONS (mm)

	T	CS	A	B	E
NPS-A 400	400	1700	1054	180	500
NPS-A 500	500	1700	1054	180	600
NPS-A 700	700	2000	1354	480	800
NPS-A 1000	1000	2400	1754	880	1100

REFERENCE MAXIMUM CAPACITY VALUES

Reference maximum capacity values specified below refer to the metering of material with small grain size and specific weight equal to 1 kg/dm³.
According to used motor drive, the allowed working range varies from 5 to 15 times.

BELT MODEL	SPECIFIC WEIGHT (kg/dm³)	MAX FLOW RATE (kg/h)
NPS 400	1.0	6.000
NPS 500	1.0	10.000
NPS 700	1.0	20.000
NPS 1000	1.0	30.000



TECHNICAL FEATURES

Main structure	Stainless steel
Heads	Stainless steel
Loading and unloading hoppers	Stainless steel (optional)
Belt	Calibrated junction in various materials depending on the application
Side rails	Stainless steel and soft bands depending upon the application (optional)
Hood	Polycarbonate (optional)
Weighing system	Double staniless steel off-center load cells C3
Speed control	Incremental encoder 1000 pulses/round IP66
Electrical junction boxes	Available for load cells and encoder
Motor	Asynchronous three-phase multi-voltage or semi vectorial (optional)
Motor fan	Optional depending on the application
Bolts and supports	Stainless steel
ATEX conformity	Available as an option for ATEX 22 zones

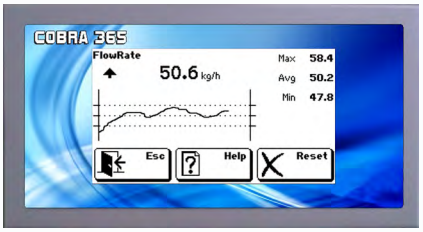
NPS-AT

FOOD COMPLIANT STAINLESS STEEL WEIGHING BELT

Made in Italy

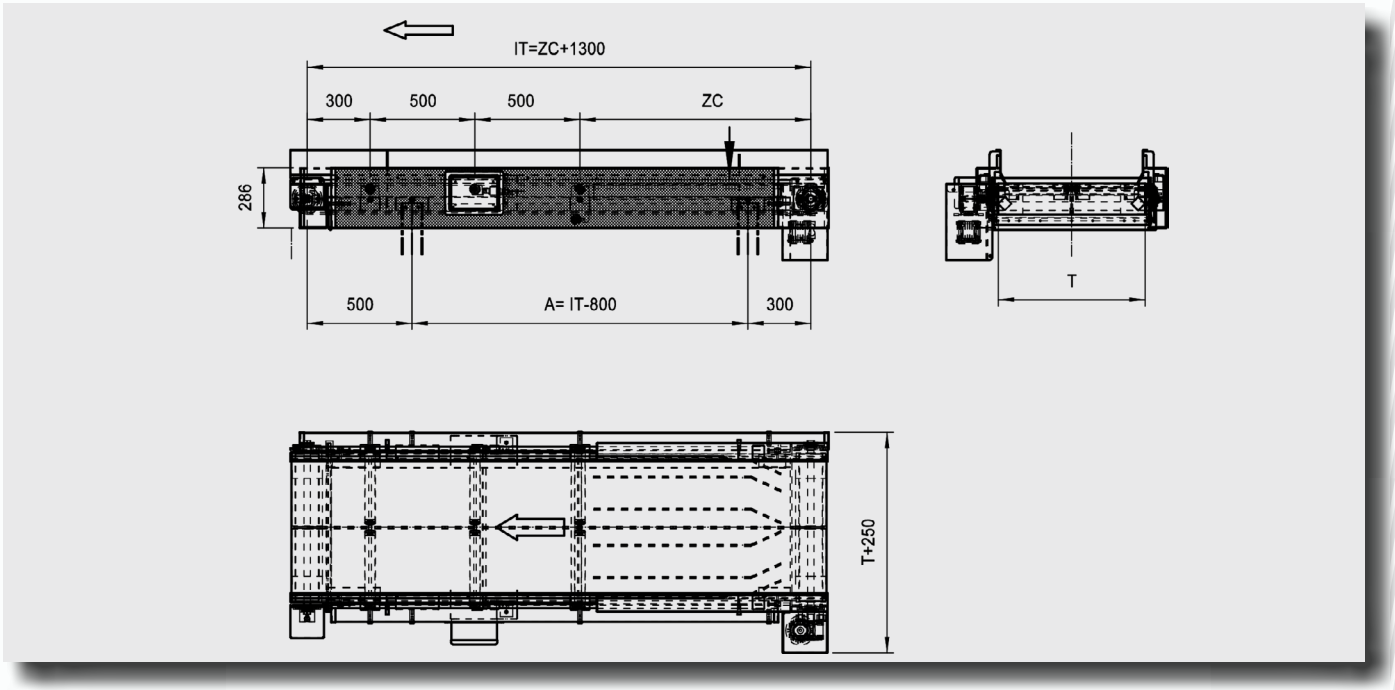
HIGH PRECISION

UP TO 30 t/h



COBRA 365 ELECTRONIC CONTROL UNIT

The NPS-AT series weighing belt is suitable for dosing powders or granular materials. It has an operating capacity between 300 and 30.000 kg/h approximately.
This `AT` version is fully made of stainless steel and equipped with IP67/66 electronic parts to allow water jet cleaning. Food grade belting allows use in the food industry.
Customized versions of the base model are available upon request.
The belt can extract the material from storage bins or hoppers and can be used as fixed capacity dispenser for continuous dosing cycles.
COBRA 365 control unit also allows its use as weight totalizer, set weight dispenser, percentage master/slave dispenser.



STANDARD MODELS DIMENSIONS (mm)

	T	ZC	A	IT
NPS-AT 500	500	500	1000	1800
NPS-AT 600	600	600	1100	1900
NPS-AT 700	700	700	1200	2000
NPS-AT 800	800	800	1300	2100
NPS-AT 1000	1000	1000	1500	2300

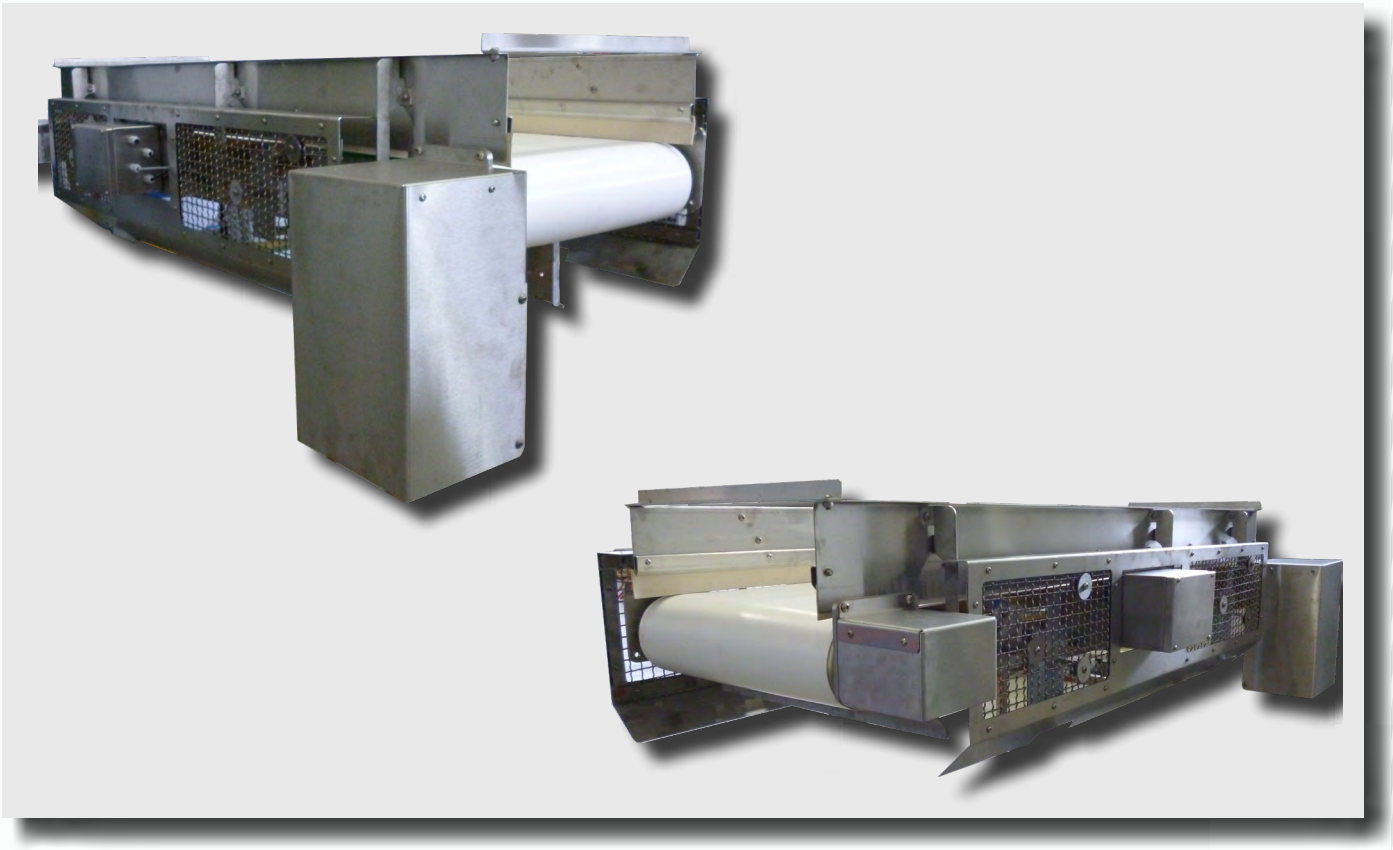
NPS-AT

FOOD COMPLIANT STAINLESS STEEL WEIGHING BELT

REFERENCE MAXIMUM CAPACITY VALUES

Reference maximum capacity values specified below refer to the metering of material with small grain size and specific weight equal to 1 kg/dm³.
According to used motor drive, the allowed working range varies from 5 to 15 times.

BELT MODEL	SPECIFIC WEIGHT (kg/dm³)	MAX FLOW RATE (kg/h)
NPS 500	1.0	6.000
NPS 600	1.0	10.000
NPS 700	1.0	20.000
NPS 800	1.0	25.000
NPS 1000	1.0	30.000

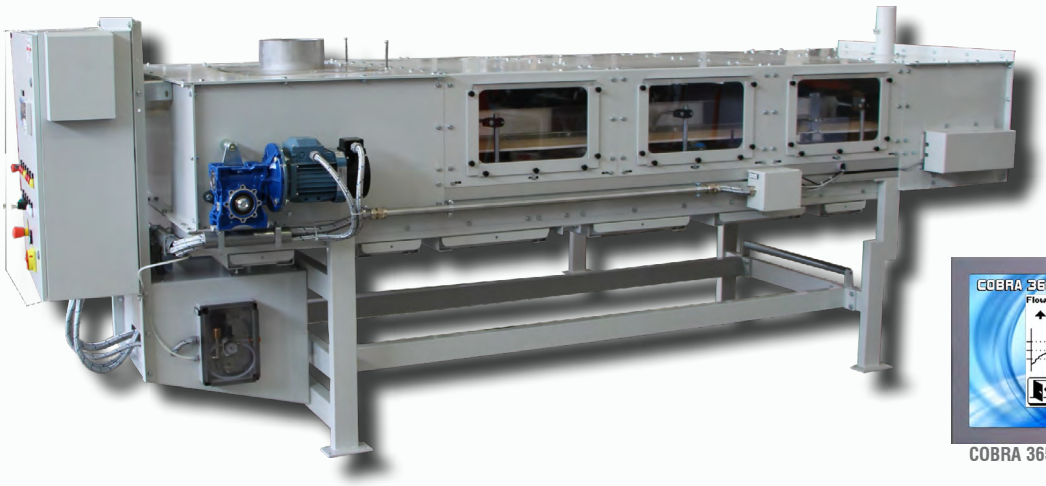


TECHNICAL FEATURES

Main structure	Stainless steel
Heads	Stainless steel
Loading and unloading hoppers	Stainless steel (optional)
Belt	Calibrated junction in various materials depending on the application
Side rails	Stainless steel and soft bands depending upon the application (optional)
Hood	Polycarbonate (optional)
Weighing system	Double staniless steel off-center load cells C3
Speed control	Incremental encoder 1000 pulses/round IP66
Electrical junction boxes	Available for load cells and encoder
Motor	Asynchronous three-phase multi-voltage or brushless (optional)
Motor fan	Optional depending on the application
Bolts and supports	Stainless steel
ATEX conformity ATEX	Available as an option for ATEX 22 zones

NPS-C

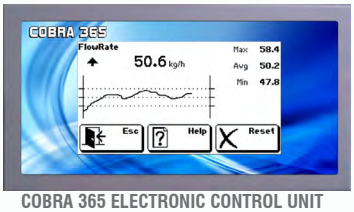
ENCLOSED WEIGHING BELT



Made in Italy

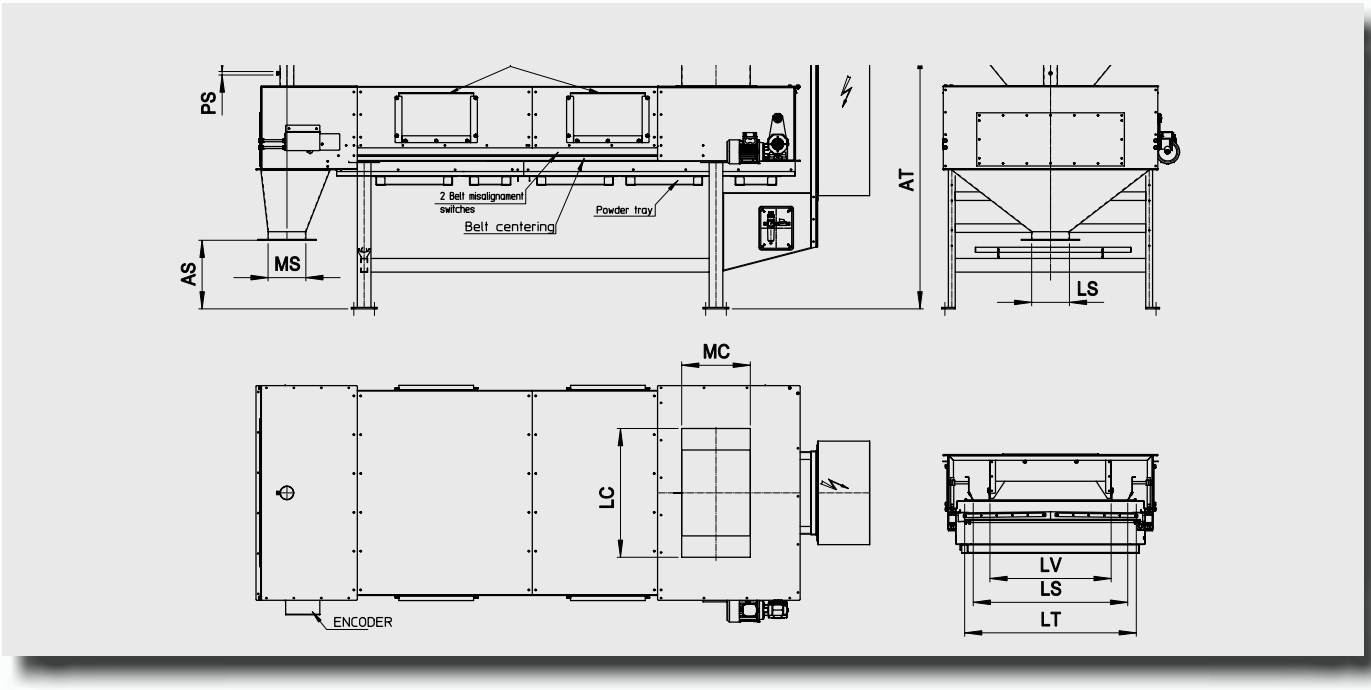
HIGH PRECISION

UP TO 50 t/h



COBRA 365 ELECTRONIC CONTROL UNIT

The NPS-C series weighing belt is suitable for dispensing dust or grains. It has an operating capacity between 300 and 50.000 kg/h approximately.
The integral casing ensures the minimum dispersion of flying dust in ambient.
Apart from the standard model , some different versions, wich can be customized, are also avaible.
The belt can take the material from storage bins or hopper and can be used as fixed capacity dispenser for continuos duty.
COBRA 365 control unit also allows its use as weight totalizator, set weight dispenser, percentage master/slave dispenser.



STANDARD MODELS DIMENSIONS (mm)

	LT	LS	CS	AT	LC	MC	AS	LS	MS
NPS-C 280	280	180	1600	900	150	150	100	200	200
NPS-C 400	400	300	1700	1000	250	250	100	300	300
NPS-C 550	550	450	1700	1000	250	250	100	300	300
NPS-C 800	800	700	1900	1200	450	450	100	400	300
NPS-C 1000	1000	900	1900	1200	700	400	100	500	300

REFERENCE MAXIMUM CAPACITY VALUES

Reference maximum capacity values specified below refer to the metering of material with small grain size and specific weight equal to 1 kg/dm³.
According to used motor drive, the allowed working range varies from 5 to 15 times.

BELT MODEL	SPECIFIC WEIGHT (kg/dm³)	MAX FLOW RATE (kg/h)
NPS-C 280	1.0	8.000
NPS-C 400	1.0	15.000
NPS-C 550	1.0	30.000
NPS-C 800	1.0	40.000
NPS-C 1000	1.0	50.000

NPS-C: FULL COVERED WEIGHING BELT WITH INTEGRATED LOCAL PANEL

TECHNICAL FEATURES

Main structure	Extruded aluminum profiles
Raising frame	Carbon steel
Loading and unloading hoppers	Stainless steel
Belt	Junction calibrated in various materials depending on the application
Side rails	Steel and soft bands depending on the application
Hood	Polycarbonate (optional)
Weighing system	Double off-center load cells C3 IP67
Speed control	Incremental encoder 1000 pulses/round IP66
Electrical junction boxes	Available for load cells and encoder
Motor	Asynchronous three-phase multi-voltage or semi vectorial (optional)
Motor fan	Optional depending on the application
Inspection windows	Extractable polycarbonate
ATEX conformity	Available as an option for ATEX 22 zones

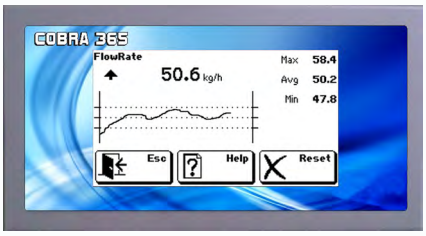
WBE

HEAVY-DUTY WEIGHING BELT

Made in Italy

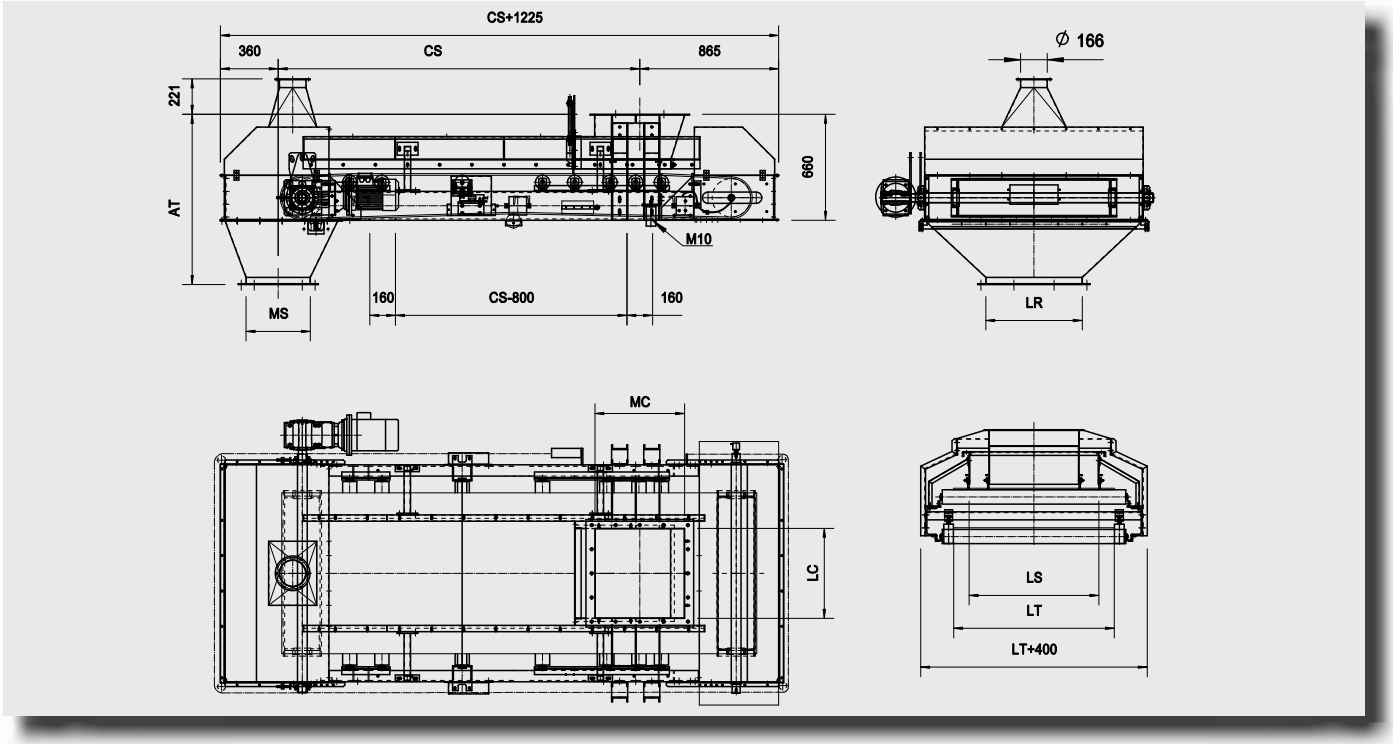
HIGH PRECISION

UP TO 80 t/h



COBRA 365 ELECTRONIC CONTROL UNIT

The sturdy framework of the weighing belt of the heavy duty series, optimised for the installation under a hopper or silos, becomes a belt of the WBE series.
The weighing belt series WBP is suitable for dispensing heavy and big-sized material, as it is very sturdy. It has an operating capacity between 3 and 80 t/h approximatey.
The belt can be made either with flat roller stations or triple roller stations. It can also be customized according to the weighed product.
COBRA 365 control unit allows its use as weight totalizer and, if combined to the extracting belt, as fixed capacity dispenser.



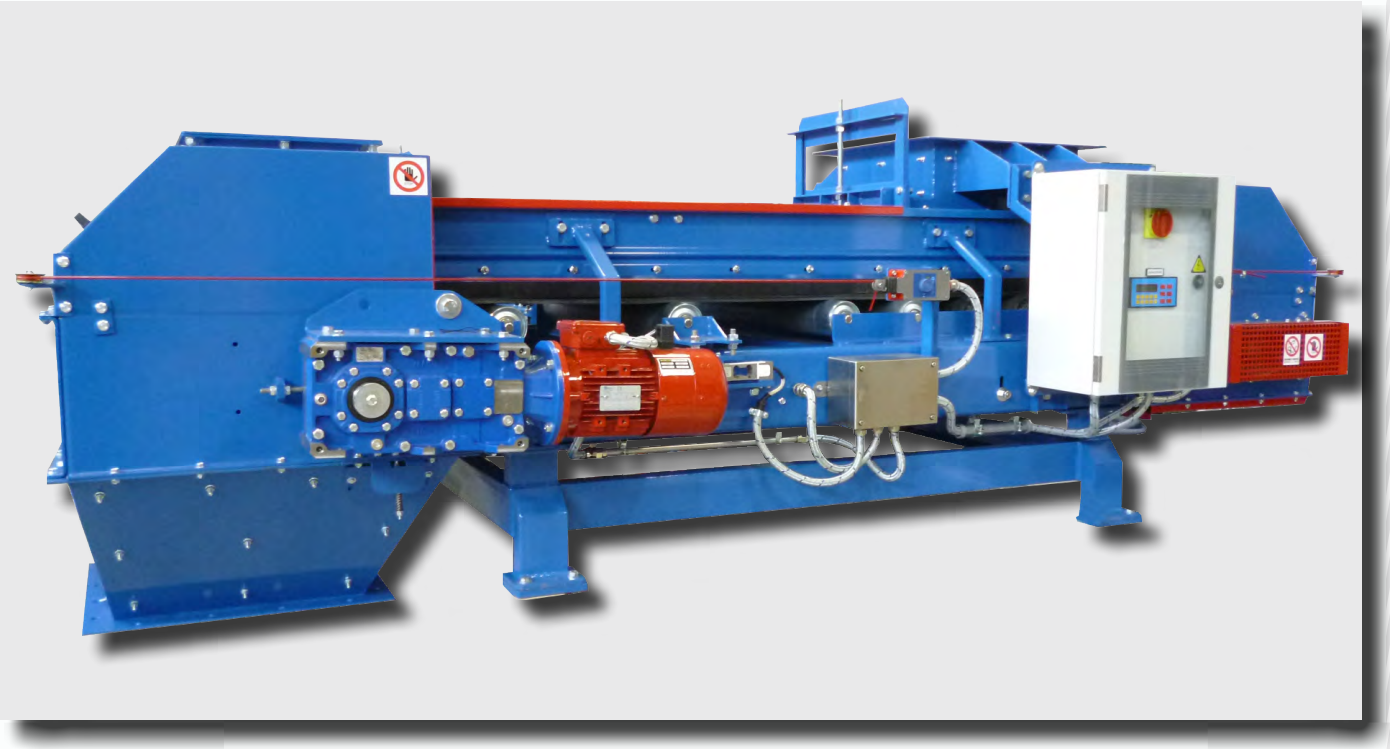
STANDARD MODELS DIMENSIONS (mm)

	LT	LS	CS	AT	LC	MC	LR	MS
WBE 500	500	350	1700	1060	250	250	300	250
WBE 650	650	500	1800	1060	350	350	350	350
WBE 800	800	650	1900	1060	500	500	400	400
WBE 1000	1000	800	2000	1060	560	560	600	600

REFERENCE MAXIMUM CAPACITY VALUES

Reference maximum capacity values specified below refer to the metering of material with small grain size and specific weight equal to 1 kg/dm³.
According to used motor drive, the allowed working range varies from 5 to 15 times.

BELT MODEL	SPECIFIC WEIGHT (kg/dm³)	MAX FLOW RATE (kg/h)
WBE 500	1.0	15.000
WBE 650	1.0	22.000
WBE 800	1.0	50.000
WBE 1000	1.0	70.000
WBE 1200	1.0	80.000

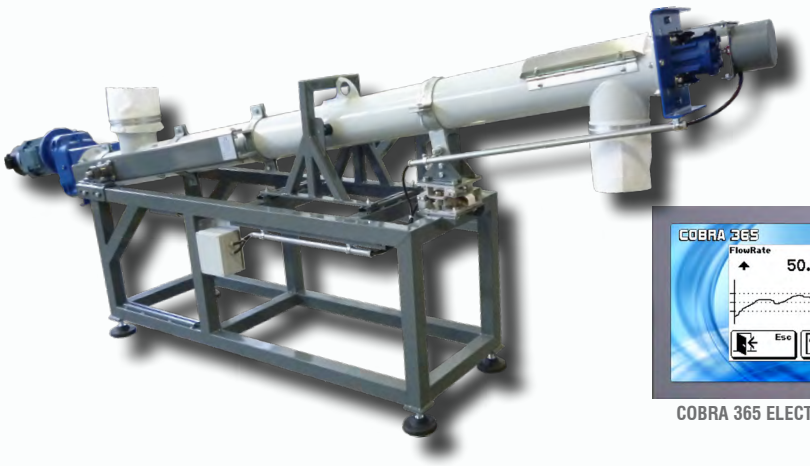


TECHNICAL FEATURES

Main structure	Carbon steel
Heads	Carbon steel
Loading and unloading hoppers	Carbon steel + HARDOX (optional)
Belt	Calibrated junction in various materials depending on the application
Side rails	Steel and soft bands depending on the application (optional)
Hood	Steel (optional)
Weighing system	Double off-center load cells C3
Speed control	Incremental encoder 1000 pulses/round IP67
Electrical junction boxes	Available for load cells and encoder IP66
Motor	Asynchronous three-phase multi-voltage
Motor fan	Optional depending on the application
Anti-vibration mounts	Steel and rubber 60ShA
ATEX conformity	Available as an option for ATEX 22 zones

CDS

WEIGHING SCREW CONVEYOR



Made in Italy

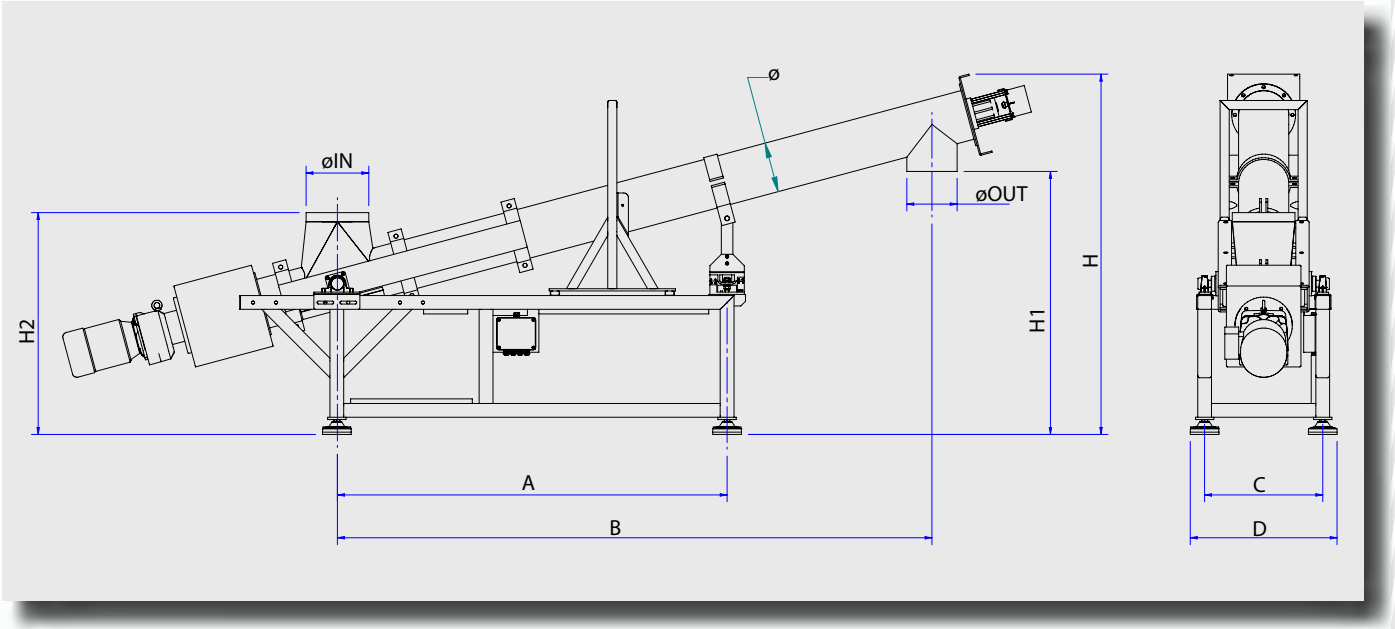
COBRA 365 ELECTRONIC CONTROL UNIT

- COMPACT DESIGN
- NO DUST RELEASE
- UP TO 80 m³/h

The CDS weighing auger is especially suitable for the dosing of powdery products that can not be extracted by means of weighing belt (for example “ventilated powders”) and where it is necessary to completely avoid the emission of dust into the environment.
The machine is made up of 3 main components:

- supporting frame adapted to fit customer plant;
- weight screw custom-made to meet specific application needs, i.e. material specifications and desired flow rate;
- control panel providing total cycle control, can be customised to meet customer needs and interfaced with pre-existing plant systems.

On request, the machine can be fitted with level indicators upstream of the plant to monitor product in feeding buffer, diverter valves for material recovery and flow switches to control clogging.



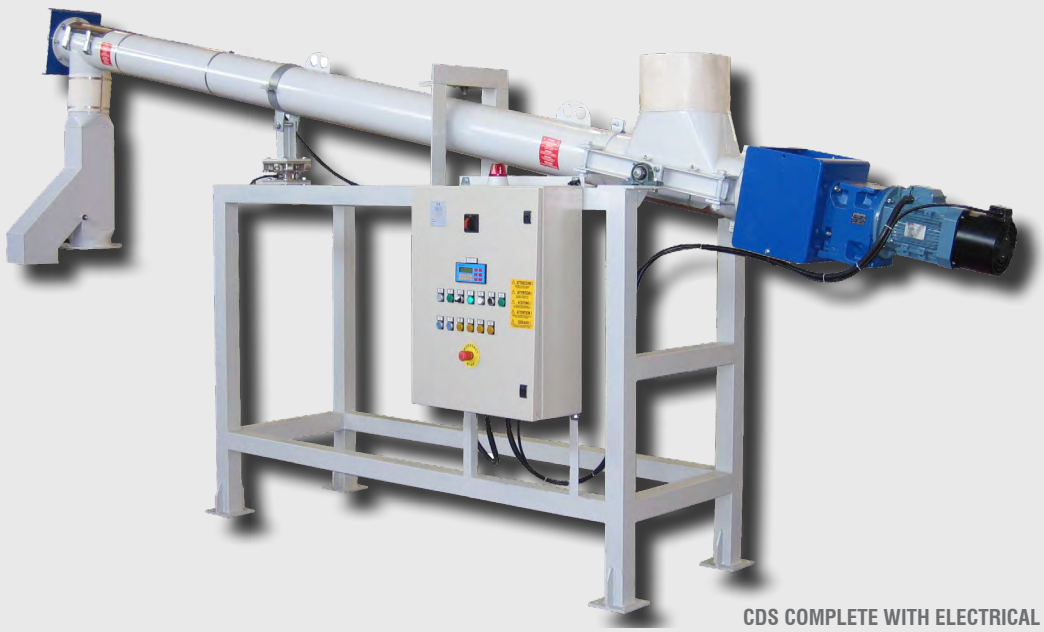
STANDARD MODELS DIMENSIONS (mm)

	ø (IN-OUT)	A	B	C	D	H	H1	H2	Tilt
CDS 139	139	1700	2300	515	640	1450	1100	900	15°
CDS 168	168	1700	2300	515	640	1450	1100	930	15°
CDS 219	219	1700	2600	515	640	1570	1150	970	15°
CDS 273	273	2000	2800	565	690	1630	1150	970	15°
CDS 323	323	2000	3000	620	470	1750	1160	1050	15°
CDS 406	406	2500	3000	800	925	1850	1160	1015	15°

REFERENCE MAXIMUM CAPACITY VALUES

Reference maximum capacity values specified below refer to the metering of material with small grain size and specific weight equal to 1 kg/dm³.
According to used motor drive, the allowed working range varies from 5 to 15 times.

SCREW MODEL	SPECIFIC WEIGHT (kg/dm³)	MAX FLOW RATE (kg/h)
CDS 139	1.0	3.000
CDS 168	1.0	6.000
CDS 219	1.0	10.000
CDS 273	1.0	25.000
CDS 323	1.0	50.000
CDS 406	1.0	80.000



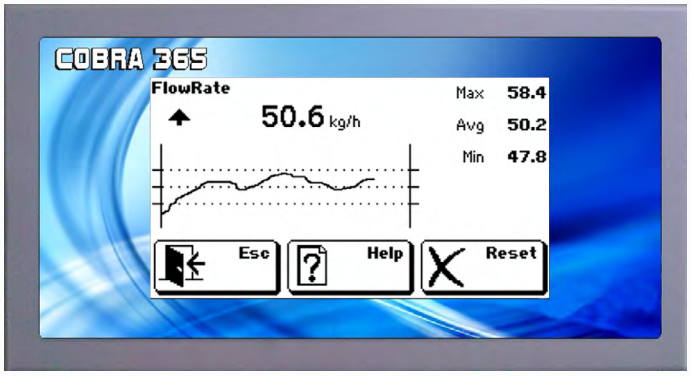
CDS COMPLETE WITH ELECTRICAL CONTROL PANEL ON FIELD AND DIVERTER VALVE

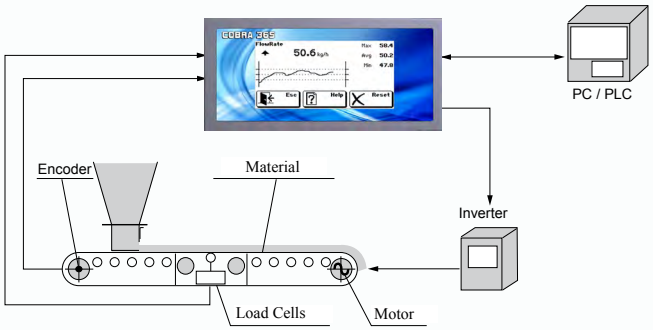
TECHNICAL FEATURES

Main structure	Extruded aluminum profiles
Tubolar housing	Carbon steel or stainless steel
Screw	Carbon steel or stainless steel
Diverter valve	Optional
Wear-resistant coating	Optional
Inspection door	Present at loading and unloading port
Weighing system	Single compression load cells C3
Speed control	Incremental encoder 1000 pulses/round
Electrical junction boxes	Available for load cells and encoder
Motor	Asynchronous three-phase multi-voltage or semi vectorial (optional)
Motor fan	Optional depending on the application

COBRA 365

FLOW RATE CONTROLLER FOR CONTINUOUS WEIGHING

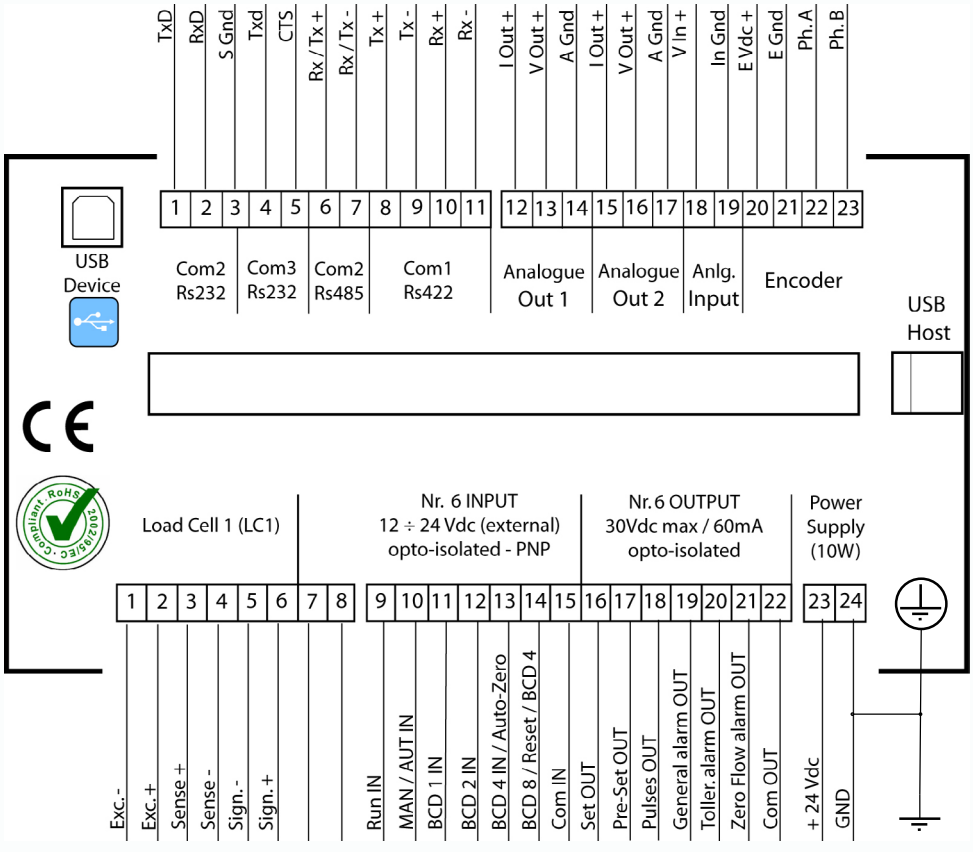




IP65

SELECTABLE LANGUAGES

Instrument box for panel mounting.
Backlighted 5.2” TOUCH SCREEN LCD display.
IP 65 front panel protection rating.
The COBRA 365 not only integrates weight and speed variables but also generates the instantaneous flow rate per hour, total weight and the function of automatic flow rate regulator.



COBRA 365

FLOW RATE CONTROLLER FOR CONTINUOUS WEIGHING

OPTIONAL AVAILABLE:

- PROFIBUS-DP PROTOCOL;
- PROFINET-IO PORT;
- USB HOST FOR PEN DRIVE;
- ADDITIONAL ANALOGUE INPUT AND OUTPUT;
- ETHERNET INTERFACE;
- 4IN/8OUT ADDITIONAL MODULE;
- 24 COLUMN PRINTER;
- BIG DISPLAY REPEATER.

MAIN FEATURES OF COBRA 365

Maintaining the flow set point by adjusting IP analog output, with an alarm output of flow out of tolerance;
Continuous transmission of the instantaneous flow rate, detected by analog output proportional to it.
Ability to set, for batching, the values of presets, sets and fly with pulse outputs to the achievement of values.
Possibility of setting of the SET POINT via analog input; optional extra analog output in addition to the standard output
Save points for the working curve of the doser when used in combination with with non-linear extractors (eg electromagnetic extractor).
Calculation of the weight total and transmission by impulse output; output can be delivered in a 24 column printer via RS232 port.
Programming of up to 15 different set points of work, settable by BCD inputs.
Able to freeze the analog output value, by means of logic input, in order to avoid the initial pendulation of system (which runs all 15 set point).
Ability to display, during operation, I/O status, the current weight, current speed, the pulse encoder and the correction factor set.
Procedures for the zero setting on working loaded belt and automatic adjustment factor correction.
Can be connected with PC / PLC using comunication protocols ASCII, Modbus-RTU, Profibus and Profinet IO (optional).

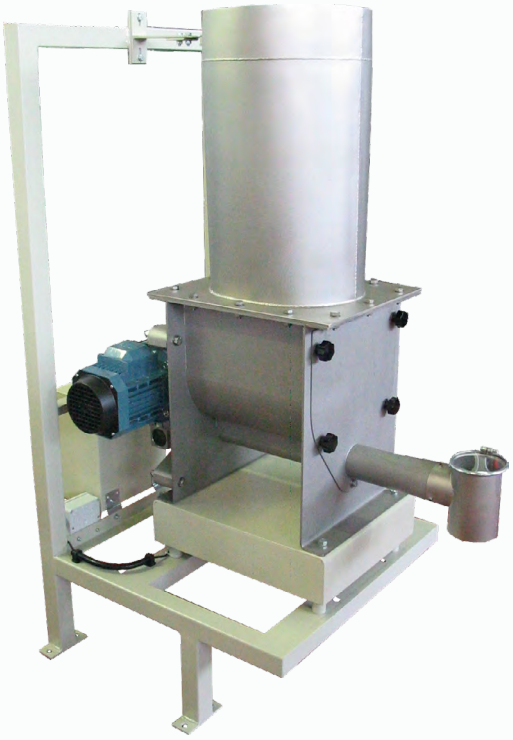
TECHNICAL FEATURES

Power supply and consumption	24Vdc 10W
CPU - Micro controller	RISC 32 bit - 44MHz
Number of load cells in parallel and supply	max 8 (350 Ω) - 5Vdc / 120mA
Communication protocol	RS232 / RS485 / USB Device, Ethernet
A/D converter	24bit
Protection rating	IP65

Display resolution	10.000	Analog output	16bit (V e mA)
Internal resolution	up to 600.000	Analog input	24bit (V e mA)
Reading resolution	1x, 2x, 5x, 10x	Encoder power supply	24Vdc
Logic output	nr.6 photorelè	Encoder input	bi-fase PP max 2KHz
Logic output features (cad.)	max 30Vdc - 60mA	Working temperature & humidity	-10 ÷ +50°C 85% (s.c.)
Logic input	nr.6 optoisolated	Case dimension	196x105x10mm
Logic input features (cad.)	12/24Vdc PNP	Panel hole for monting	187x97mm

DPC-X

LOSS-IN-WEIGH AUGER FEEDER / STANDARD LINE



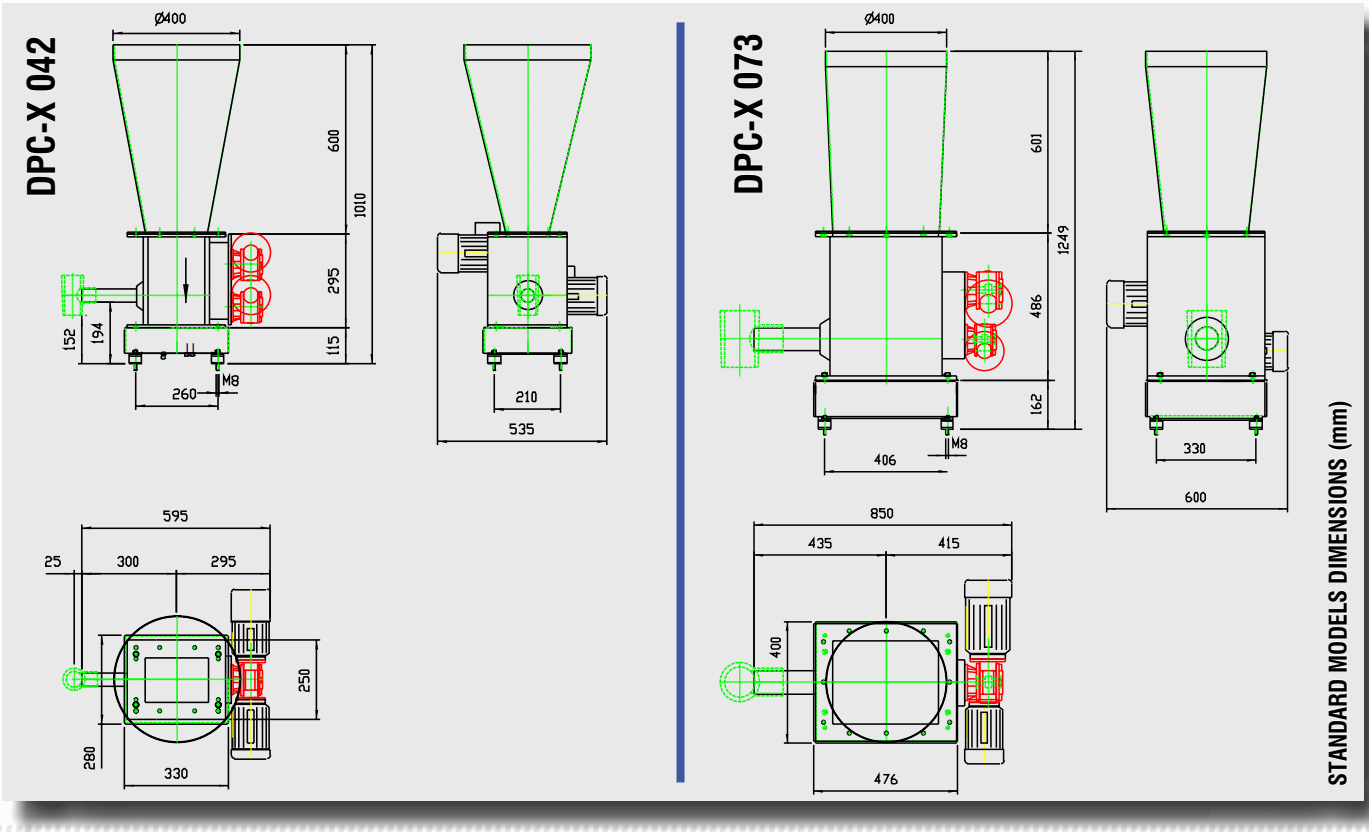
Made in Italy

TAIPAN 365 ELECTRONIC CONTROL UNIT

- MAXIMUN PRECISION
- UP TO 3600 dm^3/h
- OFF CENTER LOAD CELL
- AUTOMATIC REFILL

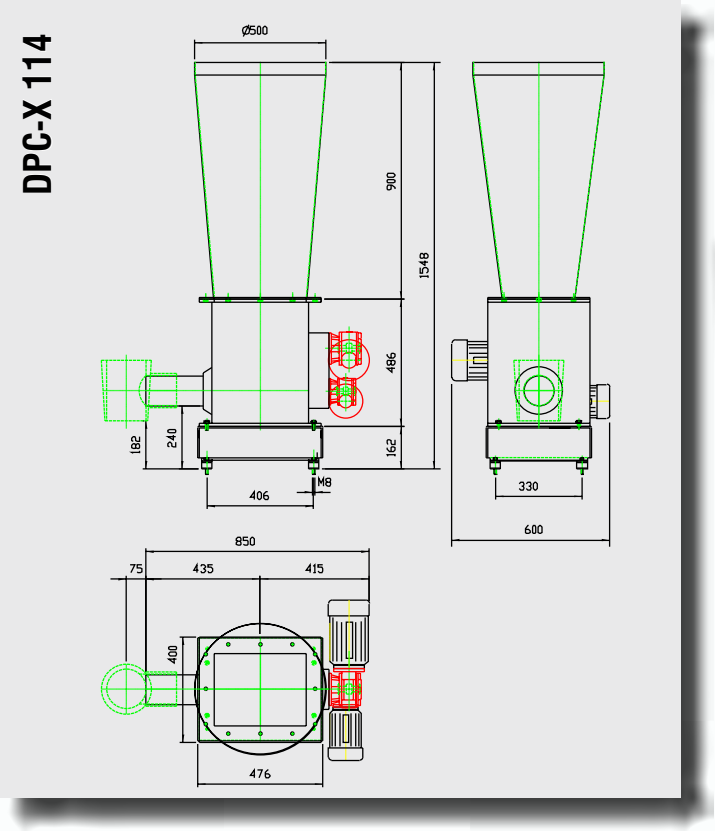
INOX Stainless Steel

The type DPC-X feeders are suitable for dosing powders with medium to low flow rates.
The batchers comprise a storage hopper, a feed device and a scale that controls decreasing weight during product discharge.
Each type of feeder is available with a broad range of motor drives and in customized versions to suit the process.
The scale is coupled with the TAIPAN 365 controller, so the batcher can operate in batching and/or continuous mode with controlled feed rate. In the latter mode, hopper refill is controlled by electronics with no need to interrupt the batching process.



DPC-X

LOSS-IN-WEIGH AUGER FEEDER / STANDARD LINE



REFERENCE NOMINAL CAPACITY VALUES dm³/h (in reference to the gear ratio)

FEEDER MODEL	GEAR RATIO				
	1:10	**1:15**	**1:20**	**1:28**	**1:40**
DPC-X 042	98	65	54	35	24
DPC-X 073	798	530	399	285	199
DPC-X 114	3640	2427	1820	1300	910

TECHNICAL FEATURES

Main structure	Carbon steel
Body material	Stainless steel
Breaker motor	Asynchronous three-phase multi-voltage
Dosing motor	Asynchronous three-phase multi-voltage or brushless (optional)
Dosing screw	Many versions depending on the application
Charging hopper	Stainless steel
Weighing system	Single off-center load cells C3
Electronic control unit	TAIPAN 365
Electrical junction boxes	Available for load cells
Motor fan	Optional depending on the application
Vertical spout	With polycarbonate indicator
ATEX conformity	Available as an option for ATEX 22 zones

DPC

LOSS-IN-WEIGH AUGER FEEDER / FLEX LINE

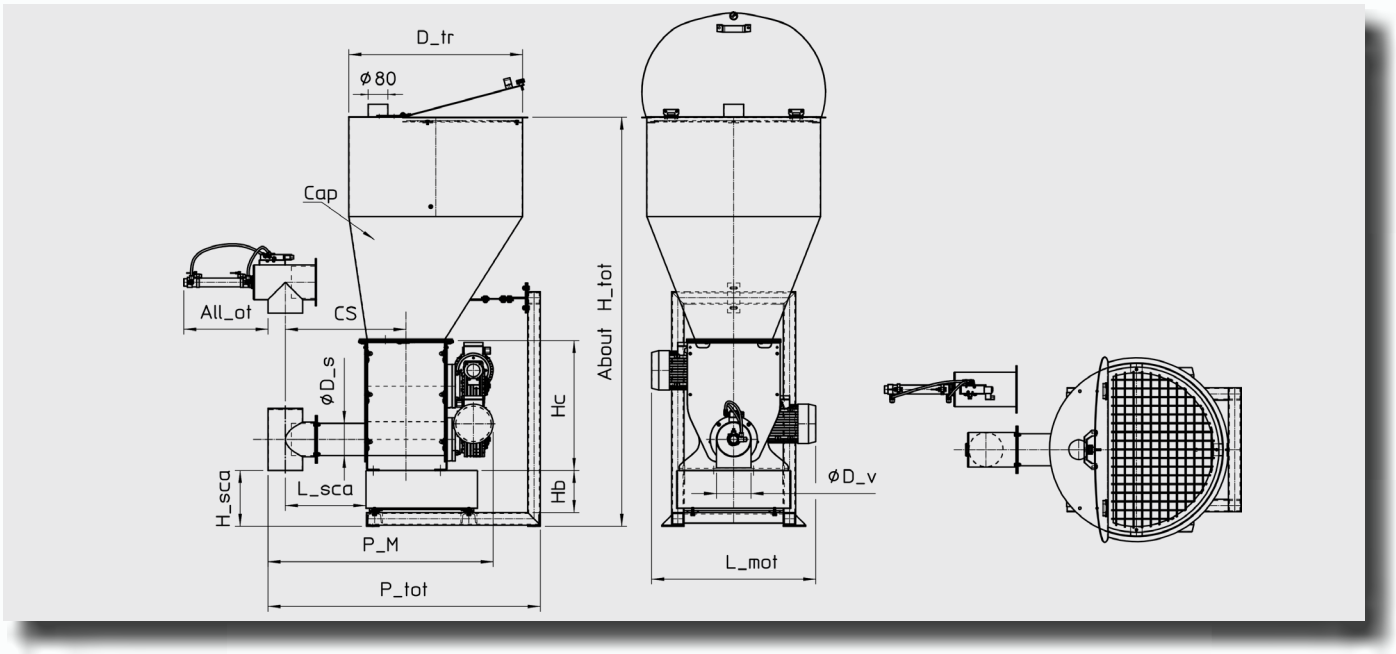
TAIPAN 365 ELECTRONIC CONTROL UNIT

Made in Italy

INOX
Stainless Steel

- MAXIMUN PRECISION
- UP TO 4000 dm³/h
- OFF CENTER LOAD CELL
- TWIN SCREW AVAILABILITY

The type DPC feeders are indicated in the dosing of powders with medium flow rates.
The batchers comprise a storage hopper, a feed device and a scale that controls decreasing weight during product discharge.
Each type of feeders is available with a broad range of motor drives and in customized versions to suit the process.
The scale is coupled with the TAIPAN 365 controller, so the batcher can operate in batching and/or continuous mode with controlled feed rate. In the latter mode, hopper refill is controlled by electronics with no need to interrupt the batching process.

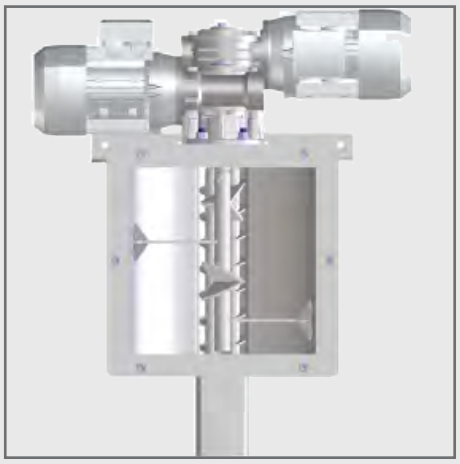


STANDARD MODELS DIMENSIONS (mm)

	Cap (dm³)	P_tot	L_mot	H_tot	H_sca	D_tr	D_v	All_ot	D_s
DPC 020	60	705	480	980	220	600	42.4	130	27
DPC 030	110	740	600	1190	205	600	48.3	170	38
DPC 040	110	740	600	1190	205	600	60.3	180	45
DPC 060	200	1030	570	1500	180	700	88.9	200	70
DPC 080	200	1030	570	1500	160	700	114.3	220	90
DPC 100	200	1100	660	1650	225	700	139.7	340	129
DPC 20+20 (twin screw)	60	705	480	980	205	600	60.3	170	60
DPC 30+30 (twin screw)	200	970	570	1500	200	700	88.9	200	90
DPC 40+40 (twin screw)	110	950	570	1300	205	700	88.9	200	90
DPC 60+60 (twin screw)	200	1165	700	1600	145	700	168.3	280	150

DPC

LOSS-IN-WEIGH AUGER FEEDER / FLEX LINE



DPC-B: DOSATORE BI-VITE

REFERENCE NOMINAL CAPACITY VALUES dm³/h

FEEDER MODEL	SINGLE SCREW (DPC)		TWIN SCREW (DPC-B)		
	MIN	MAX		MIN	MAX
DPC 020	4	25	•	7	45
DPC 030	20	90	•	35	150
DPC 040	60	200	•	100	350
DPC 060	150	600	•	260	1000
DPC 080	500	2000			
DPC 100	1500	4000			

TECHNICAL FEATURES

Main structure	Carbon steel
Body material	Stainless steel
Breaker motor	Asynchronous three-phase multi-voltage
Dosing motor	Asynchronous three-phase multi-voltage or brushless (optional)
Dosing screw	Many versions depending on the application
Charging hopper	Stainless steel
Weighing system	Single off-center load cells C3
Electronic control unit	TAIPAN 365
Electrical junction boxes	Available for load cells
Motor fan	Optional depending on the application
Vertical spout	With polycarbonate indicator
ATEX conformity ATEX	Available as an option for ATEX 22 zones

DPN

LOSS-IN-WEIGH BELT FEEDER

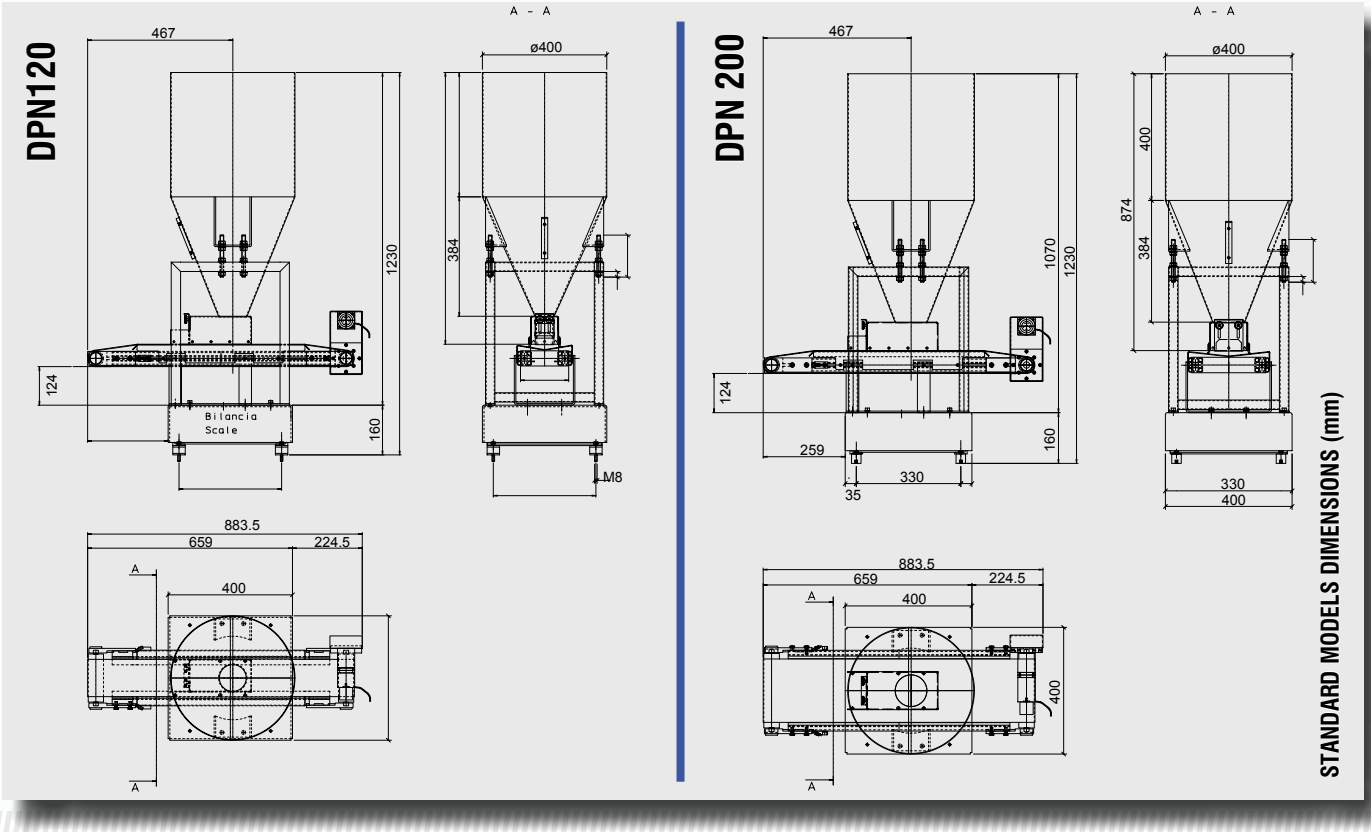
Made in Italy

TAIPAN 365 ELECTRONIC CONTROL UNIT

- MAXIMUN PRECISION
- UP TO 900 kg/h
- OFF CENTER LOAD CELL
- AUTOMATIC REFILL

INOX
Stainless Steel

The feeders of series DPN are designed to batch dust-forming materials at mid-to-flow feed rates. The batchers comprise a storage hopper, a feed device and a scale that controls decreasing weight during product discharge. Each type of batcher is available with a broad range of motor drives and in customized versions to suit the process.
The scale is coupled with the TAIPAN 365 controller, so the batcher can operate in batching and/or continuous mode with controlled feed rate. In the latter mode, hopper refill is controlled by electronics with no need to interrupt the batching process.



DPN

LOSS-IN-WEIGH BELT FEEDER

MAXIMUN CAPACITY VALUES kg/h (in reference to the gate opening) - PS=1kg/dm³

FEEDER MODEL	GATE OPENING		
	MAX (100%)	MID (50%)	MIN (10%)
DPN 120	600	450	300
DPN 200	900	650	400

TECHNICAL FEATURES

Main structure	Carbon steel
Body material	Stainless steel
Belt	Calibrated junction in various materials depending on the application
Dosing motor	Asynchronous three-phase multi-voltage or brushless (optional)
Belt cleaning system	Belt scrapes
Charging hopper	Stainless steel
Weighing system	Single off-center load cells C3
Electronic control unit	TAIPAN 365
Electrical junction boxes	Available for load cells
Motor fan	Optional depending on the application
ATEX conformity ATEX	Available as an option for ATEX 22 zones

DPN-C

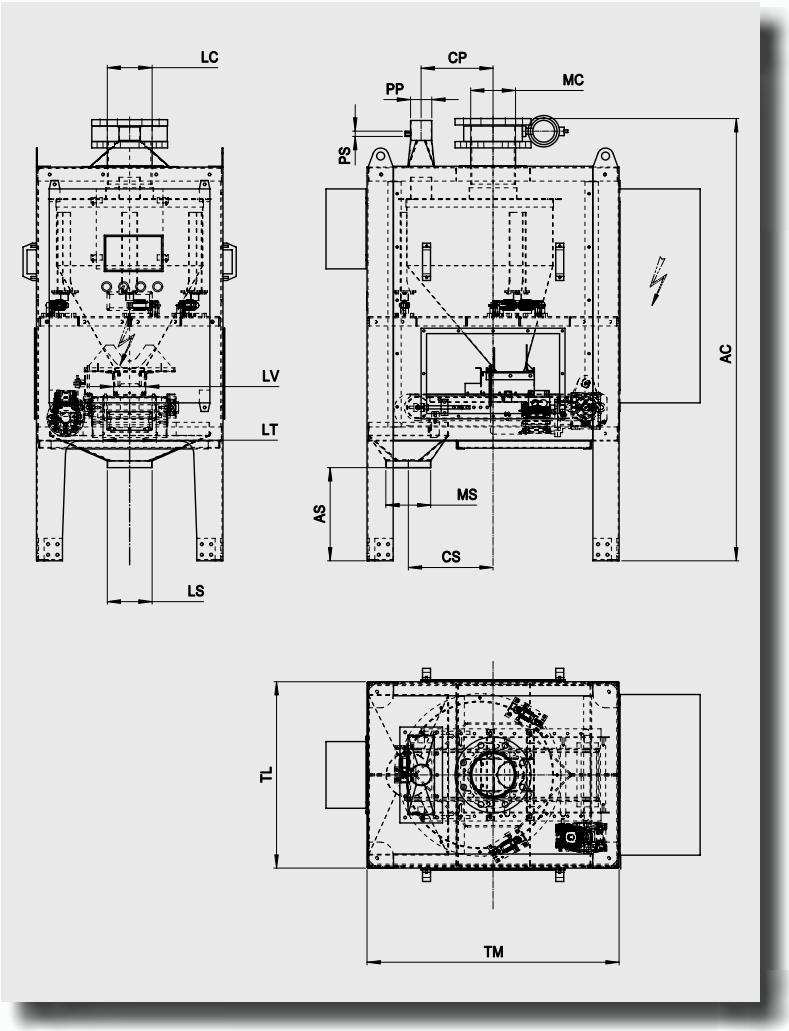
ENCLOSED LOSS-IN-WEIGH BELT FEEDER

Made in Italy

- MAXIMUN PRECISION
- UP TO 3000 kg/h
- 3 LOAD CELLS WEIGHING
- AUTOMATIC REFILL

TAIPAN 365 ELECTRONIC CONTROL UNIT

The batchers of series DPN-C are designed to batch powders at mid-to-low feed rates.
The batchers comprise a storage hopper, a feed device and a scale that controls decreasing weight during product discharge.
Each type of batcher is available with a broad range of motor drives and in customized versions to suit the process.
The integral casing ensures the minimum dispersion of airborne dust in the envoronment.
The scale is coupled with the TAIPAN 365 controller, so the batcher can operate in batching and/or continuous mode with controlled feed rate.
In the latter mode, hopper refill is controlled by electronics with no need to interrupt the batching process.



STANDARD MODELS DIMENSIONS (mm)

	LT	LS	CS	AC	LC	CP	AS	PP	PS
DPN-C 200	200	ø114,3	318	1654	ø114,3	270	236	50	1/4" NPT-F
	TOTAL LENGHT (TM)					946			
	TOTAL WIDTH (TL)					700			

DPN-C

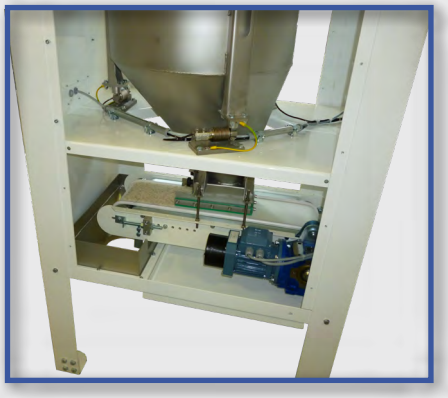
ENCLOSED LOSS-IN-WEIGH BELT FEEDER

REFERENCE MAXIMUM CAPACITY VALUES

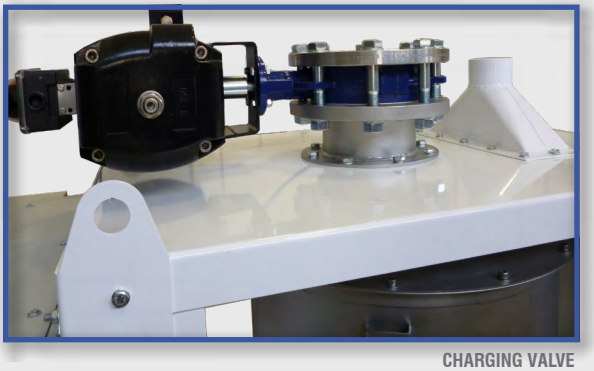
Reference maximum capacity values specified below refer to the metering of material with small grain size and specific weight equal to 1 kg/dm³.
According to used motor drive, the allowed working range varies from 5 to 15 times.

BELT MODEL	SPECIFIC WEIGHT (kg/dm³)	MIN FLOW RATE (kg/h)	MAX FLOW RATE (kg/h)
DPN-C 200	1.0	1	3.000

NOTE: the range of working capacity depends by the type of motor used.



WEIGHING BELT INSIDE DPN-C



CHARGING VALVE

TECHNICAL FEATURES

Main structure	Carbon steel
Charging valve	Stainless steel
Loading and unloading hoppers	Stainless steel
Belt	Calibrated junction in various materials depending on the application
Side rails	Steel and soft bands depending on the application
Windows	Polycarbonate
Weighing system	Triple load cells C3 IP67
Pneumatic junction boxes	Plastic with transparent top
Electrical junction boxes	Available for load cells
Motor	Asynchronous three-phase multi-voltage or brushless (optional)
Motor fan	Optional depending on the application
Local control panel	Optional with TAIPAN 365 control unit
ATEX conformity	Available as an option for ATEX 22 zones

DPV

LOSS-IN-WEIGH VIBRATING FEEDER

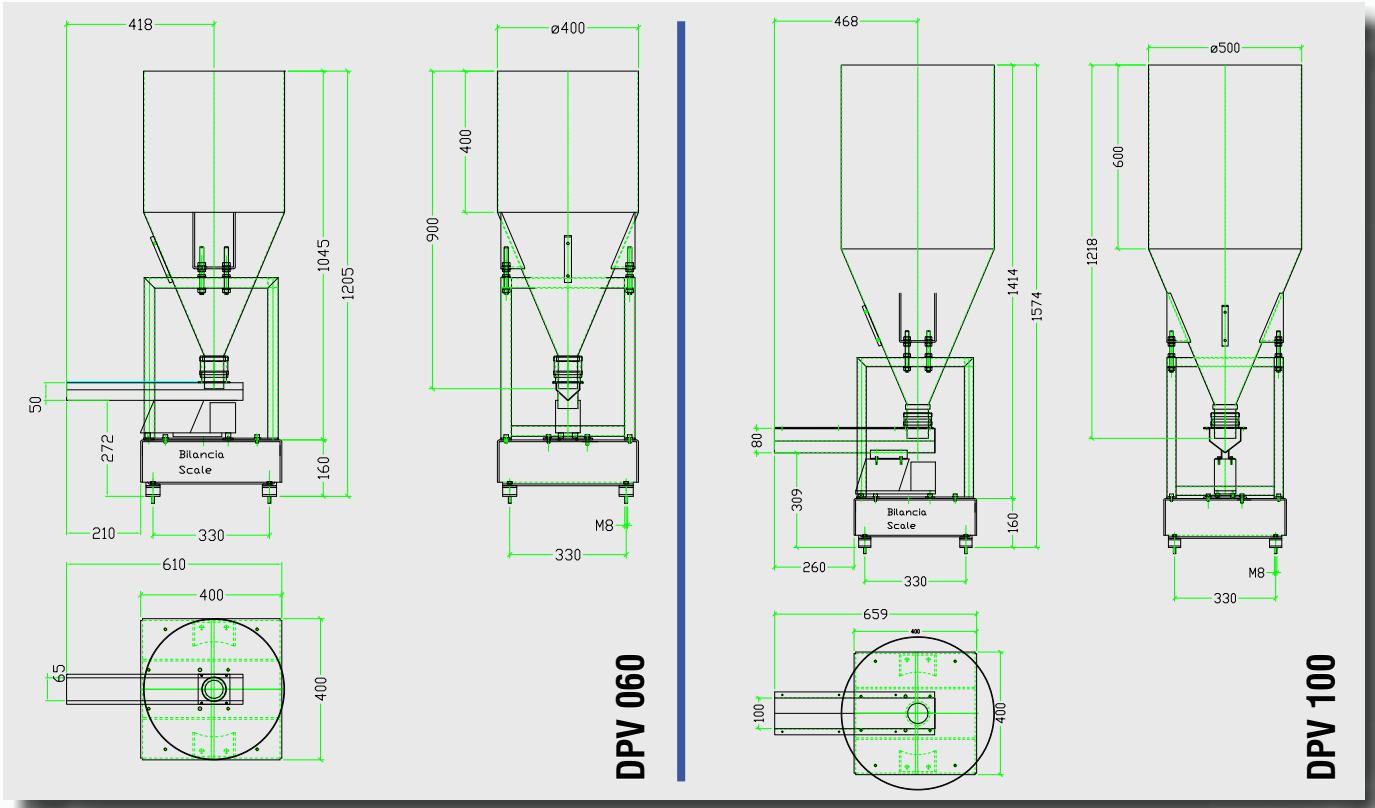
Made in Italy

TAIPAN 365 ELECTRONIC CONTROL UNIT

- MAXIMUN PRECISION
- UP TO 1000 kg/h
- OFF CENTER LOAD CELL
- AUTOMATIC REFILL

INOX
Stainless Steel

The batchers of series DPV are designed to batch dust-forming materials at mod-to-flow feed rates.
The batchers comprise a storage hopper, a feed device and a scale that controls decreasing weight during product discharge. Each type of batcher is available with a broad range of motor drives and in customized versions to suit the process.
The scale is coupled with the TAIPAN 365 controller, so the batcher can operate in batching and/or continuous mode with controlled feed rate. In the latter mode, hopper refill is controlled by electronics with no need to interrupt the batching process.



DPV

LOSS-IN-WEIGH VIBRATING FEEDER

MAXIMUN CAPACITY VALUES kg/h (in reference to maximum damper height) - PS=1kg/dm³

FEEDER MODEL	PS	
	kg/dm³	MAX (100%)
DPV 060	1	400
DPV 100	1	1000

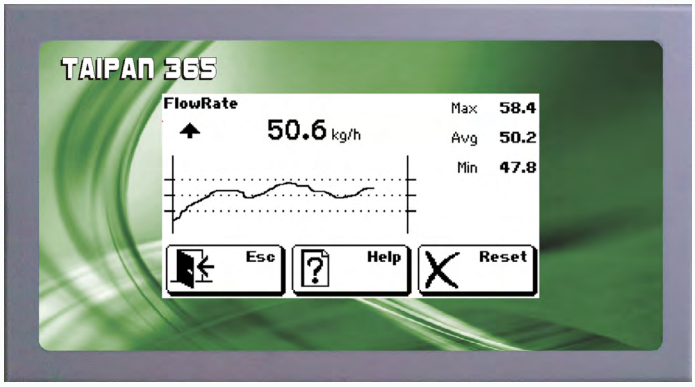
TECHNICAL FEATURES

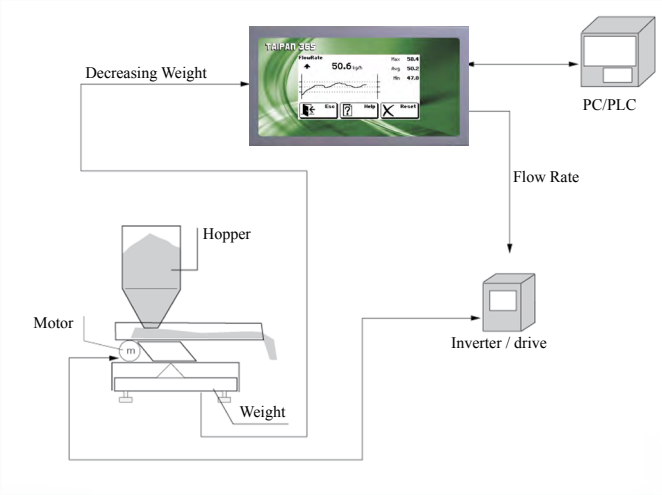
Main structure	Carbon steel
Body material	Stainless steel
Dosing system	Electromagnetic vibratory
Dosing motor	Controlled by electronic card
Height adjustment system	Double threaded rod
Charging hopper	Stainless steel
Weighing system	Single off-center load cells C3
Electronic control unit	TAIPAN 365
Electrical junction boxes	Available for load cells
Vibrator	Available compressed air or electric systems

TAIPAN 365

FLOW RATE CONTROLLER FOR LOSS IN WEIGHT SYSTEMS

ASCII Modbus PROFIBUS PROFINET

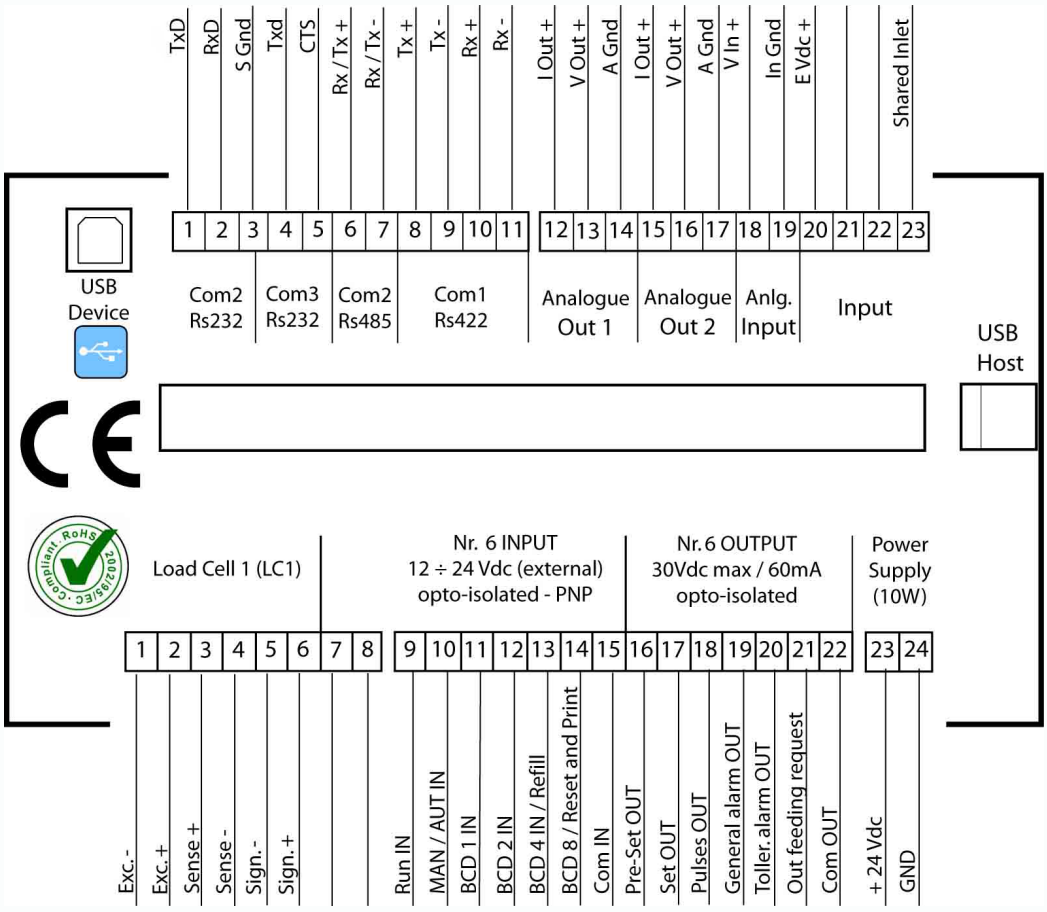




IP65

SELECTABLE LANGUAGES

Instrument box for panel mounting.
Backlighted 5.2" TOUCH SCREEN LCD display.
IP 65 front panel protection rating.
The TAIPAN 365 not only integrates weight and time variables but also generates the instantaneous flow rate per hour, total weight and the function of automatic flow rate regulator.



TAIPAN 365

FLOW RATE CONTROLLER FOR LOSS IN WEIGHT SYSTEMS

OPTIONAL AVAILABLE:

- PROFIBUS-DP PROTOCOL;
- PROFINET-IO PORT;
- USB HOST FOR PEN DRIVE;
- ADDITIONAL ANALOGUE INPUT AND OUTPUT;
- ETHERNET INTERFACE;
- 4IN/8OUT ADDITIONAL MODULE;
- 24 COLUMN PRINTER;
- BIG DISPLAY REPEATER.

MAIN FEATURES OF TAIPAN 365

Maintaining the flow SET POINT by adjusting IP analog output, with an alarm output of flow out of tolerance.
Continuous transmission of the instantaneous flow rate, detected by analog output proportional to it.
Ability to set, for batching, the values of presets, sets and fly with pulse outputs to the achievement of values.
Possibility of setting of the SET POINT via analog input; optional extra analog output in addition to the standard output
Save points for the working curve of the doser when used in combination with with non-linear extractors (eg electromagnetic extractor).
Calculation of the weight total and transmission by impulse output; output can be delivered in a 24 column printer via RS232 port.
Programming of up to 15 different set points of work, settable by BCD inputs.
Able to freeze the analog output value, by means of logic input, in order to avoid the initial pendulation of system (which runs all 15 set point).
Ability to display, during operation, I/O status, the current weight, current speed, the pulse encoder and the correction factor set.
Procedures for the zero setting on working loaded belt and automatic adjustment factor correction.
Can be connected with PC / PLC using comunication protocols ASCII, Modbus-RTU, Etherne, Profibus and Profinet-IO (optional).

TECHNICAL FEATURES

Power supply and consumption	24Vdc 10W
CPU - Micro controller	RISC 32 bit - 44MHz
Number of load cells in parallel and supply	max 8 (350 Ω) - 5Vdc / 120mA
Communication protocol	RS232 / RS485 / USB Device, Ethernet
A/D converter	24bit
Protection rating	IP65

Display resolution	10.000	Analog output	16bit (V e mA)
Internal resolution	up to 600.000	Analog input	24bit (V e mA)
Reading resolution	1x, 2x, 5x, 10x	Working temperature	-10 ÷ +50°C
Logic output	nr.6 photorelè	Storage temperature	-20 ÷ +60°C
Logic output features (cad.)	max 30Vdc - 60mA	Humidity	85% (s.c.)
Logic input	nr.6 optoisolated	Case dimension	196x105x10mm
Logic input features (cad.)	12/24Vdc PNP	Panel hole for monting	187x97mm

RPS

SINGLE STATION FIBC LOADER

RPS STATION COMPLETE WITH MOTORIZED ROLLER AND PNEUMATIC AUTOMATION

Made in Italy

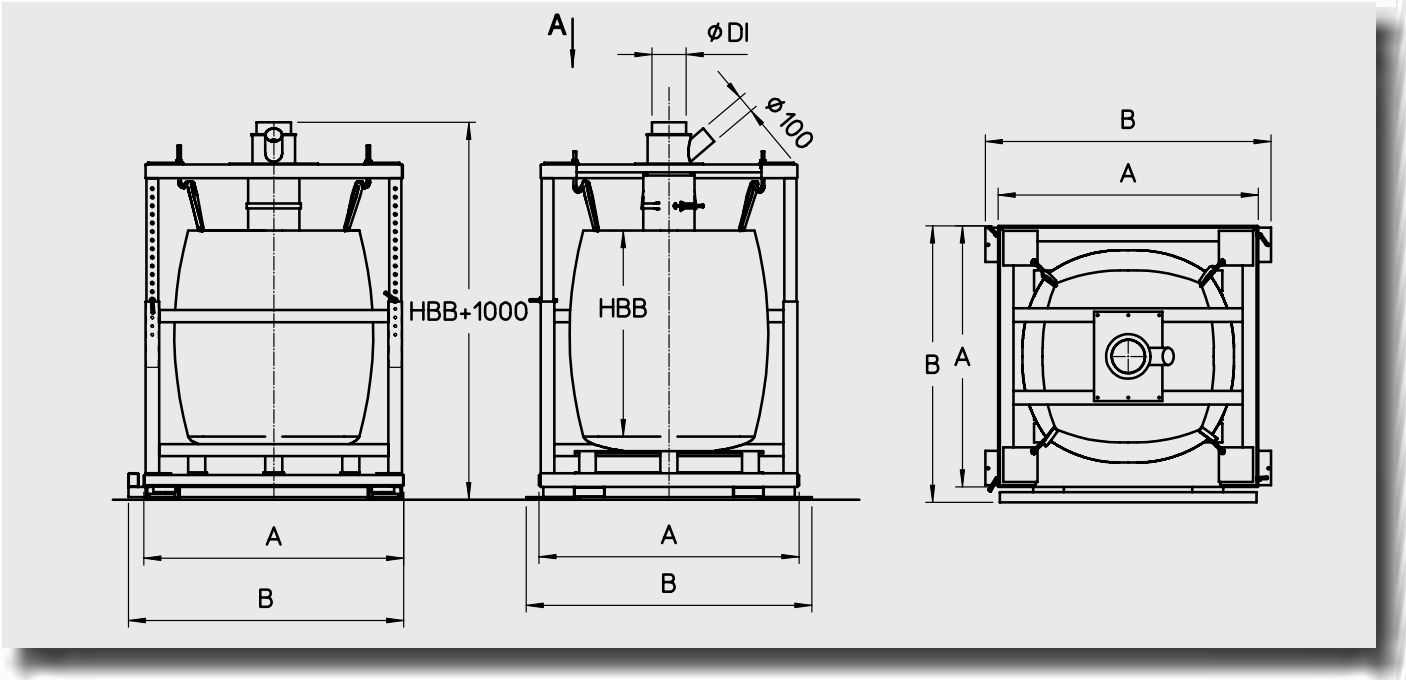
- **CUSTOM MADE MACHINE**
- **AVAILABLE IN STAINLESS STEEL AISI 304 / 316**
- **PRELOADING BIN FOR WORK WITHOUT INTERRUPTION**

The RPS filling machine fills big bags according to set weight.

Each machine can be manufactured according to big bag size and shape and equipped with different accesories, such as exhaust hood, inflatable seal, automatic bag loop release, pneumatic sealing.

Each machine is equipped with control electronic system according to single needs: weight display, fast / slow load control + fall value control, controlled load through stored formulas.

RPS can be supplied with electric control panel.



STANDARD MODELS DIMENSIONS (mm)

	DI	A	B
RPS 10	200	1520	1520
RPS 20	220	1680	1680

RPS

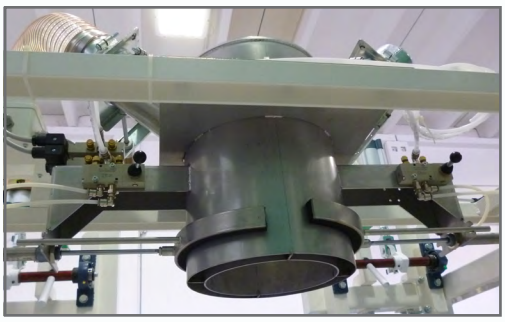
SINGLE STATION FIBC LOADER

RPS STANDARD VERSION

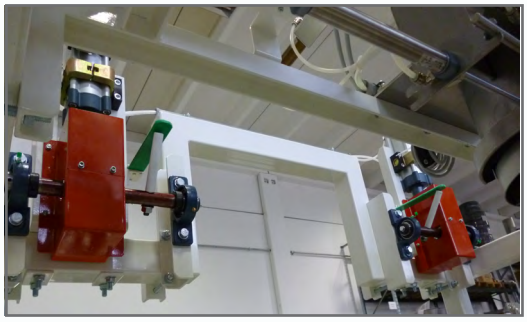
STAINLESS STEEL RPS WITH ELEVATED AUTOMATION

RPS EXAMPLES OF AVAILABLE OPTIONALS

INFLATING SEAL



PNEUMATIC SEALING



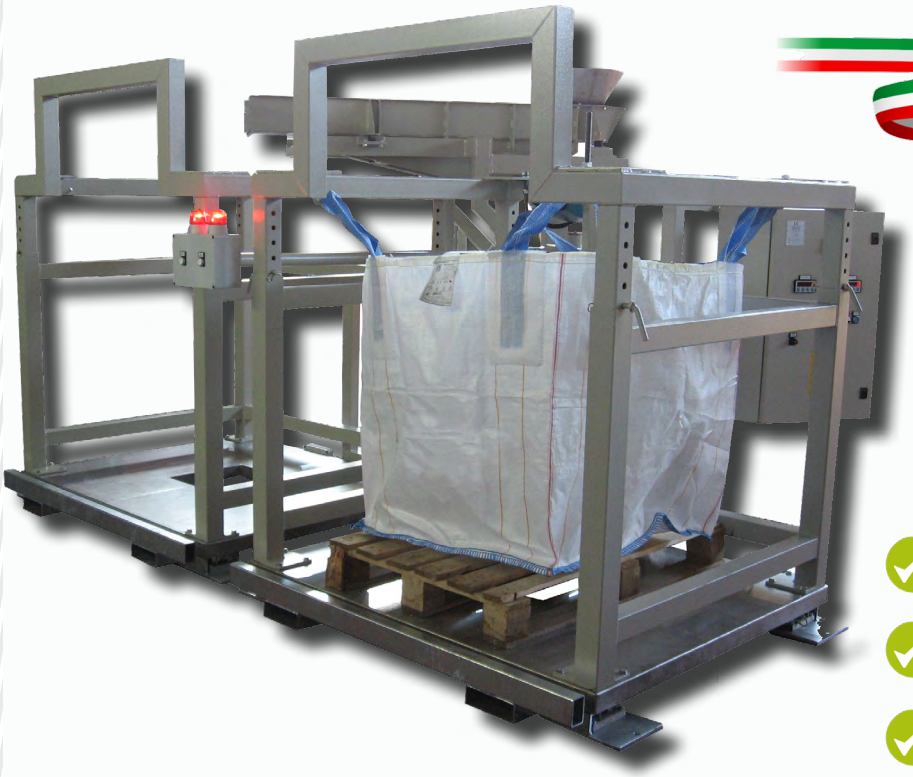
AUTOMATIC RELEASE

TECHNICAL FEATURES

Main structure	Carbon steel or stainless steel AISI 304
Base plate	Galvanized steel or stainless steel AISI 304 / 316
Frame structure	Adjustable telescopic height
Dust hose	Standard ø100mm
Opener	Stainless steel
Anti-vibration mounts	Steel and rubber 60ShA
Automatic opener	Optional
Weighing system	Optional with beam load cells
Anti-tilt system	Optional
Load cells junction box	J_BOX4 or CE41INOX
ATEX conformity	Available as an option for ATEX 22 zones

RPS-2X

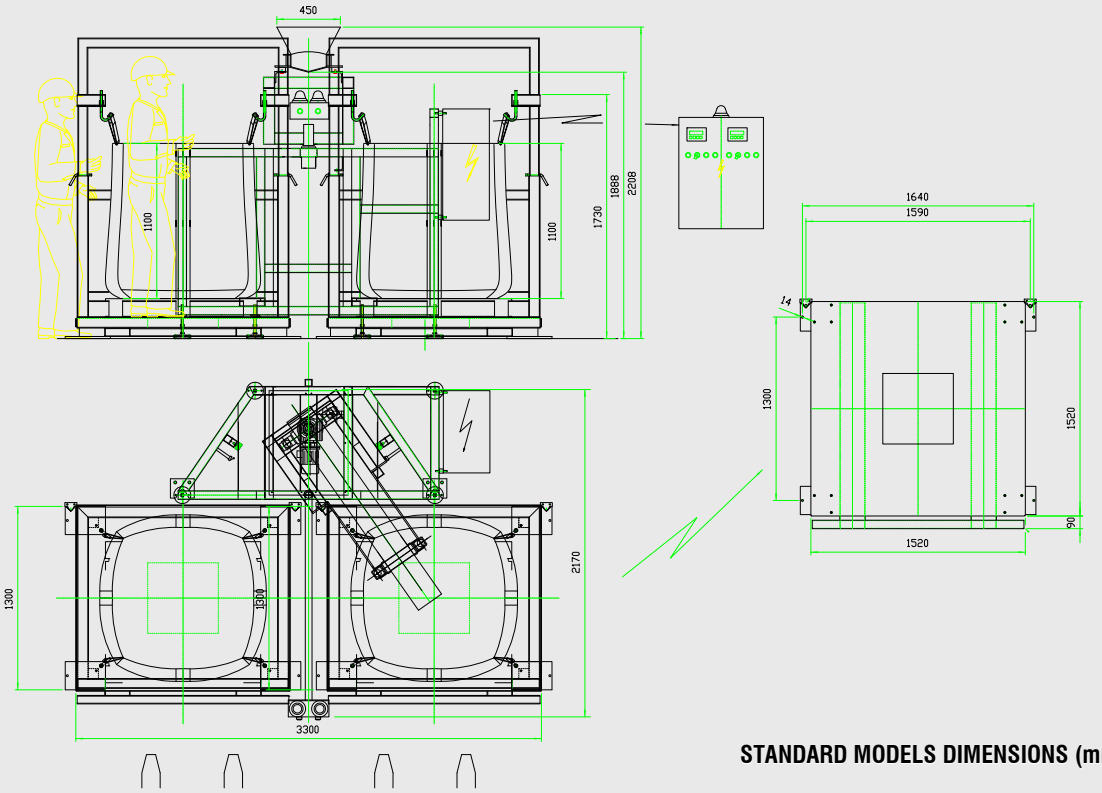
DOUBLE STATION FIBC LOADER



Made in Italy

- **CUSTOM MADE MACHINE**
- **AVAILABLE IN STAINLESS STEEL AISI 304 / 316**
- **THE PRODUCT CAN BE FED CONTINUOUSLY EITHER BY AUGER OR VIBRATING FEEDER, BOTH PIVOTING.**

For sacking powdered products with high production output standards, STAD has designed the bag filling machine RPS2x10 SA. This machine fills up big bags in continuous duty, alternating material feed to the 2 stations by means of a rotary electromagnetic feeder or a worm screw.
The RPS is equipped with control panel and PLC for cycle settings.



STANDARD MODELS DIMENSIONS (mm)

RPS-2X

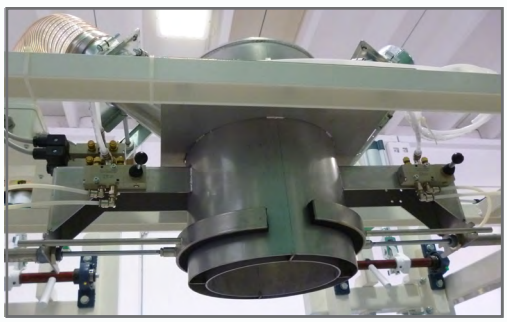
DOUBLE STATION FIBC LOADER

RPS2X10 WITH ELECTROMAGNETIC CHANNEL

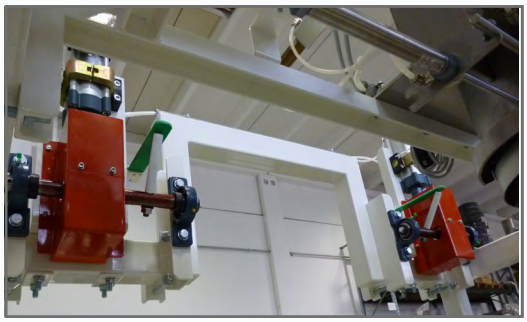
RPS2X10 WITH SCREW FEEDER

RPS EXAMPLES OF AVAILABLE OPTIONALS

INFLATING SEAL



PNEUMATIC SEALING



AUTOMATIC RELEASE

TECHNICAL FEATURES

Main structure	Carbon steel or stainless steel AISI 304
Base plate	Galvanized steel or stainless steel AISI 304
Frame structure	Adjustable telescopic height
Dust hose	Standard ø100mm
Opener	Stainless steel
Charging System	Electromagnetic Channel / Screw Feeder / Belt
Automatic opener	Optional
Weighing system	Optional with beam load cells
Anti-tilt system	Standard when there is the weighing system
Load cells junction box	J_BOX4 or CE41INOX
ATEX conformity	Available as an option for ATEX 22 zones

SBB

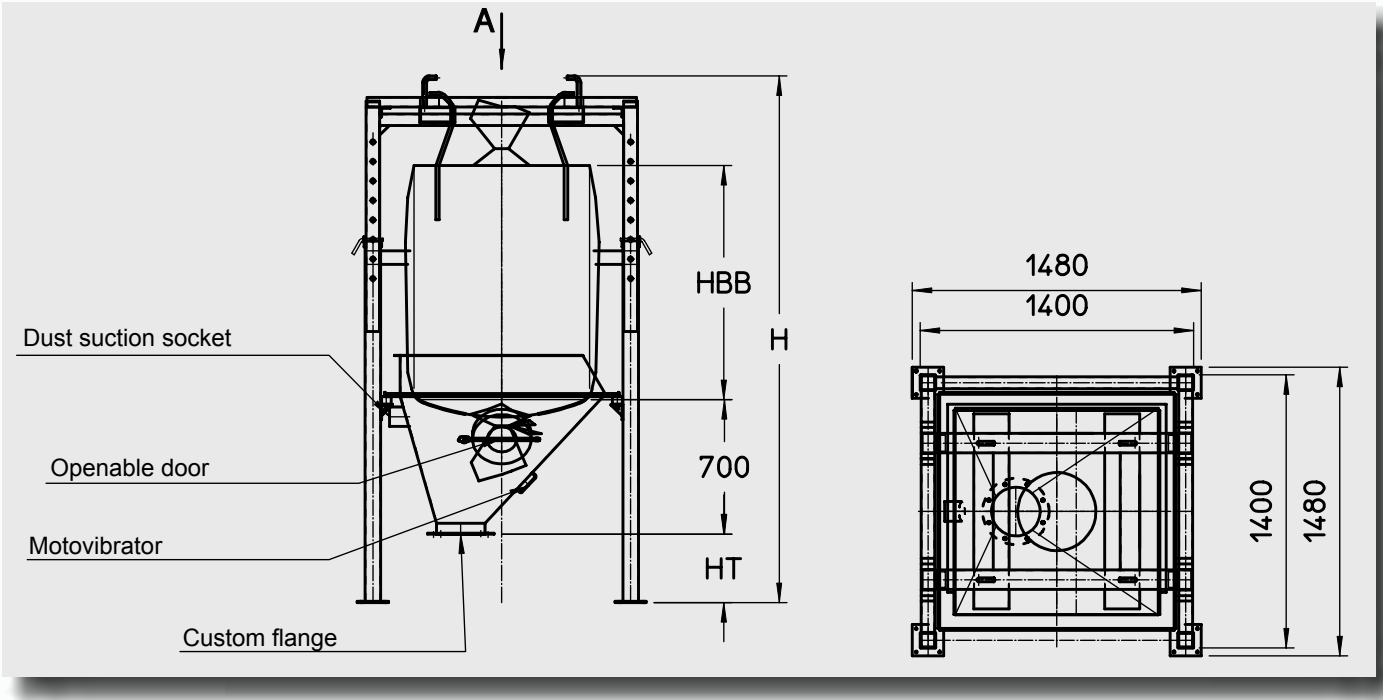
FIBC UNLOADING STATION

SBB STATION MOD. SBB-C COMPLETE WITH SCREW FEEDER AND LOCAL CONTROL PANEL

Made in Italy

- **CUSTOM MADE MACHINE**
- **AVAILABLE IN STAINLESS STEEL AISI 304 / 316**

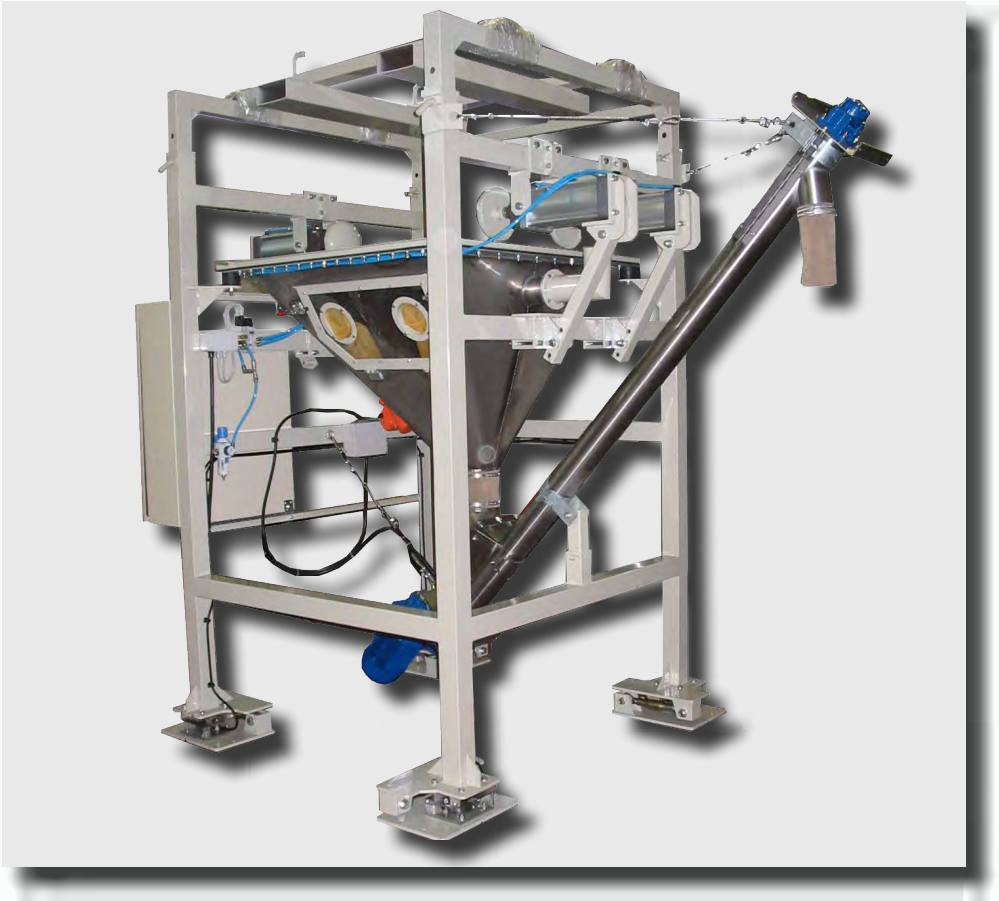
Like all the machines manufactured by Stad, SBB stations - suitable to batch powdery products stacked inside big bags - are designed and manufactured according to customer's specification. The basic model consist of a mobile telescopic big bag holder frame that can be moved with a forklift (to be adjusted along the big bag height), a stationary frame, a powder-charging hopper, and a mechanical extractor suitable to the products being extracted (weighing belt, metering screw, rotary valve, ecc...). This station can be customized by adding several devices, such us: electronic weighing and material batching control; big bag and fluidising flow aids electropneumatic shaking in case of non-smooth powders.



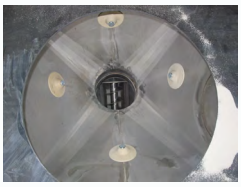
SBB	H = HT + HBB + 1200mm

SBB

FIBC UNLOADING STATION



SBB EXAMPLES OF AVAILABLE OPTIONALS



FLUIDISING
FLOW AIDS

BIG BAGS
MOVING DEVICE

WINDOW
WITH GLOVES

BIG BAGS HORIZONTAL
MOVING DEVICE

TECHNICAL FEATURES

Main structure	Carbon steel or stainless steel AISI 304 / 316
Loading hopper	Carbon steel or stainless steel AISI 304 / 316
Frame structure	Adjustable telescopic height
Anti-dust plan	Black or food grade rubber
Access door	Stainless steel with mechanical stop
Anti-vibration mounts	Steel and rubber 60ShA
Fluidification systems	Optional
Weighing system	Optional with compression load cells
Anti-tilt system	Standard when there is the weighing system
Window with gloves	Optional
ATEX conformity	Available as an option for ATEX 22 zones

ATEX

SBB-P

FIBC UNLOADING STATION WITH HOIST

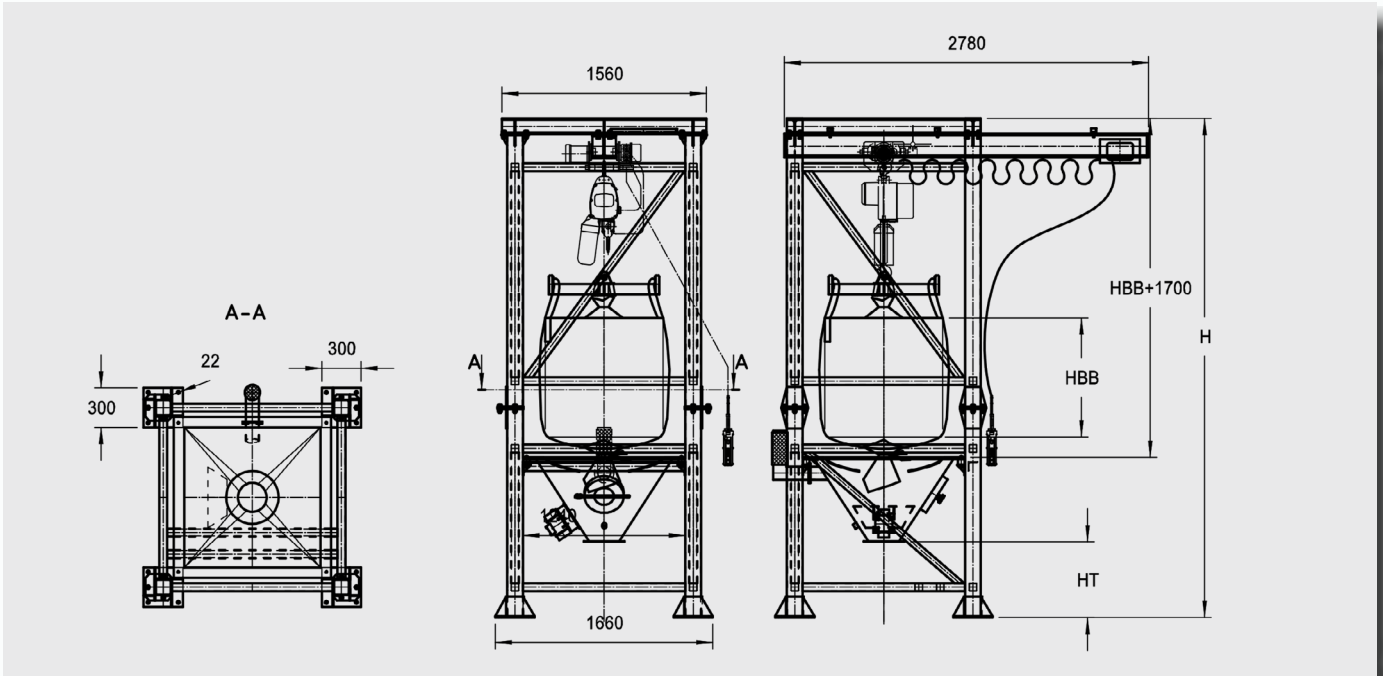
Made in Italy

The SBB-P discharging stations for dosing powdery products stored in big bags, like all STAD machines, are designed and produced to customer's specifications.
The basic model consists of a frame complete, in the upper side, with an electric chain hoist on a travelling beam, to lift and position the FIBC, a hopper, a telescopic stationary frame adjustable to the height of the big bag, a hopper containing the powder, and a mechanical extractor suited to the product to be extracted (weighing belt, metering screw, rotary valve, etc.).

The station can be customised with devices such as:
- electronic weighing and material batching control;
- electromagnetic bag shaking and vibro-aerators in case of non free-flowing powders;
etc.

CUSTOM MADE MACHINE

AVAILABLE IN STAINLESS STEEL AISI 304 / 316

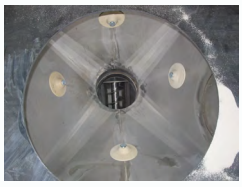


SBB	H = HT + HBB + 1200mm

SBB-P

FIBC UNLOADING STATION WITH HOIST

SBB EXAMPLES OF AVAILABLE OPTIONALS



FLUIDISING
FLOW AIDS

BIG BAGS
MOVING DEVICE

WINDOW
WITH GLOVES

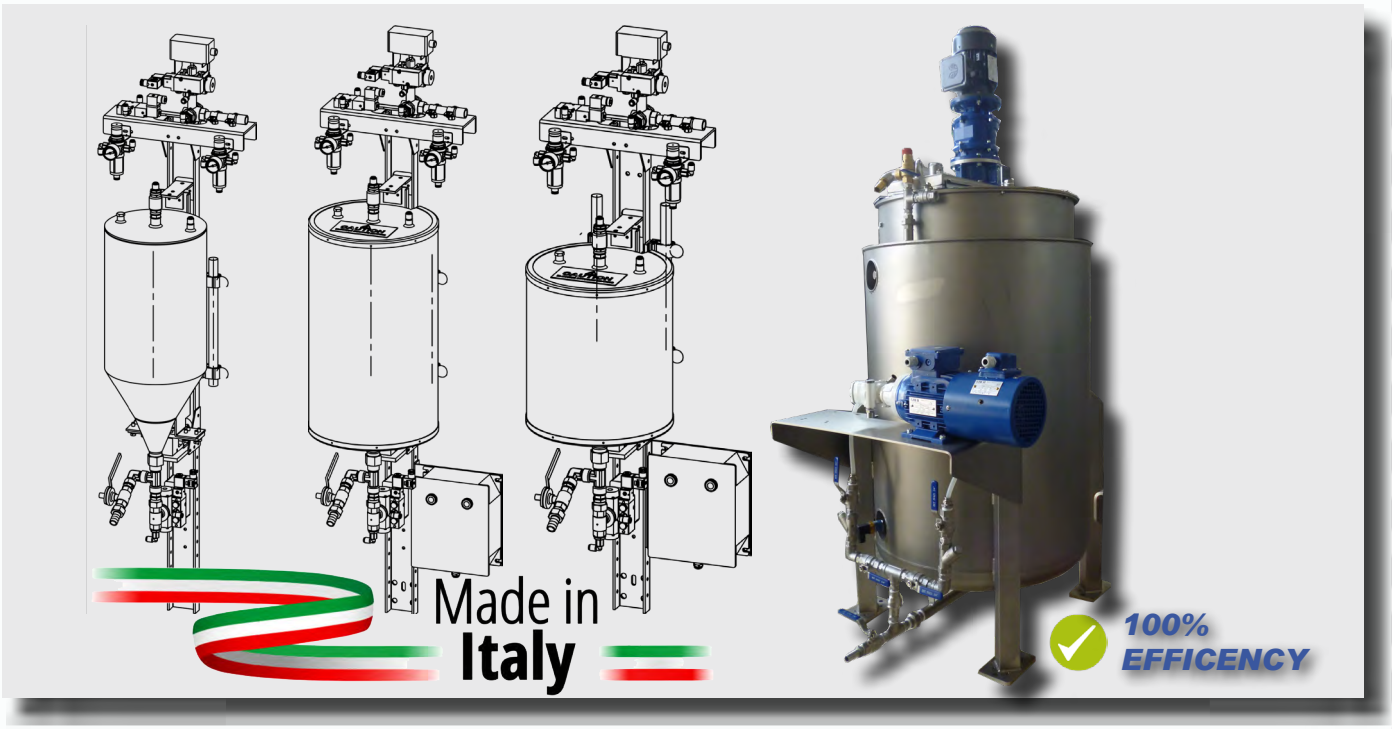
BIG BAGS HORIZONTAL
MOVING DEVICE

TECHNICAL FEATURES

Main structure	Carbon steel or stainless steel AISI 304 / 316
Loading hopper	Carbon steel or stainless steel AISI 304 / 316
Frame structure	Adjustable telescopic height
Anti-dust plan	Black or food grade rubber
Access door	Stainless steel with mechanical stop
Anti-vibration mounts	Steel and rubber 60ShA
Fluidification systems	Optional
Weighing system	Optional with compression load cells
Anti-tilt system	Standard when there is the weighing system
Window with gloves	Optional
ATEX conformity (Ex ATEX)	Available as an option for ATEX 22 zones

DOSING SYSTEMS FOR LIQUID

LIQUID DOSING FOR CONTINUOUS AND BATCH APPLICATIONS



OVERVIEW

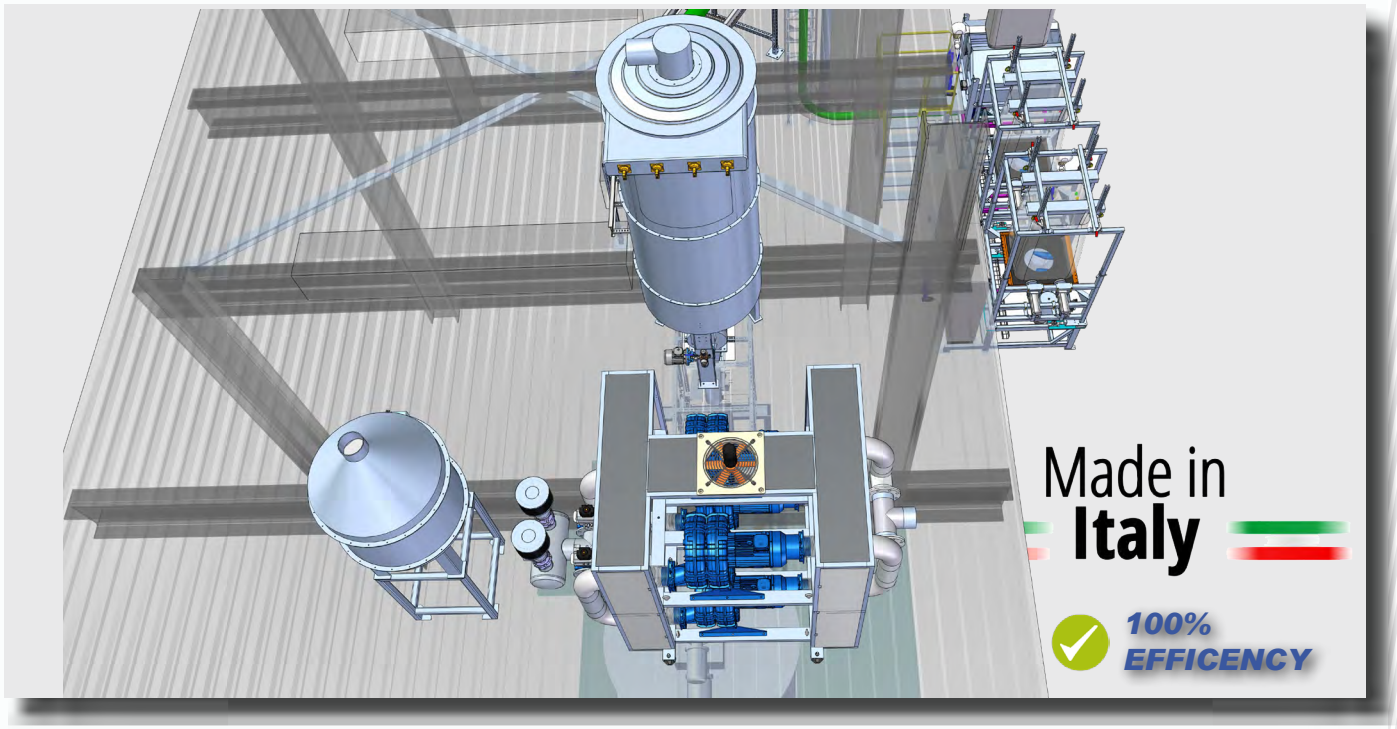
To meet our customer's need for weighing and dosing, we design and manufacture a variety of storage tanks for either fluid or viscous liquids, equipped with a wide range of accessories such as slow or fast agitators, level indicators, weighing load, dosing pumps, etc.

The tanks dedicated to viscous fluids can be electrically traced or equipped with an indirect circulation heating chamber (either for oil or water), in order to keep the product heated.

Process liquids can be dosed either by batch feeding, (in Gain-of-weight mode or in Loss-in-Weight mode) or continuously by controlled flow through our Taipan 365 flow controllers or combined with magnetic or mass flow meters.

PNEUMATIC CONVEYING

DENSE, SEMI-DENSE AND DILUITE PHASE SYSTEMS



OVERVIEW

Pneumatic conveying involves the transportation of dry powders and granular solids in pipelines using a gas stream, usually air. Based upon the material-to-air ratio, are classified as ‘dense’, ‘semi-dense’ or ‘diluite’ phase systems.
Suction or vacuum systems, utilize a vacuum created in the pipeline to transfer the material. Pressure systems use positive pressure to push the material along the pipeline.
The sum of the characteristics of pneumatic conveying give the ability, within numerous industries, to transport products without any loss to the environment, chosing the appropriate route that can move around obstacles, multiple floor levels or between buildings.

ADVANTAGES

- Dust-free transportation
- Flexibility in transport line routing
- Distribution / pickup from multiple points
- Low maintenance and low manpower costs

DISADVANTAGES

- Higher power consumption
- Higher wear and abrasion of equipment
- Limitations in transport distance and capacity are
- High levels of skill in design, maintain and operate

HOW TO CHOOSE THE PERFECT PNEUMATIC TRANSPORT

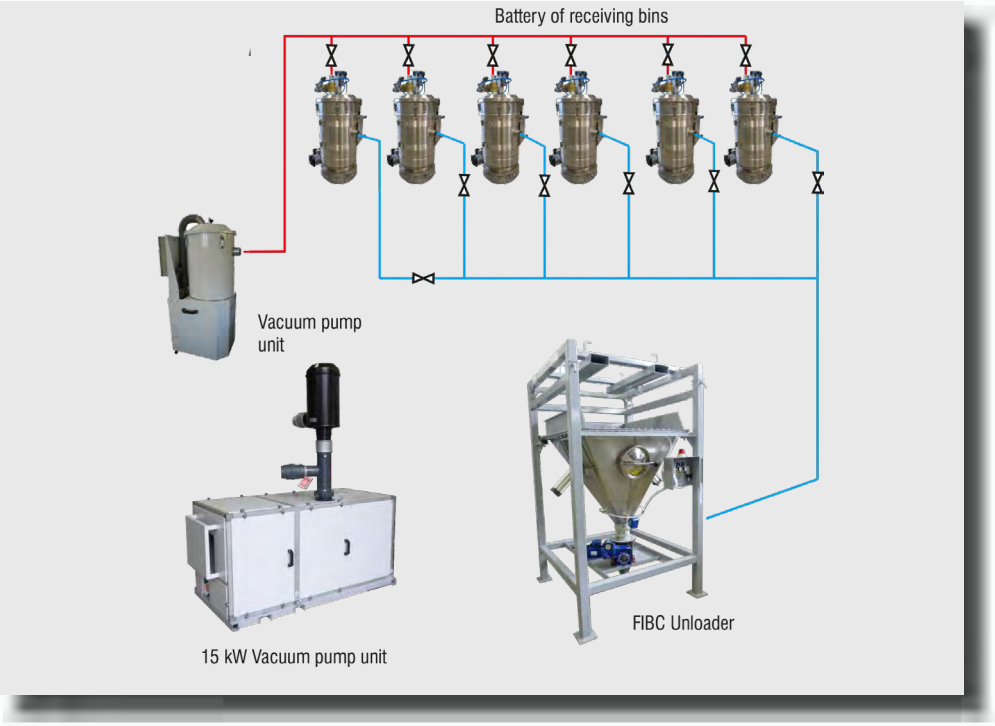
	DENSE Phase	SEMI-DENSE	DILUITE Phase
Transport speed	Low (<5 m/s)	Medium (5...10 m/s)	High (>16 m/s)
Transport pressure	High (>3 bar)	Medium (1.5...3 bar)	Low (<0.6 bar)
Ware / Breakage	Very low	Average	Medium to high
Material-to-air ratio	High (>60)	Medium (20...60)	Low (<20)
Function	Discontinuous	Discontinuous	Discontinuous / Continuous
Space requirements	High	High	Low to very low
Capital investment	High	High	Medium to Low

PNEUMATIC CONVEYING

DENSE, SEMI-DENSE AND DILUITE PHASE SYSTEMS

DILUITE PHASE

Diluite phase conveying is characterized by high transfer speeds, above saltation, so material «floats» into the airstream. Pressure (or vacuum) is relatively low (compared to dense phase systems).



DENSE / SEMI-DENSE PHASE

DENSE PHASE

Dense phase conveying is commonly used when materials are either abrasive or fragile. Dense phase systems operate at lower transfer speeds, higher pressures and higher product-to-air ratios. The higher available pressure permits a longer transport distance.

SEMI-DENSE PHASE

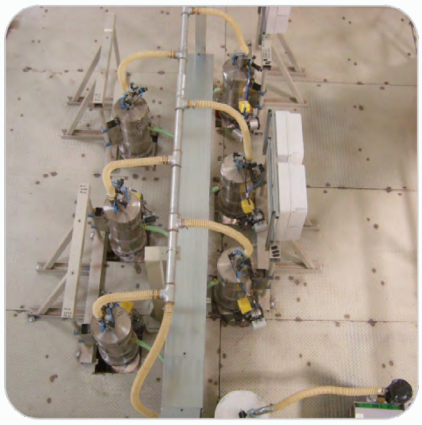
Semi-dense phase conveying is an intermediate phase between dense and diluite. Semi-dense phase systems operate at below saltation transfer speeds, with intermediate pressures and product-to-air ratios.

PNEUMATIC CONVEYING

DENSE, SEMI-DENSE AND DILUITE PHASE SYSTEMS

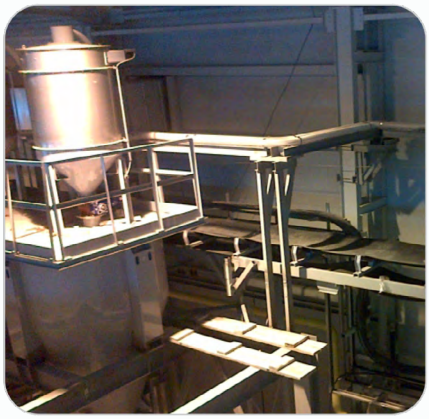
EXAMPLES OF INSTALLATIONS AND ACCESSORIES FOR PNEUMATIC CONVEYING

Battery of loading scale hoppers

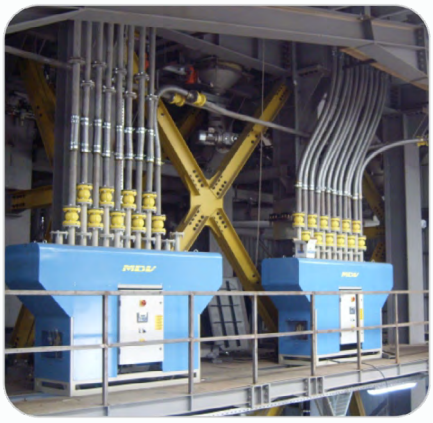


Battery of receiving bins

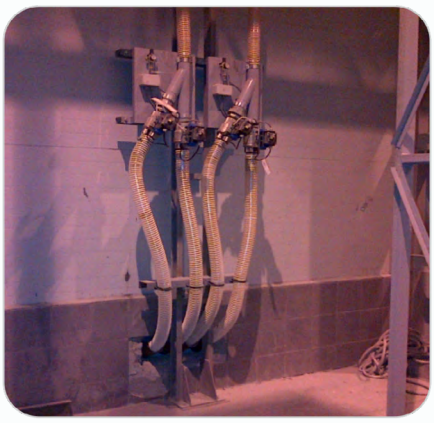
Vacuum pump unit & receiving cyclone / filter (continuous)



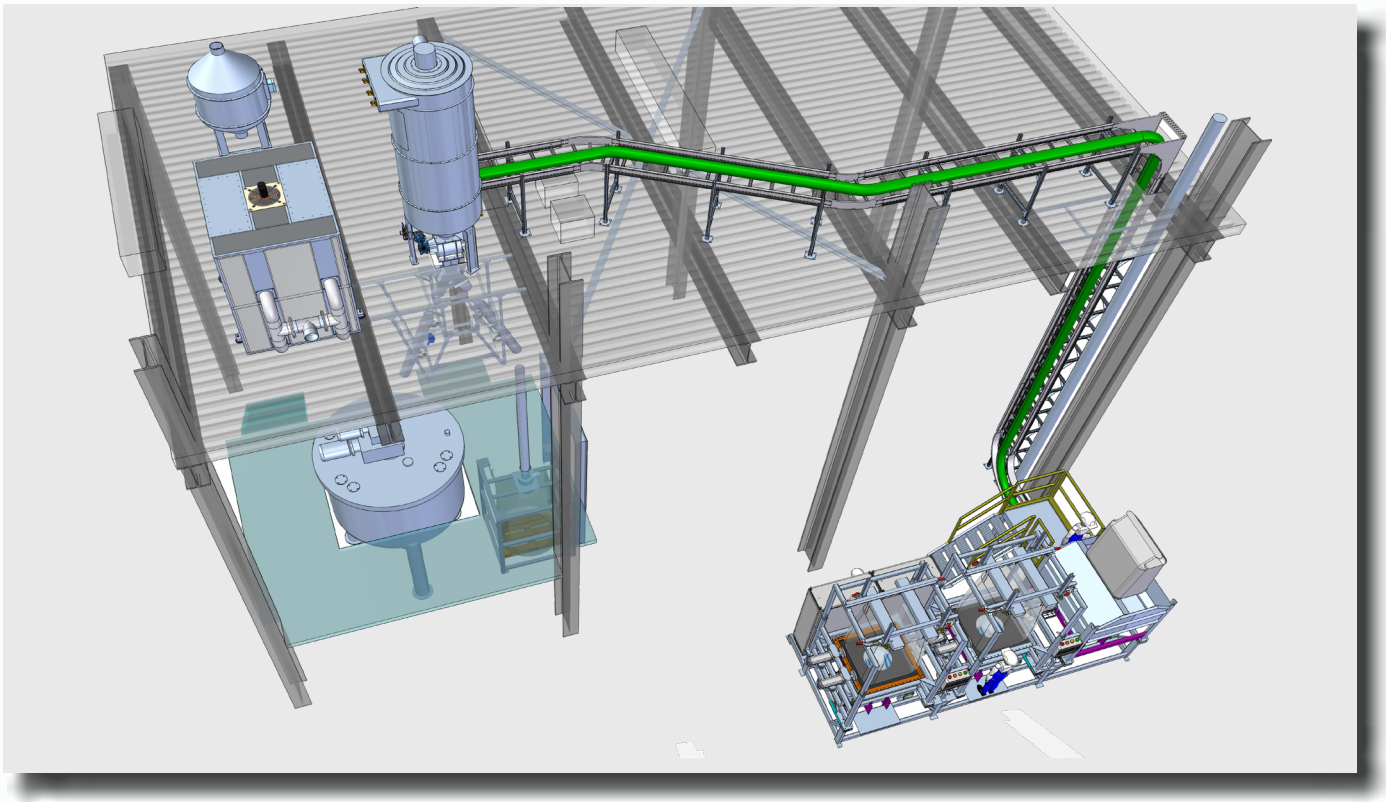
Arrival point with air filter



Multi-port automatic diverter valves

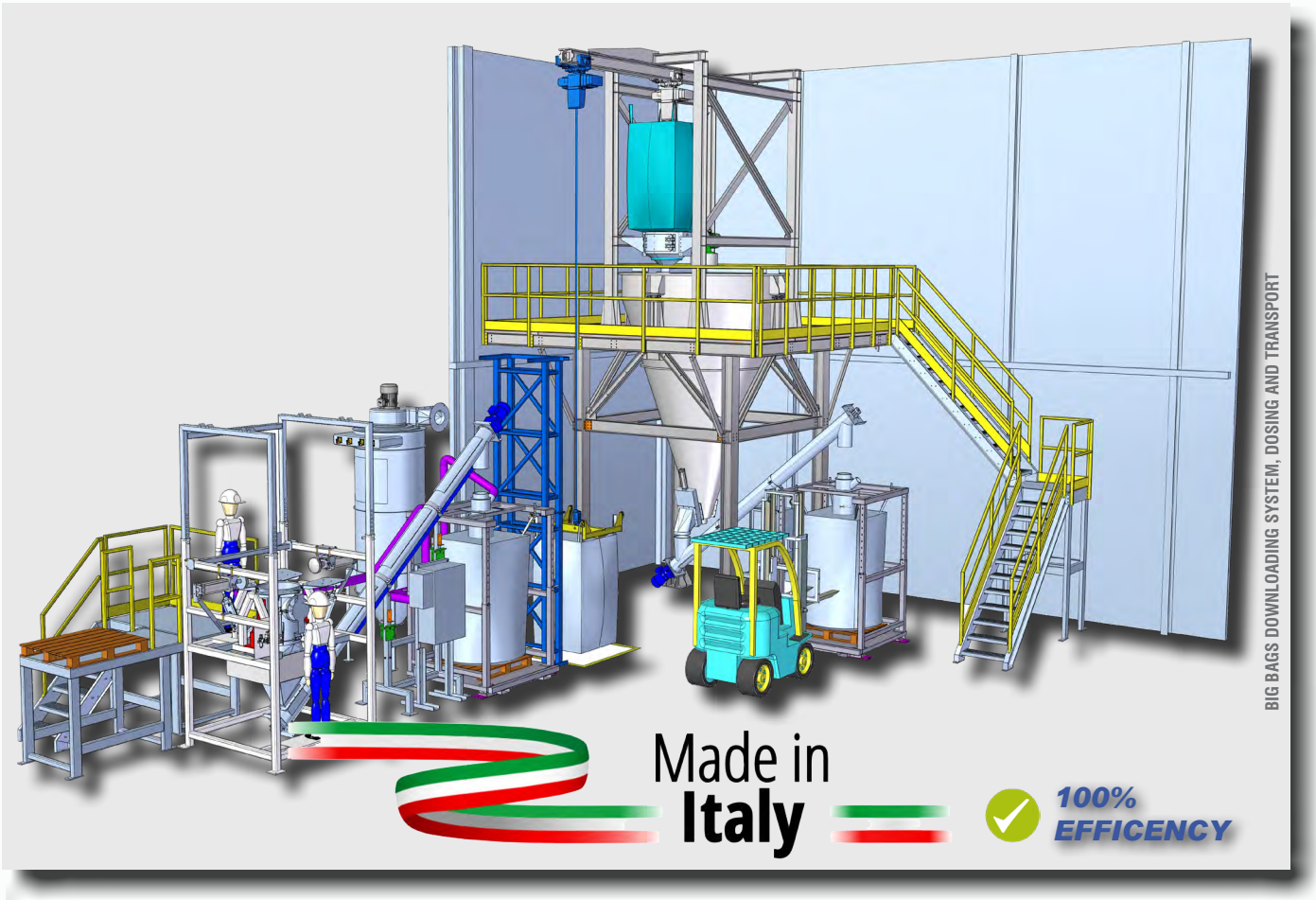


Diverter valves



SYSTEMS & INSTALLATIONS

A COMPREHENSIVE RANGE OF TAILORED-MADE SOLUTIONS



BIG BAGS DOWNLOADING SYSTEM, DOSING AND TRANSPORT

STAD's specialization is static and/or continuous weighing of all powdery solids in the bulk state (powders, granules, solid in size), used in any industrial sector.
Just from the preliminary project phase, we are able to test product samples in order to evaluate the feasibility of the process and the precision obtainable from our systems.

To complete the service offered to our customers, we are able to design and manufactu re small-sized complete plants capable of extracting, measuring, weighing, transporting, mixing, receiving and storing these products, as well as products in a liquid state.

Each of our machines is customized to meet the needs related to the specific industrial sector and to the characteristics of the product to be handled; therefore our production fore-sees the use of components that vary from carbon steel painted to stainless steel with food finishing.

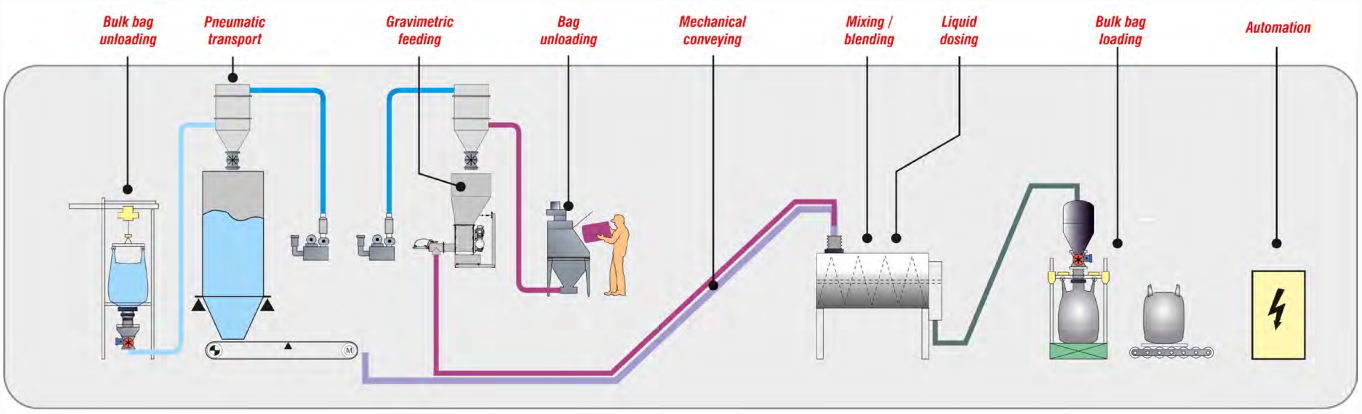
RANGE OF MACHINERY

- Bulk bag unloaders
- Manual bag unloading stations
- Volumetric feeding conveyors
- Pneumatic conveying systems
- Gravimetric feeders
- Mixers / blenders
- Silos / storage vessels

SYSTEMS & INSTALLATIONS

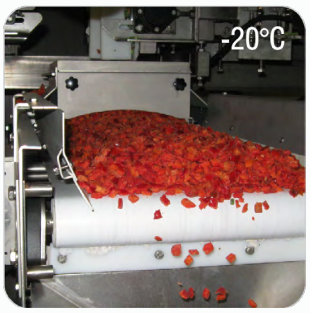
A COMPREHENSIVE RANGE OF TAILORED-MADE SOLUTIONS

Stad is also able to complete the supply of its systems by managing (in collaboration with our partner company ElleK) the entire electrical part, from the electrical system on board the machine to the computerized electrical panel with management and supervision software.

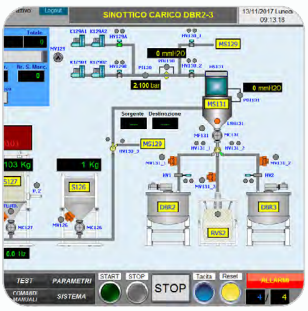


Bulk bags unloading battery

Conveyor belt with belt scale



Gravimetric dosing of food ingredients



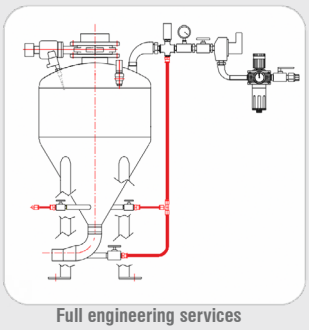
Mixer with multiple dosing scales with integrated automation

Gravimetric liquid dosing

Big bags filling station

STAD SERVICES

Product characterization



Full engineering services

In-house testing facility

NOTE

NOTE

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