

VELOX®
1929



TUNNEL LINE

LCT M T SERIES



TUNNEL LINE

AUTOMATIC IN-LINE WASHING TUNNEL FOR TRAYS

The washing tunnels from the LCT M T Series are designed to wash and dry trays with a width ranging from mm 600 to mm 1500.



LCT 70 100 M T SX equipped with Velox PLC 4.0 System – front view



LCT 70 100 M T SX equipped with Velox PLC 4.0 System – rear view



The photo represents model LCT 70 – 100: 120/140/170 M T DX

GENERAL CHARACTERISTICS LCT M T

- Full opening of the frontal doors to facilitate maintenance and cleaning operations.
- Heating system with thermostatic control of the temperatures.
- Pre-Washing and Washing sections at 55°C with drawer filters to remove the dirty residues.
- Pre-Blowing section with air blades at 48°C with 700 mc/h at 130 mbar to remove residual washing water.
- Rinsing section with clean water at 80°C.
- Rinse economizer to further reduce consumption. The rinsing system is activated only when the trays go through this section.
- Pre-drying section with air blades at 48°C with 700 mc/h at 130 mbar to remove to remove residual water from the Rinsing.
- Drying section with air blades at 50°C with 2800 mc/h at 130 mbar to completely dry the trays.



TUNNEL LINE

MODELS

- LCT 70 100 M T SX
for trays mm 600/800 wide
- LCT 100 120 M T DX (SX)
for trays mm 1000 wide
- LCT 100 170 M T DX (SX)
for trays mm 1500 wide
- LCT 70 120 M T DX (SX)
for trays mm 600/1000 wide
- LCT 100 140 M T DX (SX)
for trays mm 1200 wide

**LESS WATER,
LESS ENERGY,
LESS EFFORT.**

**EXCELLENT
PERFORMANCE**



SAVING

Velox Barchitta special washing technology ensures excellent results with very low water, power and chemicals consumption. Moreover, all models are equipped with the system to re-use the clean rinsing water to further reduce consumption.

PRODUCTIVITY

Great loading capacity, low costs and hygiene standard guaranteed for every production condition.

VERSATILITY

Velox Barchitta washing Tunnels perfectly adapt to every need and productivity.

PLUS
LCT M T SERIES

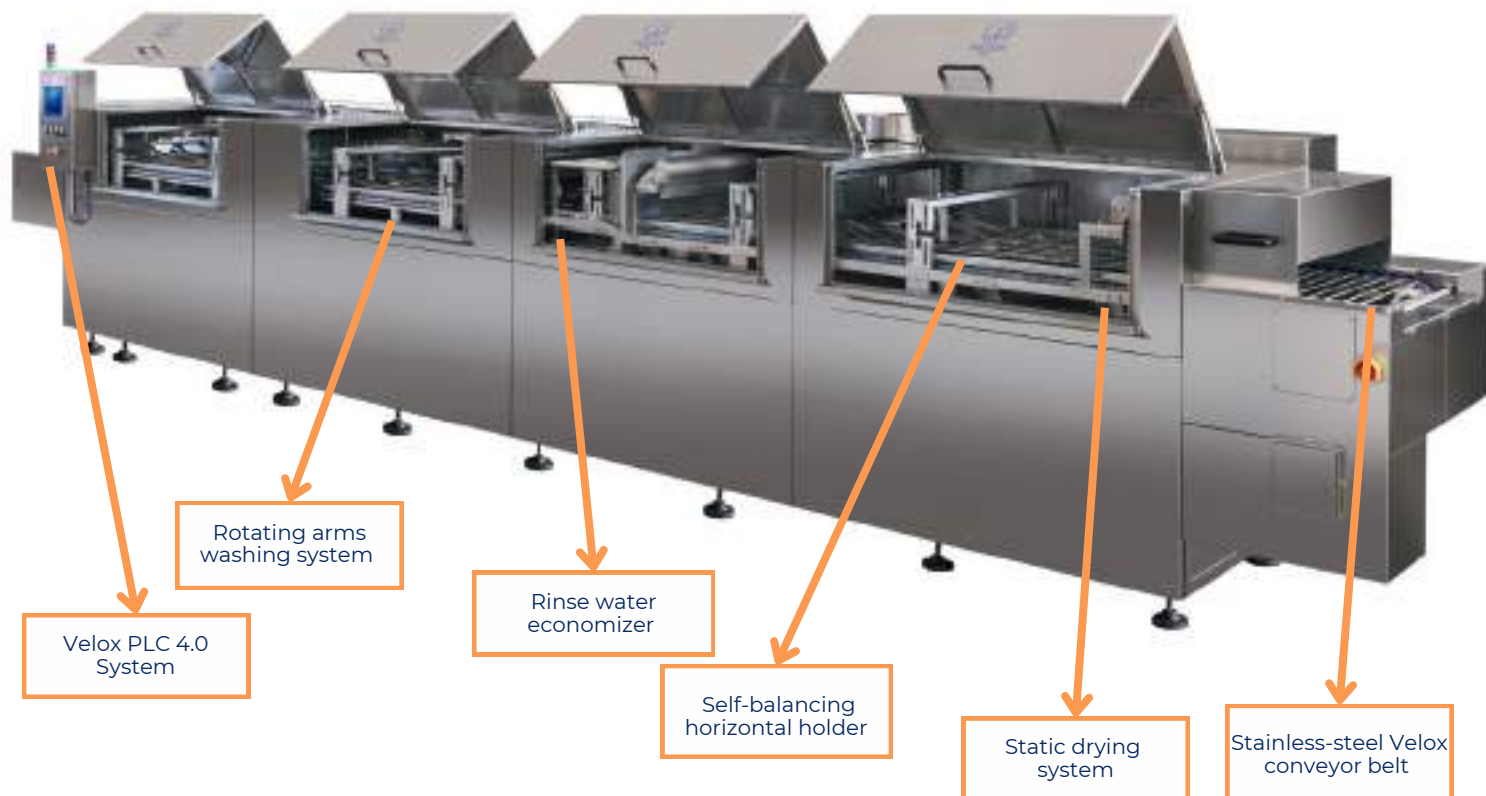
POWER

The washing system is powered by powerful stainless-steel pumps to allow the quick removal of any type of dirt.

RELIABILITY

The LCT M T Series Tunnels are entirely manufactured in stainless-steel AISI 304, the internal pipes are designed to facilitate maintenance and cleaning operations.

LCT 70 100 M T SX for trays mm 600/800 wide and small size molds – front view



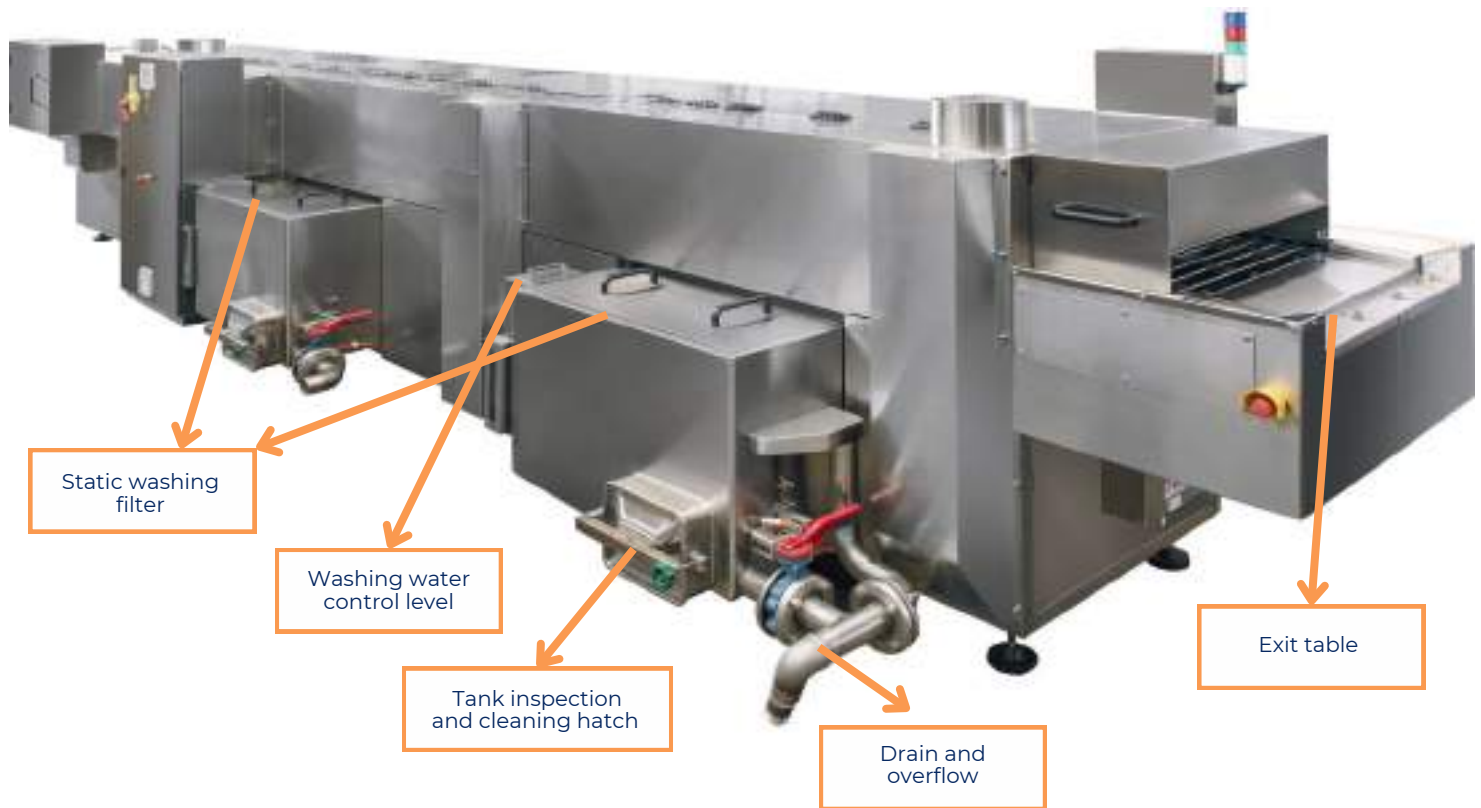
The **rotating arms washing system** allows for a more thorough and complete cleaning than static sprays washing systems, because it reaches all surfaces of the small size molds. This ensures superior results and higher hygiene standards.

The **stainless-steel Velox conveyor belt** ø mm 8 system allows to wash small items without the use of baskets.



The **self-balancing holder**, developed by Velox Barchitta, automatically adapts to variations in height and shape of the molds, ensuring uniform pressure on each piece. This ensures effective and uniform cleaning, by preventing unwanted movements or possible damages.

LCT 70 100 M T SX for trays width mm 600/800 and small size molds – rear view



Double external washing tank filters, allow cleaning during the washing without risking the residues entering the tank by having a second filter for protection.



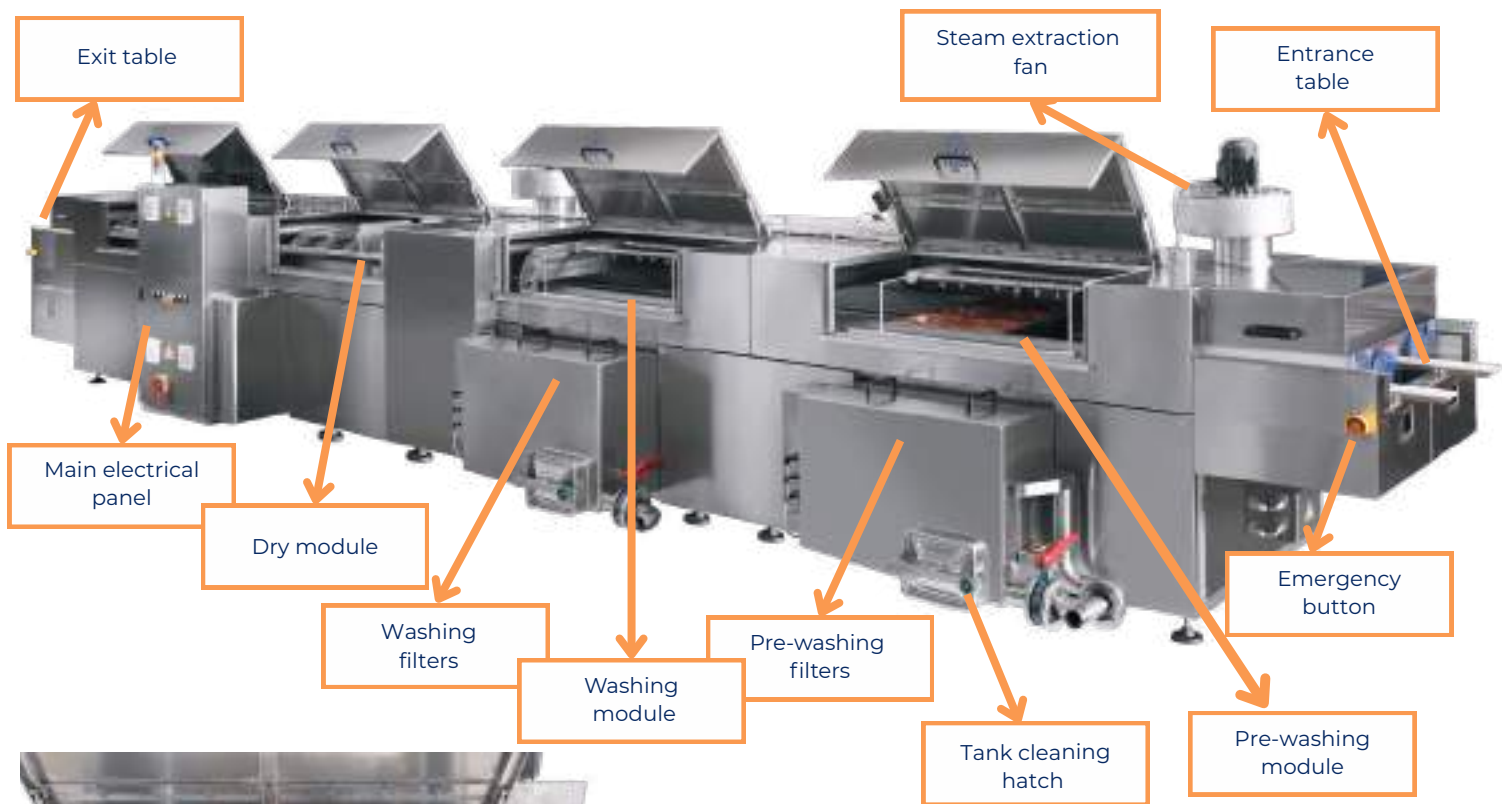
Three level water control system.



Drain with safety micro for closure of the tanks.

TUNNEL LINE

LCT 70 - 100 : 120/140/170 M T for trays mm 600/1500 wide



Demountable fixed washing sprays with quick connection bayonet coupling.



Stainless-steel transport chains.



Safety clutch.



Demountable rinsing zone with micro economizer. It allows water to flow only in the presence of trays to rinse.



Drying with upper and lower air blades with adjustable inclination.



External water and steam connections.



Light Velox PLC system.



Double external filters for washing tanks.



Drain with safety micro to prevent water leakages.



Three-level wash tank control.

SETUP

HEATING SYSTEMS

LCT M T washing tunnels as standard are heated with steam, an efficient and ecological solution that ensures a thorough washing with reduced consumption. However, to meet different operational needs, **it is also possible to request and configure them in indirect steam or electric heating versions**, thus offering maximum flexibility to adapt to any production context.



DIRECT STEAM HEATING

The LCT M T washing tunnels are designed for the food industry and they use direct steam heating to ensure an effective and hygienic wash. This system injects steam directly in the pre-washing and washing tanks, but it doesn't allow to heat the rinsing water, which must be supplied by the customer at at least 75°C.

INDIRECT STEAM HEATING

The LCT M T washing tunnels can be equipped with indirect steam heating.

With this system it will be possible to heat the pre-washing and washing tanks, rinsing water and the drying air obtaining maximum quality.

Indirect steam usage offers these advantages:

- **Energy efficiency:** the steam is used through stainless-steel exchangers with condensate traps. The condensate will be used to regenerate steam not with external water but with hot water at 90°C, reducing boiler consumption, thus reducing water consumption by preventing water loss like in the direct steam heating; so, water treatment cost will decrease because condensate already is distilled water.
- **Greater hygiene:** by not having direct contact with washing and rinsing water, there will be no problems linked to the quality of the steam used to heat the machine.
- **Reduction of the use of chemicals:** detergent consumption will go down because by not injecting steam directly into the tanks there will be no dilution of the present detergent, thus reducing its consumption.

It must be considered that one kg of steam corresponds to one liter of water, if we used 300 kg of steam per hour, we would have to replenish the detergent, because its concentration had been diluted by 300 liters of water just to heat the tanks.



By using the Velox PLC 4.0 control system the indirect steam heating system is individually monitored by the PLC control system. Each heat exchanger, with its separate circuit has its own control page.

ELECTRIC HEATING

The LCT M T washing tunnels can be equipped with an electric heating system.

With this system, the pre-washing and washing tanks will be heated with heating elements of adequate power. With the VELOX PLC 4.0 control system, it will be possible to partially activate the heating element packs to reduce the consumption of the machine. If a tank has 36 kW of heating elements, the machine decides if at that moment only 12, 24 or all 36 are necessary, depending on the temperature of the washed material.



CONTROL SYSTEMS

LIGHT VELOX PLC SYSTEM

The stainless-steel control panel is designed to ensure safety and ease of use.

It is equipped with a rotary main switch for electrical insulation, emergency button with key for immediate stops in safe conditions, and an HMI touchscreen interface which allows to view and manage the operative parameters.

The Start/Stop buttons allow the manual activation of the main functions, while the three-color light indicator signals the system status in real time (operating, warning, alarm). The ventilation grill ensures correct internal cooling, protecting electrical components from overheating.

The standard LCT M T control is carried out by a basic PLC with detection of some machine information and without Internet connection for remote assistance.



VELOX PLC 4.0 SYSTEM

All models of the LCT M T are available in the 4.0 version, this technology allows to control the machine through a touchscreen and a management program developed by us to configure the working parameters of the machine and to monitor them through specific detection sensors. The system automatically sends performance certification and reports to quality control. The advantages of the 4.0 version involve the entire process and productivity of the company because they are equipped with functions for predictive maintenance, for fault recognition and for remote assistance.



WASHING SYSTEMS

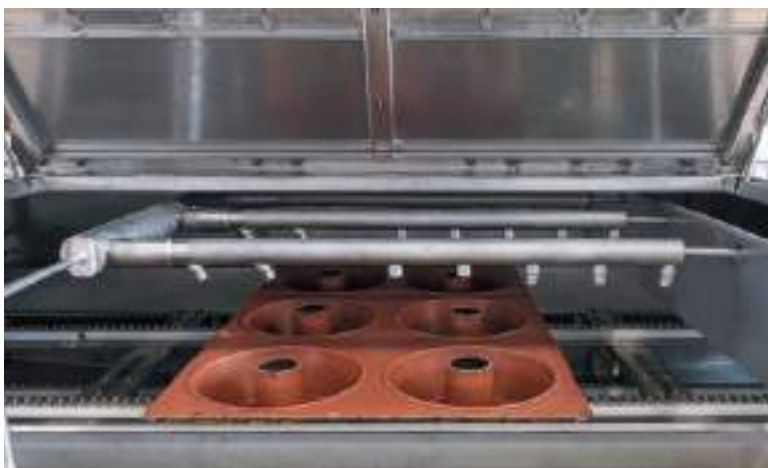


ROTATING ARMS WASHING SYSTEM

The rotating arms washing system, entirely made out of AISI 304 stainless-steel with rotating bearings, allows to wash the dirtiest or most intricate items (such as pastry molds and forms). Thanks to the rotation of the arms, the water hits more incisively the items even in the most difficult to reach points, covering 100% of the belt surface.

FIXED JETS WASHING SYSTEM

The fixed jet washing system is made with pipes entirely in AISI 304 stainless steel, placed on the upper, lower and lateral sides, to hit the material in all its points and guarantee excellent washing results. The pipes are removable and quick connection to facilitate maintenance and cleaning operations.



FEED SYSTEMS



STAINLESS-STEEL VELOX CONVEYOR BELT

The Velox stainless-steel \varnothing mm 8 conveyor belt allows to wash small items without the use of baskets.

*only available on model LCT M T 70 120

DOUBLE CHAIN

The standard feed system is with double stainless-steel chains.



TECHNOLOGY 4.0 PIONEERS

We want to promote the production change that leads to fully automated and interconnected processes. For this reason, Velox Barchitta machines are designed to meet the requirements of Industry 4.0 standards.



Management program entirely designed, developed and managed by Velox Barchitta



PLC control with simple and intuitive interface



Interconnection to computer systems



Data Upload and Remote Control



Automated Integration with Logistics Systems



Remote maintenance and remote diagnostics



Sensors for monitoring parameters and conditions



Certification of the cycle with control of parameters for Safety, Health and Hygiene



Adaptation to process trends



OUR GREEN VISION

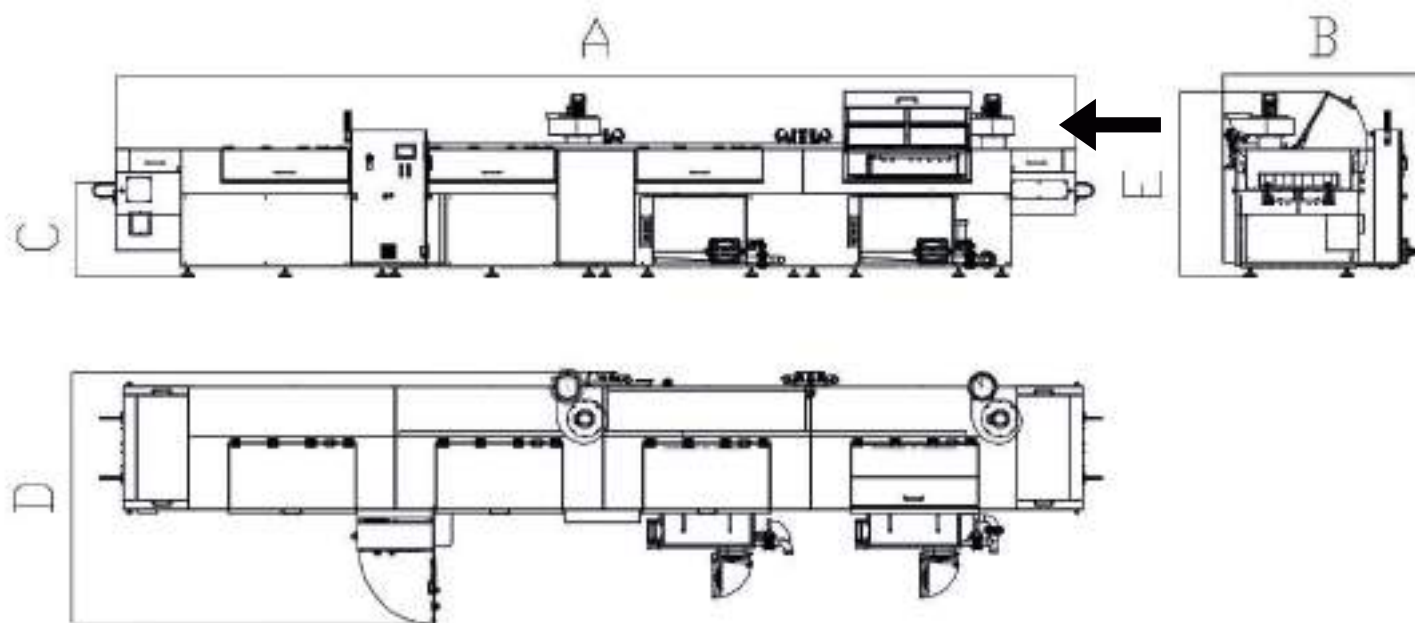
Thanks to the experience as protagonists on the industrial washing market since 1929, and the attention to sustainability, we have been able to lower water, energy, and detergent consumption on our machines.



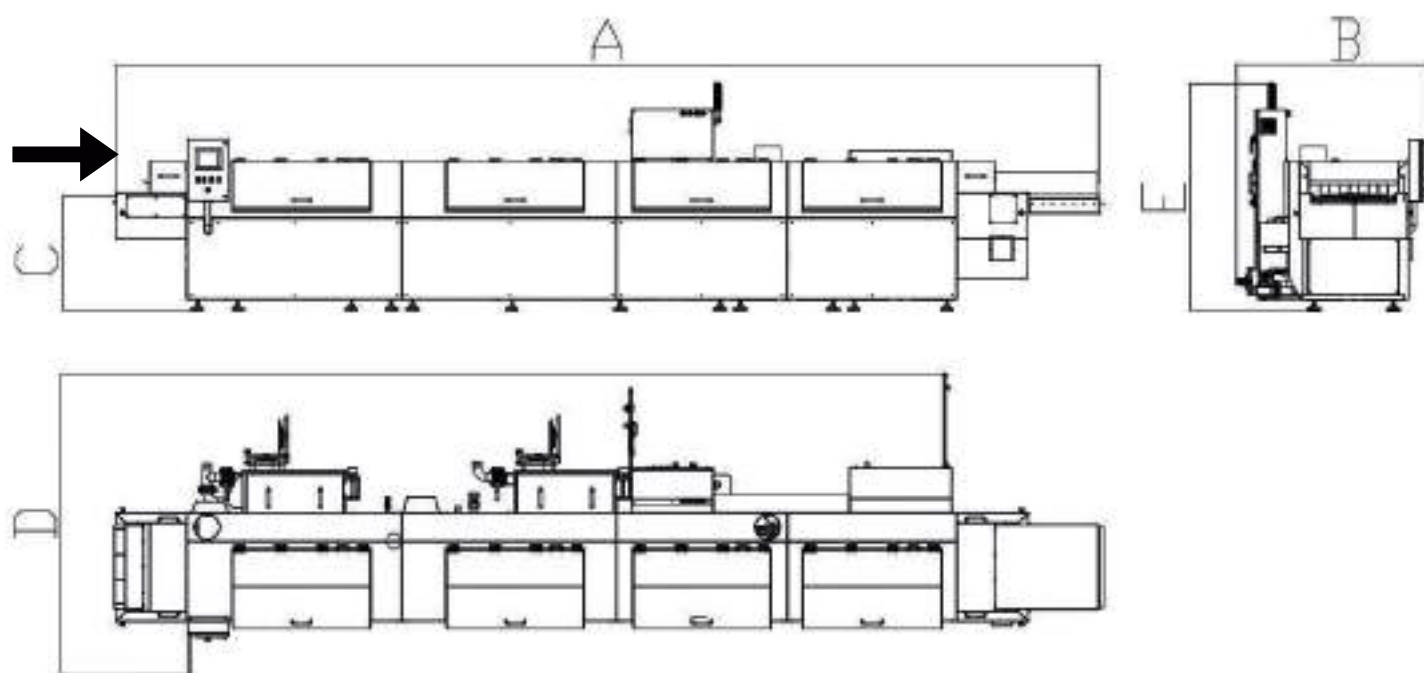
TECHNICAL DATA

	LCT 70 100 M T V	LCT 70 120 M T V	LCT 100 120 M T V	LCT 100 140 M T V	LCT 100 170 M T V
A - WIDTH (mm)	9580	6650	10179	10181	10179
B - DEPTH (mm)	1852	2028	1899	2258	2616
C - HEIGHT (mm)	2204	1975	1885	1980	1885
D - PROFONDITÀ CON PORTE APERTE (mm)	2510	2680	2680	2680	2680
E - HEIGHT WITH OPEN DOOR (mm)	2064	2170	1969	1856	1969
USEFUL OPENING ENTRANCE (mm)	752	1070	1070	1220	1555
Trays Width	mm 600/800	mm 600/1000	mm 1000	mm 1200	mm 1500
Productivity	580 trays/h	580 trays/h	540 trays/h	480 trays/h	420 trays/h
Pre-washing tank capacity	424 l	524 l	524 l	624 l	724 l
Washing tank capacity	424 l	524 l	524 l	624 l	724 l
Pre-washing pump	1x 11 Kw	1x 11 Kw	1x 11 kW	1x 11 kW	1x 11 kW
Washing pump	1x 11 kW	1x 11 kW	1x 11 kW	1x 11 kW	1x 11 kW
Pre-blowing pump	-	1x 5,5 kW	1x 5,5 kW	1x 5,5 kW	1x 5,5 kW
Pre-drying pump	-	-	1x 5,5 kW	1x 5,5 kW	2x 5,5 kW
Drying pump	4x 5,5 kW	3x 5,5 kW	4x 5,5 kW	4x 5,5 kW	4x 5,5 kW
Steam extractor	-	2x 1,5 kW	2x 1,5 kW	2x 1,5 kW	2x 1,5 kW
Total consumption	45 kW	45 kW	59 kW	59 kW	65 kW
Washing Temperature	up to 60 C°	up to 60 C°	up to 60 C°	up to 60 C°	up to 60 C°
Rinsing Temperature supplied by the customer	75 C°	75 C°	75 C°	75 C°	75 C°
Initial Water Load	≈ 900 l	≈ 1050 l	≈ 1050 l	≈ 1250 l	≈ 1450 l
Water Consumption	6-10 l/h	6-10 l/h	6-10 l/h	8-11 l/h	8-11 l/h
Steam Consumption 3bar	260	300	300	350	400
Standard direct steam heating	✓	✓	✓	✓	✓

LCT 70 120 - 100 120 - 100 140 - 100 170 M T DX



LCT 70 100 M T SX





Velox Barchitta was the first company to introduce industrial washing in Italy.

Founded in 1929; today, Velox Barchitta is able to design and manufacture any system for industrial washing and disinfection, exporting multi-sector solutions worldwide that combine high efficiency with very low costs.

Centuries of experience, combined with the quality of materials, attention to detail and to the characteristic finishes of Made in Italy make all Velox Barchitta machines durable and high-performance.

We believe in designing tailor-made solutions based on customer's needs that add value to ensure the best results with the lowest consumption of water, energy and chemicals.

PRODUCT LINE

- **MINI** Small multifunctional glass, dish and object washers.
- **COMPACT** Fixed basket, multifunctional and various sized washing systems.
- **CABINS** Cabin washing systems with fixed and rotating base for large washing volumes.
- **TUNNEL** Standard tunnel or openable roof washing systems. Also with in-line insertion.
- **STERIL LINE** Natural, sustainable and safe disinfection solutions suitable for any sector.
- **AUTOMATION** Automatic washing systems designed, engineered and manufactured according to customer's needs.
- **ADDITIVES** High-quality detergents that maximize machine performance.

RESELLER

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