



“Helping you put the Edge on Glass”



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www.machinesandwheels.com

327 South Rd

High Point, NC 27262

336-373-0777

Meet our Team



Scottie Stephens-President/Owner
sstephens@machinesandwheels.com



Garland Goddard-Service/Technician
ggoddard@machinesandwheels.com



**Heather Monroe-Sales/Marketing
Manager**
hmonroe@machinesandwheels.com



Gray Noah-Service/Technician
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Summer Stephens-Customer Service
summer@machinesandwheels.com



Dale Stephens-Service/Technician
mandw@machinesandwheels.com



Lisa Allred-Accounting
lisa@machinesandwheels.com



Hunter Stephens-Service/Technician
mandw@machinesandwheels.com



Luke, Lila, and Harley-Executive treat eaters .
Will work for food and are available for hire!
mandw@machinesandwheels.com



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About Machines and Wheels

- ◆ **Machines and Wheels was established in 1982 by Scott and Hannelore Bushell. After Scott's passing, Hannelore continued to run the business for as long as possible, and in 2014 she sold the business to Scottie Stephens. Scottie had been an integral member of the Machines and Wheels team for over 15 years. Scottie is not only an owner/manager, but his experience matched with his knowledge of glass machinery enables him to maintain a hands on approach with both his employees and customers.**
- ◆ **Machines and Wheels employs some of the finest, most experienced technicians in the glass industry. Our techs are known for their expertise, availability, and attention to detail.**
- ◆ **Machines and Wheels still believes in a personal approach. Our customer service is unparalleled, and our number one priority is customer satisfaction.**
- ◆ **In addition to our glass machinery and consumables, Machines and Wheels also offers parts, service and repairs for any type of glass machinery.**



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DRILL 1600FF

CNC VERTICAL DRILLING MACHINE FOR DRILLING, MILLING AND COUNTERSINKING RECTANGULAR FLAT SHEET GLASS

DRILL 1600 is a 5-axis CNC drilling machine designed for producing holes, inserts and countersinks on rectangular flat sheet glass with a thickness of 3-20 mm. The machine is composed of five axes, X Y V Z W, and two electro-spindles which, as opposite drilling heads, create a double-sided drilling system that drills perfect holes.



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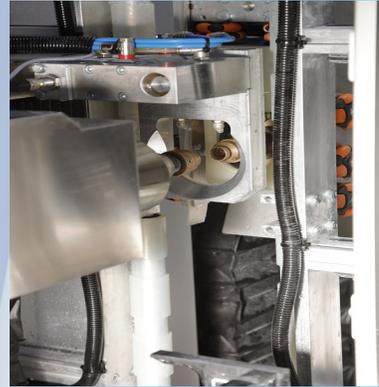
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DRILL 1600FF



Machine Dimensions with Rollers	7550X2400X2560mm
Min. Size of Glass Worked for Drilling	500X150mm
Max. Size of Glass Worked	3000X1600mm
Min. Thickness for Glass Worked for Drilling	3mm
Max. Thickness of Glass Worked	20mm
Height of Work Level	500mm
Forward Work Speed	0-36m/min. approx.
Cross Traverse– Y Axis	1600mm
Longitudinal Traverse– X axis	3000mm
Electrical Power Supply (Standard)	460V 60Hz 3-Phase
Total installed power of Machine Systems	12kW
Rated Power of Spindle # 2 of:	4+3 kW (5.3+4 HP)
Spindle Speed with Internal Cooling of the Tools	0-6,000/10,000 rev/min.
Numerical Control CNI	5 axis
Accuracy of the Working	+/- 0.20mm (over to 1000mm +/-0.020% of the length)
Number of Automatic Tool Change Slots	8+6



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DRILL 101FF

CNC AUTOMATIC VERTICAL DRILLING MACHINE FOR DRILLING, MILLING AND COUNTERSINKING SHEET GLASS

DRILL 101 FF is a numeric control 6 axis drilling machine designed for producing holes, notches, chamfering and polished rough openings of any type on straight flat sheet glass with thicknesses of 4 to 20mm. The machine is composed of six interpolated axes, X,XG,Y,V,Z,W, and Two electro-spindles positioned opposite one another creating a dead center system that drills perfect holes.



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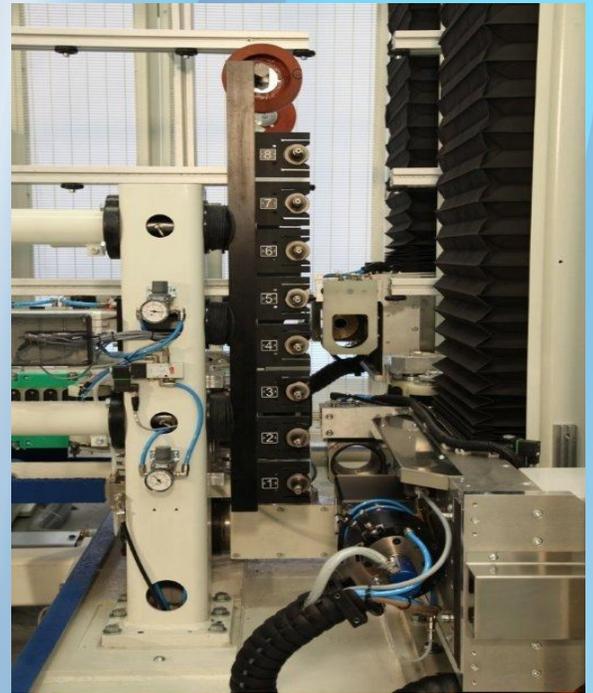
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DRILL 101FF



Machine Dimensions with Rollers	8500X2800X3200mm
Min. Size of Glass Worked	600X300mm
Max Size of Glass Worked	3000X2000mm
Min. Thickness of Glass Worked	4mm
Max. Thickness of Glass Worked	20mm
Height of Work Level	600mm
Forward Work Speed	0-20m/min. approx.
Cross Traverse– Y axis	2000mm
Longitudinal traverse– X axis	3000mm
Electrical Power Supply(Standard)	400V 50Hz 3 phase
Total Installed Power	20kW
Rated Power of Spindle N 2 of :	4kW (5.3HP) each
Spindle Speed with internal cooling of the tool	0-10,000rev/min.
Numeric Control NC 1600	6 axis
Number of Automatic Tool Change Slots	8X2



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E-D 101

8 AXIS VERTICAL MACHINING CENTER FOR GRINDING, MILLING, DRILLING AND POLISHING RECTANGULAR FLAT SHEET GLASS



E-D 101 is a vertical machining center that combines multiple types of processing in one system, which is capable of carrying out processing operations with a high level of speed and precision. The machine permits any type of processing on straight flat sheet glass, and combines all drilling and milling technology with characteristics of a vertical grinding machine.



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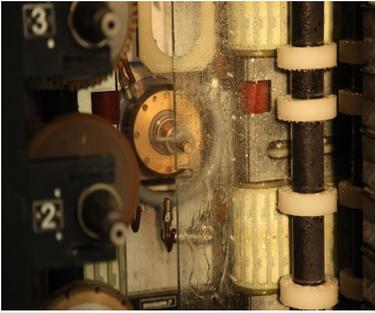
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E-D 101



Machine dimensions with Rollers	8470x3000x3275mm
Min. Size of Glass Worked	600x300mm
Max. Size of Glass Worked	3000x2000mm
Min. Thickness of Glass Worked	4mm
Max. Thickness of Glass Worked	12mm
Height of Work Level	620mm
Forward Work Speed	0-20m/min. approx.
Cross Traverse-Y axis	2000mm
Longitudinal Traverse—X axis	3000mm
Electrical Power Supply (Standard)	480V 60Hz 3- phase
Total Installed Power of Machine System	30kW
Rated power of Spindle N 2 of :	10kW (13.6HP) each
Spindle Speed with Internal cooling of the tool	0-12,000 rev/min
Numeric Control NC 1600	8 axis
Number of Automatic Tool Slots	10x2



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Skill E-D

8-AXIS VERTICAL MACHINING CENTRE FOR GRINDING, MILLING, DRILLING AND POLISHING STRAIGHT AND SHAPED FLAT GLASS



SKILL E-D is a vertical machining center that allows multiple machining processes to be combined in a single system capable of performing all machining processes with extreme speed and precision. The machine allows all machining processes to be carried out on straight or shaped flat glass (with a maximum of 3 shaped sides) and combines all vertical drilling and milling technology with the features of a vertical grinder.



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Skill E-D



Machine Dimensions with Rollers	11350x2910x3850mm
Min. Size of Glass Worked	600x300mm
Max. Size of Glass Worked	4500x2600mm
Min. Thickness of Glass Worked	4mm
Max. Thickness of Glass Worked	20mm
Height of Work Level	620mm
Forward Work Speed	0-20m/min. approx.
Cross Traverse—Y axis	2600mm
Longitudinal Traverse—X axis	4500mm
Electrical Power Supply (Standard)	480V 60Hz 3 Phase
Total Installed Power of Machine System	30kW
Total Power of Spindle. N 2 of:	10kW (13.6 HP) each
Spindle Speed With Internal Cooling of the Tool	0-12,000 rev/min
Numeric Control NC 1600	8 axis
Number of Tool Change Slots	10x2



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Machines and Wheels **Ultra** Series SE5M



The **M&W Ultra Series SE5M** is a straight line flat edging machine with 5 spindles capable of producing flat and flat with arris profiles. Beginning with 1 cup diamond wheel, the configuration is followed by 2 45° arrising wheels (front and back arris), then followed by 1 cup polishing wheel for polishing of the flat edge and 1 cerium impregnated wheel in the final position for a more brilliant polish. Inlet and outlet conveyors use timing belts for long life and precise operation, and the machine features a lubrication system for the front and rear conveyor rails. A mechanical step-less reducer adjusts the conveyor speed.



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Machines and Wheels **Ultra** Series SE5M

Position	Description	Part Number
1	Diamond Solid Band	DWSUN6FE50E
2	Diamond Resin Arris	DWCHA125AW50RQPK
3	Diamond Resin Arris	DWCHA125AW50RQPK
4	150x30x70-60	PCAA-1503070-60
5	150x40x70 Cerium Rubber	PCWR-1504070-C



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Machines and Wheels **Ultra** Series SE9M



The M&W Ultra Series SE9M is a straight line flat edging machine with 9 spindles capable of producing flat and flat with arris profiles. Two cup diamond wheels are followed by 2 sets of 45° arrising wheels (a diamond and polishing wheel for the front and back arris). These are followed by 2 cup polishing wheel to polish the flat edge and 1 cerium impregnated wheel in the final position for a more brilliant polish. Inlet and outlet conveyors use timing belts for long life and precise operation. A mechanical stepless reducer adjusts the conveyor speed, and the glass thickness is adjusted with a hand wheel on the right side of the machine body.



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Machines and Wheels **Ultra** Series SE9M

Position	Description	Part Number
1	Diamond Solid Band	DWSUN6FE50D
2	Diamond Solid Band	DWSUN6FE50MF
3	Diamond Res/Met Bond	DWSUN130AW50RMPK
4	130x35x60 AR2	PCAR2-1303560
5	Diamond Res/Met Bond	DWSUN130AW50RMPK
6	130x35x60 AR2	PCAR2-1303560
7	Diamond Res/Met	DWSUN6FE50RTPI
8	150x40x70 10S-80	PC10S-1504070-80
9	150x40x70 CE-3 Cerium	PCFEX-1504070-C



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Machines and Wheels **Ultra** Series SAE10M



The M&W Ultra series SAE10M is a 10 spindle variable angle mitering machine, with 2 diamond, 2 resin and 2 polishing spindles on a 0-45° mitering base and 4 spindles for the front and rear arris. The glass thickness is adjusted by turning a knob on the control panel and displayed on a scale meter. The mitering angle is adjusted by turning a knob on the control panel and the angle is indicated on a scale disc. The conveyor speed is manually controlled with the hand-wheel of a stepless reducer with high to low speed range. Glass removal is regulated by adjusting a hand-wheel on the input conveyor. Inlet and outlet conveyors use timing belts for long life and precise operation.



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Machines and Wheels **Ultra** Series SAE10M

Position	Description	Part Number
1	Diamond Segmented	DWSUN6FE50BSW
2	Diamond Solid Band	DWSUN6FE50D
3	Diamond Res/Met Bond	DWSUN6FE50REPK
4	Diamond Res/Met Bond	DWSUN6FE50RMPK
5	150x40x70 10S-80	PC10S-1504070-80
6	150x40x70 CE-3 Cerium Artifex	PCEX-1504070-C
7	Diamond Res/Met Arris	DWSUN5AW50RMPK
8	130X35X60 AR2	PCAR2-130X35X60
9	Diamond Res/Met Arris	DWSUN5AW50RMPK
10	130X35X60 AR2	PCAR2-130X35X60



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Metral FNG



Adjustable spindle head for bevelling and edging carries out the bevelling, edging and polishing work. Glass support table with electronically adjustable rotation speed. Rotation of the table facilitates operation, as the operator does not need to move, allowing for automatic edging and bevelling of complete circumferences with the mechanical compass already included in price. The glass is bevelled and edged without using a template. A following wheel system guides the wheel along the edge of the glass providing an uniform bevel along the shape of cut. The glass support table has adjustable vacuum cup arms along with arm extensions for large pieces of glass. The vacuum pump unit provides vacuum to the suction cups and is mounted separately in the control panel. A rotating overhead electrical distributor unit with water feed incorporated supplies power and water to the grinding head. The machine is fitted with closed circuit water and cerium oxide recovery systems.



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Metral FNG

Pos	Type	Part #	Description
1	DW	DWMET4PE22EF5	1/4 PE one-step
2	PW	PPBD-1001522	100x15x22 polish
1	DW	DWMET4PE22EF8	3/8 PE one-step
2	PW	PPBD-1002022	100x20x22 polish
1	DW	DWMET4PE22EF10	1/2 PE one-step
2	PW	PPBD-1002522	100x25x22 polish
1	DW	DWMET4FS22EF5	1/4 F/S one-step
2	PW	PPBD-1001522	100x15x22 polish
1	DW	DWMET4FS22EF8	3/8 FS one-step
2	PW	PPBD-1002022	100x20x22 polish
1	DW	DWMET4FS22EF10	1/2 F/S one-step
2	PW	PPBD-1002522	100x25x22 polish

Beveling

1	DW	DWMET6BV30MB	150mm Metal
2	RW	DWMET6BV30RFPI	150mm Resin
3	RW	DWMET6BV30RQPI	150mm Resin



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Metral TD-3



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Metral TD-3

FEATURES

Automatic lower, and optional manual or automatic upper drilling.

Automatic Cycle:

- Operation of both drilling units
- Water feed On and Off.
- Clamping of glass.
- Slug ejection.
- Continuous cycle for work in series.

The functions can be selected so that each operation can be carried out individually. Rotation speed of the drills can be adjusted electronically from a control panel potentiometer. Stainless steel chuck and spindle cooling by means of a rotating union with special seals in the chuck area. Support table with adjustable extension guides. OPTIONAL: Laser centering: A diode laser emits a beam which passes through the drill bit for exact hole centering. Tank with water pump for closed circuit cooling.

Caster table for drill MTD FEATURES:

Caster table for support and glass location when drilling in large sheets of glass. The entire table lifts to allow movement of the glass. When glass is positioned, the table lowers to bring the glass onto the fixed drill table with the casters supporting the glass around it. Table movement is effected by means or four simultaneously acting air cylinders to provide uniform raising and lowering movement. The table is actuated by a foot pedal control.



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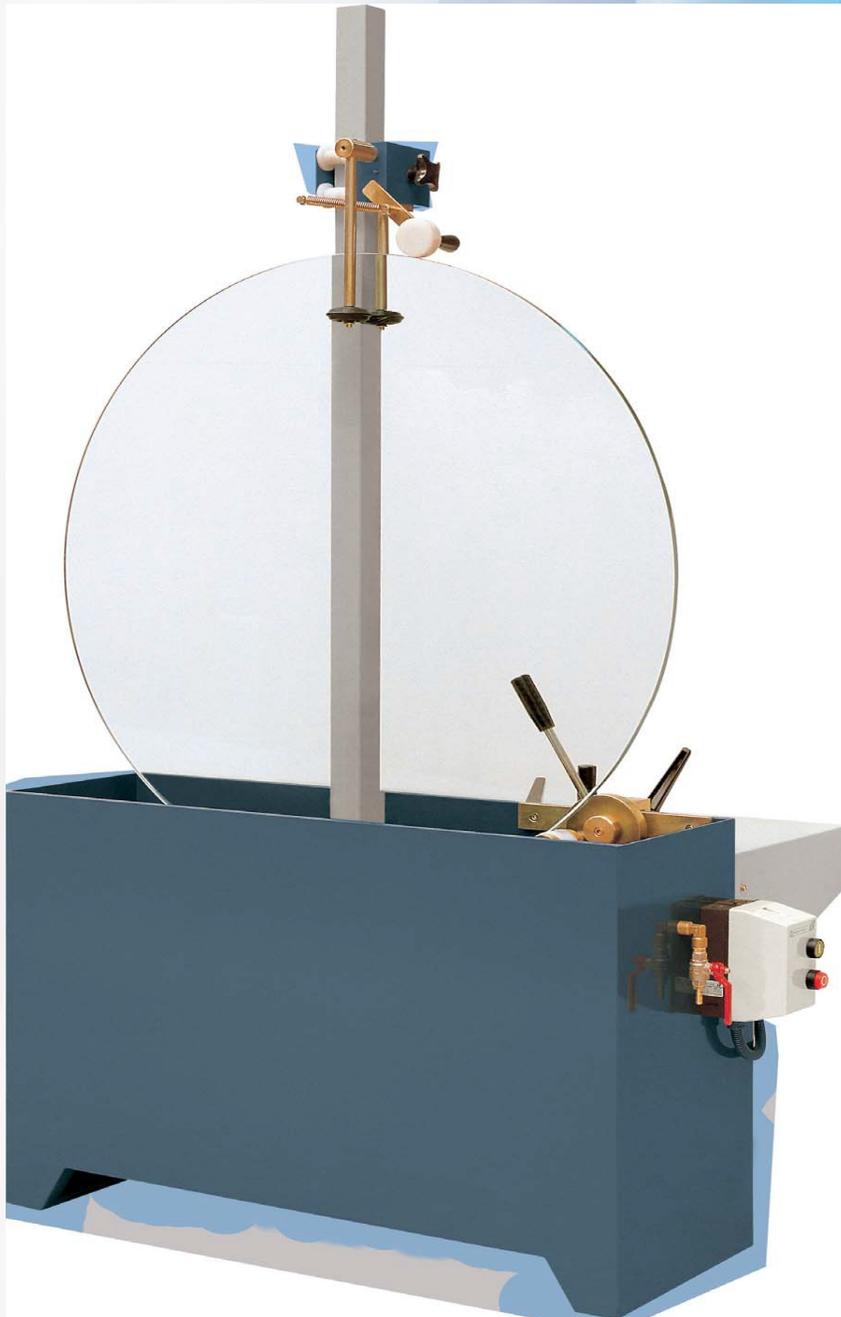
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Metral CC



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Metral CC

FEATURES

The edging operation is performed by locating the glass edge vertically against the drive wheel and the grinding wheel, while retaining it at the top between two guide wheels. The operating pressure is provided by the weight of the glass itself. The wheel is applied with a spring for small items. The operative unit comprises one diamond wheel for grinding and one polishing buffer. Depending on the situation, one or the other operation is performed. At the end of the operation, the rocking mechanism lever is moved. A roller separates the glass from the wheel, which stops. If the glass is poorly cut, with jagged edges, it is rested against the rocking unit roller so that the grinding wheel may remove the jag.



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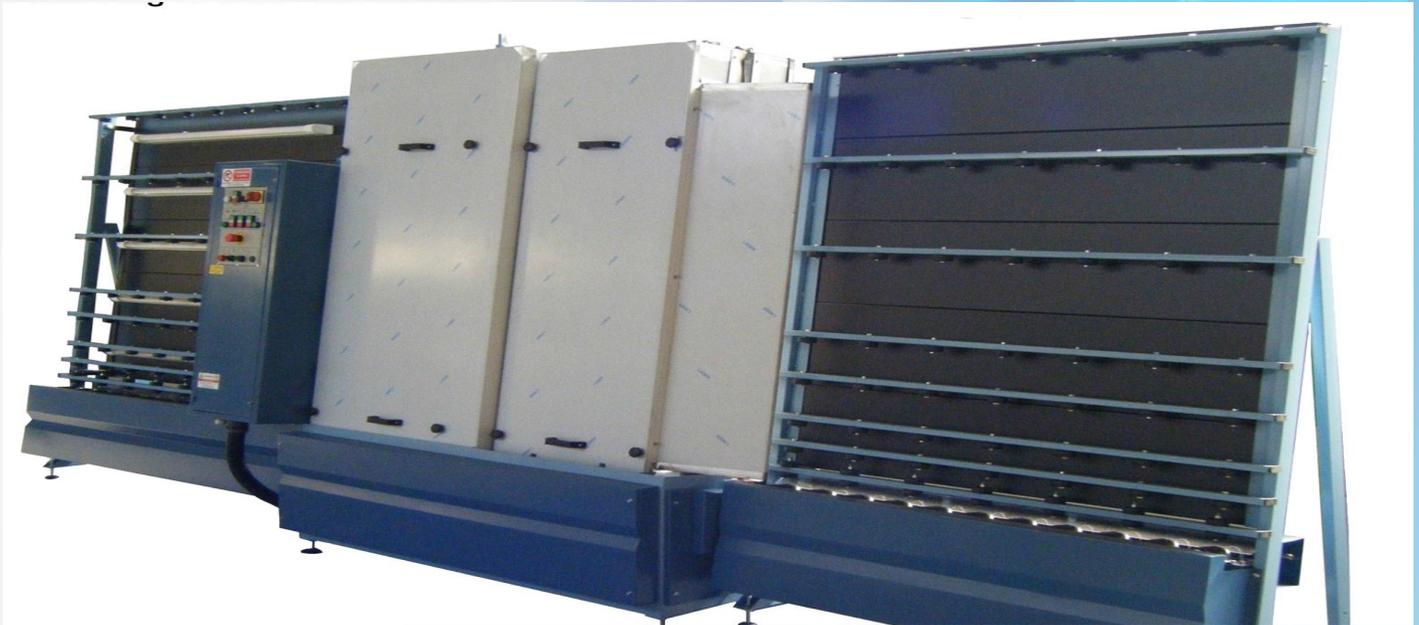
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StefiGlass Washers

The Stefiglass Sprint Vertical Washer is suitable for heavy duty post processing washes, sandblasting, etc., and made exclusively in “open” version allowing to wash out format.



Advantages

- ◆ Glass washing minimum:300(L)x150(H)
- ◆ Features a wash/rinse area completely in stainless steel followed by a large drying area
- ◆ Both areas of the machine are accessible through removable casing, soundproof in drying area
- ◆ The mechanical movement is placed at the bottom, below the crankcase
- ◆ Working speed: 1 to 5 minutes



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Malnati Washers



Washing machines are made in a great variety of types for any application. Regardless of whether you want to produce insulating glass or if you want to use it with you grinding area. Special applications are also possible. Minimum washable glass 400mm X 300mm Washable Thickness from 3-19mm with pneumatic thickness adjustment made by operator adjustment in two positions Adjustable Speed from 1.5-4 meters per minute Body of washer entirely made of stainless steel. Each Tank with high pressure water pumps for recycling water. Machines able to wash "Low-E" glass on demand



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Products and Services

Diamond Grinding Wheels

Machines and Wheels supplies a variety of grinding products to be suited for particular machine applications. In order to satisfy customer needs, we take in to account what the customer is looking for combined with the capabilities of their equipment. Every factor counts, and every factor comes in to play when it comes to Machines and Wheels providing you with optimum performance and the best cost.



Decorative profile wheels

Decorative profile wheels need to be precisely formed and need to retain that form as long as possible in order to provide a uniform edge on the glass. Machines and Wheels has developed a wide range of decorative profile specifications in conjunction with our suppliers, taking into account esthetic considerations as well as the demand of ease of cut and polish. In addition, Machines and Wheels offers a pre-profiling service for polishing wheels in order to facilitate break-in of decorative profile polishing wheels.



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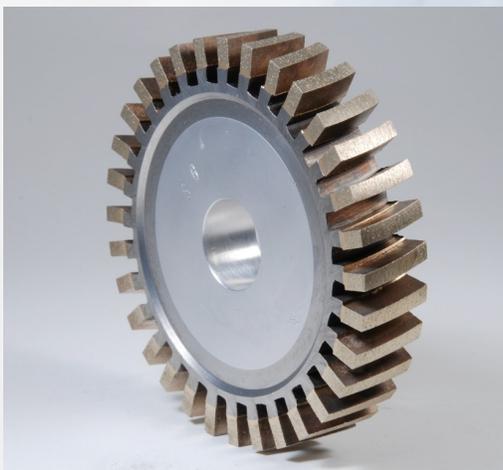
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Products and Services

Machines and Wheels Retruing Service

Machines and Wheels offers a diamond wheel retruing service to extend the optimal usefulness of your diamond wheel products. Over time wheels can become misshapen, or can develop off center grooves that create an uneven finish. V-groove or D-groove wheels can flatten out. They may need to be opened up to restore the cutting.



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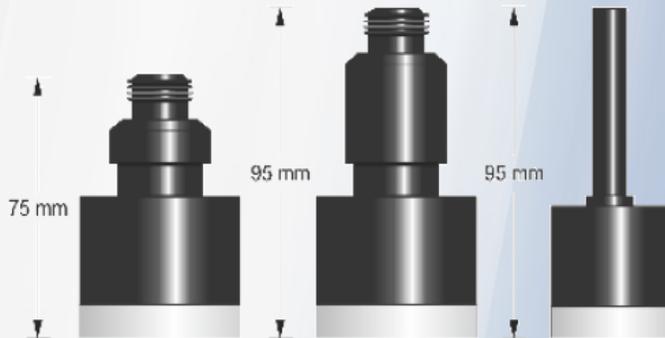
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Products and Services



Long-Life Diamond Drill Bits

Bonded diamond drill bits are made with a 10 mm deep sintered diamond crown. Unlike electro-plated bits, where a single layer of diamonds is coated onto a steel tube, the bonded bit wears uniformly throughout the depth of the bond, giving a life expectancy of 30 times that of the electro-plated bit. We have a wide variety of sizes available with the following configurations: Straight shank (3/8") bits for tripod and drills with a standard chuck and 1/2" threaded Belgium mount in both short (75mm) and long (95mm) configurations.



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Products and Services

Machines and Wheels proudly sells the finest Diamond tooling on the market. Machines and Wheels has a long standing reputation of selling premium cost effective tooling and supplies. All tooling is manufactured by the best manufacturers in the business. All tooling sold by Machines and Wheels has also been tested by the staff and customers. Machines and Wheels is committed to giving you the highest quality tooling and supplies for the most competitive price. Our manufacturers stand behind their tooling and we stand with them to ensure every customer comes away with exactly what they need to make their production easier.



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Products and Services

Dry Coolant

Available in 5 gallon pails (40 lbs. Dry Powder) (Treats 4000 gallons of water.)

1. Maximize coolant usage for higher quality grinding and softer sludge.
2. Increased diamond wheel life and efficiency.
3. Contains a rust inhibitor to help machinery last longer.
4. Bio-degradable for easy disposal.
5. Helps to eliminate water spots on glass.
6. Anti-Foam
7. Anti-Bacterial
8. Easy to use
9. Easy to store
10. Save money on shipping cost (no 55 gallon containers)



Cerium Oxide

Machines and Wheels offers cerium oxide for your scrubbing and polishing needs. Cerium oxide polishing compounds are manufactured with a certain percentage of cerium oxide along with enhancing additives such as suspension and dispersion agents. In general, higher grades contain the higher percentages of cerium oxide.



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Products and Services



Polish Wheels

Machines and Wheels carries several different types of polishing wheels manufactured by established companies in the glass industry. Marrose Abrasives, RBM, ITALMOLE, Abrasipa, and Buffalo Felt Products are industry leaders, and Machines and Wheels is proud to offer these quality wheels to their customers.



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Testimonials

- ♦ “Machines and Wheels customer service exceeds ordinary expectations with round the clock attendance and a superb attitude. Heather and the office staff takes and ships orders diligently and tends to our company’s needs in a quick and timely fashion. Their wide variety of both tooling and equipment are enough to meet even the biggest shop’s most demanding requirements.”

-Link McIntosh, Safety and Maintenance American Glass Inc.-
Springfield, MO

- ♦ “The installation and the parts and service with Scottie Stephens and Gray Noah has exceeded our expectations. Machines and Wheels is the best equipment service organization we deal with, bar none.”

-John Dwyer, President, Syracuse Glass Company,
Syracuse NY



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- ◆ “In 2005, I purchased a flat edger from machines and Wheels. The whole experience with the set up and training was fantastic. The technicians are extremely knowledgeable. Since then, anytime that I have called with any question regarding troubleshooting or wheels or anything, they have been so helpful and taken the time to make sure my problem was solved. I highly recommend this company if you are considering a machine purchase ”

-Stace Overly, Owner, Westshore Glass & Mirror

- ◆ “You guys have helped me with the problems with my beveller through extensive telephone support. You guys are great-you spent time with me when you didn’t have to. I could write three pages”

Don, Active Glass



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