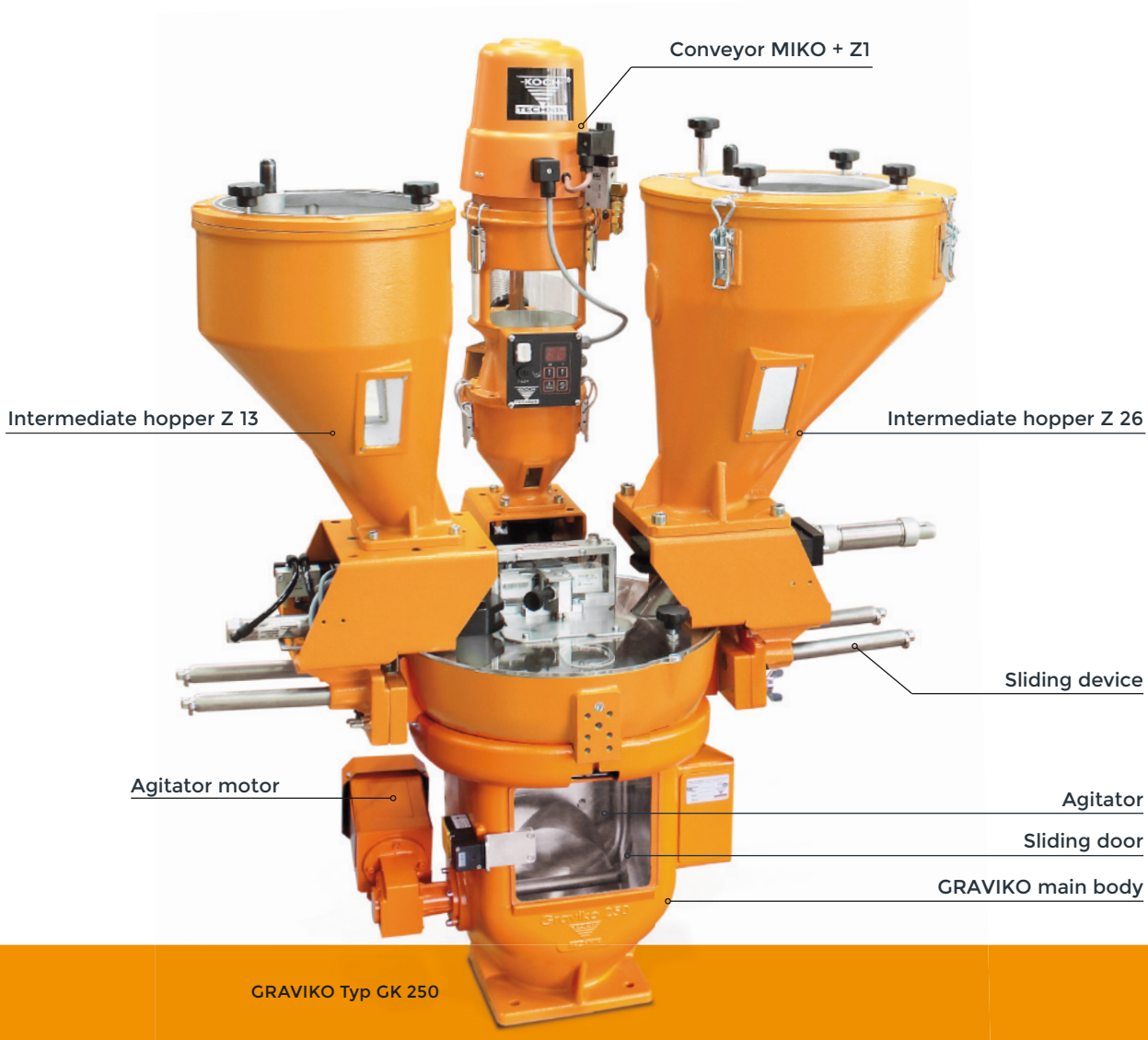
KOCH TECHNIK

Gravimetric dosing and weighing system for plastic material

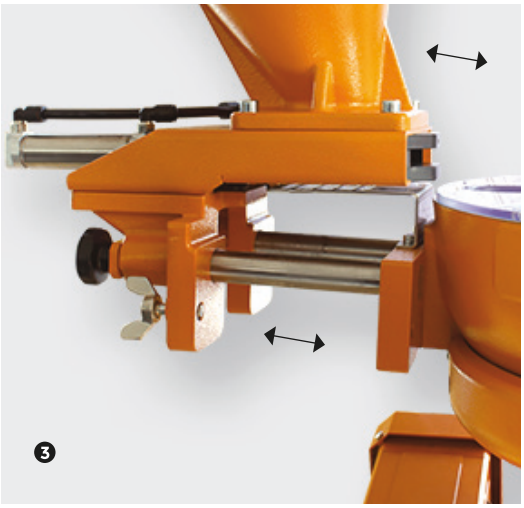
GRAVIKO

GRAVIMETRIC DOSING AND WEIGHING SYSTEM

The patented GRAVIKO doses plastic materials precisely and reliably with the highest reproducibility. Accurate, reproducible dosing is essential to the quality of any manufactured product. If raw materials, additives and other components are not accurately dosed and weighed, the characteristic features of many shaped parts cannot be achieved. The GRAVIKO was developed for accurate dosing. It is a patented gravimetric dosing and weighing system with excellent reproducibility.



GRAVIKO Typ GK 250



❶
GRAVIKO GK 600
Z13 / A8 and hopper loader
A2 + Z1

❷
GRAVIKO GK 65
integrated in a modular system
with a MCm-G Touch control unit

For throughputs up to 80 kg/h
Up to four components can be added via sliders or the proven master batch or grain stations (Pu / Ma / Kö). All the components are mixed very thoroughly after weighing and before further processing. The GRAVIKO can be dismantled within two minutes without the need for tools.

GRAVIKO GK 250
The basic design of the GK 250 is comparable to the GRAVIKO GK 65, but is larger and intended for throughputs up to 250 kg/h. 4 dosing stations can be combined as part of the modular system.

GRAVIKO GK 600,
GRAVIKO GK 800,
GRAVIKO GK 1000
Throughputs up to 600 kg/h, 800 kg/h and 1000 kg/h

4 to 8 dosing stations can be combined as part of the modular system, depending on the model. Granules, regrind or grains – each material can be individually weighed, registered and mixed before it is processed.

❸
GRAVIKO DEMONTAGE
It is possible to take a Graviko GK apart within two minutes without tools. Dosing stations can be pushed outwards once two wing screws have been released.

❹
SCHWENKVORRICHTUNG
With dosing volumes of more than 800 kg/h, the slider is replaced by a mechanism that swivels through 90°.

This swivelling action facilitates material changes and cleaning.

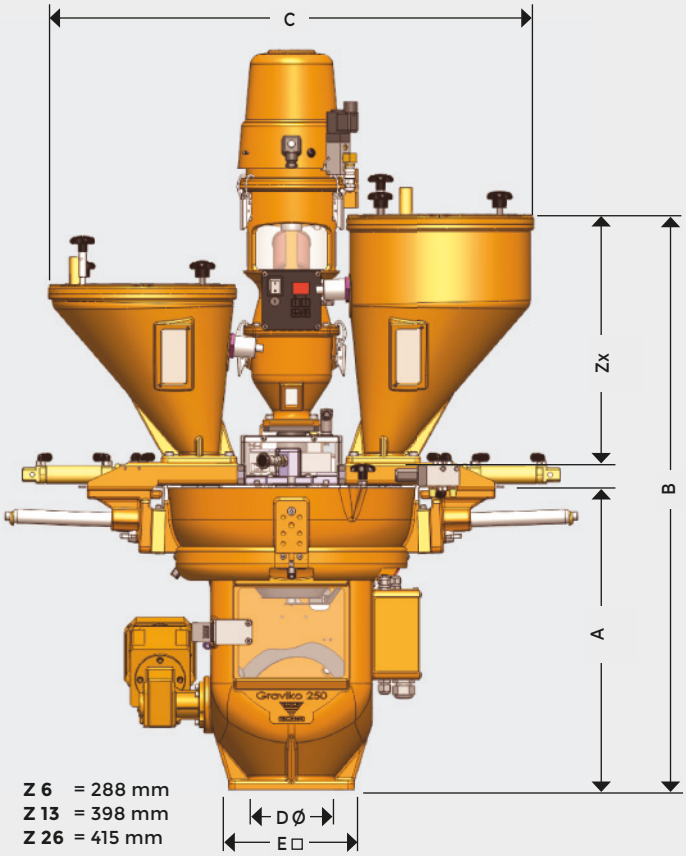
THE FUNCTIONAL PRINCIPLE OF THE GRAVIKO

The individual components, such as grains, powder, ground material or coarse powders, can be dosed into the weighing container with a slider, or alternatively using chamber volume dosing. Tiny quantities are dosed with an accuracy calculation of 0.001 s. A load cell registers the actual weight of the individual components and communicates the values to the Koch control unit, which compares them with the calculated nominal weight. Each filling is weighed hundreds of times in succession to balance out any variations. If the nominal weight and the actual weight are the same, the bulk materials are emptied into the mixer. Here an agitator optimally mixes the dosed batch before it is processed on the machine.

The basic version can process up to four different materials depending on the throughput of the processing machine. The GRAVIKO can be used directly on the injection moulding machine or extruder and is compatible with all KOCH equipment and accessories.

PATENTED

TECHNICAL DATA



Z 6 = 288 mm
Z 13 = 398 mm
Z 26 = 415 mm

GRAVIKO – EXPLODED VIEW

1. Lid
2. Weighing hopper with high-precision weighing cell
3. Cleaning door (window

ALL GRAVIKO UNITS CAN PROCESS UP TO 5 MATERIAL COMPONENTS USING TWO-COMPONENT CONVEYOR UNITS.

Typ	Throughput kg/h*	Housing	Stations max.	Output kW	Voltage V/Hz
GK 65	80	GKAL	4	0,19	400/50
GK 250	250	GKAL	4	0,19	400/50
GK 600	600	V2A	4/6	0,19	400/50
GK 800	800	V2A	5	0,47	400/50
GK 1000	1000	V2A	6	0,47	400/50
GK 1500	1500	V2A	6	0,47	400/50
GK 2000	2000	V2A	8	0,47	400/50

* Requirements: Bulk density > 0,65 kg/h (with feeder unit D 50)

Typ	**A** mm	**B** mm	**C** mm	**D Ø** mm	**E □** mm
GK 65	405	A + 35 + Zx	671	50	140
GK 250	485	A + 35 + Zx	729	96	200
GK 600	700	A + 35 + Zx	910	96	200
GK 800	980	A + ZF* + Zx	1060	96	330
GK 1000	1161	A + ZF* + Zx	1190	96	330
GK 1500	1362	A + ZF* + Zx	1190	96	330
GK 2000	1658	A + ZF* + Zx	1449	96	300

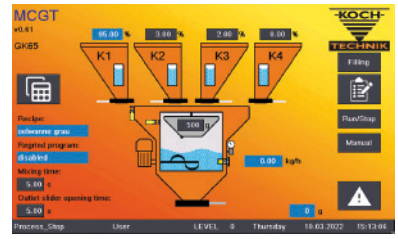
* FU = Feeder unit (142 - 225 mm depending on type)

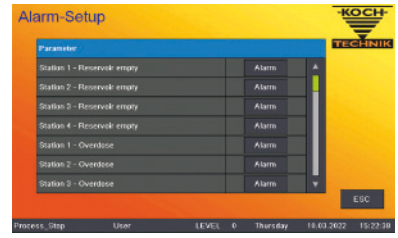
PRECISE

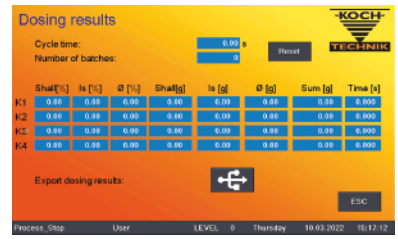
CONTROL SYSTEM

MCM-G TOUCH CONTROL UNIT

The MCm G Touch is an easy-to-use control unit for gravimetric dosing systems. All dosing parameters, including all results, can be documented via the control unit. Once the recipe has been entered in %, dosing takes place starting with the first cycle without the need for calibration.







Control unit MCm-G Touch for gravimetric dosing systems

DISPLAY

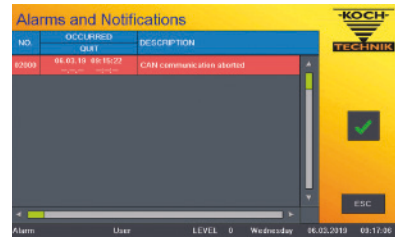
- TFT LCD 7“, 24-bit with LED illumination and touch function

HARDWARE

- 16-bit processor ARM 9 and up to 4 GB non-volatile memory
- SD slot and optional interfaces: Ethernet, USB, RS232/422
- Control for up to 4 dosing units (8 dosing units as an option)

SOFTWARE

- Very user-friendly software
- Language changeover: Display in 16 languages
- Manual actuation of all functions (cleaning and setup mode)
- 100 recipes and ground material program
- Dosing parameters with nominal and actual value display
- Specification of dosing volume, e.g. for octabin fill
- USB interface as option for exporting the recorded dosing data
- Internet FTP server implemented
  (IP and DNS server address can be set)
- 3 password levels and password administration
- Alarm records, Alarm configuration and tolerance monitoring
- Connection to visualisation software (optional)
- Control of 4 conveyor components (up to 8 conveyors optional)



Alarm table

Alarm definition
Results
Graphic weighed value display
Dosing parameters

EXPAND YOUR CAPABILITIES

MIXING AND DOSING

We are specialists in dosing, mixing and coloring of plastic materials! We provide you with precise, reliable technology - for injection moulding machines and extruders.

FEEDING

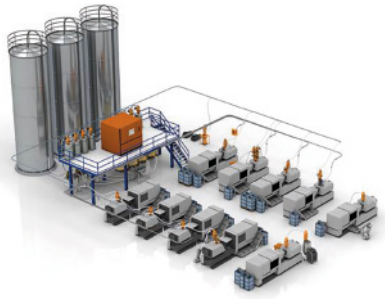
We offer peripheral equipment to supply your plastics processing machine with material. Our hopper loader transfer material save and clean to injection moulding machines and extruders.

DRYING

Our dryers for plastic materials are characterised by a high efficiency and cost effectiveness.

CENTRAL FEEDING SYSTEMS

We design, manufacture and install your centralised material feeding system. Specifically to your requirements and customised to your plastics processing needs.



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