



## Utensil washer



# Elettrobar Utensil Washer

Elettrobar offers an innovative generation of utensil washers with a wide range of products that, for sizes, user interfaces and technologies, meets every requirement in washing all kinds of utensils.

The offer comprises four ranges:

**Mistral X:** an undercounter and a front load with 50x60 cm rack

**Mistral LX:** a full-optional undercounter and a front load with 50x60 cm rack and interface with multicolour LCD screen

**Niagara:** two models with 56x63 cm rack differing for useful door opening

**River:** four full-optional models with multicolour LCD screen interface and versions with heat recovery



# Advantages of a utensil washer

## **Saving time**

Depending on the type of dirt, by selecting one of the available cycles, utensils can be washed in just a few minutes, while manual washing would require much more time also considering the time required for drying.

Time saving is greater especially with items that are harder to wash manually due to their particular shape, such as baskets, large basins of planetary appliances or heavy cookware in general.

## **Reduced consumption**

Compared to manual washing, a utensil washer can save over 50% in water and 70% in detergent, since more efficient products can be used that work in an environment at much higher temperatures and, above all, are dosed exactly at each wash thanks to the electronically controlled peristaltic pumps that all our machines are equipped with.

## **Maximum hygiene**

Unlike manual washing where the water temperature does not exceed 50°C and neutral detergents are used, with a utensil washer, washing occurs at 60 - 65°C and reaches 80 - 85°C in rinsing; moreover, specific detergents with a high degree of alkalinity are used which have great efficacy and significant germicidal power. Some models are also equipped with a thermal sanitising cycle according to European standard EN- ISO 15883-1/3.



## Ease of use

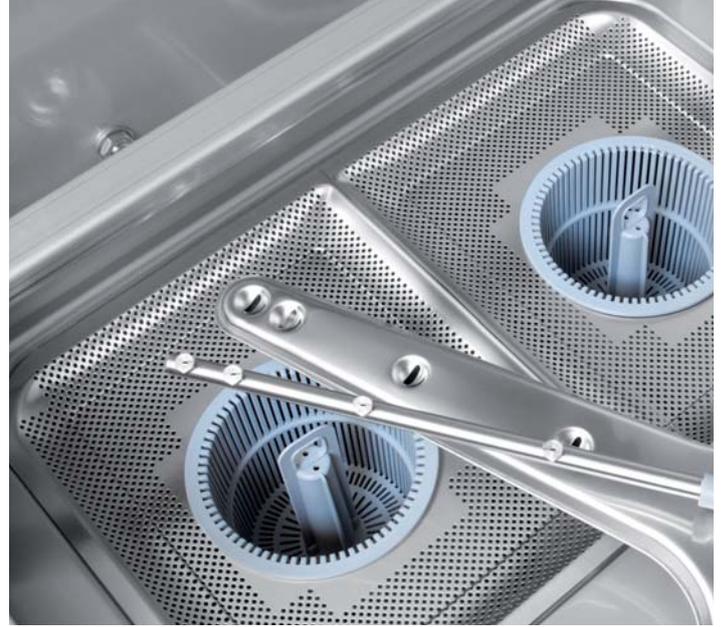


Elettrobar machines offer the greatest ease of use and ergonomics, thanks to devices such as the door split into two interlocked parts for an easy and stable opening, the racks in stainless steel with anti-friction sliding pads to make loading and unloading fast and easy, the automatic dosing system that prevents frequent manual interventions. Both user interfaces, ELI the LED screen equipped used in Mistral X and Niagara machines and ESI the colour LCD screen equipped unit used in Mistral LX and River models, were devised to facilitate the intuitive use of the product, taking the frequent turnover of operators into consideration. Reducing the training time is crucial, granting anyway a correct use of the machine and this is why key information are given using colours more than text. More trained operators and service engineers have a wide range of functions to control, adjust and maintain the machine available.

These functions are structured in menus and protected by keys, to prevent improper or accidental selection. Utensil washers, by their own nature, face a wide range of items, from oven trays to bread baskets, from pots and pans to plates, as well as different levels of dirt. This is why Elettrobar pot washers have got a wide range of specialized programs. Our competitors often have “programs” that actually are always the same program, simply made shorter or longer; our programs differ, quite the opposite, in wash and rinse temperature, amount of rinse water, logic and, obviously, also length, so that a single machine can give the best answer to any variation found in day by day activities. The entire choice of programs and their main specifications are shown in the table below; the number and type of said programs depends on the chosen model and level of trimming.

PROGRAM	MAIN USE	Duration sec.	Wash °C *	Rinse °C *	Consumption l/cycle			
					MISTRAL 241X/242X MISTRAL 241LX/242LX	NIAGARA 243/244 RIVER 345/346	RIVER 347	RIVER 348
<b>ProFessional 2</b>	General purpose - lightly soiled items	120	55	80	2,4	3	4	6
<b>ProFessional 4</b>	General purpose - on average soiled items	240	60	82	3	3,5	6	8
<b>ProFessional 6</b>	General purpose - heavily soiled items	360	65	85	3,5	3,5	6	8
<b>ProFessional 8</b>	General purpose - heavily soiled items	480	65	85	3,5	4,5	6	8
<b>ProFessional 10</b>	General purpose - heavily soiled items	600	65	85	3,5	4,5	6	8
<b>ProSelf</b>	Auto clean	120	n.s	80		3		
<b>ProClean</b>	Power auto clean and drain	240+	15	n.s	25,4	40	72	137
<b>ProDrain</b>	Auto drain	n.s	n.s	n.s				
<b>ProLong</b>	Adjustable duration	720	60	82	3,5	3,5	6	8
<b>ProEco</b>	Low temp wash - Blood and starch	300	45	80	3,5	3,5	6	6
<b>ProActive 5</b>	Intensive - Automatic prewash	300	65	85	5	6	8	10
<b>ProActive 7</b>	Intensive - Automatic prewash	420	65	85	5	6	8	10
<b>ProPlates</b>	Plates	90	60	82	2			
<b>ProSan</b>	Sanitation according to EN-ISO 15883-1/3	auto	70	85	3,5			
<b>ProSteel</b>	Cutlery	720	72	88	3,5			

## Ease of cleaning



All models have stainless-steel tray filters that completely cover the wash tank, for retaining and concentrating the coarse dirt so that it does not pass through the pump and then settle inside the wash chamber. For cleaning at the end of the day there is a self-washing cycle whose operation varies depending on the chosen set-up.

## Quality and reliability

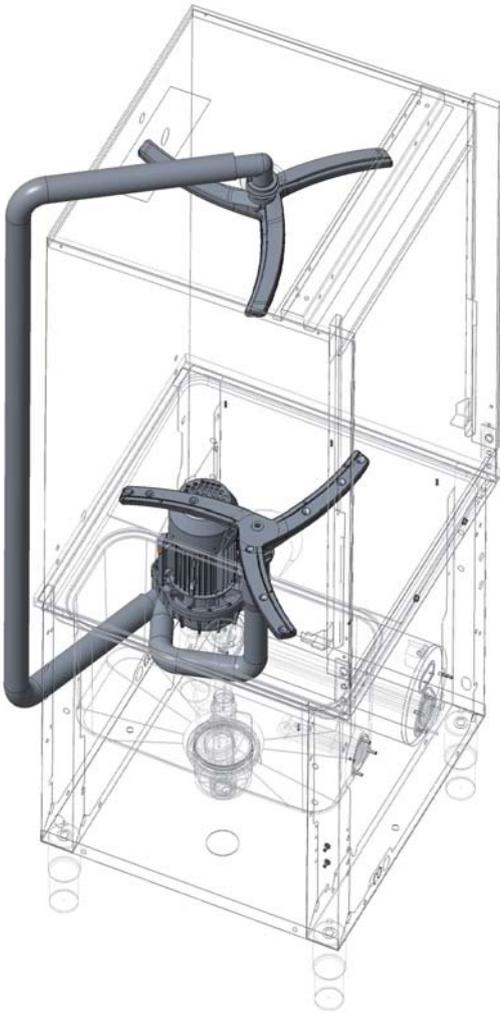
Elettrobar utensil washers are designed to ensure the utmost reliability, they use high quality components that are often specifically designed and manufactured according to our specifications (pumps, electronic board, interfaces...). The entire process, from design to production and final test and control (covering 100% of the machines) follows the most strict and up-to-date standards and is ISO 9001 certified. We also pay great attention to all environmental issues, using recyclable materials and adopting a low impact production process that is ISO 14001 certified.

Elettrobar products are serviced by a widespread and qualified network. In order to make service as easy as possible we have increased as much as possible the commonality of parts. In comparison to the previous generations the amount of spare parts required to service our entire range has dramatically decreased; this means more promptness and efficacy, cutting the time to source spare parts. We also take directly care of developing, training and supporting our dealers and service partners.



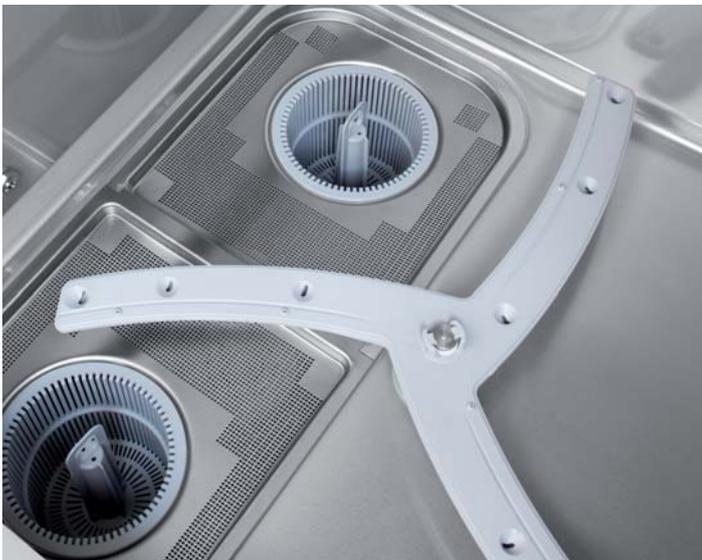
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## Technologies



### **EWT wash system**

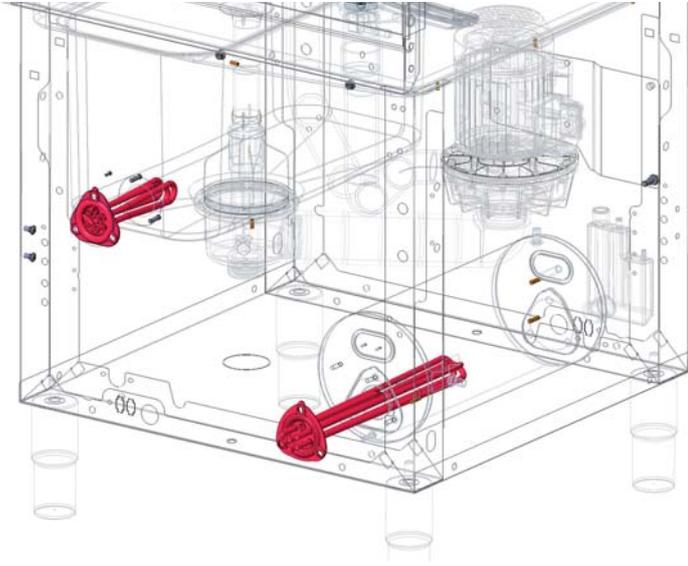
It is a Elettrobar proprietary concept that avoids any sudden variation of the water flow's direction in the circuit section between pump and wash arm. This happens, quite the opposite, in traditional pumps, where a flow diverter has to be placed somewhere in the circuit, to split the flow to the upper arm and that to the lower arm; the diverter is actually the point where most of the pressure losses and most of the noise are generated. With our system a much higher part of the energy given to the water by the pump reaches the items to wash, improving the mechanical cleaning. The benefit of this is a 25% higher efficacy and a significant energy saving. Available on all models.



### **HiTech wash arm**

Made of top quality composite material it's significantly lighter, but also shock and chemical aggression resistant, than a similar one in stainless steel. The consequence is an easier rotation and better distribution of water. We could say that Colged uses the hydraulic energy to wash items and not to make the arm turn. Along with the EWT wash pump it represents the heart of the high efficiency wash system all Elettrobar machines are equipped with. The rinse arm is integrated and lays on the same plane, avoiding to spoil the wash water jets. The HiTech arm can be used with pumps having a power up to 1.500 W.

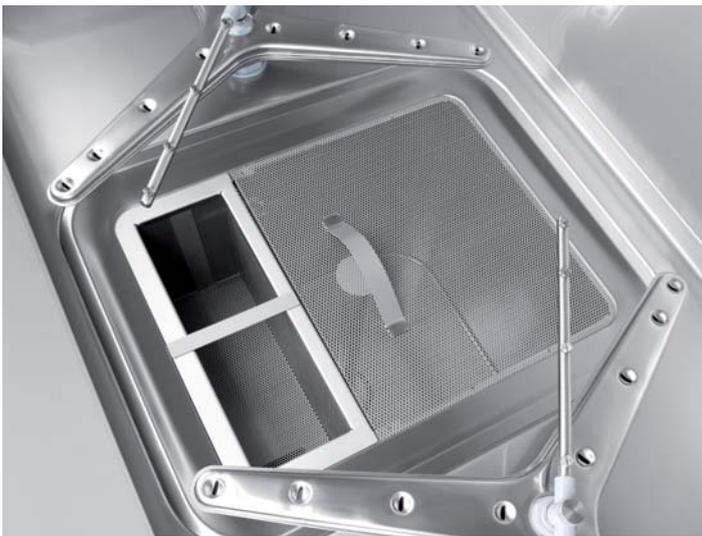
Available on all models except River 347 and 348 which, equipped with 2,700 W pumps, have stainless-steel arms.



## EHW powered heating system

This technology was developed to avoid the dramatic drop of wash water temperature that takes place in traditional machines, with interlocked tank and boiler heating elements, when a number of cycles are run one after the other. EHW technology operates tank and boiler elements independently, each being controlled by a separate electronic circuit that activates the element when and for as long as necessary. This keeps the temperature of the water in the wash tank up to 10 °C higher in case of consecutive cycles. Washing at higher temperature means a better result, higher efficacy of detergent and a faster dryer: better performances and cost saving.

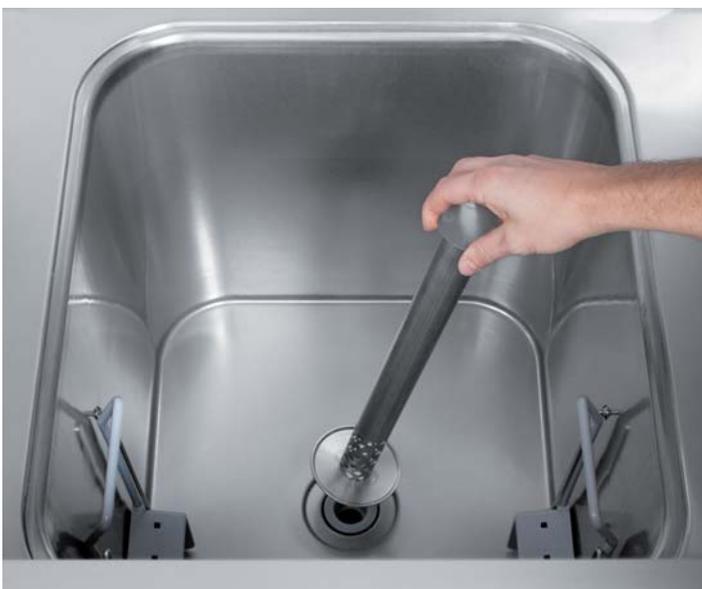
Available on all models except River 348.



## ERT rinse system

This rinse system uses a powerful booster pump and a pressure-less boiler filled through a break tank device that prevents any pollution of the external water supply net, according to the market best practice. Advantages: constant rinse pressure, constant rinse temperature, constant rinse water volume, whatever the external conditions are. This is why ERT is a full member of Colged's CRP (Constant Rinse Technology) concept.

Available on all Mistral LX and River range models.



## EDT drain system

A long work shift with good results necessarily requires that the liquid in the tank is continuously replaced by fresh water. The traditional stem pipe system used by most of our competitors is simple, easy to build and cheap but its efficacy is limited: one out of three litres of fresh water simply floats away over the dirty heavier liquid in the tanks and is drained without giving any contribution (efficacy 66%). EDT has a fully digital level control in the tank and a built in drain pump; at the end of the wash phase a pause of a few seconds let the solid waste sediment on the tanks bottom, then the pump drains a specific amount of water exactly from that area, taking away both water and particles. The final rinse takes in the same amount of fresh water. The efficacy is therefore close to 100% and the water stays cleaner for a longer time. The benefits are a superior efficacy of rinse, so that less water can be used, a superior efficacy of detergent, so that a lower concentration can be implemented and a longer time between two total replacements of wash water. This results in a significant money saving.

Available on all models except Niagara 243D and 244D versions.

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## mistral 241X 242X - 241LX 242LX

The utensil/pan washers with 50x60 cm rack and compact in size, ideal for rooms with limited space, are the ideal solution for effectively washing utensils commonly used in pastry and ice-cream shops, bakeries and delicatessens.

The construction is sturdy to ensure long life, maximum resistance to stress, and reduce heat dispersion and noise thanks to use of wide-spaced double-skin side panels with double-skin door. The rack guides are welded, the tank has a deep-drawn bottom and integral stainless-steel surface filters.

Ease of cleaning is ensured by the construction of the wash chamber without pipes and sharp corners, the presence of integral stainless-steel filters and by the automatic self-clean and draining programs as standard.

**Mistral 241X 242X** two models, one undercounter and one front load, with interface with colour LED screen and ELI soft-touch buttons, equipped as standard with tank partial drain with pump and rinse-aid and detergent dispensers.

**Mistral 241LX 242LX** two models, one undercounter and one front load, with interface with multicolour LCD screen and ESI soft-touch buttons, full optionals as standard with tank partial drain with pump, rinse aid and detergent dispensers and atmospheric boiler with rinse pump. Both the LED interface (ELI) and the LCD screen (ESI) ensure ease of use of the machine thanks to the intuitive approach intended for staff with limited training or frequent turnover.



Mistral 241X



Mistral 242X



Mistral 241LX



Mistral 242LX

Mistral 241X 242X - 241LX 242LX		
	Ø cm	41
	H cm	GN1/1 (53x32)
	H cm	60x40
	cm	60x50x39



# niagara 243 244

Two models, 243 and 244 with 56x63 cm rack, that are the ideal solution for effectively washing large utensils commonly used in pastry and ice-cream shops, bakeries and delicatessens. The two models differ for useful door opening: 65 cm for the 243, 85 cm for the 244. Two versions are available for both models: one with built-in rinse aid and detergent dispensers and a more complete one which, in addition to the dispensers, is equipped with tank partial drain with pump.

The construction is sturdy to ensure long life, maximum resistance to stress, and reduce heat dispersion and noise thanks to integral double-skin side walls with split door, fully moulded tank and integral stainless-steel surface filters.

Ease of use is enhanced by the interface with colour LED screen and ELI soft-touch buttons offering intuitive use even for staff with limited training or frequent turnover.

Ease of cleaning is ensured by the construction of the wash chamber without pipes and sharp corners, the presence of integral stainless-steel surface filters and by the automatic self-clean and draining programs as standard.

		<b>Niagara 243</b>	<b>Niagara 244</b>
Rack size	cm	56x63	56x63
Clearance	cm	65	85
Wash chamber	cm	56x63x65	56x63x85



**Niagara 243**



**Niagara 244**

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## river 345 346 347 348



River 345



River 346



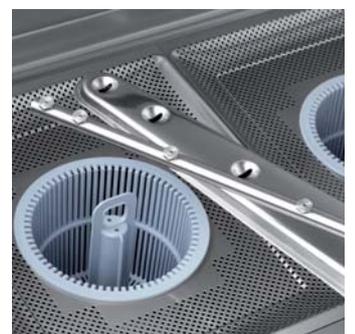
River 347

The Elettrobar main range comprises four full-optional models, two of which are ample in size for effectively washing large quantities of utensils commonly used in pastry and ice-cream shops, bakeries and delicatessens. All models are full-optional equipped as standard with tank partial drain with pump, rinse aid and detergent dispensers and atmospheric boiler with rinse pump. The construction is sturdy to ensure long life, maximum resistance to stress, and reduce heat dispersion and noise thanks to integral double-skin

side walls with split door, fully moulded tank and integral stainless-steel surface filters.

Models 347 and 348 have stainless-steel wash and rinse arms.

Ease of use is enhanced by the interface with multicolour LED screen and ESI soft-touch buttons offering intuitive use even for staff with limited training or frequent turnover.

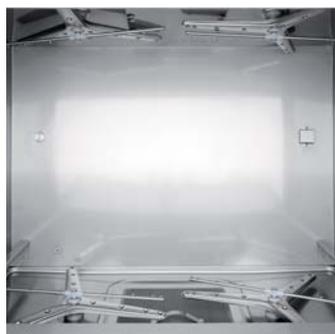




River 348

		<b>River 345</b>	<b>River 346</b>	<b>River 347</b>	<b>River 348</b>
Rack size	cm	56x63	56x63	70x70	131x70
Clearance	cm	65	85	85	85
Wash chamber	cm	56x63x65	56x63x85	70x70x85	131x70x85

Ease of cleaning is ensured by the construction of the wash chamber without pipes and sharp corners, the presence of integral stainless-steel filters and by the automatic self-clean and draining programs as standard. For all models, the NRG version with heat recovery is available, an effective system for removing steam and recovering residual heat.



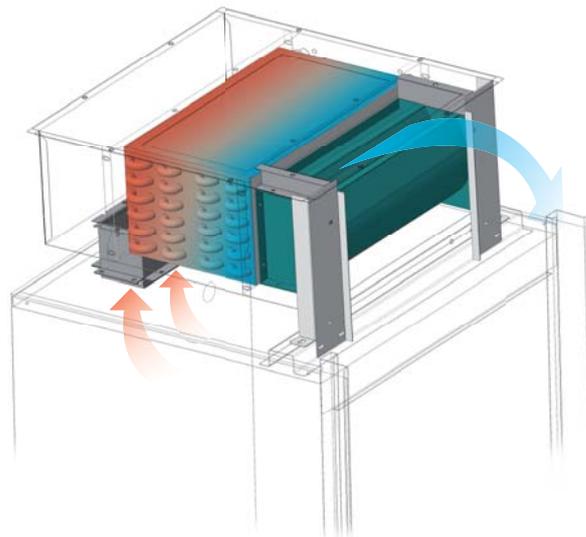
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# NRG Technology



## Benefits of the NRG heat recovery/steam condensation system

- **A healthier work environment**
- **A drastic reduction in the amount of steam emitted into the work environment**
- **30% saving in the energy used to heat cold intake water from the mains**



After rinsing a centrifugal fan draws the steam out of the wash chamber and directs it into a copper/aluminium heat exchange battery where it condensates, giving its internal and latent heat to cold water coming from outside and going to the boiler, that increases its temperature by approximately 20 °C. This takes to a reduction of the energy (electricity) required to heat rinse water up to 30%, depending on the selected program. The most evident effect is, anyway, the almost complete elimination of the steam introduced in the room when the door is open.

Cycle time is extended by 30" or 60" depending on the model of machine. The use of osmotic water requires a special stainless steel battery to avoid corrosion.

NRG is available for River models.



FEATURES		MISTRAL 241X	MISTRAL 242X	MISTRAL 241LX
Max real output	racks/hr	20	20	20
Max theoretical output	racks/hr	30	30	30
Dimensions (WxDxH)	cm	60x70x85	60x70x129	60x70x85
Dimensions NRG version (WxDxH)	cm			
Rack size	cm	50x60	50x60	50x60
Clearance	cm	40,5	40,5	40,5
Max. height of plates	cm	41	41	41
Max. trays dimensions	cm	GN1/1 (53x32)	GN1/1 (53x32)	GN1/1 (53x32)
Max. pans dimensions	cm	60x40	60x40	60x40
Max. bread baskets dimensions	cm	60x50x39	60x50x39	60x50x39
Wash chamber dimension	cm			
Peristaltic rinse aid and detergent dispensers		yes	yes	yes
USB connection		yes	yes	yes

TECHNICAL SPECS				
Tank volume	lt	23	23	23
Boiler volume	lt	6	6	6
Tank heating element	kW	2,1	2,1	2,1
Boiler heating element	kW	6	6	6
Wash pump power	kW	0,7	0,7	0,7
Rinse pump power*	kW			0,2
Drain pump power*	kW	0,04	0,04	0,04
Total electric power	kW	8,8	8,8	8,8
Power supply	V	400/50/3N	400/50/3N	400/50/3N
Max current	amp	16	16	16
Water feed pressure min-max	bar	2 → 4	2 → 4	1 → 4
Water feed temperature min - max	°C	15 → 60	15 → 60	15 → 60

\* where present

AVAILABLE VERSIONS			
<b>D</b>	peristaltic rinse aid and detergent dispensers		
<b>DE</b>	peristaltic rinse aid and detergent dispensers and partial drain with pump	yes	yes
<b>CDE</b>	atmospheric boiler with rinse pump, peristaltic rinse aid and detergent dispensers and partial drain with pump		yes
<b>CDE NRG</b>	atmospheric boiler with rinse pump, peristaltic rinse aid and detergent dispensers, partial drain with pump and heat recovery unit		

## Effective productivity

The maximum productivity that can actually be obtained in real-life operating conditions when several cycles are performed in succession, taking into account the time required between cycles for the water to reach the correct temperature and to unload and load the rack.

(Parameters used: water supply temperature 15 °C and loading/unloading time of 12 seconds).

## Theoretical productivity

Value that **cannot be achieved in real-life conditions**, obtained through mathematical calculation considering the shortest wash cycle.



MISTRAL 242LX	NIAGARA 243	NIAGARA 244	RIVER 345	RIVER 346	RIVER 347	RIVER 348
20	20	20	20	20	20	20
30	30	30	30	30	30	30
60x70x129	72x78x173	72x78x193	72x78x173	72x78x193	85x85x196	147x85x196
			72x78x196	72x78x215	85x85x219	147x85x219
50x60	56x63	56x63	56x63	56x63	70x70	131x70
40,5	65	85	65	85	85	85
41						
GN1/1 (53x32)						
60x40						
60x50x39						
	56x63x65	56x63x85	56x63x65	56x63x85	70x70x85	131x70x85
yes	yes	yes	yes	yes	yes	si
yes	yes	yes	yes	yes	yes	si

23	37	37	37	37	66	131
6	6	6	12	12	12	12
2,1	3	3	3	3	8	10,5
6	6	6	6	6	8	10,5
0,7	1,5	1,5	1,5	1,5	2,7	2x2,7
0,2			0,2	0,2	0,2	0,2
0,04	0,04	0,04	0,04	0,04	0,04	0,04
8,8	10,5	10,5	10,5	10,5	18,7	15,9
400/50/3N						
16	20	20	20	20	32	32
1 → 4	2 → 4	2 → 4	1 → 6	1 → 6	1 → 6	1 → 4
15 → 60	15 → 60	15 → 60	15 → 60	15 → 60	15 → 60	15 → 60

	yes	yes				
	yes	yes				
yes			yes	yes	yes	yes
			yes	yes	yes	yes



# elettrobar

*The Benefit Makers*

During more than forty years of business, we have produced more than a million industrial dishwashers at our two Italian plants. These numbers reflect our unrivalled experience in the sector. Building on this experience, we have continued to develop competitively-priced innovative products for leading players in the catering industry, providing effective, consistent benefits for their various enterprises. This is why we at Elettrobar claim to be more than just a dishwasher manufacturer: we are benefit makers.

Our company is fully aware of the increasing importance of environmental protection issues and for many years has played its part, developing and patenting innovative technologies able to reduce water, energy and detergent consumption without impairing performance.

We adopt extremely stringent ISO 9001:2008 certified quality control procedures to build products that can withstand even the harshest operating conditions. Our dishwashers are manufactured at facilities that lead the way as regards workplace safety and environmental impact, as confirmed by ISO 14001:2004 certification.

## Eurotec Service

Our commitment to quality does not end when the machine leaves the factory, but continues throughout the entire life-cycle of the product:

EurotecService is the specialised division that oversees both our replacement parts service and our after-sales service, with particular emphasis on training and qualification of our extensive network of dealerships and service centres that covers the whole of Italy.

This division is also responsible for pre-sales, logistics and customer care activities, thereby promoting an intrinsically synergistic approach to all activities that have a direct bearing on customer satisfaction.



**ITW FOOD EQUIPMENT GROUP**

**Eurotec s.r.l. - divisione ELETTROBAR**

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