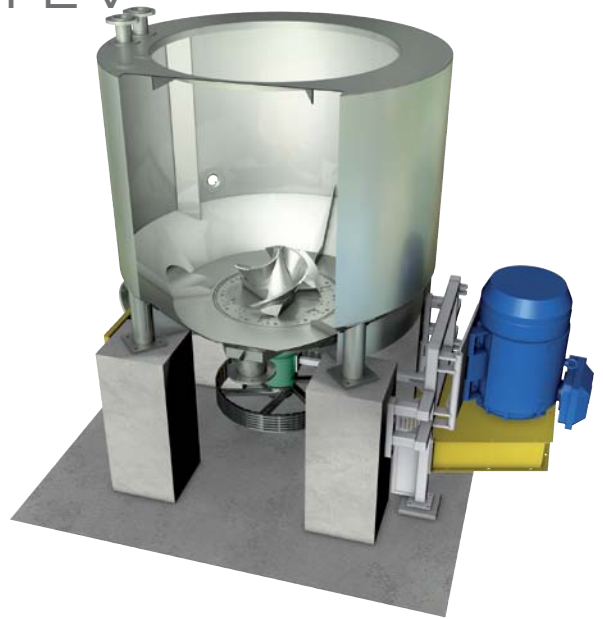




Cellwood Machinery
FOR BETTER PULP AND PAPER

Grubbens Vertical Pulpers

TYPE V



CELLWOOD
MACHINERY

Grubbens Vertical Pulpers

TYPE V

Grubbens V-Pulpers are used in the following positions:

Pulping of Bales

Broke handling

Trim handling

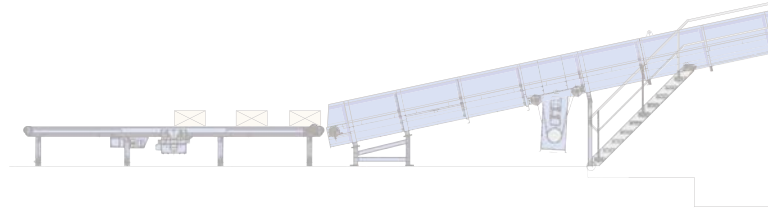
Pulping of Wet Strength material

GRUBBENS S-ROTOR



GRUBBENS S-ROTOR OPTIMIZED FOR:

- Mechanical processing
- High Pulp Consistency
- Low Energy consumption



Bale Pulper



- Cellwood Machinery AB has over 50 years of experience with different Pulper installations and offers the most energy efficient and flexible pulping solutions.
- The design of the Grubbens vertical Pulper and S-Rotor allows for a high operating consistency in both batch and continuous operation.
- The optimal pulping conditions result in high pulping quality, short pulping time as well as a very low power usage (kWh/ton).
- High pulping quality is a very important condition for optimum function of the following Refining stage.

TECHNICAL INFORMATION

OPERATION

Grubbens Pulper units are designed for use with either a belt drive or a gear drive.

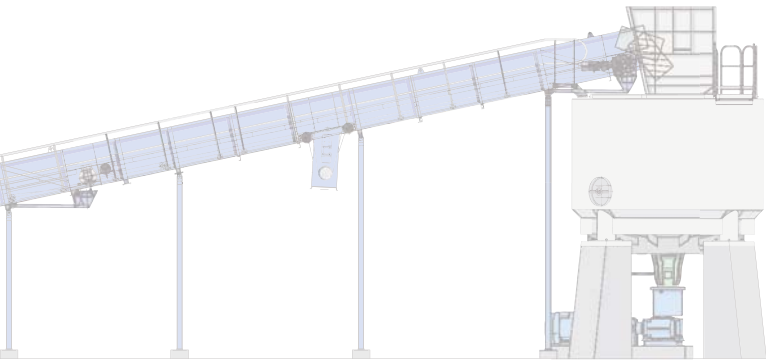
As the rotor unit has its own bearings, when using a gear drive, the coupling is connected to the rotor shaft. This means that the gear only has to sustain torque forces.

A belt drive provides quieter operation and increased flexibility, while a gear drive is used when higher power demand is required.

PROCESS ENGINEERING

Grubbens Vertical Pulpers can be used for both batch and continuous operation. Continuous operation requires a slightly lower operating consistency, but the shorter retention time results in much higher capacity in the same volume. In batch operation it is recommended to use a VFD to facilitate the emptying of the Pulper and to produce a more even discharge consistency.

The surrounding controls and logics are designed in close cooperation with the customer to achieve optimal functionality.



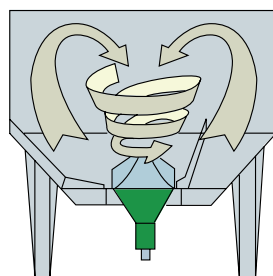
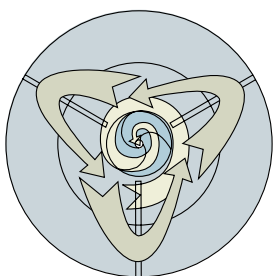
GRUBBENS PULPERS: THE RESULT OF 50 YEARS OF EXPERIENCE AND CONTINUOUS DEVELOPMENT



- Customized solutions allow flexible installations in regards to design and placement of feed hood, Pulper tub and motor frame.
- The design of the Grubbens vertical Pulper and S-Rotor results in complete movement of the pulp. Three main streams assure high fibre friction and high velocity towards the rotor centre.

GRUBBENS PULPERS FULFILL MARKET REQUIREMENTS, SUCH AS:

- Gentle disintegration of pulp
- High pulping consistency
- Disintegration of wet-strength material without the use of chemical additives or steam
- Low energy consumption
- Low maintenance costs
- Unique technical features such as reversible strainer plates, wear strips and counter knives
- Customized solutions



CELLWOOD MACHINERY

World Leader of Dispersing & Pulping Technology



Cellwood Machinery AB develops, manufactures and supplies machinery and systems for the pulp and paper industry. Our aim is constant development, leading to cost-effective machinery and energy savings for our customers. Cellwood Machinery always provides an operational guarantee and undertakes everything from engineering and drawing documentation to complete installations.

Cellwood Machinery is a world leader in pulper design and dispersing systems. We are represented in all countries by our own personnel or agents. For further information, visit our website www.cellwood.se.

Cellwood Machinery is part of the Swedish family-owned industrial group The Cellwood Group, which has around 350 employees.



Cellwood Machinery AB • Box 65 • SE-571 21 NÄSSJÖ • SWEDEN • Phone +46 380-760 00 • Fax +46 380-141 23
Street address • Storgatan 53 • SE-571 32 NÄSSJÖ • SWEDEN • E-mail sales@cellwood.se • www.cellwood.se