

Air Density Separator (ADS)

A most efficient and versatile protection device for chip conditioners, slicers and pulp mill equipment.

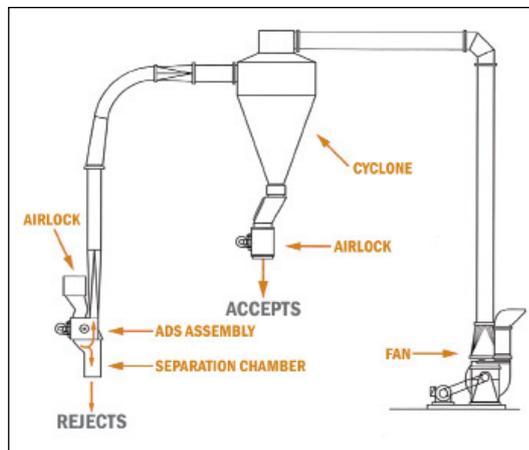


Features/Advantages

Another Quality Component from the Leader in Chip Processing Technology

Jeffrey Rader pioneered the use of vacuum air systems to remove chip contaminants such as rocks, knots and metal over 40 years ago. Our Air Density Separator's uniquely-designed control system provides for optimal removal efficiency. The versatility of the ADS provides flexibility in locating chip conditioners and Chip-Sizer™ rechippers, saving costly space and reducing capital investment.

The ADS system's unique design allows for a curtain of air to be pulled across an adjustable separation chamber. Rocks, knots and unwanted debris drop out of the flow of material at this controlled separation zone while accepts are



conveyed to a cyclone.

Aside from protecting downstream equipment, the system's ability to remove knots and compressed wood greatly improves the pulping process and helps eliminate pulping rejects.

Each ADS system is custom tailored to accommodate your specific process requirement resulting in the elimination of unnecessary



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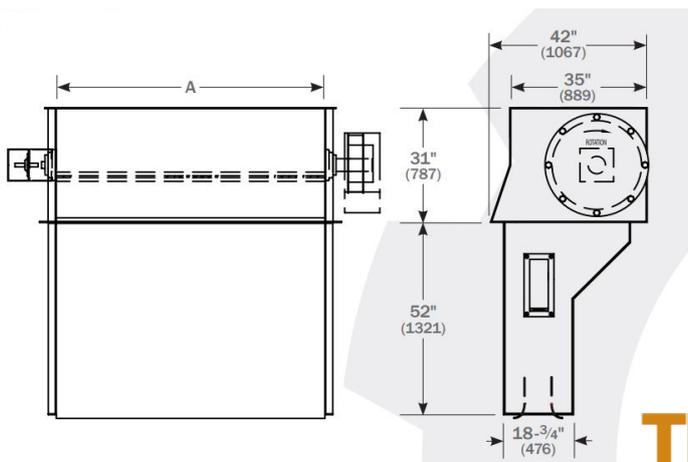
Operation

energy consumption.

The ADS was primarily developed to remove tramp materials and rocks from wood chips in the pulp and paper industry, and separate heavy and light material in the refuse/resource recovery industry. In the wood handling industry, the ADS has also been used to separate out knots and compression wood, that in some pulping and papermaking processes is undesirable. The flexibility of the ADS allows the system to be installed in almost any installation, and allows easy adjustment of the separation chamber to control the dropout of oversize and heavy materials.

Wood chips are metered into the separation chamber, where they pass through a rubber-tipped airlock. The separation chamber is adjustable to control the upward moving column of air into the material conveying pipe. By adjusting the separation chamber, the heavier “rejects” drop out of the airflow into a tote box or rejects conveyor. The lighter “accepts” are conveyed upwards with the moving air stream into the material conveying pipe to the cyclone, where the air and accepted material is separated. Chips separated at the cyclone are discharged through the airlock under the cyclone, and are then available for further processing, free of the heavier materials.

Dimensions

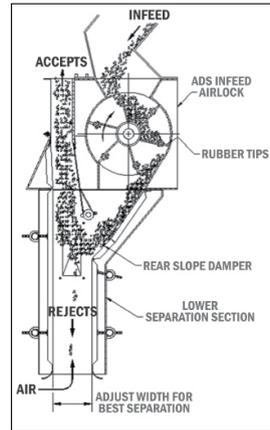


APPROXIMATE LAYOUT DIMENSIONS* IN. (MM)

| MODEL | A |
|---------|------------|
| 24 x 36 | 36" (914) |
| 24 x 48 | 48" (1219) |
| 24 x 60 | 60" (1524) |
| 24 x 72 | 72" (1829) |
| 24 x 84 | 84" (2134) |

* Certified drawings will be furnished for installation. Installation supervision is available.

Air that has been separated from the lighter



material continues out of the cyclone at the top and is directed by the discharge air piping to the centrifugal fan, where the air is discharged to the atmosphere. Alternately, the air may be recirculated to the separation zone using a return air plenum, which reduces atmospheric emissions to a minimum, saving time during the

environmental acceptance process.

Air volume is controlled with a control panel and fan damper or VFD in order to maintain the proper air velocity through the separation chamber. The fan damper or VFD is controlled by an actuator connected to the control panel, which is checking the pressure drop across the cyclone at all times. As the pressure drop falls outside a preset range, the damper or VFD will increase or decrease the air volume as necessary.

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