

DRILL

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SKILL GLASS
VERTICAL CNC CENTERS

DRILL 101FF

DRILL 1600_DRILL 1600FF_MILL 1600

SKILL WASH

DRILL



SKILL GLASS

INDEX

This catalog illustrates the functions and capabilities of the machines shown. However, please note that, given the complexity of the models and the variety of services available, some configurations may include specific options. To determine the correct set-up for your machine, please contact our sales and technical staff.

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DRILL



A COMPANY, A VERTICAL GLASS TECHNOLOGY SCHOOL



SKILL GLASS

Located in the industrial heart of Alto Vicentino, SKILL GLASS is specialised in the design and production of high-tech vertical processing machines for flat glass. Our solutions, the result of consolidated experience and constant innovation, include vertical grinding, drilling and milling lines, designed for maximum efficiency, reliability and ease of use.

Vertical technology allows the optimisation of spaces and movement, and simplifies the handling of the glass, proving ideal for the processing of large sheets, now increasingly demanded in the industry.

Each machine is developed through a careful design phase, aimed at simplicity of mechanical functions, full automation of processes and low maintenance requirements.

In our headquarters in Schio, we develop flexible modular solutions that can be used in a stand-alone setup or integrated into complete processing lines. Our range of machines, all CNC, includes drilling and milling machines, grinding and polishing machines, combined systems and special custom-designed systems to meet specific production needs.

Thanks to dedicated software, intuitive interfaces and functional design, our machines offer an immediate use and high-performance experience, confirming SKILL GLASS as a reliable partner for glass companies that look to the future with ambition, precision and technological vision.

This catalogue features the **DRILL Range**, a wide range of **Drilling and Milling Machines** to best meet the multiple processing needs of your company, embodying our experience and continuous commitment to research and cutting-edge solutions for vertical processing.

In addition to our machines in the **DRILL range**, we also present the **SKILL WASH** specific washing machine, designed to integrate perfectly in the production cycle. It permits an extraordinary **optimisation of work times**, improving overall productivity and simplifying the operations. The intuitive interface and working software, even when installed in the "in-line" version, also allow it to be used in stand-alone mode. The ease of maintenance and construction quality make it an essential tool for those in need of **uncompromised efficiency**.

Each machine is a perfect blend of innovation, functionality and reliability.

We are here, at your side!

Inside every SKILL GLASS machine you'll find not just technology, but also the genuine passion of people who believe in their work and in customer satisfaction. Each component, detail and function is the result of a daily commitment composed of listening, experience and care. For us, building a system does not only mean offering a technical solution, but **accompanying customers in their journey of growth**, with dedication, professionalism and constant closeness. The care we put into every stage – from design to after-sales support – is the reflection of a value we consider fundamental: customer centricity. This is what makes our machines more than mere production tools: they become an **extension of our responsibility and our passion**, designed to last over time and meet the real needs of those who work day-after-day with skill and vision.

We wish you all an enjoyable read and trust that this catalogue will offer you practical ideas to optimise your investments and enhance all aspects of your production process.

to staff Skill Glass



PRESENTATION



DRILL 101FF

is a 6-axis CNC drilling machine for making holes, notches, bevels and polished or rough openings of any programmed shape on flat glass sheets, including low emissivity (Low-E) glass, with shaped or straight edges, from 3 to 21 mm in thickness. The machine consists of six axes and two electro-spindles: these are mounted opposite each other and therefore allow processing with a double-sided drilling system to obtain perfect holes in glass. The drilling/milling machine is designed to combine the best technology available for these processes, for technically perfect results with great speed.

The processing of vertical sheets has several advantages over flat processing: the machine occupies significantly less space than a flat machine; resting the sheet on the roller conveyor automatically provides a fixed zero point that is error-free, as the end stop is certain; in addition, while on horizontal machines the table must be perfect or else the sheet may break, the vertical position allows natural alignment as the support is on the bottom edge.

It is designed with an **extremely robust and stable structure** and is available in a range of height configurations from 2.0, 2.6 up to 3.3 metres. It comes with or can be

equipped with roller conveyors of different lengths, from 2.5 up to 12 metres. Perfectly suited for the most varied production needs, DRILL 101FF stands out for its ability to manage **large batches with repetitive cycles**, as well as dynamic cycles with different formats and processes, while always maintaining high operating efficiency. It handles thicknesses from 3 to 21 mm, while providing **practical programming**, flexible batch management and reliability, even in the most complex production situations.

The **Twin Head Technology (THT)** that characterises the equipment features the simultaneous use of the two functionally interchangeable heads (front and rear), enabling the machine to quickly and efficiently manage different types of processing, both in simultaneous mode (e.g. drilling and countersinking) or in sequential/synchronised mode (milling with the front head + grinding with the rear head).

One of the main strengths of DRILL 101FF is its **high operational versatility**. The machine is ideal for integration into complex production lines, for example placed in sequence with an edge grinder (as in super-fast lines for large batches of parapets or showers), as well as for use in stand-alone mode, for independent machining. In any case, it can be easily combined with a washing machine, to

create holes and/or notches or cut-outs in specific products, even of small sizes.

Like all the **Skill Glass 101 series** models, DRILL 101FF is also distinguished by its **innovative glass support and conveyor system**, described in detail in the Winning Points section. The motorised support rollers ensure smooth and safe movement: they guide the sheet in the work zone, relying on vacuum belts for the clamping and movement of the glass during processing.

The casing, made from metal sheets with an anti-corrosion protective treatment and powder coating, is a distinctive feature of this line. It not only gives it a highly aesthetic and prestigious appearance, but also conveys a sense of robustness and durability over time.



WINNING POINTS



1. A 2.2 x 3.0 m cabin with front and rear side door for safe access and ample movement.

2. The weight of the glass always rests on the roller conveyors, not requiring rear suction-cup structures. The weight of the sheet has little or no effect on the movement system and so it does not burden the suction cups.

3. The tool racks are positioned vertically beside the spindle.

The 2 tool racks, driven by 3 horizontal pistons, are in a vertical position, just 20 cm beside the spindles, protected from water and from dirt.

4. The machine allows loading (and unloading) of glass longer than the roller conveyor dimensions.

Provided that adequate safety measures are taken, this function is permitted by the roller conveyors and vacuum belts, which operate on the basis of the work program, regardless of the length of the glass.

5. Option of loading the glass onto the outfeed roller conveyor; the machine then takes it to the infeed roller conveyor, saving the operators from having to perform difficult or risky manoeuvres due to lack of space.

6. Vacuum belts for moving the glass during processing. Two belts fitted with tens of vacuum suction cups, positioned to the left and right of the spindle, they (each) grip

around 90 cm of glass. The machine is equipped with a four-belt system in order to process sheets of glass without any weight restrictions.

7. The movement of the glass is distributed in a functional and synchronised manner between the rollers and the vacuum belts. Infeed and outfeed of the glass by means of motorised roller conveyors. During processing, the movement of the glass is performed by the vacuum belts for safe and precise handling. Once the processing is completed, the outfeed roller conveyor takes the sheet away, while the infeed rollers and belt load the next one.

8. The machine has been designed with no rear mechanical structures (suction cups) for moving the glass from the infeed to the outfeed. This is an exclusive advantage of Skill Glass products that above all protects the glass handling components from dirt or damage.

9. High-tech anti-vibration and Low-E processing systems. The machine is equipped with 8 vertical anti-vibration stabilising bars (4 in front and 4 behind) with rollers to stabilise the glass during processing. The rollers on the Low-E version are made specifically for this purpose so that the glass coating is not damaged.

10. High-power, interchangeable double spindle. The machine is equipped with 2 identical 4 kW spindles (front and rear) that can perform all the machine's functions.

11. Automatic machine shutdown operations. Automatic washing. When the machine has ended its work, the two spindles are automatically activated and spray high-pressured water on the vacuum belts and on the presser and stabiliser rollers.

Draining of the internal water circuit. When work is ended, the machine drains the water from the line of the two spindles.

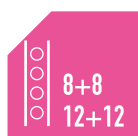
Mechanical moving parts and services. When work is ended, the machine moves all the mechanical parts. This helps keep all mechanical moving parts and services functioning properly.

12. Automatic lubrication - Automatic grease dispenser. Grease distribution to over 50 lubrication points is done automatically from a single grease containment tank.

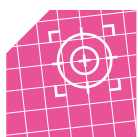
13. Alarms with warnings on the operator display: for low grease levels or insufficient grease distribution; for air pressure losses below the pre-defined limits; for vacuum pressure losses; codified operator signals for the control of irregularities to facilitate diagnosis and support interventions.

WIN 101 FF DRILL CLASS

WIN CLASS



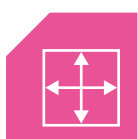
1. DOUBLE TOOL RACK
WITH 8-12 POSITIONS



2. SIX-AXIS CNC PROCESSING



3. AUTOMATIC LUBRICATION



4. SPACIOUS AND SAFE
2.2 X 3.0 M CABIN



5. LOW EMISSIVITY (LOW-E)
PROCESSING SYSTEM



WIN CLASS DRILL 101 FF

DRILL 101FF



GLASS CLAMPING
AND MOVEMENT SYSTEM
WITH 2 VACUUM BELTS



NOSHEET WEIGHT LIMIT
WITH 4 VACUUM BELTS



GLASS PROCESSING
CAPACITY OF THICKNESSES
FROM 3MM TO 21 MM



TWO 4 KW COAXIAL
ELECTRO-SPINDLES



PROCESSING



DRILL 101FF

The machine is equipped with 2 electro-spindles, each with 4 kW of power, which support ISO40 tapered tool holders housed in a dedicated rack positioned vertically beside the spindles.

The machine, software and mechanics are all designed around the concept of two equally powered spindles that can be interchanged for all functions as required. A single spindle is potentially capable of handling all the processing, although for the quality of the drilling, the use of both is recommended. The possibility of using the sequential/synchronised work mode considerably reduces the time involved.

Conventional drilling/countersinking operations are performed using both spindles, but it is worth noting that sequential/synchronised machining programs can be used for milling operations, with the spindles fitted with different tools to perform, for example, milling with the front spindle, immediately followed by grinding with the rear spindle, with no need for a tool change.

The machine may include a system for machining low-emissivity (Low-E) glass and glass with special surface treatments.

The operating solutions made possible by

the machine play an important role. Although these offer indirect advantages, they are properly part of the specific design choices and technical architecture of the machine.

They include:

REVERSE LOADING MODE

PROCESSING OF SHEET DIMENSIONS GREATER THAN THE LENGTH OF THE ROLLER CONVEYORS

AUTOMATIC ADJUSTMENT OF THE GLASS OUTFEED HEIGHT FOR ALIGNMENT WITH MACHINES OF DIFFERENT HEIGHT

The following is a detailed list of the processes the machine can perform:

1. DRILLING

Thanks to the coaxial heads on either side, drilling is done with the greatest speed while always ensuring perfect and precise holes.

2. COUNTERSINKING

Can be done either with individual diamond tools and adjusted by the program based on the customer's needs, or with accessories fitted on diamond drill bits.

3. MILLING

Thanks to the extreme robustness and precision of the system, milling becomes a fast and simple operation.

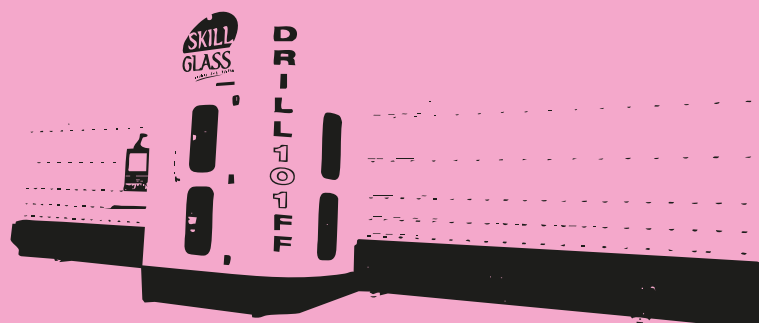
4. COMBINED GRINDING AND MILLING

With the multi-function tools, a cut-out can be milled and ground in a few seconds. Alternatively, if the dimensions of the cut-out allow it, the milling can be done with the front spindle, immediately followed by grinding with the rear spindle, in order to protect the differentiated wear of the multi-function tools.

2.

1.

DRILL 101FF



Machine dimensions with roller conveyors (other sizes available)

3000 X 2000

L 8500 mm
I 3000 mm
h 3275 mm

4500 X 2600

L 11400 mm
I 3000 mm
h 3920 mm

Machine carters

Painted steel

Basement structure

Galvanized and painted steel

Minimum glass size that can be processed

600 X 300 mm

Maximum glass size that can be processed

3000 X 2000 mm

4500 x 2600 mm

Minimum glass thickness allowed

3 mm

Maximum glass thickness allowed

20 mm

Working height from the ground (other sizes are available on request)

620 mm

Feed and working speed

0 - 21 m/min.

Standard electrical connection (other on request)

400 V 50 HZ

Power installed in standard configuration

20 kW

Electric spindle power (nr. 2)

4 KW (5.3HP)

Electro-spindle rotation speed with internal tool cooling

0-10.000 rpm

Numerical control

6 AXES

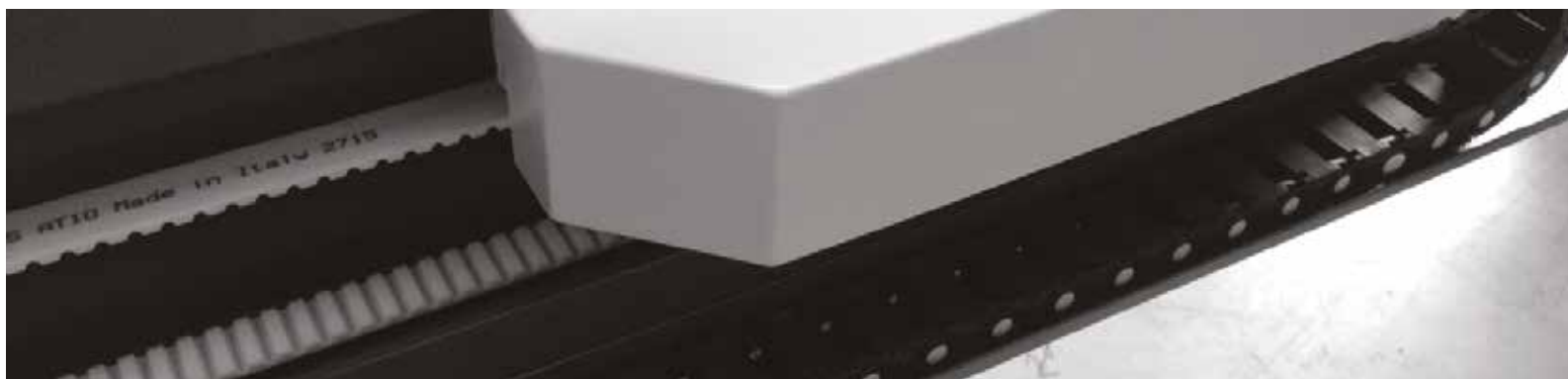
Standard automatic tool change stations (front/rear/optional)

8 + 8

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WIN 101FF CLASS

PRESENTATION



TOP-OF-THE RANGE CNC DRILLING MACHINES FOR PROCESSING FLAT GLASS.

DRILL 1600 / DRILL 1600FF

The DRILL 1600 and DRILL 1600FF models represent a new generation of CNC machines for drilling and milling flat sheet glass. Designed for high performance, advanced functionality and economic benefits in terms of initial investment and of operational cost savings, they stand out for their efficiency and reliability.

They both belong to the same family and share the same construction features, technical principles and operating procedures. The two versions have identical casing and conveyor systems, and share a large part of their mechanical moving parts.

The basic difference lies in the processing functions offered.

DRILL 1600 FOUR-AXIS CNC DRILLING MACHINE

Designed for automatic drilling of holes and countersinks on flat sheet glass from 3 to 20 mm in thickness, DRILL 1600 has four axes and two counterposed electro-spindles. The double-sided drilling system guarantees absolute precision and maximum hole quality, even in conditions of high productivity.

DRILL 1600FF FIVE-AXIS CNC DRILLING/MILLING MACHINE

DRILL 1600FF expands the capabilities of the basic version, adding the possibility of creating holes, countersinks and milled cut-outs on rectangular flat glass sheets from 3 to 20 mm in thickness. It is equipped with five controlled axes and two counterposed electro-spindles, for precise and versatile machining with the same double-sided drilling system.

To facilitate processing, while machining glass up to a height of 1600mm, the machine can also accommodate sheets of greater height thanks to its open-top cabin. The machines can process glass sheets of 3200 and 4500mm in length.

All models are equipped with automatic air conditioning in the electrical cabin as standard.

Both versions offer a wide range of equipment; they can be equipped with a motorised outfeed roller conveyor, if the glass needs to be conveyed to another machine, and the operator has the option of unloading the glass onto either the infeed or outfeed roller conveyor, according to convenience.



WINNING POINTS



1. The cabin dimensions are 1.3 x 2.4 m, with a front door and rear side door to ensure safe access and ample space to manoeuvre. The parts more exposed to contact with water are protected with galvanising and powder coating, to ensure robustness and durability over time.

2. **Glass support system.** The glass sheet rests exclusively on the roller conveyors, eliminating the need for any rear suction-cup supports. The weight of the sheet has minimal impact on the handling system.

3. **Tool rack bars.** The tool racks are positioned vertically, close to the spindles, to reduce tool-change times and increase precision and safety of movement.

Standard configurations:
 DRILL 1600: 6+6 tapered tool holders and
 DRILL 1600FF: 8+6 tapered tool holders.
 Available options: racks with up to 12+12 tapered tool holders on request. The rack arrangement protects the tools from water and dirt. The linear movement of 20 cm, driven by three horizontal pistons, allows alignment with the spindle for fast, safe and error-free tool changing. The system, designed to avoid complex movements and reduce maintenance, relies solely on pneumatic horizontal movement with mechanical stops, leaving the vertical

movement to the spindle, for depositing and picking up tools.

4. **Flexible glass unloading.** The system allows unloading of the sheet either on the outfeed roller conveyor or on the infeed roller conveyor. The absence of rear suction-cup units and the use of a lateral clamp for the movement of the glass offer the possibility of choosing the unloading direction based on operational needs.

5. **No rear mechanical structures.** The machine is designed without suction-cup systems for moving the glass to the outfeed, an exclusive advantage of Skill Glass products. Rear mechanical structures, typically found in other solutions, are exposed to water, dirt and debris, with consequent wear and frequent maintenance work.

6. **Anti-vibration technology.** A presser system stabilises the sheet in the processing zone, eliminating any vibrations. This technology allows machining to be carried out even in the grip area of the pneumatic clamp: the clamp can be detached without affecting the stability of the glass, which is kept fully immobilised by the pressers.

7. **Automatic machine shutdown operations.** **Draining** of the internal water circuit. When work is ended, the machine completely drains the water from the circuit of the two spindles. **Mechanical moving parts and services.** When work is ended, the machine moves all the mechanical parts. This helps keep all mechanical moving parts and services functioning properly.

8. DRILL 1600 and DRILL 1600FF can be integrated into a production line by simply installing motorisation on the outfeed roller conveyor.

9. **Automatic lubrication - Automatic grease dispenser.** Grease distribution to the various lubrication points is done automatically by means of a single grease containment tank, a centralised pump system and peripheral distribution blocks.

10. **Alarms with warnings on the operator display:** for low grease levels or insufficient grease distribution; for air pressure losses below pre-defined limits; codified operator signals for the control of irregularities to facilitate diagnosis and support interventions.

DRILL 1600 CORE CLASS 1600FF

CORE_{CLASS}



1
AUTOMATIC DOUBLE TOOL
CHANGER WITH 6
POSITIONS
(DRILL 1600)



2
AUTOMATIC DOUBLE TOOL
CHANGER WITH 6-8
POSITIONS
(DRILL 1600FF)



3
FOUR-AXIS CNC
PROCESSING
(DRILL 1600)



4
FIVE-AXIS CNC
PROCESSING
(DRILL 1600FF)



5.
AUTOMATIC LUBRICATION



CORE_{CLASS}

DRILL 1600 6000FF

DRILL 1600 / DRILL 1600FF



SPACIOUS AND SAFE
1.35 X 2.4 M CABIN



GLASS CLAMPING AND MOVEMENT
SYSTEM WITH PNEUMATIC CLAMP
ON RIGHT SIDE



MACHINING OF GLASS
THICKNESSES FROM
3MM TO 20 MM



TWO COAXIAL ELECTRO-SPINDLES
(3 KW ON DRILL 1600,
3+4 KW ON DRILL 1600FF)
AND INTERNAL TOOL COOLING



REMOTE SUPPORT



PROCESSING



DRILL 1600 / DRILL 1600FF

SPINDLES AND TOOLHOLDERS

The machine is equipped with two electro-spindles featuring automatic tool change with special vertical racks positioned beside the spindles. This configuration allows drilling and countersinking operations to be carried using both spindles in a coordinated manner, ensuring maximum operating efficiency.

OPERATIONAL BENEFITS AND FLEXIBLE PROCESSING

The technical solutions adopted are the result of targeted design choices, providing direct and indirect benefits. For example, machining can even be carried out on the grip zone of the pneumatic clamp once it is removed, as the glass sheet remains perfectly immobilised by the presser system, preventing any undesired movement.

THERE'S MORE THAN JUST THE WORK

In addition to its cutting-edge technical solutions, this machine is also surprisingly elegant, combining a refined design and

robust construction. Every detail has been studied in order to offer the greatest operational practicality, making processes simple, smooth and fast. It is a complete machine that combines speed and efficiency with versatility, making it suitable for a range of production requirements. This is all available for a surprisingly affordable investment, allowing you to improve the quality of your daily work without compromising on convenience and style.

TYPES OF PROCESSING AVAILABLE:

DRILL 1600

1. DRILLING

Thanks to the counterposed coaxial heads, drilling is performed with the greatest speed while always ensuring perfect and precise holes.

2. COUNTERSINKING

This can be done with individual diamond tools, adjusted by the software based on the customer's needs, or with accessories fitted on diamond drill bits.

DRILL 1600FF

1. DRILLING

Thanks to the counterposed coaxial heads, drilling is performed with the greatest speed while always ensuring perfect and precise holes.

2. COUNTERSINKING

This can be done with individual diamond tools, adjusted by the software based on the customer's needs, or with accessories fitted on diamond drill bits.

3. MILLING

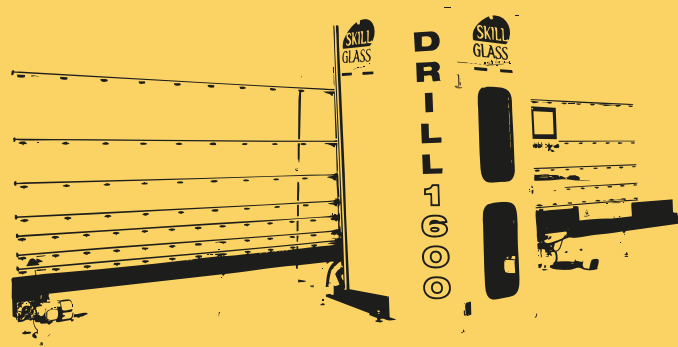
The superior robustness and precision of the system allow milling to be done simply, quickly and with high quality results.

4. COMBINED GRINDING AND MILLING

With the multi-function tools a cut-out can be milled and ground in a few seconds. Alternatively, when the dimensions allow it, milling can be done with the front spindle, immediately followed by grinding with the tool mounted on the rear spindle, thereby reducing uneven wear on the multi-function tools.



DRILL 1600 / DRILL 1600FF



Machine dimensions in the version:

DRILL 1600

L 8370 mm abt.
I 2400 mm abt.
h 2570 mm abt.

DRILL 1600FF

L 8810 mm abt.
I 2400 mm abt.
h 2570 mm abt.

Machine carters

Painted steel

Basement structure

Galvanized and painted steel

Minimum glass size that can be processed for drilling

500 X 150 mm

Maximum glass size that can be processed

3200 X 1600 mm

Minimum glass thickness allowed

3 mm

Maximum glass thickness allowed

20 mm

Working height from the ground (other sizes are available on request)

500 mm

Feed and working speed

0 - 20 m/min. abt.

0 - 36 m/min. abt.

Standard electrical connection (other on request)

400 V 50 HZ three-phase

Power installed in standard configuration

8 kW

12 kW

Electric spindle power (nr. 2)

3+3 kW

4+3 kW

Electro-spindle rotation speed with internal tool cooling

0 - 6000 RPM

0 - 10.000 RPM

CNI Numerical control

4 AXES

5 AXES

Standard automatic tool change stations front + rear (optional)

6+6 (12+12)

8+6 (12+12)

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DRILL 1600 CLASS CORE 1600FF

PRESENTATION



FOUR-AXIS CNC DRILLING MILLING MACHINE FOR FLAT SHEET GLASS.

MILL 1600

is a 4-axis CNC milling machine, designed for making cut-outs and holes, countersinking and milling on flat sheet glass from 4 to 20 mm in thickness. The machine is equipped with a high-performance front electro-spindle and is a compact, versatile and highly productive solution, ideal for completing drilling and milling operations.

Thanks to a pneumatic clamp machining system, MILL 1600 ensures high precision and speed of execution. Its controlled four-axis architecture enables complex machining operations while keeping the glass in a fixed position, and the combined movement of the clamp and spindle (also on the horizontal axis) ensures maximum operational flexibility.

The new design of the processing cabin, open-topped and fully transparent, allows the processing of sheets up to 1600 mm in height, and even larger sizes, if necessary. The maximum workable length is 3200 mm. The operator has the option of unloading the glass onto the infeed or outfeed roller conveyors, depending on the line requirements.

In keeping with Skill Glass tradition, MILL 1600 shares much of its structure and roller conveyors with the DRILL models, ensuring reliability and component compatibility.

The machine is designed to offer **concrete advantages** in terms of investment and of operational cost savings.

All models come with automatically regulating air conditioning in the electrical cabin as standard. Upon request, the configuration can include automatic tool holder release and an autonomous water recirculation system, for further process optimisation.

Design has become a distinctive feature in the new MILL line: its modern, elegant and functional lines enhance the work environment and highlight the build quality of the brand. In addition to the aesthetic aspect, operational practicality lies at the heart of every detail, for fast, intuitive and complete processing that reduces cycle times and simplifies daily work management.

MILL 1600 is not just a versatile, high-performance machine, but also a particularly affordable investment that combines efficiency, convenience and style in one single solution.



WINNING POINTS



1. Ergonomic cabin. Designed for maximum ergonomics in a compact space, the cabin offers a large front opening that allows full access to the work area. This feature facilitates maintenance operations, always in complete safety. The surfaces most exposed to contact with water are protected with galvanizing and powder coating, ensuring high resistance to corrosion and long life.

2. Front spindle: efficiency, protection and practicality. The spindle is positioned in the front part of the machine, so that its inclined angle facilitates natural draining of the water. This exclusive design solution provides greater efficiency and superior durability, preventing the accumulation of liquid inside it. Direct access from the front, via the large technical cabin door, makes maintenance operations rapid and simple, while also improving protection of the spindle from tool cooling-water spray.

3. Glass support system. The glass sheet rests entirely on the roller conveyors, eliminating the need for rear suction cup supports. The weight has minimal impact on the handling system, ensuring optimal stability and the absence of vibrations, even with large sheets.

4. Flexible glass unloading. The system allows unloading of the sheet either on the outfeed roller conveyor or on the infeed roller conveyor. The absence of rear suction-cup units and the use of a lateral clamp for the movement of the glass offer the possibility of choosing the unloading direction based on operational needs.

5. No rear mechanical structures. The machine is designed without suction-cup systems for moving the glass to the outfeed, an exclusive advantage of Skill Glass products. Rear mechanical structures, typically found in other solutions, are exposed to water, dirt and debris, with consequent wear and frequent maintenance work.

6. Anti-vibration technology. A presser system stabilises the sheet in the processing zone, eliminate any vibrations. This technology allows machining to be carried out even in the grip area of the pneumatic clamp: the clamp can be detached without affecting the stability of the glass, which is kept fully immobilised by the pressers. The result is a precise, safe machining process with no risk of accidental movement of the sheet.

7. Automatic machine shutdown operations. Draining of the internal water circuit. When work is ended, the machine drains the

water from the spindle line. This operation, which immediately follows the automatic washing, is performed by means of compressed air, until the two circuits involved are completely drained. **Mechanical moving parts and services.** When work is ended, the machine moves all the mechanical parts. This helps keep all mechanical moving parts and services functioning properly, to prevent blockages or errors in the case of infrequent use by the customer.

8. Semi-automatic lubrication - Semi-automatic grease dispenser. Grease distribution to the various lubrication points is done semi-automatically. There is a single, centralised grease loading point and peripheral distribution blocks to reach the parts that require constant greasing.

9. Alarms with warnings on the operator display. For air pressure losses below the pre-defined limits, to avoid possible machine malfunctions. **Codified operator signals for the control of irregularities** in all the machine's mechanical and electro-mechanical movements. This is to facilitate diagnosis and support interventions.

MCORE1600

CLASS

CORE_{CLASS}



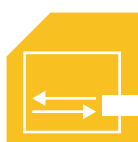
1
FOUR-AXIS CNC
PROCESSING



2
SEMI-AUTOMATIC CENTRALISED
LUBRICATION



3
SPACIOUS AND SAFE
CABIN WITH LARGE
TRANSPARENT DOOR



4
GLASS CLAMPING AND MOVEMENT
SYSTEM WITH PNEUMATIC CLAMP
ON RIGHT SIDE

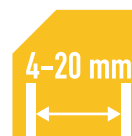


MILL 1600_{CLASS}

MILL 1600



5. MACHINING OF GLASS
THICKNESSES FROM 4MM
TO 20 MM



6. 4.4 KW ELECTRO-SPINDLE



7. ELECTRO-SPINDLE
MOVEMENT ON VERTICAL
AND HORIZONTAL AXES



8. REMOTE SUPPORT



PROCESSING



MILL 1600

When speaking of innovation in the glass-machining sector, the aspects normally considered are performance, processing speed and the completeness of available functions.

However, the real change brought by this machine is something else: the possibility of high-quality technology at a surprisingly affordable price.

The result is a machine that represents a new concept of accessibility: not a cheap compromise, but a smart balance that allows anyone to equip themselves with a modern, elegant and functional machine that can enhance their daily work and give their business a competitive edge.

It is the outcome of a clear philosophy: we first invest in development and optimisation, so that our customers can invest less, without sacrificing the pleasure and safety of working with a reliable, modern machine that is built to last. In an industry where innovation is often measured only in terms of numbers, here it is gauged in the capacity to open new paths and offer new possibilities, with an investment that becomes truly sustainable.

SPINDLES AND TOOLHOLDERS

The machine is equipped with a 4.4 kW electro-spindle. This configuration allows drilling, countersinking and milling operations to be performed with extreme speed, ensuring maximum operating efficiency.

OPERATIONAL BENEFITS AND FLEXIBLE PROCESSING

The technical solutions adopted are the result of targeted design choices, providing direct and indirect benefits. For example, machining can even be done on the grip zone of the pneumatic clamp once it is removed, as the glass sheet remains perfectly immobilised by the presser system, preventing any undesired movement.

It is not necessary to be a large industrial plant to approach a technology of this level: this machine has been designed to give everyone the opportunity to grow, investing a moderate amount, but obtaining in return a concrete and lasting value. Choosing this machine therefore means adopting a new approach, in which design, ease of use and solid construction are accompanied by a price that is surprisingly affordable.

TYPES OF PROCESSING AVAILABLE:

1. DRILLING

Drilling is performed with the greatest speed, while always ensuring perfect and precise holes.

2. COUNTERSINKING

This can be done with individual diamond tools, adjusted by the software based on the customer's needs, or with multifunction tools.

3. MILLING

The superior robustness and precision of the system allow milling to be done simply, quickly and with high quality results.

4. COMBINED GRINDING AND MILLING

With the multi-function tools, a cut-out can be milled and ground in a few seconds. The first step involves milling of the profile/cut-out. In the following step, the machine performs the milling with the trapezoidal grinder section of the same tool.

3.

MILL 1600



Machine dimensions in the version:

3200 X 1600

L 7900 mm abt.
I 2000 mm abt.
h 2580 mm abt.

Machine carters	Painted steel
Basement structure	Galvanized and painted steel
Minimum glass size that can be processed	500 X 150 mm
Maximum glass size that can be processed	3200 X 1600 mm
Minimum glass thickness allowed	4 mm
Maximum glass thickness allowed	20 mm
Working height from the ground (other sizes are available on request)	500 mm
Feed and working speed	0 - 36 m/min. abt.
Standard electrical connection (other on request)	400 V 50 HZ three-phase
Power installed in standard configuration	6 kW
Electric spindle power	4.4 kW (6 HP)
Electro-spindle rotation speed with internal tool cooling	0 - 10.000 turns/min.
CNI Numerical control	4 AXES
Fastening the tool on the spindle (option)	G 1/2" (Cone with automatic release)

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MILL CORE1600 CLASS

PREMIUM CLASS

20

SKILL WASH PRESENTATION



HIGH-TECH VERTICAL WASHING MACHINE FOR WASHING AND DRYING FLAT GLASS, WITH STRAIGHT OR SHAPED EDGES.

SKILL WASH

is the ideal solution for washing sheets of glass, combining **versatility, reliability and superior performance**. Designed to adapt to a wide range of applications, it can be used both in line (e.g., in production or double-glazing plants) or as a **stand-alone unit**.

Main characteristics:

COMPLETE PROCESS

high performance pre-wash, washing with 4 or 6 brushes and drying, with a dedicated quality control zone.

FLEXIBLE CONFIGURATIONS

available with washing sections for heights of 2.0, 2.6 and 3.3 metres, it offers numerous customisation options for the length and configuration of the roller conveyors.

MODES

available in the complete version, with infeed and outfeed rollers, or with a single outfeed roller conveyor for integration with existing machines.

INTUITIVE TECHNOLOGY

it is controlled by a **latest generation PLC**, with a simple and intuitive **touch screen panel**, suitable even for operators with minimum experience. All the work

parameters and cycles are easy to monitor and adjust. Thanks to its solid structure and advanced technology, **SKILL WASH** ensures impeccable washing results, maximum efficiency and ease of use, establishing itself as an industry benchmark for quality and innovation.

The **SKILL WASH** vertical washing machine is designed to offer maximum performance in terms of quality, efficiency and automation. Each component is studied to ensure ease of use, reliability and operational flexibility:

STRUCTURE AND ACCESSIBILITY

robust metal technical processing zone, 2.5 m in size (2.9 m for 6-brush models), front doors that are easy to remove.

QUALITY COMPONENTS

machine chassis made entirely from stainless steel, four or six-brush configuration, high-pressure fan, stainless steel outfeed frame with integrated lighting.

SMART TECHNOLOGIES

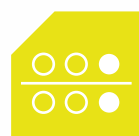
ergonomic control station, full in-line compatibility, automatic thickness detection, low emissivity (Low-E) glass sensors.

ADVANCED FUNCTIONS

SMS (Multi Station Unloading) technology. You can choose between 2 or 3 unloading and automatic rewashing function.



SKILL WASH



1. 4 TO 6 WASHING ROLLERS



4. WATER HEATER WITH THERMOSTATS

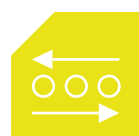
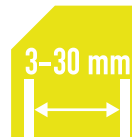


2. AUTOMATIC GLASS THICKNESS READING AND DETECTION OF SURFACES WITH SPECIAL TREATMENTS

6. INOX STAINLESS STEEL MACHINE BODY

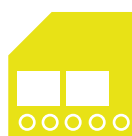


7. GLASS WASHING FROM 3 mm TO 30 mm

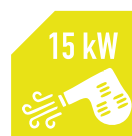


3. BIDIRECTIONAL CONVEYOR MOTORS AND REWASH FUNCTION

5. SMS FUNCTION (MULTI-STATION UNLOADING)



8. 15 KW HEATER/BLOWER WITH SELF-REGULATING ACTIVATION



PROCESSING



SKILL WASH

1 Prewash Section Protection and Quality on First Contact

Prewash is an essential phase in the cleaning process, designed to uniformly moisten the glass and to remove more stubborn dirt remaining from previous processes. This section is equipped with high-efficiency nozzles, fed by a constantly clean water circuit, for effective preliminary rinsing before the glass passes under the brushes.

The main benefits include:

- Greater final wash quality, thanks to the prior removal of dust, residues and impurities;
- Protection of the brushes, which only come into contact with pretreated surfaces, thereby reducing wear and maintenance needs;
- Operational efficiency, as the general performance of the machine is preserved over time.

The prewash section is therefore essential to ensure a safer, more effective and longer-lasting cleaning process.

2 Washing Section Precision, Efficiency and Reliability

The glass sheets are washed by means of 4 or 6 high-efficiency 180 mm diameter brushes, designed to ensure thorough cleaning without compromising the fragility of the treated material.

The collection and recirculation tanks are equipped with temperature sensors that optimise the heater power and enable smart water regeneration management, leading to energy savings and operational sustainability.

The brush motors and drives are installed in the upper part of the cabin, a design solution that ensures protection from spraying water and maximum accessibility for routine maintenance operations.

The brushes are of different types depending on their position:

- Rear brushes: 0.30 mm bristles, ideal for larger residues;
- Front brushes: 0.15 mm bristles, specifically designed for a delicate and precise finish.

This setup allows progressive and uniform cleaning, reducing surface wear and providing consistent results even on delicate glass or glass with surface coatings.

3 Drying Section Speed, Efficiency and Quietness

The sheets are dried by a high-pressure system consisting of a powerful fan that feeds a pair of stainless steel blowers, designed to ensure complete, rapid and uniform drying on glass of any size.

The system is optimised by a smart automatic actuator, which regulates the fan operation based on the incoming glass flow and the selected work program. This function avoids the risk of continuous switching on and off, helping to reduce energy consumption and optimise cycle times.

To ensure a quieter and more comfortable working environment, the fan is housed in a soundproof box, which significantly reduces noise emissions without compromising performance.

4 Outfeed Quality Control Visual Inspection

The outfeed roller conveyor has an integrated lighting system with strategically positioned lights, which allows a quick and accurate visual inspection of the glass sheets at the end of the washing cycle. This configuration allows you to check the washing quality directly on the line, without interrupting the work flow.



SKILL WASH



Machine dimensions including inlet and outlet roller conveyors.
for machine with 2 brush units (other sizes available)

3000 X 2000

L 9250 mm
l 3000 mm
h 3100 mm

4500 X 2600

L 12250 mm
l 3000 mm
h 3600 mm

6000 X 3300

L 15250 mm
l 3000 mm
h 4330 mm

Machine carters	INOX		
Basement structure	INOX		
Minimum washable glass dimensions	500 X 150 mm		
Maximum washable glass dimensions	3000 X 2000 mm	4500 X 2600 mm	6000 x 3300 mm
Minimum permissible glass thickness	3 mm		
Maximum permissible glass thickness	30 mm		
Maximum loadable weight of glass to be washed	Without weight limits		
Working height from the ground (other sizes available on request)	620 mm		
Number of washing sections (standard/optional)	2 / 3		
Total number of brushes (standard/optional)	4 / 6		
Brush diameter	180 mm		
Brush bristle diameter (front/rear)	(mm) 0,15 / 0,30		
Automatic and motorized brush pressure adjustment	YES		
Automatic low-emissivity glass (Low-E) detection	YES		
Automatic control system between the entered value and the detected thickness	YES		
Self-regulating heater for washing water	YES		
Quality control lights on the exit roller conveyor	YES		
Glass pre-washing system	YES		
Drying with 2 blowers / kW of blower power	SI / 15 kW		
Glass entry side / Glass exit side	At the customer's discretion		
Installed power	28,5 kW		
Standard electrical connection (other on request)	400 V 50 HZ		

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SKILL WASH CLASS

ASSISTANCE - SERVICES



**GUIDED
BY THE GENUINE
PASSION
OF PEOPLE WHO
BELIEVE IN THEIR
WORK AND IN
CUSTOMER
SATISFACTION.**

EVOLVED AFTER-SALES MANAGEMENT WITH SERVICE-CRM PLATFORM PARTS SERVICE

1 To ensure efficient and prompt support, SKILL GLASS uses a dedicated platform based on a Service-CRM system for the integrated management of its after-sales services. This tool allows us to precisely monitor and manage all customer requests, with particular attention to the supply of materials and parts, ensuring rapid, traceable and professional support.

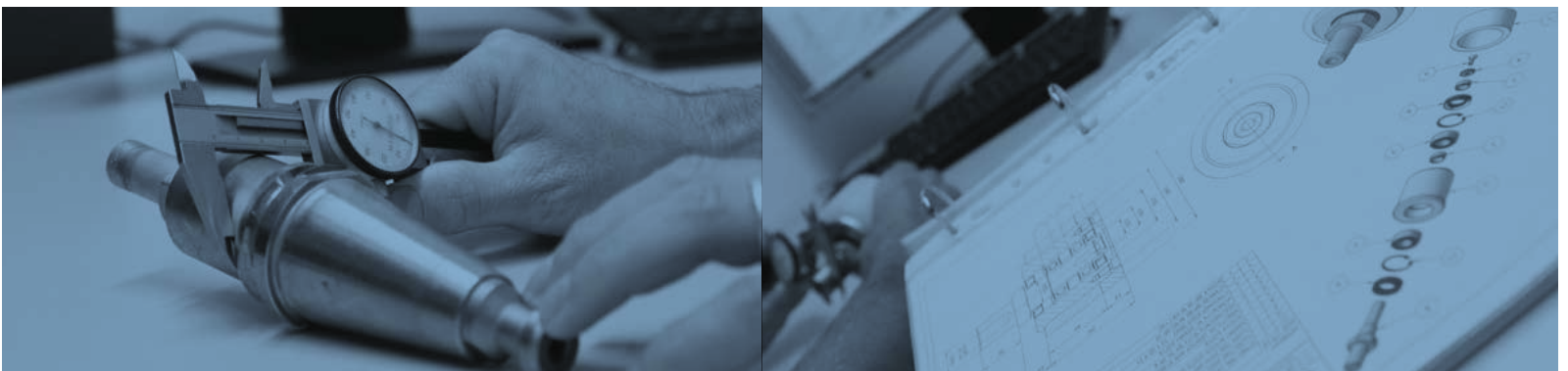
AFTER-SALES SUPPORT MANAGED IN AN INTEGRATED AND EFFICIENT MANNER

2 SKILL GLASS makes use of an advanced platform based on a Service-CRM system for integrated management of after-sales activities. This tool allows us to precisely monitor all support requests, ensuring prompt and effective interventions. Thanks to the support of our multi-lingual staff, we are able to communicate directly with

customers all over the world, offering an accessible and professional service. The direct remote support connection with our systems allows us to quickly intervene, reducing machine downtime and improving operational efficiency. The entire management through Service-CRM ensures constant control of the status of requests, with the punctuality and reliability that distinguish our service.

PROFESSIONAL TRAINING FOR OPTIMAL USE OF THE SYSTEM

3 SKILL GLASS focuses great attention on the preparation of the customer's operating staff. The purchase of a system includes a high-level technical training service, designed to transfer all the necessary skills and fully exploit the machine's potential, in a safe, efficient and autonomous manner right from the start.



OUR CATALOGS



PREMIUM CLASS CNC

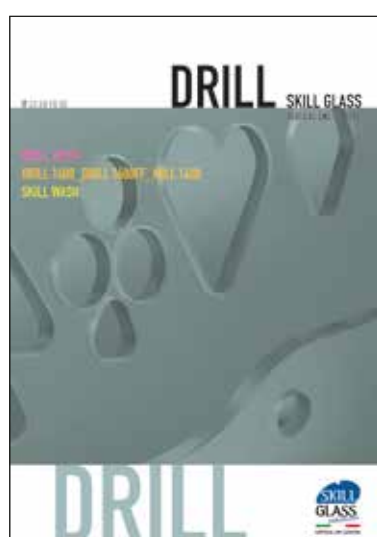
SKILL E-D

WIN CLASS

E-D 101

PREMIUM CLASS WASHING

SKILL WASH



WIN CLASS

DRILL 101FF

CORE CLASS

DRILL 1600 - DRILL 1006FF - MILL 1600

PREMIUM CLASS WASHING

SKILL WASH



PREMIUM CLASS CNC

SKILL SFILL

WIN CLASS

SFILL 101ML - SFILL 101

PREMIUM CLASS WASHING

SKILL WASH

SKILL GLASS
MADE IN ITALY



SKILL GLASS SRL

Via Egidio Gregori, 2
36015 Schio (VI) - Italy
Tel. +39 0445 500202

E-mail: info@skillglass.it
www.skillglass.it

