

**RS 3800-A**

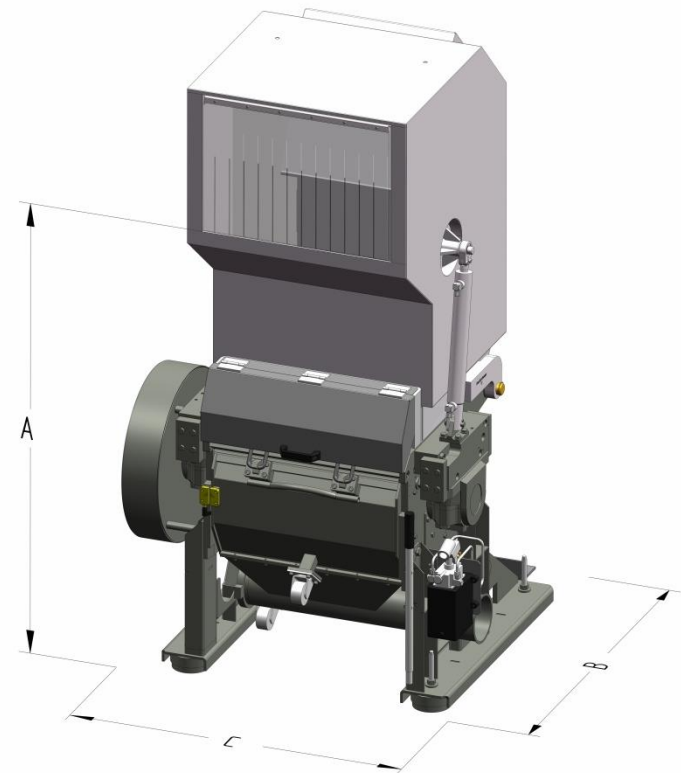
**Devours large  
volumes quietly**

# RS 3800-A

## Sizes

	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
A	1.550 mm	1.550 mm	1.550 mm
B	1.190 mm	1.190 mm	1.190 mm
C	1.290 mm	1.605 mm	1.920 mm

\* Depending on screen size and material



# RS 3800-A

## Modular design

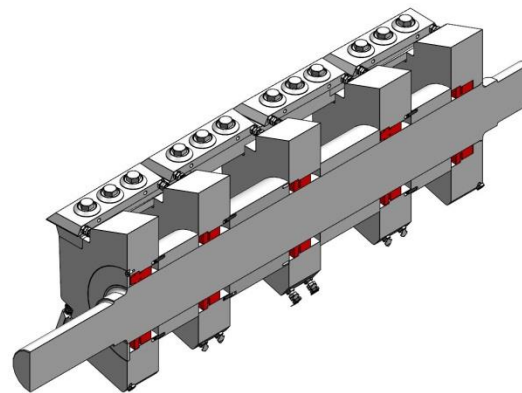
- Individual variation of components
- Integrated noise protection
- Blade adjustment gauge included



# RS 3800-A

## A smart rotor

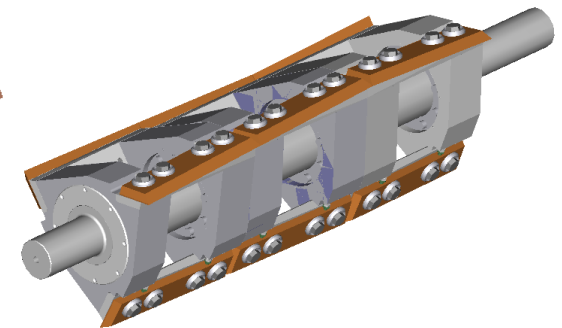
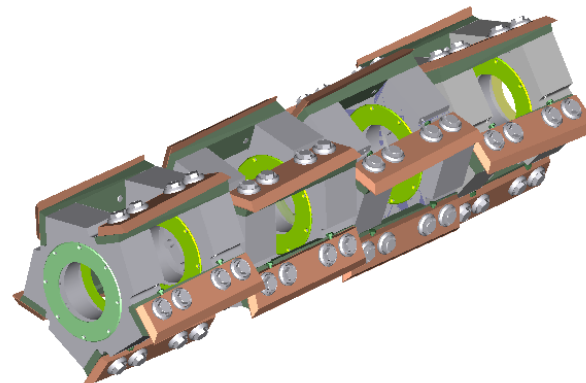
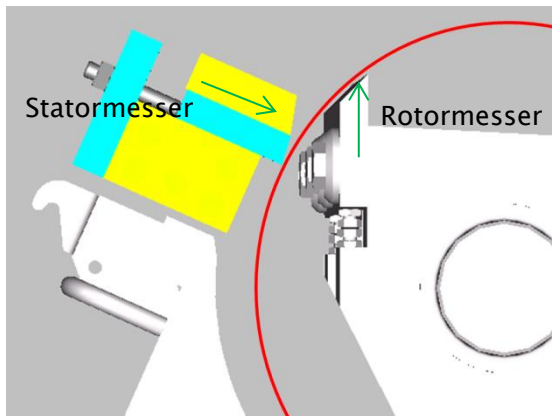
- Rotor segments are mounted on a steel shaft with couplings
- It is possible to replace individual rotor components
- Segments with opposing blade angles keep the material in the middle of the rotor (v-cut)



# RS 3800-A

## A smart rotor

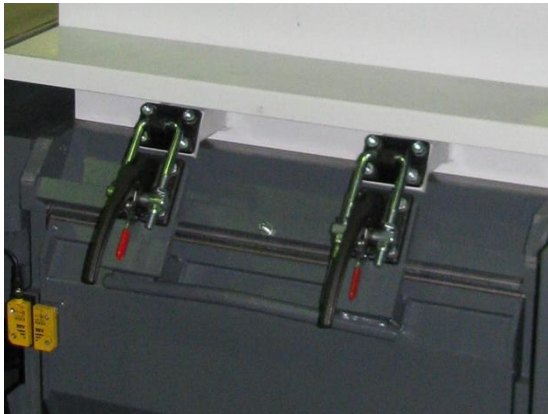
- Constant cutting circle diameter guarantees consistent throughput and granulate quality
- Short rotary blades simplify handling when replacing blades
- Unlimited rotor configuration (offset or continuous cut)



# RS 3800-A

## Developed on the basis of practical experience

- Tool-free opening of the grinder
- Hopper opens easily by means of manual hydraulic system

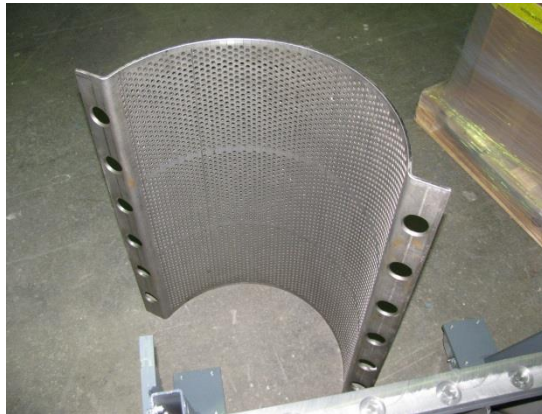




# RS 3800-A

## Developed on the basis of practical experience

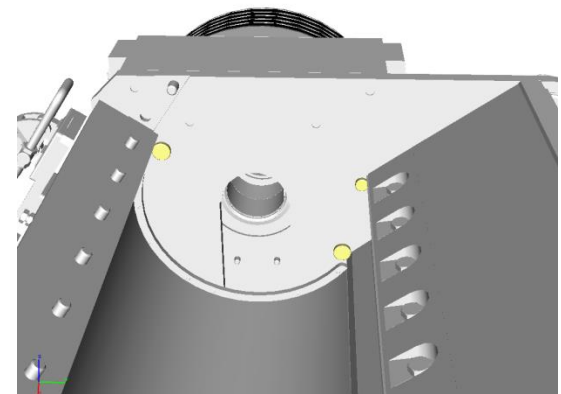
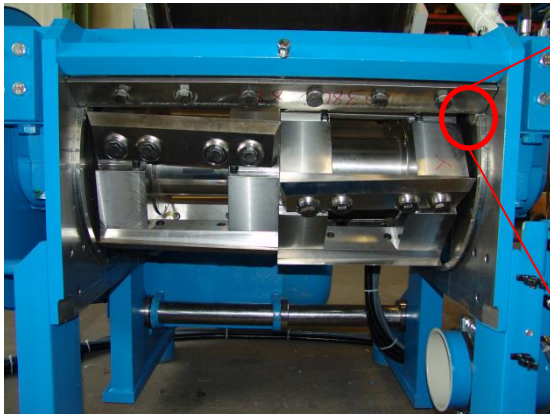
- Very good machine accessibility for cleaning and servicing
- Screen is useable on both sides and can be removed without tools



# RS 3800-A

## Developed on the basis of practical experience

- Stator blade is mounted against a positive stop

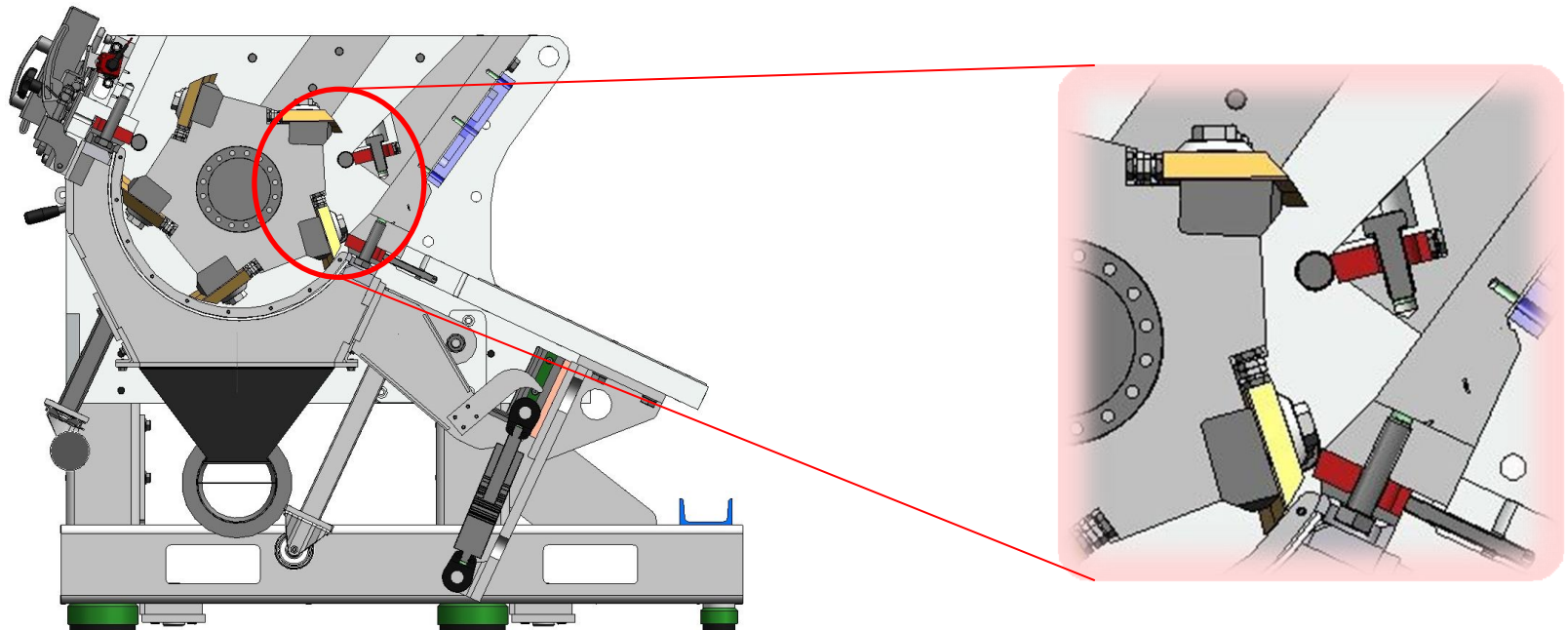




# RS 3800-A

## Versatile in use

- Five-blade rotor for higher throughput
- Third stationary blades for thick-walled parts



# RS 3800-A

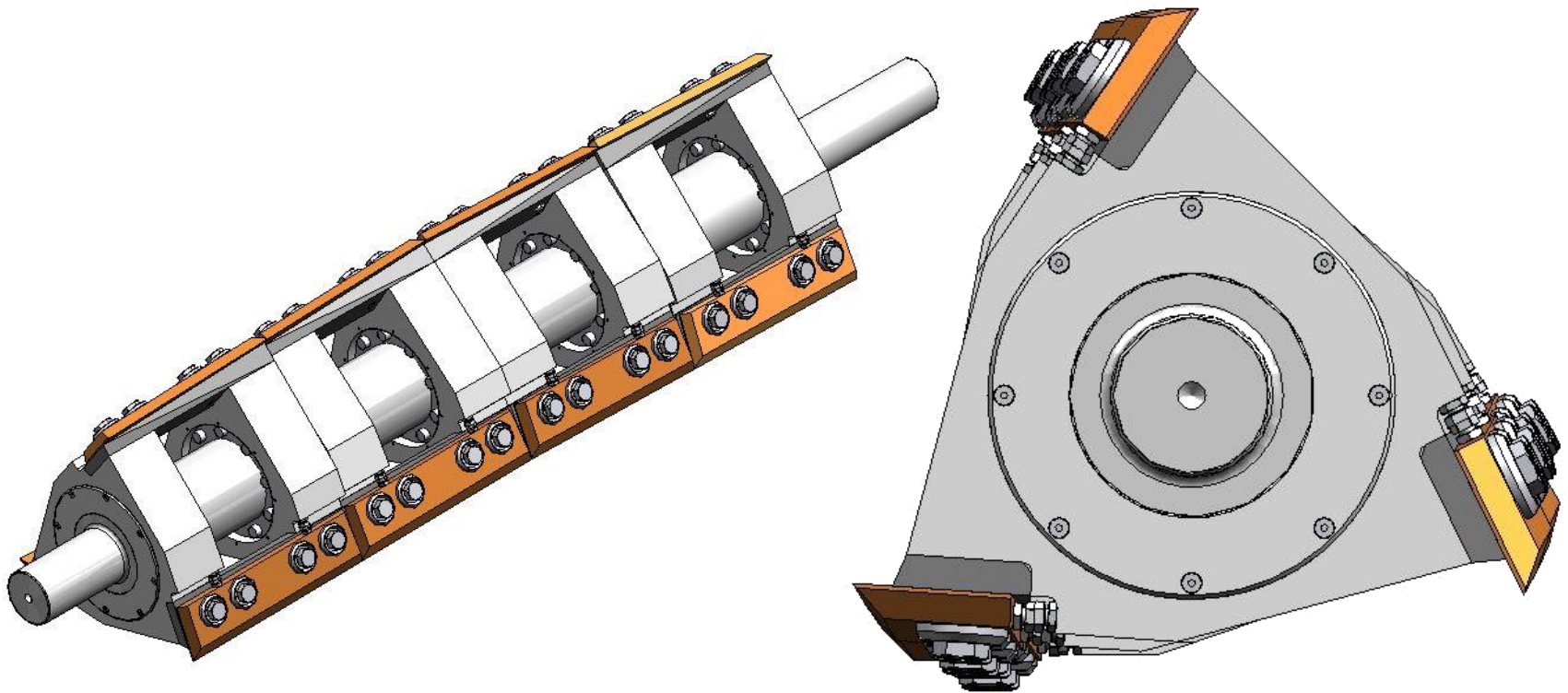
## SECURITY is a top priority

- A safety limit switch at the hopper and the screen tray guarantee a opening only when the rotor is at a standstill
- A switch on of the grinder is only possible if screen tray and hopper are completely closed



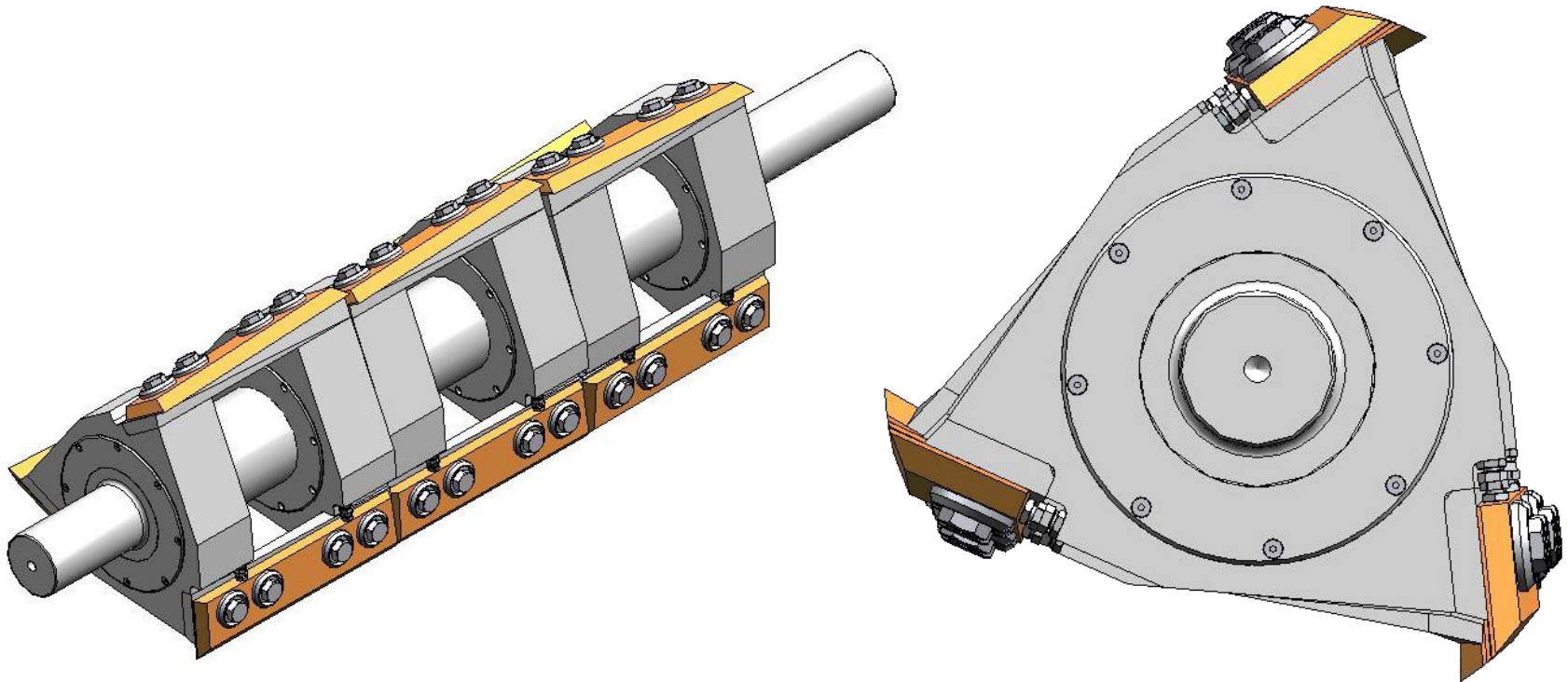
# RS 3800-A

## 3 blade open segment rotor



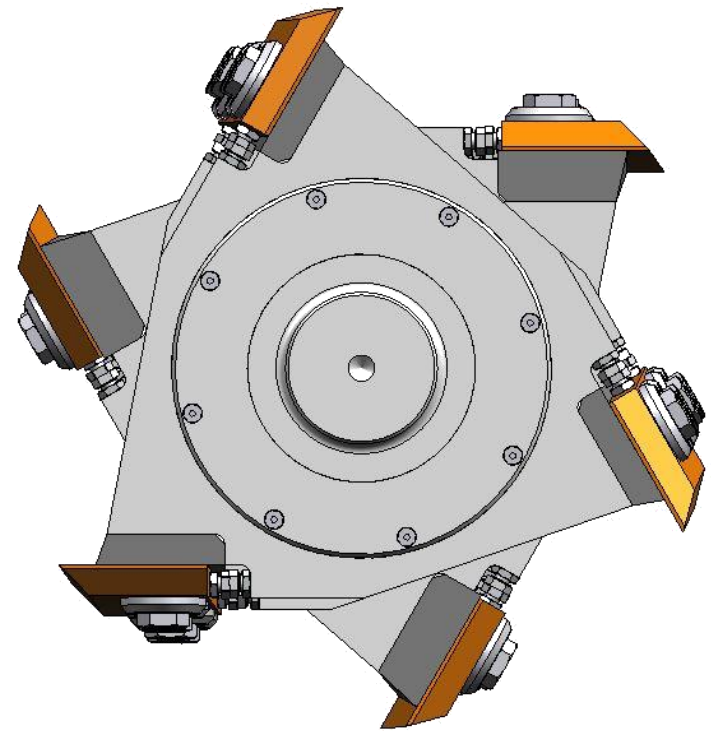
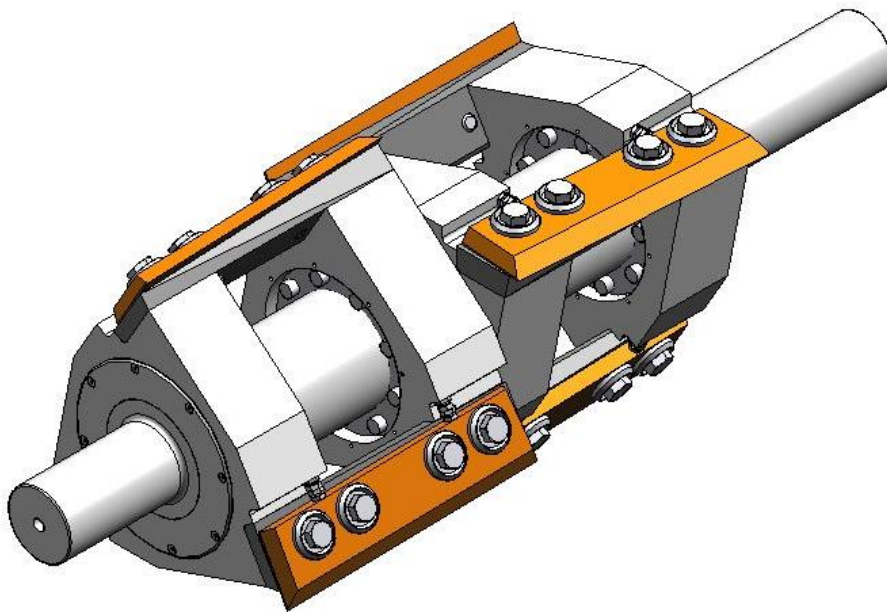
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3 blade open segment rotor  
5° staggered



# RS 3800-A

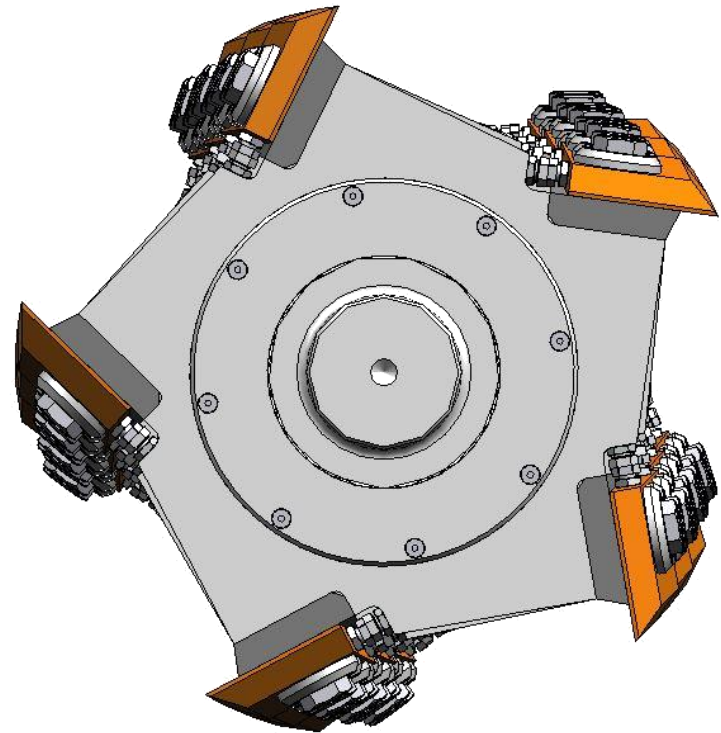
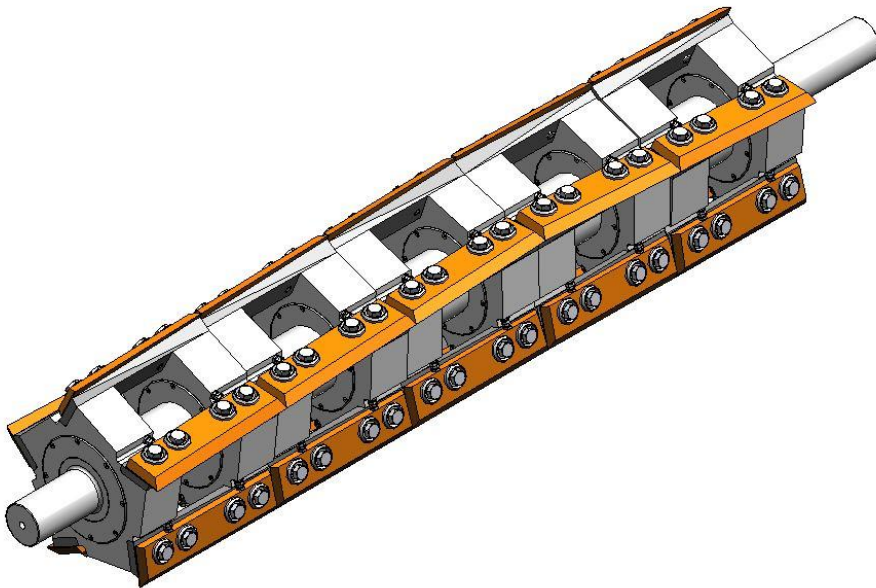
3 blade open segment rotor  
60° staggered





# RS 3800-A

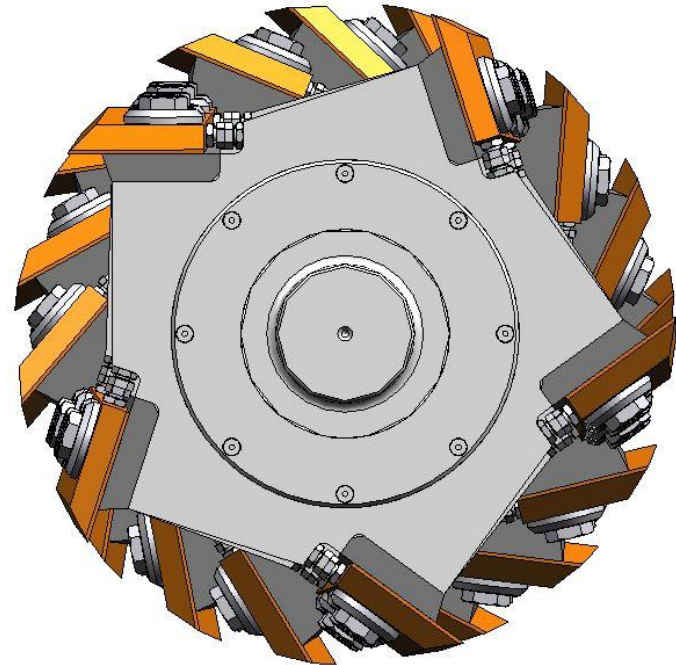
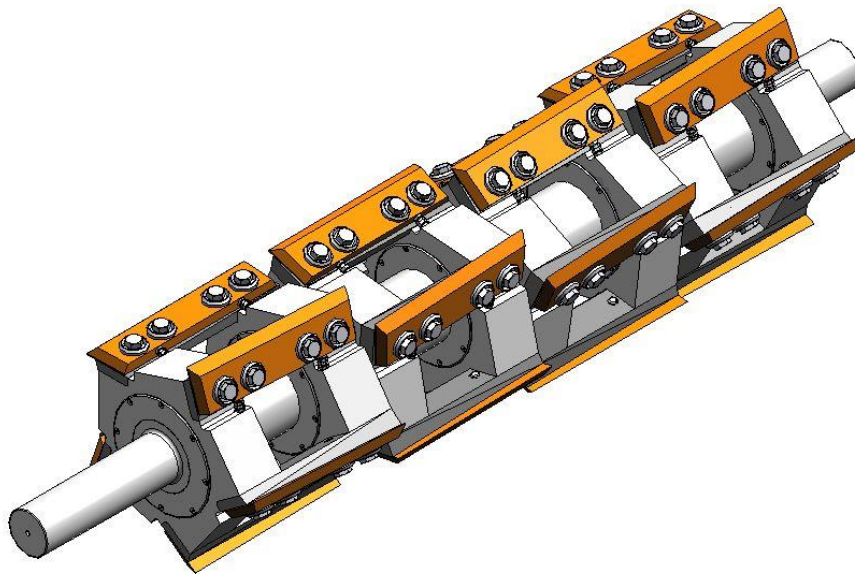
## 5 blade open segment rotor





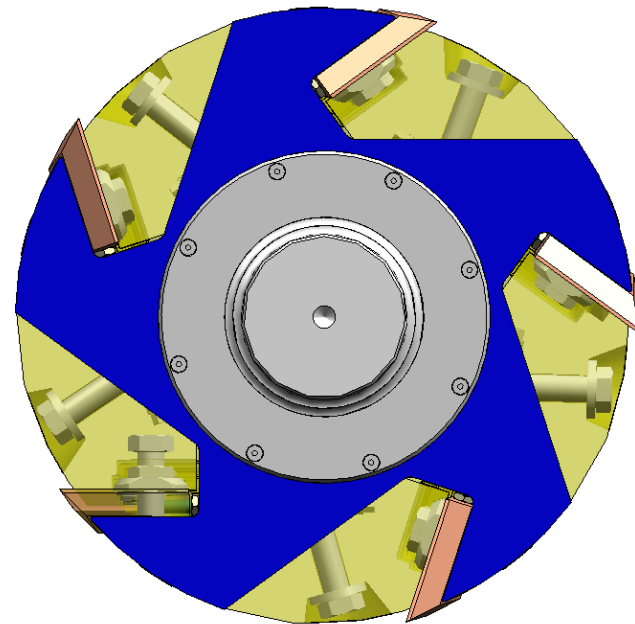
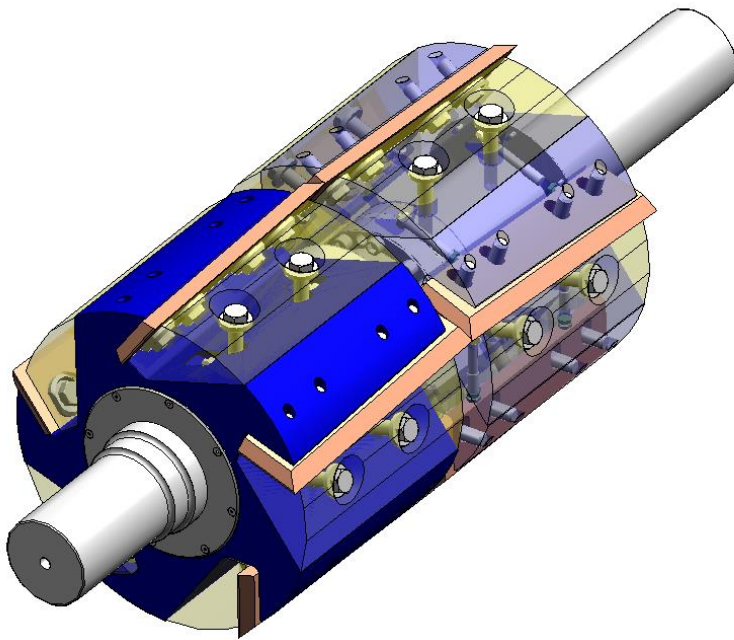
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5 blade open segment rotor  
22,5° staggered



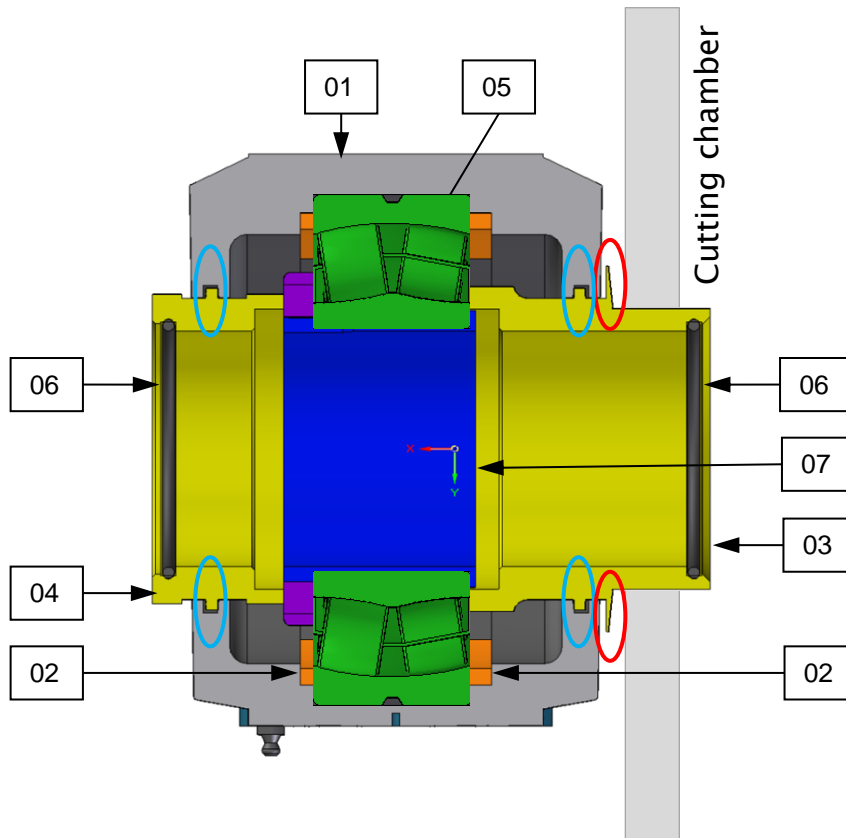
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## 5 blade variation rotor



# RS 3800-A

## Pillow block bearing (fixed bearing)

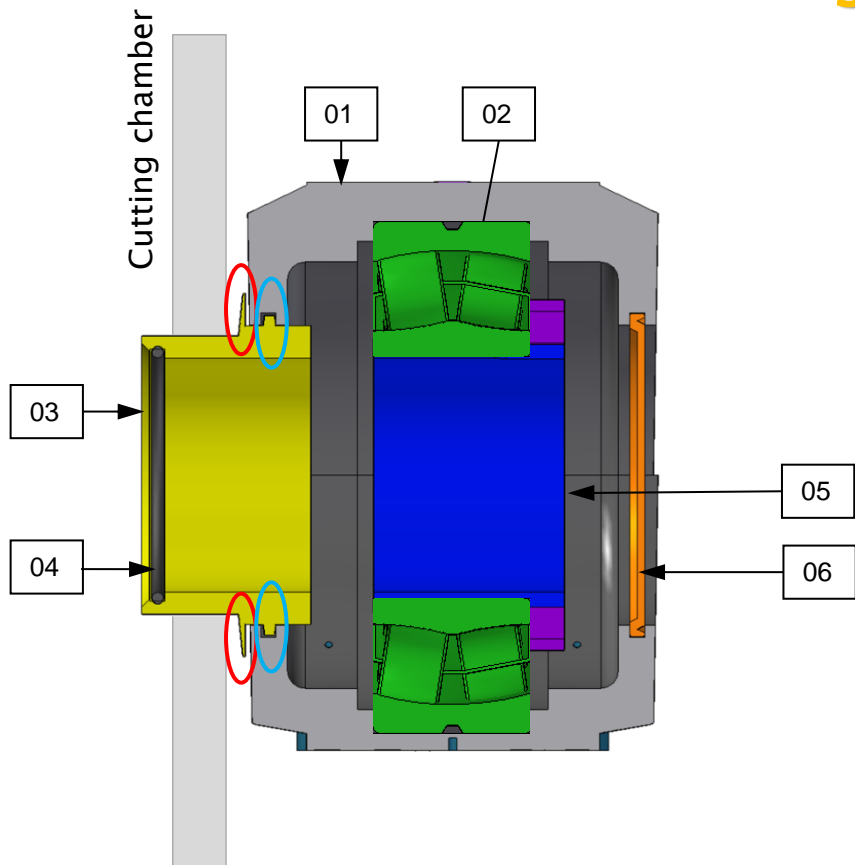


- Double-row cylindrical roller bearings
- Sealing (labyrinth sealing) and free space for cutting chamber with centrifugal disc
- Fixed bearing on the drive side

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

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## Pillow block bearing (movable bearing)

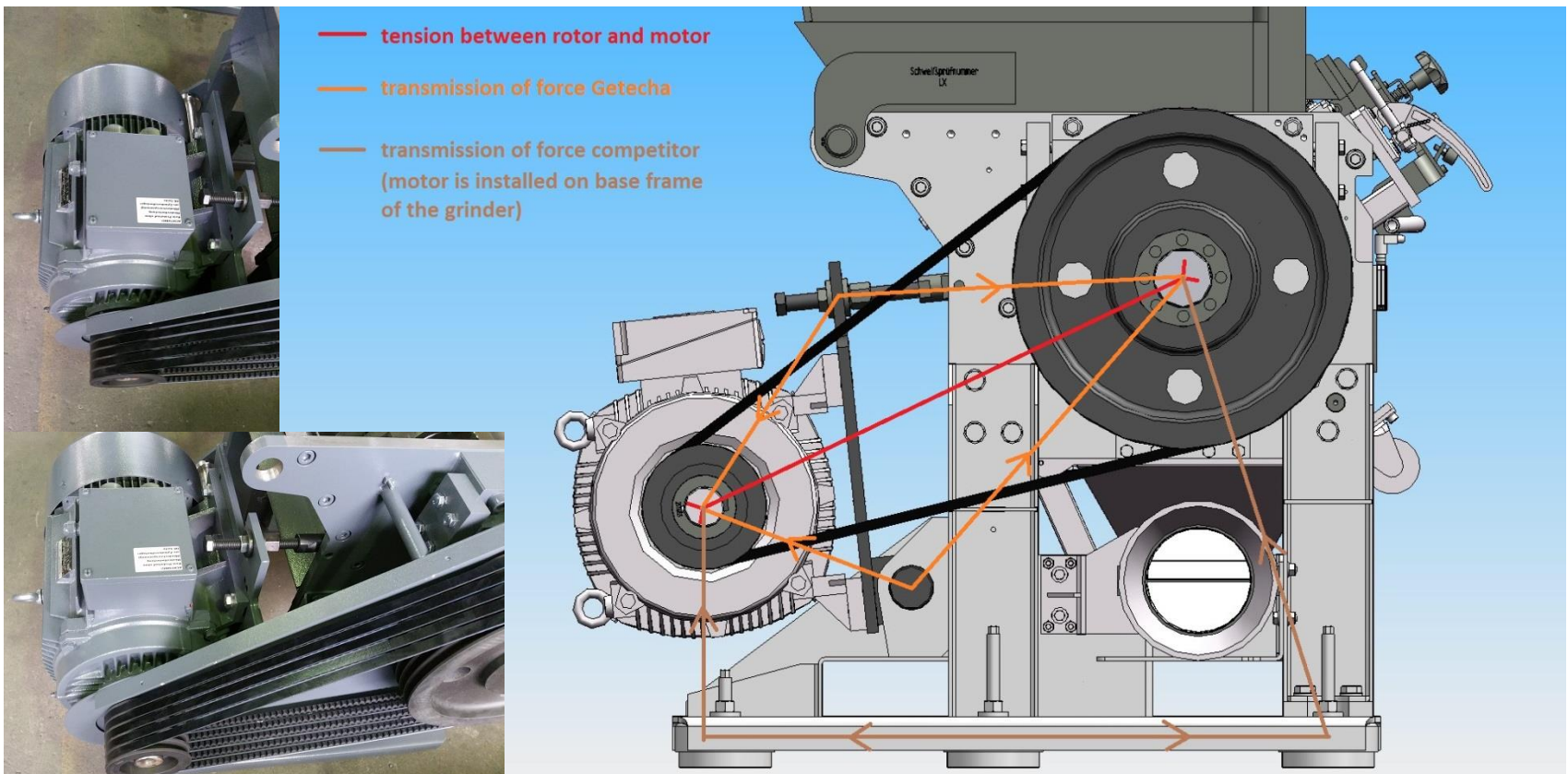


- Double-row cylindrical roller bearings
- Sealing (labyrinth sealing) and free space for cutting chamber with centrifugal disc
- Fixed bearing on the drive side

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

## RS 3800-A

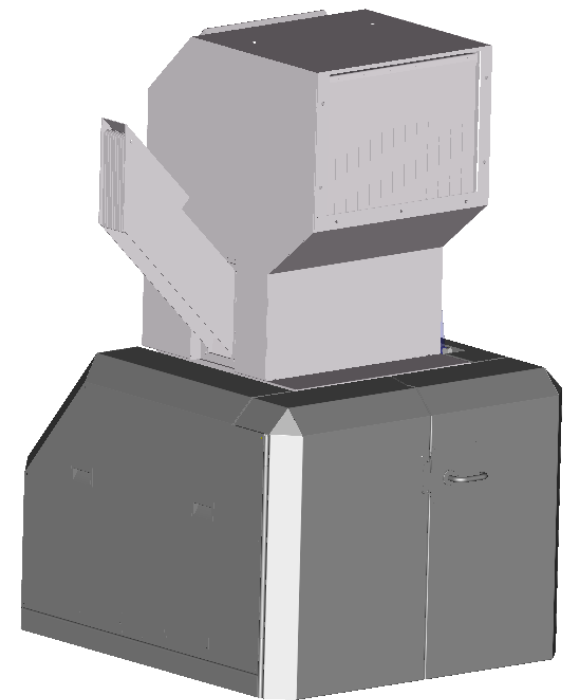
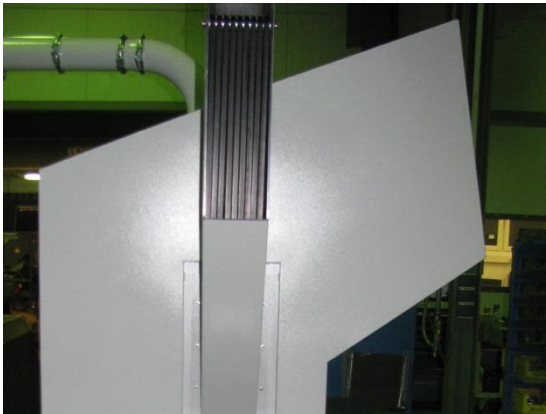
## Power transmission of motor



# RS 3800-A

## Various hoppers

- Lateral bypass hopper for tubes and profiles

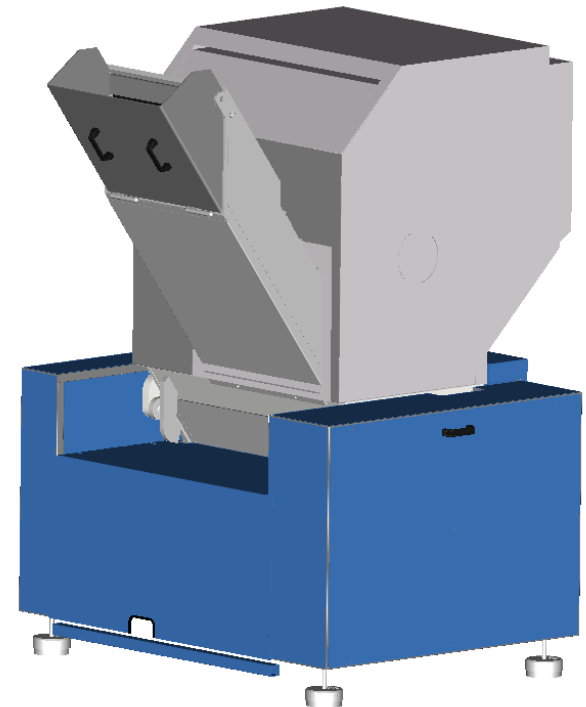




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## Various hoppers

- Rear bypass hopper for plates



# RS 3800-A

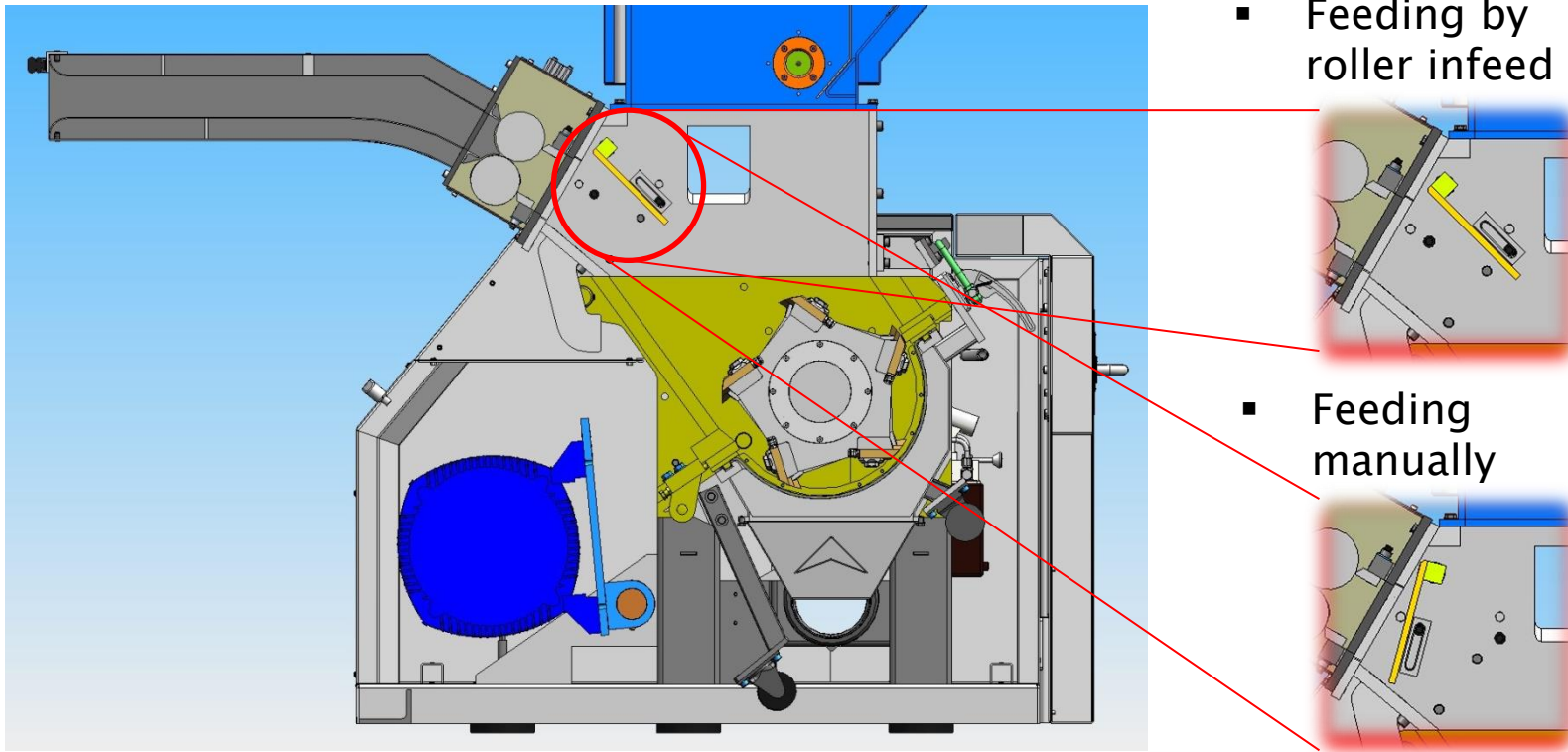
## Various hoppers

- Rear roller infeed



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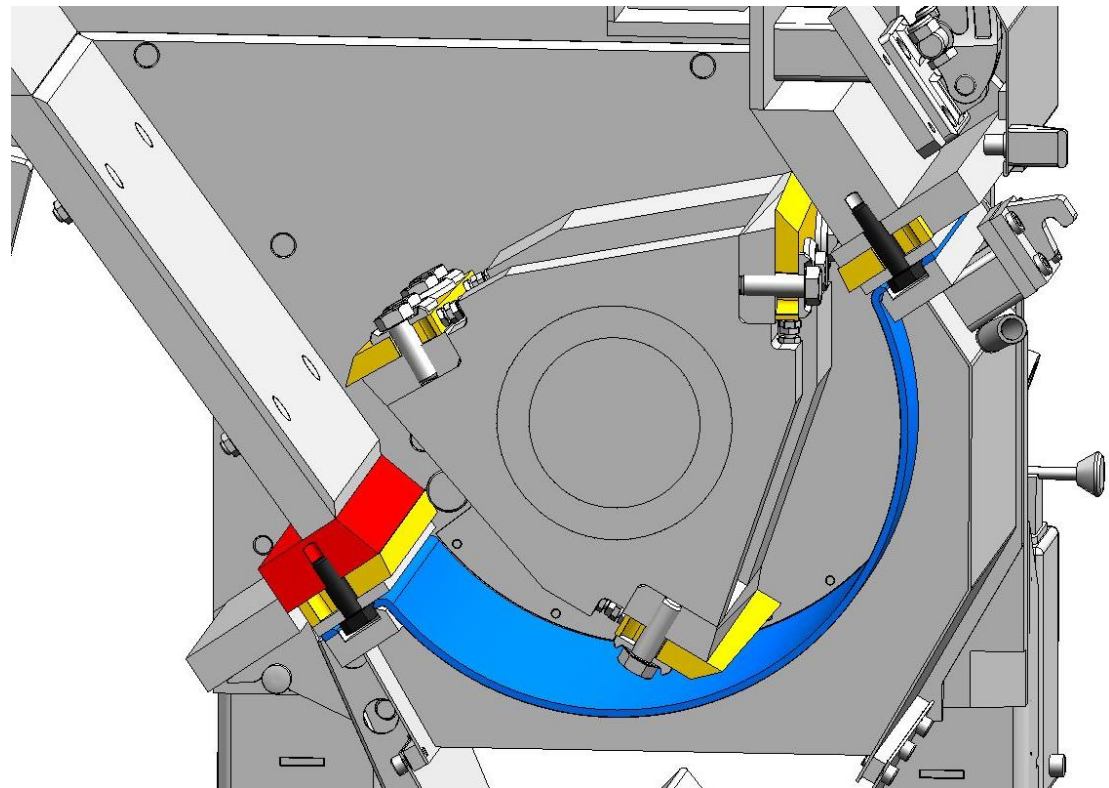
## Switchover flap for rear roller infeed



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## Wear and tear package

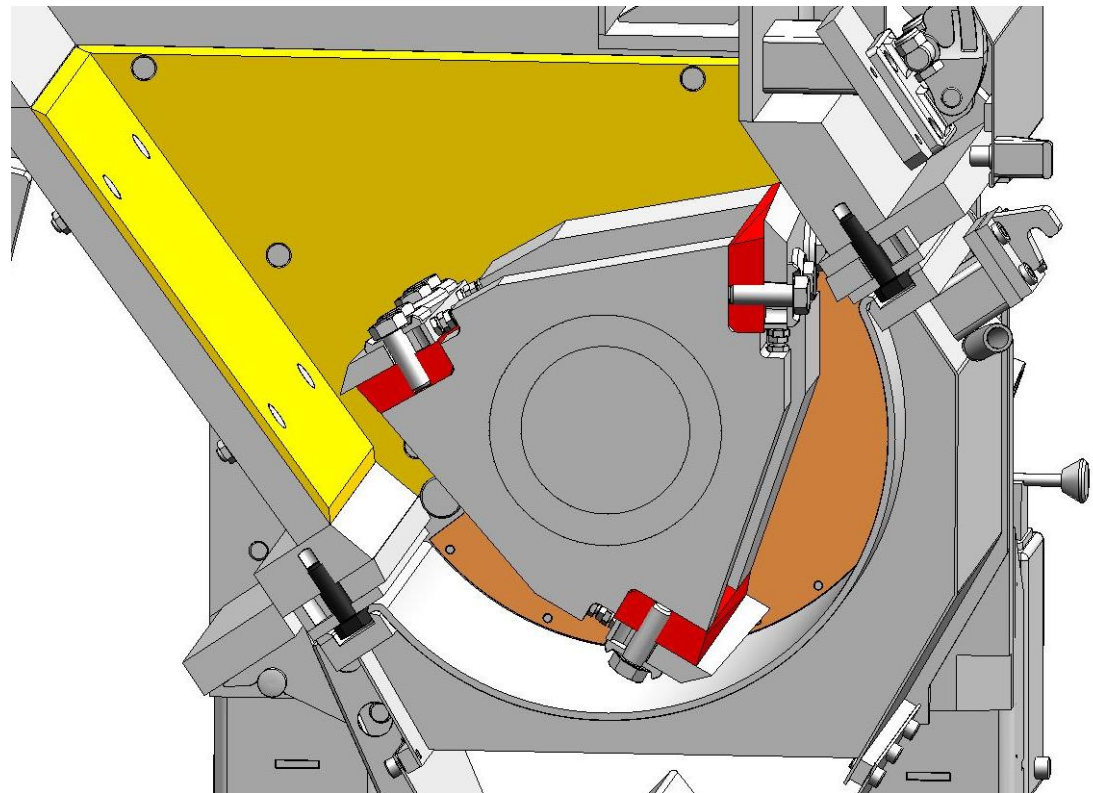
- Roto and stator blades HSS
- Screen nitrocarburated
- Hardened knife carrier for the rear stator blade



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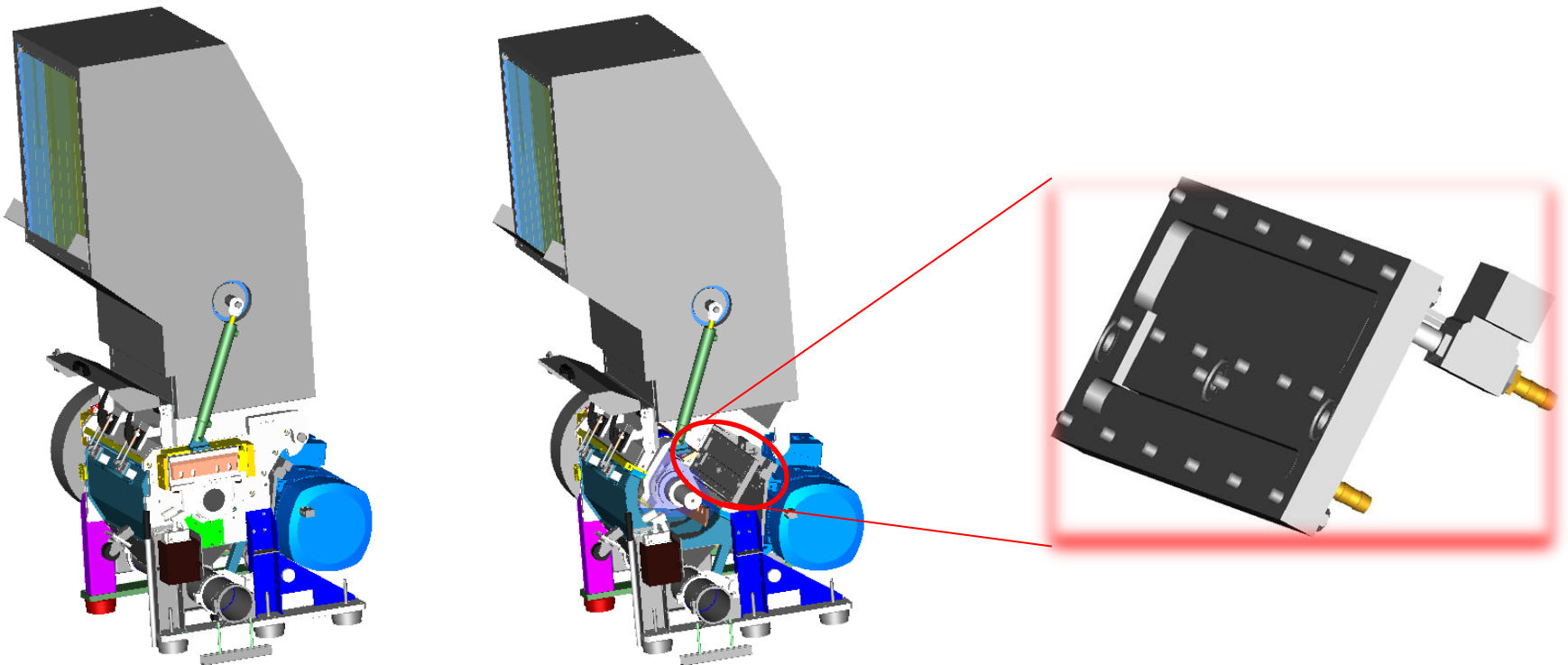
## Extended wear and tear package

- Changeable wear protection plate in the infeed zone
- Hardened side plates in the cutting chamber
- Hardened knife carrier for the rotor blades



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## Water cooling





# RS 3800-A

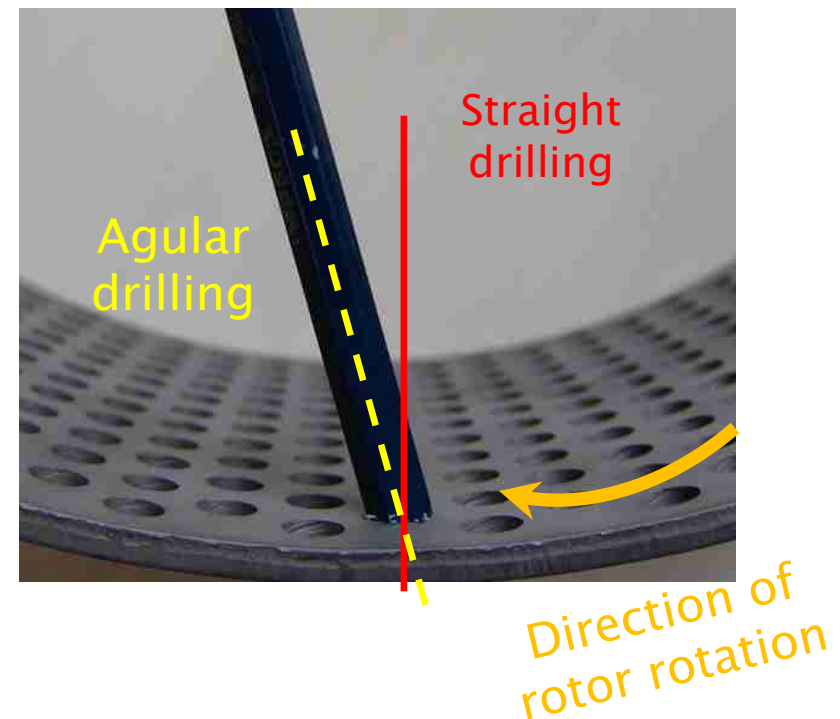
## Problem: Long parts in regrind

- 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.

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## 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.



# RS 3800-A

## Solution: Angular drilled screen

- 6 mm standard screen
- 6 mm angular drilled screen



# RS 3800-A

## Problem: Too low throughput

- In one of the application actually matching grinder, the throughput of the grinder is too low. There must be found a way to increase the throughput of the grinder a little to satisfy the requirement.

# RS 3800-A

## Solution: Increase the number of cuts at the same rotor speed

- The 3-blades rotor is replaced with a 5 blades rotor. Thus, when using 2 stator blades, the number of cuts increased from 6 cuts to 10 cuts per revolution. 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 the throughput by about 10–12%.

# RS 3800-A

## Problem: Very massiv material

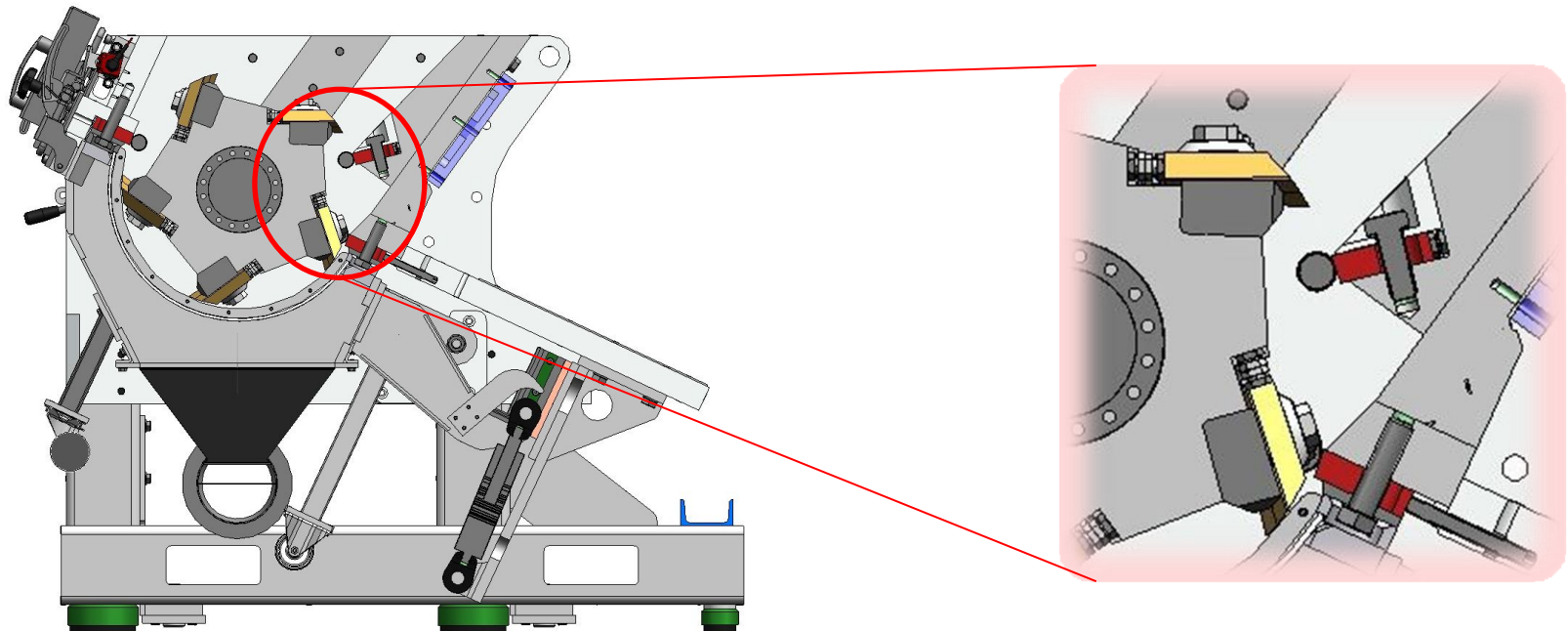
- At thick lumps or plates a very long cut results from the tangential cutting path of the rotor blade through the material. This increases the force needed to pass through the material.
- In case of very thick lumps, the material penetrates too deeply into the rotor. Thereby the cutting can't be done by the grinder. There is a risk that the granulator stops.



# RS 3800-A

## Solution: 3rd stator blade as pre-cutting blade

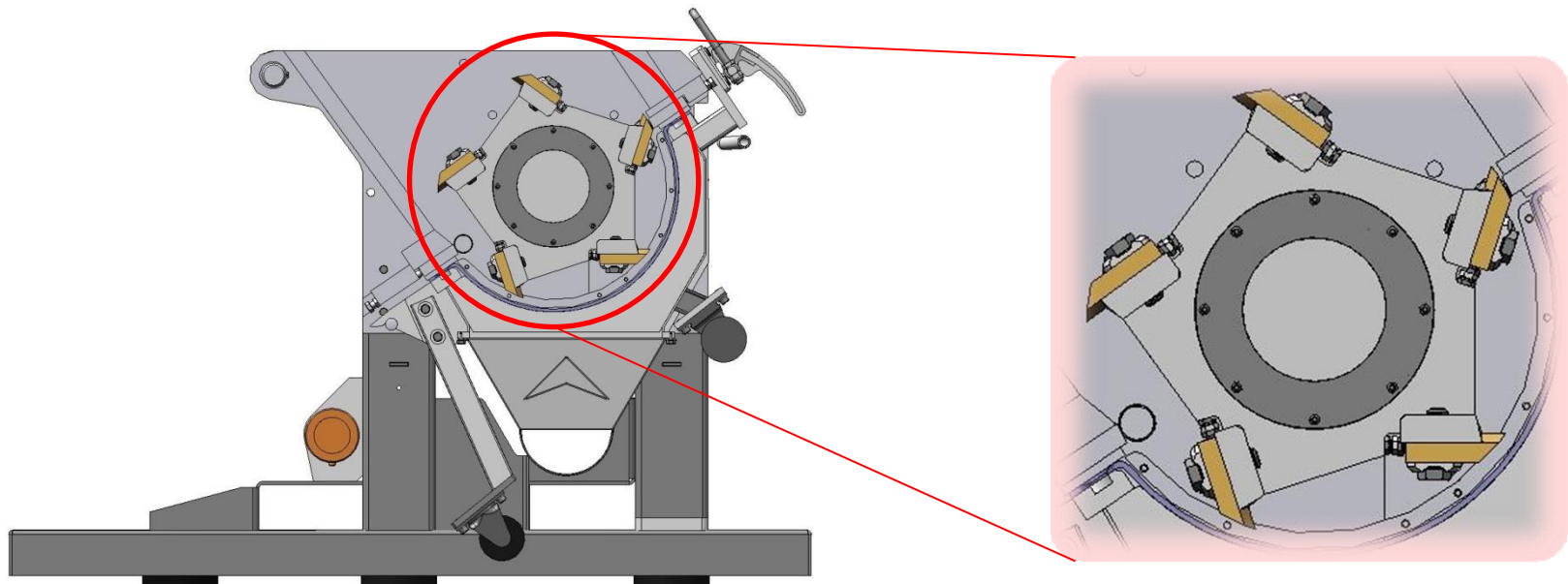
- Up from the series 380x the 3rd stator blades can be used as a pre-cutting blade. Because of the location of this 3rd stator blade the cutting length is shortened.



# RS 3800-A

## Solution: 5-blade rotor

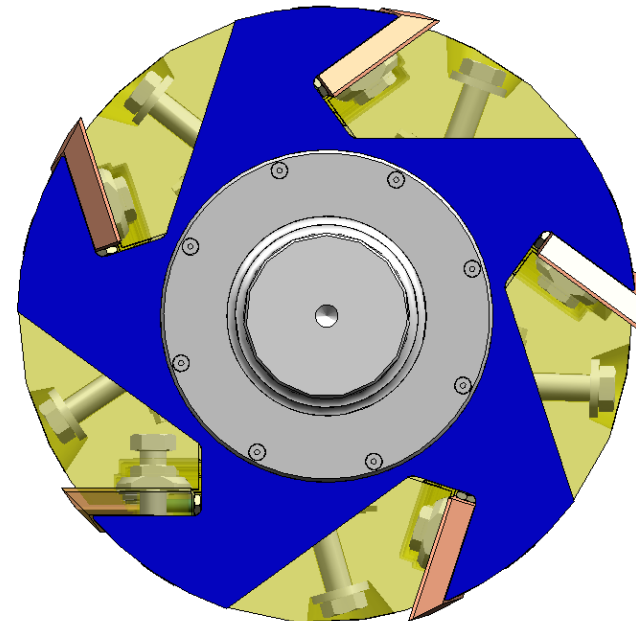
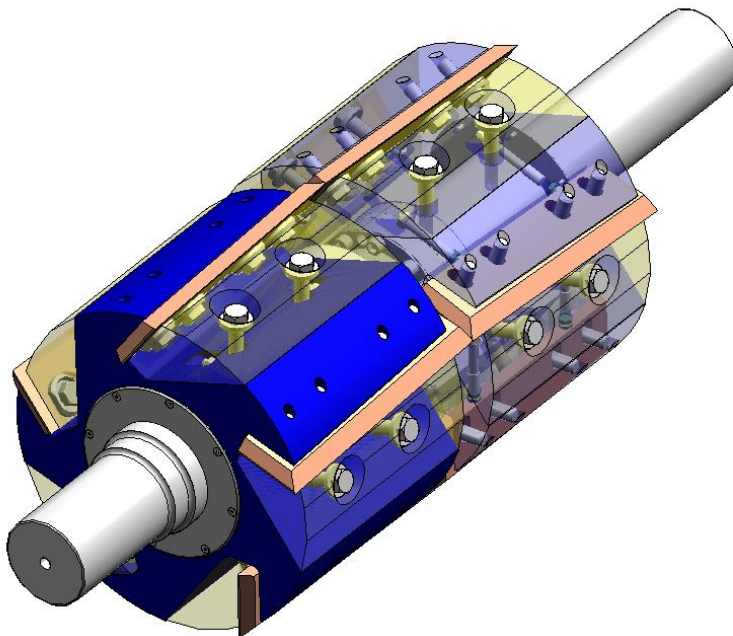
- By using a 5-blade rotor, the lump cannot penetrate as deeply into the rotor, because the space between the blades is smaller. Thus, the lump will be cutting at the edge and not in the center where the lump is usually more massive.



# RS 3800-A

## 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.



**Many thanks  
for your attention**



**Getecha GmbH**