

### Typical applications

- ✓ Pellet Plants
- ✓ OSB/MDF Plants
- ✓ Particle board Plants
- ✓ Hot Gas Generation for Direct Dryers
- ✓ Thermal Oil Heating
- ✓ Steam Generation
- ✓ District Heating

### Fuel Handling system mainly comprises

- ✓ Fuel Bin
- ✓ Hydraulic power pack
- ✓ Fuel fed conveyors
- ✓ Fuel Feeder

A dependable fuel feed system is crucial to maintaining complete and thorough combustion control in any biomass fired energy system.

Your fuel feed system should be as steady and worry free as possible. EnPlant offers Fuel bin - Live bottom fuel feed System, fuel fed conveyor, intermediate storage bin, fuel feeder. Engineered and designed to work with your furnace and, to deliver the amount of fuel required. Fuel feed system designed for specific HGG ensuring that the energy needs of your plant are consistently met.

The Wet Fuel Storage Bin includes rugged live bottom fuel feed design utilizing "ladders" for accurate feed rate control. Ladders have hold down clips on each side. Our ladder design is conservatively designed and capable of handling varying waste wood fuel. The Hydraulic cylinders, motors, and power units for the storage bins are completely external to the bin. The range of fuel storage sizes offered to meet feed requirements and operating schedule of your plant.



Fuel Handling for Biomass Energy system





Live Bottom Ladders









### Fuel bin

– live bottom fuel system can be silo designed for top-roof loading, side wall open silo design for front loaders and fuel bin for truck unloading.



This type of silo or bin unloader comprises of hydraulic driven scrapers covering the entire silo bottom. The so called scrapers are built like a climbing Ladder and each foot bar makes the scraper which moves the material forward. The mowing scrapers which we call the “Ladders” are 1,5 m wide and the length is the same as the length of the Bin.

### The Ladders

are driven by hydraulic cylinders, one for each Ladder. The Ladders moves back and forth 700 mm. Each scraper has such a shape that it moves the material forward when the Ladder runs forward but it slides under the material during the backwards movement. The discharging effect is achieved by this reciprocating movement of the entire Ladders.



The size of the cylinders varies with the type of material stored in the bin, the volume and the density. The cylinder sizes varies from 100 mm diameter for small bins up to 250 mm for large ones.



The Moving floor system is equipped with a hydraulic power unit for generating the oil flow to the hydraulic cylinders.



### Spike roller – Level roller

Spike roller installed at bin outlet. The purpose is to control the flow of material but also tear apart larger chunks which could cause jamming in the collecting conveyor.



### Fuel Feed conveyor

EnPlant uses a drag chain conveyor design that uses heavy duty chain to handle hogged bark and other wood waste materials. The Fuel feed conveyor utilizes a bottom drag chain design with the return over top and, comes complete with conveyor chain with flights, gear box drive and motor. The double conveyor chain is running on UHMW rails and, steel flight running on bottom plate Hardox. The Fuel feed conveyor has a tail end sprocket and drive shaft with chain sprockets at the discharge end. Conveyor trough totally enclosed with bolted covers.



### Fuel Feeder - Metering Bin

The Fuel Feeder is attached to the front of the furnace. Hydraulically driven fuel rams deliver precise amount of fuel required by the furnace at any time based on demand. The dedicated hydraulic power unit for the Furnace is designed with variable speed capability.

The Fuel feeder system consists of the following main components

- ✓ Fuel gate
- ✓ Fuel hopper with Distribution screw conveyor.
- ✓ Micro wave level switches for starting stopping the fuel conveyors
- ✓ Hydraulic cylinders - pushing fuel into the Furnace.
- ✓ Deluge system on the Fuel Hopper spraying water at back fires in the fuel Hopper
- ✓ Dribble chute, collecting fuel losses from the fuel feeders.

