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FMB Pegasus CNC Automatic Automatic Mitre Band Saw

Standard Features & Equipment of the Pegasus CNC

Overview

The PEGASUS CNC is designed for mitre sawing from 0 to 60 degrees in automatic cycle. The CNC control will allow you to set a cut length AND cutting angle for each step in a cycle. For instance: Index the work piece 32 inch and cut at 0 degrees; the index 64 inch and cut at 45 degrees. The movement of the saw head to the cutting angle is controlled by the CNC control.

Saw Head Design and Features

Massive Heavy Duty Torsion Free Saw Head is manufactured from special aluminum alloy; steel and cast iron for a balanced saw head that absorbs cutting vibrations. The height return of the saw band is set automatically to the work piece.

Rotation of the Saw Head

The rotation of the saw head is fully programmable from the control panel of the machine. The rotation is powered by hydraulic cylinder and the cutting angle maintained via magnetic band. Once the saw head is at the desired cutting angle; the saw head is locked into position via hydraulic cylinder.

Dynamometric Band Tension

The blade is tensioned dynamometrically to the proper tension. A Saw Blade Breakage switch will shut the machine down in the event band tension is lost for any reason.

Blade Rotation Sensor

The rotation of the band wheels is monitored and if any deviation is detected the machine will shut down.

Saw Blade Drive and Blade Speed Control

The Direct Drive Reduction Gear Box features gears with ground teeth that are induction hardened. The gear box is an enclosed system greased for long life. The direct drive gear box transmits power directly to the band wheel. This feature allows for maximum torque delivered to the cut. The blade speeds (50-400 FPM) are controlled via an inverter. The blade speed is changed via input in the CN control.

Saw Blade Feed System

The saw blade is fed via hydraulic system with dual controls of pressure and rate of feed. The controls are located conveniently to the operator.

CN Cutting Control Panel

CN cutting control manages your cutoff programs, simply input via the keypad, the desired length, angle of cut, number of pieces, blade speed, etc. and the machine will monitor the cutoff jobs for accuracy.

99 Cutting Programs can be stored and each program can have 100 steps (Number of cuts and cut length).

Desired cut length is input and if more than one index required, CN will automatically calculate the required number of strokes and blade kerf calculation.

Blade Guide System

The Saw Blade is supported by roller and carbide guides. The carbide guides are wear resistant. The saw blade has reduced twist as it enters the guide, putting less strain on the blade backing material.

Material Index System

The material is indexed to the cut length via a hydraulic gripper vise. The gripper vise travels on dual linear rails that reduce friction. The length gauge is set via a servo motor and ball screw. The vise is activated by dual limit switch. The index vise also has a two speed index with creep feed to final position the part to an exact length.

The vises are self centering, thus even a bent bar can be fed without incident.

There are 4 rollers on the in feed side of the blade. Two of the rollers move in automatic cycle with the gripper vise to better support the work piece as it becomes shorter. The Accuracy of the Index System is +/- 0.004". The Length of a single index is 39 inch and the drop end in auto cycle is on 12 inch.

Part Clamping System

The clamping vises are on a rack system with hydraulic cylinder. This allows for rapid adjustment of the cutting vise according to the work piece.

Chip Collection Pan

A large chip collection pan allows for the chips to collect then the coolant to drain from the chips. The chip pan can be emptied of dry chips.

Blade Brush

The Blade Brush is driven via motor and gear box. This cleans the blade of chips and promotes long blade life.

Electrical Panel

The electrical panel and operator control is ergonomically located in the front of the machine. Control Voltage is 24 VAC. The panel has built in protection of high voltage and short circuit. The CN control has many self diagnostic features.

Technical Data:

Cutting Capacity	0 Degree	45 Degree	60 Degree
Round	12-1/2" (320 MM)	12-1/2" (320 MM)	9" (230 MM)
Square	12-1/2 x 12-1/2" (320 x 320MM)	10 x 10" (260 x 260MM)	6-1/3 x 6-1/3" (160 x 160MM)
Rectangle	15-3/4 x 16-1/8" (320 x 410 MM)**	10 x 13-3/8" (260 x 340 MM)	6-1/3 x 9" (160 x 230 MM)
Bundle	7-7/8 x 16-1/8" (200 x 410 MM)		

** Up to 20" cut length in semi-auto cycle

Saw Power Transmission:

Saw Motor 4.5 HP Direct Drive
Torque Efficiency 95%

Saw Blade Information:

Saw Blade Size 13 ft 7 in x 1-3/8 in x 0.042 in
Saw Blade Speed 50 to 400 FPM

Hydraulic Motor 1.5 HP
Coolant Motor 1/8 HP
Machine Weight 4,775 lbs
Machine Size (l x w x h) 96 x 181 x 59