

Options

SPC II-750/750S with Compulsive Sending System (CSS)

Even if a granulator has enough processing capacity for some runners, one with higher capacity had to be chosen because of restriction of hopper throat width. The compulsive sending system is equipped with an effective screw to send runners that are bigger than the standard hopper to the rotating cutter.

This system is attachable to SPC II -750/750S model.

NOTES

1. The CSS is not a device that increases the throughput of gran cutter. (100g/min for 750/750S models)
2. The anti-scattering curtain is not installed because there is a possibility that the curtain is caught in the CSS.
3. The effectiveness of the CSS depends on a runner shape, diameter, and stiffness. Send us samples beforehand so that we can make an appropriate suggestion to you.



Screw

- Buzzer
- Emergency stop button
- Extension hopper
This can be put into the standard hopper. (Height adjustable)
- Anti-bridge stirring motor
(mounted onto a dedicated suction tank.)
- Another press cutter size
Standard size → small size
(Hard material granulator II-400/750 2.8×4.5→2.1×3.5)
- Press cutter High-speed steel cutter
Titanium coated cutter (abrasion proof)
- Special color: Specify your color.
Color no. or sample is needed.
- 100 percent recyclable GMA mixer is also available upon request.

	Chute
	Suction tank
Signal tower Single: Red/Green/Yellow Double: Red-Green	Frame for paper bag <Alternative of bag or tank. 200 to 75 models>
	Hopper with anti-scatter shutter
Safety hopper (Z type)	Bar magnet
	Level switch Designed by Harmo Upon request separately. Power supply 200VAC (50/60Hz) 100VAC (50/60Hz) (option) Other voltages upon request.

Other optional parts upon request.

* This brochure is subject to change without notice.

Manufacturer: **HARMO CO., LTD.** ISO9001 CERTIFIED
INTERNATIONAL MARKETING DEPT.
International Marketing Department 4124-1 Minamiminowa-mura Kamiina-gun
Nagano-ken 399-4595
TEL. +81-265-72-0111
<http://www.harmonet.co.jp>

This catalogue uses 100% recycled paper.

SPC2/GM2/MB2-AE 10101KP

Not a Crusher, But a Gran-Cutter

Gran-Cutter & Mixer Series

SPC II / SPC II - S / GM II / GM II - S / MB II



SPCII-400

GMI-400S

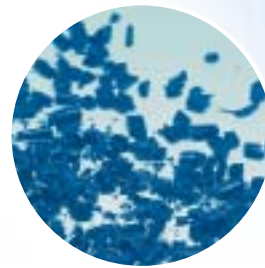
Harmo's revolutionary Gran-Cutter reduces your plastic material cost.



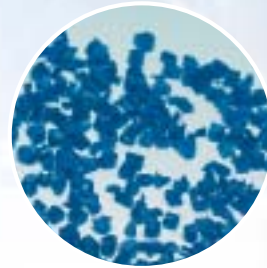
PATENTED
9
COUNTRIES

"Not a crusher, but a Gran-Cutter" Harmo's Gran-Cutter is a revolutionary device to regrind runners and sprues into granules roughly as small as virgin pellets by unique swing press cutting system patented in nine countries. This can recycle materials which have been conventionally discarded.

SPCII Gran-Cutter regrind sprues into cylindrical granules - not crushed pieces and fines.



Granulated materials



Gran-Cutter materials

To customers who have never used a Gran-Cutter

Over conventional crushers

Very little dust

The cutters do not re-cut sprues and runners in the same place, thus minimizing dust, static electricity, and heat generation.

Very few miscuts

The spacing between the blades approximately duplicates the size of virgin pellets, so sprues and runners get granulated to roughly the same dimension, resulting in very few longs without a screen.

Very quiet

Cutting is held to a minimum, therefore the device is very quiet.

Easy to clean

Because there is minimum static electricity produced, any dust does not adhere to interior surfaces. Furthermore, its large door which opens downward significantly shortens cleaning time. (5 to 7 minutes)

No static electric generation

No heat generation

No dirt at all

Soft materials are acceptable

Easy set-up

Easy to operate

Not a Crusher, But a Gran-Cutter

No more waste. Sprues are recycled to uniformly size.

Examples of hard materials



PMMA (Poly (Methyl methacrylates))



POM (Polyester)



PA (Nylon 20% glass filler)



ABS (Acrylonitrile butadiene styrene)

Examples of soft materials



PP (Polypropylene)



PE (Polyethylene)



TPE (Thermoplastic elastomer)



PUR (Polyurethane)

More advanced Gran-Cutter SPCII series



Newly designed swing cutters minimize LCP longs.



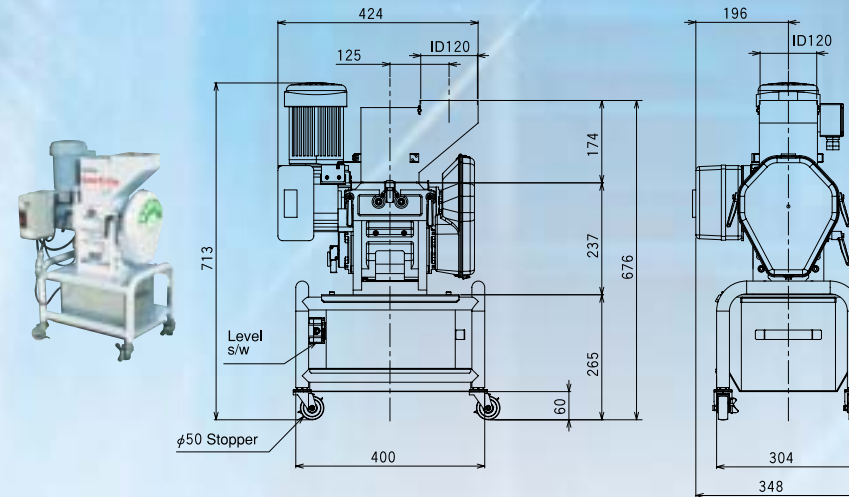
The detachable bottom plate allows you to carry the granulator with material bag on in. (SPC II-400 only)



The hopper can be directed in three directions and no-tool detachable.

The new cutters make cleaning easier.

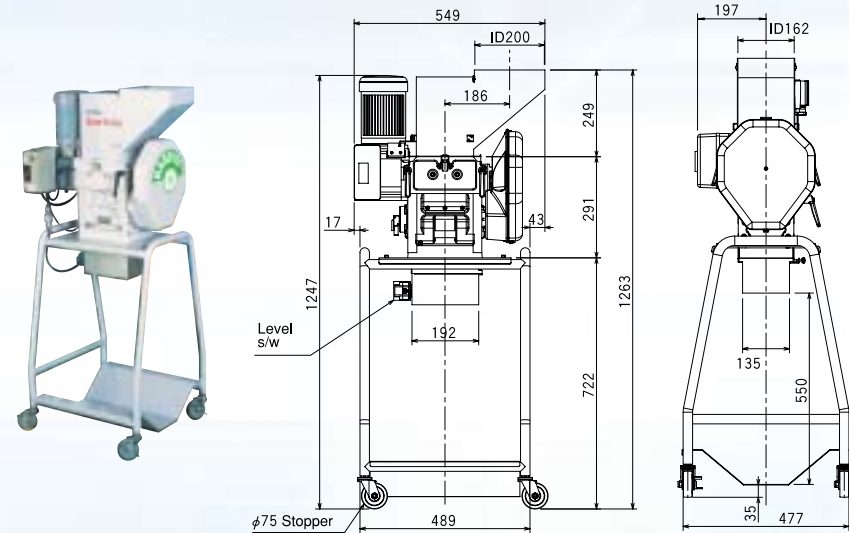
SPCII-200 / SPCII-200S



Model	SPC II -200
Power	3-phase 200VAC (50/60Hz)
Motor output	0.2kw-3P
Rotary cutters	φ98mm 4 pieces 37.5rpm/50Hz 45rpm/60Hz
Press moving cutters	2.1mm×3.5mm 24 pieces 2.8mm×4.5mm 20 pieces (S type) 75 cycles/min (50Hz) 90 cycles/min (60Hz)
Hopper mouth	120mm×120mm
Sprue diam.	φ6mm or smaller
Throughput	※30~40g/min
Weight	60kg

※ This value is for a sprue, nylon with 20% glass fiber, 6mm diameter, 4g-weight.
※ This value is for a sprue, TPE, 6mm diameter, 3g-weight. (S type)

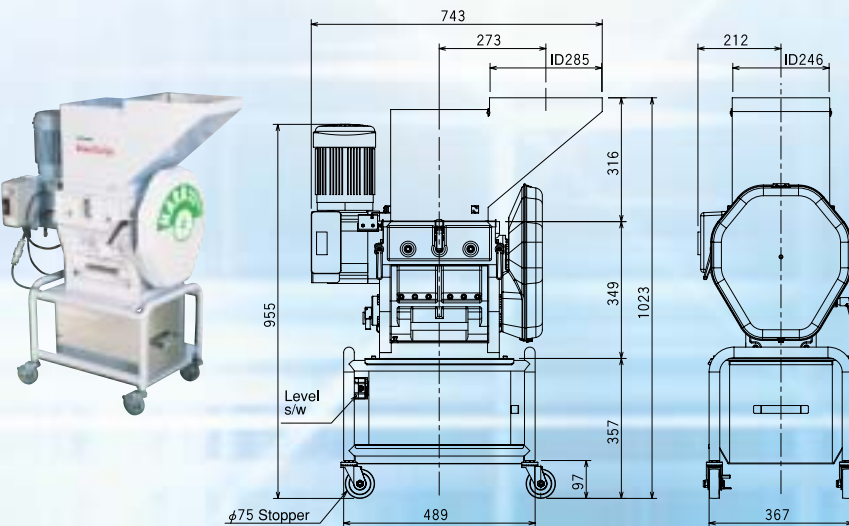
SPCII-400 / SPCII-400S



Model	SPC II -400 / SPC II -400S
Power	3-phase 200VAC (50/60Hz)
Motor output	0.4kw-4P
Rotary cutters	φ130mm 4 pieces 37.5rpm/50Hz 45rpm/60Hz
Press moving cutters	2.8mm×4.5mm 27 pieces 112.5 cycles/min (50Hz) 135 cycles/min (60Hz)
Hopper mouth	200mm×162mm
Sprue diam.	φ8mm or smaller
Throughput	※90~120g/min
Weight	95kg (S type: 100kg)

※ This value is for a sprue, nylon with 20% glass fiber, 6mm diameter, 4g-weight.
※ This value is for a sprue, TPE, 6mm diameter, 3g-weight. (S type)

SPCII-750 / SPCII-750S



Model	SPC II -750 / SPC II -750S
Power	3-phase 200VAC (50/60Hz)
Motor output	0.75kw-4P
Rotary cutters	φ176mm 4 pieces 37.5rpm/50Hz 45rpm/60Hz
Press moving cutters	2.8mm×4.5mm 41 pieces 112.5 cycles/min (50Hz) 135 cycles/min (60Hz)
Hopper mouth	246mm×285mm
Sprue diam.	φ8mm or smaller
Throughput	※150~200g/min
Weight	145kg (S type: 150kg)

※ This value is for a sprue, nylon with 20% glass fiber, 6mm diameter, 4g-weight.
※ This value is for a sprue, TPE, 6mm diameter, 3g-weight. (S type)

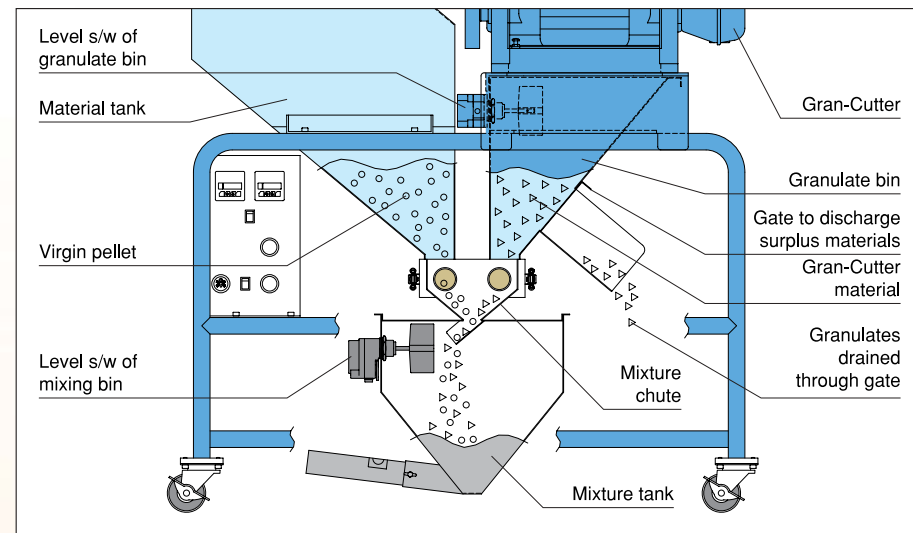
GRAN MIXER

GM II Series (Mixer)

Mixing Virgin and Gran-Cutter Materials at Once
Introduced with stylish design



GM II-Series Layout



- Easy setting for mixture ratio of virgin and recycling materials on the control panel. (Screw rotations)
- Only screw rotations are displayed on the control panel.
- The warning buzzer sounds at the time of machine emergency stop.
- Easy material exchange.
- Cleaning the inside of the Gran Mixer is easy without any tool.
- Mixed virgin and recycling materials are stored in the mixture tank without any wings or blades.

Version up, becomes easier to use [GM II / MB II series]

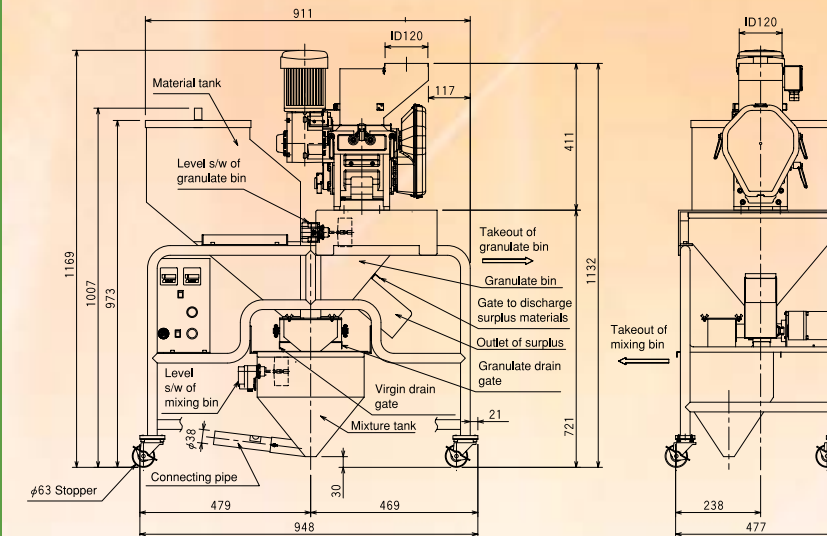


● Housing the control box in the cart makes the body narrow.

● Fixing the motors to the cart makes the removal of them unnecessary in cleaning.

● Removing the conventional surplus bin provides easy cleanup.
● The buzzer informs you that the granulate bin is filled.
● The provided container can be used to receive surplus materials.

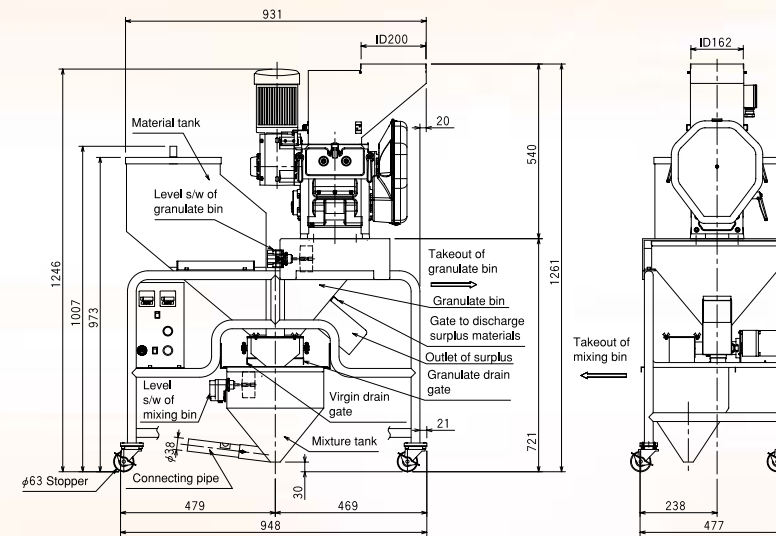
GMII-200 / GMII-200S



Model	GM II -200 / GM II -200S
Power	3-phase 200VAC (50 / 60Hz)
Motor output	0.2kw-grounding 4P
Rotary cutters	φ98mm 4 pieces 37.5rpm / 50Hz 45rpm / 60Hz
Press moving cutters	2.1mm×3.5mm 24 pieces 2.8mm×4.5mm 20 pieces (S type) 75 cycles / min (50Hz) 90 cycles / min (60Hz)
Hopper mouth	120mm×120mm
Sprue diam.	φ6mm or smaller
Throughput	※30~40g/min
Weight	107kg (S type:112kg)

※ This value is for a sprue, nylon with 20% glass fiber, 6mm diameter, 4g-weight.
※ This value is for a sprue, TPE, 6mm diameter, 3g-weight. (S type)

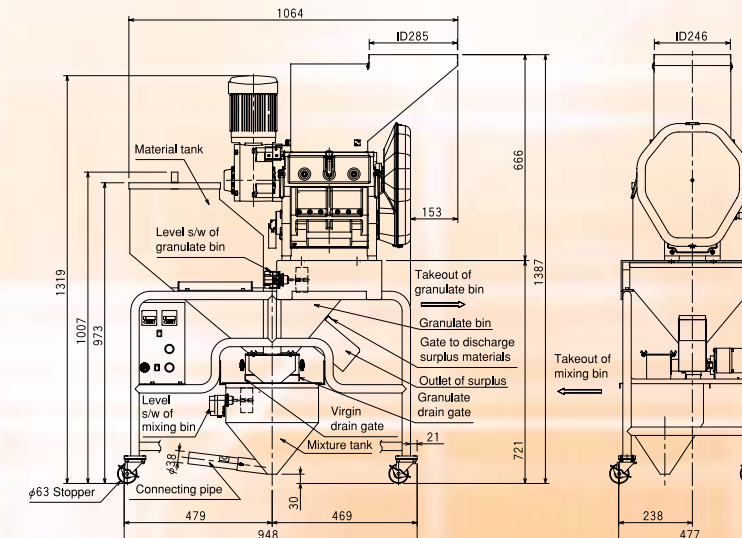
GMII-400 / GMII-400S



Model	GM II -400 / GM II -400S
Power	3-phase 200VAC (50 / 60Hz)
Motor output	0.4kw-grounding 4P
Rotary cutters	φ130mm 4 pieces 37.5rpm / 50Hz 45rpm / 60Hz
Press moving cutters	2.8mm×4.5mm 27 pieces 112.5 cycles / min (50Hz) 135 cycles / min (60Hz)
Hopper mouth	162mm×200mm
Sprue diam.	φ8mm or smaller
Throughput	※90~120g/min
Weight	139kg (S type:144kg)

※ This value is for a sprue, nylon with 20% glass fiber, 6mm diameter, 4g-weight.
※ This value is for a sprue, TPE, 6mm diameter, 3g-weight. (S type)

GMII-750 / GMII-750S



Model	GM II -750 / GM II -750S
Power	3-phase 200VAC (50 / 60Hz)
Motor output	0.75kw-grounding 4P
Rotary cutters	φ176mm 4 pieces 37.5rpm / 50Hz 45rpm / 60Hz
Press moving cutters	2.8mm×4.5mm 41 pieces 112.5 cycles / min (50Hz) 135 cycles / min (60Hz)
Hopper mouth	246mm×285mm
Sprue diam.	φ8mm or smaller
Throughput	※150~200g/min
Weight	182kg (S type:187kg)

※ This value is for a sprue, nylon with 20% glass fiber, 6mm diameter, 4g-weight.
※ This value is for a sprue, TPE, 6mm diameter, 3g-weight. (S type)

Entirely New Swing Press Cut System! With the SPCII-S series Gran-Cutter, it is now possible to regrind soft-type resin sprues and runners that until now could not be recycled.

9 Countries-Pat.

Conventional Granulators

Conventional rotary cutter granulators, when cutting sprues and runners that are larger than the cutter height, leave pieces in a comb-like form. (See fig. 1). The remaining pieces, held in the cutters, inhibit the cutting of subsequent sprues and runners and, while trapped, get repeatedly shaved into dust. In the case of thin sprues and runners, cut pieces remain in a ring-like form on the stationary cutters. (See fig. 2). Those pieces cannot be processed until the next sprues and runners are added. While caught, they are also rubbed to dust.

The Gran-Cutter

The Gran-Cutter utilizes a cam-driven swinging shaft rather than a rotating blade. The patented system cuts the sprues and runners between teeth on the swinging shaft and teeth on a stationary blade mounted on the interior frame of the Gran-Cutter. (See fig. 3).

When the swinging press cutter converges on the stationary cutter, the sprues and runners are cut in the "bite" of the teeth, and the granules are ejected from between the teeth of the cutters. The press cutter swings open again, and the next sprues and runners fall between the teeth to be cut. (See sequence of photos). There are no trapped pieces of sprues and runners, thus no dust. There is also very little static electricity or heat produced.

The soft-type ReSin Gran-Cutter

End-users have repeatedly expressed a concern that they could not recycle various elastomers and soft-type resins that they use, and they wished if there was a machine to granulate sprues and runners of those materials for recycling. Until now, there was basically no way to recycle elastomers and soft-type resins, and it was impossible to satisfactorily use the discarded sprues and runners.

In response, Harmo has developed the SPCII-S Series Gran-Cutter, designed specifically to granulate those materials for recycling.

The machine must not be used for granulating materials other than those soft-type materials specifically designated as compatible.

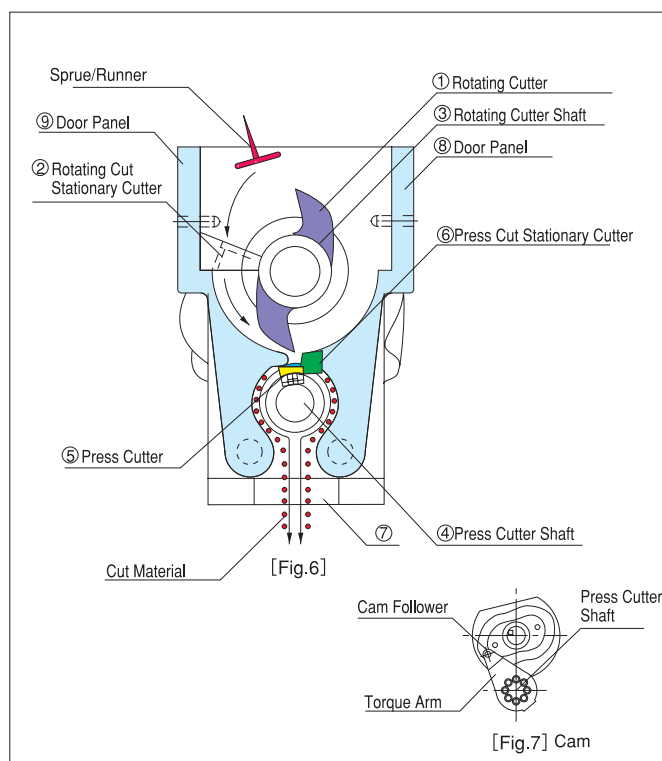
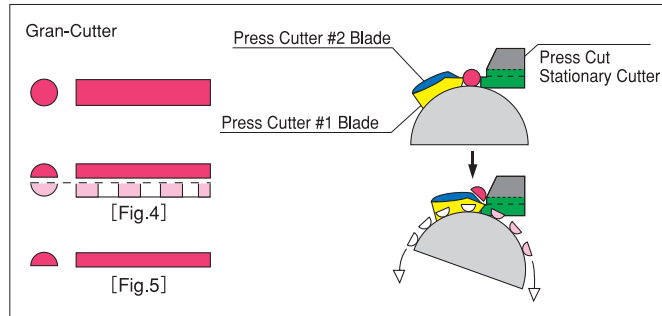
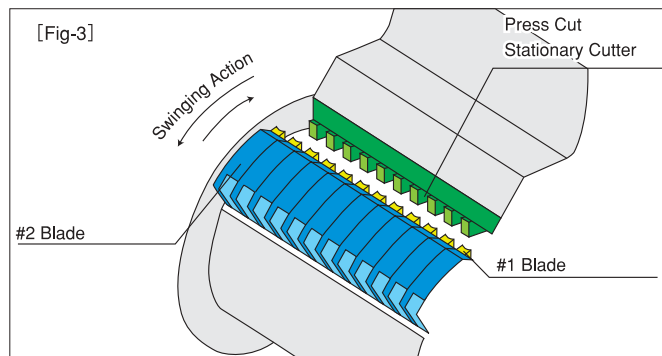
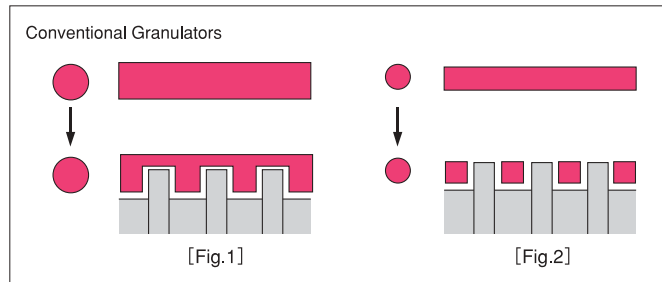
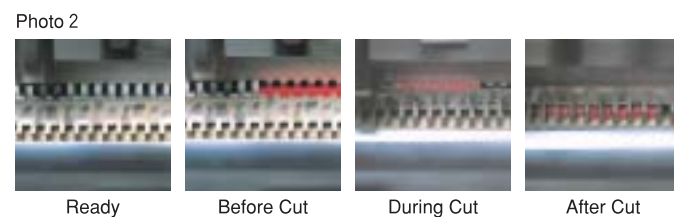
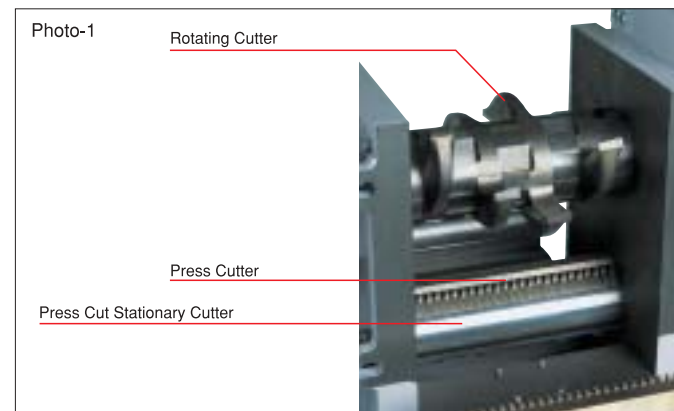
The Design of the Gran-Cutter

Sprues and runners drop into the upper section of the Gran-Cutter, where they are rough cut between blades on a rotating shaft assembly and blades on a stationary plate. (See fig. 6).

The rotating shaft assembly is directly connected to the axle of the mounted motor. (See fig. 7). Also affixed to the axle is a cam, from which the swinging press cut assembly shaft is driven by means of a torque arm and cam follower.

After passing through the rotating cutter blades, the chopped sprues and runners fall between the press cutter assembly teeth, where they are granulated into pellets.

Figure 6 shows the shape of the large side door panels that can be opened in the manner of photo 1, exposing the interior of the Gran-Cutter and making cleanup very quick and easy.

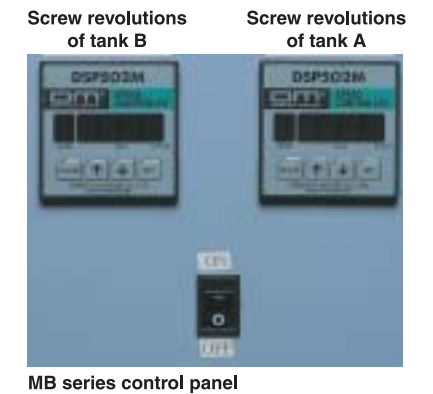


MIXER

MB II Mixers



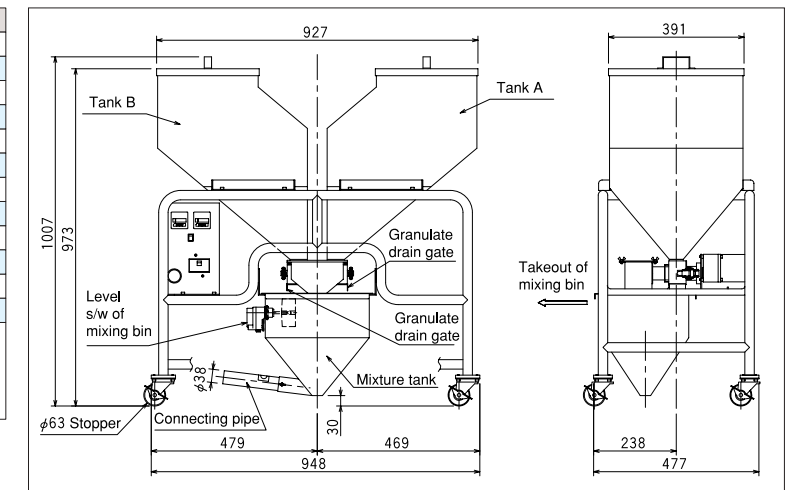
- The mixer mixes granulated and virgin materials.
- Easy setting for mixture ratio of virgin and granulated materials on the control panel. (Screw rotations)
- Only screw rotations are displayed on the control panel.
- Easy material exchange.
- Cleaning the inside of the Gran Mixer is easy without any tool.
- Mixed virgin and granulated materials are stored in the mixture tank without any wings or blades.



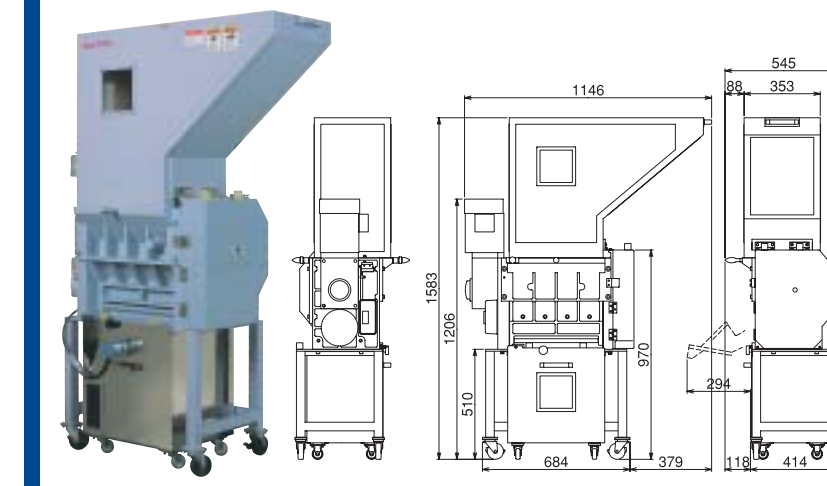
Specification

Item	Mixer
Model	MB II
Installation place	Indoor
Power supply	Single-phase 200VAC
Power plug	Grounding 3P 20A
Feeding	Screw
Motor	Single-phase
Measuring	Control of screw rotations
Mixing	Synchronous feed of two types of materials
Capacity of tank A	Approx. 25Kg
Capacity of tank B	Approx. 25Kg
Capacity of mixture tank	Approx. 4Kg
Weight	Approx. 50Kg
Screw feed amount a minute	ABS granulated material 3 rpm (Min. rotations) ~ 12g 46 rpm (Max. rotations at 50Hz area) ~ 173g 56 rpm (Max. rotations at 60Hz area) ~ 210g

Dimensions



SPC-1500



Model	SPC-1500
Power	3-phase 200VAC (50/60Hz)
Motor output	1.5kw-4P
Rotary cutters	φ220mm 4 pieces 37.5rpm/50Hz 45rpm/60Hz
Press moving cutters	3.8mm×6mm 54 pieces 112.5 cycles/min (50Hz) 135 cycles/min (60Hz)
Hopper mouth	450mm×350mm
Sprue diam.	φ13mm or small
Throughput	※ Intermittent feeding (Max. 400g per min.)
Weight	320kg

※ This value is true for a 9g, 6mm diameter sprue containing 20% six nylon glass.