

Rapid
300, 400 & 500
Series



Direct access to **superior performance**

Injection moulding

Blow moulding

Extrusion processes

The formula for success

Rapid's "open-hearted" engineering concept is now built into each granulator model of its Rapid 300, 400 and 500 Series. The big benefit of being open-hearted is that it boosts performance by providing direct and easy access to the heart of a machine to achieve very rapid cleaning and maintenance times for fast production changeovers. Such extremely short pit stops maximize uptime and minimize labor costs. The clear access to core machine parts also

allows "visibly clean" inspection and approval, preventing contamination at colour and material changes.

The complete open-hearted family provides a throughput of up to 1200 kg/h (2600 lbs/h).

Once again, Rapid confirms that it leads the field with innovative design and makes no compromises in providing you with high-performance granulators.

Tailored to your needs

In addition to different widths that suit your granulation needs, the granulators can be upgraded to PowerTech performance suitable for the toughest technical plastics containing glass fiber and other abrasive fillers.

PowerTech is a granulator equipped with reinforced parts to take on the hardest granulation jobs.

The combination of open-hearted concept, amazing application flexibility and the production of even better quality regrind across the complete family adds up to the formula for success in the highest-performance granulation.



Easy cleaning and maintenance

The outstanding ergonomic design of all models allows you to rapidly reach the heart of the machine and gain access to appropriate parts to achieve fast cleaning, maintenance and changeover times. "Visibly clean" inspection and approval is a further benefit.



Less energy

The true double scissors action reduces the force needed to slice through plastic waste. Therefore a smaller motor can be used to significantly reduce energy consumption.



Highest-quality regrind

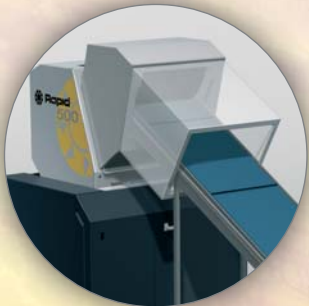
The Rapid cutting technique, comprising clean double scissors-cutting action and constant cutting circle, produces granules of a uniform size with minimal dust content even with the toughest materials.



Improved safety interlock

The new design of the safety interlock system allows quicker opening of a granulator. It is also safer because its speed-related sensor ensures that the rotor is standing still before the granulator can be opened.





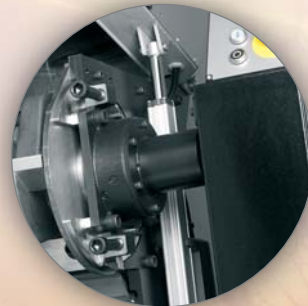
Versatile hopper

A great number of hopper configurations is available as standard options depending on application and infeed method. Most of the standard hoppers are of modular design and can be easily re-configured later if needed.



Built-in future

As the cutterhouse of most models can be configured for injection moulding, blow moulding or extrusion applications, a granulator is readily transformed on site for an alternative application after it has been installed.



Power-assisted opening/closing

Rapid opening and closing of the infeed hopper is assured by gas springs or a motor-driven jack.

Injection moulding

Injection moulding is often characterized by a wide variety of small, medium-size and large products, including technical and/or filled materials, and by frequent changes of end-product type and colour. This is where a Rapid 300, 400 or 500 Series granulator shows its superiority as an essential part of a production process. Re grind derived from reject products, sprues and runners is of a quality required for direct recycling to the moulding machine.

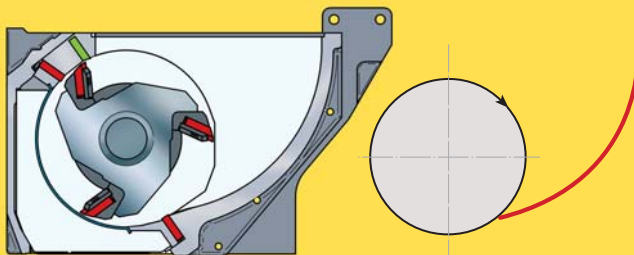
The Rapid open-hearted family is ideal for high-volume central or beside-the-press granulation of injection moulding rejects like sprues, crates for bottled drinks, dashboards, bumpers, hubcaps, car lenses, ski boots and a whole lot more.

Rapid granulators configured for injection-moulding applications help to maintain a stable production process.



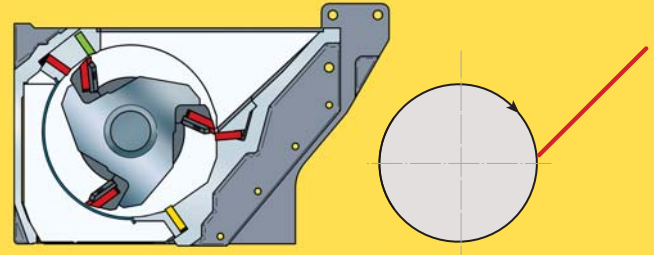
Cutterhouse configuration ■ ■ ■

Rapid granulators offer a choice of supertangential or tangential infeeds for bulky and smaller product.



Supertangential for bulk waste

The two fixed knives as shown (red) are typically used. A third fixed knife (green) is optional with the Rapid 500 Series for higher capacities.



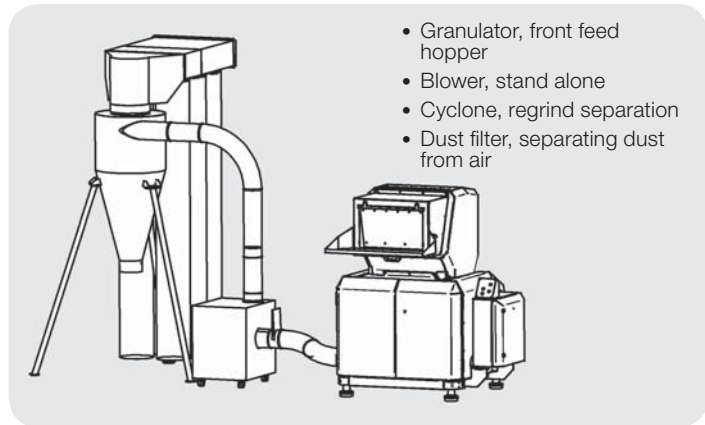
Tangential for thicker walled mouldings

The two fixed knives as shown (red) are typically used. One, or two (500 Series), additional fixed knives (green/yellow) – are optional to increase throughput.

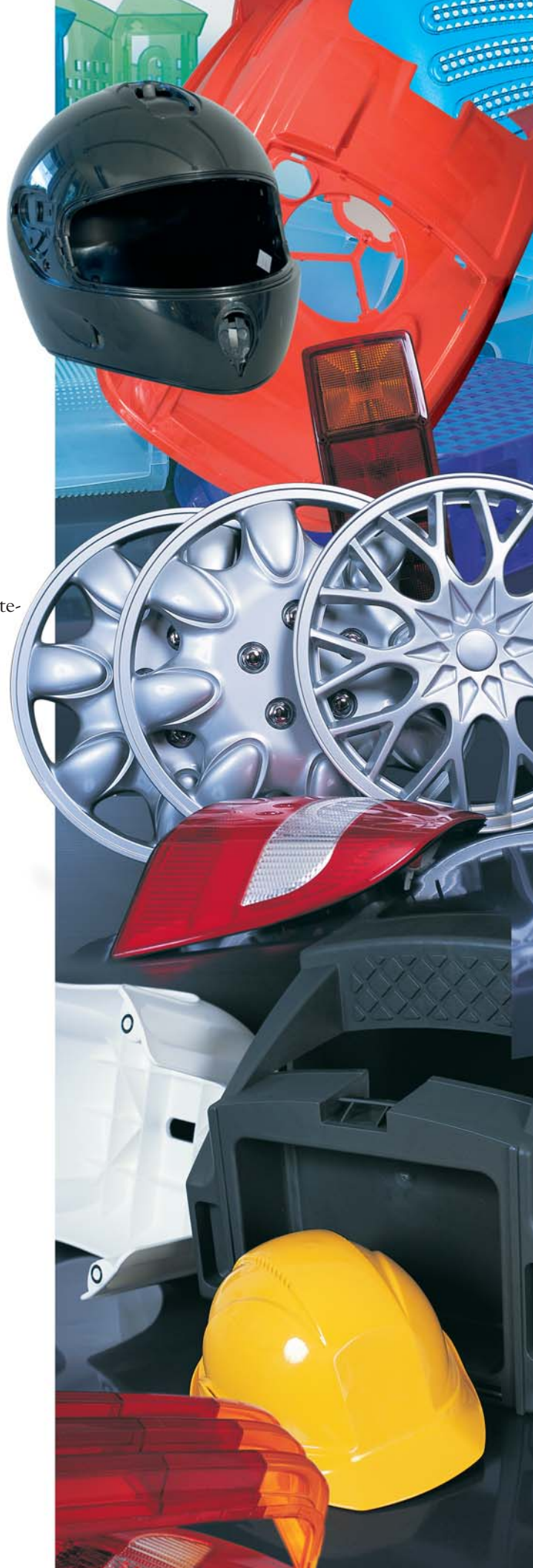


Visibly clean! ■ ■ ■

Core components are quickly removed to allow fast cleaning and maintenance. After cleaning, you can visibly ensure that all regrind is removed to prevent contamination when making colour or material changes.



A band conveyor with optional sound trap results in quieter granulation.



Blow moulding

Blow-moulding waste such as diverse plastic bottles, larger containers – including large water containers, jerry cans, etc. – and big barrels are typical in this application segment. These are quickly turned into high-quality regrind that can be recycled directly to the moulding machine by the Rapid open-hearted family.

A combination of double scissor-cut action and the super-tangential cutterhouse optimizes gripping of

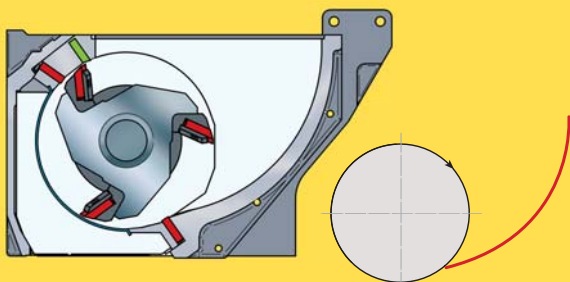
bulky products and minimizes the fly-back of material. The result is smooth continuous granulation. There is no need for precutting bulky items, and the granulators are compact enough to be fed at chest height.

All these benefits emphasize the importance of integrating a Rapid granulator for direct recycling as an important unit of your production line.



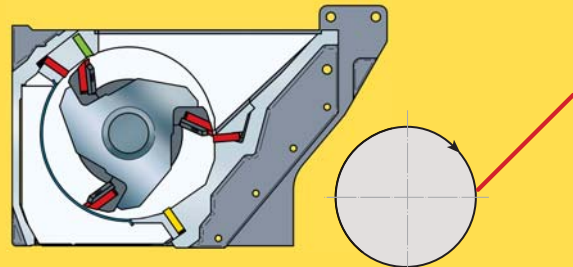
Configuration of cutterhouse ■ ■ ■

The supertangential infeed gives Rapid granulators the huge grip needed for bulky items and preventing parts from “dancing” on the rotor.



Supertangential for bulk waste

The two fixed knives as shown (red) are typically used. A third fixed knife (green) is optional in the Rapid 500 Series for higher capacities.



Tangential for thicker walled material

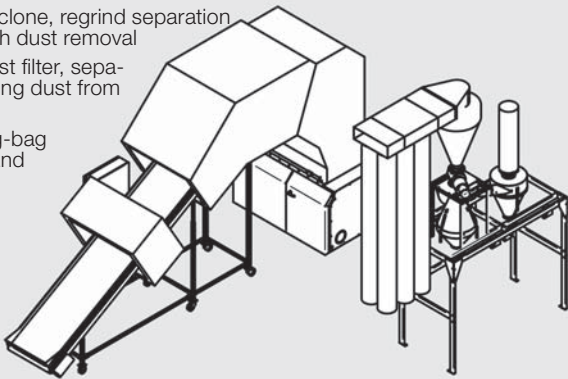
The two fixed knives as shown (red) are standard configuration. A third fixed knife (yellow) is optional for higher capacities. The Rapid 500 Series can even be set up with a fourth (green).



Directly to core components ■■■

A motor-driven jack (optional) raises and lowers the infeed hopper. Now with direct access to all parts, including fixed and rotating knives, a Rapid open-hearted granulator is ready for cleaning, knife changing or servicing.

- Granulator, band conveyor
- Cyclone, regrind separation with dust removal
- Dust filter, separating dust from air
- Big-bag stand



Typical granulator configuration used for blow-moulding applications.

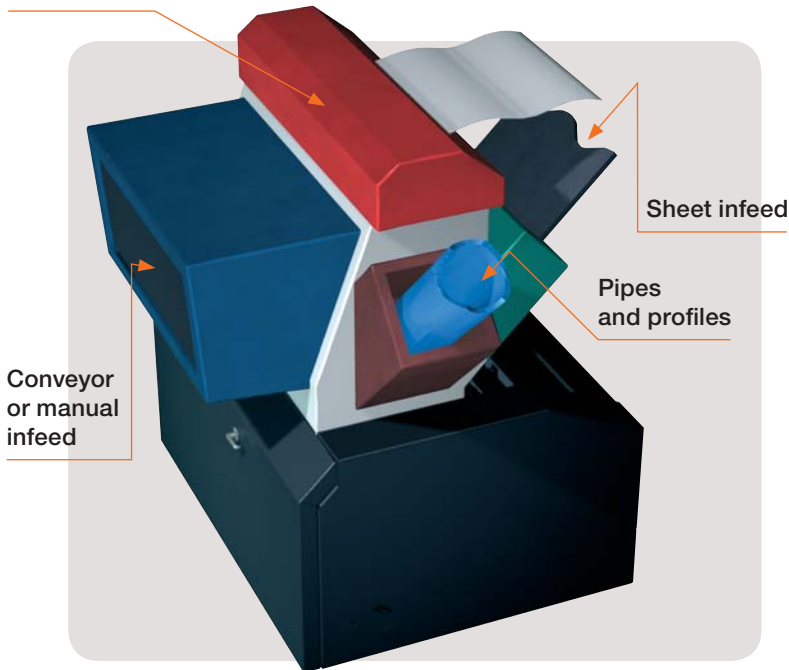


Extrusion processes

Typical waste resulting from extrusion processes consists of pipes, profiles, sheets and films. These put special demands on granulators, particularly different hopper configurations. For example, side infeed is preferred to guide in longer parts like pipes and profiles, roll feeding systems are best for different kinds of film and packaging, and rear feeding suits sheets.

Rapid granulators of the open-hearted family more than meet the challenges presented by extrusion waste and form an important part of an integrated production line. The high-quality regrind produced can be recycled directly back to the extrusion process without negatively affecting the product quality.

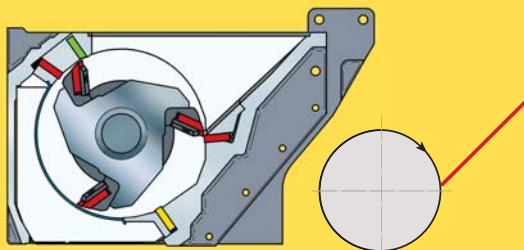
Roll feed unit



In-line granulator for film granulation. Optional, pneumatic loop control arm for synchronizing film feeding speed with the line speed.

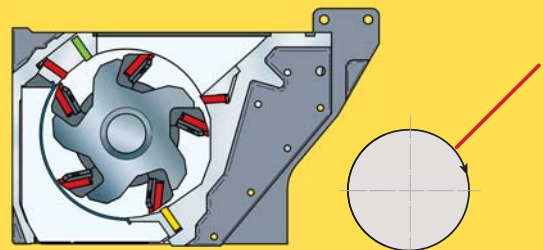
Cutterhouse configuration ■ ■ ■

Different types of infeed and a pre-cutting knife make Rapid granulators ideal for extrusion applications.



Tangential for extruded materials

The two fixed knives as shown (red) are typically used for film or thin plates and profiles. One additional fixed knife (yellow) – plus an extra knife for the Rapid 500 Series (green) – are optional to increase throughput.



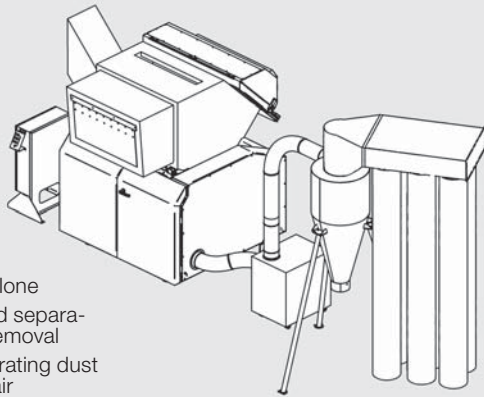
Pre-cut for thicker walled materials

Only for 500 Series. Recommended for heavy-duty granulation of sheets, pipes, profiles and thick-walled materials etc. A third and/or fourth fixed knife (green/yellow) is optional for higher capacities.

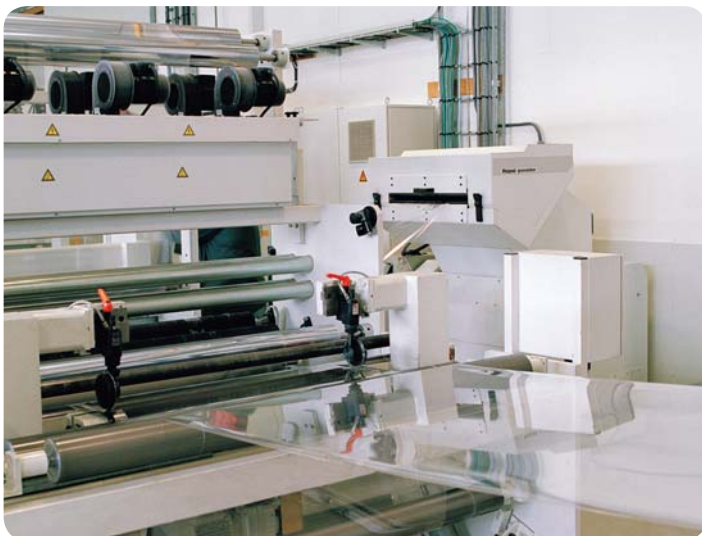


No tools required ■ ■ ■

The green light of a Rapid open-hearted granulator let's you know when it's safe to open the machine. No tools are required to gain access to the cutterhouse and associated components.



- Granulator, front feed, side feed, roll feed
- Blower, stand alone
- Cyclone, regrind separation with dust removal
- Dust filter, separating dust from outgoing air



Inline granulation of edge trimmings with a dedicated roll-feed unit.



The most trusted name in

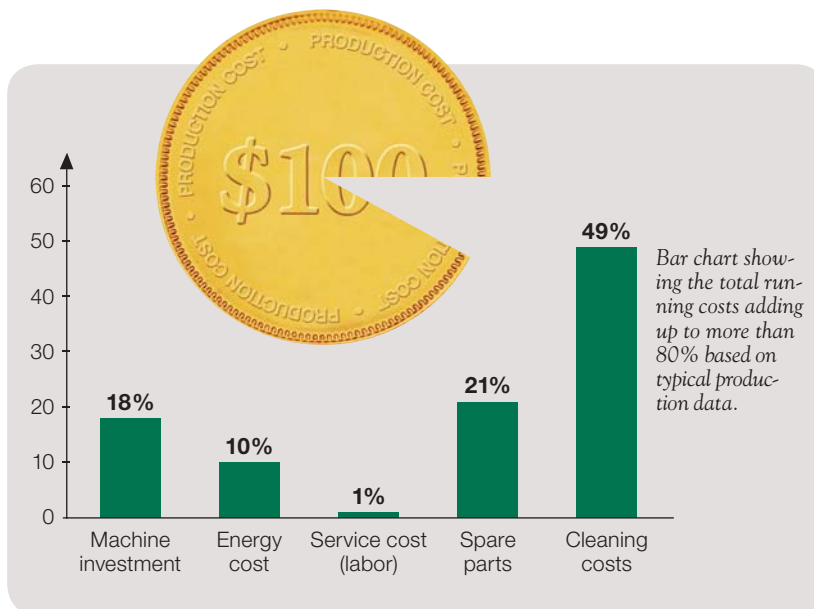
Decades of providing the plastics industry with superior granulator technology, robust machines that translate into optimal life-cycle economy, and excellent regrind quality have made Rapid the most trusted name in granulators. By keeping an eye on the future and listening to what our customers say, we are always ready to respond to their present and future needs.

Completely integrated production lines and further features of the Rapid 300, 400 and 500 Series are presented here along with how we support you after granulator installation.

Your most profitable investment ■ ■ ■ ■

Investing in a high-quality granulator frequently gives a very quick payback time and return-on-investment. It's also important to realize that the granulator purchase price is often less than 20% of the total lifecycle costs, whereas running costs represent over 80% of the total costs as presented in the diagram below.

To show exactly how you can benefit, Rapid has developed a cost-calculation function on our website www.rapidgranulator.se. Pay it a visit and make your own calculation.



The toughest for the toughest ■ ■ ■ ■

Reinforced parts are built into Power-Tech models to enable them to make light work of granulating abrasive technical and/or filled materials and prolong granulator lifetime for these tough applications.



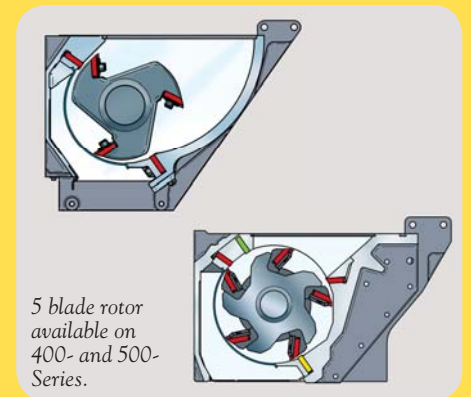
Jig for optimum knife clearance ■ ■ ■ ■

Optional devices are available for re-sharpening and presetting of both rotating and fixed knives outside the machine to increase uptime and provide optimal knife clearance.



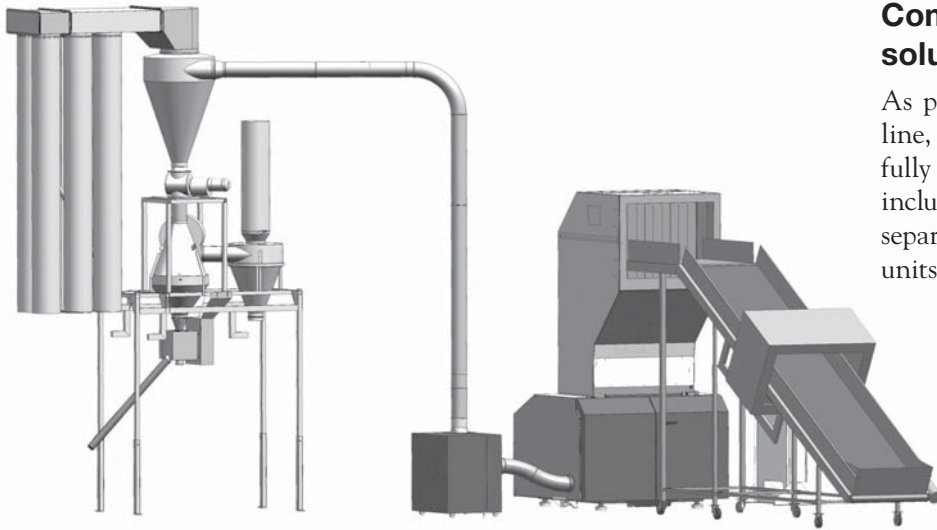
3-blade or 5-blade rotor ■ ■ ■ ■

The 3-blade rotor works best for bulky blow-moulded and other voluminous waste, whereas the 5-blade rotor is ideal for higher throughput applications involving film and smaller parts. Either 2, 3 or 4 fixed knives can be specified depending on the model.



5 blade rotor available on 400- and 500-Series.

granulators



Complete system solutions ■■■

As part of a totally integrated production line, a Rapid granulator solution can be fully equipped with all types of infeed including a conveyor, metal detection and separation, and dust separation and filter units.

Committed customer support ■■■

Rapid is represented by a worldwide network of sales companies and qualified distributors who meet certified standards of training, granulator performance, and customer care. We make every effort to provide the entire backup you need to get the best out of our granulators.



Instant spare part service ■■■

As we are well aware that satisfied customers are loyal customers, we make sure that Rapid granulators are kept up and running for the maximum time possible. To promote this, we have an instant spare parts delivery service aimed at getting parts to you quickly in the time frame you choose.



	Cutterhouse widths, mm					Motor sizes, kW
	300	450	600	900	1200	
Rapid 300	■	■	■			5.5–15
Rapid 400		■	■	■	■	11–37
Rapid 500			■	■	■	18.5–55

The most trusted name in granulators



Rapid is the world leader in granulation. We develop, manufacture and market individual granulators and completely integrated recycling solutions for the plastics industry. With an extensive granulator range, from table-top units to giant machines, we can satisfy virtually all your granulation needs.

Our products are regarded as the most ruggedly built, most dependable and of the highest quality available on the market. And our excellent spare parts service helps to keep them in top condition.

We are dedicated to partnering with you. With over 50 years of experience, a global presence, and more than 60,000 units installed worldwide, we offer you our expertise, our people, and our resources.

Rapid strives to exceed your expectations in recycling plastic waste.



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