Chip Thickness Screening

Systems and equipment specially designed for total chip preparation.

Versatile and efficient thickness screening for pulp production

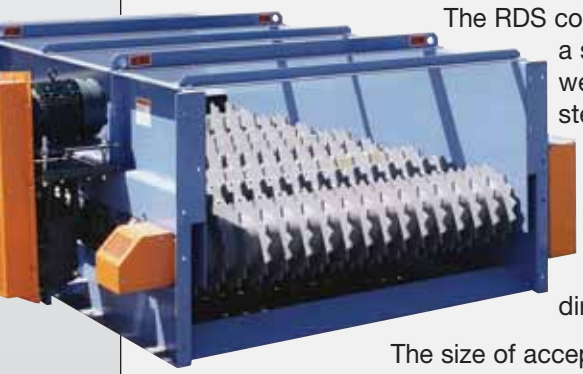
Wood costs represent the highest cost component in pulp production and for this reason it is essential to get the highest yield from the wood chips used. And because the quality of the end product never exceeds the quality of the input product, the manner in which wood chips are prepared for pulping is significant .

Jeffrey Rader offers equipment for the four stages of total chip preparation. These stages are gross oversize removal, over-thick chip removal, size reduction of over-thick chips, and fines removal.

Gross oversize removal

Jeffrey Rader's Disc Screen (RDS) is a great choice for the removal of grossly oversized wood chips, lily pads, ice lumps and other foreign objects.

These "overs" can be set aside for further processing by re-chipping, or hogging, after which they can be re-introduced into the incoming chip flow.



The RDS consists of a series of wear-resistant steel discs mounted on heavy-duty shafts, all rotating in the same direction.

The size of acceptable particles passing between the discs is controlled by the interface opening between discs, and the slot length between shafts. The interface opening (IFO) of the RDS is selected for each application and requirement, and can be changed to adapt to changing material characteristics. The infeed to the RDS is important for maximum efficiency.

Overthick chip removal

Once the gross overs are removed from the chip flow, the chips can be screened for "thickness". The normal range for accept chips for pulping is 4-8mm. Chips thicker than 8mm are removed for further processing.

Jeffery Rader offers two types of primary thickness screens. They are bar type screens, and disc type screens.

The Jeffrey Rader DynaGage™ Bar Screen consists of multiple rigid frame sections containing a series of parallel steel bars alternately attached to eccentric shafts. The spaces or slots between the bars are accurately pre-set and locked in place to establish the open area through which material will pass. When activated, the eccentricity of the shafts causes the bars to alternately rise and fall in a circular pattern. During the screening process, chips are repeatedly tipped and tumbled by the oscillating motion. Chips of acceptable size pass through the slots while overthick material is retained on the decks and carried over the end.

Jeffrey Rader can also provide flat disc type screens which use a patented Raderflex design. As in the scalping type screens, the size or thickness of the throughput is controlled by the interface spacing of the discs.

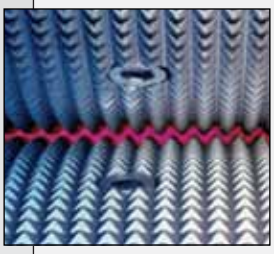
A Jeffrey Rader Air Density System is used to remove knots, dense fiber and racks from the reject flow prior to the chips going to over thick processor.

Jeffrey Rader's equipment is used in multiple stages of chip thickness screening and chip preparation, from the gross scalping screens to fines screens and over-thick processors.

CRUSH. FEED. PROCESS. CONVEY. STORE.

Overthick chip size reduction

The Jeffrey Rader Chip Conditioner consists of two heavy duty rolls, with removable, profiled surfaces,



which rotate towards each other and pull the oversize chips between them. The profiled surfaces are aligned so that the pyramid apexes on one roll travel in the valleys of the apexes on the adjacent roll.

With normal oversize wood, the Conditioner typically generates less than 1% fines and 2% pins, verses chip slicers generating between 2%-8% fines and up to 15% pins (based on -3mm RH fines and -2mm slot pins).

Due to reduction in wear parts in contact with material, and due to the low-speed action of the conditioning process, the wear is significantly less than in other forms of overs processing.

- Easy to maintain design. All components are simple, off-the-shelf items which all millwrights are familiar and understand.
- Easily replaced with high strength bolted fasteners.
- Hardened stainless steel segments are standard.

The Chip-sizer was created as a result of industry concern over the high maintenance cost of typical re-chippers.

Jeffrey Rader is the first company in the industry to research and develop a “true” no-knife re-chipper. Several designs were discussed and tested in our lab before determining that our current patented design would be best suited for the industry.

- Low capital cost provides a rapid R.O.I.
- High recovery rates increase profits.
- Ships complete with motor, drive assembly and base for quick installation.
- Metal trap minimizes damage from tramp metal.
- The large infeed opening ensures that plugging is eliminated in the Chip-sizer.
- No knives to sharpen or damage keeps maintenance costs low.

Fines removal

Raderwave

High-efficiency fines removal with excellent pin chip retention. Raderwave is self cleaning, with out plugging or blinding by pins, snow or ice. Screen decks easily replaced, and there is a wide variety of deck opening sizes and geometry available.

Optional features include adjustable inclination, and variable wave frequency.

Chip classification

Chip thickness classification is an important process in reducing cost in the mill.

The CC2000 allows mills to classify chips on a user defined thickness.

- All controls and functions are monitored by computer.
- New software is compatible with Microsoft Windows®
- While other classifiers can only sample, larger samples are more accurately processed in less time.
- Automated chip classification allows total variability of chip thickness size selection.

JEFFREY RADER™

UNITED STATES • CANADA • SWEDEN

USA: Corporate Headquarters
Jeffrey Rader Corporation
398 Willis Road
Woodruff, SC, USA 29388
Phone: 864.476.7523
Toll-Free (North America): 800.615.9296
Fax: 864.476.7510

CANADA: Montreal, Quebec
Jeffrey Rader Canada
2350 Place Trans-Canadienne
Dorval, Quebec
H9P 2X5 Canada
Phone: 514.822.2660
Fax: 514.822.2699

CANADA: Vancouver, BC
Jeffrey Rader Canada
Unit 2, 62 Fawcett Road
Coquitlam, BC
V3K 6V5 Canada
Phone: 604.299.0241
Fax: 604.299.1491

SWEDEN: Stockholm
Jeffrey Rader AB
Domnarvsgatan 11
163 53 Spånga
Stockholm, Sweden
Phone: +46 8 56 47 57 47
Fax: +46 8 56 47 57 48


CC2000
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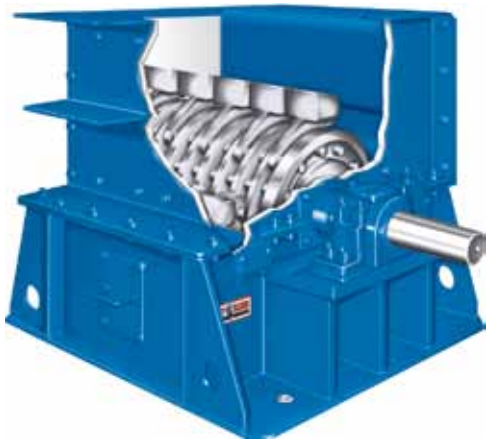


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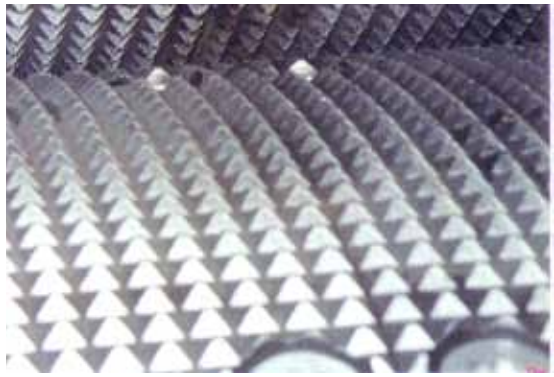

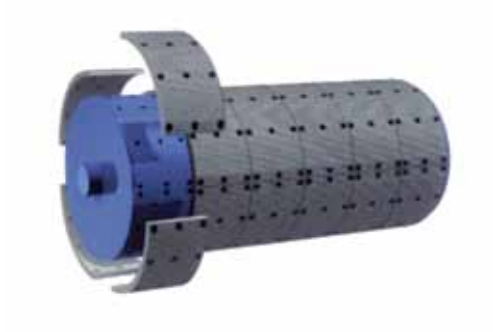

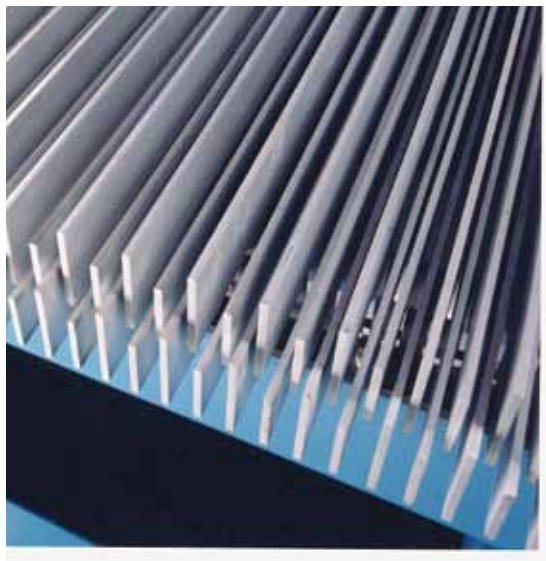


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