

GRAVICOLOR 310/610

Presentation

ZERO LOSS



GRAVICOLOR 310/610



Introduction

The GRAVICOLOR 310 and 610 dose and mix up to eight different materials precisely and with maximum recipe accuracy thanks to the unique motan cone dosing system. The modular design and excellent engineering guarantee optimum performance, flexibility, and reliability of the units. This gravimetric batch dosing and mixing unit can be used for injection moulding, blow moulding and extrusion processes.

The integrated and improved IntelliBlend analysis function records the recipe, material and operating environment and documents all process data. With the help of the software, the user achieves continuous self-optimisation of the system and consequently the best possible operating point with the highest recipe integrity and consistent, high product quality.

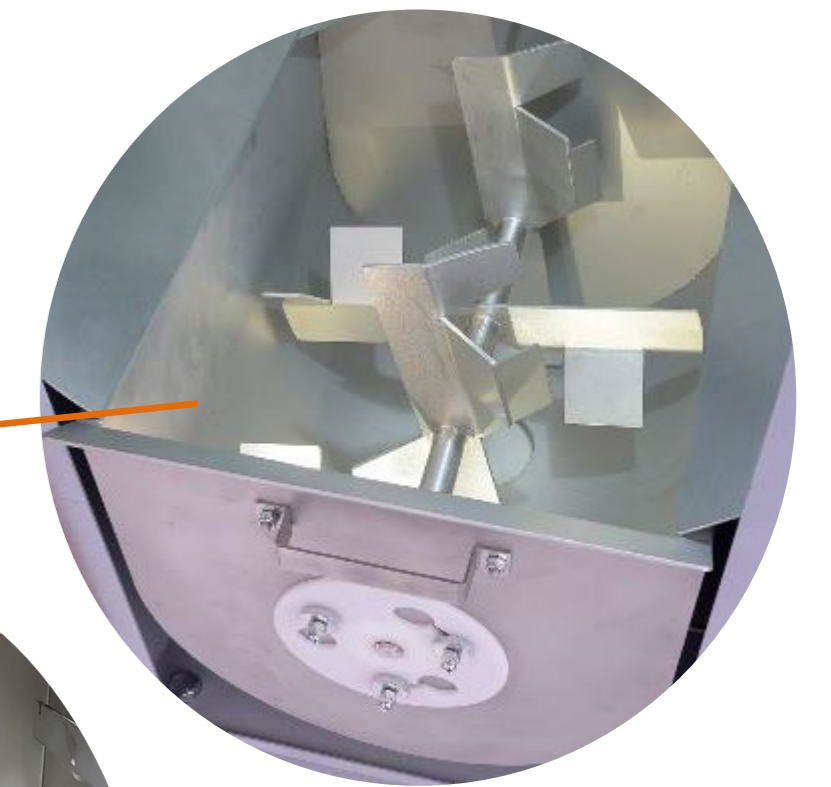
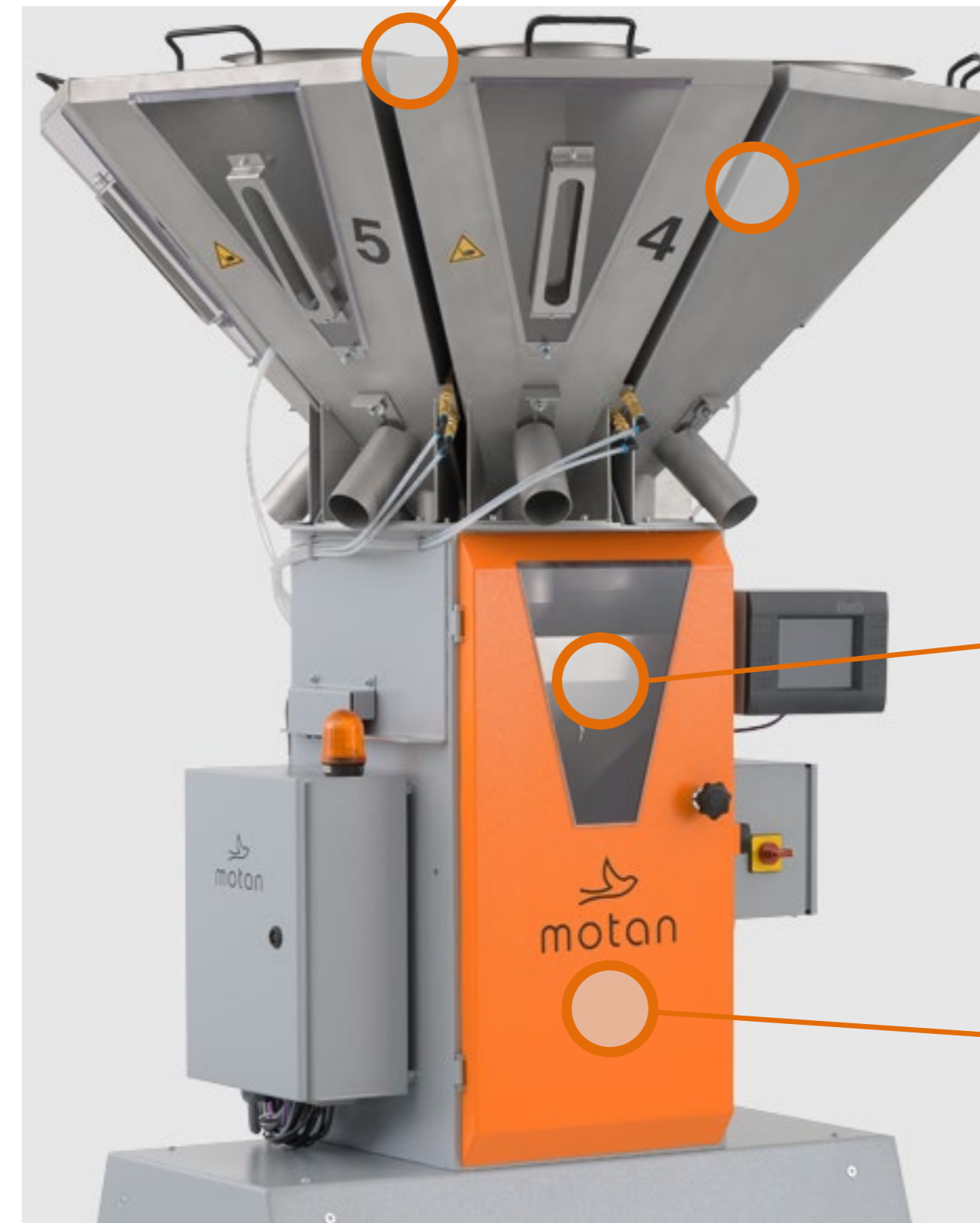
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Highlights

Flexible – Modular – Easy to clean

Improvement of the new Design:

- ↳ Modular / removable material hopper (Ø: 100/60/45/30/20)
- ↳ Up to 8 material hopper
- ↳ Pneumatic proven cone dosage
- ↳ Quick and easy material change - each hopper get a quick-drain
- ↳ Removable, optimised mixing chamber and weighing bin - easy cleaning
- ↳ Contactless level sensor
- ↳ Integrated motor monitoring





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Gravimetric dosing

Absolutely true to the recipe and reproducible.

The high and consistent dosing accuracy of the GRAVICOLOR 310 and 610 mean that you can reduce the percentage of additives being dosed without a loss in quality and so save on materials and costs.

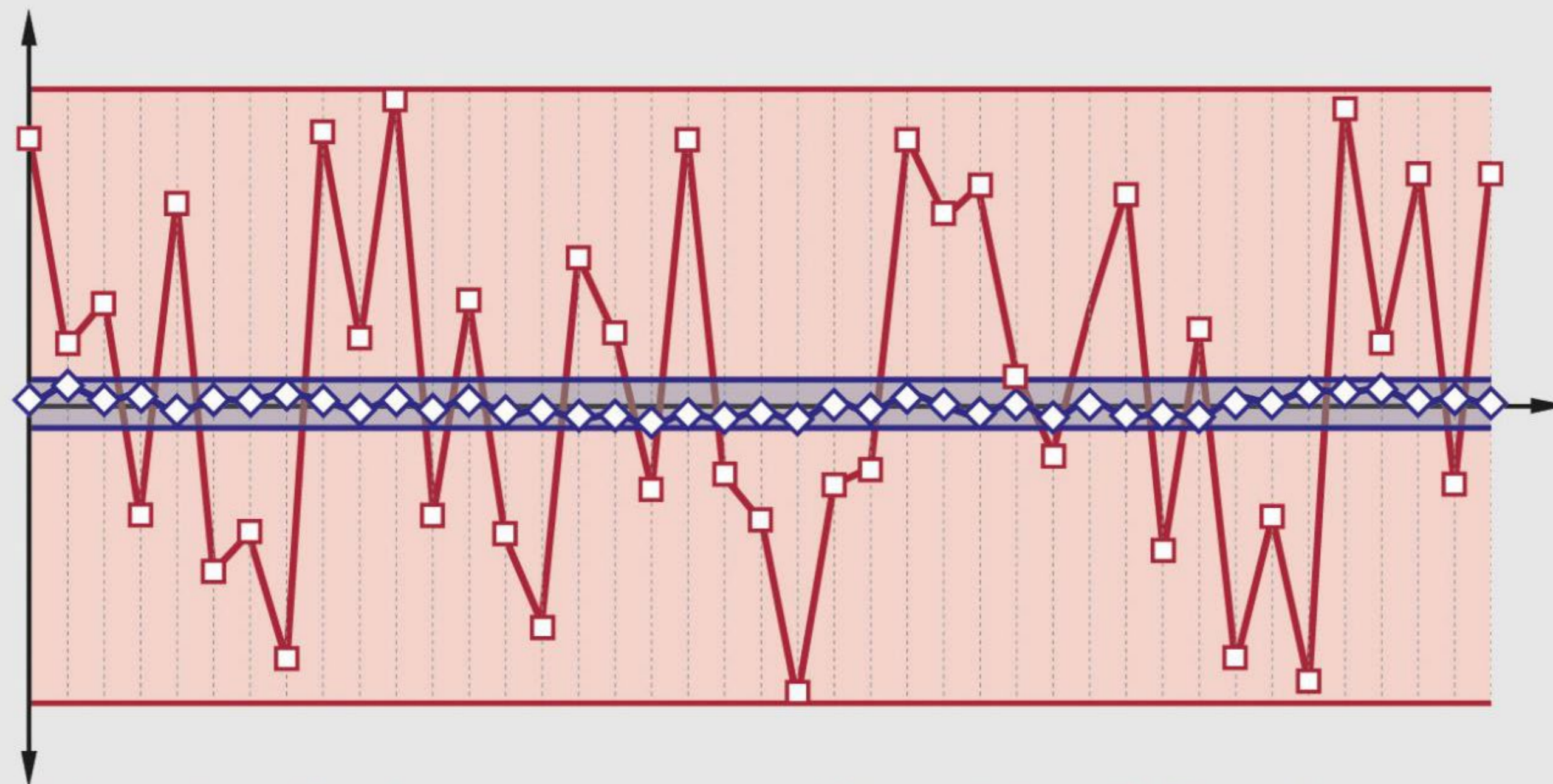
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IntelliBlend

Recipe integrity gives you an excellent and consistent product quality. Any fluctuations in the amount dosed are automatically corrected by immediately adjusting the batch weight.

The proportion of masterbatch dosed is automatically adjusted depending on the amount of regrind available. The weighing accuracy is not affected from vibrations caused by the processing machine, as these are filtered out by a special algorithm.



Red line: Recipe accuracy **without** IntelliBlend

Blue line: Recipe accuracy **with** IntelliBlend

Highly accurate and consistent dosing for the correct recipe and low additive consumption.

Independent of recipes, materials or the operational environment, IntelliBlend analyses all process data achieving the best possible operating point at any time through continuous self-optimisation.

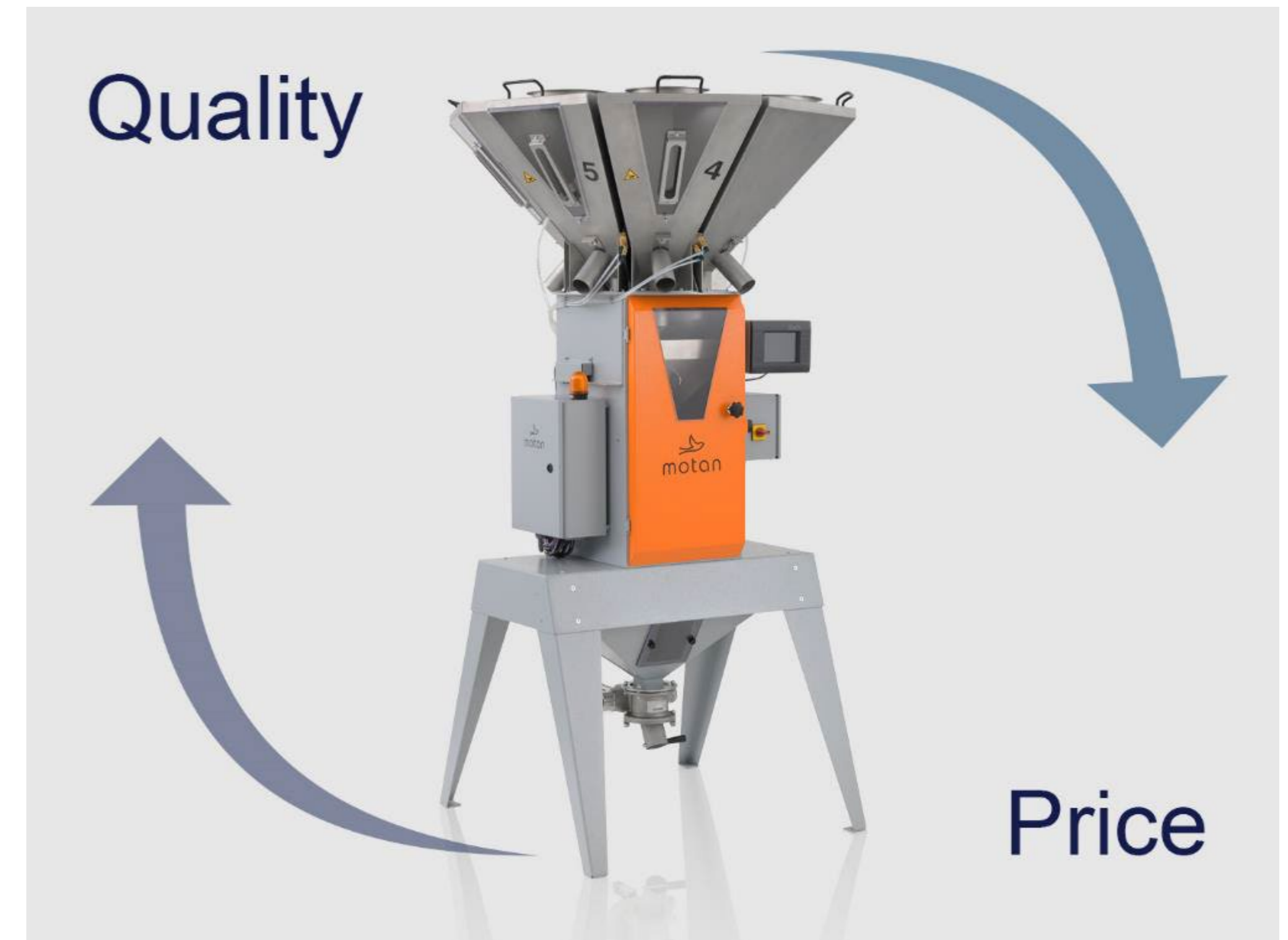
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Ideal price-performance ratio



Proven motan quality and intelligent functions.

With proven motan quality, you not only ensure the highest dosing accuracy, but also save costs in your plant thanks to the long service life of the unit, the integrated conveying control and continuous self-optimisation through the IntelliBlend function. A price-performance ratio that is guaranteed to pay off!





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Modular design

High flexibility for customised solutions.

The basic unit of the GRAVICOLOR 310 and 610 is designed to offer a **high degree of flexibility** in terms of the configuration and number of components.

Up to **eight material hoppers** with five different dosing sizes can be used variably on the unit.



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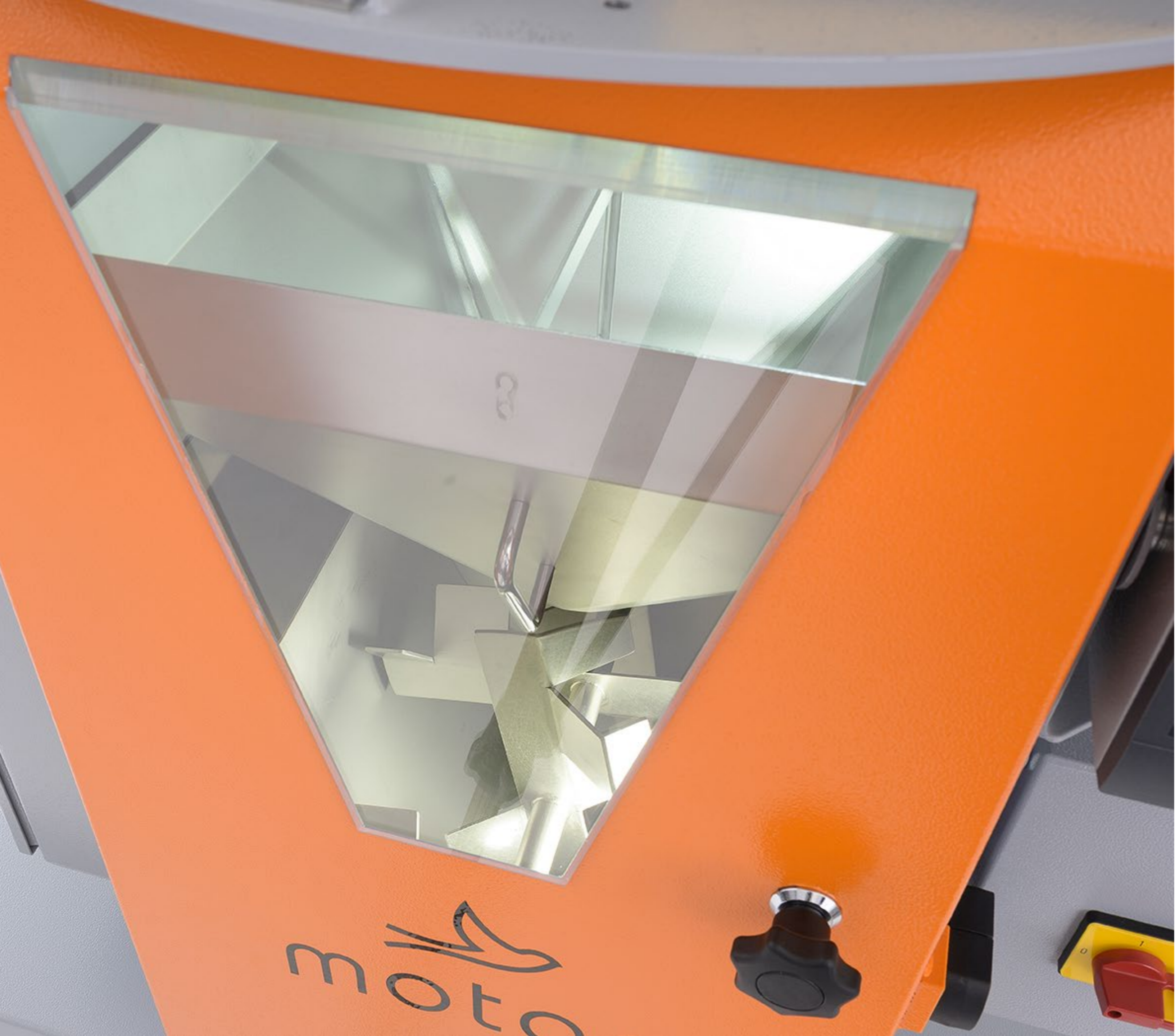
All material contact parts are made of stainless steel

Contamination free and easy to clean.

The stainless-steel material hoppers have continuously welded joints.

This guarantees you contamination-free operation and easy clean down due to the high-quality surface finish.





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Large viewing windows

Visual control of the process.

The viewing window in the front door and the large viewing panes in the material hoppers ensure an excellent visual control of the ongoing process.

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Fastest material changeovers and cleaning

Higher efficiency because more time spent in production.

Quick material changeovers and cleaning are improved by the optimised modular design. The large front door, removable weigh bin and mixing chamber make it easy to change materials. The material hoppers can be removed with minimum effort but can also easily be emptied using the quick discharge pipe that is attached to each material hopper. The large viewing window is removable so enabling the material hopper and the hopper loader mounted above to be thoroughly cleaned.



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Removable material hoppers

Easy cleaning & quick material changes.

The material hoppers have been designed to optimise material flow. In addition, all hoppers on the GRAVICOLOR 310 and 610 can be removed with little effort and are easy to clean.



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Unique cone dosing

Maximum accuracy.

All components are dosed using the unique motan cone dosing system. These batch dosing and mixing units therefore guarantee maximum dosing accuracy.

Cone dosing opens centrally and allows for symmetrical material flow. Any potential material bridges are destroyed through the vertical movement of the cone.

So, a clean material flow is always guaranteed, even for difficult flowing regrind materials such as flakes. The material hoppers can be equipped with five different cone sizes. Thanks to the variable selection of dosing modules, we can offer a customised solution for your process.



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Unique cone dosing



Material hopper	1/4 (60l)		1/8 (30l)		
Cone size	Ø100mm	Ø60mm	Ø45mm	Ø30mm	Ø20mm
Dosing range	10-100%	10-100%	5-100%	2-10%	0,5-5%
METRO G loader	15l and 30l (Ø300mm)		6l and 10l (Ø200mm)		

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Weigh bin



Quick and easy handling.

The weigh bin can quickly and easily be removed without the need for tools and can be cleaned away from the unit.



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Mixing chamber

Homogeneous mixing without dead zones.

The mixing chamber with an offset material discharge prevents dead zones and provides a completely homogeneous mix.

It can be quickly, simply and easily removed for cleaning without the need for tools and cleaned away from the unit.



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Installation on the machine

Save you valuable floor space.

You can easily install a GRAVICOLOR 310 and 610 on to the throat of a processing machine. The GRAVInet GC-E control has a feature that compensates for vibration or oscillation.

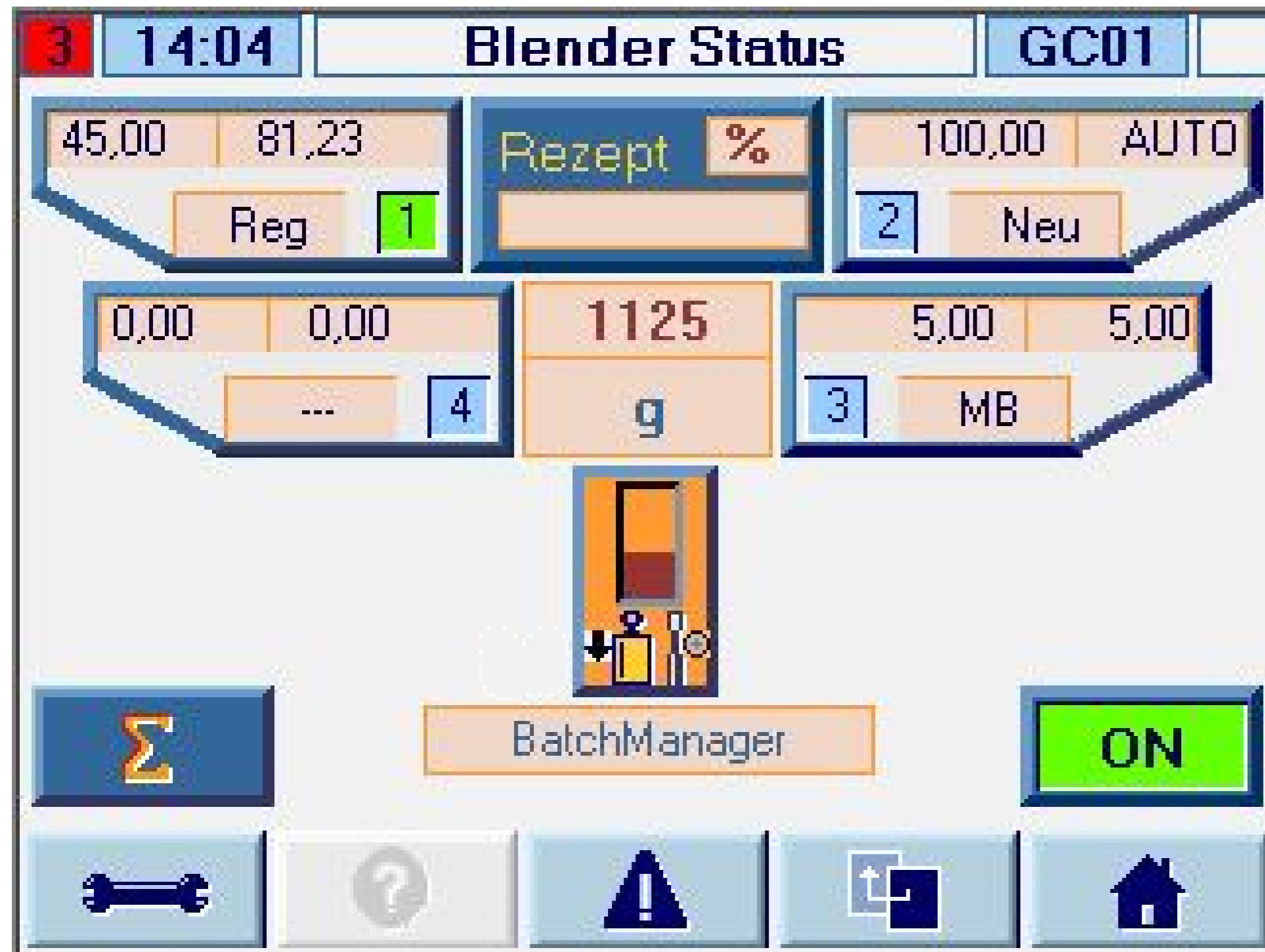
Material segregation is prevented because of the short distance material travels from the GRAVICOLOR 310 and 610 mixing chamber to the machine throat.

Of course, the dosing and mixing station can also be placed next to the machine or operate as a central station feeding multiple processing machines.



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GRAVInet GC-E control



Validation enabled control for recording of process relevant parameters for complete documentation.

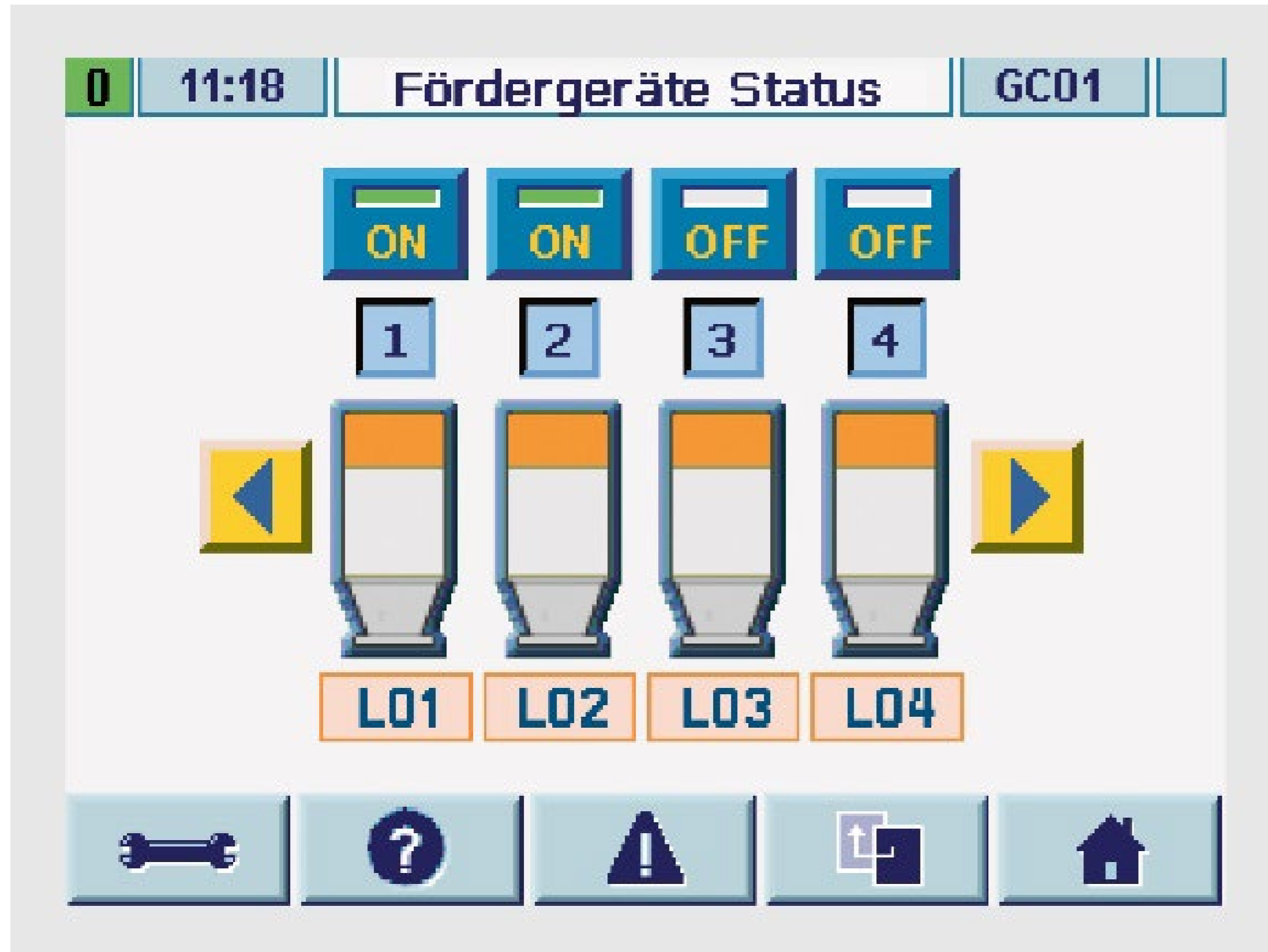
The GRAVInet GC-E control system features an open network architecture based on Ethernet. The full colour touch-screen display is intuitive and easy to use, making it fast and safe to operate. It has comprehensive tools for sequence and process control. A regrind management function prevents overdosing of other components.

CONTROLreport offers you reporting and documentation functionality for quality assurance and it delivers advanced service functions and graphical display of process data.

Event reporting is used for downstream analysis of parameter changes via the control.

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Integrated conveying



No need to buy a separate control.

By integrating conveying into the GRAVINet control you save money as no separate conveying control is needed.

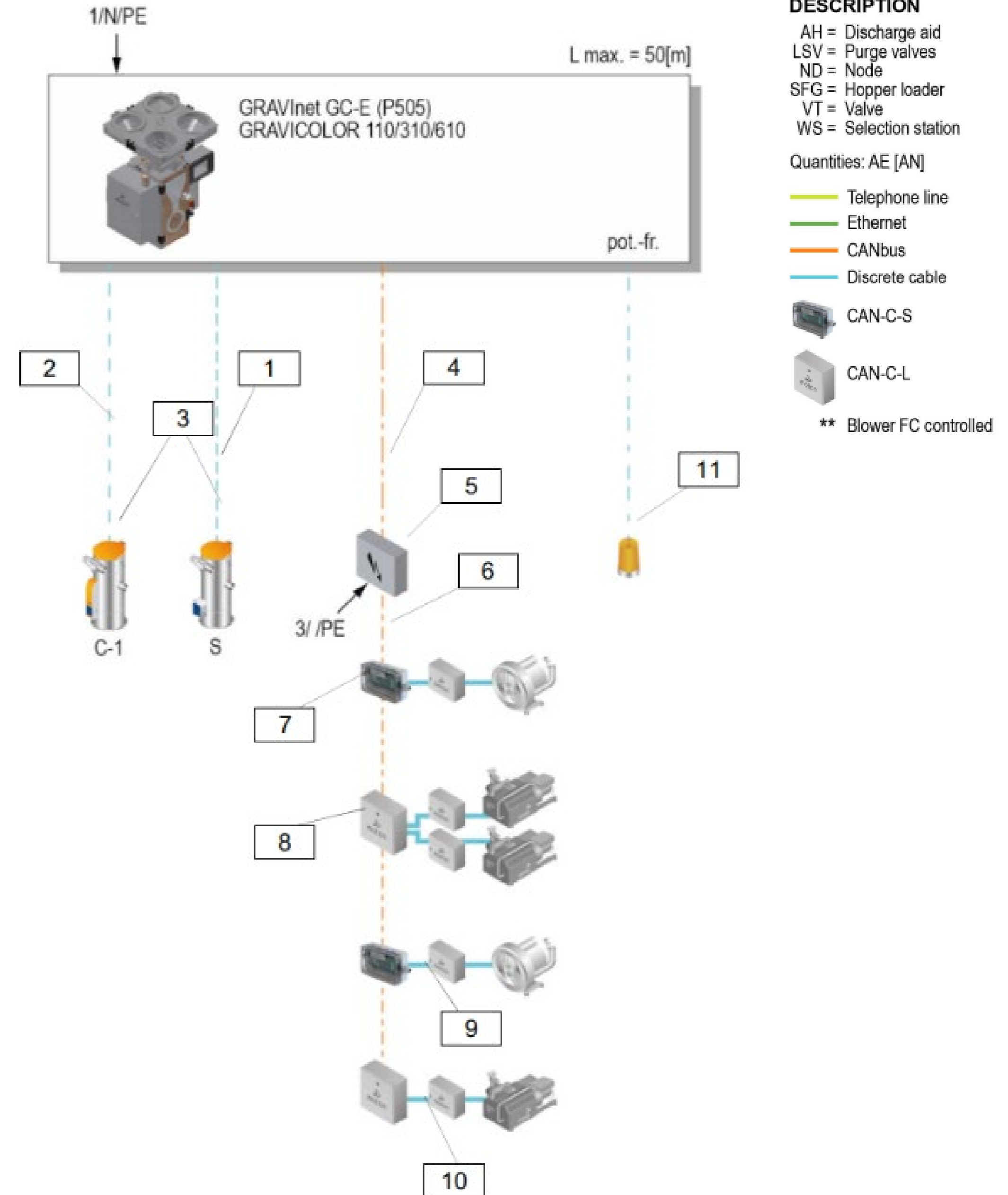
It can control up to nine material loaders with a blower station and stand-by blower; i.e. material handling for an eight component mixing station and a processing machine.

For the installation of complex systems, you can network multiple GRAVICOLOR units with each other or with other motan controls of the CONTROLnet family. This guarantees a high degree of flexibility. A central WEBpanel provides an overview of the entire production.

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Integrated conveying control

- Conveyor control integrated into the control system (as standard!)
- For up to 9 hopper loader (8 components + 1 processing machine)
- Blower station and standby blower – control via CAN nodes



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Ionisation option

Increased process reliability thanks to ionised air.

The ionisation option blows ionised air into the weigh bin and mixing chamber. This reduces electrostatic adhesion of the materials to the surfaces of the GRAVICOLOR. This helps maintain a homogeneous mixture. The amount of ionised air can be individually adjusted via a throttle valve.



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Sensor cleaning option



Increased process reliability with dusty materials.

The sensor cleaning option uses a blast of compressed air to clean the lens of the infrared sensor during each batch cycle. This prevents dust accumulation on the sensor.

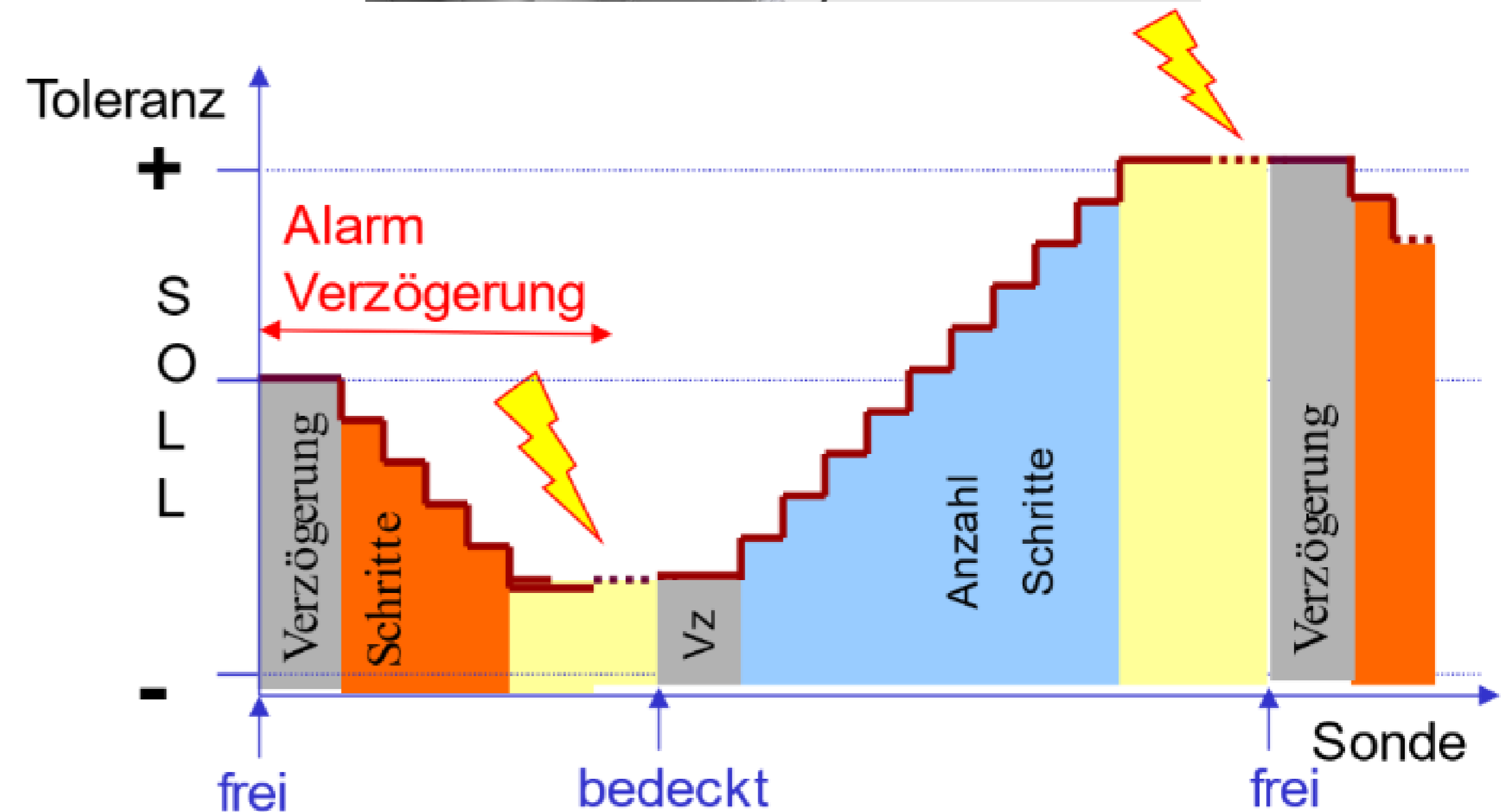


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Regrind sensor option

Intelligent regrind management with fluctuating regrind availability.

With the built-in sensor on the regrind component, the “regrind management” can be activated on the control unit. The intelligent control ensures maximum use of regrind and therefore a constant recipe mix with a step-by-step approach to recipe proportions.



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Level sensor option

Increased process reliability thanks to early detection of empty dosing hoppers.

The level monitoring of the individual material hoppers can be installed individually. This option allows for an alarm message to be given when the material level in the hopper is low.





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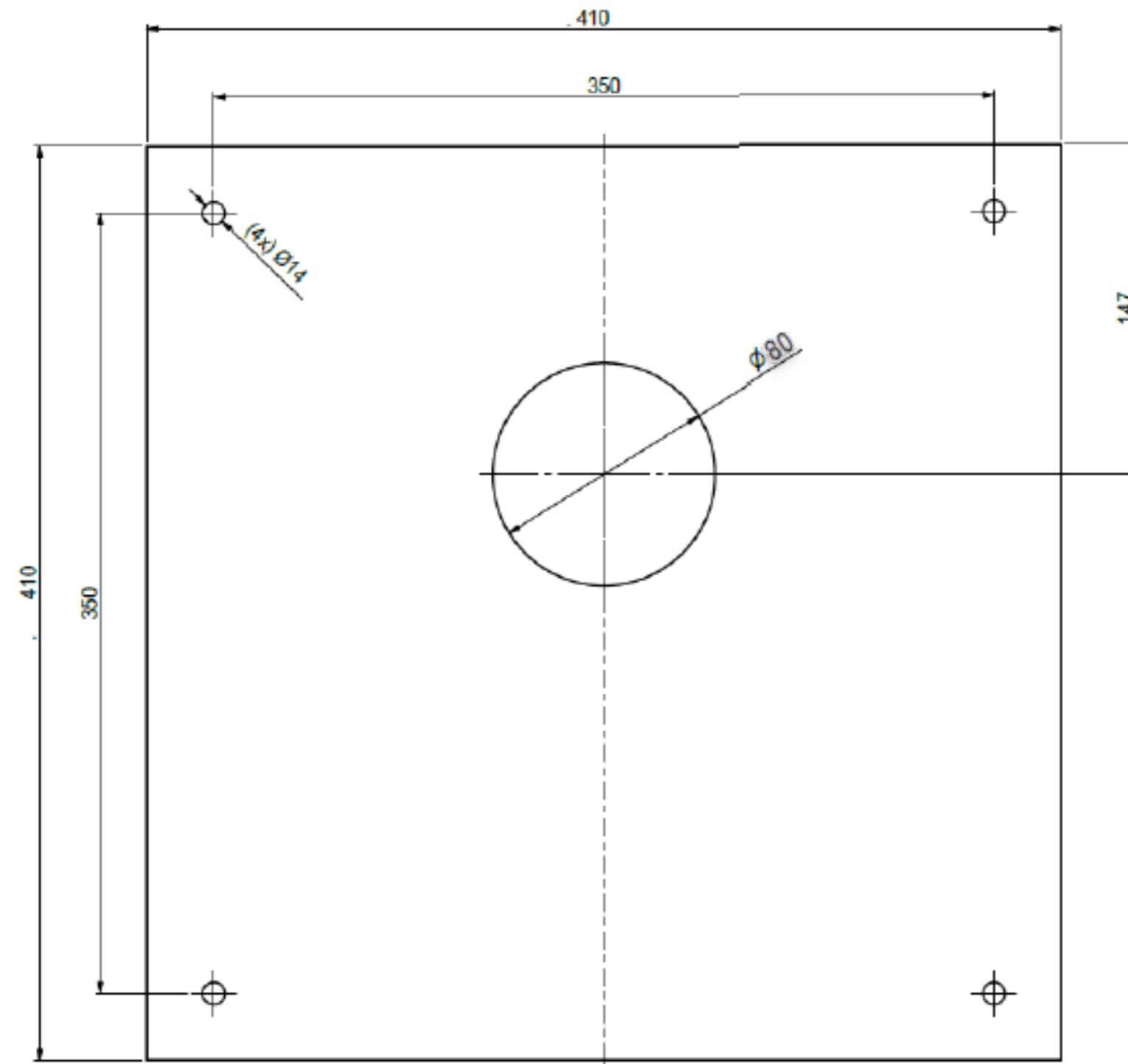
Manual filling

The lid with handle prevents contamination with hand-filled containers and is used in combination with an intervention guard and clamping ring. Can only be used for 1/8 containers.

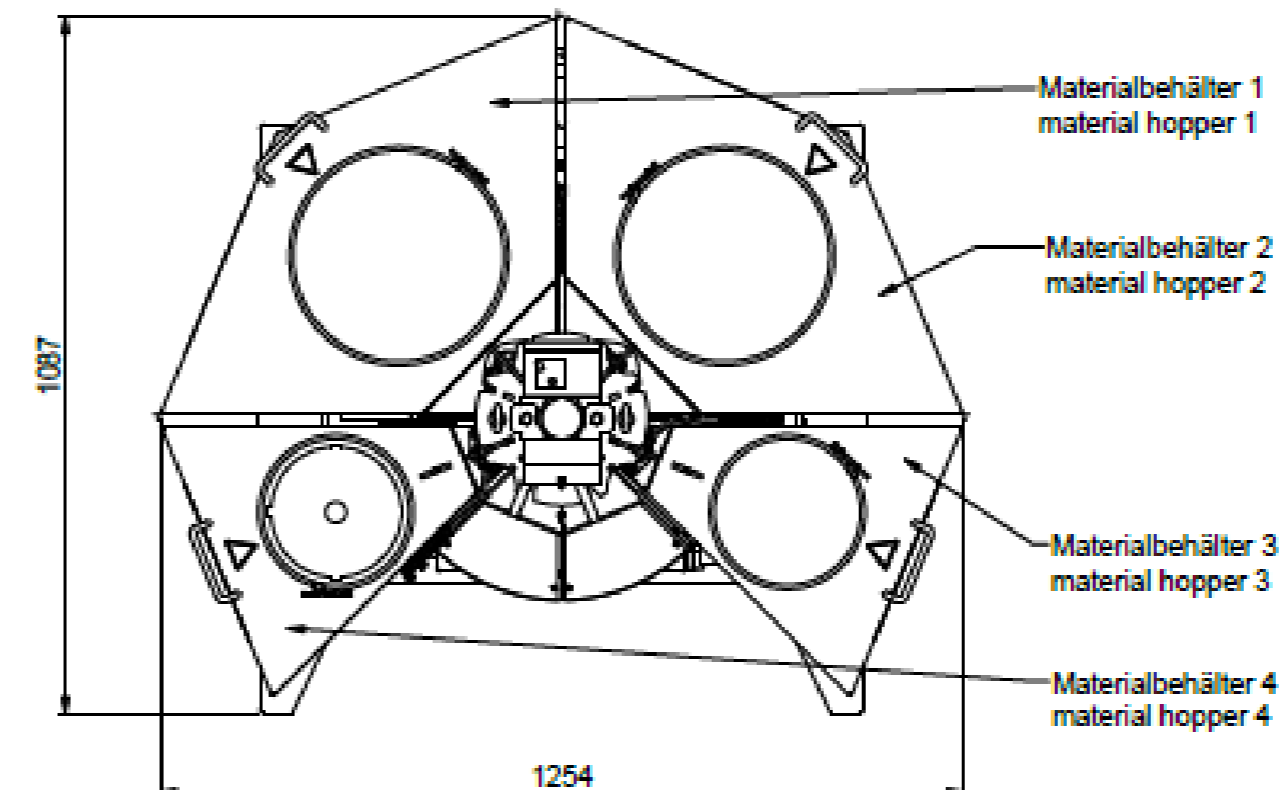
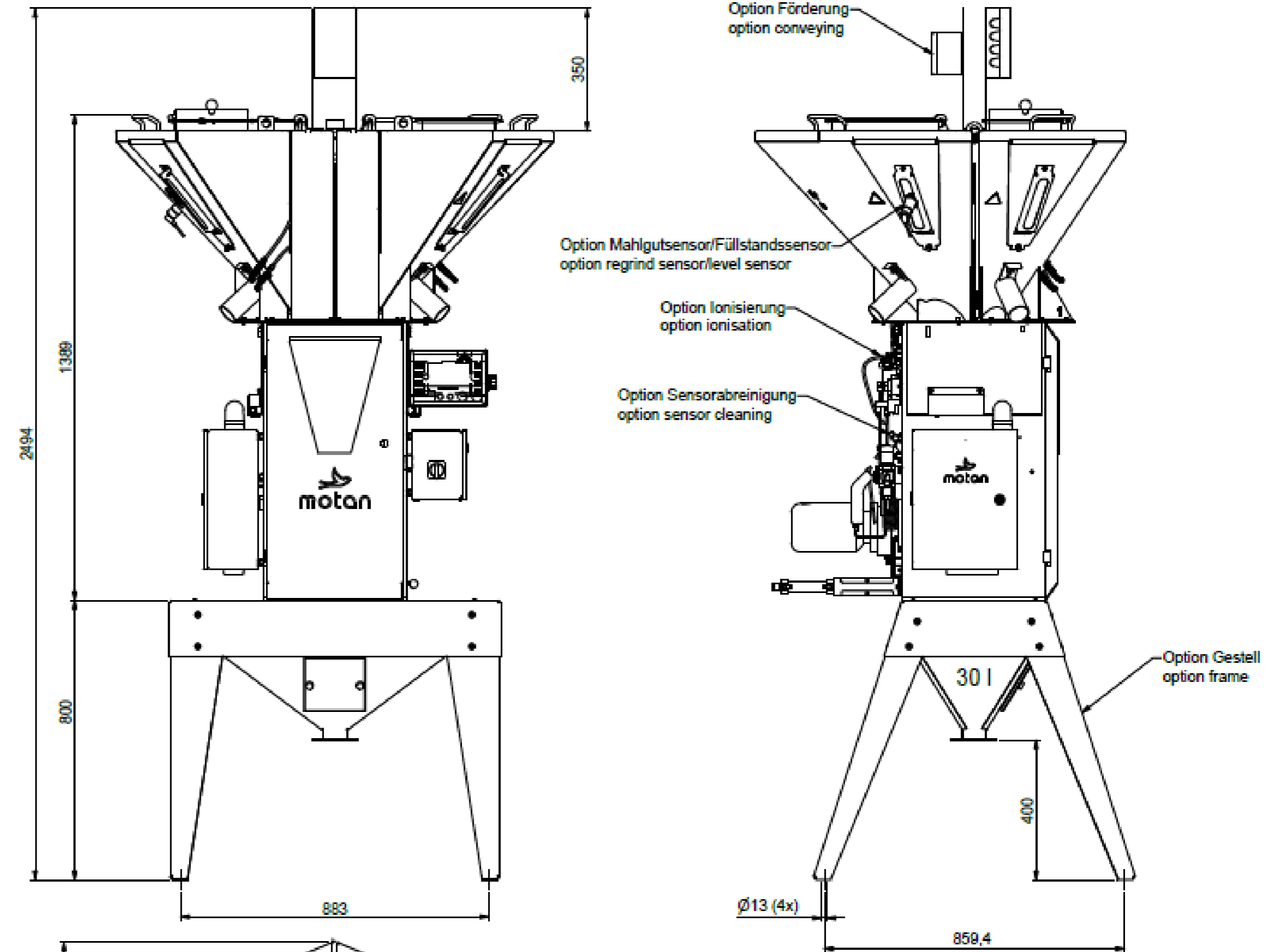
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Technical data GC310/610



GC310 Vorderseite
GC310 Frontside



Technische Daten/technical data		
Batchgewicht GC310	batchweight GC310	2,5 kg
Batchgewicht GC610	batchweight GC610	5,0 kg
Anschlussspannung	operating voltage	230V/50Hz
		120V/60Hz
Steuerspannung	control voltage	24 V
max. Vorsicherung	max. back-up fuse	6 A
Anschluss Druckluft	operating air pressure	min. 6 bar / 87 psi
Gewicht ohne Gestell	weight without frame	180 kg
Gewicht mit Gestell	weight with frame	230 kg