Дозирование и смешивание Easyfeed, GDS, MDW, MDP, Exacta, HCWB, PAF, BDS, Grado, Blendo

Технические характеристики

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Easyfeed+

Easy to use with PLC control, 7” touch screen and Ethernet connection

High accuracy thanks full gravimetric blending control of each component

Fully modular design allows increasing the number of dosing stations

GRAVIMETRIC LOSS-IN-WEIGHT FEEDER

Easyfeed+ is the new gravimetric dosing unit specifically for Starve fed Extruder and injection molding processes, which require high dosing accuracy and homogeneous dispersion of additives.

It is available in 4 sizes with throughput up to 200, 400, 600, and 800 kg/h and with variable configurations from 2 to 5 ingredients. Thanks to the fully modular design, increasing the number of dosing stations is possible even after installation according to production requirements.

Easyfeed+ is available only in the ADVANCE version with PLC control to ensure the integration with the production plant and Winfactory 4.0 supervisor software developed by Piovan.

The 7’’ touch color display, is provided with a protective shell mounted in a swivelling support, helps the operator with configuration and in ordinary managing of the feeding process.

The dosing system is characterised by full gravimetric blending control of each component, and inclined screw feeders to improve metering accuracy and prevent undesired dribble. Auger screws are driven by brushless motors with a wide range of speeds up to 600 rpm.

Preforme e Bottiglie in PET | Imballaggio rigido | Componenti auto | Articoli tecnici | Dispositivi medicali | Lastre tecniche e Termoformatura | Film flessibile | Tubi, Profili, Cavi | Fibre e Reggetta | Riciclo | Compound

Total number of stations 5 modular dosing stations

Dosing system Dosing screw driven by brushless motor

Managed material Pellet; for flakes and regrind only with model EFD80 and special hopper

The entire dosing station is weighted by the load cell to ensure higher precision and accuracy

All parts that come into contact with the ingredients are made of satin stainless steel

PLC control and the on-board electrical box does not require any floor space

Model	Min Throughput (kg/h)	Max Throughput (kg/h)	Hopper (dm³)	Power supply
EFD20	0.16	200	8 – 15	400 V / 3 / 50 Hz 380-415-440-460- 480 V / 3 / 60 Hz
EFD40	0.20	400	8 – 15 – 30	
EFD60	-	600	15 – 30 – 60	
EFD80	-	800	15 – 30 – 60	

Throughput pellet with bulk density 0.55 kg / dm³

GDS-5E

Suitable for granules, additives and powders

Suitable for extruder operations in overfeed and underfeed mode

Full control of the Extrusion line

Piovan
Fdm

GRAVIMETRIC DOSING SYSTEM

- Continuously operated gravimetric dosing system
- Main component supplied as free falling version, or dosed by screw
- One main component and max. 4 auxilliary components
- Simultaneous dosing of all components of the recipe
- 6 exchangable dosing screws for different throughput ranges (from 1 up to 300 kg/h)
- Dosing unit for very low throughputs from 0,2 to 60kg/h
- Easy and quick cleaning, before changing the recipe
- User-friendly PLC control

GDS-5E

Gravimetric Dosing System

Electrical Data	
Main connection:	400 V, PE, 50/60 Hz
Protective system:	IP 44

Dimensions	
H x W (max.):	1200 mm x 1360 mm
Weight:	max. 140 kg

Ambient Conditions	
Max. temperature of bulk:	80°C
Max. ambient temperature during operation:	+5°C up to +50°C
Relative air humidity:	≤ 80 %

Material	
Mixing support and upper part:	Cast aluminum alloy
Mounting plate:	aluminum
Weighing hopper:	stainless steel/plexiglass
Inlet part:	stainless steel

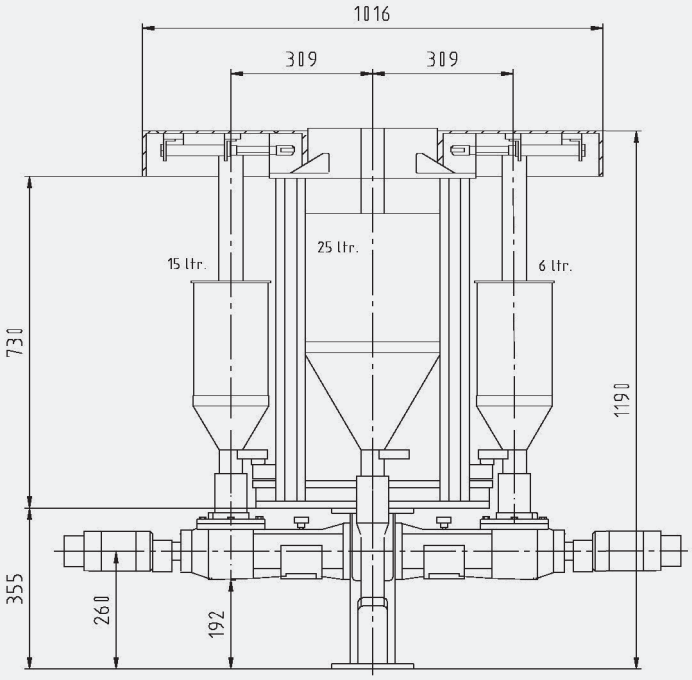
Net volume	
Maximum throughput:	300 kg/h
Weighing hopper:	6, 15 or 25 l
Load cells:	7,2; 12; 18 kg

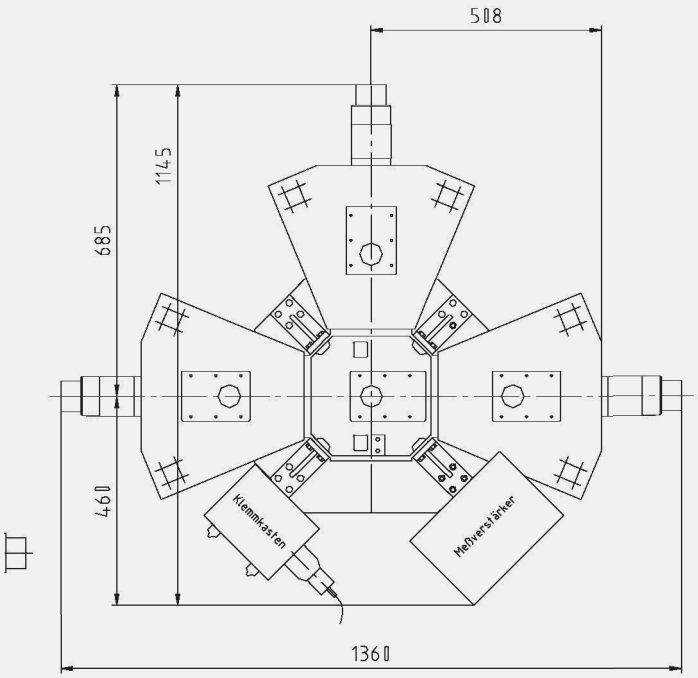
Degree of accuracy	
System*	< 0,5 %
Load cells*	0,015 %

*Performance and dosing depending on the bulk cargo

Options

- High-temperature version
- Clean-room version
- Automatic feeding of the dosing stations
- Cleaning opening with scavenging connection
- Remote maintenance
- Automatic screw calibration





Piovan
Fdm

GDS

LOSS IN WEIGHT BLENDERS, FOR PELLET, FLAKES, REGRIND, ADDITIVES AND POWDER

GDS series is the right solution when continuous dosing with the highest accuracy is required.

The unit is located above the extruder inlet and fed by vacuum receivers.

High quality load-cells measure the loss in weight of the single components and the servo drives regulate the throughput of each components.

Suitable for granules, flakes, regrind, additives and powder

Suitable for starve feeding extruder

Complete control of extrusion line

PET Preforms & Bottles | Rigid Packaging | Automotive components | Technical parts | Medical solutions | Thermoforming & Technical Sheets | Flexible Film | Pipes, Profiles, Cables | Fibres & Strapping | Recycling | Compounds

Max throughput (kg/h) Max 1,500 kg/h

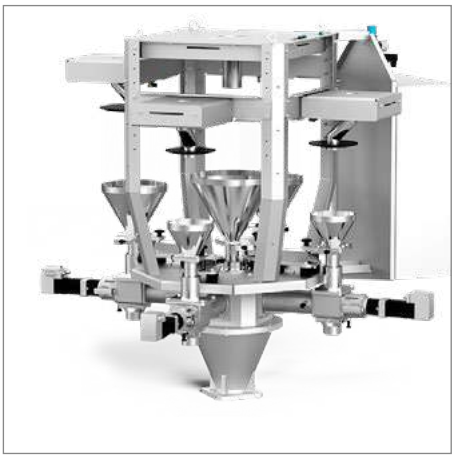
Dosing device Free falling main component and/or dosing screws (single as well as twin screw design)

Material to be dosed Pellets, flakes, free flowing powder according to dosing model

Installation layout available Central support frame as standard design for the installation of multiple dosing units directly on the extruder threat or platform

Main options

- Dosing units as well as refilling valves designed for high temperatures up to 180 °C
- Integrated control for feeding systems, drying and material storage equipment.
- Customer interface on special request via Profinet, OPC, Profibus and others (customized solutions for OEM`s)



Each station can be equipped with hoppers of different volume and made of different material according to the application and throughput

The refilling valves and the related pneumatic actuation are integrated in the blender frame, with a clean and compact design

A complete range of screw and dosing bush is available to cover a wide number of applications

	Max number of components	Max total throughput (kg/h)	Max single station throughput (kg/h)	MIn single station throughput(kg/h)	Material to be dosed
GDS1	1	1,500	-	-	pellets, regular regrind
GDS5	5	600	600	0.5	
GDS7	7	1,500	1,500	0.5	pellets, flakes, free flowing powder
GDS11	11	700	400	0.5	

Exacta
GV

GRAVIMETRIC MICRODOSING UNIT

Exacta GV is a gravimetric microdoser by Piovan. It can dose even one single granule, remaining immune to vibrations coming from external sources.

The easy-to-use 7” interface with advanced PLC control and integrability with Winfactory 4.0 make Exacta GV the best solution for precise dosing and quality track.

An easy customisable material database is included as standard. It can be quickly and easily recalled for an immediate start-up.

Exacta GV doses easily low melting materials by means of a cooling circuit.

Very high precision up to one single granule

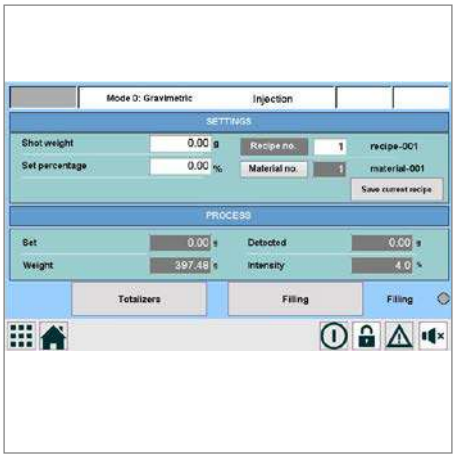
Easy accessibility for cleaning

Performances consistent in time

PET Preforms & Bottles | Rigid Packaging | Automotive components | Technical parts | Medical solutions | Thermoforming & Technical Sheets | Flexible Film | Pipes, Profiles, Cables | Fibres & Strapping | Recycling | Compounds

Total number of stations	2
Max - min throughput (kg/h)	0.1—2 kg/h
Dosing device	Vibrating channel
Material to be dosed	Regular chips
Installation layout available	For gravity feeding of the IMM
Main options	Different cable length for the control box installation (3, 5, 10 or 15 m), feeding system with vacuum loader or with Venturi, ionizer for the dosing of electrostatic materials, visual and acoustic alarm, cooling connections, equalization device, junction box to manage the feed-back from extruder or the enable from the IMM

The internal residence hopper is placed on load cells for a continuous monitoring of the throughput according to the loss in weight principle



The control of the dosing process is realized with a PLC system, to guarantee high performances and with a user-friendly HMI

The layout of the dosing station is highly compact Two stations can be mounted on the same central body

MDP 300

VOLUMETRIC DOSER

Flexibility and production efficiency

- High dosing repeatability
- Reduced times for changing production batches
- Energy saving

The MDP 300 volumetric dosing unit simultaneously doses up to 4 components (virgin material, recycled material, additives and masterbatch) using pneumatic guillotines, with a capacity of up to 300 kg/h.

The MDP 300 is ideal for use on injection molding machines, extruders and blow molding machines. It can be installed directly on the processing machine or positioned on the floor on a dedicated structure equipped with a suction valve. Available with two, three or four dosing stations that can be added at any time.

Operator interface :
The control keyboard with a 3.5-inch liquid crystal display uses the most advanced generation of microprocessors.

The operator can access the following functions:

- recipe memorization
- selection of one of 299 recipes that can be memorized
- selection of one of 3 possible languages (out of a range of 10)
- rapid emptying of stations
- alarm monitoring
- management of access levels with security passwords

Only available in: BO, BR, UY, EC, PY, AR, CL, PE, VE, CO

MDW 150

GRAVIMETRIC DOSER

Homogeneous mixing in each batch

- Custom configuration
- Precise dosing and high process repeatability
- User-friendly and immediate communication with operator

The MDW 150 is a gravimetric dosing unit equipped with a pneumatic guillotine or dosing screw. It can dose up to 6 types of granulated materials. With a nominal capacity of up to 150 kg/h, this dosing unit is ideal for injection, blow molding and extrusion processes.

• Modular dosing stations allow high flexibility
• The mixer and the special agitator design provide a homogeneous mixture, without preferential flows and material stagnation, even in critical materials such as flakes
• Uses high-resolution load cell that immunizes the system from vibrations caused by the transforming machine
• Color touch screen panel with 8.5' screen

Only available in: BR, AR, BO, CL, CO, EC, PY, PE, UY, VE

High Capacity Weigh Blender

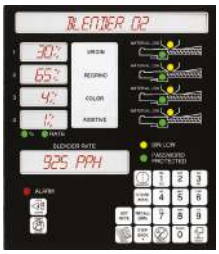
HCWB

Benefits:

- Delivers accurate blending of various resins and additives
- Up to four components
- Low level material switches
- Homogenizing mixing chamber
- Vacuum take-off drain out
- SPI protocol
- Throughputs up to 10,000 PPH
- Optional motors and augers for varying throughputs
- Optional vibratory feeders in lieu of Auger feeders

The HCWB Series high capacity gravimetric weigh blender delivers unparalleled accuracy and performance! A powerful mixing motor and variable speed DC auger motors assure delivery of throughputs from 1,500 - 10,000 LBS/PPH. The standard OMNI-IVWB microprocessor control is simple to set up and delivers reliable and repeatable performance.
Material changeovers are quick and simple with augers that can be disassembled and up to three vacuum take-off adapters.

OMNI-IVWB Microprocessor Control



The OMNI-IVWB features user-friendly control. Store up to 100 recipes for quick recall, adjust regrind automatically or manually while maintaining correct ratios of virgin to additive. Provides extremely accurate control of the blend.

Global Presence

Wherever our customers are and wherever they are looking to grow. 5 production facilities, 21 subsidiaries and representatives in more than 70 countries ensure that we stay close to our customers.

Whether you are seeking equipment to help optimize your manufacturing processes or require global technical service support for a new plant, Piovan can work with you to develop the most suitable local or global solution.

Aftersales Technical Support

Aftersales Technical Support group (ATS) provides extensive aftermarket service support, ensuring a constant and consistent performance and the assurance that assistance is just a moment away!

- Equipment and system startup new installations
- 24/7 technical phone support to address questions or resolve problems as they relate to Una-Dyn products or systems.
- Product and systems training on maintenance and troubleshooting of UNA-DYN products and systems.
- Design custom maintenance agreements and equipment audits which provide appropriate reports on system performance, along with suggestions for improvements.
- Remote monitoring through Una-Dyn's Factory Acquisition Control System, F.A.C.S.

24/7 Technical Support is always available to assist with any questions or to help resolve any issues and, if on-site service is necessary, will quickly dispatch assistance to your plant.

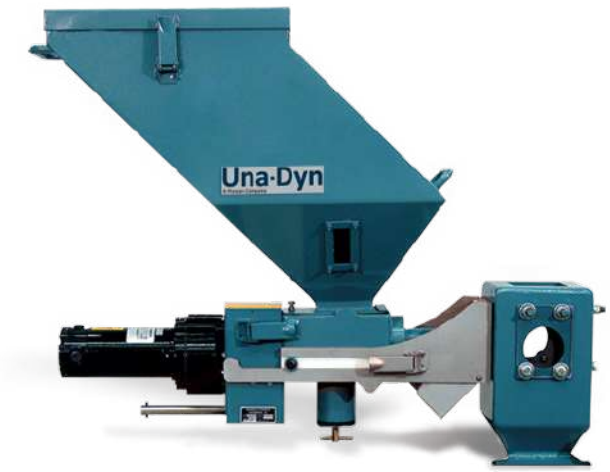
Email us at aftersales@unadyn.com, or contact us directly at 703.490.7000 for assistance today!

PAF Series

Additive Feeder

Benefits:

- Heavy-duty construction
- Easy-to-clean modular components
- Throughput rates from 0.5 - 1000 PPH
- Modular design - Simple to re-configure
- Resin drain-out port
- Two feed bins sizes available (Standard 1.5 cu. ft., optional 0.25 cu. ft.)
- Connect up to 4 feeders to a common riser
- Optional drawer magnet

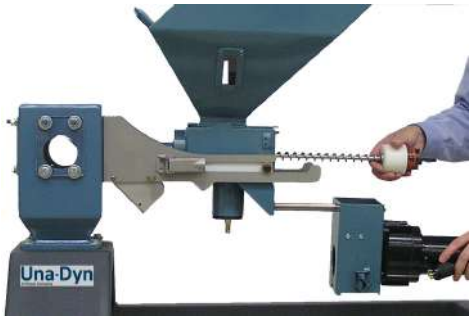


PAF Series additive feeders are rugged, reliable and simple to operate. Quick-disconnect clamps on all feeder components permit easy cleaning and fast additive changeovers. The swing-down sample chute makes calibration easy and accurate. Auger metering to the center of the primary resin flow maximizes additive dispersion.
The standard UDC controller provides auger speed control and a digital display. Additional feeder control options include the extruder follower function that responds to changed in the speed of the extruder. For molding machines, we offer the OMNI IV microprocessor-based, adaptive control which automatically adjusts the metering rate in response to changes in the molder's screw retraction cycle.

NOTE: Standard Feed Bin is 1.5 cu. ft.; optional Small Feed Bin is 0.25 cu. ft.

Quickly Access and Replace Feeder Components for Quick Material Change

Release clamps on sides of gearbox motor



Slide towards you to release gearbox motor and feed auger.

Grasp handles and slide material feed bin towards you and lift off.

Auger assembly in calibration mode is ready to deliver catch samples of additive.

Material drain-out port for ease of cleaning and material change over.

Controls

Standard Feeder Control

- Solid state controller
- Calibration switch
- Material feed indicator
- Digital display
- Easy-to-set auger speed dial

OMNI IV Control (For molding machines)

- Microprocessor controller
- Calibration switch
- Material feed indicator
- Digital display

Extruder Follower (For extruder applications only)

- Responds to changes in the extruder speed to maintain additive percentage
- Available with panel-mounted tachometer

Options:

Model 5 mixing chamber - throat mounts below the additive feeder to provide mechanical agitation to achieve a uniform blend prior to discharge.

Small feed bin, .25 CU FT

Magnet - used to prevent ferrous material from entering the machine.

BDS 100

Gravimetrisches Chargen Dosiergerät
Gravimetric Batch Dosing System

- *Gravimetrischer Batch Mischer*
- *8 Komponenten*
- *4 Hauptkomponenten mit Absperrschieber*
- *Anbaumöglichkeit bis 4 Kleinkomponenten mit Dosierschnecken*
- *Gesamtleistung 100 kg/h, Granulat, Regranulat, Additive und Masterbatch, gut rieselfähig*

- *Gravimetric Batch Blender*
- *Total 8 components*
- *4 main components with slide valve*
- *Up to 4 auxiliary components with dosing screws*
- *Total output 100 kg/h pellet,*
- *Regrind, additive and masterbatch*
- *Each for free-flowing material*

BDS 100

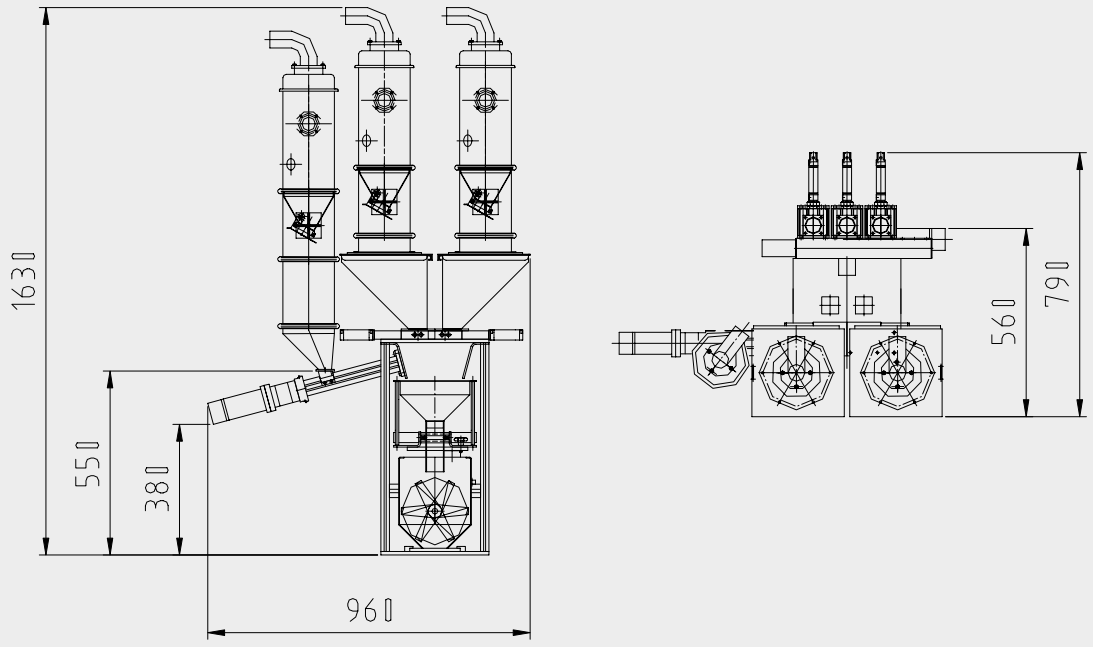
Gravimetrisches Chargen Dosiergerät
Gravimetric Batch Dosing System

Technische Daten /Technical Data

Elektrische Daten	
Netzanschluss:	3 x 400 V, PE, N, 50/60 Hz
Nennleistung:	1.0 kW
Stromaufnahme:	1.5 A
Schutzart:	IP 44
*Leistung je nach Steuerung und Ausführung	
Abmessungen	
H x B (max):	1630 mm x 960 mm
Gewicht:	50 kg
Umgebungsbedingungen	
Max. Temperatur des Förderguts:	+ 90°C
Max. Umgebungstemperatur im Betrieb:	+ 5°C bis + 50°C
rel. Luftfeuchtigkeit bei 20°C:	≤ 80 %
Emissionen	
Geräuschemissionen:	≤ 65 dB (A)
Werkstoffe	
Einlaufschieber, Mischer, Wägetrichter:	Edelstahl
Oberteil, Montageplatte:	Aluminium
Dosierung	
Nettovolumen Wägetrichter:	2 Liter
Dosierleistung:	5 - 100 kg/h
Anzahl der Komponenten:	max. 8
Hauptkomponenten 1-4 über Schieber:	20 - 100 %
Nebenkomponenten 5-8 mit Schnecke:	< 20 %
Anzahl der möglichen Dosierschnecken:	4
Dosiergenauigkeit:	± 0,2 % batch/h
*Leistung und Dosiergenauigkeit in Abhängigkeit vom Schüttgut.	
Zubehör	
Silos, Sackaufgaben, Big-Bag Entleerstationen, Saugfördergeräte, Zentralfilter, Rohrleitungen	

Electrical Data	
Main connection:	*3 x 400 V, PE, N, 50/60 Hz*
Nominal output:	*1.0 kW*
Current consumption:	*1.5 A*
Protective system:	*IP 44*
**Performance depending on control and construction*	
Dimensions	
H x W (max):	*1630 mm x 960 mm*
Weight:	*50 kg*
Ambient Conditions	
Max. temperature of cargo:	*+90°C*
Max. ambient temperature at work:	*+5°C to +50°C*
Air humidity at 20°C:	*≤ 80 %*
Emission	
Noise level:	*≤ 65 dB (A)*
Material	
Slide valves, blender, weight-hopper:	*stainless steel*
Blender top, casing:	*aluminium*
Dosing	
Net volume Weight hopper content:	*2 litres*
Dosing Output:	*5 - 100 kg/h*
Number of components	*max. 8*
Main components 1-4 with slide valve:	*20 - 100 %*
Auxiliary components 5-8 with dosing screw:	*< 20 %*
Number of different dosing screws:	*4*
Degree of accuracy:	*± 0,2 % batch/h*
** Performance and dosing depending on the bulk cargo.*	
Options	
Silos, bag emptying station, big-bag discharge station, suction conveyor, main filter, piping material	

Beispielzeichnung je nach Ausführung / *Drawing depending on construction*



BDS 2000

Gravimetrisches Chargen Dosiergerät
Gravimetric Batch Dosing System

- *Gravimetrischer Batch Mischer*
- *8 Komponenten*
- *4 (6) Hauptkomponenten mit Absperrschieber*
- *Anbaumöglichkeit bis 4 Kleinkomponenten mit Dosierschnecken*
- *Gesamtleistung 2000 kg/h, Granulat, Regranulat, Mahlgut, Additive und Masterbatch, gut rieselfähig*

- *Gravimetric Batch Blender*
- *Total 8 components*
- *4 (6) main components with slide valve*
- *Up to 4 auxiliary components with dosing screw*
- *Total output 2000 kg/h pellet,*
- *Regrind, scrap, additive and masterbatch*
- *Each for free-flowing material*

BDS 2000

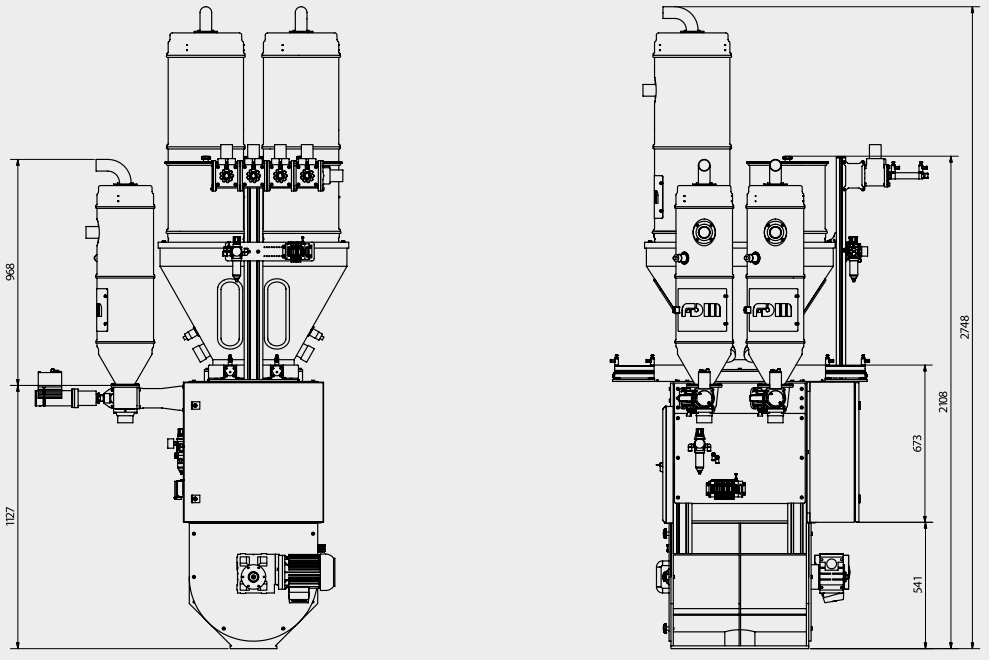
Gravimetrisches Chargen Dosiergerät
Gravimetric Batch Dosing System

Technische Daten /Technical Data

Elektrische Daten	
Netzanschluss:	3 x 400 V, PE, N, 50/60 Hz
Nennleistung:	1.5 kW
Stromaufnahme:	8 A
Schutzart:	IP 44
*Leistung je nach Steuerung und Ausführung	
Abmessungen	
H x B (max):	2100 mm x 1400 mm
Gewicht:	350 kg
Umgebungsbedingungen	
Max. Temperatur des Förderguts:	+ 90°C
Max. Umgebungstemperatur im Betrieb:	+ 5°C bis + 50°C
rel. Luftfeuchtigkeit bei 20°C:	≤ 80 %
Emissionen	
Geräuschemissionen:	≤ 65 dB (A)
Werkstoffe	
Einlaufschieber, Mischer, Wägetrichter:	Edelstahl
Oberteil, Montageplatte:	Aluminium
Dosierung	
Nettovolumen Wägetrichter:	20 Liter
Dosierleistung:	10 - 2000 kg/h
Anzahl der Komponenten:	max. 8
Hauptkomponenten 1-4 über Schieber:	20 - 100 %
Nebenkomponenten 5-8 mit Schnecke:	< 5 %
Anzahl der möglichen Dosierschnecken:	4
Dosiergenauigkeit:	± 0,2 % batch/h
Volumen Mischer:	80 L
*Leistung und Dosiergenauigkeit in Abhängigkeit vom Schüttgut.	
Zubehör	
Silos, Sackaufgaben, Big-Bag Entleerstationen, Saugfördergeräte, Zentralfilter, Rohrleitungen	

Electrical Data	
Main connection:	*3 x 400 V, PE, N, 50/60 Hz*
Nominal output:	*1.5 kW*
Current consumption:	*8 A*
Protective system:	*IP 44*
**Performance depending on control and construction*	
Dimensions	
H x W (max):	*2100 mm x 1400 mm*
Weight:	*350 kg*
Ambient Conditions	
Max. temperature of cargo:	*+90°C*
Max. ambient temperature at work:	*+5°C to +50°C*
Air humidity at 20°C:	*≤ 80 %*
Emission	
Noise level:	*≤ 65 dB (A)*
Material	
Slide valves, blender, weight-hopper:	*stainless steel*
Blender top, casing:	*aluminium*
Dosing	
Net volume Weight hopper content:	*20 litres*
Dosing Output:	*10 - 2000 kg/h*
Number of components	*max. 8*
Main components 1-4 with slide valve:	*20 - 100 %*
Auxiliary components 5-8 with dosing screw:	*< 5 %*
Number of different dosing screws:	*4*
Degree of accuracy:	*± 0,2 % batch/h*
Volume Mixer:	*80 L*
** Performance and dosing depending on the bulk cargo.*	
Options	
Silos, bag emptying station, big-bag discharge station, suction conveyor, main filter, piping material	

Beispielzeichnung je nach Ausführung / *Drawing depending on construction*



TS-35

Doppelschnecke
Twin Screw

- Ausführung gravimetrisch sowie volumetrisch
- Für das Dosieren von schlecht fließenden Materialien (Kreide, Talk etc.)
- Verfügbar als „Stand alone unit“ oder integriert in unsere anderen GDS Modelle (GDS7, GDS11)
- Vermeidung von Materialbrücken durch Rührwerke in verschiedenen Ausführungen
- Keine Materialanhaftungen an den Dosierschnecken
- Staubdicht
- Bedienungsfreundlicher Aufbau
- Siemens Steuerung

- *Designed as gravimetric and volumetric unit*
- *Dosing of poor flowing and adhesive bulk (Calcium Carbonate, Talc …)*
- *Available as stand alone unit or within our other GDS series (GDS7, GDS11)*
- *No material bridges in hopper and screw inlet because of agitators available in different designs*
- *No adherence of material at the screw surface*
- *Dust sealed*
- *Operator friendly design*
- *Siemens control*

TS-35

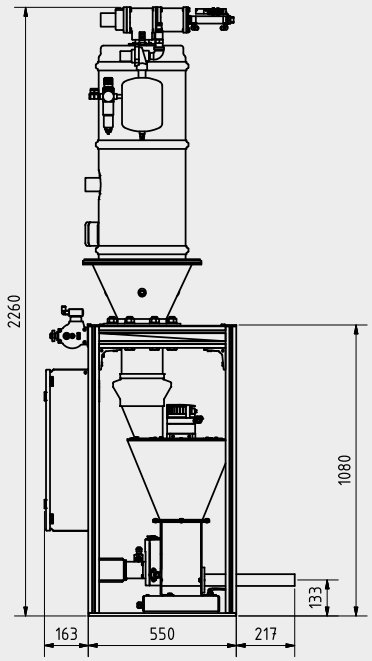
Doppelschnecke
Twin Screw

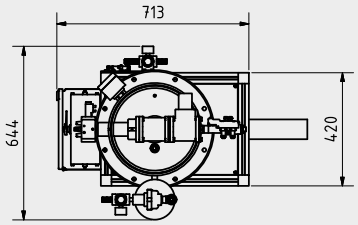
Technische Daten /Technical Data

Elektrische Daten	
Netzanschluss:	230 V, PE, N, 50/60 Hz
Nennleistung:	0,5 kW
Stromaufnahme:	2 A
Schutzart:	IP 44
* Leistungen je nach Steuerung und Ausführung	
Abmessung (ohne Fördergerät)	
H x B x T (max):	1150x 520 x 930 mm
Gewicht:	100 kg
Umgebungsbedingungen	
Max. Temperatur des Förderguts:	70°C
Max. Umgebungstemperatur im Betrieb:	+5°C bis +40°C
Rel. Luftfeuchtigkeit bei 20°C:	≤ 80 %
Emissionen	
Geräuschemissionen:	≤ 65 dB (A)
Werkstoffe	
Doppelschnecke, Einlauftrichter:	Edelstahl
Vasenkompensator:	Silikon
Montageplatte:	Aluminium
Zwischenflanschklappe:	Edelstahl, EPDM
Nettovolumen Einlauftrichter	
Einlauftrichter mit internem Rührwerk:*	20 Liter
* weitere Ausführungen auf Anfrage	
Dosierleistung:	
TS-35:	20 - 300 kg
Austragsleistung und Genauigkeit:	material- und leistungsabhängig
Zubehör	
Nutzung innerhalb anderer GDS Serien (GDS7, GDS11), Silos, Sackaufgaben, Big-Bag Entleerstationen, Saugfördergeräte, Zentralfilter, Rohrleitungen	

Electrical Data	
Main connection:	*230 V, PE, N, 50/60 Hz*
Nominal output:	*0,5 kW*
Current consumption:	*2 A*
Protective system:	*IP 44*
** Performance depending on control and construction*	
Dimensions (without hopper loader on top)	
H x L x W (max):	*1150x 520 x 930 mm*
Weight:	*100 kg*
Ambient conditions	
Max. temperature of bulk:	*70°C*
Max. ambient temperature at work:	*+5°C bis +40°C*
Air humidity at 20°C:	*≤ 80 %*
Emission	
Noise level:	*≤ 65 dB (A)*
Material	
Twin screw, hopper:	*Stainless steel*
Vase compensator:	*Silicone*
Support plate:	*Aluminium*
Butterfly valve:	*Stainless steel, EPDM sealed*
Volume of hopper (net)	
*Hopper with internal agitator:**	*20 Liter*
** other design available depending on requirement*	
Dosing performance:	
TS-35:	*20 - 300 kg*
Troughput and Accuracy:	*Bulk and performance dependent*
Options	
Usage within other GDS series (GDS7, GDS11), silos, bag emptying station, big bag discharge station, suction conveyor, central filter station, piping material	

Beispielzeichnung je nach Ausführung / *Drawing depending on construction*





ADROIT TECHNOLOGY

GRADO

GRAVIMETRIC GAIN-IN-WEIGHT BLENDER
WITH INTEGRATED GRAVIMETRIC EXTRUSION CONTROL

GRADO ADROIT TECHNOLOGY

GRAVIMETRIC GAIN-IN-WEIGHT BLENDER WITH INTEGRATED GRAVIMETRIC EXTRUSION CONTROL

A new concept of batch blending system, with a quite innovative and original mix of design and technology. GRADO ADROIT is the highest expression of know-how, creative thinking and passion of a leading manufacturer of batch blenders for the plastic extrusion industry, with two decades of experience and more than 10.000 blenders made.
Nothing comparable in terms of blending accuracy, higher throughput, easy maintenance and cleaning, modularity, reliability.

GRADO ADROIT is the third generation of GRADO, the batch blender which became a best seller and a master-piece for the plastic extrusion industry.

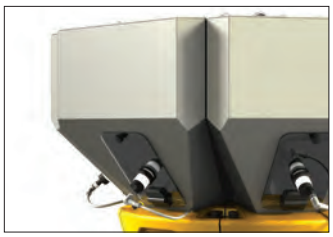
With the ADROIT version, we gave GRADO some further characteristics which make it even more unique:

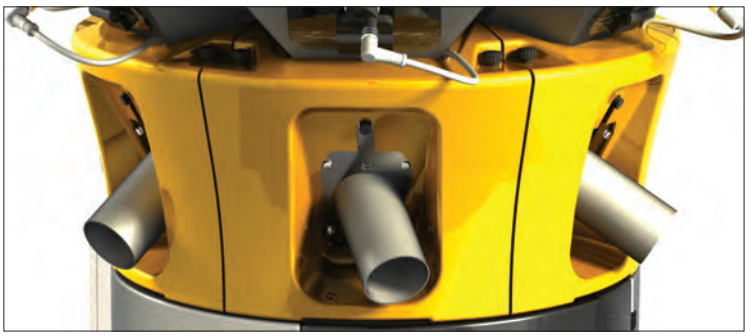
- innovative industrial design
- D.I.Y. modularity to add more ingredients
- improved reliability
- reduced maintenance
- higher & constant throughputs
- improved gravimetric efficiency
- easier cleaning and maintenance

Suitable to be installed in-line, directly on the extruder throat or either on a mezzanine, and also off-line, on a take-off stand to feed one or more extruders.

Available in 4 different sizes:
200, 400, 800 and 1.300 kg/h
Each size is available in **5 models**:
from 2 ingredients up to 6 ingredients.

ULTIMATE DESIGN &TECHNOLOGY





INGREDIENT CHANGEOVER AND CLEANING HAS NEVER BEEN SO EASY AND QUICK

- spherical mixing chamber with conical bottom part, to guarantee the most efficient mixing action and no residuals to stuck into
- discharge spouts with slide gates
- inclined slide-gate, linked to the drain spout, to guarantee a complete draining of the ingredient, with no residuals to stuck into
- quickly removable slide-gate block for deep cleaning

MODULARITY

IT'S A FULL MODULAR BLENDER

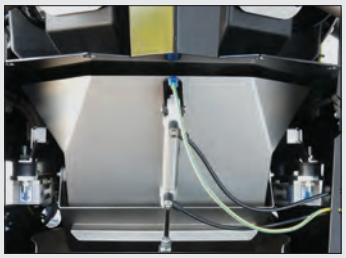
The "basic machine"
(for 2 ingredients) comes already provided with wiring terminals and control box prearranged for upgrading up to 6 ingredients.
Upgrading kits include all parts, wires and fittings needed and easy-to-follow instructions.
Add more ingredients is a D.I.Y. operation, very easy and quick, with no technical commissioning needed.

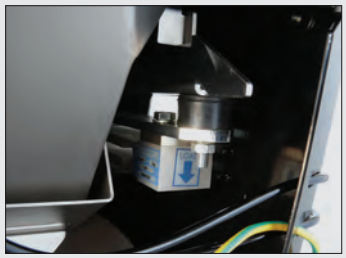
INCOMPARABLE ACCURACY AND PRECISION HIGHEST THROUGHPUT IN A SMALL SIZE

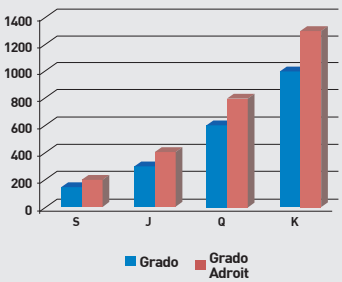
- radically improved kinetic of the slide-gate
- innovative techno-polymer flaps
- double lip polymer seals
- vibration dumpers on the weight bin
- last generation electronic B&R-X20

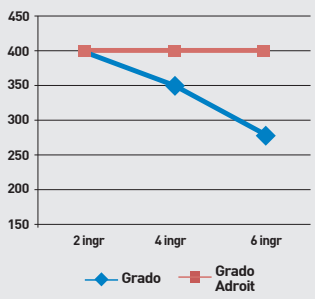
give GRADO ADROIT

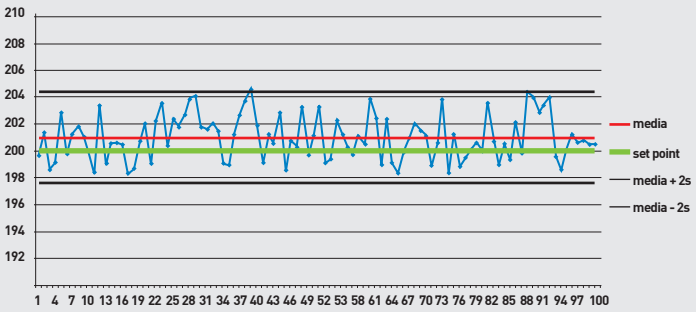
- the most precise and accurate dosing performances
- the highest gravimetric efficiency
- an incomparable performance of blending accuracy and precision, most probably the best ever seen in a batch blender
- the highest throughput related to the machine size
- higher reliability, i.e. less maintenance and longer life time









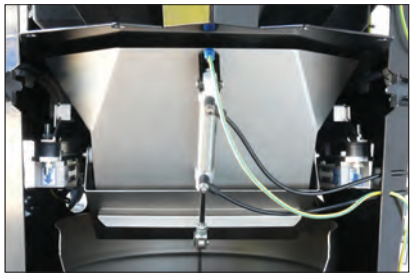


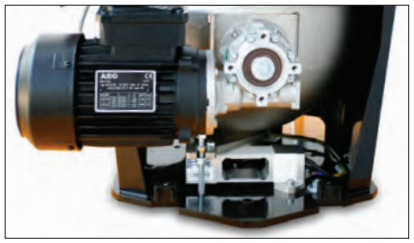
DOUBLE ACTION BLENDER

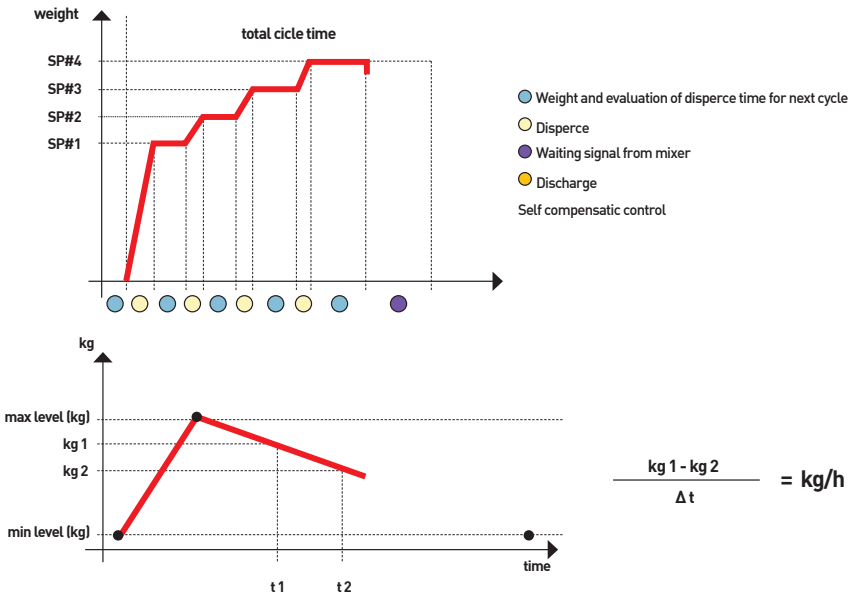
- Gravimetric gain-in-weight blending
- Gravimetric loss-in-weight extrusion control (extruders control and take-off control)

Batch gain-in-weight blending: ingredients are dosed, in sequence, by a slide-gate valve, and then fed into a gravimetric bin, mounted on load-cells.

GRADO-ADROIT has an internal loss-in-weight mixing chamber, with an hemispheric bottom, installed on load-cells, which continuously weights the material flow into the extruder. The system can measure and control the extrusion throughput or use this value to control the line speed or, as an alternative, perform both functions simultaneously.
With multi-layer lines, each extruder throughput is measured and controlled to maintain a constant layer-to-layer ratio.







INTEGRATED VACUUM LOADING SYSTEM SMARTCONVEY

Fully automatic vacuum loading system, controlled by the same PLC which controls the blending system and operated by the same HMI. One or more vacuum pumps to serve one or more receivers, whose association can be set through personalized configuration.

All receivers linked to one pump are served in turn, according to a priority sequence which is automatically assigned by the control PLC. Changeover Active Control software available, to minimize the ingredients residual quantity at the end of any job order.

ADROIT TECHNOLOGY

BLENDO

CONTINUOUS GRAVIMETRIC LOSS-IN-WEIGHT BLENDER
WITH INTEGRATED GRAVIMETRIC EXTRUSION CONTROL

BLENDO ADROIT TECHNOLOGY

CONTINUOUS GRAVIMETRIC LOSS-IN-WEIGHT BLENDER WITH INTEGRATED GRAVIMETRIC EXTRUSION CONTROL

Combining the experience gained in over 20 years of continuous gravimetric blenders and the latest innovative ADROIT technology, DOTECO presents the new generation of BLENDO.

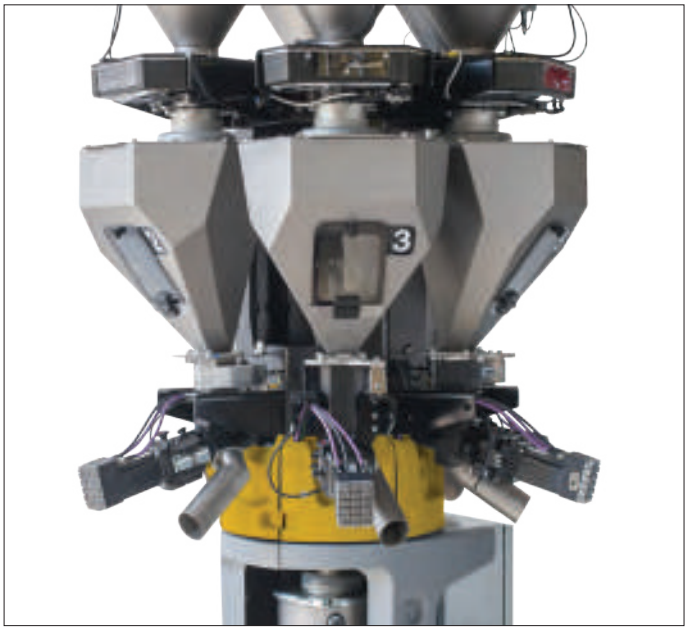
Designed to blend pellets in extrusion processes where dosing accuracy and a homogeneous dispersion of additives are strictly required. Unaffected by vibrations, BLENDO has been designed to be easily mounted directly on the extruder throat to replace the conventional feed hopper or for mezzanine mounting.

Available in 4 models, with throughputs up to 200, 400, 800 and 1300 Kg/h.

- Innovative industrial design
- D.I.Y. modularity up to 6 ingredients
- Brushless motors and direct transmission
- Wide throughput range
- Improved accuracy and precision
- Reduced footprint
- Easy cleaning and maintenance
- Quick ingredients change

Blendo Adroit is perfect for applications where accuracy and precision at low percentages and very quick set-up timing are essential requirements.

ULTIMATE DESIGN &TECHNOLOGY



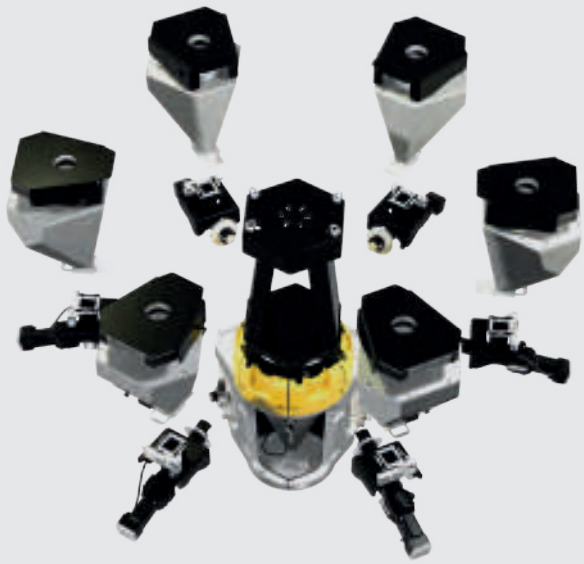
INGREDIENT CHANGEOVER AND CLEANING HAS NEVER BEEN SO EASY AND QUICK

- Downcomer hopper with reduced volume, to better follow the throughput variations and to ensure quick changeovers on the fly, with minimum residual material
- Discharge spouts to drain out quickly the residual material contained in the hopper
- Hopper with different size to ensure quick empty
- Cleaning windows

MODULARITY

IT'S A FULL MODULAR BLENDER

The "basic machine" (for 2 ingredients) can be supplied already provided with wiring terminals and control box prearranged for upgrading up to 6 ingredients.
Upgrading kits include all parts, wires and fittings needed and easy-to-follow instructions.
Add more ingredients is a D.I.Y. operation, very easy and quick, with no technical commissioning needed.



FEATURES

- Quick and easy access to all parts for maintenance cleaning
- No tools required
- Drain spout for quick and complete ingredient feed hopper emptying
- Clean out doors for fast removal of dust or ingredient residues and for visual inspection
- Easy to use, simply set the dosing percentage
- Full modular construction, from two to six ingredients
- Self-supporting structure prearranged for vacuum receiver installation without additional supports
- All parts that come into contact with the ingredients are made of food-grade materials or finishes
- The on-board control box does not require any floor space
- Standard type load cells, high resolution weighing system (24 bit A/D converter) to maximize analog accuracy
- "7", 10", 15" or 21" HTML5 user friendly interface or possibility to integrate the communication with the line supervisor
- No scheduled maintenance is required
- Reduced installation costs: cabinet on board and factory made wiring of the dosing unit

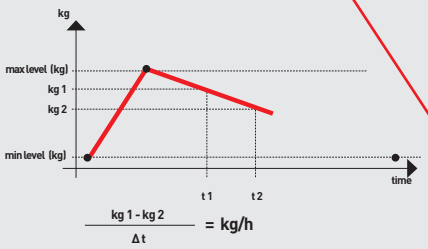
INCOMPARABLE ACCURACY AND PRECISION

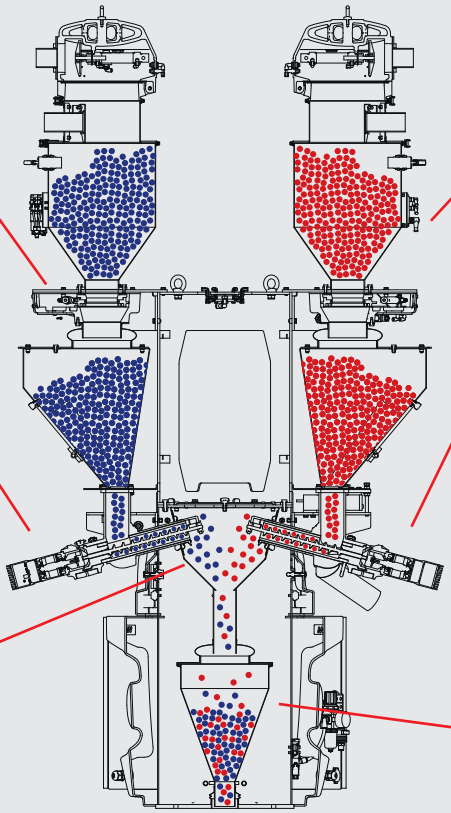
- Screws designed to ensure minimum vibrations and high precision control
- Screws are driven by brushless motors, to ensure accurate control of the revolutions, from 1 to 600 rpm
- The entire dosing unit (hopper and auger screw) is gravimetric metered with high resolution (24 bits) loading cells
- All the ingredients (even the main component) are metered with the same continous loss-in-weight technology
- The gravimetric downcomer hopper maintains continuous accurate stability of extruder throughput
- All the data are processed by the latest B&R X20 electronic hardware and the software developed by DOTECO in over 20 years of field experience with the major leaders of extrusion

INTEGRATED REFILL VALVE
Opens when the gravimetric hopper ask for material

SMARTCONVEY
Integrated Conveying System with automatic filter cleaning

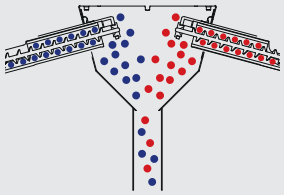
GRAVIMETRIC BLENDING
Auger screw on load cells - continous Loss - in - weight for each individual component



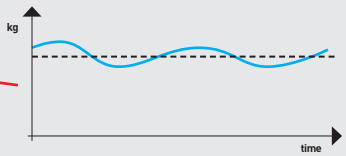


GRAVIMETRIC EXTRUSION CONTROL
Integrated algorithm with summation of all dosing stations feeding with continous loss - in - weight technology

CASCADE MIXER
The most efficient mixing system



GRAVIMETRIC DOWNCOMER HOPPER
Maintaining continous accurate stability of extruder throughput vs blending of each component



INTEGRATED VACUUM LOADING SYSTEM SMARTCONVEY

Fully automatic vacuum loading system, controlled by the same PLC which controls the blending system and operated by the same HMI. One or more vacuum pumps to serve one or more receivers, whose association can be set through personalized configuration.

All receivers linked to one pump are served in turn, according to a priority sequence which is automatically assigned by the control PLC. Changeover Active Control software available, to minimize the ingredients residual quantity at the end of any job order.

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
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Владивосток (423)249-28-31
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