



# WOOD PELLET MILLS

Leveraging its 55 years of experience in process engineering, Yemmak rises above the competition through **R&D efforts into wood pellet mills, the main machine in wood pelleting processes.**

**We manufacture five different models of pellet mills with capacities ranging from 37 kW to 355 kW.** All our pellet mills can be customized according to your needs.

Powered by innovation, we offer process solutions tailored for your needs. Our goal is to design and manufacture the machine that best suits your needs. **That's why all our models are customizable** (adjustable cover direction, engine position, feeding screw length).



# WP1

304/37

It is the smallest machine in our mill product group. It is designed to meet customer request and is suitable for low-capacity facilities.

## WP1 (Ø304 x 37) series Wood Pellet Mill

<b>Capacity</b>	0,4 - 0,6 t/h
<b>Die Width</b>	37 mm
<b>Die Inner Diameter</b>	304 mm
<b>Die Linear Velocity</b>	5 m/s
<b>Pellet Diameter</b>	Ø 6 - 8 mm
<b>Main Motor</b>	75 kW Max.
<b>Feeder Motor</b>	2,2 kW
<b>Feeder Speed</b>	0 - 118 rpm
<b>Conditioner Motor</b>	4 kW
<b>Weight</b>	2100 kg
<b>Outside Dimensions</b>	W=1740 x D=1480 x H=1700 mm
<b>Pulley Rotation Sensor</b>	Optional
<b>Die Assembly Crane</b>	Optional
<b>Hydraulic Stacker</b>	Optional

# WP2

420/78

This product has an optimum price-performance ratio with ranging motor power options from 75kW to 110kW. It is indispensable for quality pellets at low capacities.

## WP2 ( Ø420 x 78 ) series Wood Pellet Mill

<b>Capacity</b>	0,8 - 1,2 t/h
<b>Die Width</b>	78 mm
<b>Die Inner Diameter</b>	420 mm
<b>Die Linear Velocity</b>	5 m/s
<b>Pellet Diameter</b>	Ø 6 - 8 mm
<b>Main Motor</b>	75 - 90 - 110 kW Max.
<b>Feeder Motor</b>	2,2 kW
<b>Feeder Speed</b>	0 - 118 rpm
<b>Conditioner Motor</b>	7,5 kW
<b>Weight</b>	3000 kg
<b>Outside Dimensions</b>	W=2100 x D=2130 x H=2200 mm
<b>Pulley Rotation Sensor</b>	Standard
<b>Centralized Lubrication System</b>	Standard
<b>Die Assembly Crane</b>	Standard
<b>Hydraulic Stacker</b>	Optional

# WP3

520/78

This is our medium-sized product with ranging motor power options from 132 kW to 160 kW. It is also used in pelletizing by-products such as wood chips, grass, and fertilizer.

## WP3 (Ø520 x 78) series Wood Pellet Mill

<b>Capacity</b>	1,5 - 2 t/h
<b>Die Width</b>	78 mm
<b>Die Inner Diameter</b>	520 mm
<b>Die Linear Velocity</b>	5 m/s
<b>Pellet Diameter</b>	Ø 6 - 8 mm
<b>Main Motor</b>	132 - 160 kW Max.
<b>Feeder Motor</b>	3 kW
<b>Feeder Speed</b>	0 - 118 rpm
<b>Conditioner Motor</b>	7,5 kW
<b>Weight</b>	5220 kg
<b>Outside Dimensions</b>	W=3220 x D=2450 x H=2730 mm
<b>Pulley Rotation Sensor</b>	Standard
<b>Centralized Lubrication System</b>	Standard
<b>Roller Temperature Sensor</b>	Standard
<b>Roller Rotation Sensor</b>	Standard
<b>Die Rotation Mechanism</b>	Optional
<b>Die Assembly Crane</b>	Standard
<b>Hydraulic Stacker</b>	Optional

# WP4

660/118

It is one of our larger-sized products with motor power options from 200 kW to 250 kW. This model with high performance in pelletizing by-products is one of the heaviest in the series.

## WP4 (Ø660 x 118) series Wood Pellet Mill

Capacity	2 - 3 t/h
Die Width	118 mm
Die Inner Diameter	660 mm
Die Linear Velocity	5 m/s
Pellet Diameter	Ø 6 - 8 mm
Main Motor	200 - 250 kW Max.
Feeder Motor	3 kW
Feeder Speed	0 - 118 rpm
Conditioner Motor	11 kW
Weight	7800 kg
Outside Dimensions	W=4250 x D=2590 x H=2770 mm
Pulley Rotation Sensor	Standard
Centralized Lubrication System	Standard
Roller Temperature Sensor	Standard
Roller Rotation Sensor	Standard
Die Rotation Mechanism	Optional
Die Assembly Crane	Standard
Hydraulic Stacker	Optional

# WP5

900/138

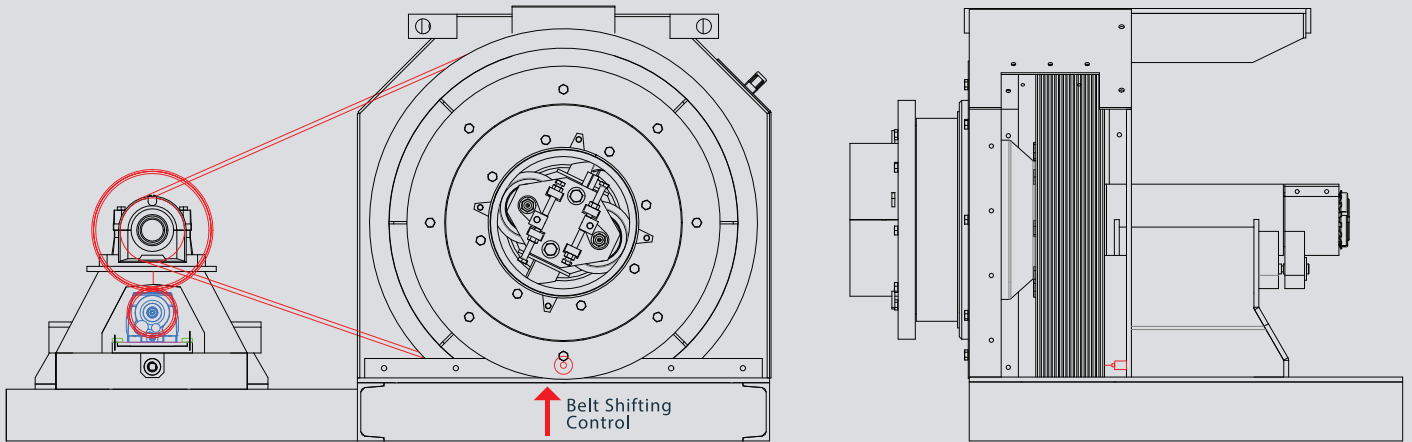
It is one of our larger-sized products with motor power options from 315 kW to 355 kW. It yields high performance in pelletizing by-products.

## WP5 (Ø900 x 138) series Wood Pellet Mill

Capacity	4 - 5,5 t/h
Die Width	138 mm
Die Inner Diameter	900 mm
Die Linear Velocity	4,9 m/s
Pellet Diameter	Ø 6 - 8 mm
Main Motor	315 - 355 kW Max.
Feeder Motor	4 kW
Feeder Speed	0 - 118 rpm
Conditioner Motor	11 kW
Weight	11000 kg
Outside Dimensions	W=4620 x D=3275 x H=3325 mm
Pulley Rotation Sensor	Standard
Centralized Lubrication System	Standard
Roller Temperature Sensor	Standard
Roller Rotation Sensor	Standard
Die Rotation Mechanism	Standard
Die Assembly Crane	Standard
Hydraulic Stacker	Optional
Water-Cooled Roller System	Optional



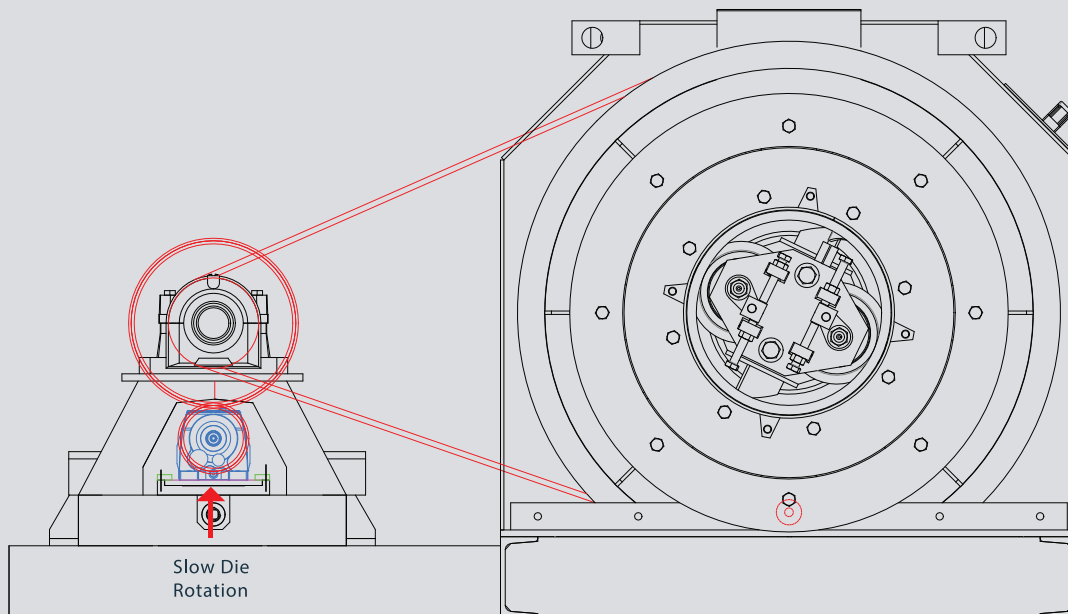
## PULLEY ROTATION SENSOR



### **The pulley rotation sensor monitors the rotation of the pellet mill's main pulley.**

It subsequently determines any shifts in the belt position. The automation system warns the operator in case of shifting. It monitors the pulley rotation speed through the PLC system and stops the engine to prevent the occurrence of belt damage in the event of a problem.

## DIE ROTATION MECHANISM



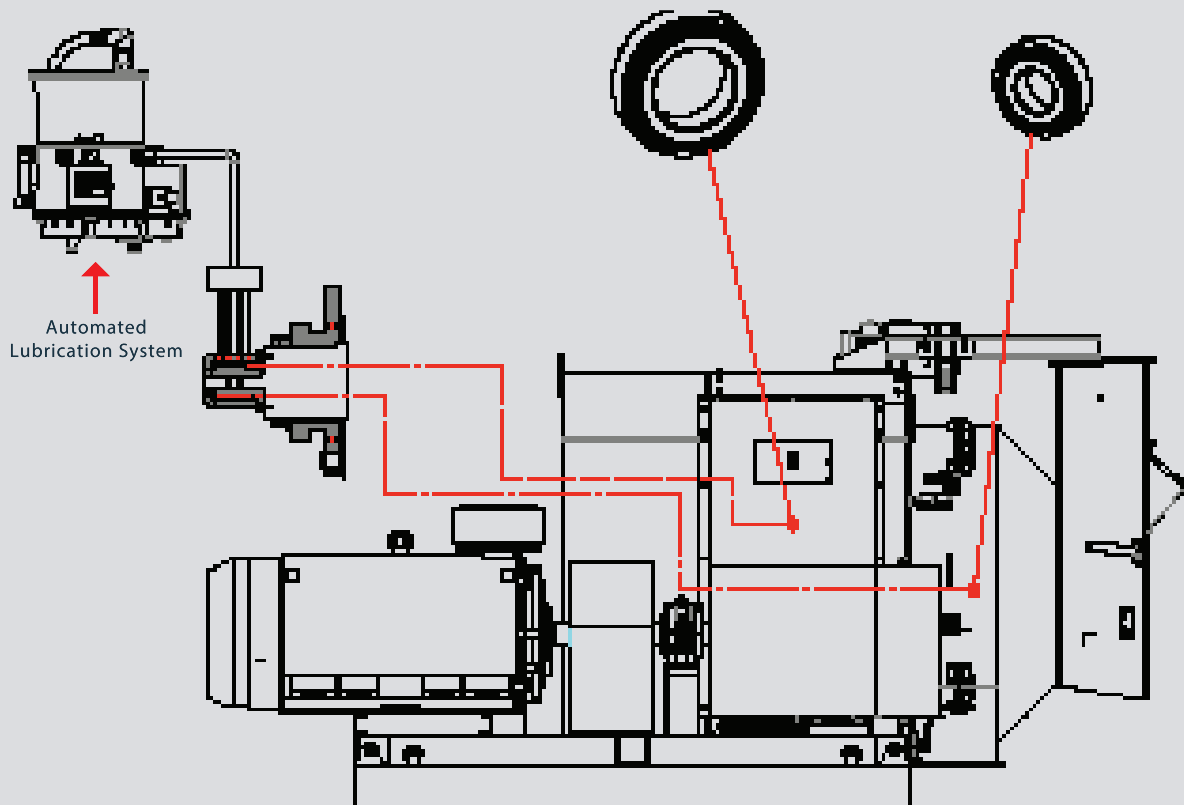
### **This motor-driven die rotation mechanism is used to replace belts and rollers and to clean and adjust the die.**

- Engine power 1.5 Kw 24 rev/min

The slow die rotation system enables the positioning of die attachment bolts to perform die assembly. Additionally, if the rear shear pin severs connection, it realigns the pin for reconnection.

The operator presses a button to commence rotation and can switch the rotation direction.

## CENTRALIZED LUBRICATION SYSTEM

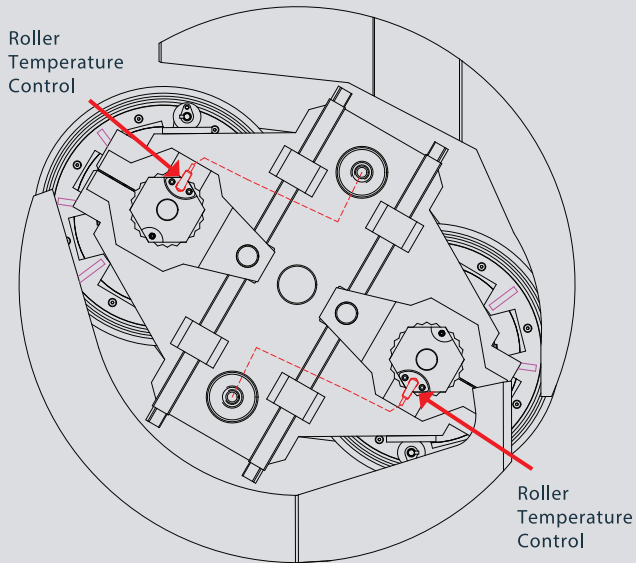


**The centralized lubrication system** calculates the required amount of grease based on temperature, load, rotation, and other such data, then distributes the grease to the bearings through the primary distributors. The Centralized Lubrication System reduces unplanned downtimes, maintenance and repair costs, and grease consumption. We use an SKF brand lubrication system. This system includes a pump that is suitable for high-viscosity grease. The system is directly connected to the pellet mill shaft through the distributor.

- Pump 24V DC rotation 22 rev/min
- Oil distribution to main bearings and roller bearings
- Filter
- Pressure valve and indicator
- Distributor



## TEMPERATURE SENSOR

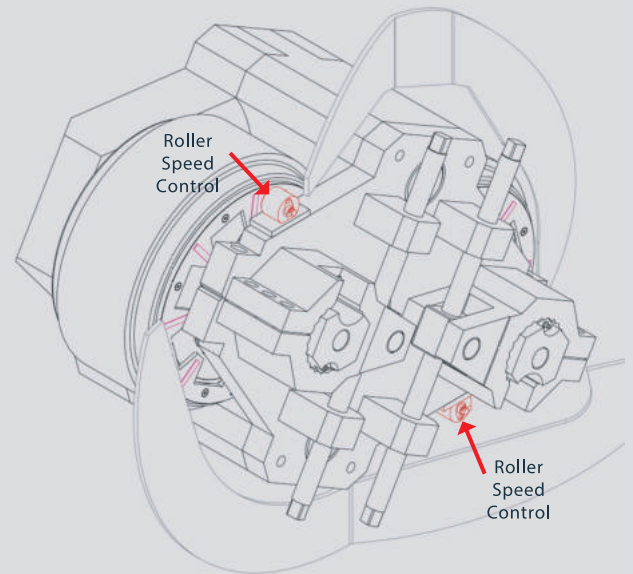


The consumption of pellet mill roller bearings bears high costs in a manufacturing plant. The lifetime of roller bearings is reduced due to high pressure, high temperature, high humidity, and a dusty work environment.

**The temperature sensor allows the temperature of the bearing to be controlled.**

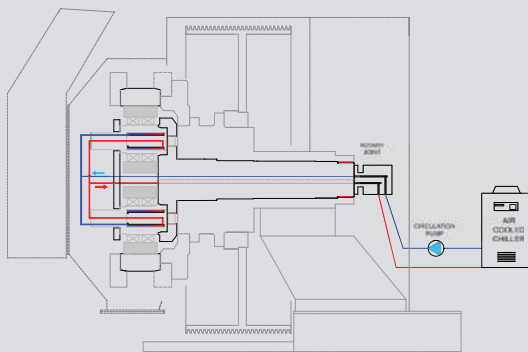
- Temperature probe
- Measurement range - 50...200°C
- Sizes Ø6\*Ø18,7\*100
- Cable connection socket, 1xM12

## ROTATION SENSOR



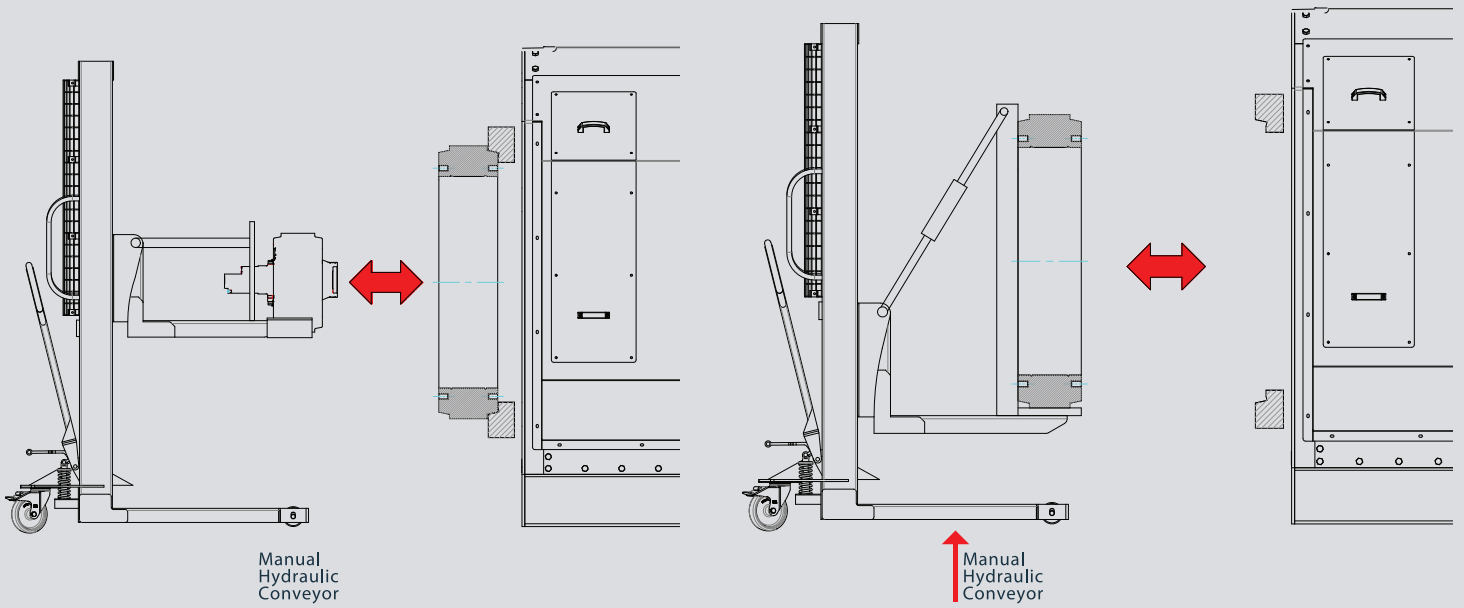
**The rotation sensor** measures the linear speed of rollers. The system stops the mill engine and sends a warning on the operator screen when the roller shifts on the die or when a product becomes lodged between the die and the roller.

## WATER-COOLED ROLLER SYSTEM



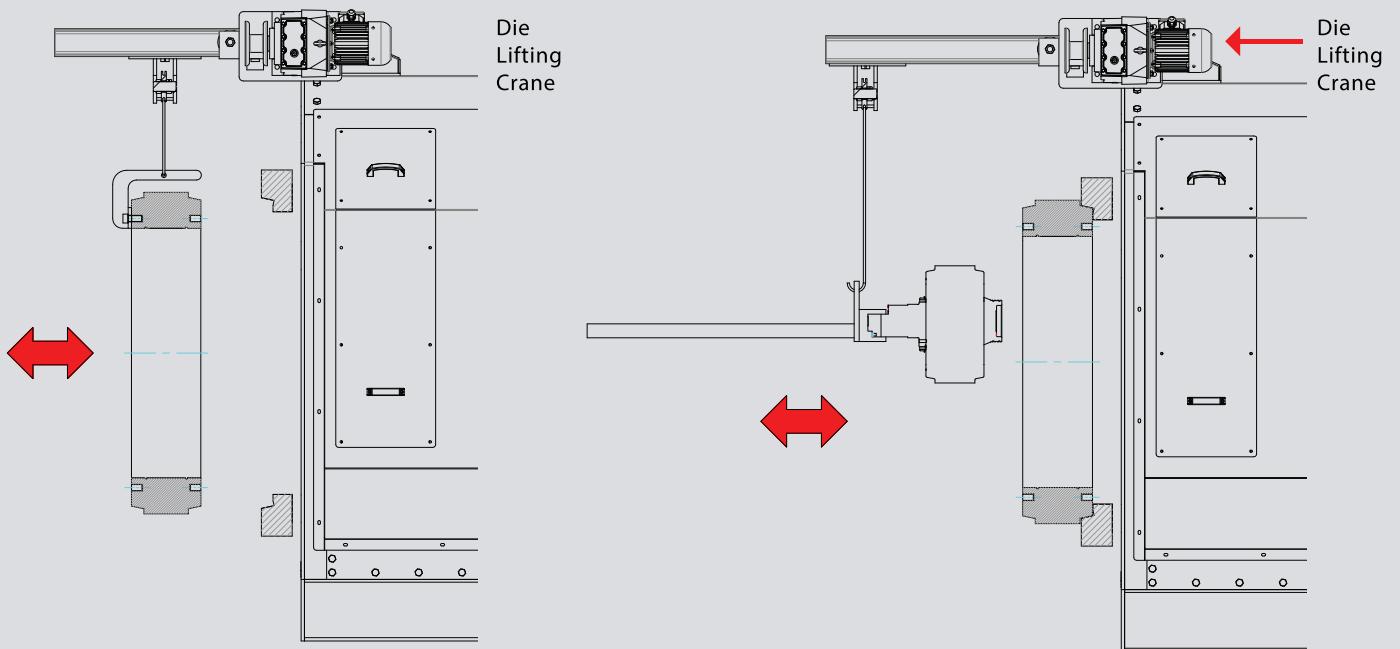
The rollers are exposed to high temperatures during the pelleting process. Bearing failures in pellet mill rollers have become increasingly prevalent, especially given the demand for higher product output and continuous operation. As oil seals often fail because of the harsh pelleting process, the cooling of bearings by forced lubrication has **not been proven** reliable. Grease can also be used in bearings. However, the grease does not cool the bearing or dissipate heat; in fact, large amounts of grease forced into the roller bearing pathways may generate heat due to friction. Subsequently, the "water-cooled roller system" was developed to effectively cool the roller bearings in a pellet mill. Because there are no moving parts in the cooling system and water or glycol is used as the coolant, "water cooling" is a more reliable system than "forced oil cooling."

## MANUAL HYDRAULIC STACKER



The **manual hydraulic stacker** facilitates die and roller installation. It delivers die and rollers to the storage area, removing the need for any further operations.

## CRANE SYSTEM



It is a **motorized mechanical crane system** that enables the easy lowering and lifting of the die and rollers. The crane is specifically anchored on the pellet mill. It works with up-down commands over the hand control.

