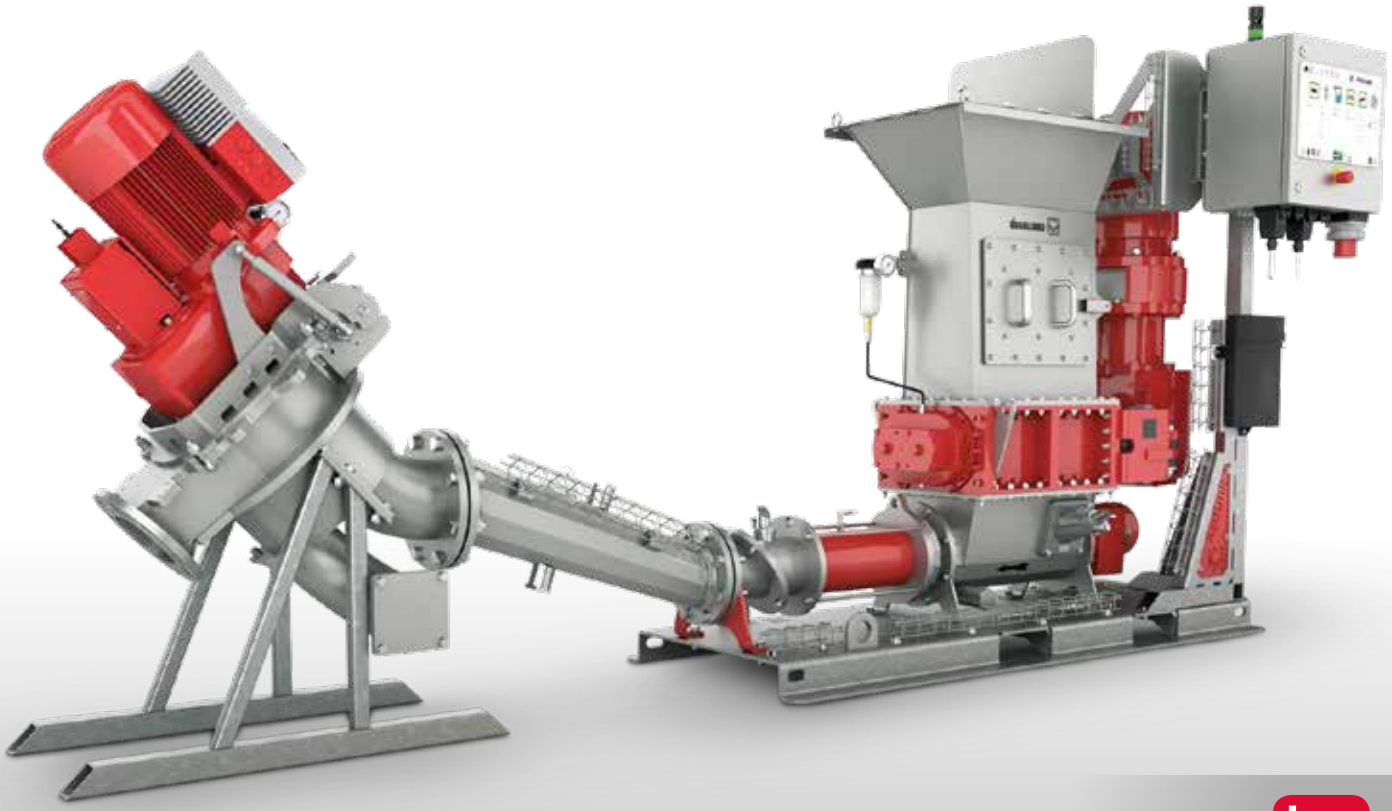


Industry

ALL-IN-ONE SOLID MATTER PROCESSING

The RedUnit system combinations for turning solid matter into pumpable media

VOGELSANG – LEADING IN TECHNOLOGY

VOGELSANG



CUTS A BIG DEAL DOWN TO SIZE

The RedUnit: adaptable, heavy-duty machines mix for particle reduction and pumping

The RedUnit is Vogelsang's answer for any process that requires the shredding and pumping of rough media, preferably in one step. A variable system individually put together to exactly match the client's demands, which Vogelsang has developed especially fort the toughest applications in the industry. With the help of a RedUnit, dry solids of a high volume are either roughly shredded or finely ground – depending on the respective demand – to then be easily treated for further uses.

Energy efficiency and minimum maintenance
The RedUnit is a complete system so there is no need for additional pumps or screw conveyors between the different shredding stages. This leads to lower electricity consumption. Vogelsang uses the most advanced sealing technology in their products: the Quality Cartridge. Thanks to its unique construction, it incorporates all seal components, thus ensuring that all elements are replaced when the cartridge is changed.

Plug and play system (optional)
The RedUnit includes an intelligent control system, developed by Vogelsang. Thanks to this, the equipment can be installed in any plant by simply connecting an energy cable. All components of the RedUnit can be visualized on a touchscreen with their technical features, which can be easily set up in accordance with the needs of each application.



The RedUnit can treat many different media, such as dry or contained in a fluid as well as in the waste part of several industries, and for production uses.

Benefits of the RedUnit

- Individual engineered unit
- Compact and sturdy
- High availability thanks to quick-and-easy service
- Added safety due to cartridge mechanical seal technology
- Low electricity consumption
- Optional: measuring and control technology
- Optional: stainless steel for demanding applications

The RedUnit can treat without problems frozen fish, meat or vegetables.

Typical applications for Vogelsang particle size reduction technology:



Organic waste
Vegetable and fruit waste,
bread waste



Agricultural crops
For example, sugar beets,
carrots, cabbage



Abattoir waste
From chickens, pigs and cows: stomach,
intestines, hides, bones



Fish waste
Heads, bones



Disposal industry
Mixed organic waste from supermarkets, product
depackaging, airplane waste



Other industries
Grinding requirements in other industries, e.g., chemical,
construction, leather

SMART COMBINATION, PERFECT BUILD

The RedUnit components and their possible arrangements

Individual components



XRipper® XRL
The XRipper XRL provides the efficient treatment of bulk material and solid matter. It reduces possible blockages and makes maintenance fast and easy. The XRipper XRL in the RedUnit can be used as a first reduction step for large-volume material.



CC series®
The CavityComfort progressive cavity pump is perfect for highly viscous and abrasive media, and media with a high proportion of large foreign matter. The CC series in the RedUnit can be usually used as a discharge pump.



RotaCut® RCQ
The macerator RotaCut is the ideal solution for fibrous matter, as well as for heavy matter in pump media. The RotaCut RCQ can be usually used for fibrous media containing foreign bodies, or when a reduction in fine solids is needed.



VX series
Vogelsang rotary lobe pumps from the VX series are positive displacement pumps designed to be especially resistant and easy to maintain. The VX series in the RedUnit can be usually used as feeding pumps when more fluid is needed.

Some possible combinations

XRipper® XRL

The easiest solution consists of a grinder XRipper XRL. It includes also the required control system used to optimize the efficiency of the complete unit. This solution is used when the customer needs a size reduction in big amounts of bulk material and solid matter. It can be used, for example, for grinding slaughterhouse waste, potatoes and sugar beets, or even for frozen vegetables.

XRipper® XRL + VX series

We can deliver a system consisting of a grinder XRipper XRL plus a rotary lobe pump from the VX series. This is a perfect solution for slaughterhouse applications with smaller throughputs and smaller hopper requirements, for example, chicken or ducks, or any other small waste without big bones or hooves.

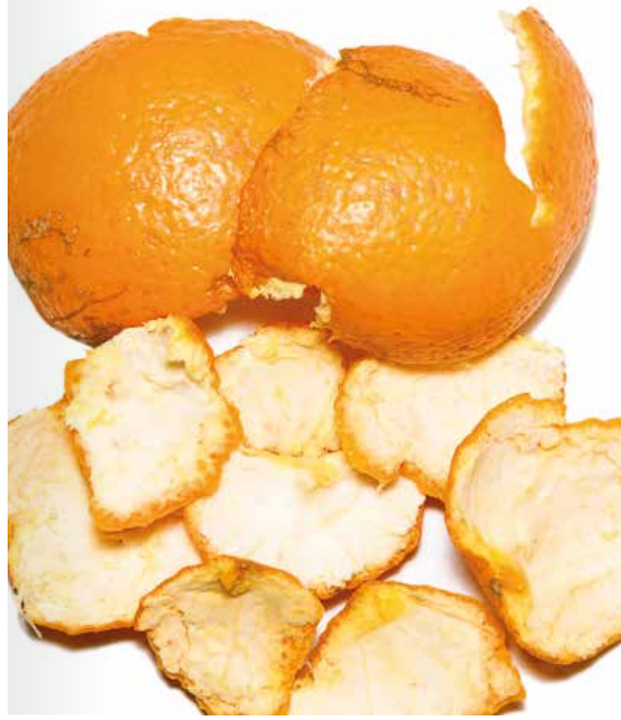
XRipper® XRL + CC series®

One of our most demanding solutions consists of a grinder XRipper XRL plus a progressive cavity pump of the CC series. This solution is used when there is a need for pumping after the first grinding stage or when the medium to pump is less liquid and has a higher dry-matter content. This combination can be used, for example, for grinding fish heads and bones to produce fish flour and oil.

XRipper® XRL + CC series® + RotaCut® RCQ

For some applications there exists the possibility to supply the system XRipper XRL plus CC series with an included downstream macerator RotaCut. This is the perfect solution for supplying an even particle size in small spaces with a maximum flexibility.

We design every unit customized to meet the requirements of each application. Contact us for an individual engineered solution!



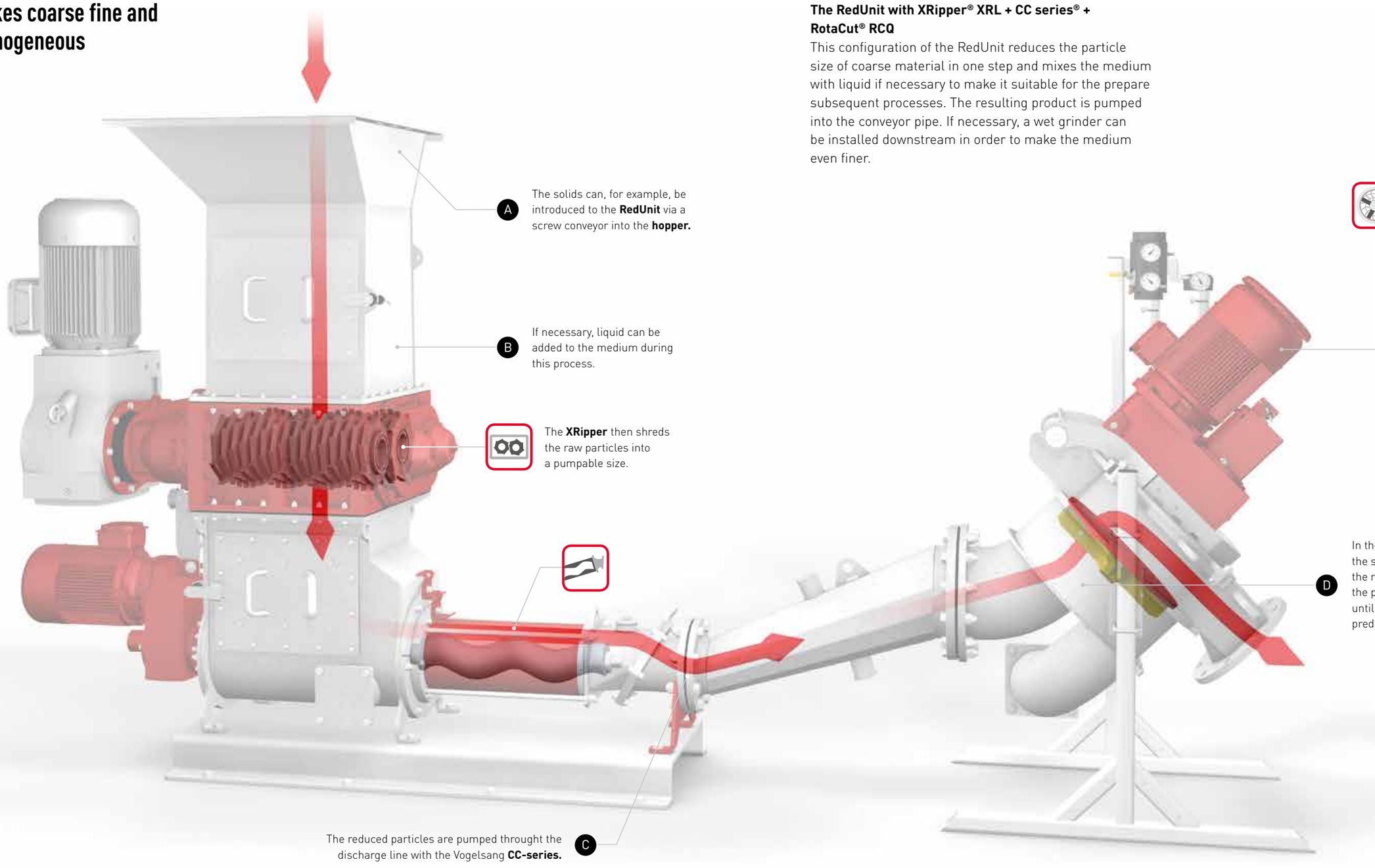






POWERFUL COMBINATION

Makes coarse fine and homogeneous



A The solids can, for example, be introduced to the **RedUnit** via a screw conveyor into the **hopper.**

B If necessary, liquid can be added to the medium during this process.

The **XRipper** then shreds the raw particles into a pumpable size.

C The reduced particles are pumped throught the discharge line with the Vogelsang **CC-series.**

D In the mixing area of the **RotaCut,** the solids are separated thanks to the rapid rotation of the **rotor** and the particle size gets reduced further until a homogeneous mixture with a predefined particle size is obtained.

The RedUnit with XRipper® XRL + CC series® + RotaCut® RCQ

This configuration of the RedUnit reduces the particle size of coarse material in one step and mixes the medium with liquid if necessary to make it suitable for the prepare subsequent processes. The resulting product is pumped into the conveyor pipe. If necessary, a wet grinder can be installed downstream in order to make the medium even finer.



XRipper XRL

TWISTED FOR MAXIMUM EFFICIENCY

The XRipper® XRL twin shaft grinder with monolithic ripper rotors

The XRipper is at home wherever coarse and high-volume solid matter has to be reduced, whether it is bulk material or coarse matter in fluids. The sturdy twin shaft design is the economical solution to treat solid matter.

Design and operating principle
The XRipper rotors are mounted in an interlocking manner on the shaft, which is itself untouched by the medium. The input material passes through the XRipper largely unobstructed. Organic waste, bones or plastic is caught by the XRipper rotors and automatically collected and ground: coarse and brittle components are pulverized, while other solid matter is ripped apart. Thanks to the different speeds of the two shafts, the XRipper rotors are self-cleaning. To adjust to the medium and the size-reduction ratio, various XRipper rotors are available with blade widths from 6 mm to 32 mm. The QuickService system allows quick-and-simple execution of all service and maintenance work on-site.

For more power and efficiency: monolithic ripper rotors
The innovative design of the monolithic ripper rotors makes solids reduction with the XRipper particularly economical. Produced from a single block of special steel (stainless steel is also available as an option) they allow for hard, precise multiple cuts, combined with a highly durable, tough core for superior cutting effect and even power transmission from the shaft to the cutting components. The monolithic ripper rotors offer high ease of service. Instead of having to replace many individual cutting components, only between one and a maximum of six XRipper rotors require replacement per shaft. This makes assembly easier and servicing safer.





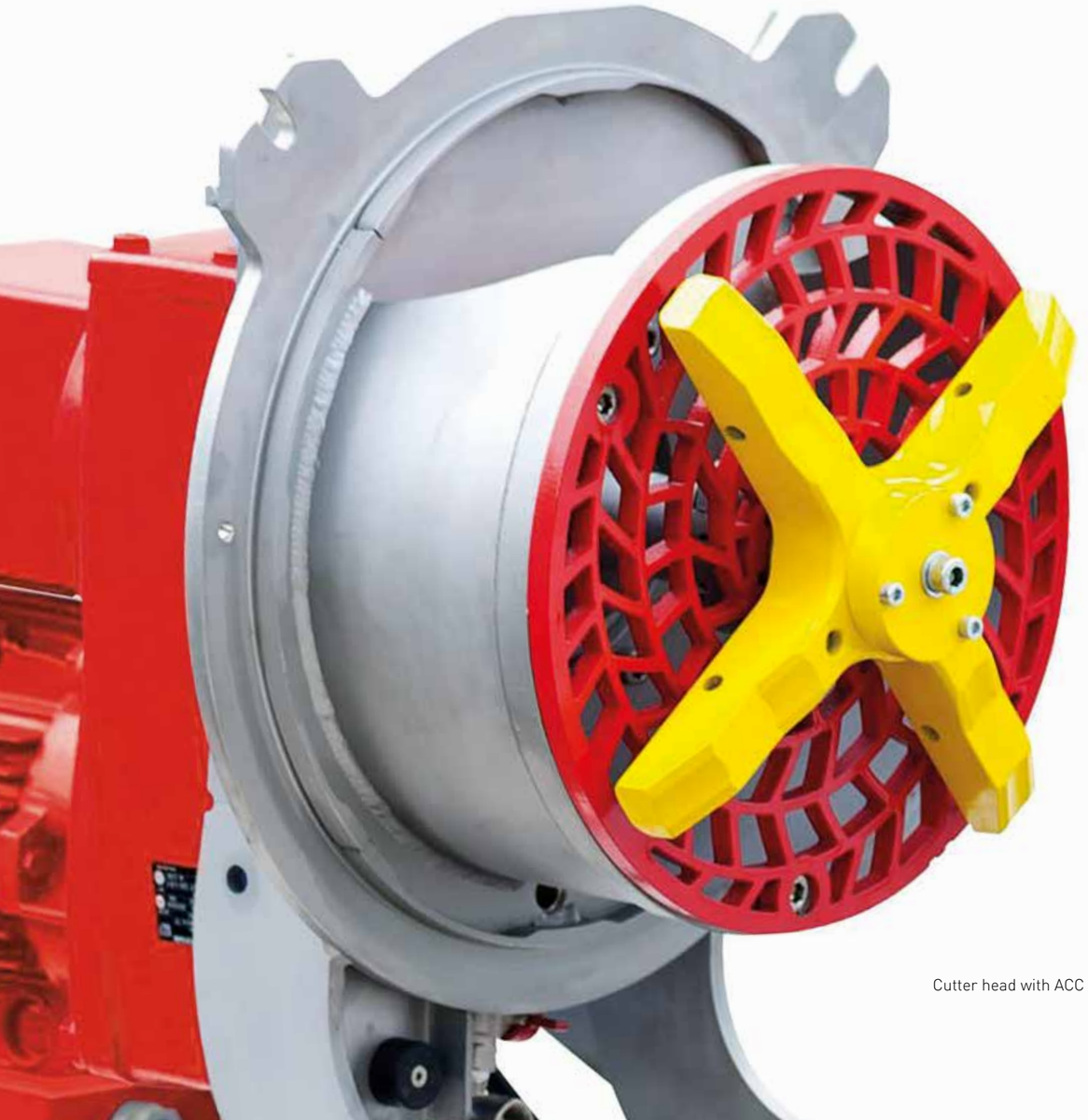


XRipper® advantages

- Economical shredding of solid matter such as fruit, vegetables and organic waste
- Sturdy and reliable
- Minimal operation interruptions thanks to straightforward maintenance
- Added safety thanks to cartridge mechanical seal technology

CUTTING-EDGE SYSTEMS GUARDIAN

The RotaCut® macerator with heavy particle separator for finer particle dimensions



Cutter head with ACC plus

Not all waste materials from food production are suitable for pumping after just one grinding or shredding step. In particular, fish, meat and vegetable waste often contain coarse matter, including particles of plastic or metal. This can lead to malfunctions or failures in downstream pumping elements, which can be prevented by using a RotaCut.

How it works

The RotaCut combines two functions: separating and shredding. While the medium flows continuously through the RotaCut, heavy material such as stones or metal parts are separated out by gravity and then effortlessly disposed of through a cleaning port. In addition, floating and suspended substances within the medium that are only coarsely shredded (fibers, hair, bones, wood, entangled material)
are transported to the cutting screen by the liquid current and shredded by rotating, self-sharpening cutting blades.

Depending on the application, it may be possible to adjust the unit individually to the medium to be pumped and the desired size-reduction ratio by selecting suitable rotor types, cutting screens and separators.



Vogelsang uses its proprietary software to calculate the optimized geometry for every size-reduction ratio. For you this means you always get the best geometry for smooth running, with minimal wear.
The cutting screens are produced from wear-resistant special steel and are reversible.



ACC – Automatic Cut Control

Automatic Cut Control ensures consistently excellent cutting in the RotaCut. During cutting, it is important for the cutting blades to press against the cutting screen at a constant pressure. This prevents fibers and other coarse matter from slipping under the cutting blades and causing blockages; as a result, ACC automatically adjusts the cutting blades and keeps the necessary contact pressure constant – as high as necessary and as low as possible. This significantly increases the lifetime of the cutting blades and eliminates the need for manual adjustment.

In the ACC plus version, the system also provides information about the condition of the cutting blades. Information about the cutting blades' remaining lifetime is displayed on the unit or it can be transferred to the central control system.

RotaCut® advantages

- Reliable shredding of fibrous and coarse matter
- Two dimensions particle size down to less than 12 mm guaranteed
- Foreign-matter protection for all downstream system components
- Fluids and suspensions are made more homogeneous and less viscous, requiring less power consumption and increasing the efficiency of the system

ECCENTRIC, YES. COMPLICATED? NO!

The CC series® progressive cavity pumps for easy maintenance and strong performance



Progressive cavity pump

With the CC series, Vogelsang has decisively improved the trusted concept of progressive cavity pumps: thanks to their innovative design, the pumps set new standards regarding the ease of service and maintenance.

Reliable each and every day
The innovative CC series has been developed for harsh applications in which highly viscous and abrasive media with a high foreign-matter content need to be pumped and where maximal availability is extremely important.

Unique concept for the easiest service
All essential parts, including the seal, can be rapidly and easily replaced, so the pump is quickly ready for use once again. Thanks to the clever pivot mechanism, it is no longer necessary to disassemble pipeline parts to perform service work. The tried-and-trusted cartridge mechanical seal is used as the pump shaft seal. Since it is a pre-mounted mechanical seal, it can be quickly and easily replaced on-site. In contrast to conventional systems, the seal can be replaced without needing to remove the Cardan shaft. When the parallel shaft geared motor is removed, the seal is also accessible from the drive end, where it can be replaced with just a few movements and without opening the pump.

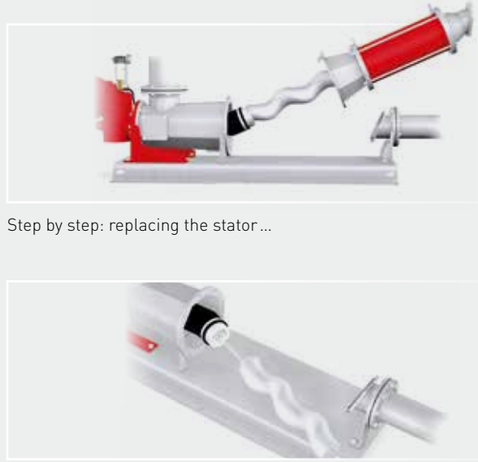
Fast replacement of parts
The CC series offers many options for replacing parts. The stator and rotor can be replaced by an individual unit, as well as the complete rotating assembly (stator, rotor and Cardan shaft).

Replacement step by step
Once the pump unit has been pivoted out, the stator is removed. Next, if necessary, the rotor is replaced – without removing the protective sleeve around the Cardan shaft. The Cardan shaft can then be removed.





Quick servicing: stator and rotor replaced as a unit



Step by step: replacing the stator …

… and rotor subsequently on-site.
All without disassembling pipeline parts

CC series® advantages

- Easy-and-quick service with an extremely compact footprint
- No disassembly of piping
- Seal replacement without opening the pump
- Quality Cartridge mechanical seals
- Sturdy Cardan shaft with protective sleeve

What we offer

We provide solutions in the following sectors:
AGRICULTURAL TECHNOLOGY, BIOGAS,
INDUSTRY, TRANSPORTATION, WASTEWATER



Our broad range of products and services

- Consulting and service
- Data management and control technology
- Disintegration technology
- Individually tailored solutions for special applications
- Pumps and pump systems
- Solid matter feeders
- Solids reduction, separators and mixers
- Spreading technology
- Supply, disposal and cleaning

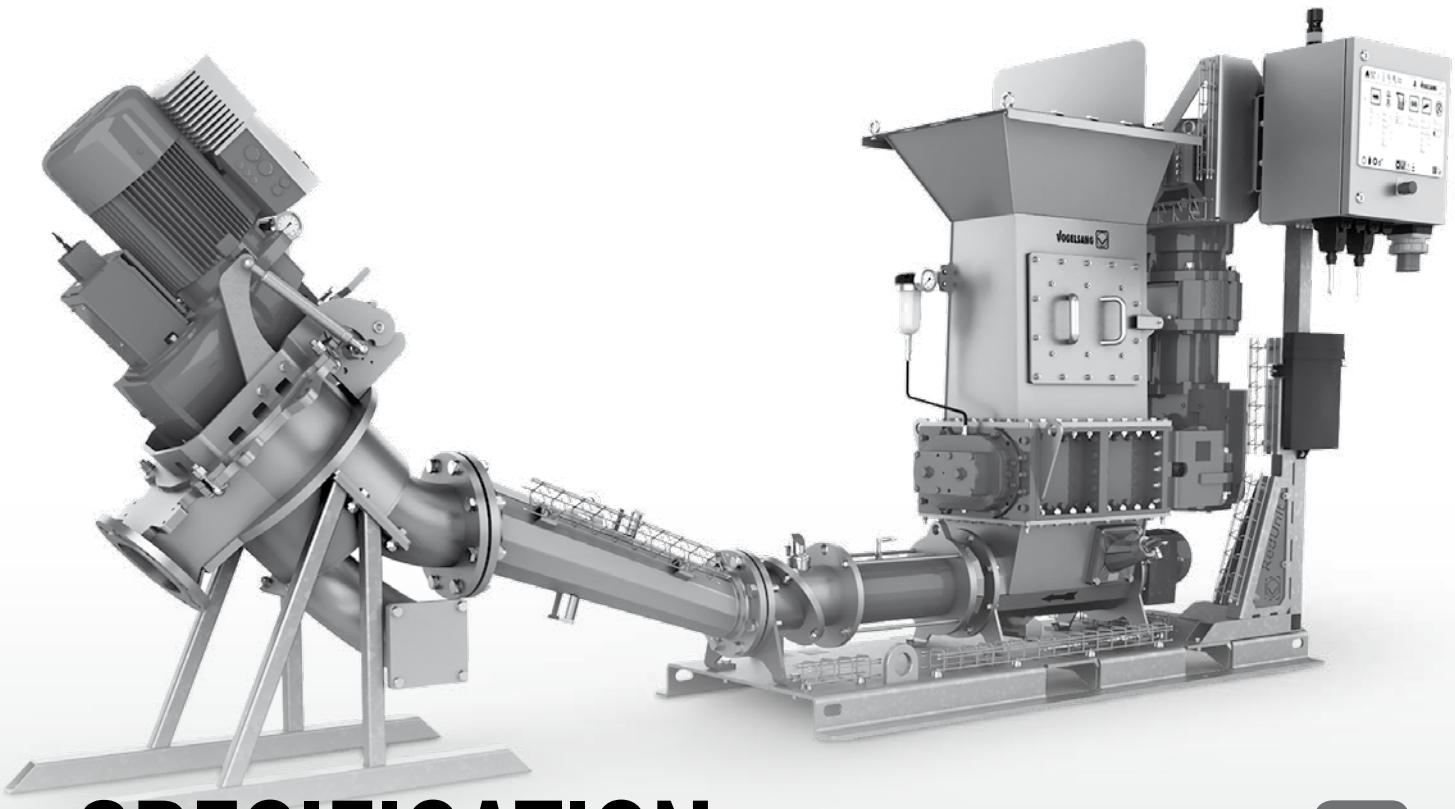
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Vogelsang GmbH & Co. KG
Holthoege 10 – 14 | 49632 Essen (Oldenburg) | Germany
Phone: +49 5434 83 - 0 | Fax: +49 5434 83 - 10
germany@vogelsang.info

vogelsang.info

VOGELSANG



SPECIFICATION

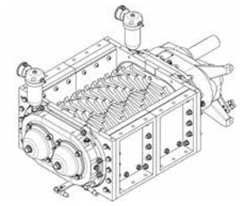
Industry

ALL-IN-ONE SOLID MATTER PROCESSING

The RedUnit system combinations for turning solid matter into pumpable media

VOGELSANG – LEADING IN TECHNOLOGY

RedUnit combinations



XRipper® XRL

Type	Max. capacity*	Input opening	Installed drive power
	m^3/h	mm (L x W)	kW
XRL136-200QD	6	200 x 320	4 – 5.5
XRL136-280QD	10	280 x 320	4 – 11
XRL136-560QD	20	560 x 320	4 – 11
XRL186-260QD	20	260 x 445	11 – 15
XRL186-520QD	40	520 x 445	11 – 22
XRL186-780QD	60	780 x 445	11 – 22

* Refers to easy-to-reduce solids

XRipper® XRL + CC series®

Type		Max. capacity*	Max. operating pressure	Point pressure***	Input opening	Installed drive power	
XRipper	CC series**	m^3/h	bar	bar	mm (L x W)	XRipper kW	Pump kW
XRL136-280QD	CC44-M1	15	4	6	280 x 320	4 – 11	4 – 7.5
	CC44-M2	15	8	12	280 x 320	4 – 11	4 – 7.5
XRL136-560QD	CC44-D1	30	4	6	560 x 320	7.5 – 11	5.5 – 11
	CC55-M2	30	8	12	560 x 320	7.5 – 12	5.5 – 11
XRL186-260QD	CC44-M1	15	4	6	260 x 445	7.5 – 11	4 – 7.5
	CC44-M2	15	8	12	520 x 445	11 – 22	4 – 7.5
	CC44-D1	30	4	6	520 x 445	11 – 22	4 – 7.5
	CC55-M2	30	8	12	520 x 445	11 – 22	5.5 – 11
XRL186-520QD	CC55-D1	60	4	6	520 x 445	11 – 22	5.5 – 11
	CC66-M2	55	8	12	520 x 445	11 – 22	11 – 22
	CC66-D1	105	4	6	520 x 445	11 – 22	11 – 22
XRL186-780QD	CC66-M2	55	8	12	780 x 445	11 – 22	11 – 22
	CC66-D1	105	4	6	780 x 445	11 – 22	11 – 22

* Refers to max flow rate of the pump ** D1/M1: single-stage progressive cavity pump, M2: two-stage progressive cavity pump

*** Maximum theoretical capacity. In practice, the capacity is normally lower, depending on pressure difference, medium viscosity and pump installation. We would be happy to configure the best progressive cavity pump for your application with the help of our computer-assisted sizing software.

XRipper® XRL + CC series® + RotaCut series®

Type			Max. capacity*	Max. operating pressure	Point pressure**	Input opening	Installed drive power		
XRipper	CC series	RC series	m^3/h	bar	bar	mm (L x W)	XRipper kW	Pump kW	RotaCut kW
XRL136-280QD	CC44-M1	RCQ-33Gpro	15	4	4	280 x 320	4 – 11	4 – 7.5	4 – 7.5
	CC44-M2	RCQ-33Gpro	15	8	4	280 x 320	4 – 11	4 – 7.5	4 – 7.5
XRL136-560QD	CC44-D1	RCQ-43Gpro	30	4	4	560 x 320	7.5 – 11	5.5 – 11	5.5 – 11
	CC55-M2	RCQ-43Gpro	30	8	4	560 x 320	7.5 – 11	5.5 – 11	5.5 – 11
XRL186-260QD	CC44-M1	RCQ-43Gpro	15	4	4	260 x 445	7.5 – 11	4 – 7.5	5.5 – 11
	CC44-M2	RCQ-43Gpro	15	8	4	520 x 455	11 – 22	4 – 7.5	5.5 – 11
XRL186-520QD	CC44-D1	RCQ-43Gpro	30	4	4	520 x 455	11 – 22	4 – 7.5	5.5 – 11
	CC55-M2	RCQ-43Gpro	30	8	4	520 x 455	11 – 22	5.5 – 11	5.5 – 11
	CC55-D1	RCQ-43Gpro	60	4	4	520 x 455	11 – 22	5.5 – 11	5.5 – 11
	CC66-M2	RCQ-43Gpro	55	8	4	520 x 455	11 – 22	11 – 22	5.5 – 11
	CC66-D1	RCQ-43Gpro	105	4	4	520 x 455	11 – 22	11 – 22	5.5 – 11
XRL186-780QD	CC66-M2	RCQ-43Gpro	55	8	4	780 x 445	11 – 22	11 – 22	5.5 – 11
	CC66-D1	RCQ-43Gpro	105	4	4	780 x 445	11 – 22	11 – 22	5.5 – 11

* Refers to max flow rate of the pump

** When using a downstream RotaCut, the max. pressure drops to 4bar (max. housing pressure RCQ)

What we offer

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- Solids reduction, separators and mixers
- Spreading technology
- Supply, disposal and cleaning

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Vogelsang GmbH & Co. KG
Holthoege 10–14 | 49632 Essen/Oldb. | Germany
Phone +49 5434 83-0 | Fax +49 5434 83-10
info@vogelsang.info

vogelsang.info

VOGELSANG