



GRAVInet GP control

The GRAVInet GP control is able to control up to 8 dosing modules with every GRAVIPLUS synchronous dosing and mixing station and the appropriate refilling slides/butterfly valves or material loaders. The control offers user-friendly operation via a 12" colour graphic display with TFT touch screen. The GRAVInet GP incorporates comprehensive functions for operation and process control, recipe management, reporting for quality assurance as well as enhanced service functions and trend charts.

The dosing and mixing stations being controlled can operate either independently or in tandem on a line. A control system to serve multiple lines is available.

The menu-driven control is designed for easy operation. Messages and alarms are displayed in plain text and multiple language options are available. Through the dynamic graphic process visualisation, the most crucial process data can be monitored and changed.

GRAVInet GP technology stands out due to its modern, Ethernet-based open network architecture enabling standard networking with all other motan CONTROLnet controls.

FEATURES:

- Menu-driven control
- Messages in plain text
- Multiple level password protection
- Recipe storage
- Individual or line operation of the dosing and mixing stations

- Event and time protocols
- Multiple line control operation possible
- Graphic display of process parameters and equipment configuration possible
- Line stop function
- Master dosing module function

- Automatic calibration
- Print function
- Remote maintenance and/or software updates via VNC
- Modbus/TCP-interface

GRAVIPLUS®
TECHNICAL DATA

Technical data	
Gravimetric dosing and mixing unit	GRAVIPLUS
Type	
No. of dosing modules	1 - 8
Material throughput min. (kg/h)	0.25
Material throughput max. (kg/h)	7500
Max. material temperature (°C)	100
Weight with one dosing module (kg)	50
Weight of one modular dosing module (kg)	15 - 40
Volume of dosing module hopper (l)	20 - 90
Power supply (V/Hz)	3/N/PE 400/50/60
Cumulative dosing accuracy (%)	up to ±0.1
Options:	
Twin screw dosing module with built-in agitator	•
Processing of liquid components	•
Integrated refill system	•
Material loaders/system for refilling	•
High temperature version (180°C/356°F)	•
Vibration damping	•

Subject to technical changes



All dimensions in mm

Gravimetric synchronous dosing and mixing station

GRAVIPLUS®

think materials management



YOUR BENEFITS

- Continuous loss-in-weight monitoring of the mass flow
- Direct input of the desired ratios
- Set points can be directly entered, even during operation
- Processing documentation provided of each individual ingredient and total system consumption
- Continuously updated display of set values/actual values
- History and event logging for documentation purposes
- High dosing accuracy and dosing constancy
- Ease of operation leads to minimal downtime and quick material changes
- Easy reconfiguration due to modular design
- Savings in construction volume due to compact design and quick refill system

Over 130 agencies world-wide.

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GRAVIPLUS®

GRAVIMETRIC SYNCHRONOUS DOSING AND MIXING STATION

GRAVIPLUS® is a continuous loss-in-weight gravimetric dosing and mixing system for granulate, regrinds, powders, flakes, fibres and liquids. Thanks to its modular design, GRAVIPLUS® is a complete dosing system which adapts optimally to every requirement. Each system can be equipped with up to eight precision screw dosing modules and is designed for throughputs from 0.25 kg/h to 7,500 kg/h. All components are dosed continuously. The material flow for each component is constantly monitored and regulated. Consistently high dosing accuracy of GRAVIPLUS® enables the production reliability which is essential to continuous manufacturing processes.



GRAVIPLUS®

TYPICAL APPLICATIONS:

- Blown film
- Cast film
- Foam extrusion
- Wire and cable coating
- Masterbatch manufacturing
- Compounding
- Inline compounding
- Wood composite manufacturing

GRAVIPLUS® installed on a single-screw extruder



Why GRAVIPLUS®?

GRAVIPLUS® stands for modularity. The complete system, composed of individual dosing modules, enables the processor to configure a dosing system which can be adapted to any application and be quickly modified to take account of any changes in the production process.

Up to 8 dosing modules for granulate, regrinds, powders, flakes, fibres and liquids can be integrated into one GRAVIPLUS® system. For hard-to-flow or non-free-flowing materials, dosing modules with twin screws and agitators are available. GRAVIPLUS® is

airtight, and all parts in contact with material are made of stainless steel or chemically nickel-plated aluminium. On the integrated support frame, material supply hoppers can be installed enabling material refilling.

The GRAVIPLUS® is self-calibrating, eliminating the need to take manual weight samples or calibrations. Colour additive and material changes are quick and easy due to the special design features of the system. A material change can typically be carried out by one person in 2-3 minutes.

Load cells



Quick material and screw changes are possible



How does GRAVIPLUS® work?

All components are continuously and individually dosed into the mixing chamber by time-synchronised precision dosing screws and variable speed drive motors. The homogeneous mixture is fed directly into the throat of the extruder preventing de-mixing, even with critical materials.

The high accuracy of GRAVIPLUS® is based on the use of state-of-the-art weigh scale and control technology. This technology, as well as the control software, is tried and proven in the global

LABLINE CT15 quick exchange module



LABLINE CS30



marketplace. The material flow is constantly measured by load cells in real time and is regulated by the control system. Variations in material flow per component are immediately sensed and compensated for by the controller.

The built-in digital load cells have an extremely high resolution of 1:1,000,000 of their weight range. They are microprocessor-based and utilise vibrating wire technology which is temperature and voltage protected delivering unparalleled accuracy.

Single screw dosing module CD70



Twin screw dosing module CT22



Single screw dosing module CS65



Discharge module with agitator



Discharge module with agitator



Double slide gate



Which components are used in GRAVIPLUS®?

The GRAVIPLUS® can be equipped with a variety of dosing modules and can thus be used for a wide range of applications. motan has a wide range of screw dosing modules, varying from simple granulate dosing modules to twin screw dosing modules for non-free-flowing powders. Therefore, the most suitable unit can be selected for every application. Apart from dosing modules for solids, weigh-tanks with dosing pumps for liquids can be used as well.

Refill slide gates and discharge modules

Using a fast refill slide gate, with up to 40 refills per hour, can significantly reduce system size and cost, especially when used in conjunction with just-in-time conveying systems.

Fast refill systems, in contrast to conventional systems, do not require large hoppers, thus reducing construction costs and installation volume. Employing smaller, simpler components enables quicker product changeover since less material needs to be drained and fewer components need cleaning. Quicker product changeover improves flexibility and operational efficiency.