



NICOS GROUP Inc.

80 Oak street, Norwood NJ 07648

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www.NicosGroup.com e-mail: sales@NicosGroup.com

## ICOS Machine parts and glassware washer Series ML



Washing, disinfecting, and drying of pharmaceutical product; such as glassware, pipettes, machine parts, tanks, glass bottles, and machine press machine tooling

- Washing chamber entirely made in stainless steel AISI 316L, corrosion proof.
- Chamber made of rectangular cross section.
- Self cleaning chamber with rounded edges.
- Machine body equipped with the connections required for the validation tests
- All the connection of the body are of sanitary type.
- Machine body supported by a frame designed for a suitable load distribution on the floor.
- Chamber inside surface, tubing, baskets and all parts in contact with the product polished to a degree of roughness 0.5 micron (20 micro-inches).
- Unloading door equipped with system of interfacing with clean environments (Bio-seal frame).

Washing and disinfection with warm water up to 95°C.

Drying program with range from 80 °C to 120 °C.

Machine fully validatable and executed in full compliance with cGMP, cGAMP, FDA and 21 CFR Part 11.

Machine with single door or pass-through type (from non sterile side to sterile side).



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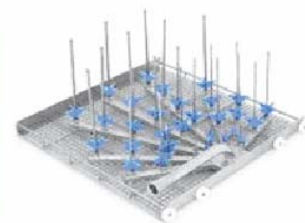
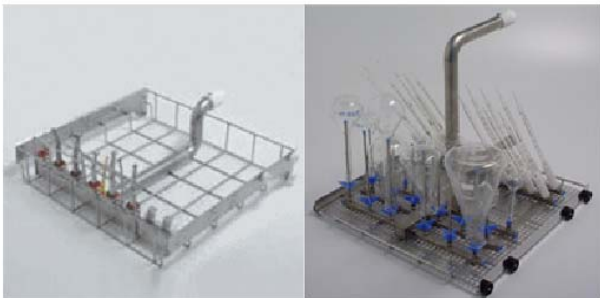
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PHASES	ACTIONS
LOADING OF MATERIAL	THROUGH PREARRANGED RACK/CART OR BASKET
PRE-WASHING	WATER LOADING, WATER HEATING, WATER RECYCLING AND WATER SPRAYING THOUGH NOZZLES
CLEANING	THOUGH DIFFERENT TYPE OF DETERGENTS
DRAIN	WATER DRAIN PLUS CIP ACTION AND PH MEASUREMENT (OPTIONAL)
WASHING	WATER LOADING, WATER HEATING, WATER RECYCLING AND WATER SPRAYING THOUGH NOZZLES
DISINFECTION	THOUGH DIFFERENT TYPE OF DETERGENTS
DRAIN	WATER DRAIN PLUS CIP ACTION AND PH MEASUREMENT (OPTIONAL)
1ST RINSE	WATER LOADING, WATER HEATING, WATER RECYCLING AND WATER SPRAYING THOUGH NOZZLES
DRAIN	WATER DRAIN PLUS CIP ACTION AND PH MEASUREMENT (OPTIONAL)
2ND RINSE	WATER LOADING, WATER HEATING, WATER RECYCLING AND WATER SPRAYING THOUGH NOZZLES
CONDUCTIVITY CONTROL	ON THE WATER RECYCLING LOOP
DRAIN	WATER DRAIN PLUS CIP ACTION AND PH MEASUREMENT (OPTIONAL)
DRYING	HOT HEPA FILTERED AIR AT MAX. 130°C
COOLING	FRESH HEPA FILTERED AIR AT APPROX. 20°C
UNLOADING OF MATERIAL	IN CLEAN ENVIRONMENT BY MEANS OF PREARRANGED RACK/CART OR BASKET

The "ML" series machines are provided with a control system consisting of a controller (PLC), an operating panel (OP) or programmable computer (PC) and printer. The control system manages the machine and its basic parameters, such as phases time, pump pressure, water pressure, water temperature, air temperature, detergents dosing, water conductivity, water PH, water level control; it allows an easy interfacing with the operator and makes it possible to customize the process cycles and the manual operations. In addition, the system produces a complete process documentation and assists the users in the operations of machine validation.



RACKS/CARTS AND BASKETS OF DIFFERENT TYPES WITH POSSIBILITY OF CUSTOMIZED TYPE