GETECHA

Grinder range

hopper granulators

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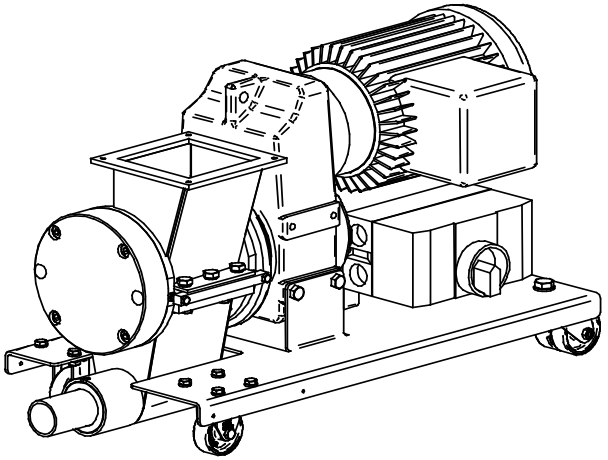
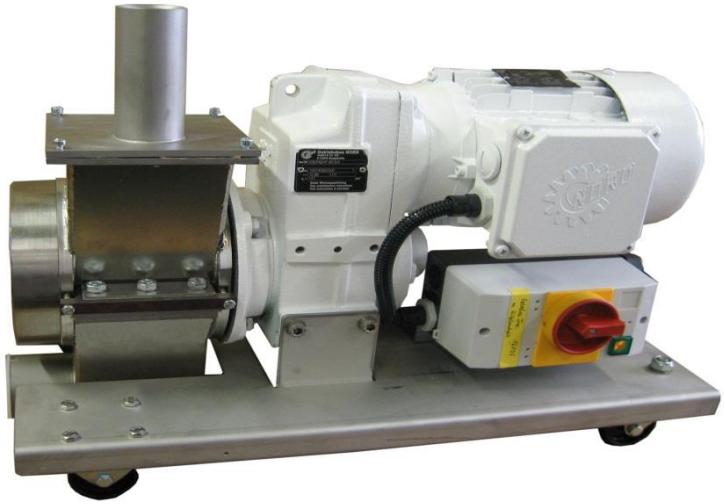
1. Beside-the-press granulators

SRS/RS 100, RS 1615, GRS 180/300

1. Beside-the-press granulators





SRS 100 – A 4.50

For granulating sprues in the CD manufacturing

Here always accrues only one sprue per cycle

Technical datas:

Rotor cutting circle:	100 mm
Cutting length:	100 mm
Motor power:	0,55 / 0,75 kW
Throughput:	up to 6,0 kg/h

1. Beside-the-press granulators

SRS 100 – A 4.49

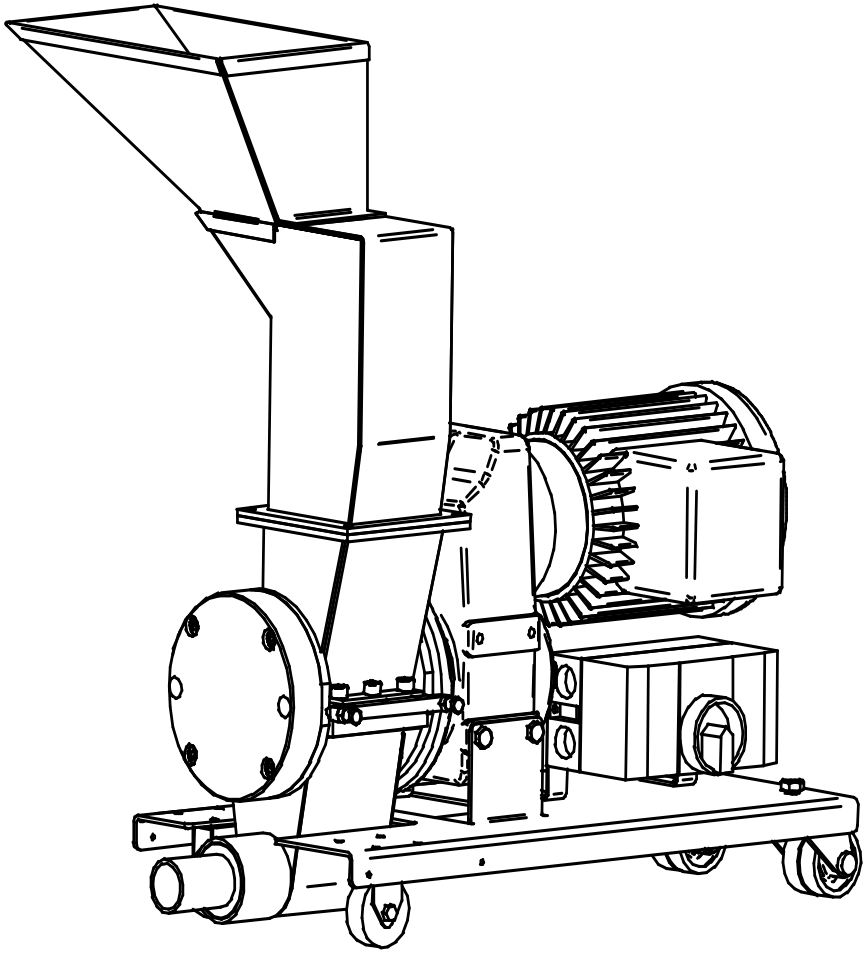
For granulating sprues in the CD manufacturing

Here always accrues two sprues per cycle

Technical datas:

Rotor cutting circle:	100 mm
Cutting length:	100 mm
Motor power:	0,55 / 0,75 kW
Throughput:	up to 6,0 kg/h

1. Beside-the-press granulators



RS 100 – A 4.31

For granulating sprues by injection moulding manufacturing, but only micro sprues
e.g. laboratory application

Technical datas:

Rotor cutting circle:	100 mm
Cutting length:	100 mm
Motor power:	0,55 / 0,75 kW
Throughput:	up to 6,0 kg/h

1. Beside-the-press granulators

RS 1615 – A x.x.x

- Frame
- Suction box
- Hopper

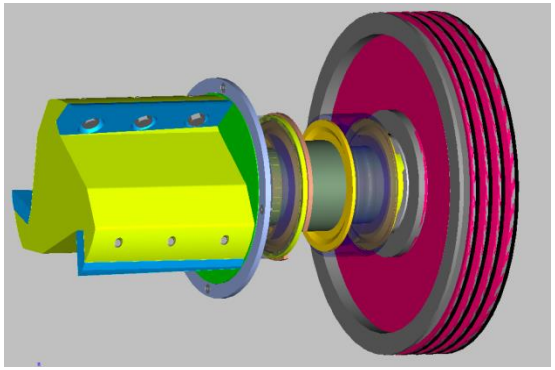
Technical datas:

Rotor cutting circle:	160 mm
Cutting length:	150 mm
Motor power:	1,5 / 3,0 kW
Throughput:	up to 25 kg/h

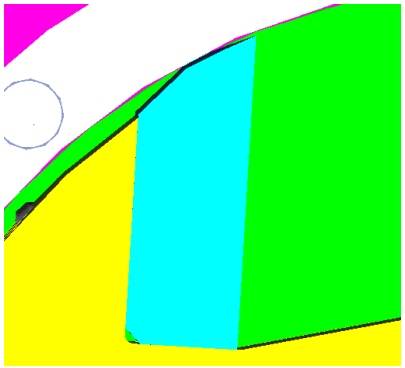
1. Beside-the-press granulators

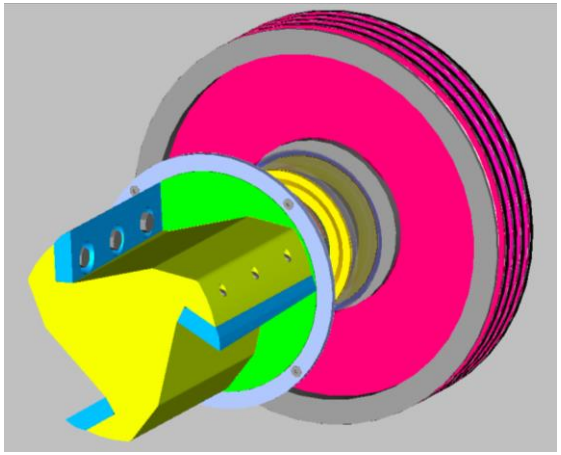
RS 1615 setup and function

- Horizontal, single-sided **double-bearing** rotor



- Regrind is conveyed by the “scissor cut” designed blades to the fixed wall with the revolving rotor-end-plate
- Rotor and stator blades can be sharpened and don´t need to be readjusted
- Always a constant cutting circle



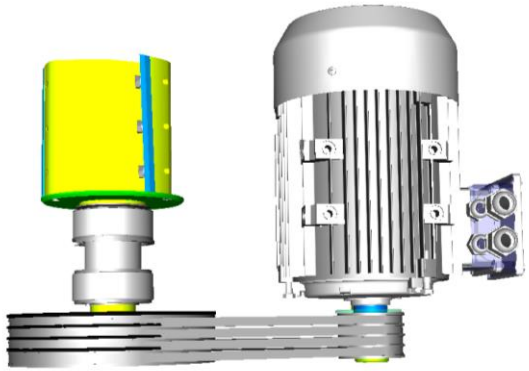


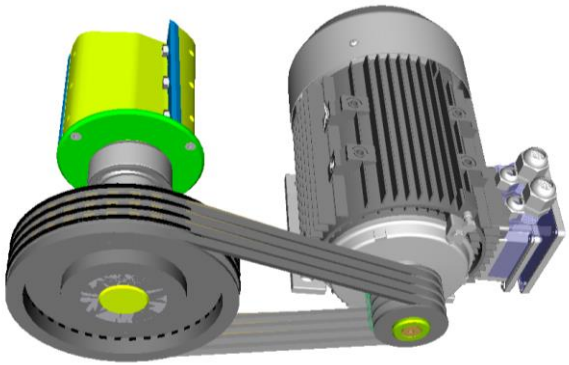
1. Beside-the-press granulators

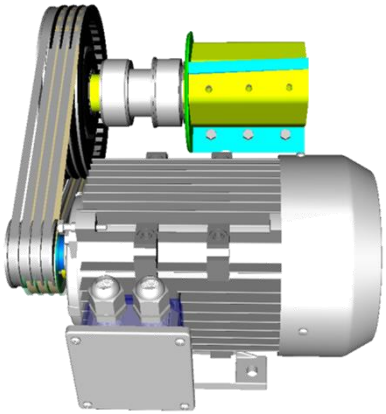
RS 1615 setup and function

- Different motor powers easily realizable

- Bearing support of the rotor
  (not by a gear motor)







1. Beside-the-press granulators

RS 1615 setup and function

- Optimum accessibility by completely swiveling cuttign chamber
- open and close without tools
- Screen can be remove simply
- Minimize dirt traps
- Suction box in drawer version

1. Beside-the-press granulators

GRS 180 – A x.x.x
GRS 300

Frame
Suction box
Trichter

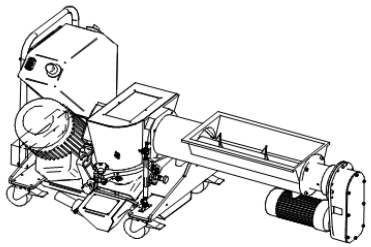
Technical datas:

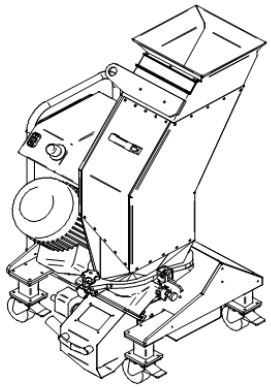
Rotor cutting circle:	180/300 mm
Cutting length:	75/125 mm
Drive power:	2,2 – 5,5 kW
Throughput:	up to 38/80 kg/h

1. Beside-the-press granulators

GRS 180/300 variations

GRS 180
–
A 00138





GRS 180
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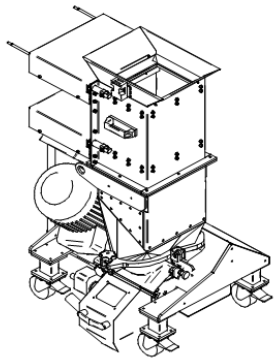
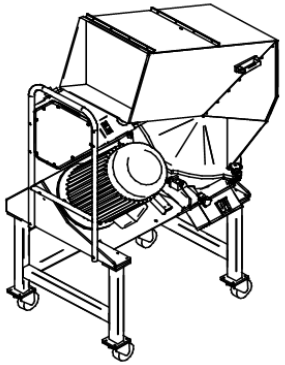
A 5.10.1

GRS 180
–
A 00136





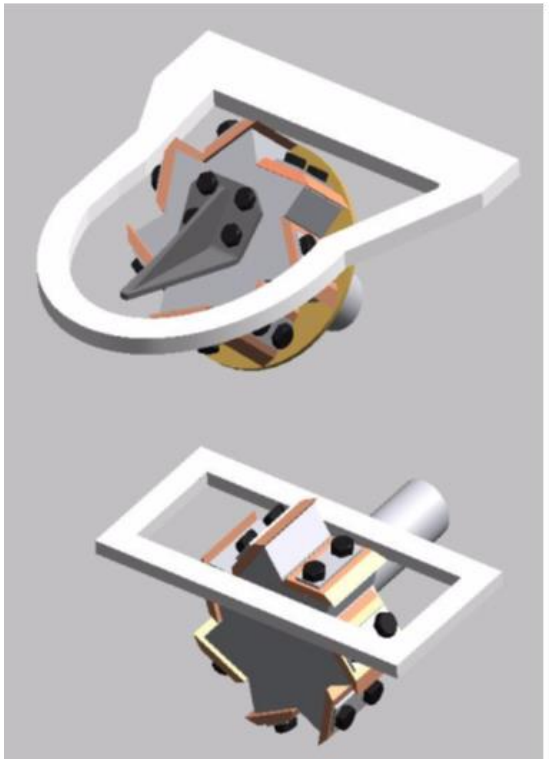
GRS 300
–
A 2.2.2

1. Beside-the-press granulators

GRS 180/300 setup and function

- Because of the inclined position of the rotor, the inlet opening is essential bigger as at horizontal mounted rotors
  -> bulky sprues are reliably detected
  -> starts with a filled hopper

- A divided grinding chamber ensures excellent accessibility
  -> fast, economical cleaning
  -> open and close without tools
  -> simple screen extraction



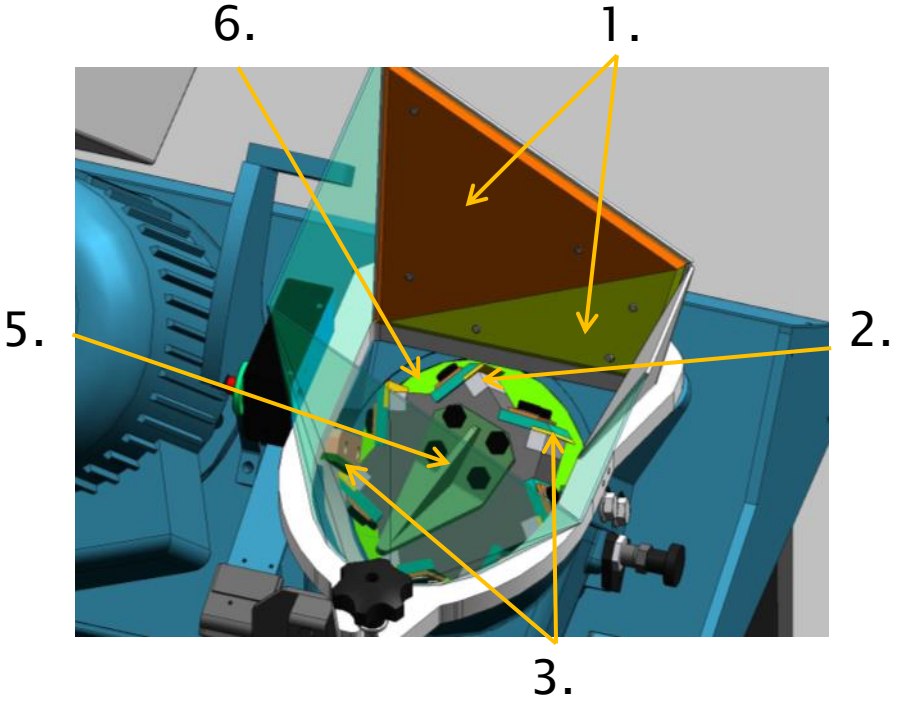
1. Beside-the-press granulators

GRS 180/300 wear and tear protection

- **Extended wear and tear protection**

consisting of:

1. Wear and tear proofed plates in the hopper (exchangeable)
2. Wear rails underneath the rotary blades
3. Rotary and stationary blades with hard metal insert
4. Screen, wear and tear proofed
5. Pre-cutter, wear and tear proofed
6. Hardened steel plate



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2. Central granulators

RS 240x, RS 300x, RS 380x, RS 450xx

2. Central granulators

RS 240x-A

	RS 2402	RS 2404	RS 2406
Cutting diameter (mm)	240	240	240
No. of rotory blades (pieces)	3	3 x 2	3 x 3
No. of stationary blades (pieces)	2	2	2
Cutting length (mm)	226	452	678
Throughput (kg/h)	60 – 100	100 – 160	150 - 220
Motor power (kW)	4,0	5,5	7,5

2. Central granulators

RS 300x-A

	RS 3004	RS 3006	RS 3009
Cutting diameter (mm)	300	300	300
No. of rotory blades (pieces)	3	3 x 2	3 x 3
No. of stationary blades (pieces)	2	2	2
Cutting length (mm)	410	630	945
Throughput (kg/h)	200 – 360	270 – 450	340 - 540
Motor power (kW)	11	15	22

2. Central granulators

RS 240x und RS 300x setup and function

Reliable in operation

- External rotor bearing with high safety factor
- Continuous cutting circle guarantees consistently good granulate quality
- Optimum distribution of cutting forces thanks to segmented rotor design
- Solid belt pulley for additional centrifugal mass

2. Central granulators

RS 240x und RS 300x setup and function

Fast, economical cleaning

- Easy-to-open hopper and cutting chamber
- Quick-release locking devices
- All components easily accessible
- Tool-free screen removal
- Smooth surfaces, machined on all sides

2. Central granulators

RS 240x und RS 300x setup and function

Individually useable

- Various rotor variants and wear-protection packages available
- Optical display of operational status
- Compact, modular design
- Additional equipment for virtually all types of applications

2. Central granulators

RS 380x-A

	RS 3806	RS 3809	RS 3812
Cutting diameter (mm)	380	380	380
No. of rotory blades (pieces)	3 x 2	3 x 3	3 x 4
No. of stationary blades (pieces)	2	2	2
Cutting length (mm)	630	945	1.260
Throughput (kg/h)	600	800	1.100
Motor power (kW)	22	22	30

2. Central granulators

RS 450xx-A

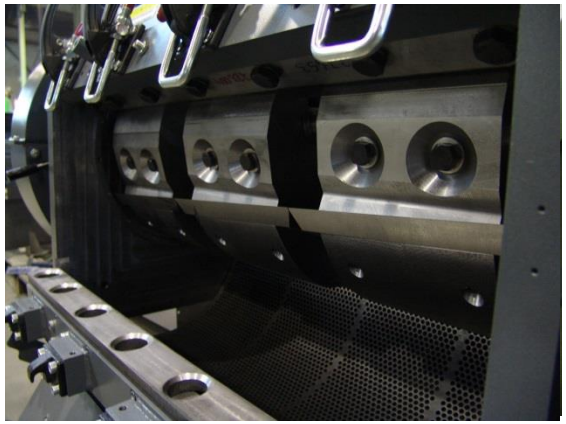
	RS 45060	RS 45090	RS 45120
Cutting diameter (mm)	450	450	450
No. of rotory blades (pieces)	3 x 2	3 x 3	3 x 4
No. of stationary blades (pieces)	2	2	2
Cutting length (mm)	600	900	1.200
Throughput (kg/h)	600	900	1.200
Motor power (kW)	30	37	45

2. Central granulators

RS 380x und RS 450xx setup and function

A smart rotor

- Rotor segments are mounted on a steel shaft with couplings
- It is possible to replace individual rotor components
- Segments with opposing blade angles keep the material in the middle of the rotor (v-cut)
- Constant cutting circle diameter guarantees consistent throughput and granulate quality
- Short rotary blades simplify handling when replacing blades
- Unlimited rotor configuration (offset or continuous cut)

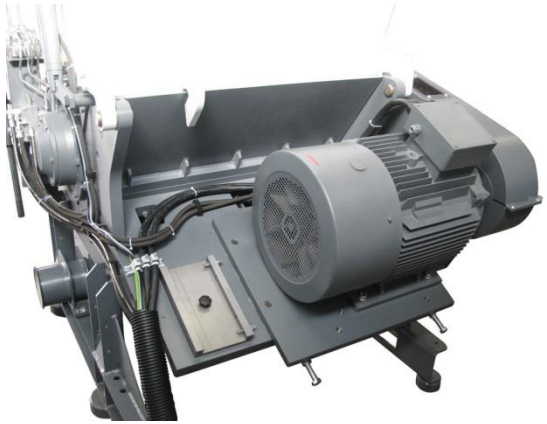


2. Central granulators

RS 380x und RS 450xx setup and function

Developed on the basis of practical experience

- Hopper opens easily by means of manual hydraulic system
- Very good machine accessiblility for cleaning an servicing
- Sreen is usable on both sides and can be removed without tools
- Stator blade is mounted against a positive stop
- Individual variation of components
- Integrated noise protection
- Blade adjustment gauge included

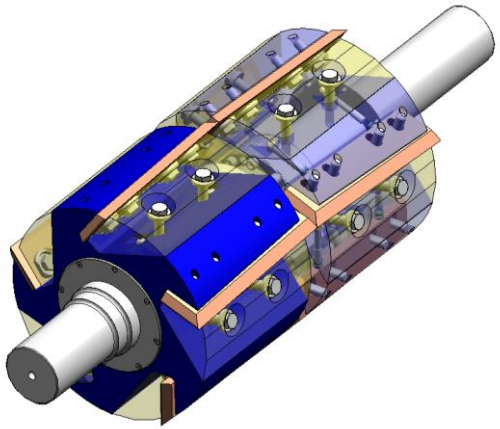


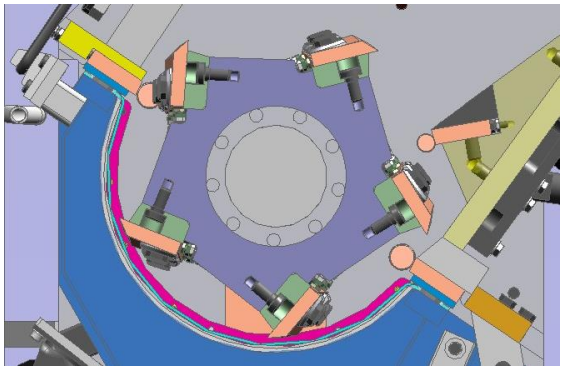
2. Central granulators

RS 380x und RS 450xx setup and function

Versatile in use

- Five-blade rotor for higher throughput
- Third stationary blades for thick-walled parts
- Additional flywheel (optional) ensures even more traction
- Wear-protection for abrasive materials





2. Central granulators

B-Version for blow moulding applications

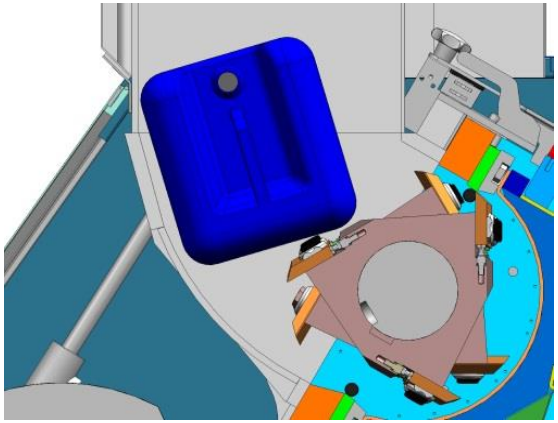
Available for the following series:

- RS 2404
- RS 3004
- RS 3806

2. Central granulators

Setup and function of B-Version

- Super-tangential inlet



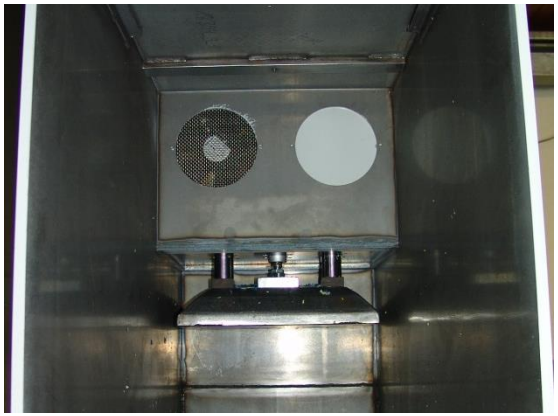
- Staggered rows of blades possible

2. Central granulators

Setup and function of B-Version

- Additional cooling fan in the hopper

- Indenter is possible



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3. Heavy-duty granulators

RS 600x, RS 800x

3. Heavy-duty granulators

RS 600x-A

	RS 6006	RS 6009	RS 6012	RS 6015
Cutting diameter (mm)	600	600	600	600
No. of rotory blades (pieces)	3 x 2	3 x 3	3 x 4	3 x 5
No. of stationary blades (pieces)	2	2	2	2
Cutting length (mm)	600	900	1.200	1.500
Throughput (kg/h)	600-1.000	600-1.500	800-2.000	1.000-2.500
Motor power (kW)	45	55	75	75

3. Heavy-duty granulators

RS 800x-A

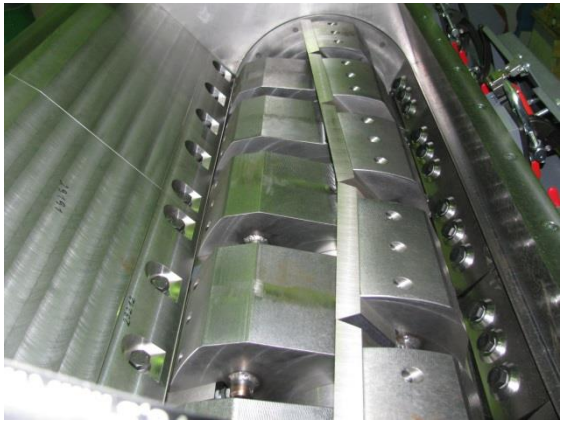
	RS 8012	RS 8015
Cutting diameter (mm)	800	800
No. of rotory blades (pieces)	3 x 4	3 x 5
No. of stationary blades (pieces)	2	2
Cutting length (mm)	1200	1500
Throughput (kg/h)	2.500	3.000
Motor power (kW)	110	110

3. Heavy-duty granulators

RS 600x und RS 800x setup and function

Designed for practical use

- Rugged, smooth-running, heavy-duty segmented rotor
- Rotor segments mounted on shaft with couplings, permits replacement of individual components
- Optimized airflow minimizes noise level and heat built-up
- Well-proven special rotors for various tasks
- Modular design for individual adaptation
- Integrated noise protection is possible



3. Heavy-duty granulators

RS 600x und RS 800x setup and function

Reliable in operation

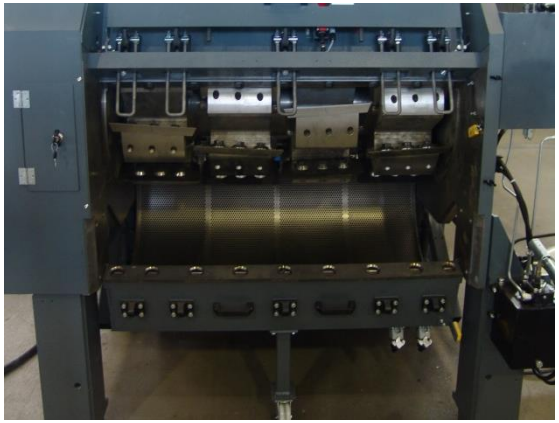
- Solid belt pulley ensures even more traction
- Continuous cutting circle guarantees consistently good granulate quality
- Rotor bearings positioned outside of the grinding chamber
- Optical display of operational status
- Smooth drive motor start to avoid current peaks

3. Heavy-duty granulators

RS 600x und RS 800x setup and function

Easy to clean

- Hopper and screen cradle open and close easy by hydraulic cylinder
- Minimal cleaning an maintenance time by virtue of pre-adjustable rotary blades
- Short rotary blades simplify handling when replacing blades
- Screen cradle can be rolled completely out of the machine
- Optimal machine accessibility

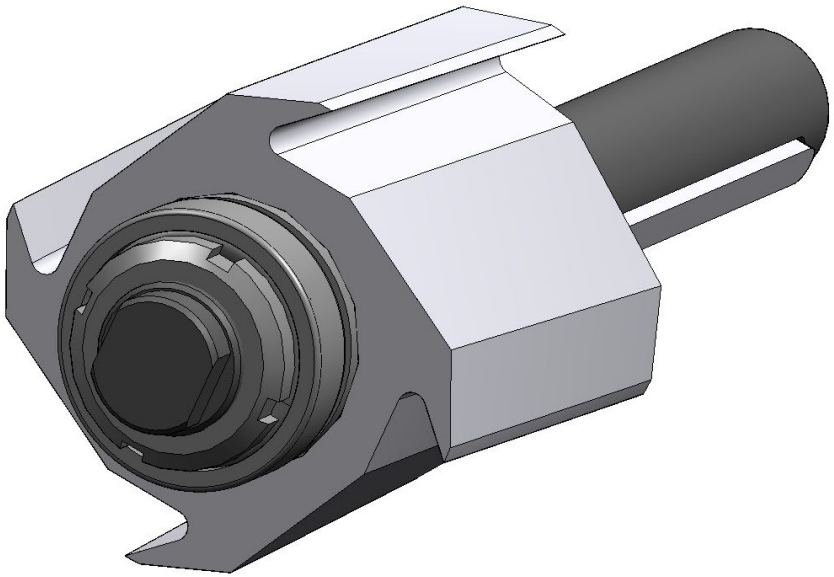


4. Rotors

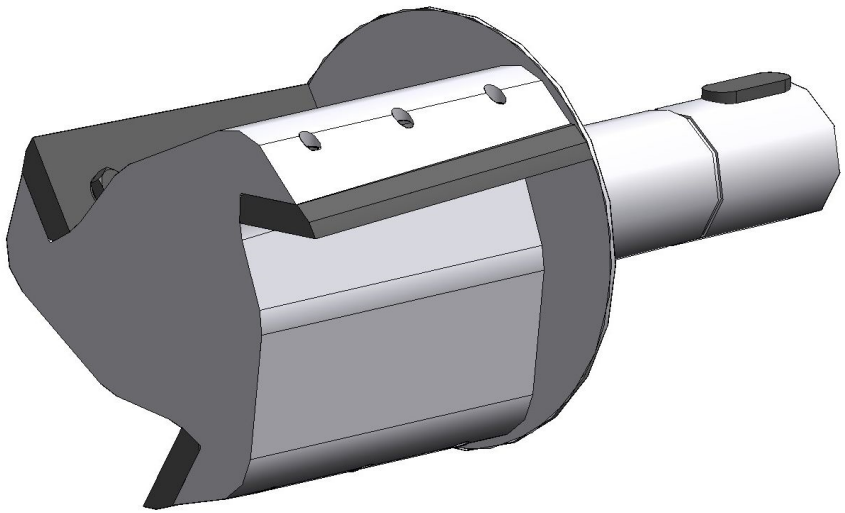
Different types

4. Rotors

RS 100

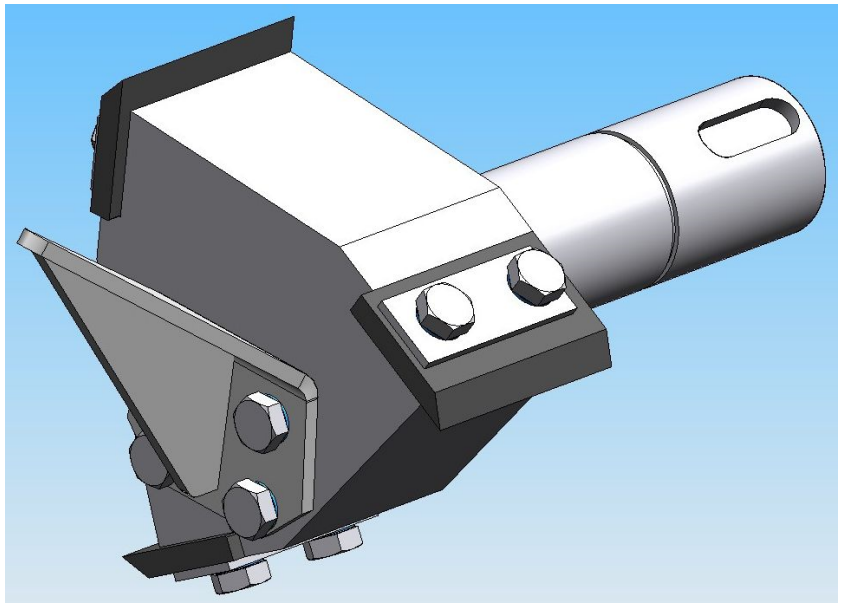


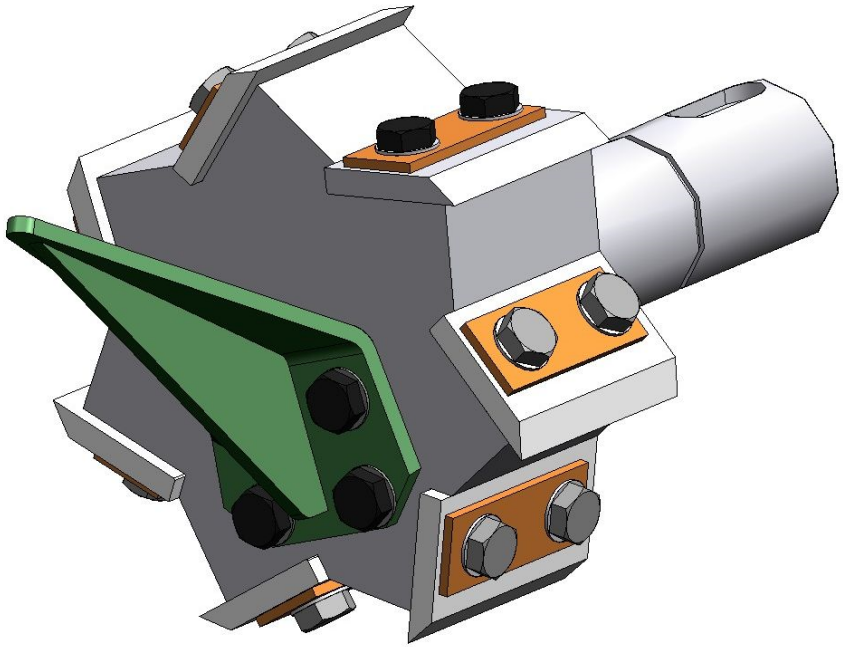
RS 1615



4. Rotors

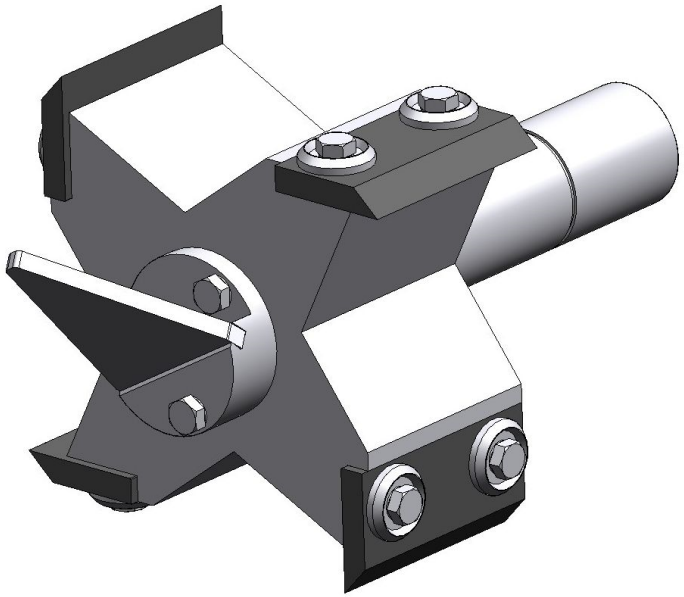
GRS 180

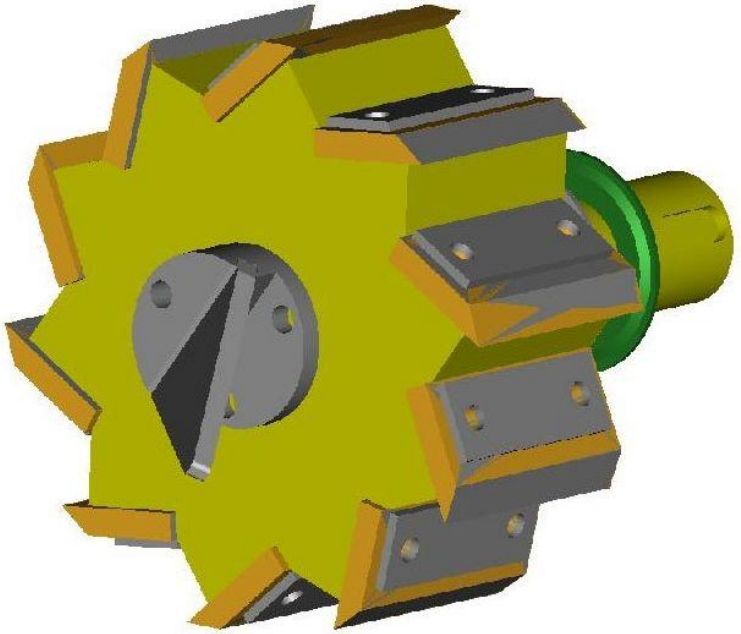




4. Rotors

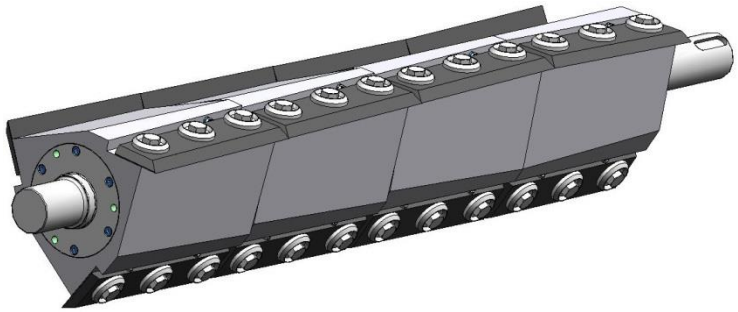
GRS 300

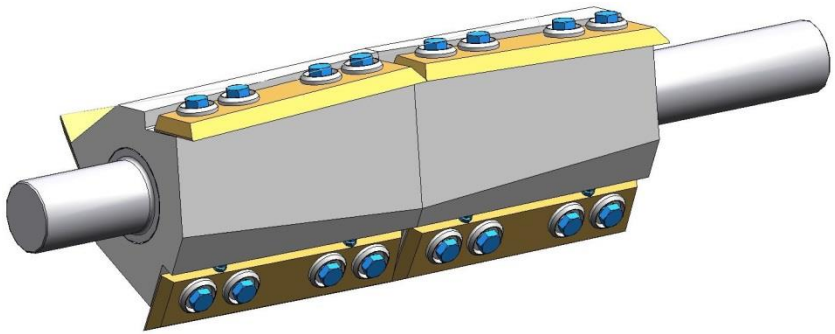




4. Rotors

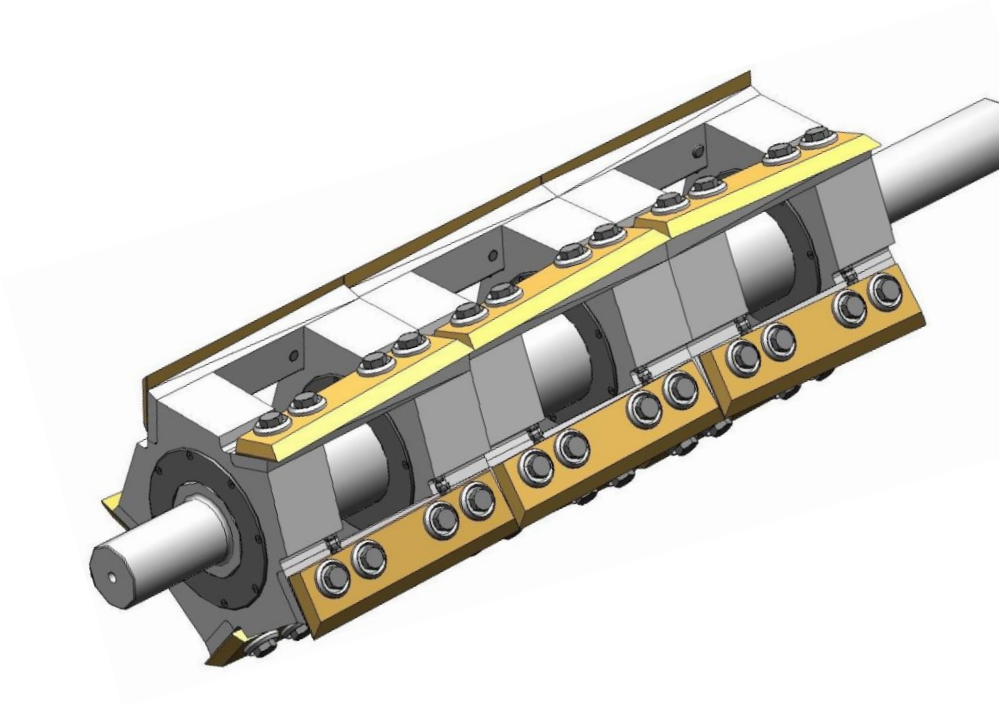
Cast-segmented-rotor

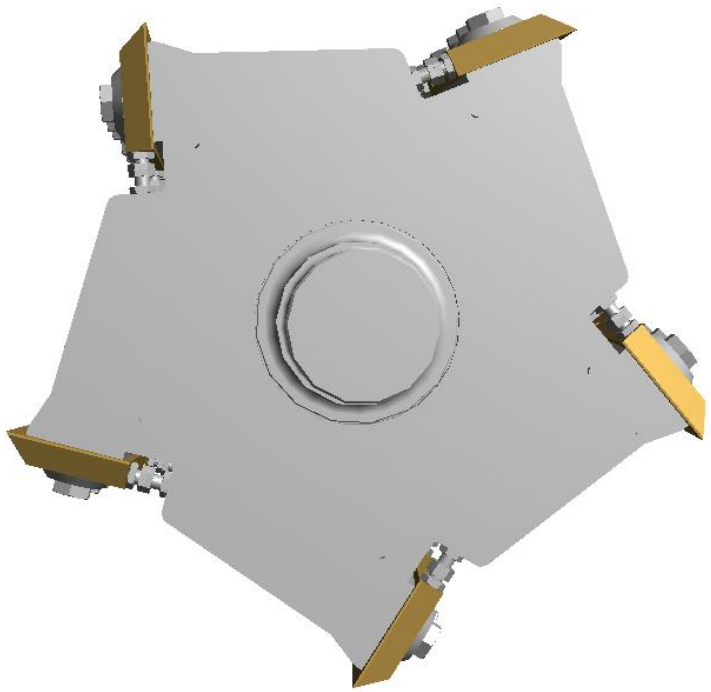




4. Rotors

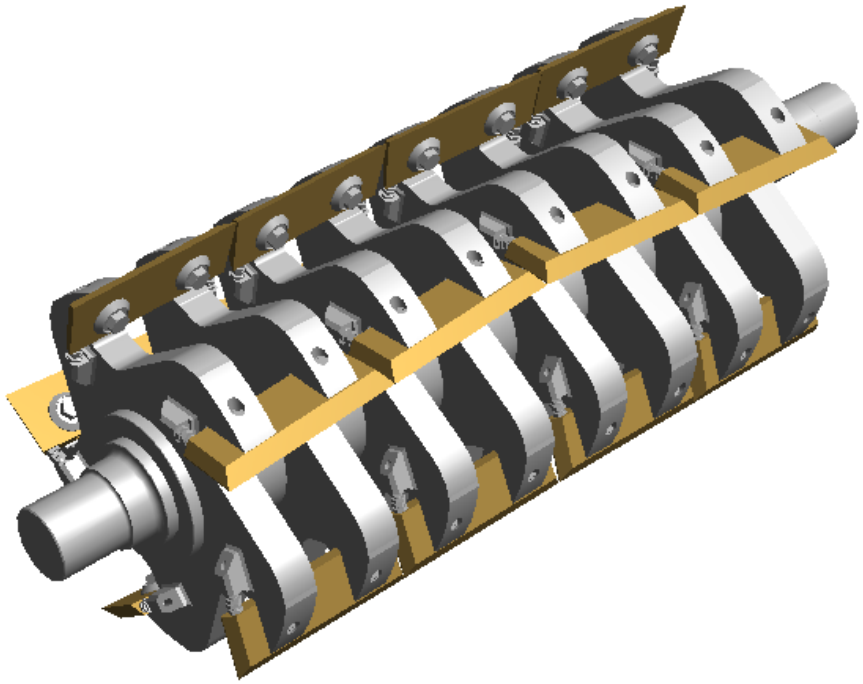
Open-segmented-rotor

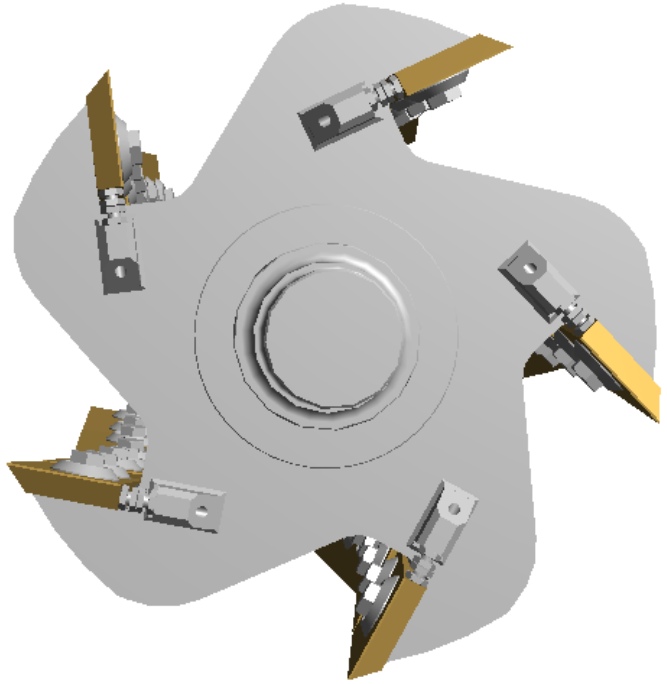




4. Rotors

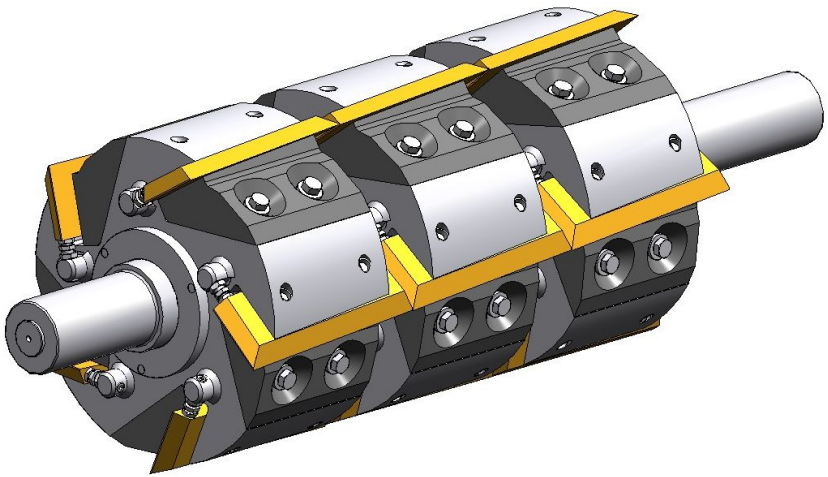
Open-hook-segmented-Rotor

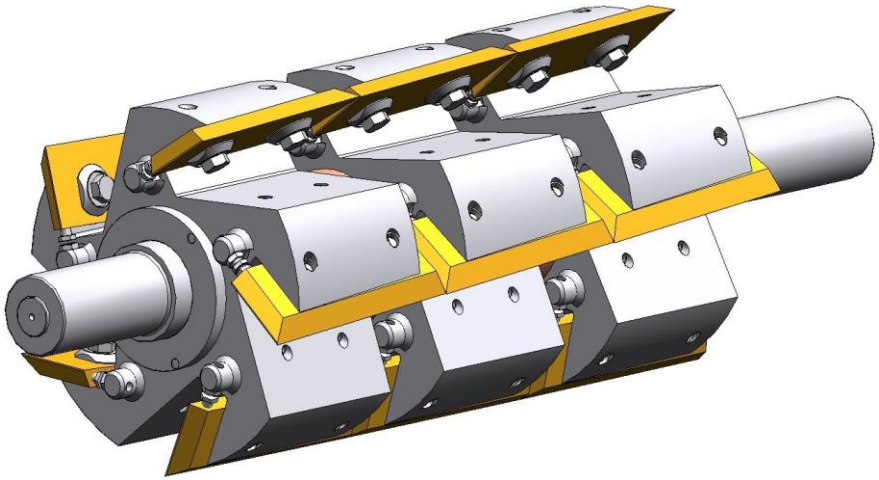




4. Rotors

Variation-rotor





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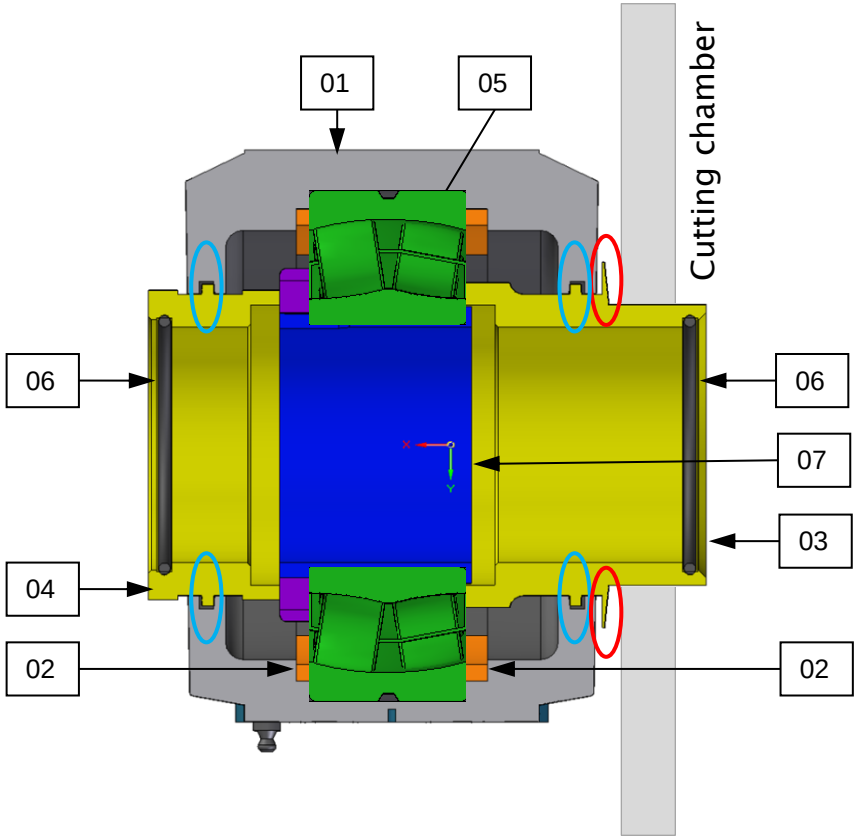
5. Bearings

Pillow block bearing
and
Flange bearing

5. Bearings

Pillow block bearing (fixed bearing)

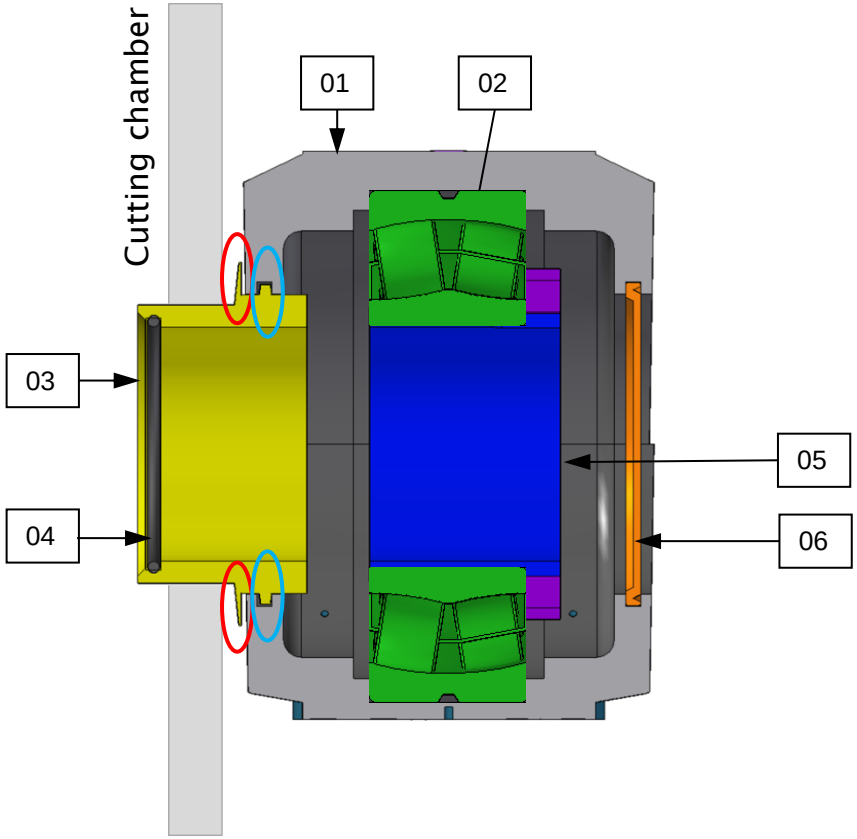


- Double-row cylindrical roller bearings
- Sealing (labyrinth sealing) and free space for cutting chamber with centrifugal disc
- Fixed bearing on the drive side

Pos.	Anzahl	Benennung
01	1	Pillow block bearing
02	2	Distance ring
03	1	Fixed ring-bearing-rotor
04	1	Fixed ring-bearing-v-belt pulley
05	1	Ball joint bearing
06	2	O-ring
07	1	Clamping sleeve

5. Bearings

Pillow block bearing (movable bearing)

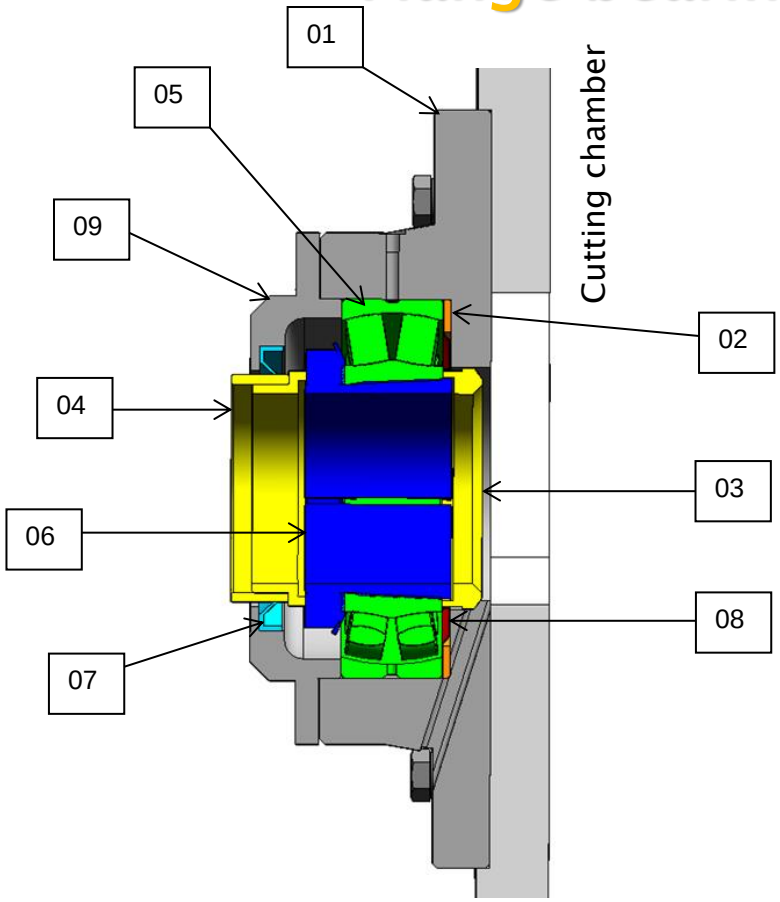


- Double-row cylindrical roller bearings
- Sealing (labyrinth sealing) and free space for cutting chamber with centrifugal disc
- Fixed bearing on the drive side

Pos.	Anzahl	Benennung
01	1	Pillow block bearing
02	1	Ball joint bearing
03	1	Thrower ring
04	1	O-Ring
05	1	Clamping sleeve
06	1	Bearing cover

5. Bearings

Flange bearing (fixed bearing)



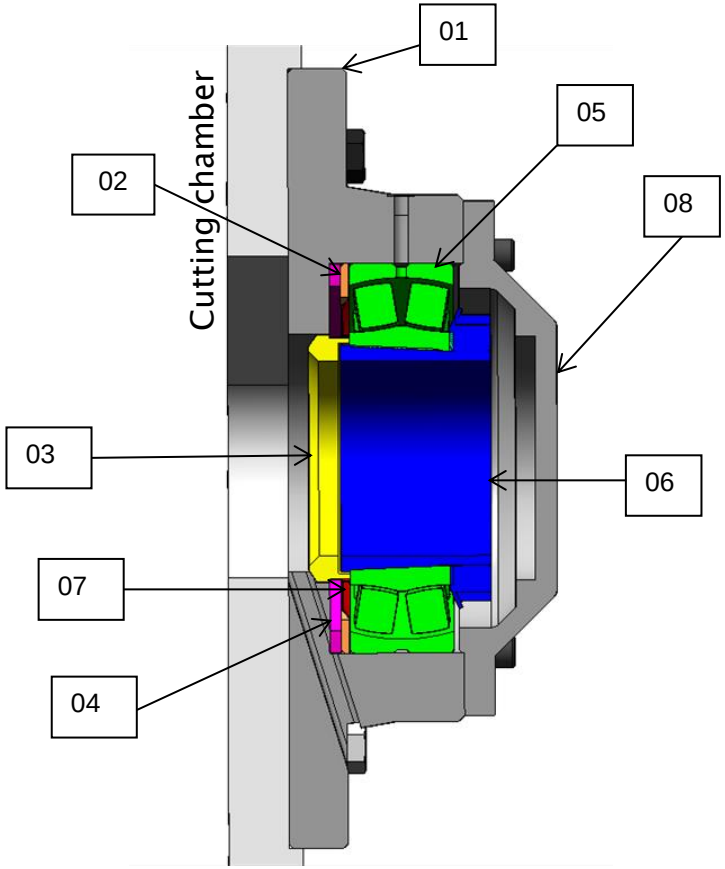
- Double-row cylindrical roller bearings
- Free space in the bearing with dust outlet duct
- Advantage compared to pillow block bearings: The stress points of the two bearings are closer to each other

Used in the series
RS 6000, RS 45000 und RS 2400

Pos.	Anzahl	Benennung
01	1	Bearing flange
02	1	Distance ring
03	1	Fixed ring-bearing-rotor
04	1	Fixed ring-bearing-v-belt pulley
05	1	Ball joint bearing
06	1	Clamping sleeve
07	1	Rotory shaft seal
08	1	Sealing ring
09	1	Bearing cover

5. Bearings

Flange bearing (movable bearing)



- Double-row cylindrical roller bearings
- Free space in the bearing with dust outlet duct
- Fixed bearing on the drive side
- Advantage compared to pillow block bearings: The stress points of the two bearings are closer to each other

Used in the series
RS 6000, RS 45000 und RS 2400

Pos.	Anzahl	Benennung
01	1	Bearing flange
02	1	Distance ring
03	1	Fixed ring-bearing-rotor
04	1	Bearing adjustment
05	1	Ball joint bearing
06	1	Clamping sleeve
07	1	Sealing ring
08	1	Bearing cover

6. Problems and Solutions

Miscellaneous

6. Problems and solutions

Problem: Long parts in regrind

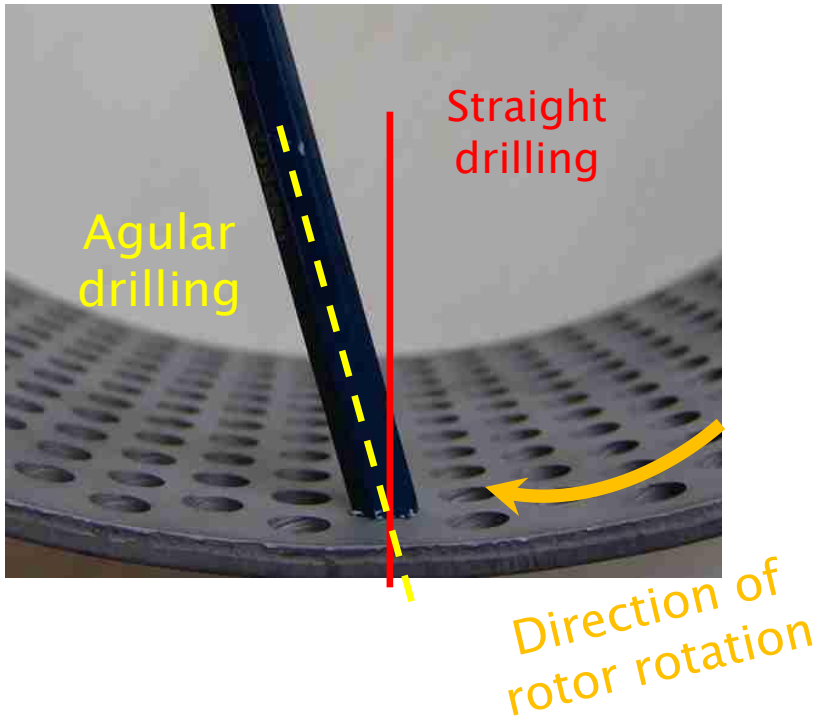
- When granulating sprues or other applications where long parts are thinner than the screen holes, they can fall through the screen before they are gathered and cutted by the rotor blades. So long parts can occur in the regrind.

- This "long parts" may lead to disturbances in the further processing of the material in dosing or at the screw entrance of the extruder.

6. Problems and solutions

Solution: Angular drilled screen

- The „long part“ is supported on the angular drilling and is braked. This is sufficient until the next rotor blade comes and cut the long part again.



6 Problems and solutions

Solution: Angular drilled screen

- 6 mm standard screen

- 6 mm angular drilled screen

6. Problems and solutions

Problem: Throughput is too low

- In one for the application actually suitable grinder, the throughput of the grinder is too low. It must be found a solution to raise the throughput for a little, to satisfy the requirement.

6. Problems and solutions

Solution: Increasing the number of cuts at the same rotor speed

- The 3-blade rotor is replaced with a 5 blade rotor. Thus the number of 6 cuts per rotation will be increased to 10 cuts per rotation, when using 2 stator blades. It is expected a higher rate of approx. 25-30%.
- The use of a third stator blade increases the number of cuts by half and therefore the throughput about approx. 10-12%.
- In the grinder RS 600x and 800x can be installed a 4th stator blade. This increases the number of cuts by one third and therefore the throughput about further 10-12%.

6. Problems and solutions

Problem: Very massiv material

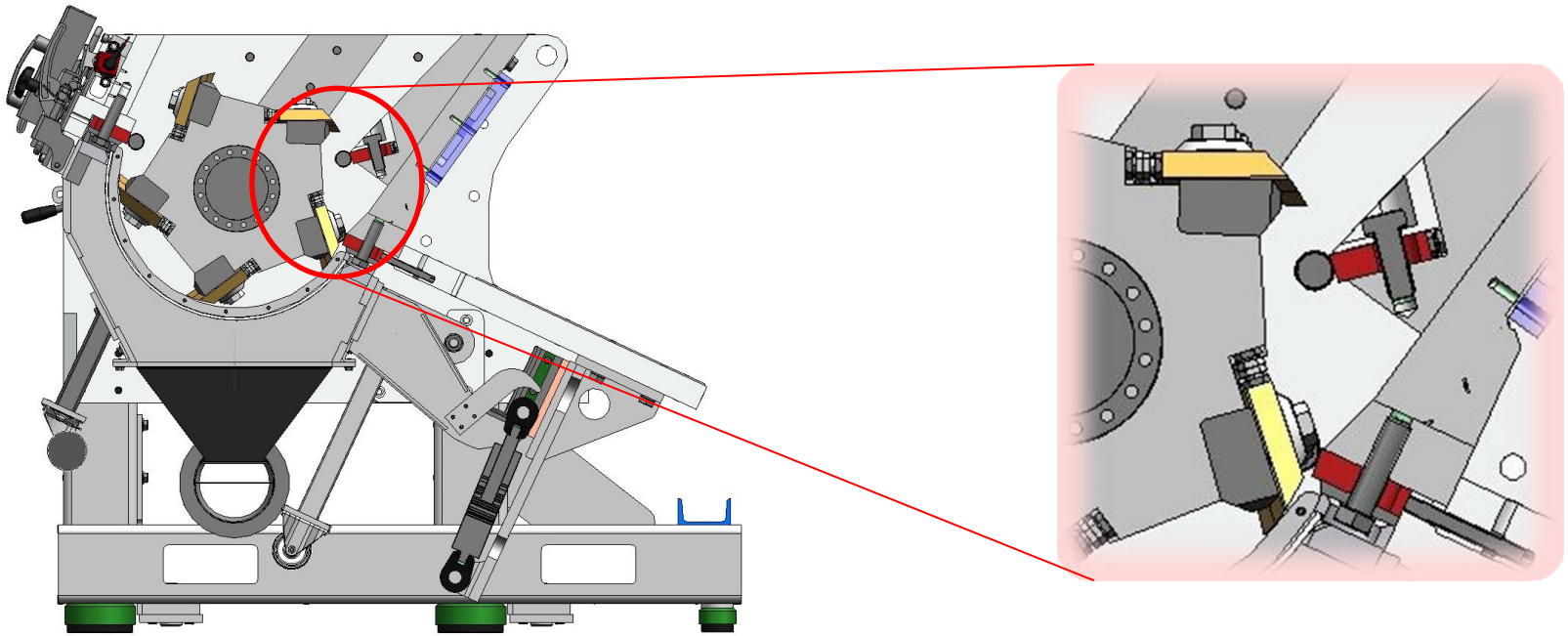
- At thick lumps or plates a very long cut results from the tangential cutting path of the rotor blade through the material. This increases the force needed to pass through the material.

- In case of very thick lumps, the material penetrates too deeply into the rotor. Thereby the cutting can`t be done by the grinder. There is a risk that the granulator stops.

6. Problems and solutions

Solution: 3rd stator blade as pre-cutting blade

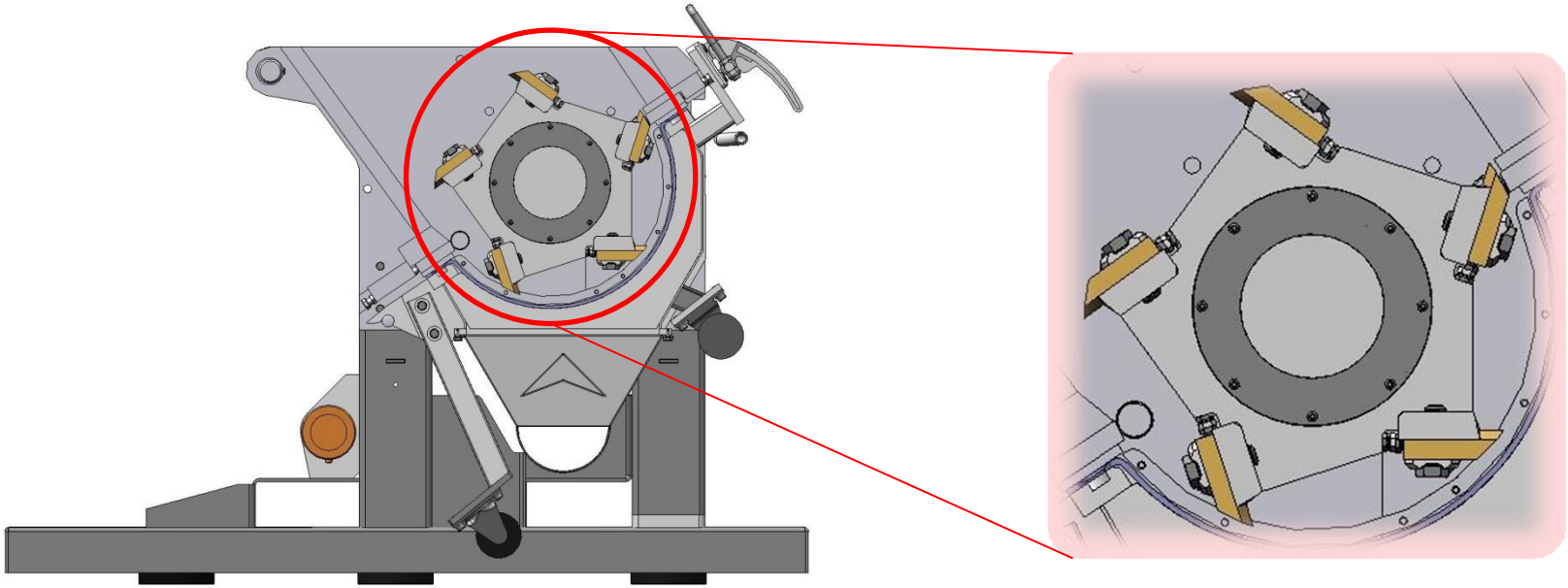
- Up from the series 380x the 3rd stator blades can be used as a pre-cutting blade. Because of the location of this 3rd stator blade the cutting length is shortened.



6. Problems and solutions

Solution: 5-blade rotor

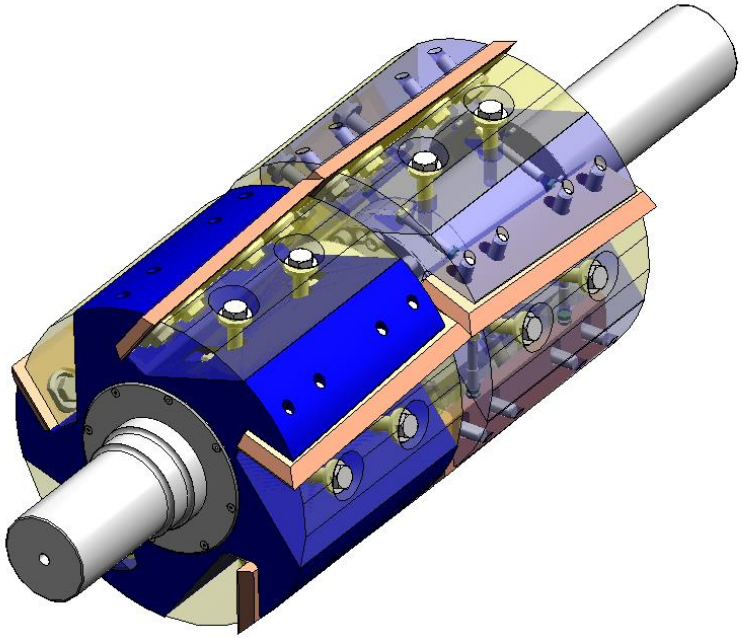
- By using a 5-blade rotor, the lump cannot penetrate as deeply into the rotor, because the space between the blades is smaller. Thus, the lump will be cutting at the edge and not in the center where the lump is usually more massive.

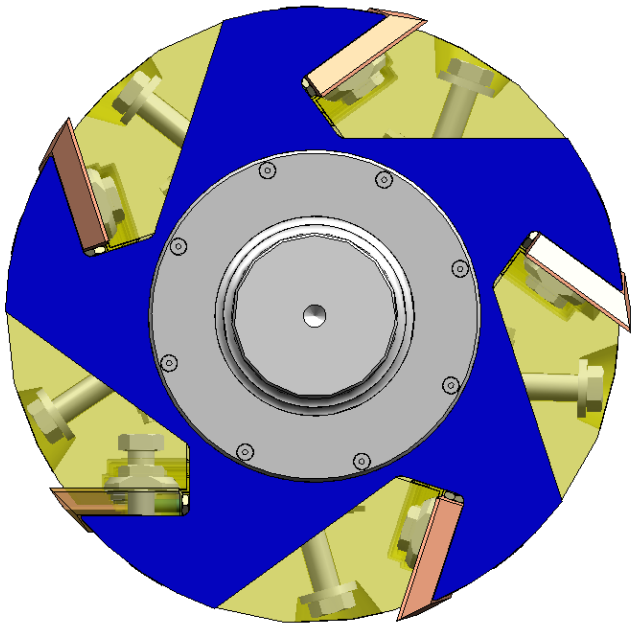


6. Problems and solutions

Solution: 5-blade rotor or variation rotor

- At extremely massive lumps, deeper penetration of the material can be prevented by a closed variation rotor. The rotor nibbling off piece by piece of the lump.





GETECHA

7. Dimensioning of granulators

Blow moulding, parts und sprues

7. Dimensioning of granulators

Specification for granulators injection moulding

getecha
INDIVIDUALITÄT IST UNSER STANDARD

Project:	
Remarks:	

Autom. feeder (conveyor) ☐ No ☐ Yes ☐ conveyor belt ☐ _____

Autom. feeder welcome ☐ No ☐ Yes ☐ conveyor belt ☐ _____

Material ☐ PS ☐ PP ☐ PA ☐ PE ☐ PC ☐ TPE ☐ ABS ☐ _____

Additives ☐ No ☐ fibre ☐ chalk ☐ _____ percentage _____%

Time of cycle _____ s Feeding per cycle _____ kg _____ m^3

Sprue-weight _____ g

Throughput _____ kg/h

Screen _____ mm ☐ angled screen

7. Dimensioning of granulators

Conveying of regrind ☐ vacuum conveyor ☐ suction unit ☐ box

Material dedusting ☐ Yes ☐ No

Exhaust air dedusting ☐ filtering bag ☐ cartridge filter

Faulty parts

☐ need to be grinded

☐ need not to be grinded

Form: _____

Weight: _____ kg

Dimensions: _____ x _____ x _____ mm

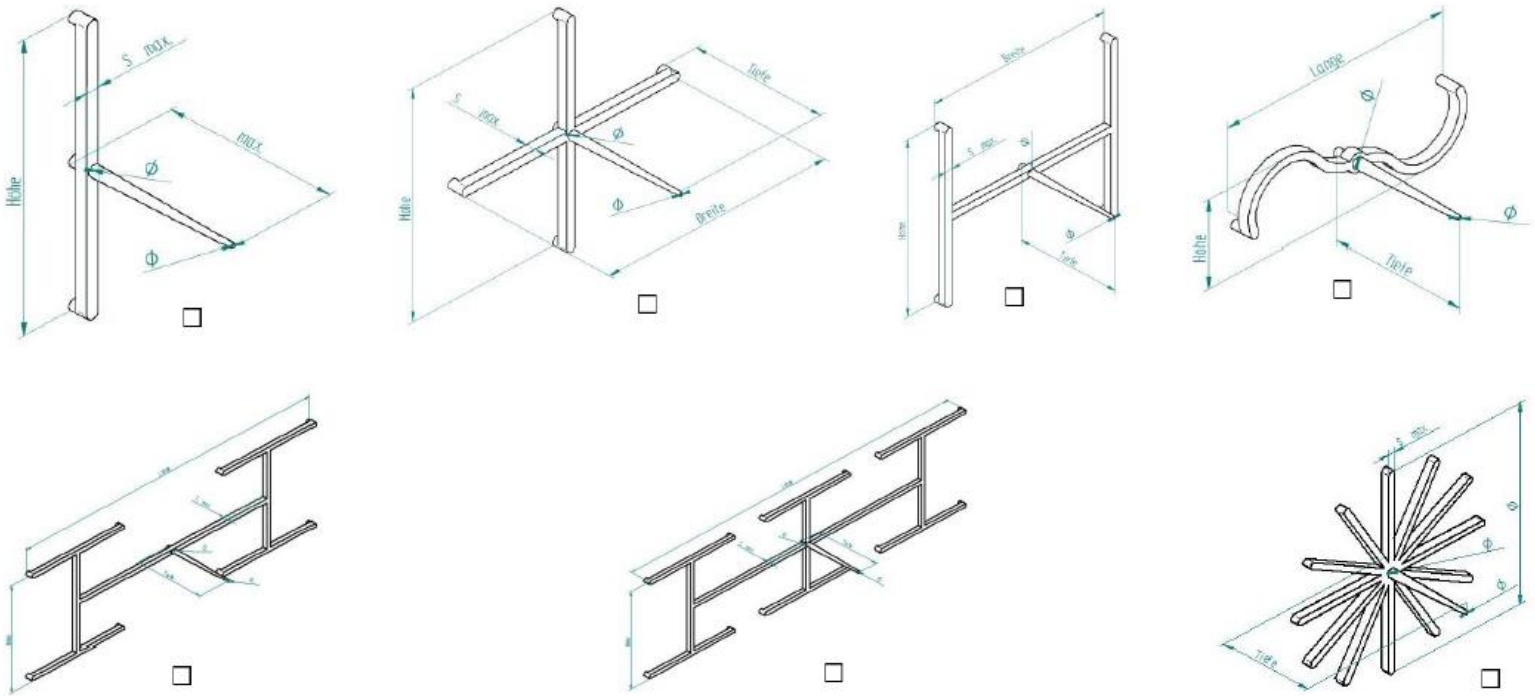
Wall thickness: _____ mm

Throughput: _____ kg/h

Special wishes:

7. Dimensioning of granulators

Angußformen / sprue forms



Many thanks
for your attention

Getecha GmbH