

 vågen



Solutions
for efficient
handling of bulk
substances

Vågen AS supplies solutions for efficient handling of bulk substances. In addition to traditional screw conveyors, we design and supply equipment for pressing/dewatering, cleaning, mixing, dosing, etc.

We also supply bucket elevators, redlers, rotary valves, knife gates and more.

Our experience with development and production of material handling equipment goes back to 1962. We relate to demanding deliveries internationally, where all the equipment is designed and documented based on customer needs.

VISION AND VALUES

Vågen AS shall be the preferred partner in the international market, with unique specialist expertise in its field and a particular focus on forward-looking environmentally friendly solutions.

Our core values are commitment, honesty and flexibility.

ENGAGED: in the form of being welcoming and fond of people, and having a commitment to our customers, partners and employees.

HONORABLE: in terms of being a stable, reliable and honorable supplier.

FLEXIBLE: in the sense that we always focus on innovation, and are solution-oriented and creative.

HISTORY

Vågen AS first started in 1991, when we took over the industrial production of Leirvik Sveis. Leirvik Sveis had worked with screw conveyors for use in the sugar and fishing industry since 1962, and with the takeover we had the opportunity to specialize further in this field.



From our head office in Tysnes outside Bergen, we have become a leading supplier in screw conveyors. Today, we have large base of national and international customers, and are constantly growing.

PRODUCT DEVELOPMENT

We have several mechanical engineers with extensive experience in construction and production, who want to help create new, quality products and solutions together with competent customers who have broad knowledge within their processes and fields of expertise. We have engineers with vast experience in development, mechanical construction, production, electro-automation and signal control that wish to help create new, better products and solutions together with competent customers who have specific knowledge within their processes and fields of expertise.

Several of our larger projects have their background in inquiries from companies and the research community working with the development of processes in which screw conveyors, in one form or another, are included. We are happy to establish a cooperation with development institutions and companies with a need for expertise within our field.

PRODUCTS

We are continuously expanding our product portfolio within bulk handling. If there is something you are missing on this page, please call us or send us an e-mail. It is possible that we already have the product you are looking for or we can develop a new one together that meets your needs.

INSTALLATION AND SERVICE

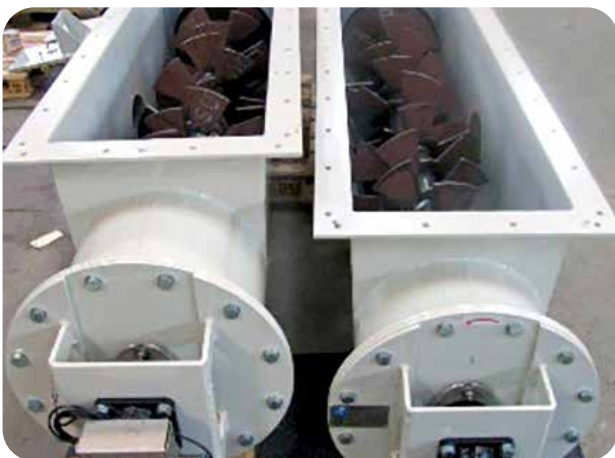
We also offer installation, service and maintenance on all machines we supply. All work is carried out by skilled workers with extensive relevant experience from our professional fields.



AQUACULTURE

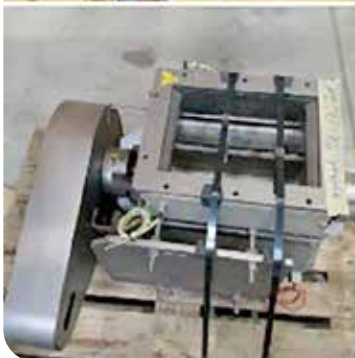
Ever since the beginning of fish farming, the industry has depended on products from Vågen. Screw conveyors, bucket elevators, redlers and more are used in feeding factories, feeding fleets and in slaughterhouses for the transport of various products that the industry is heavily dependent on. Quality, and thus operational reliability, is paramount.

We also supply separation and dewatering solutions that save the industry large transport costs and Co2 emissions. Shredders and solutions for handling dead fish are also part of the equipment we supply to this industry.



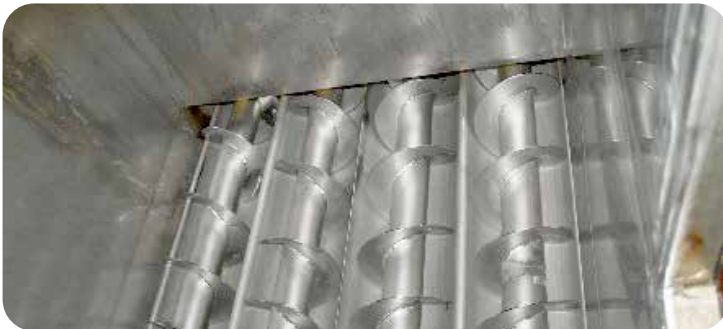
MINING AND SMELTING PLANTS

For mines and smelters, we mainly supply screw conveyors, dosing conveyors, rotary valves and silo feeders. The machines are manufactured in different steel qualities depending on the customer's preferences and the steel's resistance to different material. Hardox is widely used in this industry, but standard carbon steel, AISI 304 and 316 are also common. From time to time needs arise beyond this and we also deliver our machines in Duplex qualities or AISI 310 which is suitable at high operating temperatures.



FISHERIES

Fisheries is currently our biggest area of expertise. Whether it is about catching or processing, our machines are in diligent use. Here we supply screw conveyors for the transport of ice, salt, meal, flour etc. In connection with processing in factories, whether they are on land or water, we also supply rotary valves, bucket elevators and mills. Here, the industry has gradually gained good control over food safety, with a focus on the right steel qualities and easy cleaning with hinged lids and inset flush pipes.



FOOD INDUSTRY

In recent years, the food industry has undergone enormous development with a focus on food safety. As a supplier to this industry, we have been challenged to find new production processes to reduce the possibility of bacterial growth in our machines. We now satisfy the requirements of the largest players in this industry and deliver solutions that simplify cleaning and enable visual inspection of all parts that are in direct contact with the product. Machinery for foodstuffs should, as a minimum, be produced in stainless steel AISI 304 in order to meet the requirements for food safety. We also supply machines in AISI 316 and Duplex steel where the conditions indicate that it is best suited. The machines are delivered CE marked and with EHEDG declaration of conformity.



SLAUGHTERHOUSES

For the meat industry, we supply machines for transport, mixing, dewatering, shredding and purification of residual water. We now satisfy the requirements of the largest players in this industry, and deliver solutions that simplify cleaning and enable visual inspection of all parts that are in direct contact with the product. Machines for food should, as a minimum, be produced in stainless steel AISI 304 in order to meet the requirements for food safety. We also supply machines in AISI 316 and Duplex steel where the conditions indicate that it is best suited. The machines are delivered CE marked and with an EHEDG declaration of conformity.





OIL AND GAS

Over the past 25 years, we have supplied screw conveyors for handling drill cuttings and mud mixers to more than 350 drilling rigs nationally and internationally. This has made us a supplier you can trust in all contexts, whether it concerns dimensioning, documentation, standard products or special solutions.



PROCESS INDUSTRY

In the process industry, we meet the strictest requirements for material quality. Here, the wrong choice of building materials can have disastrous consequences. Machines can corrode within 1-2 years if the steel quality is not adapted to the customer's needs. We work closely with our customers and steel suppliers to uncover as much as possible before making the final choice of material quality in the machines we build. Salts, bases, acids, air and temperature are important parameters in this context.

RECYCLING

Recycling has become important to all of us in recent years. For Vågen, it is mainly about the delivery of machines in the receiving context, whether they are shredders for plastic cans or food waste, screw conveyors for heat treatment, or screw presses for sludge dewatering.

We know that this is an industry with a need for durable machines, where we like to use Hardox for increased wear resistance or hard welding with castolin on rotors. Some acid-resistant steel AISI 316 is also used where the machines are exposed to various chemicals that must be recycled.





SEAWEED

Since the 1960s, Vågen has accounted for a significant proportion of deliveries of machines to the seaweed and kelp processing industry. The main products of this industry are consistently produced in AISI 316. Hastelloy is also used in single process steps.

The seaweed and kelp industry is rapidly growing these days. In this context, we have the pleasure of being able to offer tried-and-tested solutions, whether it is for process equipment on board harvesting vessels, land based facilities or for factory equipment such as shredder, screw conveyors, screw presses, steam screws and more.



WATER AND WASTEWATER

Vågen AS supplies solutions for treatment plants for waste water and process water from various processes. Central to these processes are our various dewatering systems, such as strainer conveyors, screw presses and desanders. We also supply screw conveyors with or without central pipes. Shredders and Archimedean screw pump are also widely used.



STANDARD CONVEYORS

By standardizing solutions, length adaptations for example can be easily implemented without major costs. Good product quality and easy replacement of parts are also ensured through serial production and proven solutions.

We have developed Standard conveyors that can be easily assembled in different lengths in the most commonly used dimensions with rotors with or without central tube. The screw conveyors are supplied with electric and hydraulic operation.

We also deliver the start-up applications and management systems you need, all in accordance with requirement specifications. Simple start/stop or frequency control for optimal operation with speed control are both used.





SCREW CONVEYORS

Screw conveyors can be used for moving most bulk materials. They are supplied with a U-trough and lid/grid, or with a closed pipe trough. In the event of a large rise and lift height, one would benefit from using a pipe trough. Operational reliability and service life are largely influenced by the choice of material, dimensions, filling rate and speed of rotation of the rotor. Great emphasis has been placed on easy maintenance and easy access for replacing wearing parts.

We can also supply simple screw conveyors for easy operation, with piping in polyethylene (PEHD) and end pieces in steel (galvanized or stainless/acid-resistant). Our quality assurance system is adapted to customers with different quality needs, and with a good and proven project implementation model, we ensure delivery at the agreed price and delivery time.

SCREW PRESS

Vågen Screw presses are simple and reliable machines that are placed in the material flow where it is needed to separate wet and dry material. Mechanical dewatering is clearly the most economical method. Estimated capacities 1.5-24 m³/hour. With the help of a frequency converter, capacity and dry matter content can be changed. We supply screw presses with or without a central pipe in the rotor.



MULTIDISC SCREW PRESS

CLEANING AND DEWATERING IN THE SAME MACHINE

Vågen AS supplies solutions for treatment plants for waste water, sewage and sludge from various processes. The main product in this process is the Vågen Multi Disk Screw Press, which uses various polymer additives to bind the waste in waste water, sewage and process water. Proven technical solutions are used to reduce maintenance costs and simplify access to spare parts





LIFTING CONVEYORS

A lifting conveyor is basically a vertical or inclined transport screw.

There is no threshold for how steep a screw conveyor can transport, but depending on the material to be transported there are some limiting factors that affect efficiency. A great amount of material can be lifted vertically, but special requirements are then placed on technical solutions according to the relevant material to be lifted.





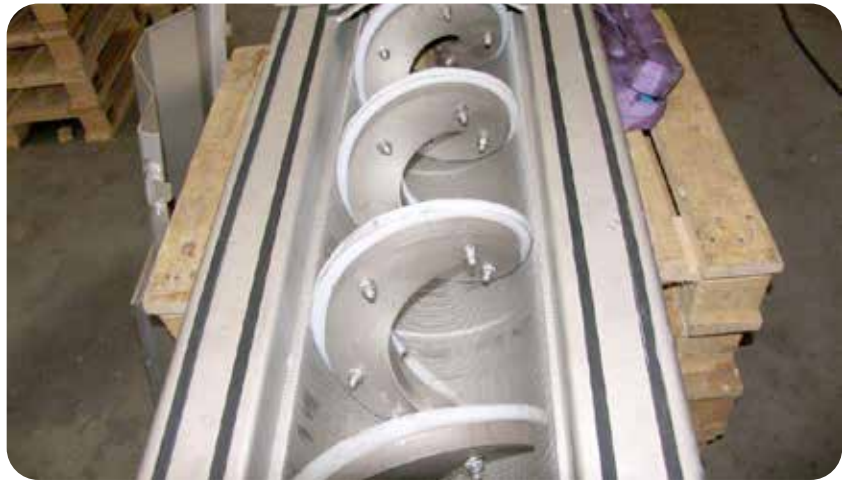
DOSING CONVEYORS

Dosing conveyors are used in most processes where there is a need to add a certain amount of a substance to a process. We design and manufacture your dosing conveyor based on your needs. We can also supply simple control or advanced weighing systems.



SEGMENTS

Vågen supplies all types of screw segments in various dimensions and adapted to the desired function.



STRAINER CONVEYORS

Sieving, or draining liquid, can be a good way of dewatering pulp. Especially if there is a lot of free water in the mass, or it is fragile and cannot withstand pressure loads. Sieving can also be used in direct combination with a screw press, by equipping the inlet part of the screw with a wire rod strainer or hole plate strainer.

ARCHIMEDES SCREW

Or Water conveyors are used to transport water or other liquids to a higher level. The advantage of using conveyors rather than pumps is that the liquid medium can contain quite a lot of solids without it hindering the flow of water in the screw.



Another important advantage of the Archimedes screw pump is low consumption and maintenance costs compared to other pump systems, thanks to their mechanical simplicity. It is clear that with a rotation speed of 25 to 30 revolutions per minute, the wear is reduced significantly compared to other pump systems. Power consumption is also lower than with suction pumps.



DISCHARGE SCREWS

A great amount of raw materials used in the process industry come in large sacks, containers or are loaded into factories with dumpers etc. It is then important to be able to receive large quantities of raw materials at a time, and then feed this evenly to the further processing process.

Discharge screws are used for emptying containers.



SILO OUTFEED

Vågen supplies silos with built-in screw bottoms for emptying products that do not float. These are delivered either as round traditional silos or in a square/rectangular design. These can be supplied in all steel grades depending on requirements. Sizes up to 200m³.

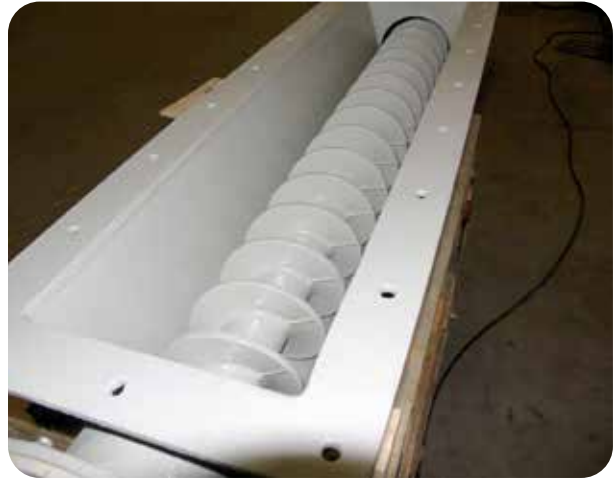


PE SCREW CONVEYORS

By standardizing solutions, length adaptations for example can be easily implemented without major costs. Good product quality and easy replacement of parts are also ensured through series production and proven solutions.

An affordable alternative. We have developed Standard Polyethylene Screws which can be easily assembled in different lengths in three different dimensions. Rotors without central pipes. SEW gear motors as standard. Pipe-Trough produced in polyethylene, which provides low friction against most materials, which helps to extend the service life. We also deliver the start-up applications and management systems you need, all in accordance with requirement specifications. Simple start/stop or frequency control for optimal operation with speed control.





ROTORS

Rotors can be supplied with central pipes (also called cores or center tubes). These are usually supported at both ends and sometimes with intermediate support.

The rotor is the core of any screw conveyor. Design and material selection are based on over 50 years of experience with various applications in most industries.

SCREW SPIRALS

Spirals, rotors without a central tube (also called centerless rotors) are usually supported only in the drive unit, and are located in a PE (polyethylene) tube or PEHD (polyethylene high density) wear liner in a steel trough.

We supply centerless screw spirals.

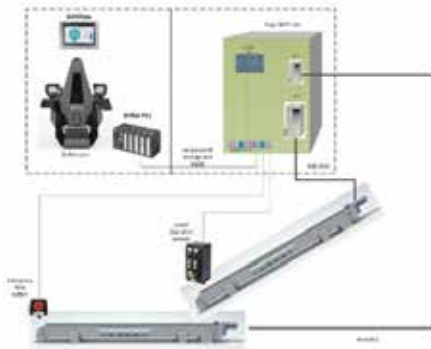
Flexible centerless screw spirals, diameter from Ø 30mm - Ø 70mm, standard lengths of 100m. Centerless screw spirals Diameter Ø 60mm - Ø 400mm.



AUTOMATION

Vågen AS delivers solutions within automation.

We deliver automation boards based on customer-specific requirements. Ordinary industrial enclosures with simple start/stop or advanced electro-automation solutions. All systems can also be delivered for ATEX Zone 1 and 2.



ROTARY VALVE TYPE GB

Rotary valves are used for pneumatic transport of all forms of flour products and granules. Blow-through valves are available in three sizes: GB 10/150, GB 19/300 and GB 34/350.

They are very useful for transporting sticky materials. Valve housing and covers are made of cast iron, and the rotor is made of S235. Furthermore, the valve is equipped with flange-mounted ball bearings and packing boxes.

All GB locks are ATEX approved for zone 20.





ROTARY VALVE TYPE UL

Cell feeder Type UL is designed for the transport of almost all free-flowing and abrasive powder products and granules. The valve can be used as a flow-through valve/dosing valve or equipped with a lower pipe for pneumatic transport. Valve housing and covers are made of heavy-duty cast iron. The closed robust rotor is made of S235 and has 8 chambers. The housing is internally hardened and the rotor blades are hard coated. The valve is equipped with packing boxes and heavy-duty flange-mounted ball bearings. Type UL is aligned with a minimal tolerance between housing and rotor, which ensures a very tight lock. The valve can be used up to 1 bar differential pressure. Furthermore, the valves are explosion-proof up to 10 bar.

CEMENT ROTARY VALVES

Type UL Cement rotary valves. Valve housing and covers are made of heavy-duty cast iron EN-GJL-250 (GG25) and equipped with a flange-mounted ball bearing and packing box. The rotor is made of steel and has 6 to 8 blades with a volume of up to 2178 m³/h and for materials with a temperature of up to 450°C. The valves can be supplied directly driven with SEW gear motor, HRC coupling and cover.





COOLING AND HEATING SCREWS

Thermal influence of materials is common in the process industry. Vågen's cooling or heating screws can be produced with cooling/heating both in the casing, central tube and in the wings/threaded segments, depending on cooling/heating needs. The material's properties are also instrumental in our calculations and construction, both regarding thermal properties, but also for condensation, "sticking", etc. Vågen can also supply pressurized systems, documented and approved in relation to the pressure equipment directive (Pressure Equipment Directive, PED, 97/23/EC).



Cooling conveyors are used for cooling and transporting bulk. They can also be used for heating.



BUCKET ELEVATORS

Vågen AS supplies Industrial bucket elevators in various sizes and material qualities, from carbon steel primed and painted or galvanized, to stainless or acid-resistant (AISI 316). Hopper/bucket elevators are used for vertical transport of dry products. Our bucket elevators are delivered in tight enclosures for safety and cleanliness. All our products are supplied with CE or TÜV and Dekra approval. The products can also be delivered with ATEX approval.

SHREDDERS

We also supply the start-up applications and control systems you need with frequency control for optimal operation of shredders with speed regulation, all in accordance with required specifications. Supplied as standard with Siemens PLC and HMI.

We supply industrial shredders in most sizes that can be easily adapted to different needs. The design of shredders is adapted to the process it will be in. Proven technical solutions are used to reduce maintenance costs and simplify access to spare parts.





MIXERS

Vågen has supplied many mixers and applications for mixing different masses. Batch mixing, as shown in the picture, is one solution.

In many cases, you may prefer a continuous mixing process, which can easily be combined in a mixing/conveyor screw.

(A very efficient mixer is shown in the illustration below, designed for mixing a given volume.)



REDLERS

Redlers and chain conveyors are used to transport all types of non-sticky dry products.

We supply feeders in various materials and sizes depending on the environment and the customer's needs. Chain conveyors can transport over long distances with differences in height along the way.



OVAL DISC STRAINER

Vågen ODA is an energy-efficient solid-liquid separator with a self-cleaning function and high capacity.

The opening between the fixed and the rotating oval rings lets the liquid through and guides and pushes the solids further in the process. The rotation between the rings cleans the system and prevents clogging of the dried sludge. The process can be run continuously and is automated.



There is little need for operator control and the self-cleaning function provides good flow in the separation process. The oval rotating rings transport the sludge towards the outlet of the machine while simultaneously separating the water from the sludge. The structure of the system is simple and requires little maintenance. Low rotation speed results in long operating time and low maintenance costs. Compared to other dewatering systems, Vågen ODA has low energy consumption. The energy consumption varies from 0.2 kW to 1.5 kW from the smallest to the largest machine which gives from 23 to 130 m³/hour capacity. The separator is a complete sludge dewatering system that can be adapted to most processes and industries. The system can be supplied with associated systems for feeding and output, and can be operated as a continuous process.

ODA - Properties

No clogging or sludge build-up

Continuous separation of particle liquid and self-cleaning during operation.

The oscillating discs are cleaned at the same time as it dewateres and drives the sludge towards the outlet.

Stable dewatering capacity

Through self-cleaning and uninterrupted operation, the system provides high capacity and ensures smooth operation.

Long service interval

Simple structure and low rotation speed result in long maintenance and service intervals.

Wear and tear and the need to replace wearing parts are low compared to other similar equipment.

Applications

Vågen ODA can effectively dewater most types of sludge and gives good results both with and without the use of polymer. The machine is used worldwide in the food and fishing industry,

but dewateres and cleans sludge from a wide variety of industries



SAND AND SLUDGE SEPARATORS

Vågen AS supplies solutions and machines for treatment plants for waste water, sewage and sludge from various processes in all types of process industries. In this context, desanders and sand separators are an important contributor to extend the life of other equipment, which will quickly wear out if sand and pebbles enter the process.

We supply desanders with a capacity of 1-300m³ per hour and Sand Separators with a capacity of up to 720m³ per hour, manufactured in AISI 304 or AISI 316.



KNIFE GATES

We manufacture and supply standard or customized knife gates, with manual, pneumatic or electric operation. The knife gate is delivered manually operated as standard, but can also be delivered with an electric or pneumatic actuator. The maximum working temperature is 80°C. In special cases, knife gates can be supplied up to 500°C. Knife gates are designed with an adapted flange size, which means that it fits directly to a rotary valve. The flanges are 5 mm with reinforcement, which means that the valve can be mounted directly under the knife gate. Knife gates are surface-treated with primer and topcoat with a minimum layer thickness of 100 µm. (MY).





SWIVEL SOLUTIONS

Vågen AS delivers customized swivel solutions based on needs. Most needs can be solved, contact us and together we will find a solution that suits you.



DRUMS AND REACTORS

Together with customers in many different process industries, we have had the pleasure of developing and delivering process reactors for drill cuttings, cleaning, pyrolysis, hydrolysis, chemical precipitation and Separation and more.

Contact us with your query and together we will find a solution that meets your needs.





SYSTEM SOLUTIONS

Vågen AS, in collaboration with Cevia Solutions, designs system solutions for complete machines and can integrate these into total system deliveries for efficient and rational bulk handling. Feel free to contact Cevia Solutions directly if you want a "turnkey" solution.



Kalkmelkmiksing



Kalkdosering



Pumpeløsninger



Ventilløsninger



Avvanningssystemer



Kontrollsystemer





SUPPORTS

Vågen AS supplies supports for various solutions. We can deliver for fixed installations or with wheels for flexibility.



VÅGEN EXPRESS ONLINE STORE

Simple screw conveyor that can be assembled in different lengths in the most commonly used dimensions, Ø200 and Ø300mm. The screw conveyors can be delivered assembled or in parts as needed. Order with the desired options and the screw conveyor is ready for delivery within 2 weeks. This is a simple standard product that is delivered without process guarantees, to ensure the right conveyor for your use.

BIGBAG SYSTEMS

The Big Bag system is used for filling Big Bag sacks.

The inlet box is supplied with a lid/grate. The lifting conveyor is made of a pipe-trough. Operational reliability and service life are largely influenced by the choice of material, dimensions, filling rate and rotation speed of the rotor. Great emphasis has been placed on easy maintenance and easy access for replacing wearing parts.





VACUUM CONVEYORS

In many processes, it is desirable to treat products under vacuum in order to, among other things, save energy in connection with evaporation and drying.

Vågen AS supplies screw conveyors and mixers designed for continuous operation under vacuum, down to 0.3 Bar(g). These can also be equipped with cooling or heating jackets that are insulated from the surroundings. Produced in carbon steel, stainless, acid-resistant, Duplex or Hastelloy depending on the process.



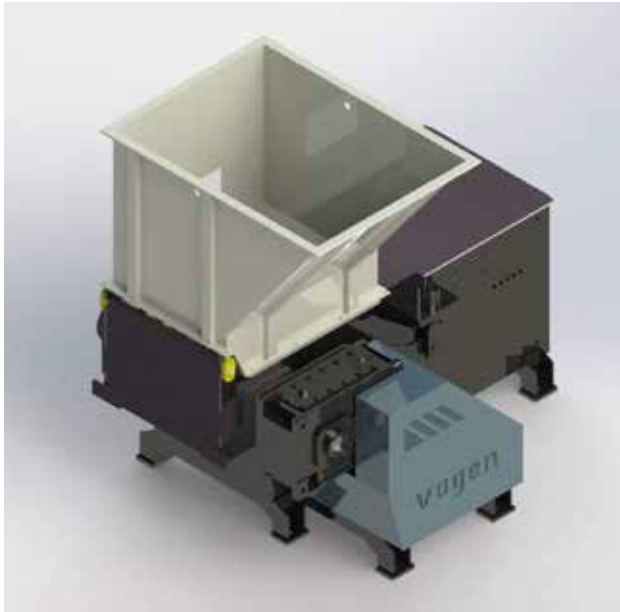
MAGNETIC SCREW CONVEYORS

Metals in materials to be transported can destroy both the product and the machinery that transports it. With magnetic screw solutions from Vågen, you can remove magnetic metals from both liquids and solids.

Contact us and together we will find the solution that best fits your process.



VÅGEN SR SHREDDER



Basic information

Manufactured in carbon steel

Reversible carbide blades for extended life

Capacity from 200-3000 kg/hour

Particle size from 40 - 100 mm

Replaceable outlet strainer

Siemens PLS

CE marked

Options

- Commissioning
- Installation
- Training

VÅGEN SR SINGLE AXLE SHREDDER

Vågen's SR series single-axe shredders have a high capacity and withstand heavy loads. A hydraulic drive unit presses the shaft with hard metal cutters against the product. Outlet strainer determines particle size after grinding and can be easily changed as needed.

The grinder is very flexible and can be delivered in several

sizes with capacities from 200 – 3500 kg per hour. The machine is delivered complete with a Siemens control system and CE documentation.

AREAS OF USE

The grinder series SR is designed for grinding soft products such as plastic, wood, waste and others.



The machine is equipped with good safety systems to avoid damage to equipment and personnel.



CONTACT US

We would appreciate hearing from you,
and are happy to answer any questions.

All inquiries are treated confidentially.

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