



Product // Catalog

Accuracy / Innovation / Results



Table of /// Contents

Circular Saw Technology

Sharpening	
Top and Face Grinder TFX	4-5
Dual Side Grinder DSX	6-7
RoboSharp Service Center	8-9
HSS Saw Blade Grinder KNC (560H & 710H)	10-11
Tipping	
H65 Ultimate Brazer - Automatic	12
H55 Ultimate Brazer - Automatic	13
H50 Ultimate Brazer - Automatic	14
HM Ultimate Brazer - Manual	15
T50 Tip Braze Strength Tester	16
Tensioning & Leveling	
Dish-O-Matic Stretcher Roll	18-19
36X2 Automated Tension Roller	20-21
RSC Round Saw Center	22-23

Knife & Surface Grinding Technology

LSGX Knife and Surface Grinder	36-37
KG / CKG / EKG Hewsaw Knife Grinder	38-39

Saw Guide Technology

GDX Guide Dresser	40-41
BGD Band Saw Guide Dresser	42
Saw Guides	43-44
SawSense Temperature System	45-47
Saw Guide Flow Equalization System	48
Saw Guide Lube Sustem	49

Band Saw Technology

Sharpening	
Shark 3000 Profile Grinder	24
Shark 600 Profile Grinder	25
Baracuda 750 Side Grinder	26
Tipping	
Stingray Stellite / HSS Tipper	27
Tensioning & Leveling	
Hammerhead 3000 Auto-Bench	28-29
Trac-Tru Band Saw Bench	30-31
Standard Band Saw Bench	32-33
Dish-O-Matic Band Saw Stretcher Roll	34-35

Tool Grinding Technology

CA5 Tool Grinder	50-51
CA7 Broach Grinder	52-53
PVD Coating	54-55

More

Saw Working Tools	56
Consumables and Accessories	57
Product List	58
Notes	59

2 Table of Contents



About Us

As a leading industrial technology company, Williams and White harnesses its 60 years of experience as a third generation family business to develop optimized solutions to the tool production and saw mill industries.

With a niche focus in cutting tool production and saw filing activities, Williams and White is continuously developing specific technology for our customer's ever changing needs. We bring industrial automation to the most demanding requirements of filing rooms, tool rooms and grinding facilities.



CNC Top & Face /// Grinder TFX



The TFX Is a fully enclosed automatic top and face grinding machine for circular saw blades up to 36" (Optional 42") diameter. The automatic CNC operation allows the operator to continue his/her work as the machine sharpens the saws.

Multi pass grinding and program saving make the TFX the ideal machine for any production or repair facility.

Highlights

- CNC multi pass grinding Increased accuracy and grind finish
- CNC feed finger system ______ Variable tooth pitch

Key Features

Variable pitch

+ CNC axis for variable pitch saws.



CNC controlled

+ Full programmability of complex tooth shapes.

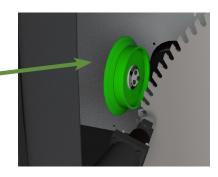


Grinding feed adjustment

- Allows you to adjust your feed rate regulating your grinding speed.
- In and out feeds are independently adjustable.

Back to back facing and topping grinding wheels

- Switch from facing to topping without doing a wheel change saving you time in your operations.
- **Wheel lift-off**





Heavy duty construction

Williams and White machines are known for extreme durability and reliability.

Tooth Styles

- Straight facing
- ✓ Straight topping
- ✓ Alternate facing
- ✓ Alternate topping
- ✓ Triple chip (single pass)
- ✓ High/low topping

Other Features

- ✓ Adjustable saw clamps
- Centralized lubrication
- ✓ 1 HP grinding motor
- CE Standard

Standard Specifications

Saw Diameter
Clearance Angle
Plate Thickness
Back bevel grinding at tooth top
Saw Kerf
Bevel grinding at tooth face
Power Requirements
Face Grinding Wheel
Top Grinding Wheel
Footprint
Coolant Capacity
Shipping Weight

3.5" – 36" (Optional 42")
-100 - +400
Up to .400"
To 45º
.040"400"
To 45º
480V 3ph
6.3" dia. x 1-1/4" bore
4" dia. x 1-1/4" bore
80" x 44" x 80H"
21 Gal
2,500 lbs

80 mm - 920 mm (Optional 1,060 mm)
-100 - +400
Up to 10 mm
To 45°
1 mm - 10 mm
To 45°
480V 3ph
160 mm dia x 32 mm bore
101 mm dia x 32 mm bore
203 cm x 112 cm x 203H cm
80 lt
1,150 kg
-



CNC Dual Side



The DSX Is a fully enclosed automatic dual side grinding machine for circular saw blades up to 36" (Optional 42") diameter. The automatic CNC operation allows the operator to continue his/her work as the machine sharpens the saws. Multi pass grinding and program saving make the DSX the ideal machine for any production or repair facility.

Highlights

Automatic operation with tooth counter For flexible and efficient operation

High precision bearings and linear slides For extreme accuracy

CNC multi pass grinding Increased accuracy and grind finish

✓ CNC feed finger system — Variable tooth pitch

Key Features

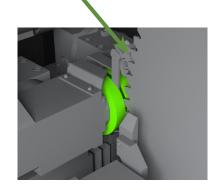
Variable pitch

The CNC axis for variable pitch saws.



Cup grinding wheels

Wheel provide a true grind geometry (no hour-glass shape)





Heavy duty construction

Williams and White machines are known for extreme durability and reliability.

CNC controlled

+ Full programmability of complex tooth shapes.



Grinding feed adjustment

- + To program complex tooth shape grinding feed adjustment.
- Depth of cut and grinding speed adjustable on the fly.

Other Features

- ✓ Adjustable saw clamps
- ✓ Centralized lubrication
- ✓ 1 HP grinding motor
- CE Standard

Standard Specifications

Saw Diameter	3.5" – 36" (Optional 42"
Clearance Angle	-100 - +400
Plate Thickness	Up to .400"
Saw Kerf	.040"400"
Power Requirements	480V 3ph
Side Grinding Wheels	4" dia. x 1-1/4" bore
Footprint	80" x 60" x 80H"
Coolant Capacity	21 Gal
Shipping Weight	2,500 lbs

80 mm - 920 mm (Optional 1,060 mm)
-100 - +400
Up to 10 mm
1 mm - 10 mm
480V 3ph
101 mm dia x 32 mm bore
203 cm x 152 cm x 203H cm
80 lt
1.150 kg



SHARPENING

///RoboSharp



SHARPEN ANY SAW WITH THE MOST VERSATILE MACHINE IN THE WORLD!

The RoboSharp-AX10L2 is a highly advanced, multi-function circular saw sharpening center. With top & face, dual side and plunge grinding capabilities, the RoboSharp is the most functional and flexible machine in the industry. The dual-bay robotic loader and patented automated tool changer system allow this sharpening center to run completely lights out.

Highlights

Top, face る side grinding in one grind center

Reduces floor space requirements and maximizes sharpening efficiency

Two independent 5-axis grinding heads allow two blades to be top/face ground simultaneously, addressing a common bottleneck in service/repair

environments

Robotic loading — Enables complete automation

Automated tool changing For full lights-out manufacturing

19" touch screen and user friendly software For intuitive operation

Key Features

Front loading carts

- This enables the machine to be positioned against a wall.
 Competitive grinding centers have rear loading carts, requiring space behind the machine which results in a larger and inefficient footprint.
- Allows for efficient operation by enabling the operator to load and view the carts from the operator station.



The RoboSharp has a grinding capacity of 8" (200mm) - 34" (865mm) diameter.

High capacity tool cart

- Each cart holds more than twice the number of saws as the competition.
- Competitors tool cart capacity: 12.7"(322mm).
- + Our tool car capacity: 28" (711mm).

True lights out operation

The RoboSharp can detect broken or worn grinding wheels and replace them from the tool bay, resulting in true lights out operation.



Dual gripper

The RoboSharp robotic loader has a dual gripper, which enables two saw blades to be handled at once.

Renishaw probe

Maps teeth with extreme precision.

Tool Changer

The tool changer enables saws of different materials and tips to be processed in a single cart. Carbide, stellite and cermet saws can all be stacked on a single cart. The tool changer will automatically select the correct grinding wheel for the specified material.

→ Remote monitoring

Enables off-site updates and alerts sent to email and mobile phone.



Specifications

Circle saw size	8" to 34"	200mm to 865mm
Plate size	.04" to .750" Plates	1mm to 19mm Plates
Saw kerf	.04" to .850"	1mm to 21mm
Radial angles	0º to 5º	0º to 5º
Hook angles	(-) 10° to (+) 35°	(-) 10° to (+) 35°
Tangential angle	0° to 5°	0° to 5°
Tooth spacing	.5" to 3"	13mm to 76mm
Shipping weight	8000lb	3600kg
Dimensions	L240" x H122" x W180"	L6100mm x H3100mm W4500mm
Voltage	480VAC, 60Hz 3 ph	400VAC, 50Hz, 3ph
Spindle motor	7.5Hp	1.5kW

Custom specifications and engineering available on request



/// HSS Cold Saw Grinder кис-560н & кис-710н



The KNC-560H and KNC-710H are automatic CNC saw grinders for HSS cold saw blades, friction saw blades and segmental saw blades in both manufacturing and re-sharpening applications.

Highlights

Grinding function for 6 different tooth forms For flexible and efficient operation

Tooth+Chamfer Grinding in one setup ______ Stopping machine for adjustment is not required

Identical Outer Rim Grinding function —————— Used saw blade can be ground to identical diameter

Key Features

CNC controlled

Programmable tooth shapes,
easy operation, and fast
application



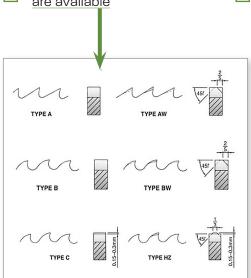
Heavy duty construction

Extreme durability and reliability



Tooth Grinding Profiles

± 6 tooth form grinding functions are available

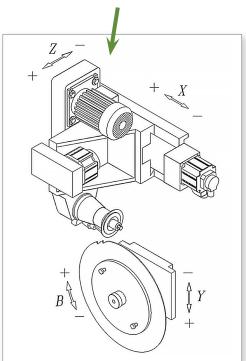


Accessories

- Saw blade holder
- Small saw blade base
- Internal lighting
- Auto machine lubrication system
- Wheel spindle auto lubrication system
- ✓ Heat exchanger of electrical cabinet
- ✓ High pressure cooling device
- Mist collecting device
- Magnetic Separator
- **✓** Tools

Traversing direction of NC axis

4 Axis servo motor as shown



Options

- Small saw blade base 22mm
- A.V.R. Automatic Voltage
 Regulator
- Air conditioner of electrical cabinet
- ✓ Probe

Standard Specifications /

Saw Diameter	KNC-560H: 1"(Optional), 1.5"~22"
	KNC-710H: 1"(Optional), 1.5"~28"
Pitch range	0.9" (max)
Grinding teeth limit	10 ~ 998 teeth
Thickness of saw blade	0.25" (max)
Range of cutting angle	0.010~ 300
Feeding speed	2 ~ 60 teeth/min
Total electric power	13.4 hp
Big saw blade base	min 140(grind only), min 170(with chamfer)
Small saw blade base	min 25(grind only), min 75(with chamfer)
Grinding Wheel	7.87" dia x 1.25" bore x0.4" thick
Footprint	66"x 98" x 91"
Weight	5577 lbs
Coolant Capacity	60 liters/min

KNC-560H: 25mm(Optional), 40~560 mm
KNC-710H: 25mm(Optional), 40~710 mm
24mm (max)
<u>10 ~ 998 teeth</u>
6.5mm (max)
0.010~ 300
2 ~ 60 teeth/min
10kw
min 140(grind only), min 170(with chamfer)
min 25(grind only), min 75(with chamfer)
200 mm dia x 32 mm bore x 10mm thick
167 cm x 248 cm x 231 cm
2530kgs
60 liters/min



CIRCULAR SAW SOLUTIONS TIPPING

/// Ultimate Brazer H55

For wood cutting saw blades

Highlights:

- Fastest brazing machine in the world
- → 5 Axis servo control.
- Smart camera for capturing different size and shape of saw tips.
- Precise dispensing flux in line or in small dots.
- Engineered for quick change over to different materials by "one touch setting" in Software and mechanical settings.
- Eco drive mode turns off the electricity and the compressed air for saving electricity.
- Intelligent error display showing the reason, position, time and recovered time.
- Remote maintenance via network interface.
- Fixed tip centering system of the saw body and the saw tip.
- Automatic annealing cycle with temperature control and choice of disabling annealing process.



Saw blade diameter	6.3"-21.6"
TIp length	0.08"-0.49"
Tip width	0.07"-0.31"
Hook angle	-10 - +30
Brazing time	4 -10 sec/Tip
HF generator	7.5hp
Air pressure	72.5psi
Electricity	240V - 1ph 50/60hz, 8kW
Dimension	L98.4" x W61.4" x H74.0"
Weight	4189lb

160mm -550mm
2mm-12.5mm
1.8mm-8mm
-10 - +30
4 -10 sec/Tip
5.6kW
5.1kg/cm ²
240V - 1ph 50/60hz, 8kW
L2500 x W1560 xH1880mm
1900Kg
<u>-</u>

TIPPING

/// Ultimate Brazer H65

For metal cutting saw blades

Highlights:

- + Reduced heat effect on saw body.
- Modern design and unique way of working to your advantage.
- | Imaging of different saw tip shapes and sizes.
- No more conventional brazing special feature of the heating inductor.
- <u>Unique 90° flux dispensing system for cermet saw tips.</u>
- + Linear controlled loading and unloading system.
- + Integrated water cooling water tank drawer for easy cleaning.
- Program controlled for off-center brazing of the saw tips.
- Intelligent fault indication with cause, place, date, time and duration of the disturbance.
- Database stores up to 75 parameters of different saw blades.



Saw blade diameter	5.9"-25.5"
Tip length	0.08"-0.49"
Tip width	0.07"-0.3"
Hook angle	-10 - +30
Brazing time	6 -10 sec/Tip
HF generator	7.5hp
Air pressure	72.5psi
Electricity	240V - 1ph 50/60hz, 10kW
Dimension	L98.4" x W61.4" x H74.0"
Weight	4189lb

150mm -650mm
2mm-12.5mm
1.8mm-8mm
-10 - +30
6 - 10 sec/Tip
5.6kW
5.1kg/cm ²
240V - 1ph 50/60hz, 10kW
L2500 x W1560 xH1880mm
1900Kg



TIPPING

Highlights:

The most cost effective brazer in the world!

Ultimate Brazer /// H50

- Engineered for quick change over to different materials by "one touch setting" in software and mechanical settings.
- Engineered for faster brazing time.
- New software with user friendly touch screen operating controls with icon based command sequences.
- Precise dispensing of flux in line or in small dots.

- LILTIMATE BRAZER
 H50

 With temperature control and choice of disabling annealing process.
 - + Dual laser sensor for capturing different size and shape of saw tips.
 - Eco drive mode turns
 off power for reducing
 electricity usage
 - + 3 axis servo control.
 - Intelligent error display showing the reason, position, time and recovered time.

Specifications

Saw blade diameter	3.9"-31"
TIp length	0.15"-0.47"
Tip width	0.06"-0.3"
Hook angle	-10 - +30
Brazing time	5.5 -7 sec/Tip
HF generator	1.34hp/7.5hp
Air pressure	70psi
Electricity	240V - 1ph 50/60hz, 7kW
Dimension	L64" x W46" x H66"
Weight	1,984lb

100mm -800mm 4mm-12mm 1.6mm-8mm -10 - +30 5.5 -7 sec/Tip 3.5kW/5.6kW 5kg/cm² 240V - 1ph 50/60hz, 7kW L1650 x W1185 xH1680mm 900Kg

TIPPING

Highlights

Ultimate Brazer

- Adjustable temperature, holding time and cooling time with automatic annealing cycle
- ideal for saw repair or special saw blade brazing
- + Easy set-up and operation

- Precision manual brazing machine
- Single tip is brazed automatically with the push of a button
- Fully programmable induction heater

Saw blade diameter	4.7"-31"	120mm -800mm
TIp length	0.15"-0.47"	4mm-12mm
Tip width	0.06"-0.43"	1.6mm-11mm
Hook angle	-10 - +30	-10 - +30
Brazing time	5.5 -7 sec/Tip	5.5 -7 sec/Tip
HF generator	1.34hp/7.5hp	3.5kW/5.6kW
Air pressure	70psi	5kg/cm ^o
Electricity	240V - 1ph 50/60hz, 7kW	240V - 1ph 50/60hz, 7kW
Dimension	L64" x W46" x H63"	L1650 x W1185 xH1600mm
Weight	1.102lb	500Kg



Highlights

Brazing Strength /// Tester T-50/Pro

- Digital Indicator: External display of min/max setting value
- Load cell: Alloy tool
 steel construction for
 high accuracy
- + Record printer



- + Easy operation
- + Safety cover included
- + Load cell for testing
- Non-destructive testing with T50 Pro

Saw blade diameter	3.9"-19.7"	100mm -500mm
Hook angle	-100 -+300	-100 -+300
Load cell capacity	2200lb	max 1 ton
Machine dimensions	L:37" X W:24 X H: 55"	L:940mm X W:600mm X 1400mm
Electricity	240V. 1Ph, 50/60Hz	240V. 1Ph, 50/60Hz
Weight	440"	200kg
_		



Notes



TENSIONING & LEVELING

Dish-O-Matic Round ///Saw Stretcher Roll



The Williams & White Dish-O-Matic Stretcher Roll is essential in all saw production and maintenance facilities. The patented Dish-O-Matic system allows operator to tension and level saws in the most efficient and accurate manner. This machine is the most durable in the industry and is installed in thousands of filing rooms and saw shops worldwide.

Highlights

✓ Heavy-duty C-frame construction Robust design is built to last

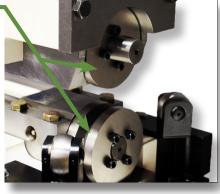
Patented Dish-O-Matic system
 Saw tensioning δ leveling on one machine

Manual or hydraulic roll pressure Reduces heavy saw hammering

For simple operation

Dish-O-Matic system

- Patented Williams & White Dish-O-Matic Stretcher Roll allows the operator to tension and level the blade in one setup.
- The system requires approximately 80% less hammering when compared to the leading competitors' manual circular saw stretchers.







NEW #36 de-kinker rolls

- Simple bolt on upgrade for your stretcher roll (Armstrong or Williams and White).
- + Heavy duty
- + Hardened rolls
- **Dial indicator adjustments**

Models

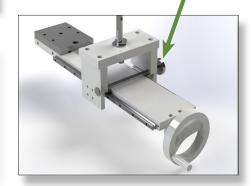
#36 Stretcher	Up to 36" diameter
#72 Stretcher	Up to 72" diameter
#108 Stretcher	Up to 108" diameter
#120 Stretcher	Up to 120" diameter

Options

- Digital pressure gauge
- Hydraulic roll pressure
- + Strobe sensor
- Variable speed rolls

NEW Easy-slide (#36 stretcher)

- Conversions available for any stretcher roll.
- + Can be added to any Williams ₹ White #36 Stretcher.
- The system allows the saw to move in and out of the rolls smoothly resulting in accurate and efficient saw positioning.
- The easy-slide is included on all new #36 models and can be retrofitted to any existing Williams & White #36 Stretcher roll machine.
- + Heavy duty
- ± Linear rail guides
- + Linear precision brake



Specifications

Circle saw capacity	8"-120" (dependent on model)	203mm-3,048mm (dependent on model)
Plate size	0.25" -0.4"	6.35mm-10mm
Standard roll radius	<u>6"</u>	<u>150mm</u>
Weight	850lb-1500lb	385kg -680kg
Dimensions	H: 52" W: 20" L:56"	H:20mm W:51mm L:1412mm
Voltage	480 Vac, 3 Ph, 60Hz	400 Vac, 3 Ph, 50Hz
Power	3kVA	3kVA



TENSIONING & LEVELING

CNC Automated /// Tension Roller 36X2



The Williams & White 36X2 is a CNC pattern tension roller designed for tension rolling circular saw blades. This new technology implements automation and added safety features to the highly renowned Williams & White Dish-O-Matic Stretcher Roll. The 36X2 allows the operator to program saw tension combinations and uses servo and hydraulic controls to deliver the most accurate and repeatable results in the industry.

Highlights

 ✓ Fully programmable touch screen
 10" HMI on separate operator stations

 ✓ Dynamic tension roll pressure
 Accurate to 10 PSI

 ✓ Store up to 500 tension combinations
 Repeatable programs for every saw

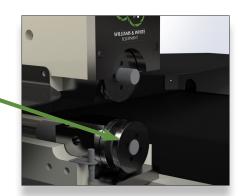
 ✓ Light curtain guarding in rolling area
 For increased safety

 ✓ Servo-driven saw center
 For precise rolls every time

PERFECT FOR MEDIUM-HIGH PRODUCTION FACILITIES!

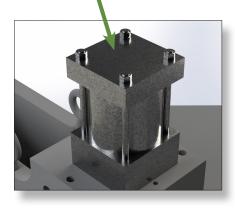
CNC roll pattern Saw tensioning

The 36X2 can be programmed to roll defined tension positions on the saw at any diameter and pressure. This feature allows the user to program all tension requirements beforehand, resulting in a highly efficient process with reduced repetitive labor requirements.



Smart roll pressure system

- The 36X2 has realtime pressure sensing compensation software.
- This means it can automatically compensate for inconsistent mechanical properties in the saw plate, resulting in highly accurate, highly repeatable tension bands.



Teach function

- Users can program the machine using a convenient teach function. The teach function enables the user to jog the Machine to specific locations, mimicking the traditional process to develop the CNC program.
- Reduce tensioning time by up to 50%

Integrated saw lift to avoid any scratches

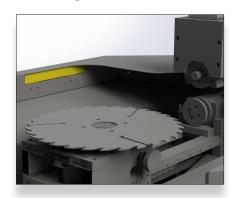
Options

+ Strobe sensor

The 36X2 strobe sensor automatically detects and avoids strobes.

Safety & ergonomics

The 36X2 reduces repetitive motion strains and the injuries by eliminating manual tensioning.



Loader ready

The 36X2 can be used alongside the Williams and White Robotic Loader, transforming this machine into a fully automated tensioning station



Circle saw capacity
Plate thickness
Dimensions
Standard roll radius
Shipping weight
Voltage
Power

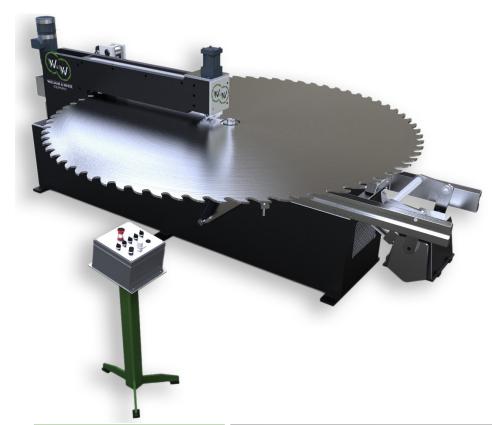
Up to 36"
Up to 1/2" thick
H:62" L: 73" W:46"
6"
1200lb
480 Vac, 3 Ph, 60Hz,
5kVA

914mm
Up to 12.7mm thick
H:1575mm x L:1845mm W:1168mm
152mm
544kg
400 Vac, 3 Ph, 50Hz,
5kVA



TENSIONING & LEVELING

Round Saw /// Center



The Williams & White Round Saw Center is the ultimate Stretcher roll, designed to load and repair large diameter saws in the safest way possible. Hydraulic loading allows for efficient saw handling while ensuring safety by eliminating heavy lifting and dangerous maneuvers

Highlights

- Hydraulic saw loading system load large diameter saws with ease
- Heavy duty all steel construction robust design is built to last
- Patented Dish-O-Matic system reduces tension № level saw on one machine need for heavy hammering
- Floating anvil for hammering (60Rc) tension № hammer on the same machine
- Hydraulic roll pressure
 reduces heavy saw hammering

Dish-O-Matic roll system

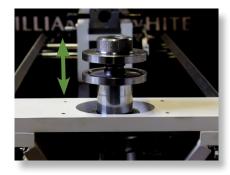
- For precise tensioning and leveling on one machine. The DOM II roll system allows the filer to tension and level the saw with one machine.
- + Off-set roll diameter for unobstructed tensioning.





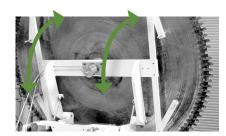
Hydraulic spindle lift

The hydraulic spindle lift (option) shuttles the spindle up and down to lower it from the saw eye. This enables filers to slide the saw further back to make repairs in close proximity to the saw eye.



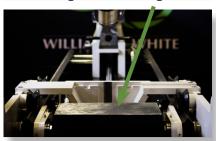
Vertical loading system with hydraulic lift

For improved safety and easy \Box loading of large diameter saws.



Floating saw anvil

 The Williams & White Round Saw Center is the only large saw stretching machine with a floating anvil. This enables filers to hammer the saw without transferring to a benching station.



Options

Variable speed rolls

Customize roll speed for your operation.

Hydraulic tooth setter

Integrated into the machine to set kerf automaticallu

Heavy duty (HD) models are available for extra thick saws and heavy production

Models

#72 RSC

(manual, semi hydraulic, fully hydraulic options) Up to 72" diameter saws

#108 RSC

(manual, semi hydraulic, fully hydraulic options) Up to 108" diameter saws

#120 RSC

Up to 120" diameter saws (completely hydraulic

Circle saw capacity	Up to 120" (dependent on model)	914mm (dependent on model)
Plate thickness	Up to 1/2" thick (standard model)	Up to 12.7mm thick (standard model)
Dimensions	H:59" L: 173" W:108"	H:1498x L:4394mm W:2743mm
Standard roll radius	6"	150mm
Shipping weight	2,600lb-5,500lb	1,496kg-2,500kg
Voltage	480 Vac, 3 Ph, 60Hz,	400 Vac, 3 Ph, 50Hz,
Power	4kVA	4kVA

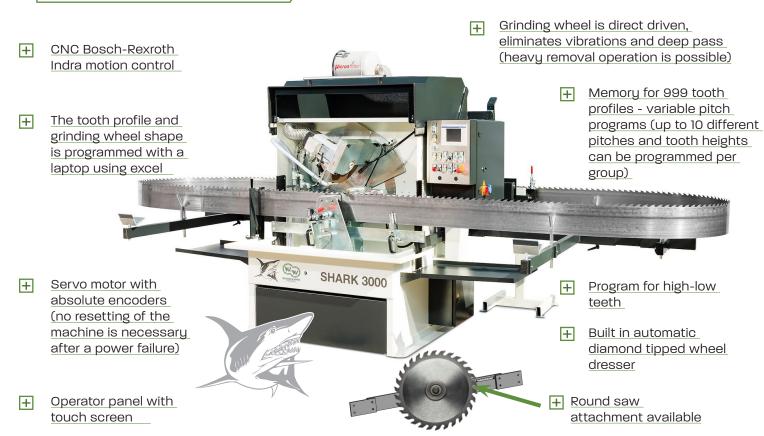


BAND SAW SOLUTIONS

SHARPENING

/// Shark 3000

CNC Profile Grinder



Saw blade width	1.2"-14.1"	30mm-360mm
Blade Thickness	0.02"-0.19"	0.6mm-5mm
Variable pitch	0.47"- 2.36"	<u>12mm-60mm</u>
Adjustable tooth height	0.16"-0.98"	4mm-25mm
Hook angle	0º to 38º	0º to 38º
Working speed adjustable	0-20 teeth/min	0-20 Teeth/min
Grinding wheel diameter	<u>1</u> 3.8"- 11"	350mm-280mm
Grinding wheel thickness	0.3"-0.6"	<u>8mm-15mm</u>
Grinding wheel motor	4kw	4kw
Pump cooling system	160I/min	160I/min
Machine dimensions	L:173" X W:78" X H:64"	L:4384mm X W1911mm X H:1615mm
Electricity	10kVA, 3 ph, 480VAC	10kVA, 3 ph, 480VAC

BAND SAW SOLUTIONS SHARPENING

/// Shark 600

Profile Grinder

- Central electrical
 blade height
 adjustment
- Saw blade
 clamping system,
 clamps the blade
 automatically
 tight when
 grinding
- Grinding wheel
 is direct driven,
 eliminates vibrations
 and deep pass
 (heavy removal
 operation is
 possible)



- Grinding heads
 are guided by
 preloaded linear
 bearing technology
 to assure optimum
 accuracy
- Cam driven head and feed system
- Simple and user friendly
- Round saw attachment available

Band saw width	1.2"-13"	30mm-330mm
Blade thickness	0.02"-0.08	0.6mm-2mm
Pitch adjustable	0.4"-2.36"	10mm-60mm
Tooth height min/max	0.15"- 1"	4mm-25mm
Hook angle	80-380	80-380
Working speed	0-12 teeth/min	0-12 teeth/min
Grinding wheel diameter	11"-7.8"	300mm-200mm
Grinding wheel thickness	0.3"-0.6"	8mm-15mm
Pump cooling system	101 I/min	100 I/min
Electricity	10kVA, 3 ph, 480VAC	10kVA, 3 ph, 480VAC



BAND SAW SOLUTIONS

SHARPENING

/// Baracuda 750

Side Dressing Machine

- Central electrical blade height adjustment
- Saw blade
 clamping system,
 clamps the blade
 automatically
 when grinding
- Grinding wheel
 is direct driven,
 eliminating vibrations
 and enabling deep
 pass (heavy removal
 operation is possible)



- Grinding heads are guided by preloaded linear bearing technology to ensure accuracy
- + CNC control
- Simple and user friendly
- Round saw attachment available

Band saw width	0.8"-13"	20mm -330mm
Blade thickness	0.02"-0.2"	0.6mm-5mm
Pitch adjustable	0.4"- 4"	10mm-100mm
Working speed	0-16 teeth/min	0-16 teeth/min
Wheel diameter	5"	<u>125mm</u>
Grinding wheel motor	2-2.5Hp with electronic speed regulation	2-1.8 kW with electronic speed regulation
Coolant pump	0.66Hp, 40 I/min	0.5kW, 40 I/min
Electricity	480VAC, 3 ph, 50/60Hz	480VAC, 3 ph, 50/60Hz
_		

BAND SAW SOLUTIONS

TIPPING -STELLITE/HSS



Band saw width	1"-14"	30mm -360mm
Blade thickness	0.02"-0.15"	0.6mm-4mm
Pitch adjustable	0.78"-4"	20mm-100mm
Working speed	3-6min	3-6min
Welding material	Stellite /HSS rod or wire	Stellite
Dimension	L:161.2" X W:72.4" X H:72.8"	L:4094mm X W:1838mm X H:1850mm
Weight	2,645lb	1,200kg
Electricity	480VAC, 3 ph, 50/60Hz	480VAC, 3 ph, 50/60Hz
_		



Auto Bench Hammerhead 3000



FULLY AUTOMATIC

The Hammerhead 3000 Auto-Bench is an all-in-one band saw processing center.

Designed to automatically tension and level a band saw with ease, the Hammerhead 3000 is a must have for any sawmill or band saw producer.

Highlights				
✓	Fully automatic	Leveling and tensioning of band saw blades		
✓	Carbide tungsten tensioning rolls	For longer life		
✓	Touch screen control	Simple and easy operation		
✓	High accuracy measuring system	With high-precision, ruby-tipped touch sensors		
✓	Auto tracking system	Automatically maintains saw blade alignment		
✓	Saw blade Feeder	Saw is driven with two feeder rolls		
✓	Double head system	2 Independent tensioning and Leveling heads		
✓	Protected working area	By an optic curtain		

Precision tension measurement system

Touch probe measures saw along entire width allowing exact placement of tension curve and tire lines



Touch screen control

Simple and easy operation



Double head system

independent tensioning and leveling heads



Fully automatic band saw center

Machine measures while in operation to determine the performance during the cycle and provides feedback to the user when the saw is ready to run



Saw blade width	3"-13"	80-330 mm
Saw blade length	16'-46'	5-14 m
Saw blade thickness	0.03"-0.08"	0.7-2.0 mm
Working speed	59'/Min	18 m/Min
Leveling tolerance	0.0008"-0.0015"	0.02-0.04 mm
Tensioning tolerance	0.0015"-0.003"	0.04-0.08 mm
Weight	3970 lb	1800 kg
Dimensions	W: 51" X H: 74" X L: 252"	W: 1296mm X H:1875 X L:6391



TENSIONING & LEVELING

BAND SAW SOLUTIONS

Trac Tru ////Band Saw Bench

NO NEED TO FLIP THE SAW WITH THE DOM II TRAC TRU BENCH



The Williams & White Trac Tru
band saw bench is a one-stop
repair center for band saws.
The rugged box beam, universal
columns and our patented DishO-Matic system make the Trac
Tru the best and most functional
in the industry.

Highlights

Can handle saws from 28' - 60'

✓
Makes this the most durable stable bench in the industry

✓
Air-strain cylinders

✓
Tightens the saw and eliminates the need for weights

✓
2 Nichrome anvils

✓
Integrated lighting

For precision inspection

Versatile for your shop

Welding clamp

The deluxe bench model is equipped with a welding clamp and welding slide. The welding slide enables you to easily move the clamp when it is not in use.



Inspection lift

Standard on all deluxe models, the inspection lift allows the operator to raise the saw for further inspection.



Standard Nichrome leveling slabs

Nichrome slabs are extremely durable and wear resistant offering longer life span than traditional steel slabs.



Expansion cylinder & multilenth

- Uses an air-strain expansion cylinder to pull the saw blade, eliminating the need for weights.
- Multi-length option available, which is intended for benches that work on multiple band saws of different lengths. This addition enables you to expand or compress the bench from one to twelve feet.
- The ability to run multiple saws off of one bench reduces the amount of space required in your filing room or saw shop.



Williams and White Dish-O-Matic II System

- Patented Williams & White Dish-O-Matic II Stretcher Roll allows the operator to tension and level the blade in one setup.
- Drastically reduces the amount of hammering required.



Options

- + Height control
- Electronically controlled wheel alignment
- Electronically controlled roll positions
- Integrated inspection lighting
- Option to have a welding clamp heater, which heats the welding clamp and creates higher-quality welds.

Trac Tru #10	Trac Tru #17
+ Up to 10" wide saw	+ Up to 17" wide saw

Specifications	_	
Band saw length capacity	Up to 60'	Up to 18.3m
Band saw width capacity	Up to 17"	Up to 430mm
Standard roll radius	6"	150mm
Shipping weight (38' saw)	Approx 4500lb	Approx 2050kg
Electricity	480Vac,3ph, 60hz	480Vac,3ph, 60hz
Dimensions (36 wheel)	W: 52" X H: 58" X variable length	W: 1320mm X H: 1470mm X variable length



TENSIONING & LEVELING

BAND SAW SOLUTIONS

Standard /// Band Saw Bench



The Williams and White Standard band saw Bench is designed to be a universal band saw maintenance station. This bench provides all the necessary features to maintain your band saws in a heavy duty package.



Highlights

Square beam design For durability and stability

Manual extendable saw length adjustment — To fit multiple lengths of saws

Manual saw lift For saw inspection

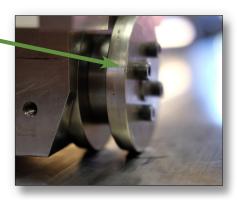
Williams and White Dish-O-Matic II System

- Patented Williams & White Dish-O-Matic II Stretcher Roll allows the operator to tension and level the blade in one setup
- Drastically reduces the amount of hammering required
- Reduces the need to flip the saw

Extendable saw turn around

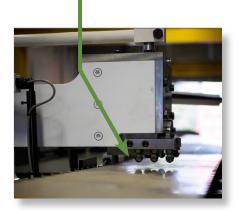
UHMW turn around tracks can extend and contract for varying saw lengths





Hardened alignment bolts

Both top and bottom of saw for stability as the saw tracks through the rolls



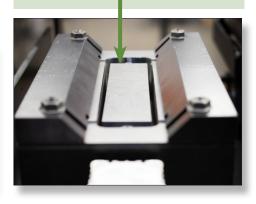
Options

UHMW air inspection lift

- Lifts the saw while in place on the bench to efficiently inspect band saw blade tension
- **Hydraulic roll pressure**
- Large anvil upgrade
- **H** Variable speed rolls
- **+** Additional floor tracks

Band saw welding clamp

- Hardened and ground hammering anvil
- Optional heating element
- Spring retraction
- + 10", 12", 16" capacity
- Pneumatic clamping



Available Nichrome leveling slabs

Nichrome slabs are extremely durable and wear resistant and offer a longer life span than traditional steel slabs.



Specifications

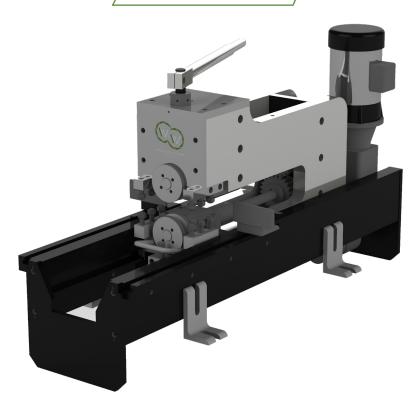
Wheel diameter	(2) 36 Inches	(2)914mm
Leveling slabs	(2) 36" x 8" x 4" mild steel	(2) 914mm x 203mm x102mm mild steel
Stretcher roll	Dish-O-Matic 2	Dish-O-Matic 2
Saw length	21' x 5"	6400mm x 127mm
Saws	Single/double cut	Single/double cut
Electricity	480Vac,3ph, 60hz	480Vac,3ph, 60hz
		•



BAND SAW SOLUTIONS

TENSIONING & LEVELING

Dish-O-Matic Band Saw /// Stretcher Roll



The Williams & White Disho-Matic Band Saw Stretcher ultimate Stretcher roll effortlessly tensions and level band saws with the one machine. Saving time and space in the shop floor.

Highlights

Heavy-duty C-frame construction robust design is built to last

High-precision roll placement with electric actuator

Patented Dish-O-Matic II system saw tensioning № leveling on one machine without flipping the saw

Manual or hydraulic roll pressure reduces heavy saw hammering

Drum switch roll actuation for simple operation

Dish-O-Matic II roll system

- For precise tensioning and leveling on one machine. The DOM II roll system allows the filer to tension and level the saw with one machine.
- Off-set roll diameter for unobstructed tensioning.

NO NEED TO FLIP THE SAW WITH THE DOM II STRETCHER!





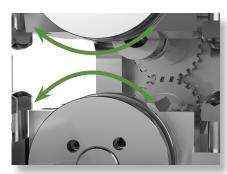
Electric actuator for cross saw roll movement

Easily change rolling position for precise tensioning.



Both top and bottom rolls are driven

Ensures band saw properly feeds through roll system.



Options

- **Hydraulic roll pressure**
- + Variable speed rolls
- + Motor brake
- **F** Round saw attachment
- + Digital pressure gauge



Models

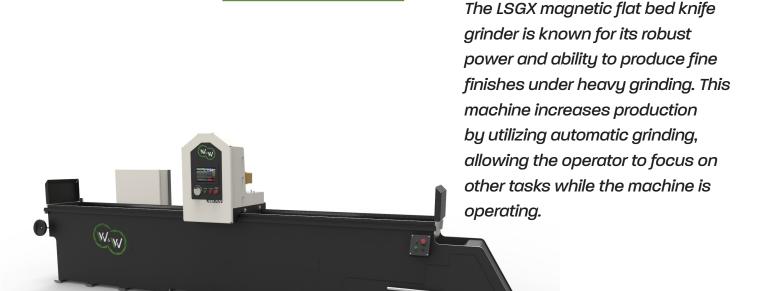
#10E	Tensioning up to 10" wide bands	
#10 DOM2	Tensioning and leveling up to 10" wide bands	
#17E	Tensioning up to 17" wide bands	
#17 DOM2	Tensioning and leveling up to 17" wide bands	

	#10	#17
Band saw capacity	Up to 10" (254mm)	Up to 17"(432mm)
Plate thickness	Up to 1/4" (6.35mm) thick	Up to 1/4" (6.35mm) thick
Dimensions	H:18" (457mm) L:36"(914mm) W:30" (762mm)	H:18" (457mm) x L:48"(1,219mm) x W:30"(762mm)
Standard roll radius	<u>6" (150mm)</u>	6" (150mm)
Shipping weight	325kg 717lb	400kg 882lb
Voltage	480Vac, 3 Ph, 60Hz,	400 Vac, 3 Ph, 50Hz
Power	3kVA	3kVA



KNIFE & SURFACE GRINDING

Knife Grinder



Highlights

 ✓ Stress relieved heavy duty steel base
 Minimizes vibration, resulting in precise surface finish

 ✓ Efficient operation and easy work piece removal
 For efficient operation

 ✓ CNC down feed and carriage travel
 For precise machine movements

 ✓ Square rail linear bearings and Turcite dovetail spindle slide
 For extreme machine accuracy

 ✓ Through spindle coolant
 For proper grinding temperature control

36 Knife & Surface Grinding

Precision linear bearings

Williams & White's knife grinders are built using precision square-track rails and bearings. These superior components allow the carriage to travel with accuracy and create stability in xyz axes.

Heavy duty frame

Manufactured using heavy duty welded box frame construction to increase accuracy and minimize vibration.

Spark-out cycle to remove burrs at end of cycle.

Through spindle coolant

Full through -spindle coolant ensures the right amount of coolant reaches the parts/ knives. This increases the life of the grinding stones and creates a smooth finish on the parts/ knives.

Quick change spindle

Williams & White's quick-change spindle system enables the operator to change the grinding stone with minimal downtime.

Dovetail spindle slide

- The dovetail spindle slides found on Williams & White's knife grinder have larger contact areas than the leading competitors.
- This provides higher stiffness and load-bearing capabilities, resulting in greater grinding consistency.



Options

Magnetic separator coolant tank with quick change fittings

- Quick disconnect system: allows the user to disconnect coolant hoses to remove the coolant tank for cleaning and refilling.
- A magnetic separator can also be added, which separates metal debris from contaminating the coolant.



Specifications

LSGX-P

Power requirements	480VAC, 3ph 60Hz, 30 KVA
Spindle motor	7.5HP/10HP/15HP (5.5kW/7.4kw/11kW)
Grinding wheel size	10" ring or 12" segmented wheel (254mm or 304mm)
Down feed Increments	.0005"003 (.01mm07mm)
Grinding wheel to surface clearance	5.25" (133mm)
Accuracy	.0005" per foot (.127mm per .304m)
Coolant capacity	160L
Weight	Depending on Lengths
Magnetic surface area	6"(150mm) wide x grinder length
Frame plate thickness	3/4" (19mm)
User interface	10" (254mm) touch screen
Program save function	Not available
Down-feed	CNC down-feed
Speed Carriage	2 Speed carriage

LSGX-D

	LOGA-D
	480VAC, 3ph 60Hz, 30KVA
	10HP/15HP/25HP (7.4kW/11kW/18kW)
)_	10" ring or 12" segmented Wheel (254mm or 304mm)
	.0001"005" (.0025mm127mm)
	5.25" (133mm)
	.0005" per foot (.127mm per 0.304m)
	160 L
	Depending on Lengths
	8" (200mm) wide x grinder length
	1" (25.4mm)
	10" (254mm) touch screen
	Standard
	Servo CNC down-feed
	Variable speed carriage

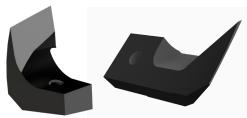


KNIFE & SURFACE GRINDING

Hewsaw /// Knife Grinder



The Williams & White CKG/ EKG Knife Grinder is designed specifically for Hewsaw small log lines. The innovative design allows 24-48 knives to be sharpened simultaneously depending on jig options.



Highlights

- Heavy duty stress relieved frame

 Minimizes vibration which results in precise surface finishes
- CNC carriage travel and down feed For easy operation
- Multiple jig configurations To fit your sharpening requirements
- Centralized lubrication system For stress free maintenance

Heavy duty stress-relieved frame

The heavy duty, vertically reinforced frame reduces harmful vibrations, flexing and distortion.

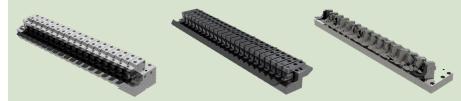


24-48 knife-jig

The Williams & White EKG/CKG has a 24-36 knife capacity to maximize the efficiency of your operation. This feature is exclusive to Williams and White EKG/CKG grinders and cannot be found in the standard rotary grinders (which hold just 12 knives).

Fixture options

Standard jig with 48 knife capacity



CKG height adjustable CKG standard fixture EKG fixture fixture

CKG height adjustable Jig with 36 knife capacity

Our adjustable knife Jig allows each of the 36 knives to be individually positioned, eliminating the need to set the Jig to the most worn knife. This control significantly increases the lifespan of each knife, and is not available on standard rotary grinders.



SHARPENS KNIVES BACK TO FACTORY STANDARDS

Specifications

Knife Capacity
Sharpening Cycle
Spindle motor RPM
Ship weight
Coolant tank capacity
Voltage
Power
Power per spindle

CKG chipping knife

Up to 36 knives (adjustable)
2-3 hours
3600 RPM
4800lb, 2177kg
130L
480Vac, 3ph, 6Hz
8kVA
7.5Hp, 5.5kW

EKG Edging Knife

Up to 24 knives (fixed)
2-3 hours
3600RPM
4800lb, 2177kg
130L
480Vac, 3ph, 6Hz
8kVA
5.5kW



SAW GUIDE TECHNOLOGY

CNC Guide Dresser



Introducing the fully automated 3 Axis CNC GDX Guide Dresser. Accurate saw guides improve the performance of your saw mill by increasing lumber recovery and reducing saw deviation; resulting in higher profits.

Highlights:

- 3 axis CNC control accurate within +/ .0002" | Improved guide accuracy (0.005mm)
- 10" touch screen and custom Williams & White For intuitive operation software
- Fits all saw guides

 One machine for all guide milling requirements
- Multi indexable insert cutter heads For unparalleled surface finish and grinding speed
- Reduced downtime/better mill performance More accurate lumber dimensions

Saw Guide Technology

CNC Milling heads

→ Variable RPM *

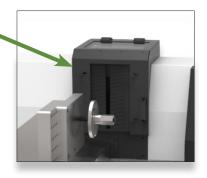
+

- + Cutter head lift off
- 15 four-sided carbide cutters per head gives ultra smooth surface finish with high feed rate.
 - 7.5 HP spindle motors



Guarding

 <u>Electronic hood lock ensures operator safety</u>



Precision machined granite base

- Yibration dampening temperature stability for unmatched accuracy
- Eliminates vibration
 during milling & isolated
 from environmental
 vibrations



Crash mitigation sensor (option)

Rejects incorrect guide before collision occurs



Why choose the Williams and White GDX?

Comparable Competition	GDX
Manual milling head movement	✓ Milling axes CNC controlled ——— Less error prone
Stepper motor motion on guide feed	Feed axes CNC controlled Smoother milling
Cutter cover is loose during operation	Integrated safety system - machine door Reduced injury risk locked during milling operation
Suide feed rate not adjustable	☑ Guide feed rate adjustable with touch ———— Fine surface finish screen
Not adjustable through user interface	RPM adjustable on touch screen Easy to dial in
No cutter head lift off	✓ Cutter head lift off No back cutting
Exposed ways	Fully enclosed ways Longer lasting accuracy

Options

- + Guide measurement station
- **Error detection sensors**
- + Remote monitoring
- □ Diamond cutter upgrade

Specifications

0.5"-4" standard (6")	12.7mm-101mm
0.002"-0.030"	0.05mm-0.76mm
As low as 14 sec	As low as 14 sec
4,500lbs	2,041kg
L: 93" x W60" x H60"	L:2,360xW:1524xH:1524m
480V 3ph 50/60Hz	480V 3ph 50/60Hz
23kVA	23kVA
7.5Hp	5.5kW
	0.002"-0.030" As low as 14 sec 4,500lbs L: 93" x W60" x H60" 480V 3ph 50/60Hz 23kVA

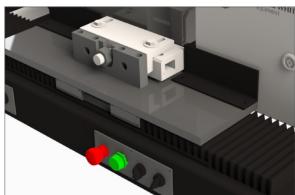


SAW GUIDE TECHNOLOGY

BGD Band Saw /// Guide Dresser



The Williams & White Band Saw Guide Dresser is a must have machine that can handle all of the filling rooms band saw dressing needs. The BGD is easy to use and delivers high precision results.



Highlights

For precision surface finish

To dial-in surface finish

For smooth carriage travel For safe operation

To fit anywhere in your shop For clean environment

Specifications

 Max guide length
 14"
 355 mm

 Max guide thickness
 2"
 50 mm

 Voltage
 460V-60Hz
 460V-60Hz

 Spindle motor
 1.5 HP, 2785 RPM
 1.15 KW, 2785 RPM

 Dimensions
 L 51.5" X W 24.5" X H 22"
 L 131 X W 62 X H 56 cm

 Weight
 350 lbs
 160 kg

Options

✓ 90° TO 40° angle cut✓ 400∨ 50Hz power

Circular & Band /// Saw Guides

Round Saw Guides



Williams and White specializes in manufacturing industry leading steel ₹ aluminum saw guides. We provide the engineering, manufacturing and quality control to deliver world class saw guides. Accurate saw guides will increase lumber recovery, resulting in maximized profits for your mill.

Key Features

- **✓** CNC machined
- ✓ Extreme precision (+ / .00025", 0.006mm)
- **✓** Super fine surface finish

- **✓** Engineered hard-coat (type 3) anodizing
- **✓** Guaranteed flatness
- **✓** Engineered to meet your requirements
- **✓** Professional resurfacing and resizing

Quality Assurance/

- ✓ Multiple inspection stages
- Engineered drawings
- ✓ Laser engraving
- ✓ Every guide cataloged and filed on record
- ✓ Williams and White quality assured

Saw Guide Repair

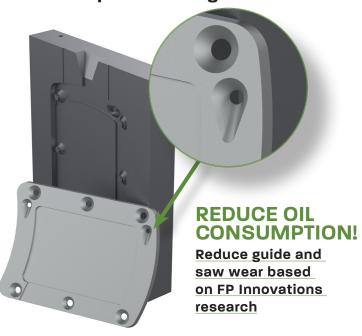
- Damaged guide repair
- ✓ Guide re-anodizing
- Guide resizing (approximately half the cost of purchasing new guides)
- **✓** Guide straightening



Guide Design & Engineering

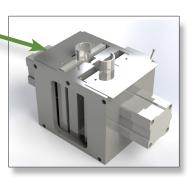
Williams and White uses cutting edge technology when working with customers to design and engineer saw guides & babbitt pads to help optimize coolant flow & improve mill performance.

Teardrop orifice designs



Babbitt mold

- <u>Custom designed mold</u> chamber
- Double pocket mold
- + Pneumatic operation
- Optimizing babbitt
 design can improve
 sawing



Splines and arbors

- + Manufactured to precision tolerances
- + Induction hardened
- + Alloy steel
- **OEM replacements**



Options

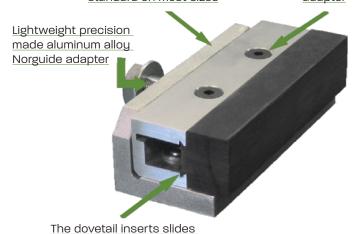
- Heli-coil inserts or thread inserts: offer extra protection against thread damage
- **✓** Platinum series guides
- ✓ Nitriding available for steel guides
- Custom engraving

Band Saw Guides

into the adapter block

quickly and easily

Lightweight aluminum alloy cartridges with steel inserts are standard on most sizes A quick turn of the key locks the insert into the adapter



Our A series band saw guides range in size from 6"-15" wide (150mm-380mm). The guide blocks are 2" (50mm) in height and are 15/8" (41mm) deep. These guides can be resurfaced approximately 40 times. The A series has the option of an internally ducted top mounting bracket with a dual wide angle spray system.

SAWSENSE Temperature /// Monitoring System



Rim & Eye Temperature Sensors +/-0.1 (1.8 °F) Degree Accuracy

WIFI Communication System

Williams and White has introduced a new temperature sensing technology to improve mill performance.

This PATENTED technology accurately measures, in real-time, the temperature of a saw blade during operation. This product is available for both round saws and band saws, and can be implemented for permanent use or diagnostic purposes.

SAWSENSE harnesses The Industrial Internet of Things (IIOT) to drive mill operations and efficiency to the forefront of the industry.

SAWSENSE*

Highlights:

- Reduces oil consumption up to 40% Reduces corrosion and pooling; less moisture in sawdust

 Up to 1 year of battery life between charges
- **0-80°C (32-176 °F) temperature range** +/- 0.1°C (1.8 °F) Accuracy
- Two sensors per system
 For critical temperature differential readings



Sawsense temperature Sensor

- Monitoring rim and eye temperatures with 2 replaceable sensors heads
- Sensor retracts to facilitate babbitt milling operation
- Excellent wear resistance
- + Rapid data transmission



WIFI Wireless Communication

- + Continuous monitoring
- Access data from nearly any convenient location within the primary networking environment
- + Configurable sample rate



PLC Integration ___

Programmable Logic
Controller (PLC)
Integration available to
integrate SawSense into
your existing mill control
systems.



Proven in mill applications

SawSense Monitoring

Measure and log temperature performance



Wireless Charging

- Convenient charging by dropping the unit on the charging pad.
- No charging port to break!
- Long lasting battery life (up to 1 year)



Data and Graphing

- → Real-time analytics
- + Historical analytics
- Recording analyzed data



Benefits to the sawmill

✓ Decreases sawing deviation — Prevents wrecks/unscheduled saw change

Rim & eye real time measurement ————————Ensures optimal saw performance

Higher chip quality Higher value

Identifies performance issues in real time ———— Determine or eliminate potential problem areas

/// Diagnostic SAWSENSE vs SMARTguides



SMARTGUIDE



Diagnostic SAWSENSE

Comparison:

SMARTGUIDES with SAWSENSE	Diagnostic SAWSENSE
✓ Guide embedded	⊘ Bolt-on system
✓ Designed for permanent temperature monitoring	✓ Designed for temporary diagnostic purposes
✓ PLC integration available	PLC integration not available
Sample rate adjust-ability available	Sample rate not adjustable
Hardware is enclosed/protected	Hardware is exposed



Saw Guide Flow [// Equalization System]



The Saw Guide Flow Equalization System is a passive flow valve which balances lubrication flow to all saws in a bank. The use of the Saw Guide Equalization System results in consistent saw performance by compensating for issues that cause unequal lubrication flow to each guide/saw. It also improves flow efficiency; reducing the amount of water and oil required. This system can be integrated into new Williams and White saw guides or existing guides in any mill.





Highlights

Retrofit into existing saw guides Low cost implementation

Reduced oil and water usage Cost savings and less moisture in chips

Regulates flow to each individual saw

Extends lifespan of saws and reduces
unscheduled saw changes

Saw Guide Lube /// System



Williams & White's guide lube system is a simple, maintenance friendly method for delivering lubrication to your saws.

- Virtually maintenance free
- Stainless steel components
- No Needle Valves means No Clogged line

(Picture): Four zone saw guide lube system

Highlights

✓	Ball valves instead of needle valves	To prevent blockage by minerals in water
✓	Flow meter (0.2 to 2 gallon per minute)	To monitor and set the flow
✓	Check valves ————————————————————————————————————	Would guide water to the designated hose
✓	Pressure monitoring system	To check the hose for any blockage
✓	Non rusting material	To prevent in water circuits
✓	PLC Can be provided upon request	To monitor pressure and cycle switches
✓	Single or multiple zone systems	Up to 4 zone system
✓	Simple Design	For ease of use and to increase durability



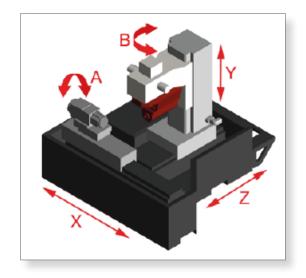
CA5 Tool Grinder



CA5 Tool Grinder is equipped with a long table of 720 mm, a wide range of accessories, a powerful electro spindle and EasyGrind multifunction proprietary software. The CA5 EvoBoost is perfect for medium to large volume tool production.

Highlights: Axes X,Y, Z accurate within +/ .000004" = Resulting in high precision tools $(0.0001 \, \text{mm})$ Unload/load a wheel in less than 5 seconds 6 slots grinding wheels rack loader Developing a high speed of 650 rpm SA50 work piece holder -19.7" (500mm) long table Enough space to install necessary accessories Mineral casting bed ______ Vibration proof. 10 times the classic iron bed rigidity Ergonomics -Control desk with an easy replaceable 22" touch screen Maintenance access panel _____ Easy access for all maintenance & regular cleaning routines Rigid nozzle tools cooling system _ Additional cooling system controlled by a cylinder HSK40, HSK50 or HSK63 Electro spindle Adjustable speed. Including a self-cooling system Renishaw tool probing Tool detecting and measuring accessory

Technical Details



Capacities

Maximum tool length (grinding)	20"	500 mm
Maximum tool length (sharpening)	→20"	→500 mm
Maximum tool diameter	10 to 12	250 to 300 mm
Maximum weight of the tool	≈ 220 lbs	<u>≈</u> 100 kg
Maximum wheel diameter (with HSK50 attachment)	12"	300mm

Specifications

Specifications	_	
X axis course (horizontal)	20"	500 mm
Y axis course (vertical)	11.5"	290 mm
Z axis course (transverse)	12"	300 mm
X axis speed (horizontal)	98'/min	30 m/min
Y axis speed (vertical)	49'/min	<u>15 m/min</u>
Z axis speed (transverse)	49'/min	<u>15 m/min</u>
A axis speed (clamping tool)	650 Rpm	650 Rpm
B axis speed (electro spindle holder)	30 Rpm	30 Rpm
B axis course (electro spindle holder	-15 / +180 deg	<u>-15 / +180 deg</u>
Electro spindle power	10 to 25 KW	10 to 25 KW
Electro spindle maximum speed	12000 to 20000 Rpm	12000 to 20000 Rpm
Wheels attachment	HSK40, HSK50, HSK63	HSK40, HSK50, HSK63
Dimension with robot	114" × 114" × 87"	2900 x 2898 x 2200 mm
Dimension without robot		2900 x 2150 x 2200 mm
Total weight	14,330 lbs	6500 kg

Options

- + Wheel sensor
- + Manual Tail-stock
- + CNC control steady rest
- + Robot charger
- + Retractable tool cooling

Accuracy

Axes X, Y ,Z axis	.0000039	0,0001 mm
Axes A, B axis	.0001 deg	0,0001 deg





CA7 EVO BOOST // Broach Grinder



CA7 EvoBoost is a specialized grinding machine for manufacturing and resharpening broaches.
Equipped with: a 1700 mm length table, a large selection of accessories, a powerful electrospindle and full option software. It is perfect for manufacturing all of your tools regardless of their size.

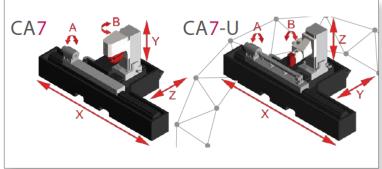
Highlights:

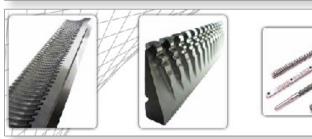
- Axes X,Y, Z accurate within +/ .000004"

 Resulting in high precision tools

 (0.0001 mm)
- 6 slots grinding wheels rack loader Unload/load a wheel in less than 5 seconds
- SA50 work piece holder _______ Developing a high speed of 650 rpm
- 67" (1700mm) long table Enough space to install necessary accessories
- Mineral casting bed _______ Vibration proof. 10 times the classic iron bed rigidity.

Technical Details





capacities

Maximum tool length (grinding)	67"	1700 mm
Maximum tool diameter	9.8"	250 mm
Maximum tool weight	441lbs	200 kg
Maximum wheel diameter (with HSK50 attachment)	11.8"	300 mm

Specifications

X axis course (horizontal)	59"	1500 mm
Y axis course (vertical)	13.7"	350 mm
Z axis course (transverse)	15.7"	400 mm
X axis speed (horizontal)	147'/min	45 m/min
Y axis speed (vertical)	98'/min	30 m/min
Z axis speed (transverse)	98'/min	30 m/min
A axis speed (clamping tool)	1500 Rpm	1500 Rpm
B axis speed (electro spindle holder)	30 Rpm	30 Rpm
B axis course (electro spindle holder)	-45/+180 deg	-45/+180 deg
Electro-spindle power	20 to 25 KW	20 to 25 KW
Electrospindle speed	12,000 to 20,000 Rpm	12,000 to 20,000 Rpm
Wheels attachment	HSK40, HSK50, HSK63	<u>HSK40, HSK50, HSK63</u>
Tool holder maximum speed (SA50)	Max. 650 Rpm	Max. 650 Rpm
Dimension	171" x 87" x 93"	4334 x 2205 x 2360 mm
Total weight	17,637 lbs	8000 kg

Options

- + Wheel sensor
- + Manual Tail-stock
- + CNC control steady rest
- + Mechanized or magnetic cradle
- + HSK40, HSK50 or HSK63 Electro-**Spindle**
- + Dressing-Rad
- + Magnetic Table

Accuracy

Axes X, Y ,Z axis	.0000039	0,0001 mm
Axes A, B axis	.0001 deg	0,0001 deg

CA7U Model

CA7U EVO BOOST has a different setup from the CA7 EVO boost which is dedicated to the broach grinding.

<u>Under this configuration, the electro-spindle</u> is in a vertical position that gives a perfect vision of the grinding process by the operator during the cycle.



SurfTech /// PVD Coating



The SurfTech PVD (Physical Vapor Disposition) coating machine significantly increases tool life span by applying a 0.0001" layer of hardened coating to the tool's surface.

✓ Stress-free operation and maintenance ✓ User friendly interface ✓ Heavy duty hardware Switching between different coating types in just 15 minutes Full automation and control through touch-screen Built to last

Remote diagnosis system

Technicians can diagnose and service remotely, ensuring maximum up-time and production

Highlights:

Applications

Cutting Tools

- **∓** Enhanced Performance
- + Longer Lasting
- Temperature Resistant



Mold & Die Casting

- → Increased Speed
- → Improved Final Product
- + Easy to Clean
- No Expensive Lubricant



Forming & Punching Tools

- | Increase Wear Resistance
- + Reduce Sticking
- + Reduce the Need for Lubricants



Other Applications

PVD coating is useful for a wide variety of specialized industries, including automotive, recreational equipment, electronics & semiconductors, medical instruments, aerospace and decorative coatings.





Specifications

Model	STAR 2
Load diameter	350 mm / 13.8"
Load height	250 mm / 9.8"
Max Load Weight	200 kg / 400 lb
Cathodic Arc Sources	2 sets
Cycle Time	2-3 hours
Foot Print	L: 2000 mm X W: 2500 mm
	(78.74" x 98.43")
Applications	Small batch production
	Fast cycle coatings

STAR 4

580 mm / 22.8"
550 mm / 21.6"
500 kg / 1,100 lb
4 sets
3-4 hours
L: 2500 mm X W: 1850 mm
(98.5" x 72.8")
High volume tool coatings

STAR 6

580 mm / 22.8"
750 mm / 29.5"
600 kg / 1,322 lb
6 sets
4-5 hours
L: 2500 mm X W: 1850
(98.5" x 72.8")
High volume large molds



Saw Working ///Tools

Circle saw leveling station

- Easy height adjustable bench with hydraulic culinder
- E Replaceable UHMW work surfaces
- (2) 24" LED lights behind diffused screen
 - Standard slab sizes up to 30" larger slabs
- available upon request
 - Slabs available in both mild steel and WW
- H Nichrome Options



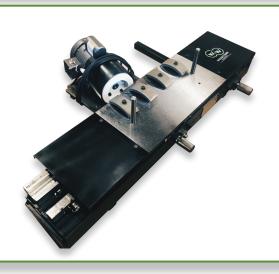
Leveling & hammering anvils

- + Precision ground
- Anvils re-conditioning service available
- All sizes of band or circular anvils available
- + Hard hammering pyramid anvils
- Lazy susan type turntables and floor stands



Tension gauge grinder

- 18" (457mm) and 24"(609mm) models available
- + 0-20' (0-6,096mm) radii
- + Heavy duty design
- + Manual operation
- Linear bearing rails



Aluminum I-Beam straight edges

- + Aluminum construction
- + Light weight
- + Up to 20' in length
- Two working surfaces
- Excellent for line bar adjustment 0.001" / foot accuracy



Saw filing hammers

- All types and weights of hammers
- Cross face / dog head / twist face /combination
- + Precision balanced



Band saw shear

- **Hydraulic actuation**
- + Replaceable shears
- → Super heavy duty



Consumables & Accessories



Oil and water coolant



Grinding wheels



Rolls - dies & regrinds





Tips



Babbitt



□ SawSense Temperature System

/// Product list

Machines /	Filing Equipment
CNC Guide Dresser (GDX)	☐ Replacement rolls (W&W, Armstrong, Hanchett, Proctor etc)
RoboSharp saw sharpening center	Anvils and slabs
HSS Saw blade grinder KNC	☐ Turn tables
☐ Dish-o-Matic circular saw stretcher roll	☐ Tipping plate
☐ 36X2 automated tension roller	Strobe brazing fixture
Round Saw Center (RSC)	Hammers (cross face, twist face, combination δ
☐ Top & Face Grinder (TFH-CS2 pro)	doghead 1-10lb)
☐ Top & face Grinder (TFX)	Tension gauges/straight edges
Dual Side Grinder (DFX-5)	Tension gauge/straight edge grinder
Dual side Grinder (DSG)	Grinding wheels
☐ H50 Ultimate Brazer (automatic brazing)	Band saw welding clamps
☐ H55 Ultimate Brazer (automatic brazing)	☐ Indicators & gauge kits
☐ H65 Ultimate Brazer (automatic brazing)	Coolant
☐ HM Ultimate Brazer (manual brazing)	Aluminum I beam straight edges
T50 Pro Braze Tester	☐ Circle saw leveling station
Auto-bench Hammerhead 3000	Band saw shear
Trac Tru band saw bench	Round saw bench
Standard bench	MIG welder
Shark 3000 CNC profile grinder	Gullet crimper
Shark 600 profile grinder	Gummer
Baracuda 750 side dresser	Post grinder
Stingray (band saw tipper)	
Auto swage	
CA5 Tool Grinder	Services /
CA7 Evo Boost Broach Geinder	☐ Stretcher roll regrinding/resurfacing
Sure Sharp Hewsaw Knife grinder (CKG/EKG)	Anvil rinding/resurfacing
LSGX magnetic flat bed knife/surface grinder	Saw guide repair
Dish-O-Matic band saw stretcher roll	Saw guide engineering/design
	Straight edge grinding
Saw Guides & Accessories	Machine rebuild/repair
,	General machining/parts inspection
Circular saw guides	Si loral mass mini Si parte il lopostion
Band saw guides	
Babbitt mold machine	
Babbitt mold plates	
Babbitt	
Splines, arbors, Sleeves	

Notes



