



BIOMASS & WOOD EQUIPMENT

Creating energy with BIOMASS & WOOD

and other types of organic material, is an absolutely fascinating process and preciseness is necessary, regardless of the material handling process.

Precision components will ensure your plant is moving materials and not experiencing costly downtime!



Precision Machine & Manufacturing's components are precisely crafted from raw materials that are made right here in the United States of America!

**Quality
you can
count on!**

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**FEEDERS • VALVES
SCREW CONVEYORS &**

**CONTACT
PRECISION TODAY**

For more information or a quote.

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 **PRECISION**
MACHINE & MANUFACTURING
1290 S. Bertelsen Road
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Creating energy with biomass, wood and other types of organic material is a fascinating process and preciseness is absolutely necessary regardless of the material type and flow.

Choosing the right components will maximize power production!

1

WOOD, ORGANIC & ALTERNATIVE FUEL FEEDERS

Not all feeders are created equal! Precision feeders are able to process a variety of material types in varying sizes and with its hardened steel knife, all discharged materials are uniform in size, which eliminates persistent blockage issues.

- ▶ Eliminates blockage issues!
- ▶ Easily handles a variety of alternative fuel types.
- ▶ Precision feeders can be rebuilt! The days of the old throw away cast iron feeders are long gone. Put a Precision feeder on site and continue to rebuild the same feeder for years to come.

MINERAL METERING VALVES

When it comes to precisely metering abrasive and corrosive materials, putting the right rotary valve inline can make the difference between a successful operation and one that is constantly causing downtime!

- ▶ Precision Machine & Manufacturing valves are manufactured with extremely tight tolerances, which ensures false air is not introduced into the system.
- ▶ Modular design! Easy to maintain, no need to replace the entire unit, only replace the worn parts!
- ▶ Manufactured from a special abrasion resistant alloy to ensure functionality and dependability.
- ▶ A successful track record of eliminating downtime and increasing throughput, while also reducing maintenance costs.

3

DUST COLLECTION VALVES

The amount of dust and airborne particulates created during the production process can be challenging to manage. This is why biomass power and wood processing plants are closely scrutinized and the reason industry leaders trust Precision Valves for their dust collection efforts!

- ▶ Precision Machine & Manufacturing manufacturers components that when compared to other competitive valves over their lifetime will:
 - Provide superior functionality!
 - Easily handle a variety of material types and sizes.
 - Precisely meter the required amount of material.
 - Are rebuildable! No throw away components here!
 - Extremely durable! Built with 500 Brinell wear parts!
 - Provide outage to outage maintenance free durability!

4

FLY & BOTTOM ASH FEEDERS

Some of the most abrasive and hardest to handle materials are the leftovers from burning coal or alternative fuels to generate power. These highly abrasive materials can quickly degrade the integrity of direct contact components if not treated properly.

- ▶ Precision Machine & Manufacturing manufactures a line of ultra-duty valves that are ion-nitride treated to provide exceptional durability and abrasion-resistance.
- ▶ When it comes to moving large volumes of highly abrasive materials, putting the right feeder in place can be the difference between worktime and downtime!

5

SCREW CONVEYORS

Precision custom engineers every screw conveyor specifically to its operational environment, which ensures maximum longevity, durability and throughput!

- ▶ Precision Machine & Manufacturing builds screw conveyors that move the materials other "common" screws fail to stand up to in comparison.
- ▶ Handles the most difficult materials with ease!
- ▶ High-Temp!

6

SELF CLEANING ROTARY VALVES

When it comes to handling the most difficult material types and/or maintaining the most critical systems, the self-cleaning rotary valve is the preferred option.

- ▶ Configured to clean itself and eliminate DOWNTIME!
- ▶ The absolute best self-cleaning valve available.
- ▶ Significantly reduces maintenance costs!

MINERAL METERING VALVES

When it comes to metering minerals and/or powdery materials, such as Calcium Carbonate, Titanium Dioxide, and/or Talc to name a few, the modular rotary valve is hands-down the most effective option. Made from a specially formulated abrasion-resistant alloy, the Precision Rotary Valve functions as a metering device and an airlock!



WOOD, ORGANIC & ALTERNATIVE FUEL FEEDERS

Equipped with a helical rotor along with a stationary hardened steel knife, which ensures that only the correctly sized material is being metered and dispensed into the operation!



1

- ▶ Hardened stainless steel knife slices large pieces
- ▶ Meters material of all shapes & sizes
- ▶ Super tight clearances to avoid false air introduction!
- ▶ Perfect for organic material!
- ▶ Rebuildable

6

SELF CLEANING ROTARY VALVES

When it comes to the most difficult material types, which cause the operational system to go down at the worst possible moment, the self-cleaning rotary valve is by far the best option! This proprietary self-cleaning unit eliminates down time and maintenance costs!



2

- ▶ Meter abrasive minerals and powdery materials
- ▶ Built with specialty 500-Brinell abrasion-resistant alloys
- ▶ Modular- Wear item replacement
- ▶ Save energy!
- ▶ High-Temp!



BIOMASS & WOOD EQUIPMENT

DUST COLLECTION VALVES

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3

- ▶ Tight-Tolerances- Minimizes blowby!
- ▶ Keeps the trapped air from escaping!
- ▶ Precisely meters the material!
- ▶ Pneumatic line injectors

4

- ▶ Rounded rotor pockets
- ▶ Combined durability & functionality!
- ▶ A metering device AND airlock!
- ▶ Maximum throughput
- ▶ Abrasion resistant



FLY & BOTTOM ASH FEEDERS

Able to easily process massive amounts of fly and bottom ash, without prematurely wearing out important components.

5

- ▶ Precisely engineered
- ▶ Durable & Functional!
- ▶ Handles the most difficult materials
- ▶ Abrasion resistant
- ▶ Rebuildable



SCREW CONVEYORS

When it comes to moving the most difficult of material types, Precision is the only option! Hot, abrasive, sticky, the more difficult the better!



CONTACT PRECISION TODAY!

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Precision Machine & Manufacturing's components are 100% manufactured in the United States of America!

\$1.5M | PER DAY!

This is an estimated average daily cost for a biomass power plant to be shut down for a day and could be as much as **\$2.5M** depending upon energy prices.

For a single unplanned outage, this cost could be as much as **\$17.5M** if the operation is down for a week.

This lack of production and the associated costs is what fuels **Precision Machine & Manufacturing** to build the highest quality material handling components in the industry!

Made in the USA and built with special wear-resistant alloys solely intended to provide cement plants with outage to outage reliability.



\$1.5M per day is too much to ask anyone to pay for faulty components, so the question isn't *"Can you afford Precision Machine & Manufacturing?"* it is *"Can you afford **COSTLY** downtime?"*



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