Gravimetric Blenders

A state-of-the-art, cost-effective gravimetric blender for direct mounting on injection molding, blow molding and extrusion machines.

Comet's CGB series gravimetric blenders provide even mixing, accurate weighing, and can process up to eight kinds of materials simultaneously. The advanced microprocessor controller with digital display is simple to operate and is both user-friendly and intuitive.

The self-compensation and calibration function ensures accurate material metering percentages. A highly precise electronic weigh scale ensures precise weighing of every batch with accuracy from ±0.1% - 0.3%. Models range from a metering capacity of 88 to 6,614 lbs./hr.

Standard Features

- Accurate weighing for an even mix of materials and automatic compensation for material variations. The accuracy is ±0.1% when the raw material ratio is 0.5%~5% (excluding 5%). When the raw material ratio is larger than 5%, accuracy changes to ±0.3%.

- Auto calibration after each material is weighed ensures accuracy.

- Up to 100 recipes can be stored for future use plus an alarm log function.

- CGB-600 models and below are machine mount and come with a magnetic base and manual discharge plate.

- CGB-2000 models and above come with a portable floor stand, storage hopper and pneumatic discharge valve.

- Easy to operate. Load hoppers with regrind, natural, color, and/or additives, set to percentage desired, turn on controller and the blender operates automatically, adding components in the proper percentages.

- Recycled material compensation function (recycling hopper is equipped with a low level switch). Variation compensation can be automatically calculated based on the feed amount of the recycled materials.

- All models are equipped with a second discharge valve to replace the main discharge valve when the modular proportion is within 0.5%~5%.

- Ethernet communication function centrally monitors the operation when connected to a molding machine.

CGB-600-4

Options

- Memory card to store ratio information for product quality control.

- Hopper low level sensor to alarm when material is insufficient.

- Analog signal function for automatic molding machine screw speed adjustment relative to current output.

- Floor stand, pneumatic slide gate, storage bin and suction box for CGB-600 models and below.

CGB Series

Ratio Calculations for Color Concentrate and Additive

Batch Capacity (*Color Concentrate/Additive Ratios calculations for Batch Capacity*)

Example: Batch= 1000g
Hopper 1 = Auto calculated
Hopper 2 = 40%
Hopper 3 = 3%
Hopper 4 = 2%.

Real Weights:
Hopper 1 (Virgin A) = 1000g x (100%-40%-3%-2%) = 550g.
Hopper 2 (Virgin B) = 1000g x 40% = 400g.
Hopper 3 (Color Concentrate) = 1000g x 3% = 30g.
Hopper 4 (Additive) = 1000g x 2% = 20g.

Using this mode, the weight of color concentrate and Additive does not fluctuate from the main virgin component (Hopper 1).

Two (2) Virgin Components *(Color Concentrate/ Additive Ratios calculations for Two Virgin components (i.e. Virgin A and Virgin B)*

Example: Batch = 1000g
Hopper 1 = Auto calculated
Hopper 2 = 40%
Hopper 3 = 3%
Hopper 4 = 2%.

Real Weights:
Hopper 1 (Virgin A) = 1000g x (100% - 40%) = 600g
Hopper 2 (Virgin B) = 1000g x 40% = 400g.
Hopper 3 (Color Concentrate) = 600g + 400g) x 3% = 30g.

Hopper 4 (Additive) = (600g + 400g) x 2% = 20g.

Using this mode, the weight of the color concentrate and the additive fluctuates from both the two virgin components.
(Hopper 1 & Hopper 2).

One (1) Virgin Component *(Color Concentrate/ Additive calculations for One Virgin component)*

(Hopper 1):
Example: Batch = 1000g
Hopper 1 = Auto calculated
Hopper 2 = 40%
Hopper 3 = 3%
Hopper 4 = 2%.

Real Weights:
Hopper 1 (Virgin) = 1000g x (100%-40%) = 600g.
Hopper 2 (Regrind) = 1000g x 40% = 400g.
Hopper 3 (Color Concentrate) = 600g x 3% = 18g.
**Hopper 4 (Additive)** = 600g x 2% = 12g.

Using this mode, the weight of color concentrate and additive is adjusted automatically depending on the availability of regrind (Hopper 2). Using the example above: As long as regrind in Hopper 2 is full, the amount of color concentrate (Hopper 3) and additive (Hopper 4) will be always 18g and 12g respectively.

But, if regrind is not available or its level is low, virgin component in Hopper 1 automatically replenishes the difference. Thus, real weights of color concentrate and additive become:

Hopper 3 (Color Concentrate) = 1000g x 3% = 30g.
Hopper 4 (Additive) = 1000g x 2% = 20g.

Using this mode, if the compensational value is set to 0%, the weight of both color concentrate and additive is adjusted proportionally against the real weight of the virgin component. And, if the set value is >0.01% or <0.01%, the weight of both color concentrate and additive is adjusted proportionally against the real weight of both the virgin and regrind.
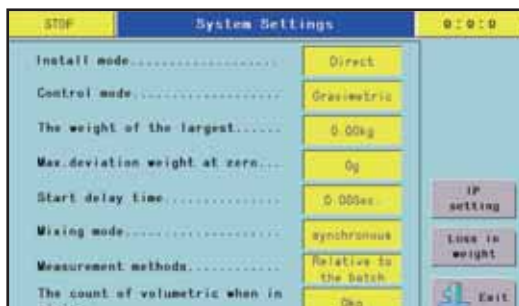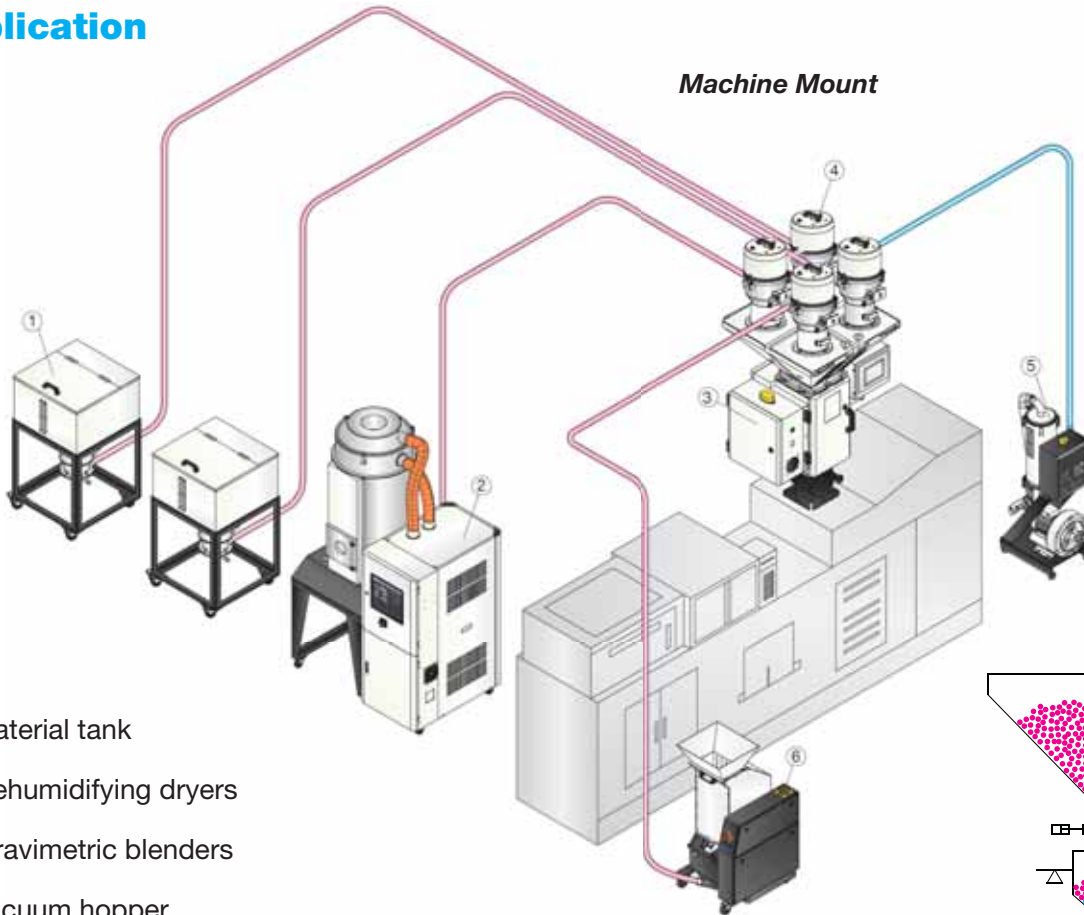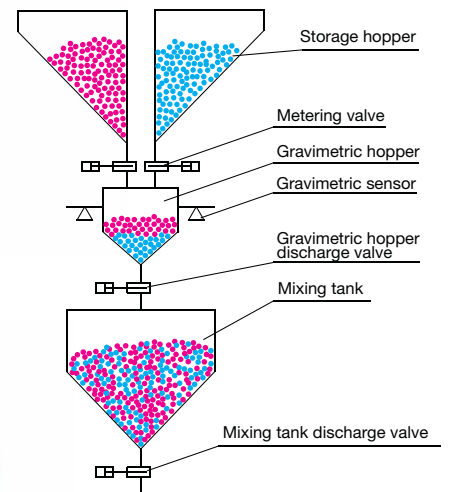

System Setting

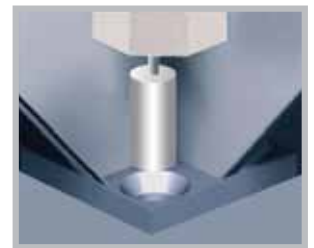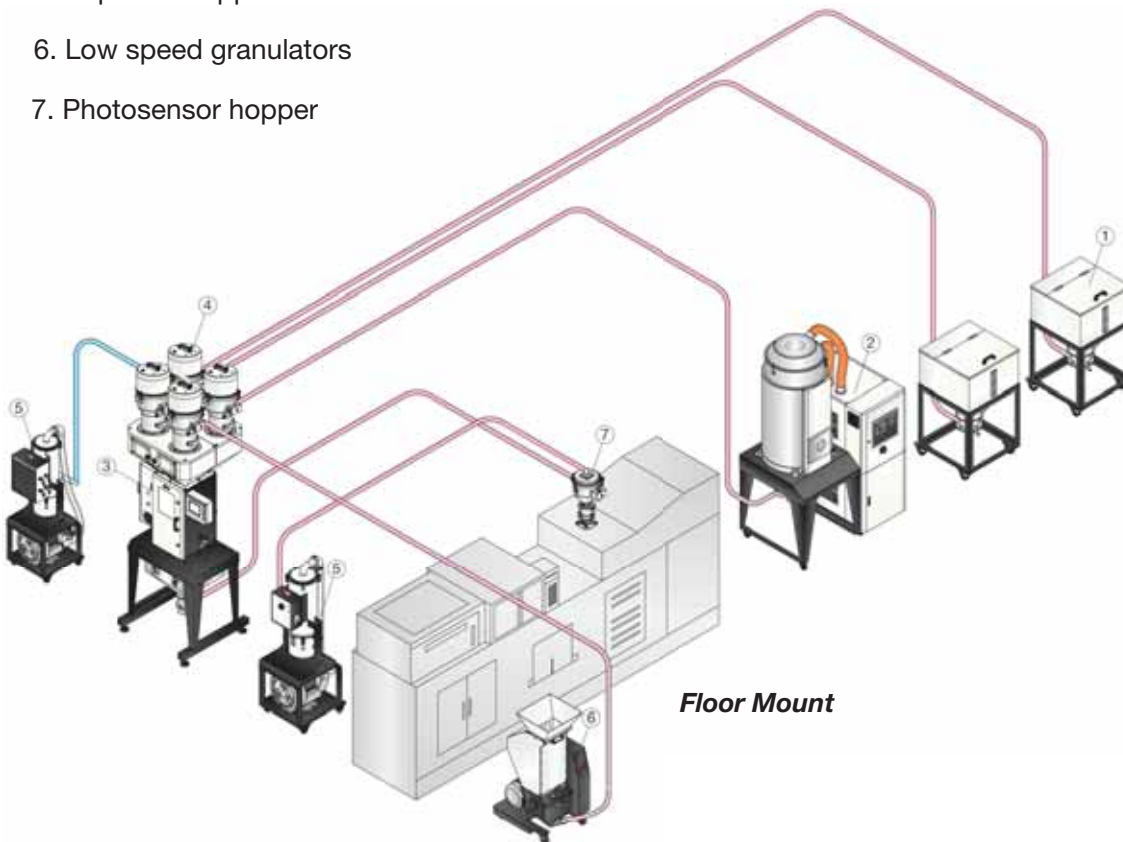*Recipe Edit*

Application

Machine Mount

1. Material tank

2. Dehumidifying dryers

3. Gravimetric blenders

4. Vacuum hopper

5. Separate hopper loader

6. Low speed granulators

7. Photosensor hopper

Storage hopper

Metering valve

Gravimetric hopper

Gravimetric sensor

Gravimetric hopper discharge valve
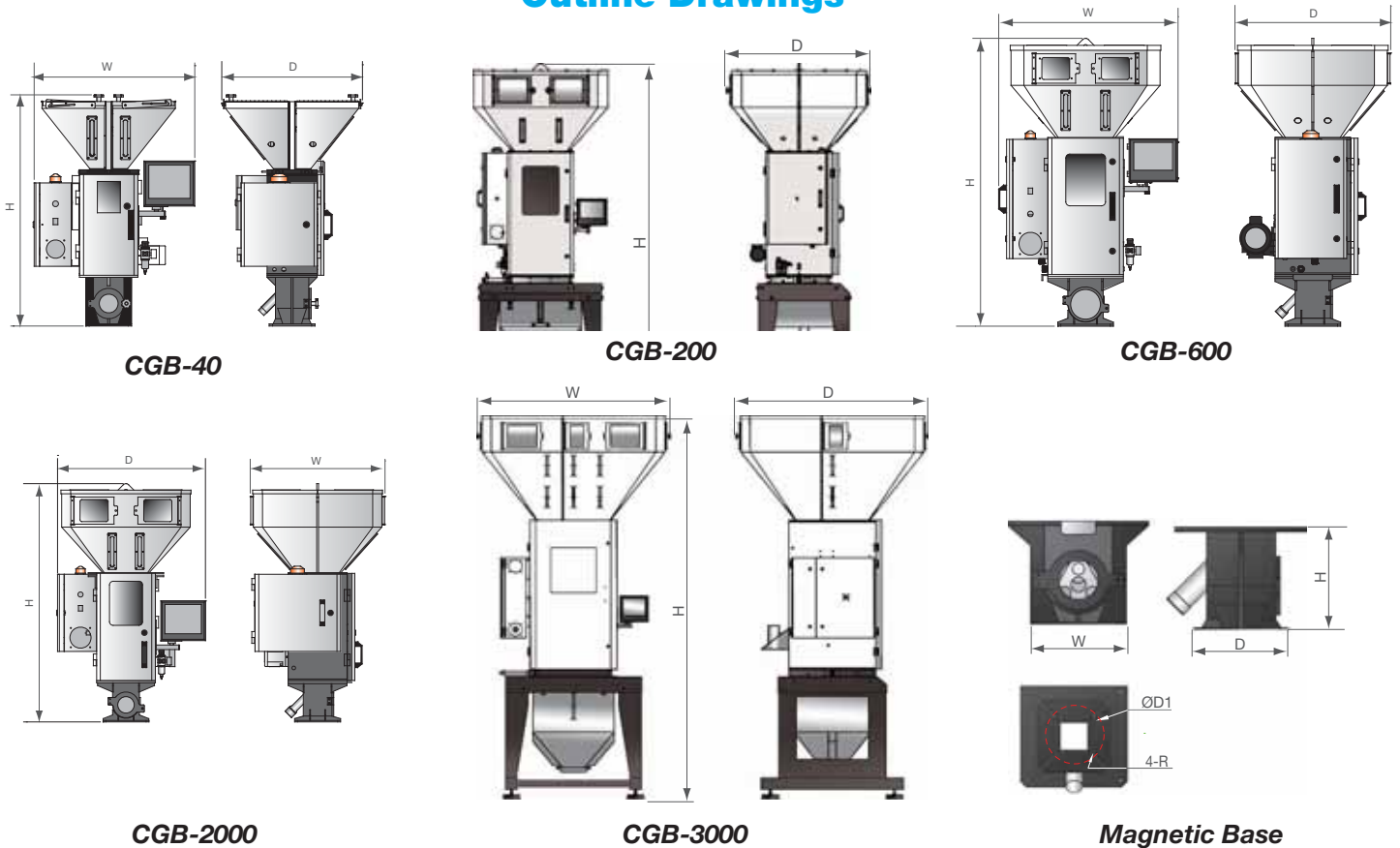
Mixing tank

Mixing tank discharge valve

Floor Mount

Vertical cone metering valve ensures accurate metering of granules. Only applicable on the models with 2000kg/hr throughput and above.

CGB Series

Outline Drawings

CGB-40

CGB-200

CGB-600

CGB-2000

CGB-3000

Magnetic Base

Specifications

Model	CGB-40-4	CGB-200-4	CGB-600-4	CGB-2000-4	CGB-2000	CGB-3000-4	CGB-3000-6	CGB-3000-8
Ingredients	4	4	4	4	6	4	6	8
Max. Batch	0.6	3.0	8	18		40		
Compressed Air (kg)	6.0	6.0	6.0	5-6		5-6		
Mixing Motor Power (kg)	0.09	0.18	0.55	0.4		1.1		
Max. Output (kg/hr)	40	200	600	2000	1800	3000	2500	2000
Dimensions								
H (mm)	1110	1300	1445	2800		3375		
W (mm)	770	810	905	1110		1695		
D (mm)	675	735	785	1180		1695		
Magnetic Base (mm) (W x D x H x φD1 x R)	220 x 220 x 243 x 160 x 6.5	250 x 250 x 213 x 200 x 6	280 x 280 x 250 x 220 x 6	—		—		
Mobile Stand (mm) (H1 x H2 x W x D)	713 x 50 x 654 x 600	880 x 50 x 724 x 800	885 x 60 x 814 x 800	1000 x 65 x 1060 x 1000		1075 x 70 x 1240 x 1240		
Machine Mount Weight (kg)	115	135	160	350		650		
Floor Mount Weight (kg)	135	170	220	500		850		

Notes: 1. Metering accuracy refers to each ingredient.
2. Primary metering valve is suitable for 5% and above ratio (can reach accuracy of ±0.3%).
3. Secondary metering valve is suitable for ratios between 0.5% and 5% (can reach accuracy of ±0.1%).
4. Max. output and metering accuracy of each model based on the data from bulk density 0.8kg/L, dia. 3~4mm pellets in a test criteria of continuous running.
5. Power Supply: CGB-600 and below: 10, 230AV, 50Hz.
              CGB-2000 and above: 3d>, 400AV, 50Hz.

We reserve the right to change specifications without prior notice.