

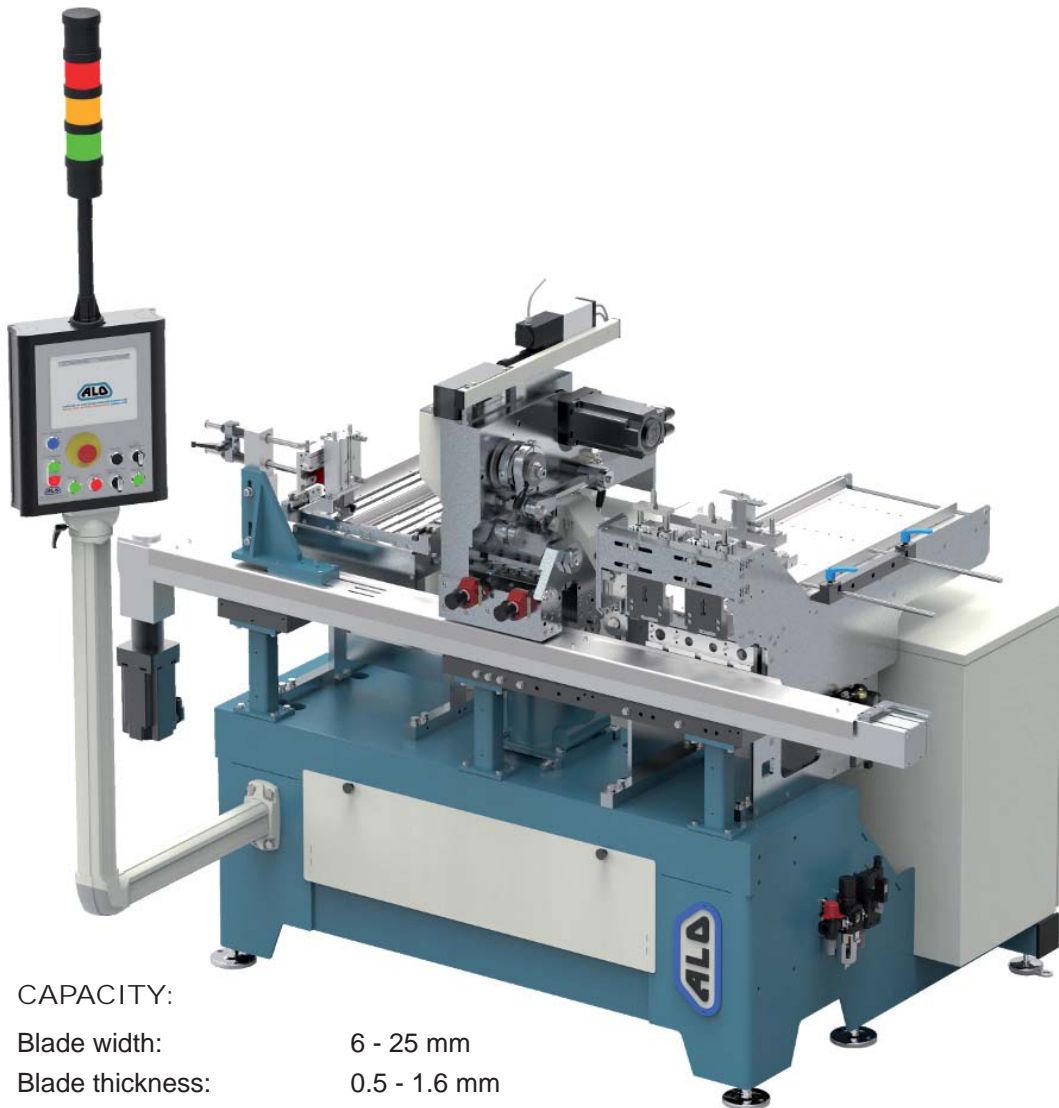
JIG SAWS

ALO 787-M
ALO 787-R
JS06

AUTOMATIC SETTING MACHINE
AUTOMATIC SETTING MACHINE
AUTOMATIC JIG SAW GRINDING MACHINE

ALO 787-M

Automatic setting machine for jig and reciprocating saw blades



CAPACITY:

Blade width:	6 - 25 mm
Blade thickness:	0.5 - 1.6 mm
Blade length:	65 - 315 mm
Setting tolerance:	±0.01 mm
Symmetry tolerance:	±0.01 mm

OPTIONS / ACCESSORIES:



ALO 81-57
Table top set gauge



ALO 81-60
Set gauge



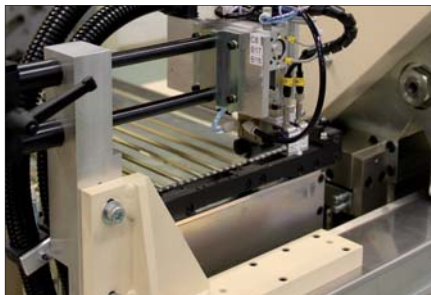
ALO 61201
Grinding fixture



ALO 61207
Grinding fixture



Infeed magazine ready to fill up the batch with a new blade package.



Outfeed magazine with pick and place unit.



Improved clamping together with digital micrometer makes clamping adjustments easier.

MACHINE DESCRIPTION

The setting machine is fully automatic and all functions are controlled by a programmable controller. The feeding magazine, for approx. 700 blades, separates and feeds one blade at the time into the blade carrier that is mounted on a linear feeder. The feeder transports the blade to position for setting and to unload position. A blade pick unit takes the set blade from the carrier and drops it into the out-magazine.

The whole length of a 150 mm (6") blade can be set, or portions of the blade can be left unset. Overall set is easy to adjust with micrometer micrometer. Fine adjustment of overall set are made with an actuator from the HMI with the advantage that fine tuning can be carried out in increments while machine is running in auto mode.

The setting motion is controlled by a servo motor. Adjustments of the height position of the setting unit are powered by an electrical motor controlled from the HMI. A pneumatic cylinder locks the pillar stand in position after any height adjustment. Parameters can be stored in the PLC/HMI and reloaded to the process next time the same particular product should be run in the machine.

The machine is universal but requests blade related parts, like blade carriers and magazine inserts, to be able to handle blades with shaped backs.

TECHNICAL SPECIFICATION:

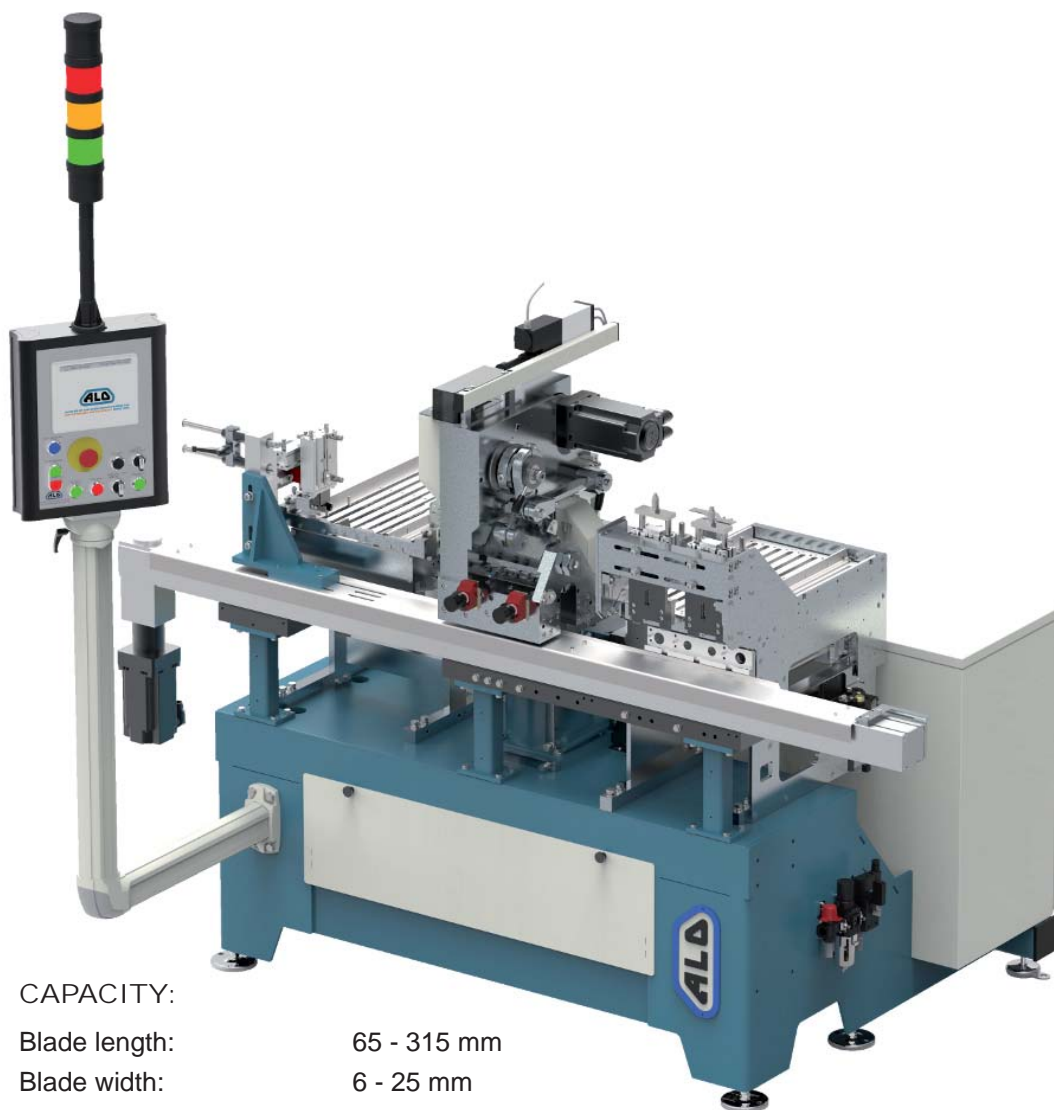
Blade width:	6 - 25 mm	
Band thickness:	0.5 - 1.6 mm	
Blade length:	65 - 315 mm	
Max. set length / set cycle:	150 mm	
Tooth pitch:*	2 - 32 tpi	
Setting tolerance:	±0.01 mm	
Symmetry tolerance:	±0.01 mm	
Capacity:	33 blades / min at a blade length of 150-300 mm	
Air pressure:	6.3 bar	
Voltage:	400 VAC, ± 10%, 3-phase, 50-60 Hz ± 1%, directly earthed system	
Space requirement (l x w x h):	1.8 x 1.3 x 1.45 m	
Weight:	990 kg	

* Setting tools are not included in the machine price.



ALO 787-R

Automatic setting machine for jig and reciprocating saw blades



CAPACITY:

Blade length:	65 - 315 mm
Blade width:	6 - 25 mm
Blade thickness:	0.5 - 1.6 mm
Setting tolerance:	±0.01 mm
Symmetry tolerance:	±0.01 mm

OPTIONS / ACCESSORIES:



ALO 81-60
Set gauge



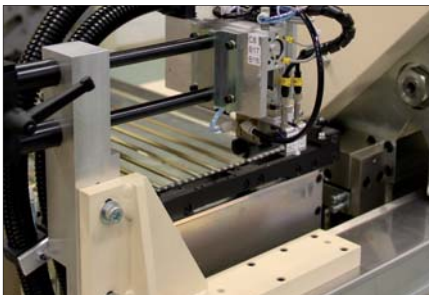
ALO 61201
Grinding fixture



ALO 61207
Grinding fixture



Infeed magazine ready to fill up the batch with a new blade package



Outfeed magazine with pick and place unit



Improved clamping together with digital micrometer makes clamping adjustments easier

MACHINE DESCRIPTION

The setting machine is fully automatic and all functions are controlled by a programmable controller. The feeding magazine, for approx. 700 blades, separates and feeds one blade at the time into the blade carrier that is mounted on a linear feeder. The feeder transports the blade to position for setting and to unload position. A blade pick unit takes the set blade from the carrier and drops it into the out-magazine.

The whole length of a 150 mm (6") blade can be set, or portions of the blade can be left unset. Overall set is easy to adjust with digital micrometer. Fine adjustment of overall set are made with an actuator from the HMI with the advantage that fine tuning can be carried out in increments while machine is running in auto mode.

The setting motion is controlled by a servo motor. Adjustments of the height position of the setting unit are powered by an electrical motor controlled from the HMI. A pneumatic cylinder locks the pillar stand in position after any height adjustment.

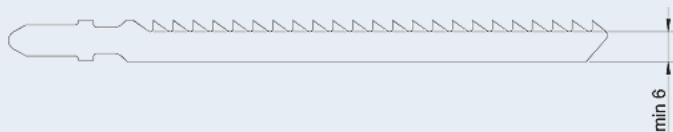
The machine is universal but requests blade related parts, like blade carriers and magazine inserts, to be able to handle blades with shaped backs.

The machine is delivered in ALO standard colour blue and white.

TECHNICAL SPECIFICATION:

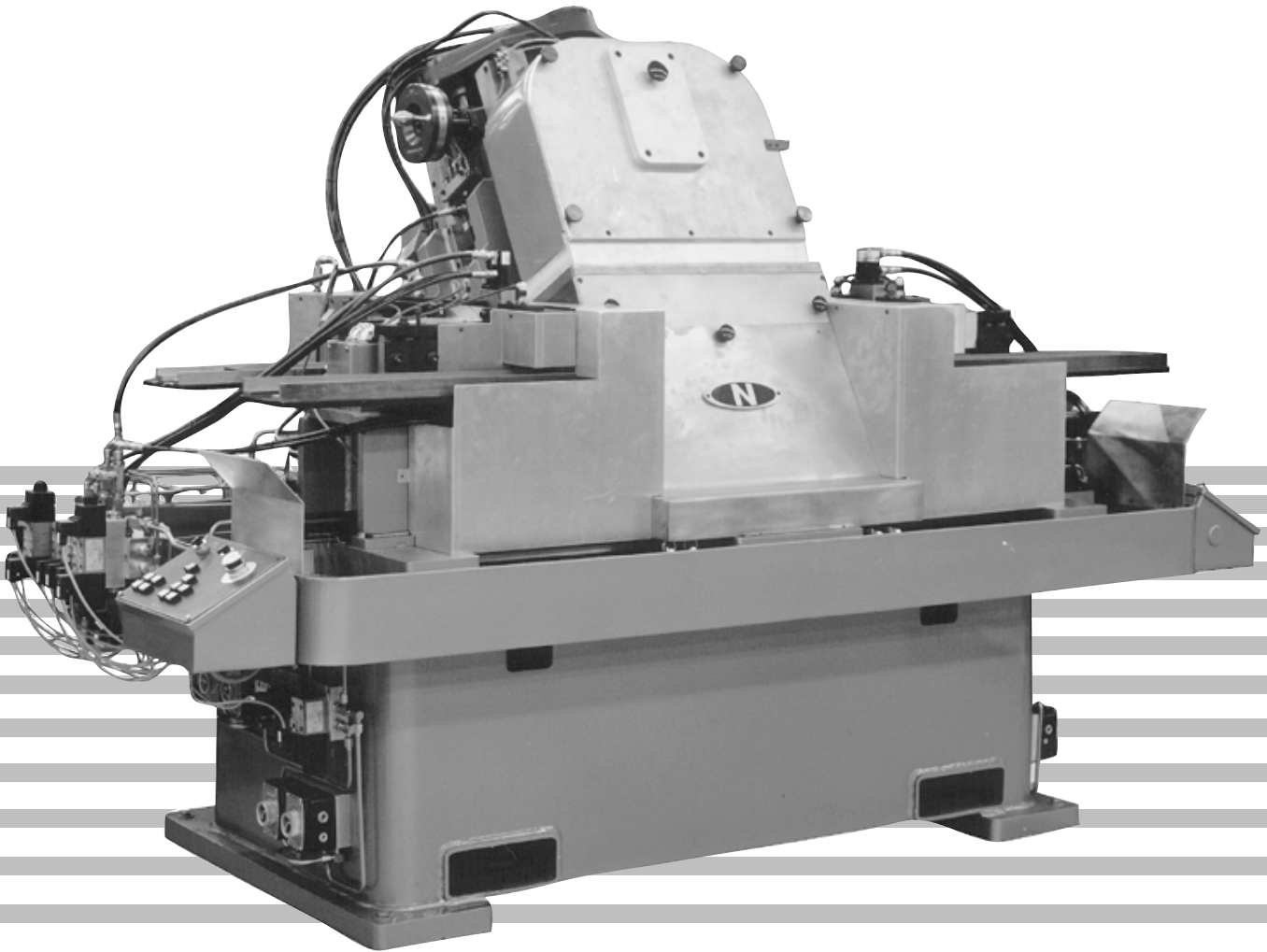
Blade width:	6 - 25 mm
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Air pressure:	6.3 bar
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Space requirement (l x w x h):	1.8 x 1.3 x 1.45 m
Weight:	990 kg

* Setting tools are not included in the machine price.



JS06

AUTOMATIC JIG SAW GRINDING MACHINE



MADE IN USA



NORMAC / Precision Grinding Machines

Exclusive Features

Dual automatic load and unload mechanisms.

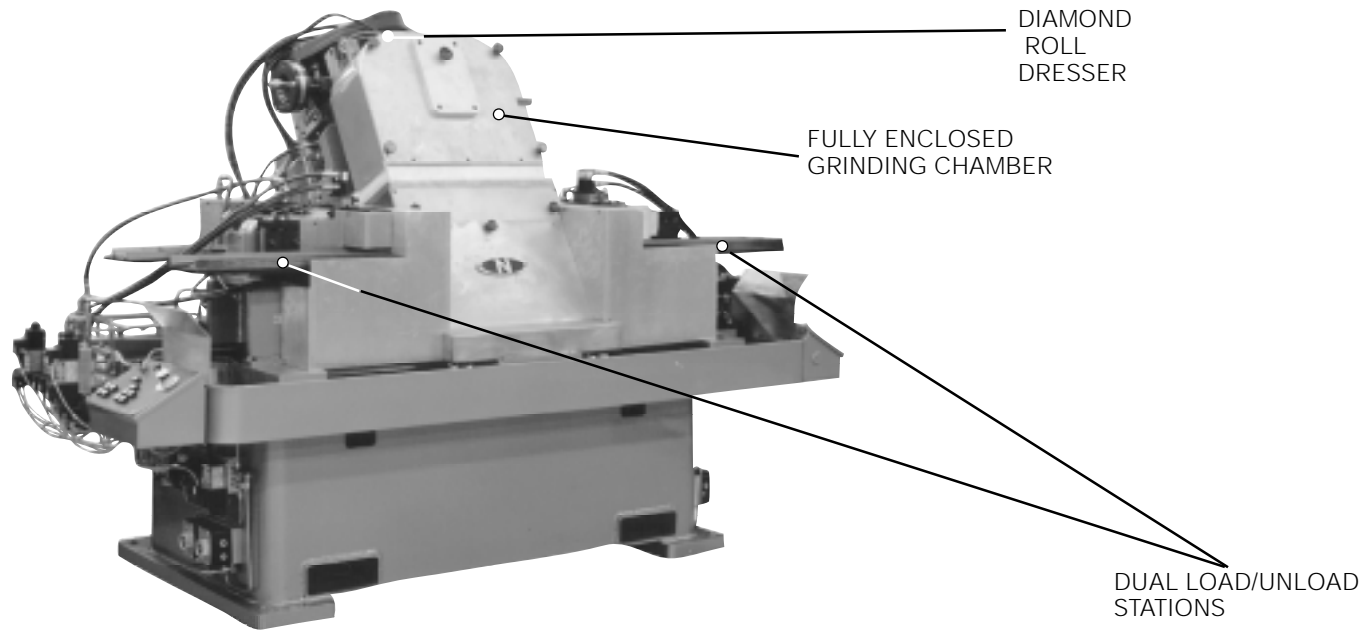
Swiveling grind vises for grinding bevel angles.

Grinds sharp, uniform teeth with little or no burr.

Wheel and Dresser Slides are Heavy Cast Iron, Hardened and Ground, and Automatically Lubricated for Greatest Durability.

Fully Automatic, Self-compensating Rotary Diamond Roll Dressing System.

Enclosed grinding chamber for a cleaner, quieter work environment.



JS06 Automatic Jig Saw Reciprocating Saw Blade Grinding Machine

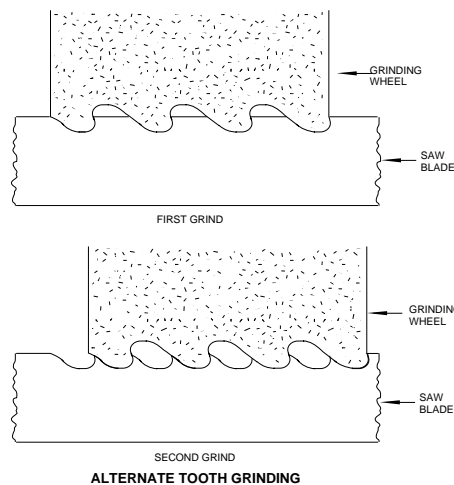
General Description

The JS06 Fully Automatic Jig Saw Blade Grinding Machine provides a new, fast and efficient method for grinding jig saw and reciprocating saw blades. The JS06 features dual automatic load and unload mechanisms and dual grinding vises to provide maximum output from the machine. The swiveling vise mechanisms allow grinding bevel angles up to 30° and the angled grinding wheel head allows grinding up to 20° positive rake angles.

The JS06 grinds using an alternate tooth (or "skip tooth") method that ensures grinding sharp, uniform teeth with little or no burr.

In the automatic cycle, one grinding vise moves to its unload/load station where a finished blade is unloaded from the vise, and

a new blade blank is loaded. While this is happening, the other grinding vise rotates to the preset bevel angle and travels under the grinding wheel, grinding half the teeth. After the blade has traveled past the grinding wheel, the vise rotates to the opposite bevel angle and shifts one pitch length. The vise then travels under the grinding wheel in the opposite direction to finish grinding the teeth, and then travels to its unload/load station.



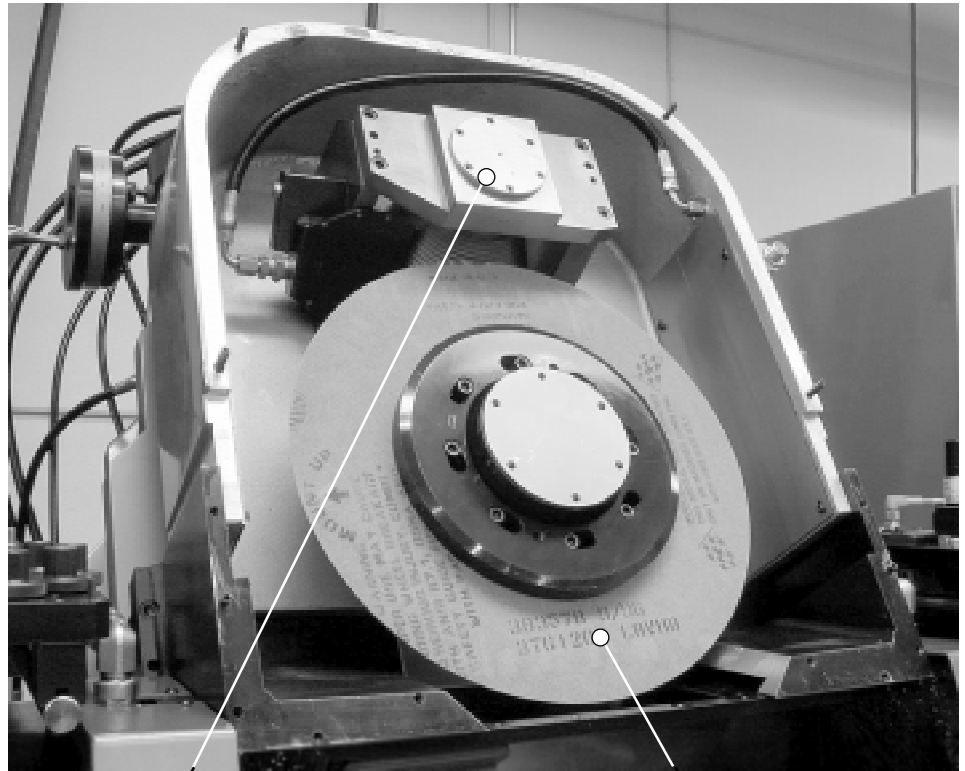
Style of blade produced by the JS06.

Wheelhead and Dresser Assembly

The JS06 wheelhead assembly incorporates hardened and ground precision wheel and dresser slides that are automatically lubricated for reliability and ease of maintenance. The dresser and grinding wheel slides are geared together so reestablishing tooth depth is unnecessary when making a wheel change.

The wheel dressing frequency is determined by the type of blade material being ground and is preset by using a counter on the control panel. Dressing depth is infinitely variable.

The dressing system on the JS06 consists of a 2 H.P. precision motorized spindle with outboard support for greater rigidity, and a reverse plated diamond dresser roll to dress the grinding wheel. This roll is designed with a 28° face angle capable of producing up to a 20° positive rake angle on the finished tooth form.



Rotary Dresser

Grinding Wheel

Loading and Unloading System

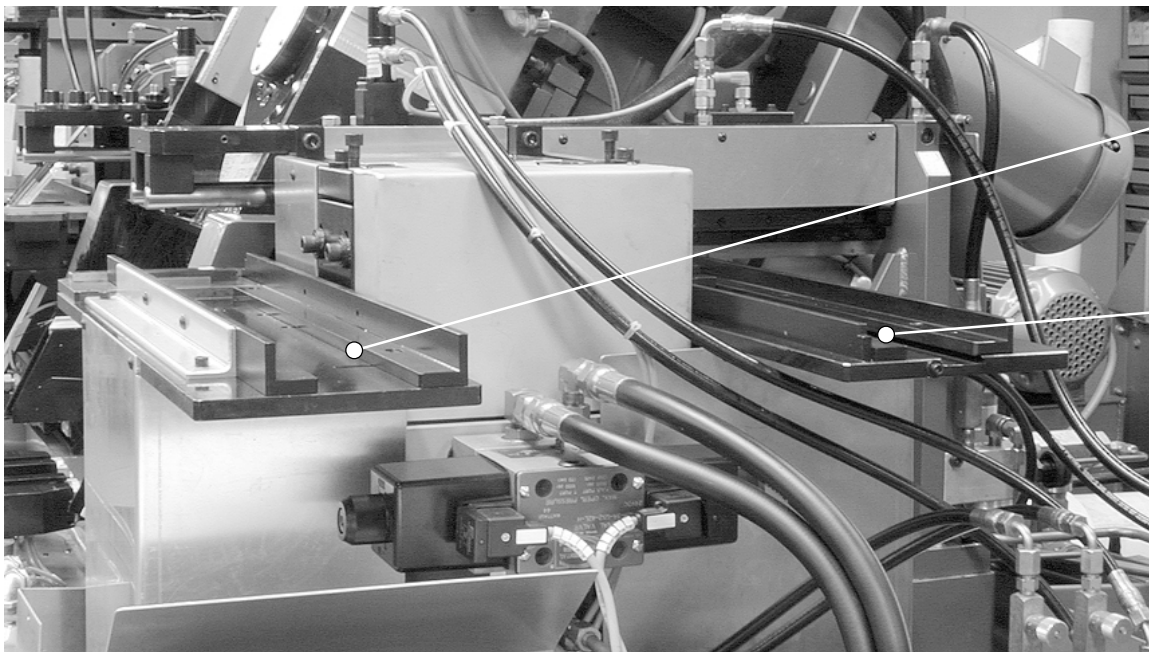
The JS06 features dual load and unload stations; one load/unload station at each side of the machine. Each load/unload station consists of a loading and unloading tray. The load tray, holds jig saw blade blanks and the other, the unload tray, holds the finished ground blades.

In the automatic cycle, the blades move forward in the load tray and when they reach

a prescribed position a loader blade picks up a new blade and places it in the grind vise. While this is taking place an unload finger comes down on the unload station and moves a finished blade from the grind vise toward the unload tray. When the finished blade is in position at the opening of the unload tray, a metal finger rises and pushes the finished blade into the tray and stacks it with the other

finished blades.

Since loading /unloading takes place during grinding there is no delay waiting for the machine to reload a blank. There is no wasted loading time when you grind jig saw blades on Normac's JS06.



Unload Station

Load Station

Specifications

Blade Size

1-3 mm thick, 3/16"-1/2" (4,7 mm-12.7 mm) high, 6" (152.4 mm long), 5" (127 mm) tooth length.

Rake Angle

20° maximum positive rake angle.

Bevel Angle

30° maximum bevel angle.

Grinding Wheel Size

20" (500 mm) O.D. x 8" (203,2 mm) I.D. x 2.5" (63.5) minimum to 4.5" (114,3 mm) maximum wide., 28° face angle. Vitrified bonded type.

Control

Programmable Logic Control

Coolant Requirement

30 gallons per minute (115 LPM) at 100 PSI (7.0 atmospheres). Straight oil coolant is recommended.

Note: *Coolant system not furnished with the machine.*

Electrical Requirement

230, 380, 415, 460 OR 575 V.A.C. 50 or 60 Hz, 3 phase, 17 Kw.

Floor Space

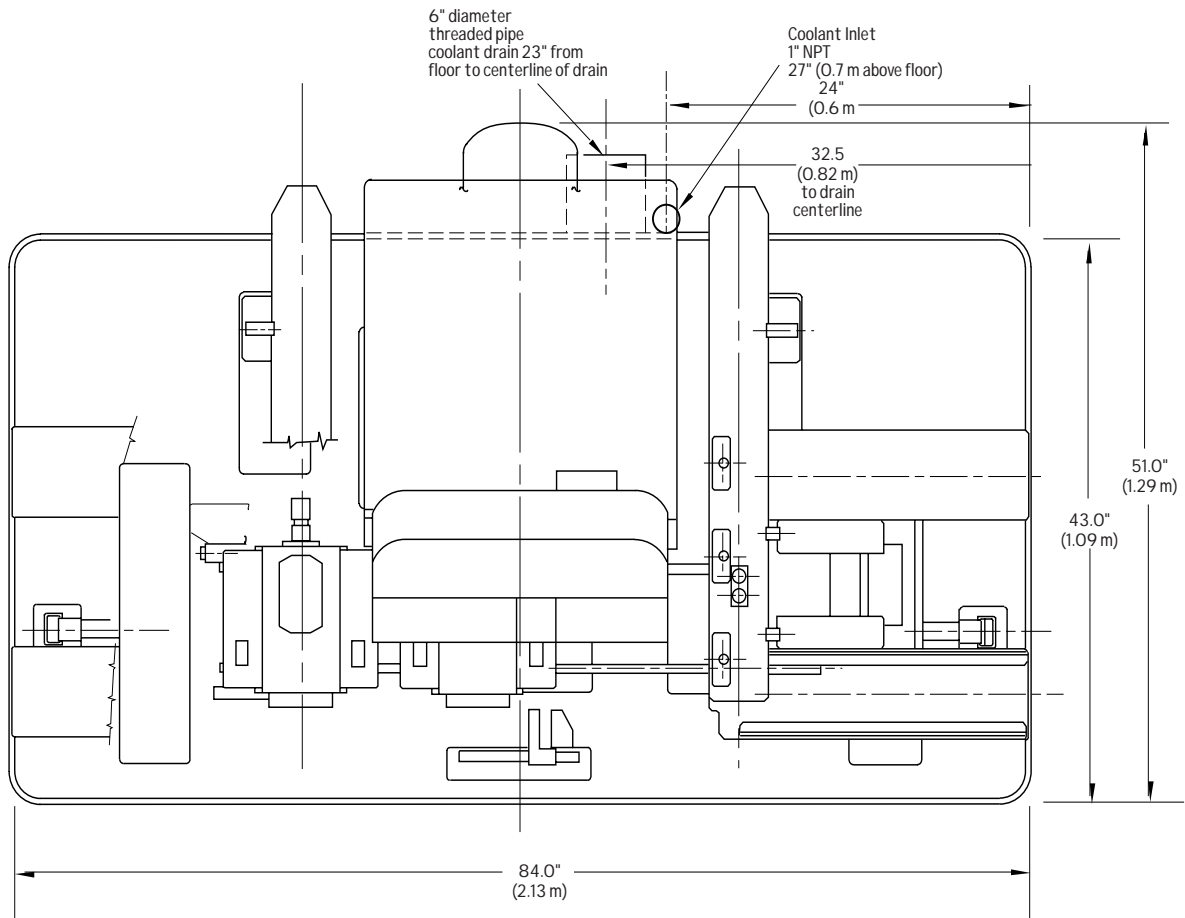
84" x 51" (2,1 m x 1,3 m).

Shipping Weight

8,200 lbs. (3720 kg)

Estimated Production Rates
Average 720 pcs/hr

Production rates shown are averages based on actual operation. Actual rates may vary depending on grinding wheel used, type of steel, coolant, etc.



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