

AQUA SERIES

VERTICAL WASHING MACHINES
FOR FLAT GLASS



INTEGRATED WASHING AND DRYING IN A SINGLE SOLUTION



The **Aqua series** is the Intermac range of washing machines which can be fully integrated with vertical machining centres, enabling processed glass to be washed and dried in accordance with the highest standards. Aqua guarantees extreme cleaning of all the impurities accumulated during the machine operations carried out on glass sheets, preparing these perfectly for subsequent processing operations or for leaving the machining cycle.



AQUA SERIES

- ✓ PERFECT IN LINE INTEGRATION WITH VERTICAL MACHINING CENTRES
- ✓ DEDICATED TECHNOLOGY FOR AUTOMATIC MANAGEMENT OF ALL TYPES OF GLASS ON THE MARKET
- ✓ LONG-TERM RELIABILITY THANKS TO A ROBUST STAINLESS STEEL STRUCTURE
- ✓ IDEAL FOR INFINITE WORK CYCLES
- ✓ EXTREMELY USER-FRIENDLY.

INFINITE WORK CYCLES

Aqua can be fully configured in accordance with varying production requirements courtesy of the length-adjustable inbound and outbound conveyors, both for stand-alone and in-line installations. The solution offers maximum flexibility when it comes to glass loading and unloading widths, thanks to the 3 dimension types (1.0/1.5/2.0 m), which can be combined with one another. It is also possible to configure the processing direction, from right to left and from left to right.



The central washing and drying unit is constructed entirely from stainless steel, guaranteeing safety and durability over time.

The passage of the glass through the washing machine is a crucial stage in the glass processing cycle as it removes all the impurities from the sheet that may have been deposited during previous processes, as well as preparing the glass for subsequent processing operations such as tempering, screen printing, lamination, digital printing and double glazing, where the glass must be perfectly clean when it enters the machine. The Intermac Aqua range washes and dries processed glass to the highest standards.

An automatic adjustment system enables Aqua to handle glass sheets with thicknesses of up to 32 mm, and can be interconnected with other machines in the same line, allowing the processing speed and the machine opening to be managed in accordance with the thickness of the sheet of glass in question.



AQUA GUARANTEES INFINITE USE, ADAPTING PERFECTLY TO THE SPEEDS OF THE MACHINING LINE

High-quality components

The feed rollers that move the glass forward work as a single unit, and are made from a one piece of vulcanised and ground rubber; they are non-marking and antistatic, they do not absorb oil or generate dirt, and are not charged with electrostatic current.

The transmission of the drive rollers takes place by means of bevel gear sets in plastic material, which are devoid of any type of lubrication.



Entry sensors

The machine can be equipped with entry sensors, enabling automatic measurement of the glass thickness.

ATTENTION TO DETAIL

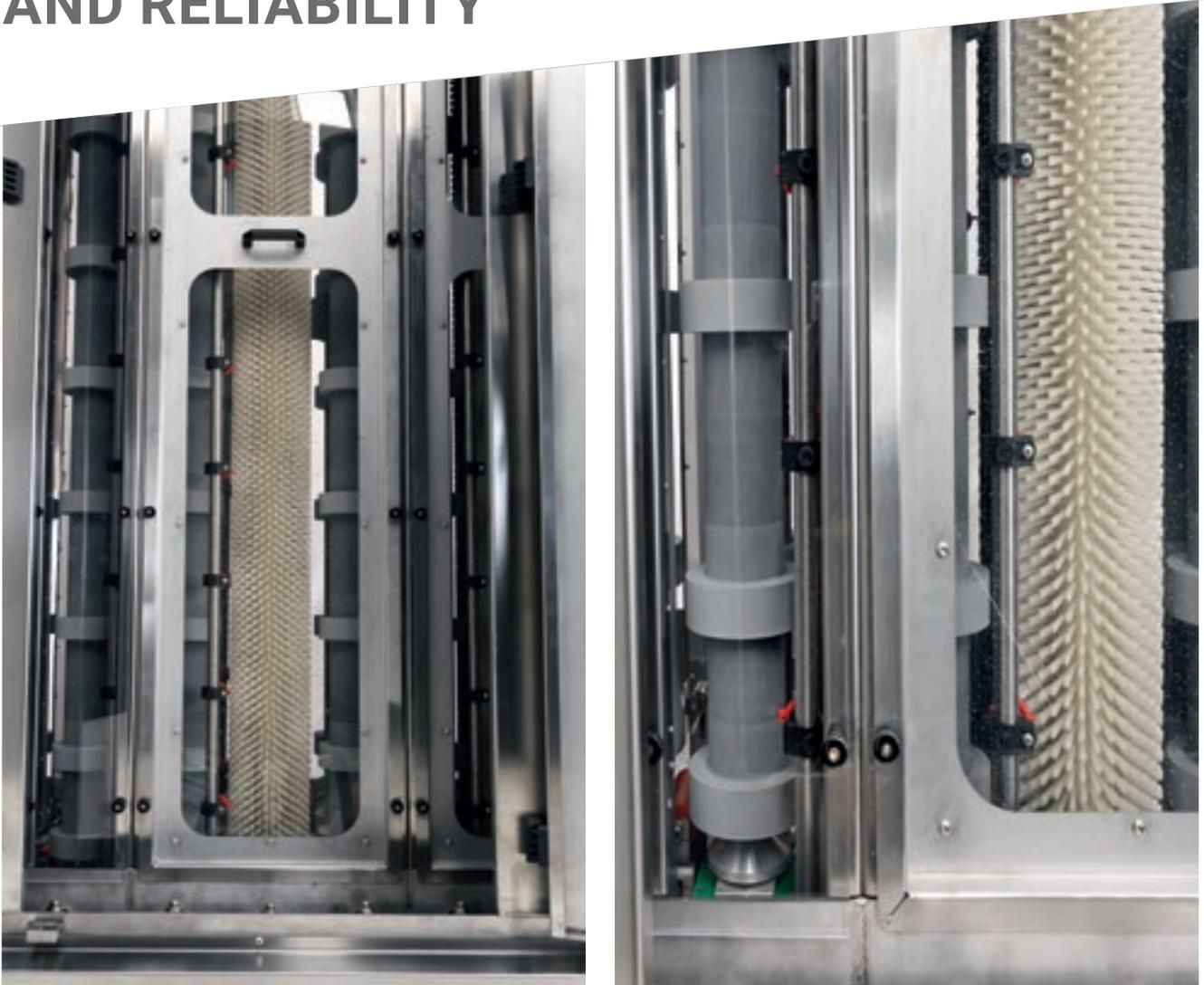


PRE-WASHING OF THE GLASS

The entire Aqua range features a glass pre-wash system; this step is fundamental, particularly when the washing machine is combined in line with other machines.

The pre-wash process is performed by spraying hot water onto the glass, and does not use brushes: this step enables around 80% of the accumulated residues to be removed without damaging the glass.

SAFETY AND RELIABILITY



A targeted jet of water is directed towards the glass during the washing and rinsing phases, courtesy of bars fitted with special nozzles that guarantee perfect coverage of the entire sheet of glass.

WASHING

Washing is performed by two or three pairs of brushes.

The machine can also be equipped with soft front brushes, which are particularly suitable for washing delicate types of glass (low-e).

Each washing section has its own tank, with independent pumps.

RINSING

Where subsequent processing operations are due to take place, it is advisable to fit the machine with a purification system for demineralising the water, for an improved glass drying result (no droplets or rings).

HIGH-QUALITY RESULTS



DRYING

The glass sheets are dried by two blowers.

- ▣ Air blade (blowers) in stainless steel ensure absolute durability over time.
- ▣ The machine can be equipped with antistatic bars, to eliminate the current generated during the drying operation.
- ▣ The fan power can be managed via the inverter in accordance with the speed of work.



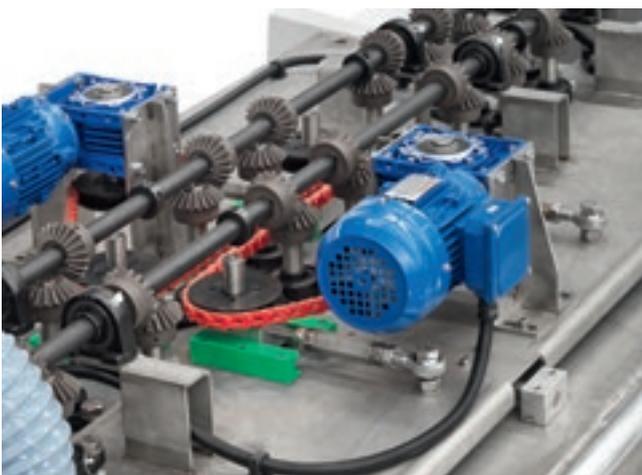
Easy access and inspection.

The lights fitted in the area where the glass exits the machine enable perfect inspection and quality control at the end of the processing operation.

EASY ACCESS AND MAINTENANCE



The roller and brush transmission system are positioned on the upper part of the machine for improved protection against water, and to enable facilitated inspection and maintenance.



Transmission belt with high resistance to wear, easy to maintain. Modular, no need to replace.



The tanks are mounted on wheels to facilitate movement during the cleaning phase. The water inside the tanks passes through two different stages of filtration before being recirculated inside the machine. The tank of the first pair of brushes contains a heating element and a thermostat for water heating. The option of heating the water in the other tanks facilitates the removal of residues and helps to dry the glass sheets. (optional).

EASE OF USE



7" TOUCH SCREEN CONTROL PANEL

- ▣ Option of controlling the working temperature from the control panel
- ▣ Energy saving kit: energy savings are achieved by switching off the motors in the main work unit when the machine is in standby mode.
- ▣ Adjustable working speed, from 2 to 7 m/min.
- ▣ The working thickness can be adjusted to the millimetre.

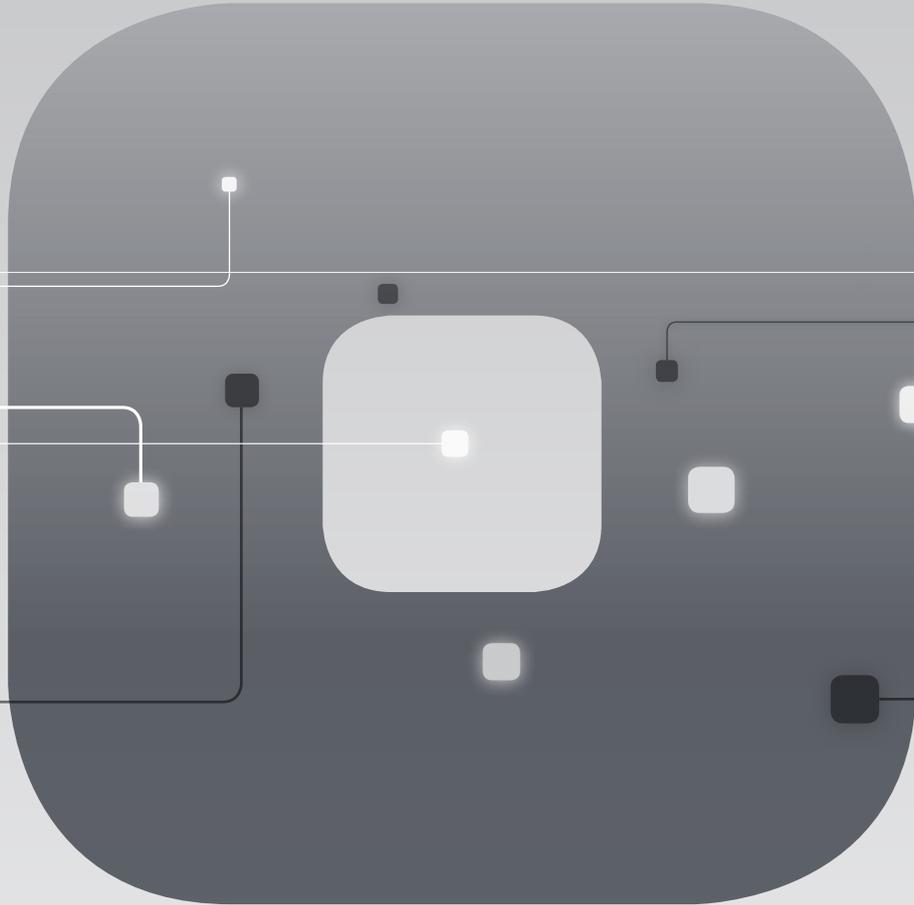
PERFECT IN LINE INTEGRATION WITH INTERMAC VERTMAX VERTICAL MACHINING CENTRES.



The height of the work table can be changed in accordance with the size of the Vertmax vertical machining centre (750/550 mm).

SOPHIA

GREATER VALUE FROM MACHINES



The Biesse IoT platform which enables customers to access an extensive range of services to streamline and rationalise their work management processes.

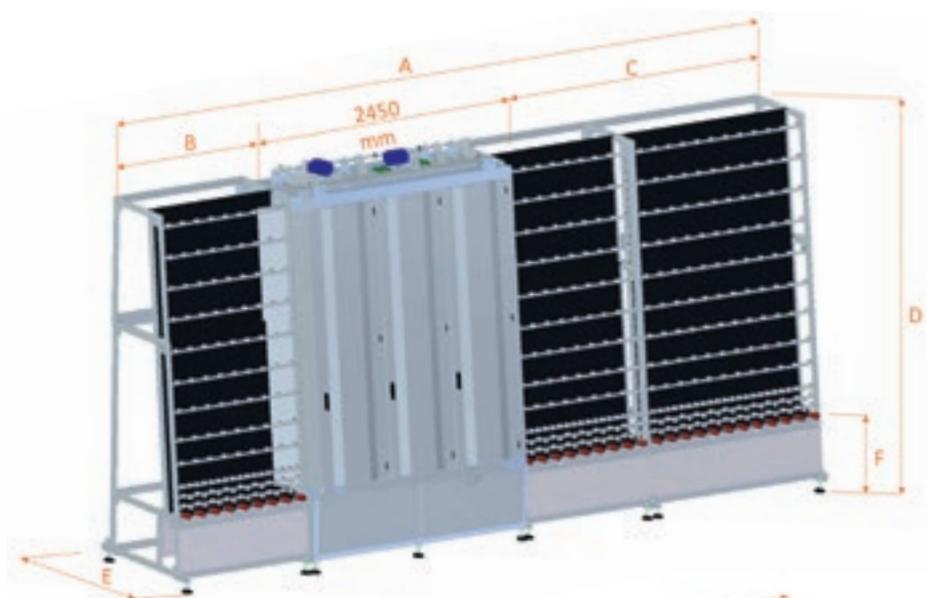
□ SERVICES

□ PROACTIVITY

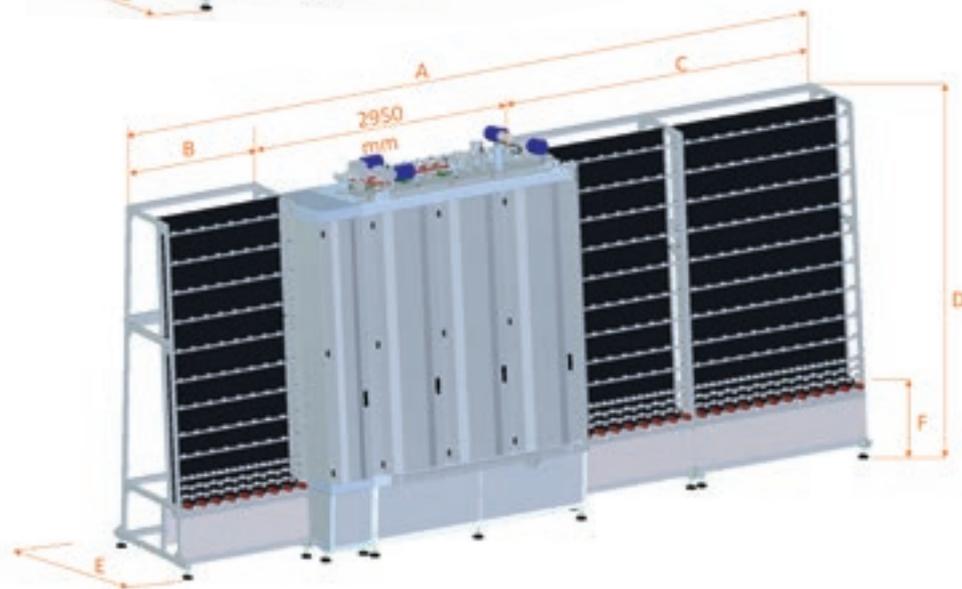
□ ANALYSIS

TECHNICAL DATA

- ▾ AQUA series
4 brushes
2 blowers



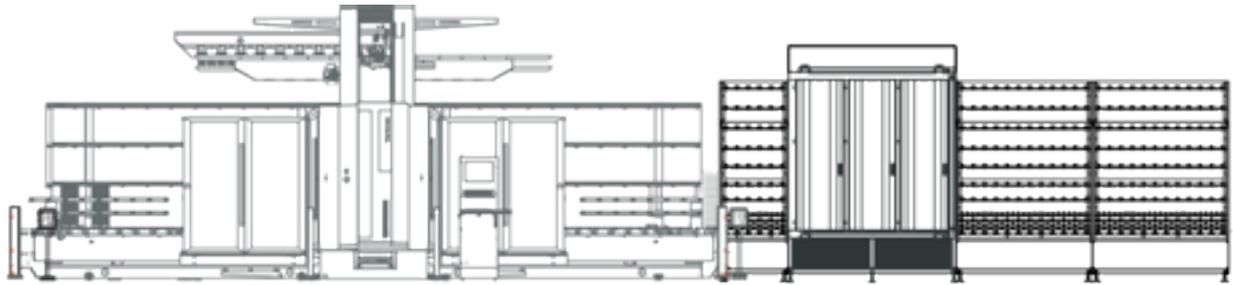
- ▾ AQUA series
6 brushes
2 blowers



DIMENSIONS

AQUA SERIES		A = B + C + Central module		D	E	F
		B*	C*			
1.6	mm	1000	2500	2700	3000	640
2.2	mm	1000	3500	3450	3000	750
2.6	mm	1000	5000	3850	3000	750
2.8	mm	1000	5000	4000	3000	750
3.3	mm	1000	6000	4500	3000	750

* The configuration can be varied according to customer requests.



Vertical washing machine Aqua in line with vertical CNC Vertmax.

AQUA		1.6 V-4.2	2.2 V-4.2	2.2 V-6.2	2.6 V-4.2	2.6 V-6.2	2.8 V-4.2	2.8 V-6.2	3.3 V-4.2	3.3 V-6.2
Maximum height	mm	1.600	2.200	2.200	2.600	2.600	2.800	2.800	3.300	3.300
Minimum size	mm	400 x 200								
Machinable thickness	mm	from 3 to 32								
Advance speed	m/min	2 - 7	2 - 7	2 - 7	2 - 7	2 - 7	2 - 7	2 - 7	2 - 7	2 - 7
Work table height	mm	520/640	750	750	750	750	750	750	750	750
Buffing Unit		4	4	6	4	6	4	6	4	6
Blowers		2	2	2	2	2	2	2	2	2
Water tanks		4	4	5	4	5	4	5	4	5
Brush diameter	mm	150	150	150	150	150	150	150	150	150
Pre-washing		•	yes							

The technical specifications and drawings are non-binding. Some photos may show machines equipped with optional features. Biesse Spa reserves the right to carry out modifications without prior notice.

Weighted sound pressure level A (LpA) during machining at the operator's workstation on the vane-pump machine LpA=79dB(A) Lwa=96dB(A) Weighted sound-pressure level A (LpA) at the operator's workstation and sound power level (LwA) during machining on the cam-pump machine Lwa=83dB(A) Lwa=100dB(A) Measurement uncertainty K dB(A) 4.

The measurement was carried out in compliance with UNI EN 848-3:2007, UNI EN ISO 3746: 2009 (sound power) and UNI EN ISO 11202: 2009 (sound pressure levels at workstation) during panel machining. The noise levels shown are emission levels and do not necessarily correspond to safe operation levels. Despite the fact that there is a relationship between emission and exposure levels, this may not be used in a reliable manner to establish whether further measures need to be taken. The factors determining the exposure level for the workforce include length of exposure, work environment characteristics, other sources of dust and noise, etc. i.e. the number of other adjoining machines and processes. At any rate, the above information will enable the operator to better evaluate dangers and risks.

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Lots of on-site, online and classroom training modules for personalised growth.



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AN EXCELLENT LEVEL OF SERVICE

+550

HIGHLY SPECIALISED
TECHNICIANS AROUND
THE WORLD, READY TO HELP
CUSTOMERS WITH EVERY
NEED

90%

OF MACHINE DOWN CASES
WITH RESPONSE TIME
UNDER 1 HOUR

+100

EXPERTS IN DIRECT
CONTACT THROUGH
REMOTE CONNECTIONS
AND TELESERVICE

92%

OF SPARE PARTS ORDERS
FOR MACHINE DOWNTIME
PROCESSED WITHIN 24
HOURS

+50.000

ITEMS IN STOCK IN THE
SPARE PARTS WAREHOUSES

+5.000

PREVENTIVE MAINTENANCE
VISITS

80%

OF SUPPORT REQUESTS
SOLVED ONLINE

96%

OF SPARE PARTS ORDERS
DELIVERED IN FULL ON TIME

88%

OF CASES SOLVED WITH
THE FIRST ON-SITE VISIT

MADE WITH ZYTRONIC

THE UNMISTAKABLE FINGERPRINT OF THE CNC MASTERS

Zytronic, a company that produces tactile technology and touchscreen solutions, opts for the sophisticated technology of Intermac machining centres to guarantee the highest level user experience. When using a touch screen or any device to purchase a train ticket, make a withdrawal from an ATM, purchase a soft drink or play at a slot machine, response time is the factor that determines user satisfaction for the interaction with the electronic device. That's why Zytronic develops innovative, patented tactile solutions that have made it the leader in touchscreen solutions for the past 15 years. To serve such a wide-ranging market the company needs to develop great flexibility in the production of various screen types, and Intermac has, over

time, proven to be the perfect supplier for technology that guarantees quality, precision and impeccable finishing. Zytronic and Intermac boast a historic relationship based on mutual trust and respect, and the company already owns two Intermac machines: a Master 33 and a superb Compact Edge, which have proven to be the ideal choice for guaranteed quality and reliability over time. Production Director Adrian Leyland explains: "We need to be able to offer unique products for our customers, guaranteeing the highest level user experience with regard to the interaction with touch technology. In addition, the size of touchscreens is increasing, with shapes becoming more and more complex; this is precisely why the flexibility that the Master 23 guarantees when

machining glass into the shapes that we want is absolutely fundamental." All of these factors led us to choose Intermac once again. The decision has bolstered Zytronic's market success, which was already strong thanks to years of experience in the glass machining sector. Sales and Marketing Director, Ian Crosby, adds: "We keep receiving more and more requests from our customers for frameless touchscreens, and once again the Master 23 helps us find the right solution and outdo the competition. Thanks to Intermac, we are sure to win the challenge of providing the utmost user experience".



Founded in Italy,
international native.

We are an international company that manufactures integrated lines and machines to process wood, glass, stone, plastic and composite materials and what will come next.

Thanks to our rooted competence nurtured by an ever-growing worldwide network, we support your business evolution – empowering your imagination.

Master of materials, since 1969.

We simplify your
manufacturing
process to make
the potential of
any material
shine.



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