



# PERFECTION IN GRANULATORS

*Rotoplex® Ro product line.*



**HOSOKAWA ALPINE**

Process technologies for tomorrow.

# WE ARE YOUR INTERFACE:

## » FOR STANDARDISED AND INDIVIDUAL PROCESS SOLUTIONS

When it comes to comminution technology, we at Hosokawa Alpine set standards. From the development to the manufacture of high-performance granulator systems for hard, fibrous and tough materials, a precise interplay of all components is essential. And we master this to perfection in the form of our Rotoplex granulators thanks to our long years of experience, continuous development work and constant innovations. Our Rotoplex granulator has achieved cult status in Hosokawa Alpine's granulator range.

The standard product lines stand out due to their robust design in high-quality spheroidal graphite cast iron (GGG 40). The spheroidal graphite iron machine housing and cutting rotors are characterised by the following advantages:

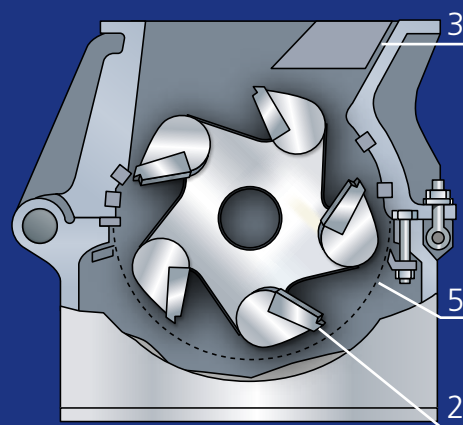
- High strength values
- Unparalleled dimensional stability
- Improved vibration and structure-borne noise reduction at comparable sheet metal wall thickness

Our patented cross-scissor-cut rotor – proven over many years – guarantees a sharp cut, a low-dust product as well as smooth and uniform machine performance throughout all product lines at a verifiable reduction in energy consumption of as much as 20 per cent compared with conventional cutting techniques. Custom-made systems, individually tailored to suit the requirements posed by customers and products, are our forte as well as extensive and practical equipment variants for:

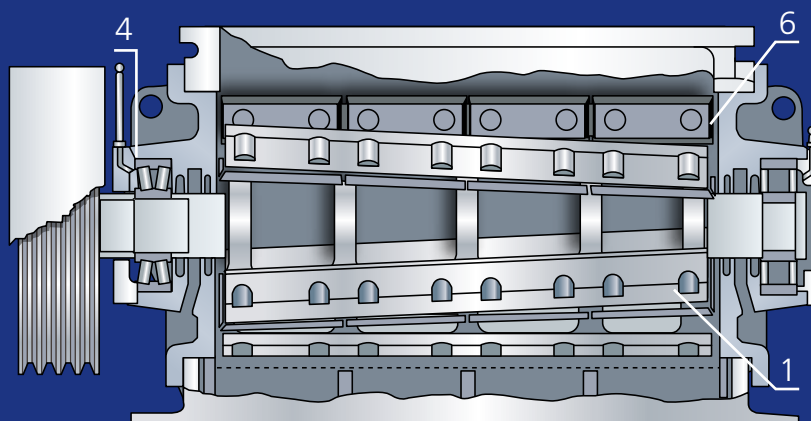
- Product feed (mech. feed units, feed metering hoppers, pneumatic feed systems)
- Product discharge (pneumatic product discharge systems, product dedusting systems, exhaust air cleaning)
- Noise reduction (integrated sound insulation, secondary noise control)
- Electric control units (Alpine PlexControl R)

including in-house engineering are a matter of course for us. Over and above this, a number of machines and complete systems for various system configurations are available in our application testing centre. Why not convince yourself of our unrivalled technology „Made in Germany“?

## » PRECISION MADE TO ORDER



1 Cross-scissor-cut rotor  
2 Rotor knife



3 Retaining wedge  
4 Special bearing

5 Screen support  
6 Side rotor casing

## » FOR A WIDE VARIETY OF PRODUCTS



### » FIBRES / NON-WOVENS

High cutting power for processing highly tear-resistant synthetic and natural fibres as well as non-wovens



### » CABLE RECYCLING

Dry mechanical recovery of copper / aluminium from mixed cable scrap at maximum yield and purity



### » THERMOFORMING

On-line and off-line solutions for stripes, rejects and punched screen rolls



### » RUBBER / CAOUTCHOUC

Efficient coarse and fine grinding of vulcanised and unvulcanised rubber and caoutchouc materials



### » TEA / SPICES / DRIED VEGETABLES

Low-intensity cutting and grinding to achieve coarse- and fine-cut products with minimal dust generation



### » FILM RECYCLING

Comprehensive in-house film recycling solutions for in-line and off-line applications with Rotoplex granulators as the key players



### » PLATES AND CHUNKS

Efficient coarse and fine grinding of vulcanised and unvulcanised rubber and caoutchouc materials



### » PAPER

From precisely cut flakes to a targeted separation of fibres



### » BLOW MOULDING

Low-noise systems to achieve a dedusted product for cooled or hot flashes and production rejects



### » INJECTION MOULDING

Preliminary grinding and dedusting of all production scrap that arises during injection moulding



### » RECYCLABLE MATERIALS

The high specific cutting power, large wear capacity and minimal knife exchange times ensure unparalleled yield and efficiency



### » NATURAL MATERIALS

Leather, cork, wood – processed to customer specifications



### » VEHICLE INTERIORS

Efficient disintegration of textile fibre composites to obtain a maximum yield and purity using custom-designed systems



### » EXTRUSION

Stand-alone machines and complete solutions for pipes and profiles



### » CHEMICAL PRODUCTS

The Rotoplex as a process granulator to meet specific requirements of the chemicals industry (construction materials, inert operating mode)



# LITTLE GIANTS

Product line: 28/40 - 36/60 Ro

The „little giants“ among the granulators are the machines belonging to our 28/40 – 36/60 product line. Convincing is the modular and compact design combined with highly effective components, making the „little giants“ indispensable members of the Rotoplex family. The mill rotor and the cast-iron housing provide dimensional stability and constitute a guarantee for a long service life. The motorisation and product feed system are laid out individually to suit the job in hand and / or customer specifications.

## DESIGN FEATURES:

- Patented cross-scissor-cut rotor – guarantees optimal material distribution at maximum cutting performance
- Hinge-back screen support – permits easy screen removal and perfect access to clean the machine and to exchange the knives

➤ 36 / 60 Ro



- Usability of the cutting elements: rotor knives on one side / stator knives on two sides
- Cutting gap adjustment after knife exchange: outside the machine with the rotor knife adjustment fixture
- Special shaft bearing which prevents penetration of the product into the bearing and the ingress of excess lubricant into the grinding chamber

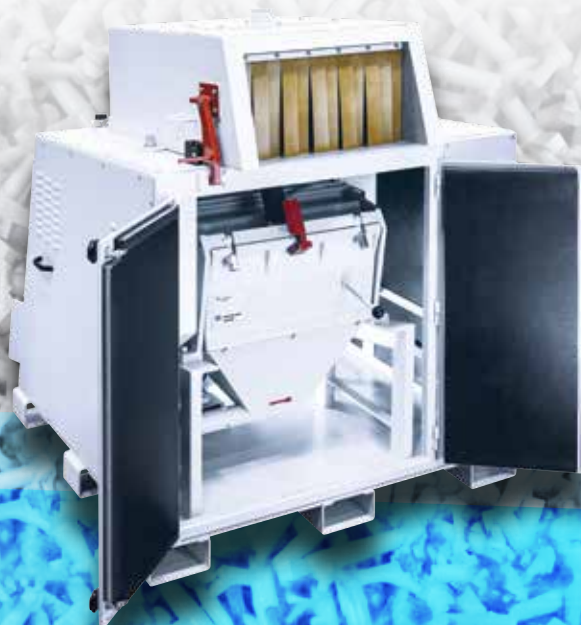
## OPTIONS:

- Several rotor versions
- Different materials of construction (stainless steel, chemical nickel-plating)
- Product dedusting systems in standard design or to customer specifications
- Different sound insulation concepts (integrated sound insulation, soundproof cabin)

➤ 1



➤ 2



# A CLASS OF ITS OWN

*Product line: 40/63 - 63/125 Ro*

The above term originates from the numerous users. And that naturally makes us very proud of our product line. As a genuine "workhorse" in operation around the clock, this product line has proven itself worldwide and has made a name for itself in the granulator world. The interaction between the solid cast-iron housing, high-performance cast-iron rotor, along with form-fit arrangement of the stator knives guarantees in continuous mode the reliability and enormous capacity. Continuously improved over the years and now in its 7th generation, this product line has stood the test of time since 1965 and is a veritable evergreen.

## DESIGN FEATURES:

- Patented cross-scissor-cut rotor – guarantees optimal material distribution at maximum cutting performance
- Usability of the cutting elements: rotor knives on one side / stator knives on four sides

- High number of stator knife rows
- Cutting gap adjustment after knife exchange: outside the machine with the rotor knife adjustment fixture
- Special shaft bearing which prevents penetration of the product into the bearing and the ingress of excess lubricant into the grinding chamber

## OPTIONS:

- Several rotor versions
- Different materials of construction (stainless steel, chemical nickel-plating)
- Product dedusting systems in standard design or to customer specifications
- Different sound insulation concepts (integrated sound insulation, soundproof cabin)



➤ 50 / 80 Ro

➤ 3



➤ 1 28/40 Ro with intake device ➤ 2 analog 1  
➤ 3 50/80 Ro





# THE HEAVY DUTY

*Product line: 80/125 - 90/300 Ro*

Alone the sight of the Rotoplex 80/125 Ro - 90/300 Ro granulators is impressive and conjures up the designation „heavy duty“. As the big brother of the „class of its own“ product line, these granulators are totally reliable in operation around the world even if the demands are high for applications such as:

- Film
- Cable, fibres, leather
- Chunks
- Non-woven

Uncompromisingly solid machine construction paired with precise cutting technology make a clean-cut product at maximum capacity possible. Throughputs of up to 8 t/h can be achieved. This product line is a real heavy worker suitable for dynamic as well as, intermittent loads plus for maximum permanent loads.

## DESIGN FEATURES:

- Patented cross-scissor-cut rotor – guarantees optimal material distribution at maximum cutting performance
- Usability of the cutting elements: rotor knives on one side / stator knives on four sides
- High number of stator knife rows
- Cutting gap adjustment after knife exchange: outside the machine with the rotor knife adjustment fixture

- Special shaft bearing which prevents penetration of the product into the bearing and the ingress of excess lubricant into the grinding chamber

## OPTIONS:

- Different materials of construction (e.g. stainless steel, chemical nickel-plating)

- Pneumatic product discharge, dedusting and filter technology in standard design or can be tailored to match the individual customer situation on site
- Several rotor versions
- Available in designs for wet processing as well as for applications with a minimised leakage gas rate

➤ 90 / 300 Ro





## MACHINE SIZES

*At the end of the day, however, the size is decisive. Our machine sizes in tabular form:*

Rotoplex	Type Ro	28/40 Ro	28/60 Ro	36/60 Ro	40/63 Ro	50/63 Ro	50/80 Ro	50/100 Ro	50/125 Ro
Drive	kW	7.5 - 15	11 - 18.5	15 - 30	22 - 45	30 - 55	37 - 75	75-90	90
Throughput* (approx.)	kg/h	250	350	400	600	800	1050	1300	1500
Cross-scissor-cut rotor	min <sup>-1</sup>	1000	1000	740	650	550	550	550	550
Rotor knife rows	Qty.	3	3	4	4	5	5	5	5
Stator knife rows	Qty.	2	2	2	3	4	4	4	4

Rotoplex	Type Ro	63/100 Ro	63/125 Ro	80/125 Ro	80/160 Ro	80/190 Ro	90/190 Ro	90/224 Ro	90/300 Ro
Drive	kW	75 - 110	90 - 160	90 - 160	132 - 250	150 - 250	250 - 315	2 x 200	2 x 250
Throughput* (approx.)	kg/h	1550	1800	2900	3100	3800	n/a	n/a	n/a
Cross-scissor-cut rotor	min <sup>-1</sup>	465	465	350	350	350	300	300	300
Rotor knife rows	Qty.	6	6	8	8	8	10	10	10
Stator knife rows	Qty.	5	5	4/5	6	6	7	7	7

\*Reference value: material PE / mill screen 6 mm Ø



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Process technologies for tomorrow.

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