

Optional parts (examples of the options for GRANCUTTER/GRANMIXER)

SPCII-750/750S with Compulsive Sending System (CSS)

The system feeds a runner larger than the standard hopper to the coarse cutter.

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

- **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
Hard material granulator II-1500
3.8×6→2.8×4.5
Soft material granulator II-1500S
3.8×6→2.8×4.5
- **Anti-wear type pressing blade**
High-speed steel blade
- **Special color : Specify your color.**
Color no. or sample is needed.
- **100 percent recyclable GMA mixer is also available upon request.**



Bar magnet

- Diameter 22mm
- We can customize the length to your requirement.



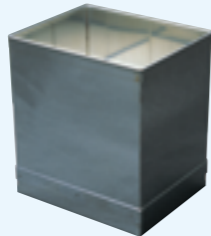
Hopper with anti-scatter shutter

- The picture shows the double shutter type.
- The single shutter type, the double-door shutter type, and the slide shutter type are also available.



Signal tower

- Single:
Red/ Green/Yellow
- Double:Red-Green

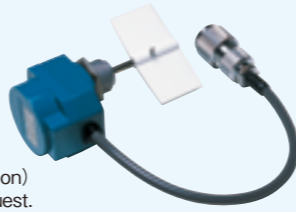


Extension hopper

This can be put into the standard hopper.
(Height adjustable)

Level switch

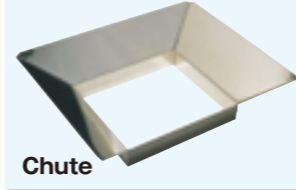
Designed by Harmo
Upon request separately.
Power supply
200VAC (50/60Hz)
100VAC (50/60Hz) (option)
Other voltages upon request.



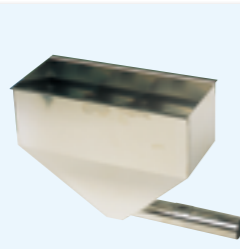
Buzzer



Emergency stop button



Chute



Suction tank



Safety hopper (Z type)



Frame for paper bag
Choose from the tank type and the paper-bag type (excluding SPCII-1500 and 1500S).

※The size and shapes are customizable on the listed auxiliary chute, suction tank, paper-bag frame, and hopper.
※Other optional parts upon request.

We are prepared to granulate your materials on a trial basis. Please feel free to contact our representative.

*This brochure is subject to change without notice.

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Not a Crusher, But a Gran-Cutter

Gran-Cutter & Mixer Series

SPCII / SPCII-S / GMI-t / GMI-St / MBIt



SPCII-1500

GMI-750t

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

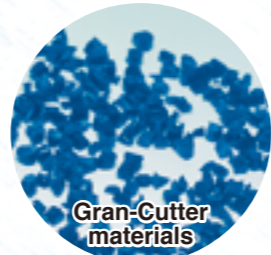
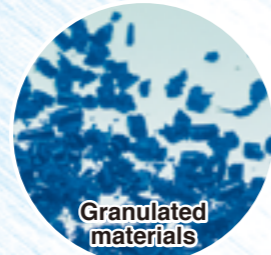
PAT.



SPCII-400

"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.



To customers who have never used a Gran-Cutter

Over conventional crushers

- **Evenly-sized granules**
Employing the patented "Swing-Press Cutting System" can regrind runners and sprues into evenly-sized granules.
- **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 long pieces 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.

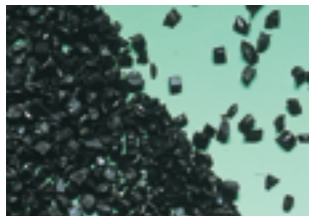
Examples of hard materials



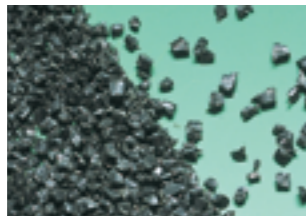
PMMA (Poly (Methyl methacrylates))



POM (Polyester)



PA (Nylon 20% glass filler)



ABS (Acrylonitrile butadiene styrene)

Examples of soft materials



PP (Polypropylene)



PE (Polyethylene)



TPE (Thermoplastic elastomer)



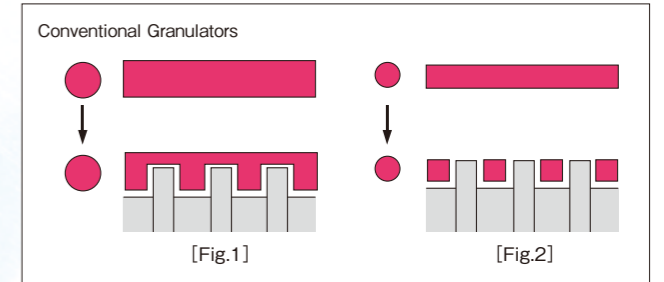
PUR (Polyurethane)

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.

PAT.

Conventional Granulators

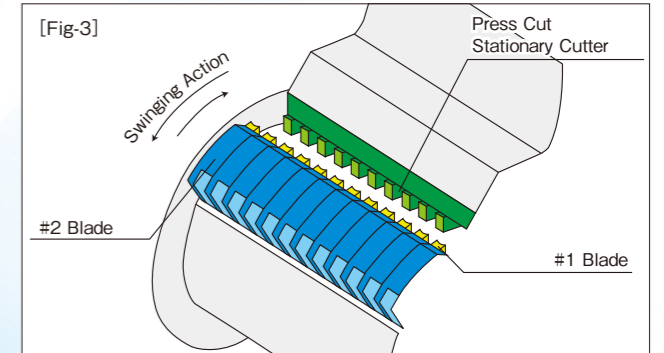
Conventional rotary cutter granulators, when cutting sprues and runners that are larger than the cutter height, leave pieces in a comb-like form. (See fig. 1). The remaining pieces, held in the cutters, inhibit the cutting of subsequent sprues and runners and, while trapped, get repeatedly shaved into 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.



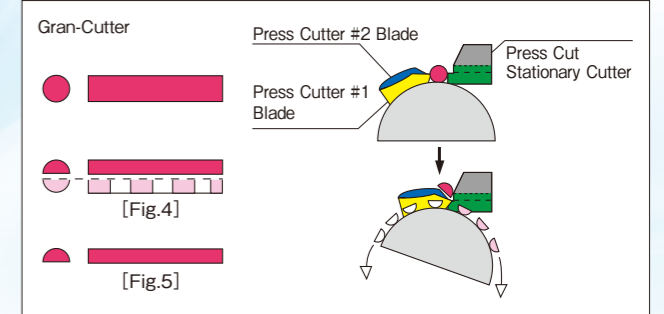
The soft-type ReSin Gran-Cutter

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.

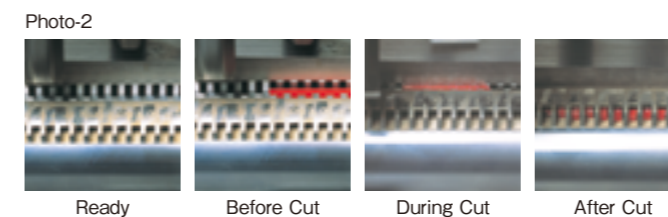
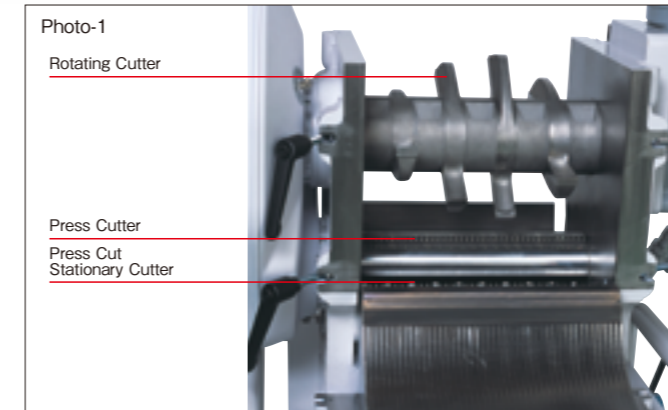
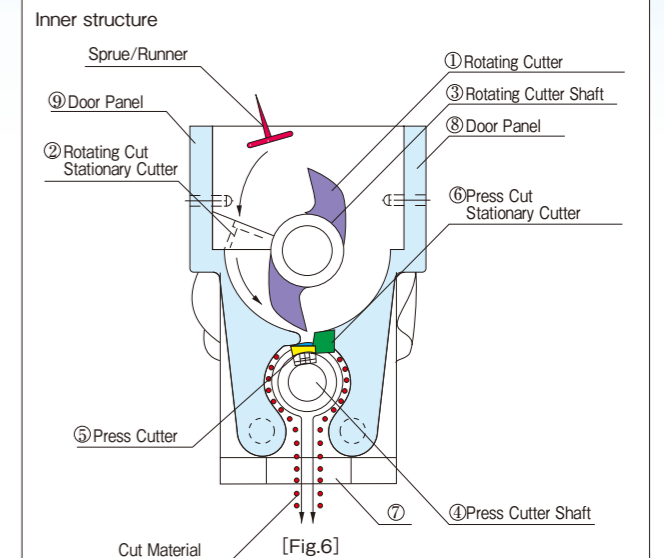
The machine must not be used for granulating materials other than those soft-type materials specifically designated as compatible.



The Design of the Gran-Cutter

The rotating cutter (1) and the rotating cut stationary cutter (2) roughly cut the fed sprues and runners. The rotating shaft (3) and the grooved cam [figure 7] are directly connected to the motor. Action of the grooved cam makes the press cutter shaft (4) and the press cutter (5) start to swing with the rotation of the motor.

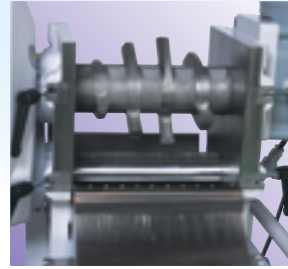
The chopped sprues and runners are pressed in between the (6) press cut stationary cutters and granulated into pellets. The produced pellets go through (7). The cleaning is very easy because the door (8) and (9) open widely as shown in the [Figure-1].



GRAN CUTTER

SPCII Series (Cutter)

More advanced Gran-Cutter SPCII series



Newly designed swing cutters minimize LCP longs.



The frame for paper-bag allows you to easily attach the paper bag and smoothly move the unit.



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



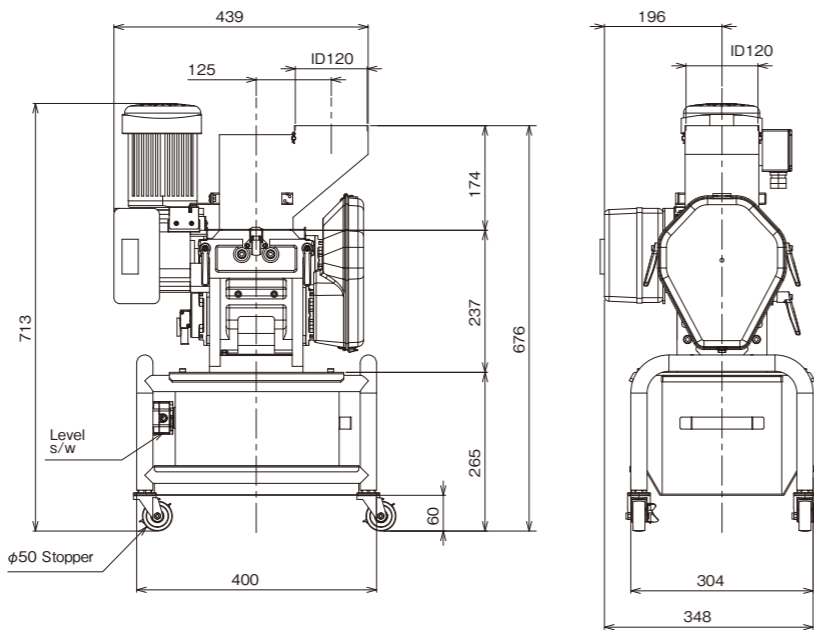
The new cutters make cleaning easier.

SPCII-200 / SPCII-200S

Model	SPCII-200 / SPCII-200S
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
Material Tank (volume)	Approx. 3kg
Weight	60kg (S type:65kg)

※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)

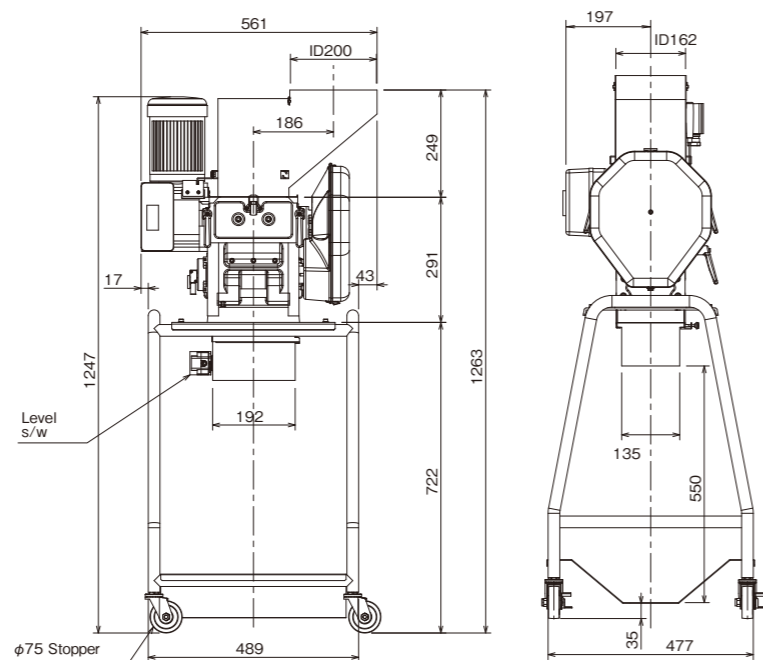


SPCII-400 / SPCII-400S

Model	SPCII-400 / SPCII-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
Material Tank (volume)	N/A (material bag)
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-1500 / SPCII-1500S



Model	SPCII-1500 / SPCII-1500S
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 45 pieces 112.5 cycles / min (50Hz) 135 cycles / min (60Hz)
Hopper mouth	402mm×360mm
Sprue diam.	φ13mm or smaller
Throughput	※Intermittent feeding, max.320~400g/min
Material Tank (volume)	Approx. 4kg
Weight	295kg

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

※This value is for a sprue, TPE, 6mm diameter, 3g-weight. (S type)



The hinged hopper ensures safety operation.



The hopper faces in three directions and can be clamped.



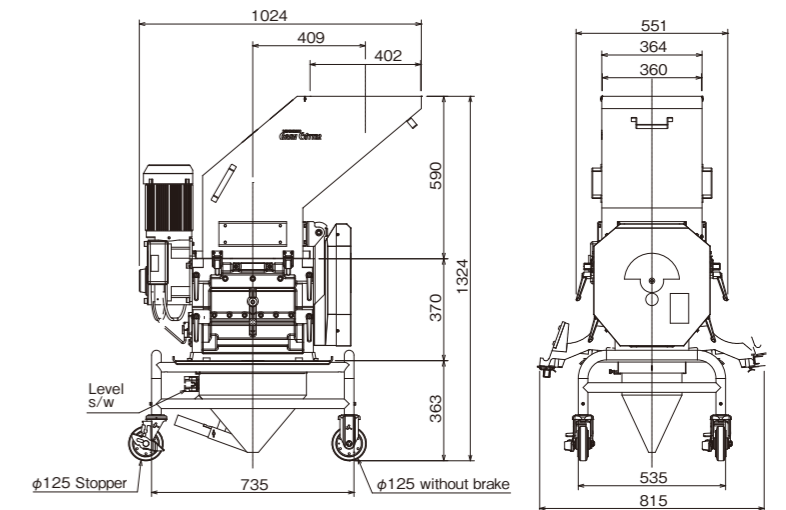
Large casters are used.



Small grain type blades are available as option.



Standard suction tank available as option.

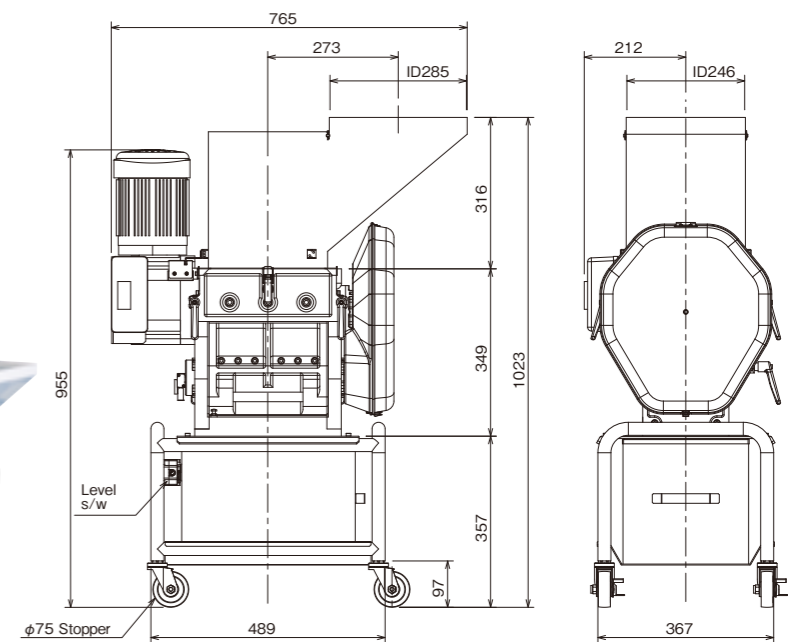


SPCII-750 / SPCII-750S

Model	SPCII-750 / SPCII-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
Material Tank (volume)	Approx. 9kg
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)

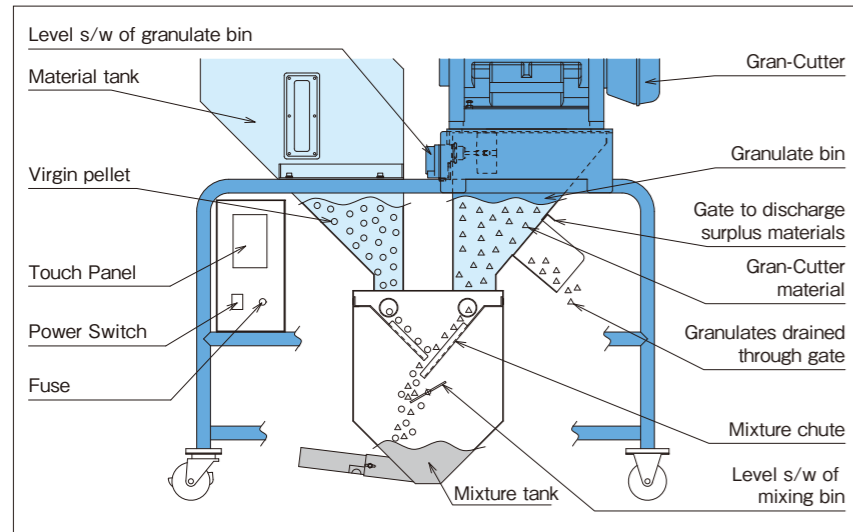


GRAN MIXER

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

GMI-t Series (Mixer)

GMI-t Series Layout



GMII-750t

- The equipped touch panel and buzzer alert you when the unit stops with an error.
- 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 [GMI/MBII series]



- Fixing the motor to the frame eliminated the steps for removing the motors during clean-up.

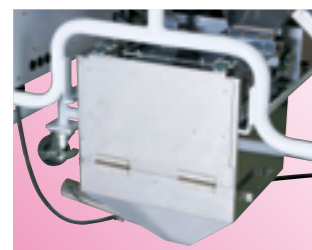


- The touch panel and the buzzer alert you when the bin is full.
- The provided container can be used to receive surplus materials.

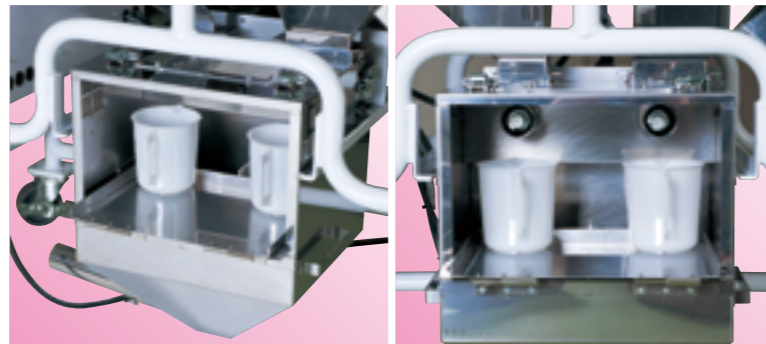
(GMI only)

Easier measuring with the improved mixing screws

The measurement procedure for mixing is drastically improved compared to the conventional unit. The lid on the mixing tank can serve as a table to put the included measuring cups. The screw automatically stops by the timer when measuring the materials.

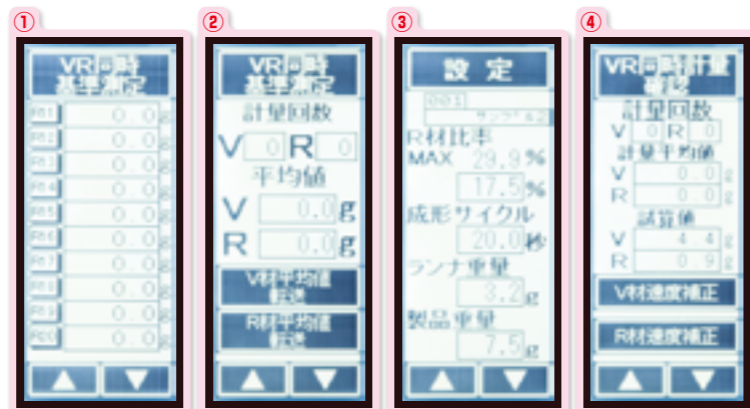


included measuring cups. The screw automatically stops by the timer when measuring the materials.



Finger-tip operations with the touch panel

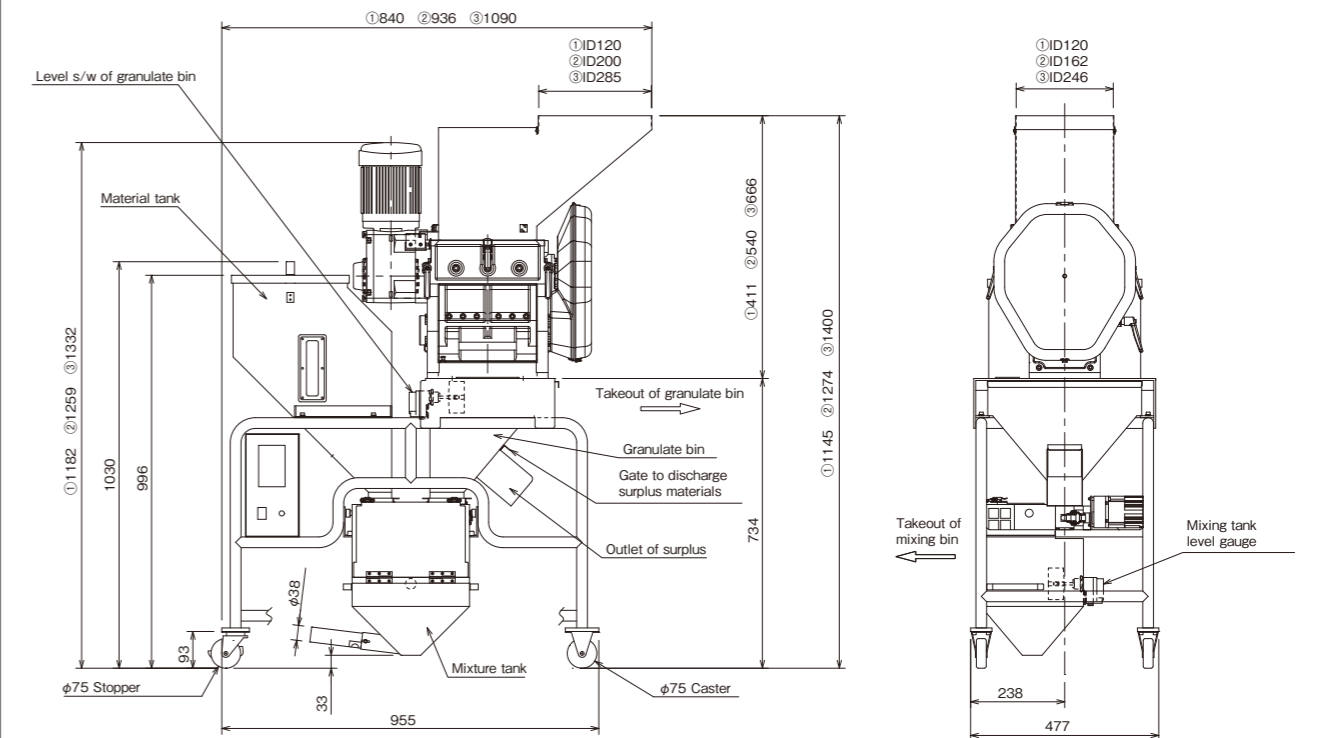
- ① Measure the virgin pellet (V) and the granules (R) with the measuring cup. Repeat for a few times and enter the measurements. The unit starts to run the reference measurement.
- ② The unit automatically calculates and saves the average of the reference measurements, and then transfers the average value.
- ③ Enter the molding conditions. The unit automatically configures the number of screw rotations.
- ④ The unit compensates the difference between the actual measurements and the provisional calculations.



GMII-200t / GMII-200St · GMII-400t / GMII-400St · GMII-750t / GMII-750St

Model	GMII-200t / GMII-200St	GMII-400t / GMII-400St	GMII-750t / GMII-750St
Power	3-phase 200VAC (50 / 60Hz)	3-phase 200VAC (50 / 60Hz)	3-phase 200VAC (50 / 60Hz)
Motor output	0.2kw-grounding 4P	0.4kw-grounding 4P	0.75kw-grounding 4P
Rotary cutters	φ98mm 4 pieces 37.5rpm / 50Hz 45rpm / 60Hz	φ130mm 4 pieces 37.5rpm / 50Hz 45rpm / 60Hz	φ176mm 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)	2.8mm×4.5mm 27 pieces 112.5 cycles / min (50Hz) 135 cycles / min (60Hz)	2.8mm×4.5mm 41 pieces 112.5 cycles / min (50Hz) 135 cycles / min (60Hz)
Hopper mouth	120mm×120mm	162mm×200mm	246mm×285mm
Sprue diam.	φ6mm or smaller	φ8mm or smaller	φ8mm or smaller
Throughput	※30~40g/min	※90~120g/min	※150~200g/min
Material tank capacity	Approx. 25kg	Approx. 25kg	Approx. 25kg
Granule tank capacity	Approx. 4.0kg	Approx. 4.0kg	Approx. 4.0kg
Mixing tank capacity	Approx. 3.5kg	Approx. 3.5kg	Approx. 3.5kg
Weight	109kg (S type:114kg)	139kg (S type:146kg)	184kg (S type:189kg)

※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)



※① : GMII-200t / GMII-200St ② : GMII-400t / GMII-400St ③ : GMII-750t / GMII-750St

MIXER

MBIIt Mixers

- The mixer mixes granulated and virgin materials.
- This unit is only for mixing and not equipped with the gran cutter.

Model	MBIIt
Capacity for virgin materials	Approx. 25Kg
Capacity for recycled materials	Approx. 25Kg
Capacity of mixture tank	Approx. 3.5Kg
Weight	Approx. 51kg

