

Flight conveyor dishwashers and basket washers

FLIGHT

The information contained in the present document correspond to the definition of the product at the date of issue of the same. The producer reserves him the right to bring changes to the characteristics for technical improvements.

FLIGHT CONVEYOR DISHWASHERS IN EVOLUTION

The FLIGHT conveyor dishwasher design procedure follows a set line: high quality materials and components, with each supply lot subject to inspection and checks. This is to guarantee safe and efficient use in accordance with current standards, as specified in ISO 9001:2000.

Each component of each dishwasher is tested thoroughly to guarantee safety and washing quality in all configurations.

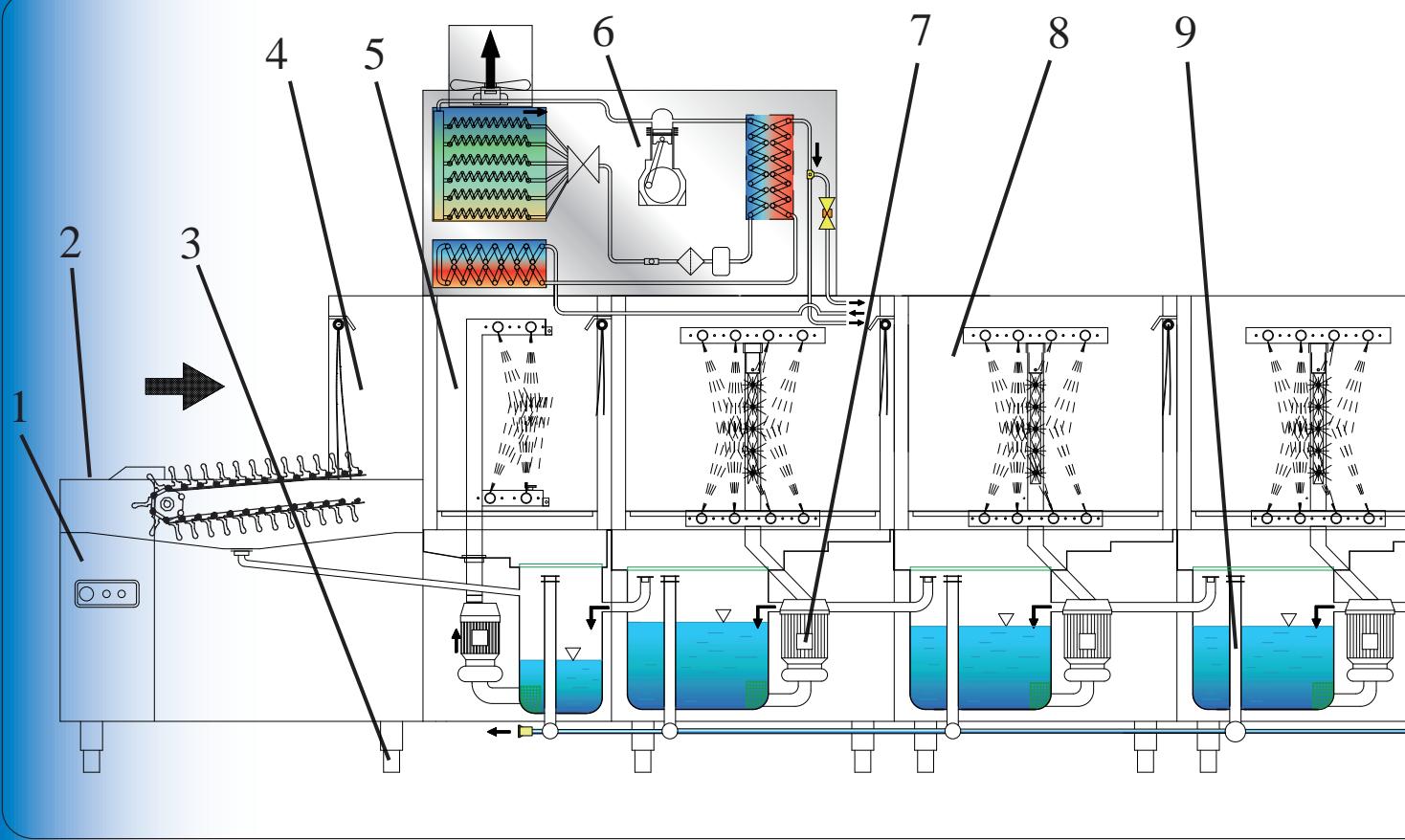
The FLIGHT conveyor dishwasher is specially designed to give excellent results at reduced costs in professional catering, leading to great savings in all stages of use.

Thanks to its great versatility, ease of use and total cleaning capability, this dishwasher is the ideal solution for any modern washing room, working in complete conformity with the strictest current hygiene standards.

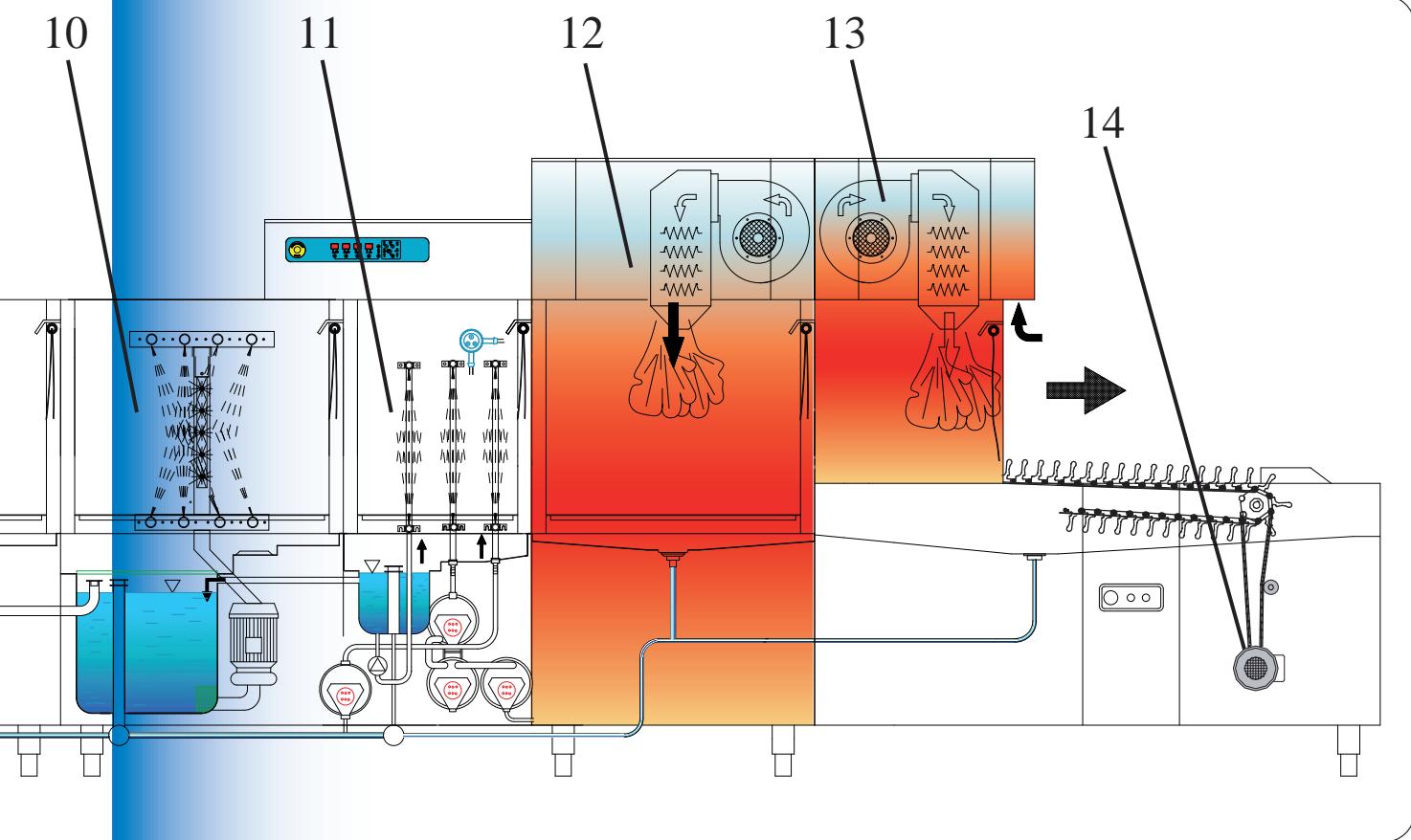
The R&D and design staff have the expertise to respond to your every need, with innovative design solutions to all requests, no matter how detailed.



FUNCTIONALITY AND QUALITY RESULTS



1. Entry module: with removable surface filters to catch any solid matter or forgotten large items that could drop off during loading and block the shelf unloading movement.
2. Bodywork: the entire supporting structure has been designed in AISI 304 of thickness 2 mm with high load capacity geometric shape.
3. The machine comes with adjustable feet for positioning and levelling the conveyor correctly.
4. Splash guard: standard supply, on both entry and exit.
5. Pre-wash module: AISI 316 press-formed wide radii tank with rounded corners, with no interstices that trap the dirt and wide angles for easier cleaning and emptying.
6. Heat recovery: energy recovered with intake at 15°C with machine running (i.e. pumps and rinsing on) is over 12 kW. With the heat pump the energy recovery is over 21 kW.
7. Wash pump and pre-wash pump: Self-cleaning wash pumps: fitted vertically with intake higher than outlet so that all internal residue is expelled. Pumps scaled to work at maximum output capacity with overtemperature below estimated limits for long electric motor life (conforming to Standards 60335-1 and 60335-2-58).
8. Washing module: washing arms made entirely of AISI 304, with self-cleaning



nozzles. Bayonet fitting for easy individual removal. Standard supply with two lateral washing arms, ideal for washing trays and irregular shaped items. Washing intensity settable from the upper and lower arms.

9. Overflows: overflow pipes with anti-removal system to prevent them being removed or confused with pipes from other tanks (different size). Procedure: to drain, simply turn the overflow clockwise, pull it up and turn it anticlockwise. It will stay in this position until lowered again.

10. Tank filters: pumps protected against entry of solid matter by double filter set.

11. Rinsing module: rinsing arms made entirely of AISI 304. Standard supply rinse

saver, which enables rinsing only in the presence of items to wash.

12. Stage dryer: heating power 12 kW.

13. Shelf dryer: heating power 12kW.

14. Transmission module: two different washing speeds. The slow speed gives a more powerful wash, suitable for particularly dirty dishes. Both speeds give perfect end results, even in very busy periods, guaranteeing perfect hygiene and compliance to DIN 10510 Standards at all times. The drive is transmitted to the conveyor pulley by a chain with chain tightener as standard supply. Adjustable oil-bath reduction gear with built-in clutch.

THE DETAILS THAT MAKE THE DIFFERENCE

Control panel conforming to the following European directives:

Machine Directive (2006/42/CE)

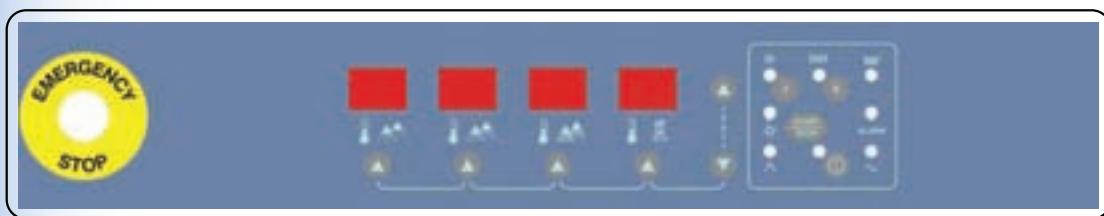
Electromagnetic Compatibility (EMC2004/108/CE)

and the following harmonised technical standards:

Safety of household and similar electrical appliances (EN 60335-1)

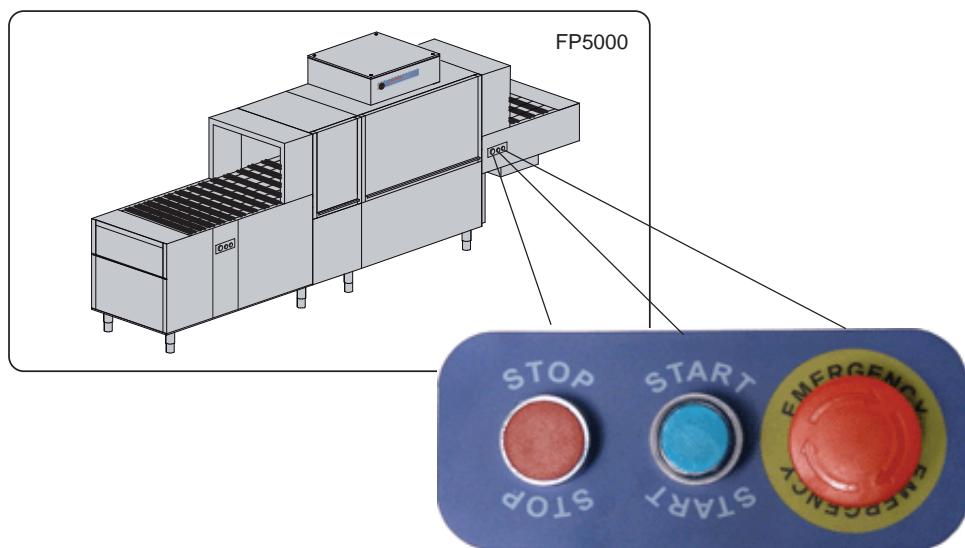
Particular requirements for commercial electric dishwashing machines (EN 50416)

Electrical equipment of machines (EN 60204-1)



Safety systems: there are emergency mushroom-head buttons on the control panel and entry and exit shelves that cut off the power to all moving parts when pressed. Each door has a safety system that switches off the pumps and all moving parts if opened. There is also a limit switch that stops the conveyor when the dishes or other items are not removed. The shelf doors are protected by magnetic microswitches. Standard supply anti-jamming clutch built in to oil-bath reduction gear.

The boilers are fitted with safety thermostats that cut off the power to the electric heating elements if they reach danger temperatures.



Tank filters: pumps protected against entry of solid matter by double filter set.

1-Surface filters slightly tilted towards a collection basket that catches the big food scraps and any cutlery fallen out of the baskets.

2-Pump intake filters for additional protection against solid residue.

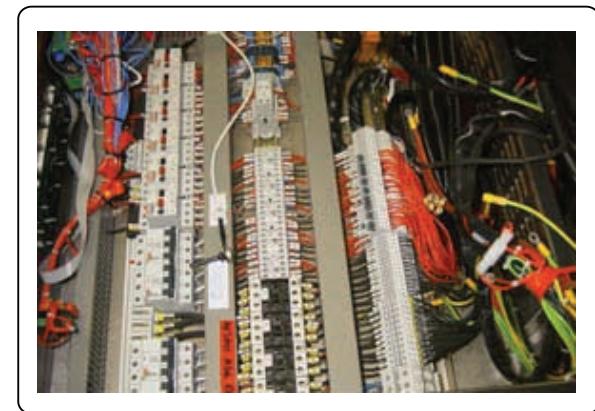


Nozzles: the nozzle geometry is specially designed to push scraps of food away from the nozzles. The stainless steel rinsing nozzles, fastened with ring nuts, have dome filters to stop gritty residue getting in and damaging the water sprayer. Every arm has end plugs for easier, more thorough cleaning.



Control panel: the pump motors are also protected against short circuit by magnetothermal switches and circuit breakers. IP65 electrical panel buttons. All models have high-sensitivity (0.5°C) digital thermostats, with an alarm for if the set temperature is not reached, an overtemperature alarm and a probe breakdown self-diagnosis system. The machine has an autotimer for switching off the dryer and/or other optionals if not used for more than 6 minutes.

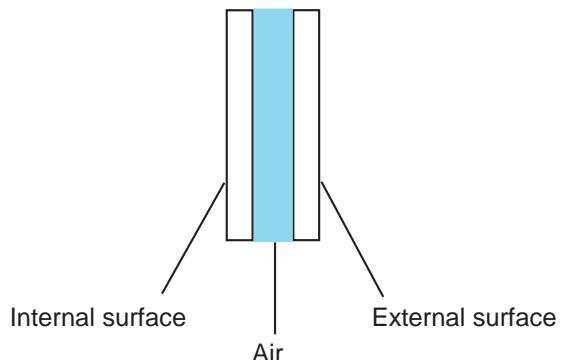
With electronic board and membrane circuit keyboard version, an interface is available for storage of HACCP parameters.



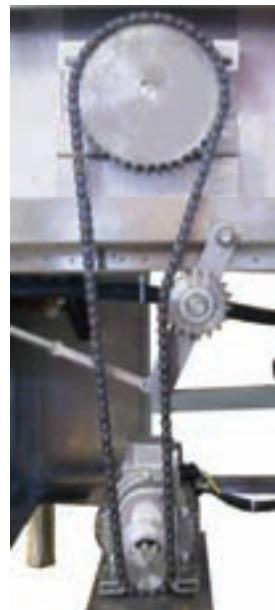
Conveyor types: there are 3 types of holders for conveying the items: one for dishes, one for baskets and one for conveying insulated food trays. The holders are designed so that the water jet hits the entire front and rear surface of the dish, guaranteeing perfect cleaning. The loading in 3 rows is simple, making the operator's work quicker and easier.



Double-wall insulation: the double-wall insulation not only minimises loss of heat and surface temperature but also reduces noise emission to a minimum.
The doors come insulated as standard supply.
Insulation optional.

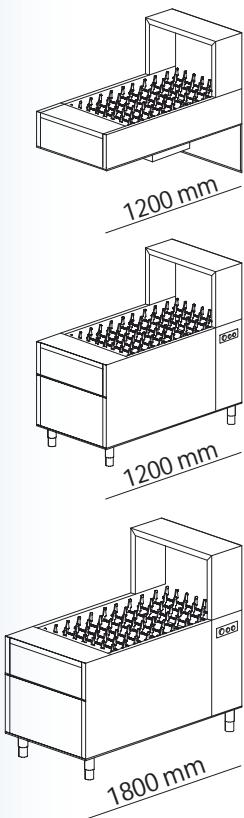


Movement system: the movement system has a double lateral guide of thickness 2 mm and height 100 mm to prevent items falling off the conveyor when under the washing jets. The basket conveyor is driven by a double-polarity motor with two washing speed selections and has a reduction gear with a clutch, which engages to stop the movement if the strain exceeds the set level.

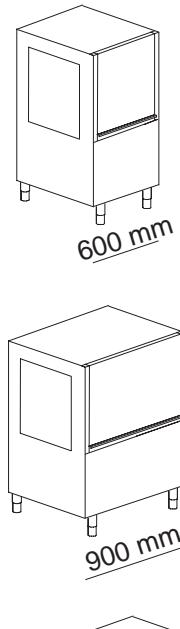


STANDARD COMPONENTS FOR YOUR IDEAL DISHWASHER

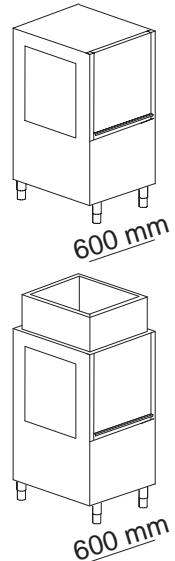
Entry modules



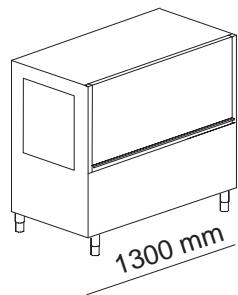
Pre-wash modules



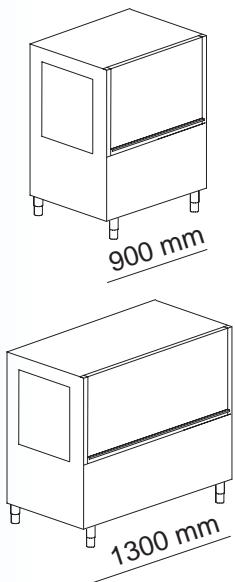
Neutral zone



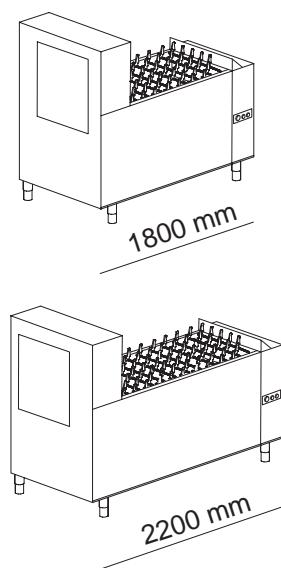
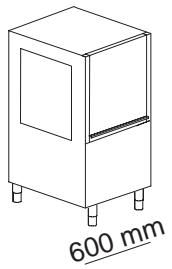
Wash modules



Exit modules



Double rinsing module



SIMPLE MAINTENANCE LINKED TO EXCELLENT PRODUCTION

Cleaning

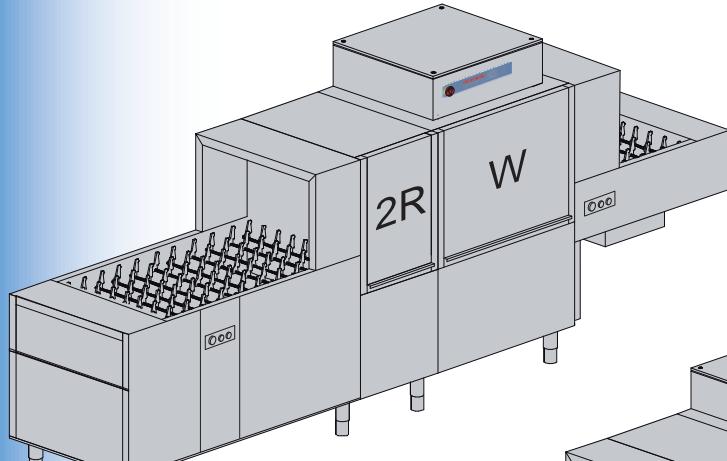
Internal cleaning made easier and safer thanks to the gradients and radii of the tank. Door opening is effortless thanks to the internal band-spring counterbalances. The fully opening door structure gives the operator easy access to the whole interior. The wash pumps are self-cleaning and protected against electrical overload: they are fitted vertically with the intake higher than the outlet so that all internal residue is expelled and protected by a double filter set. The first tilted surface filter catches the bigger food scraps and any cutlery fallen out of the baskets and the second pump intake filter protects the pump against any solid residue.

Speed

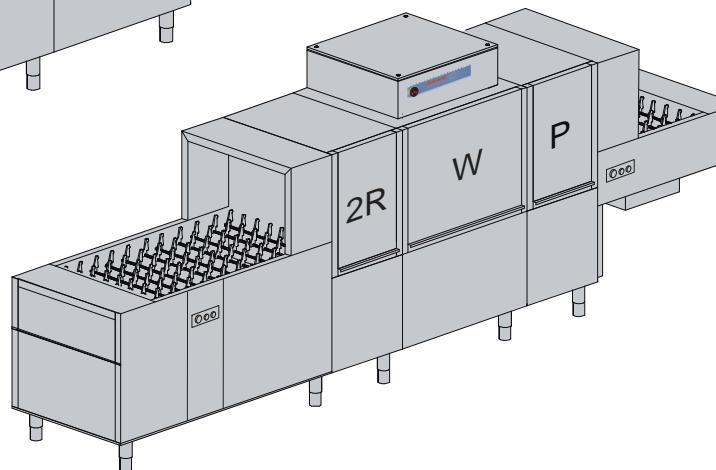
The speed range gives perfect end results, even in very busy periods, guaranteeing perfect hygiene and compliance to DIN 10510 Standards at all times.

1 [^] Speed	2 [^] Speed	UM	Model
2400	3710	dish / hour	F3300
2700	4080	dish / hour	F4900
3200	4820	dish / hour	F5700
4200	6360	dish / hour	F7200
4500	6800	dish / hour	F7600
5400	8160	dish / hour	F9500
6000	9070	dish / hour	F9800
6600	10000	dish / hour	F10000
2,2	3,45	m / min	FP5000
3,25	5,1	m / min	FP7500
4,45	6,95	m / min	FP10000
8,23	5,27	m / min	FP12500
1.4	2.15	m / min	FP850
1.95	3	m / min	FP1100

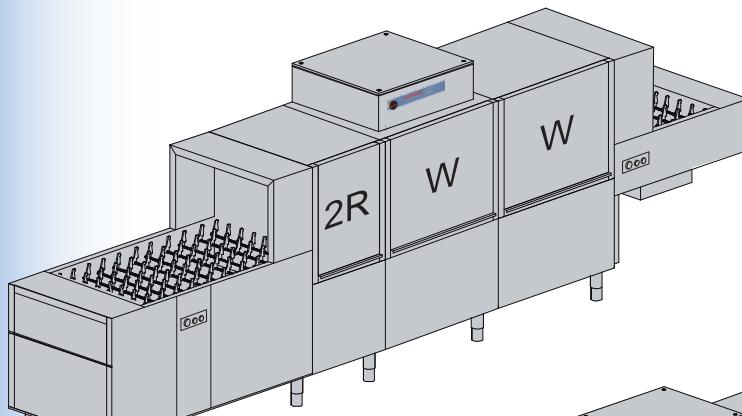
A VAST RANGE TO MEET ALL NEEDS



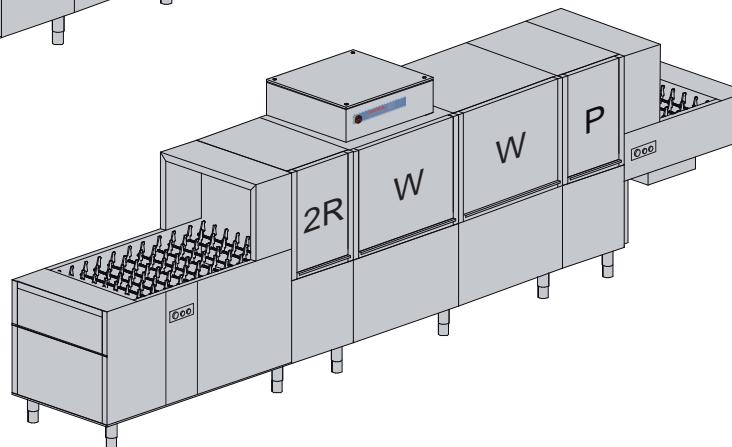
F3300



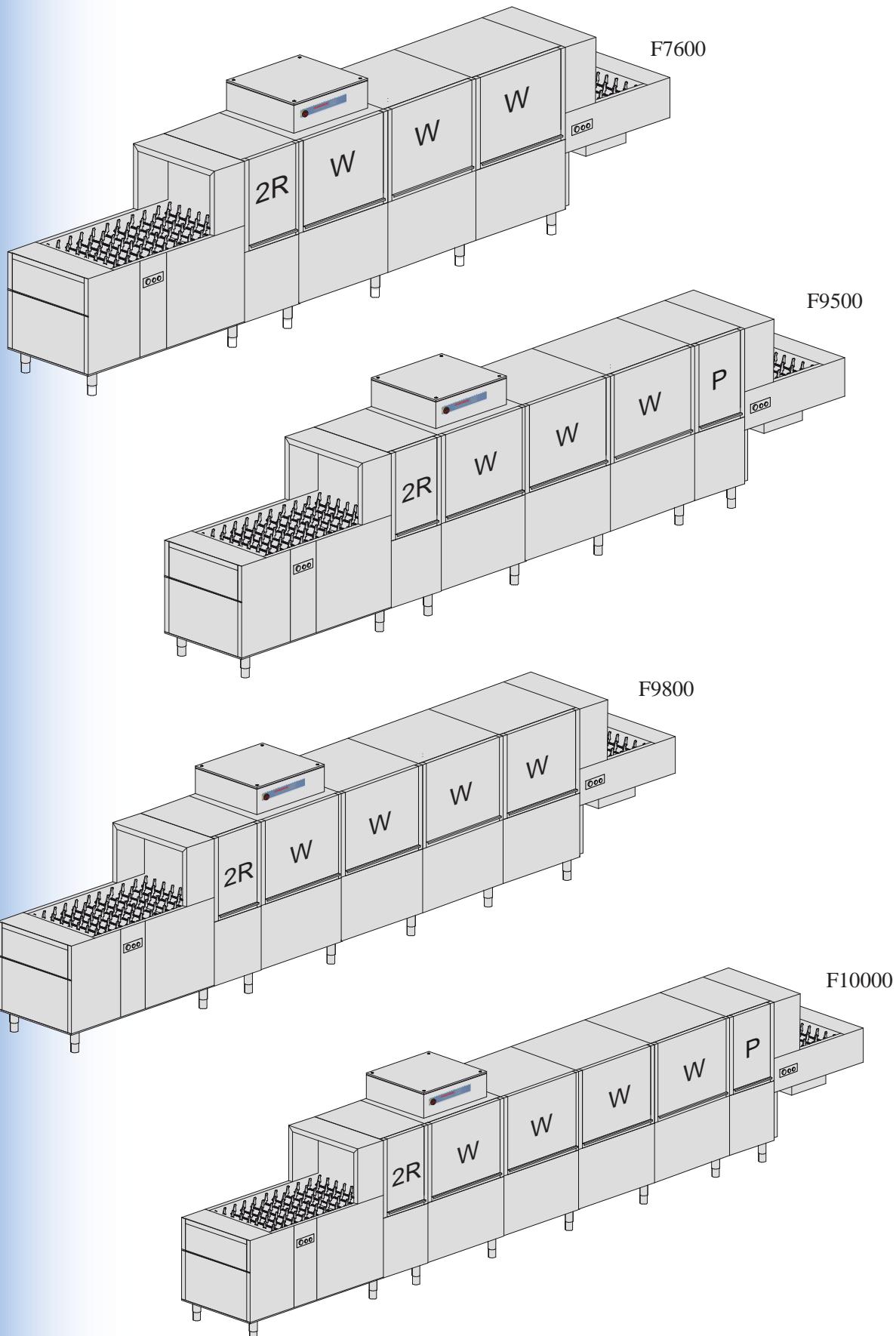
F4900



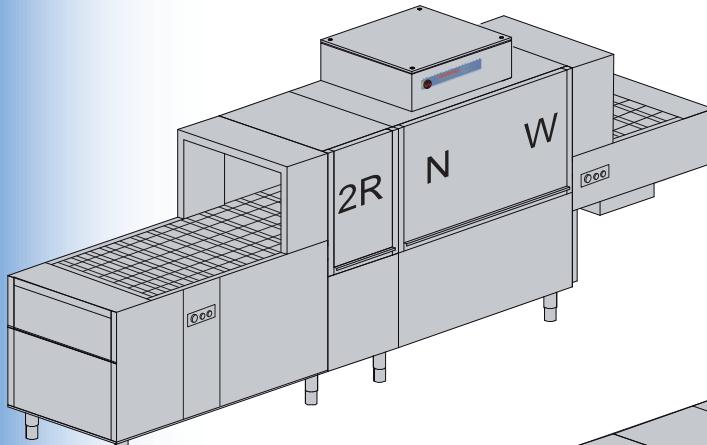
F5700



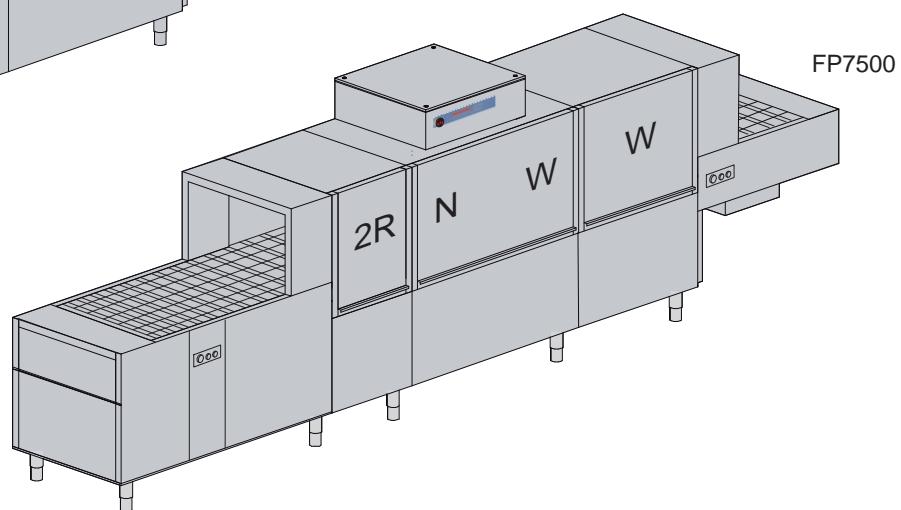
F7200



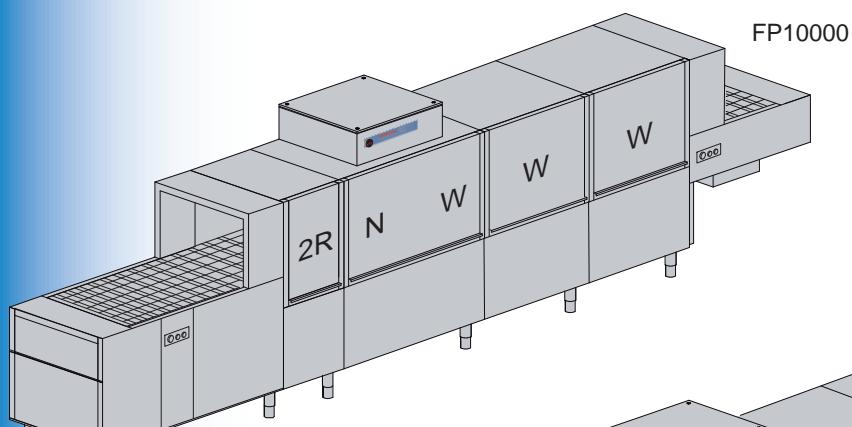
FLIGHT CONVEYOR DISHWASHERFOR ALL THE SOLUTIONS



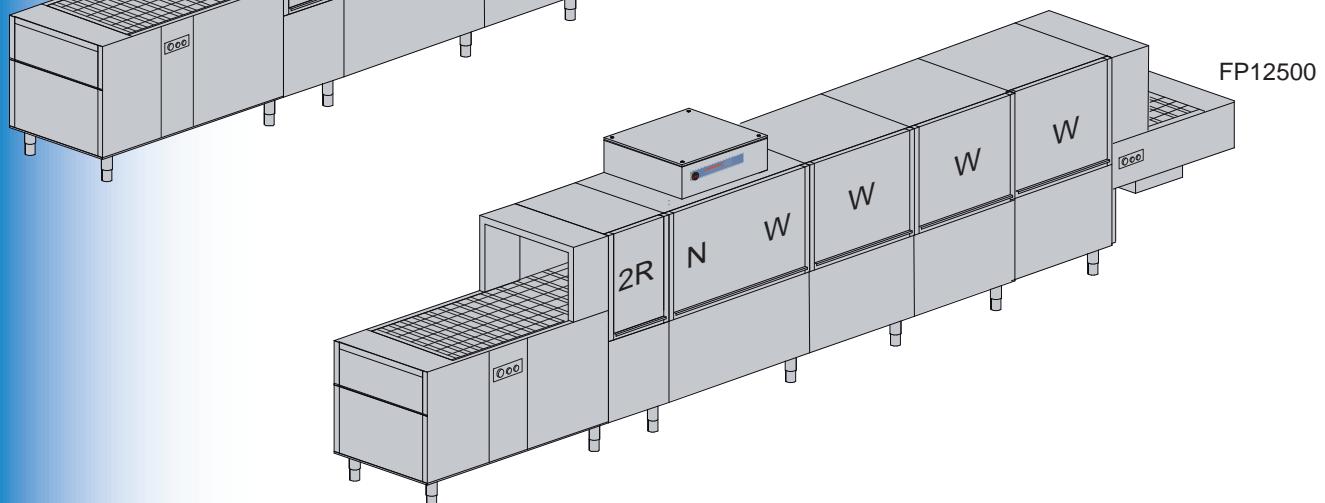
FP500



FP7500



FP10000



FP12500

EASY TO USE, AN UNBEATABLE WASH

Tank filling and water heating start automatically when the machine is switched on. The reaching of the filling level in the tanks is guaranteed by an automatic reset system.

The temperature of the tanks and boiler is selectable and is displayed on the digital thermostats on the control console. The space between the washing and rinsing zones, with mobile flaps positioned in a special layout, prevents the washing water from getting into the rinsing zone and dirtying it.

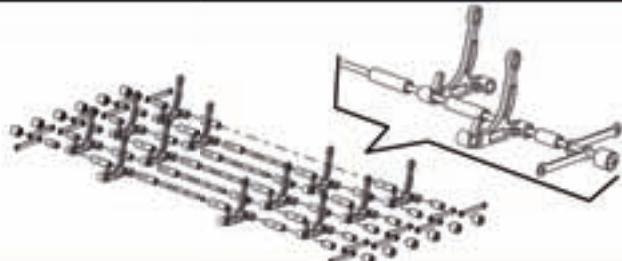
All machines have a second rinsing zone, guaranteeing the perfect distribution of the water over the basket and the elimination of all traces of detergent with lower water and detergent consumption.

The ECODET (detergent economy system), standard on the machines, more reduces the machine's detergent consumption.

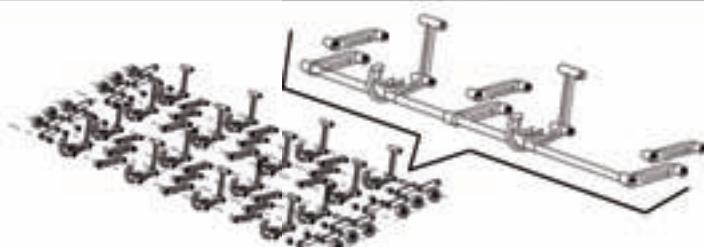
CONVEYORS FOR CLEANING ALL ITEMS

Thanks to their ergonomic shape and positioning in the conveyor, the holders make it possible to convey and wash any kind of item.

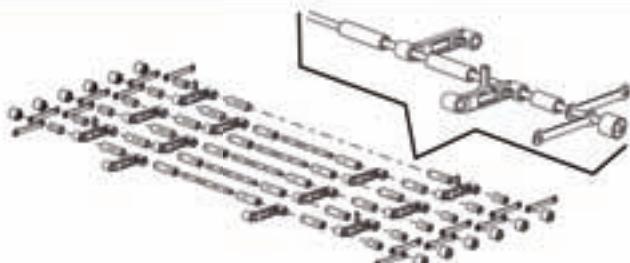
Gastronorm/Euronorm dish and tray conveyor



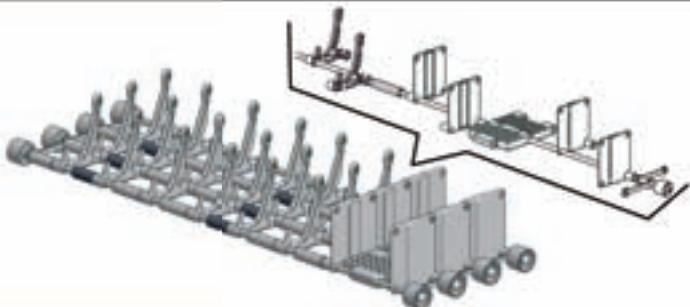
Insulated food tray conveyor



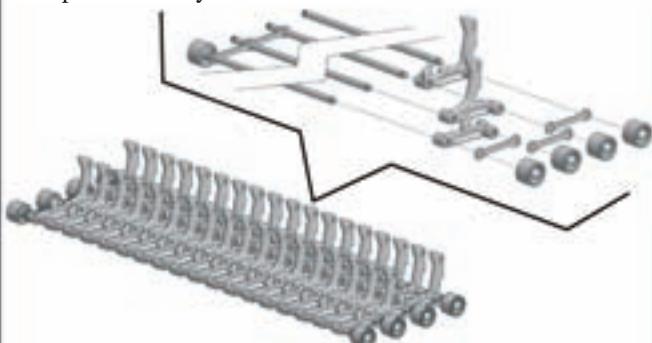
Basket conveyor



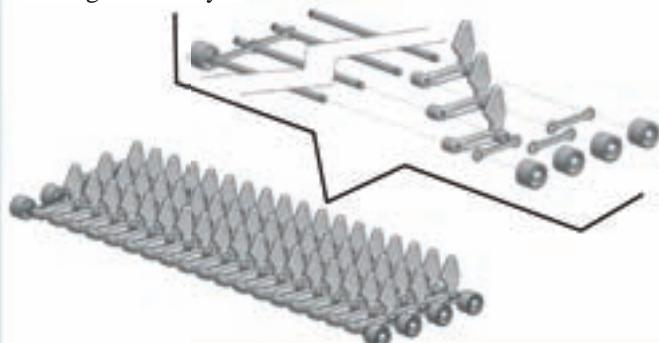
dish conveyor end track cutlery



"hospital" conveyor



"In-flight" conveyor



THE BEST WAY TO SAVE

Rinse saver

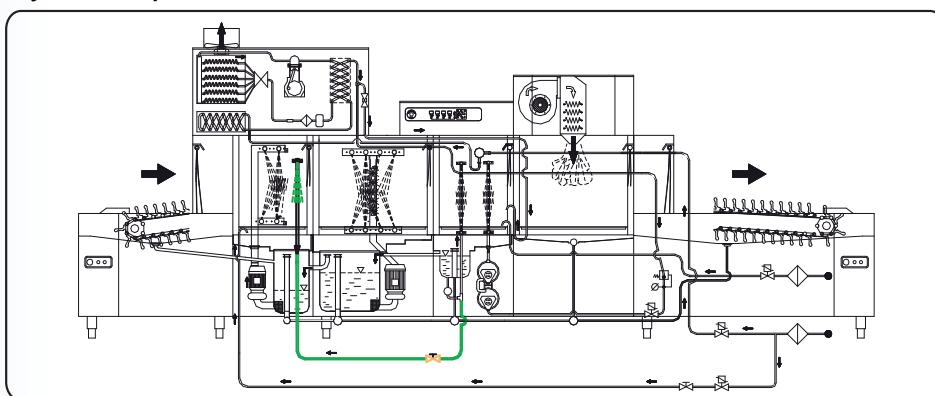
The rinse module starts up only when there are items to be washed, and is enabled when a grid is moved by the presence of items, which switches on the pre-rinse pump and rinse valve.

This reduces both the water consumption and the electrical power used to heat the water.

ECODET (Detergent economizer)

This system sends part of the rinsing water directly back into the pre-wash, thus reducing the quantity of water regenerated in the washing zone and therefore reducing the amount of detergent required.

This amount is settable during installation and allows a saving of up to 50% in detergent. The water sent to the pre-wash is added to the total water regenerated, thus increasing the efficiency of the pre-wash.



ELECTRONIC CIRCUIT BOARD: TECHNOLOGY AT YOUR SERVICE

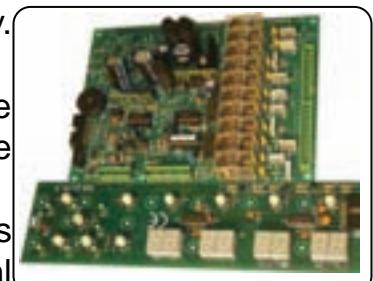
The electronic board is specially designed to interface with the conveyor dishwasher control panel.

This new electronic board optimises washing efficiency by allowing the continuous monitoring and maximisation of the washing process in all situations. As well as controlling the washing conditions, it also checks on the operation of the machine, giving alarm signals if any problems arise that may affect the efficient running of the unit or the washing and sanitizing quality.

The circuit board has two vitally important functions.

The board's operator interface is an ergonomic membrane keyboard with easily recognisable functions and low-voltage controls.

The board is housed in a cabinet with no external openings apart from the connector ports, in accordance with technical specifications and the IP55 protection standard, which state that it must be protected against contact with water and dust.



A great advantage of the board is that it controls the heating of the rinsing water boiler. The water heating can be managed by the board in two operating modes.

The first mode gives maximum water heating power in two separate stages, when the boiler water is at a temperature lower than 75°C and when the rinsing zone is operating. The second mode, which we can call the "hold" mode, switches on at 75°C-85°C and takes the water to the ideal rinsing temperature more slowly, in a series of steps.

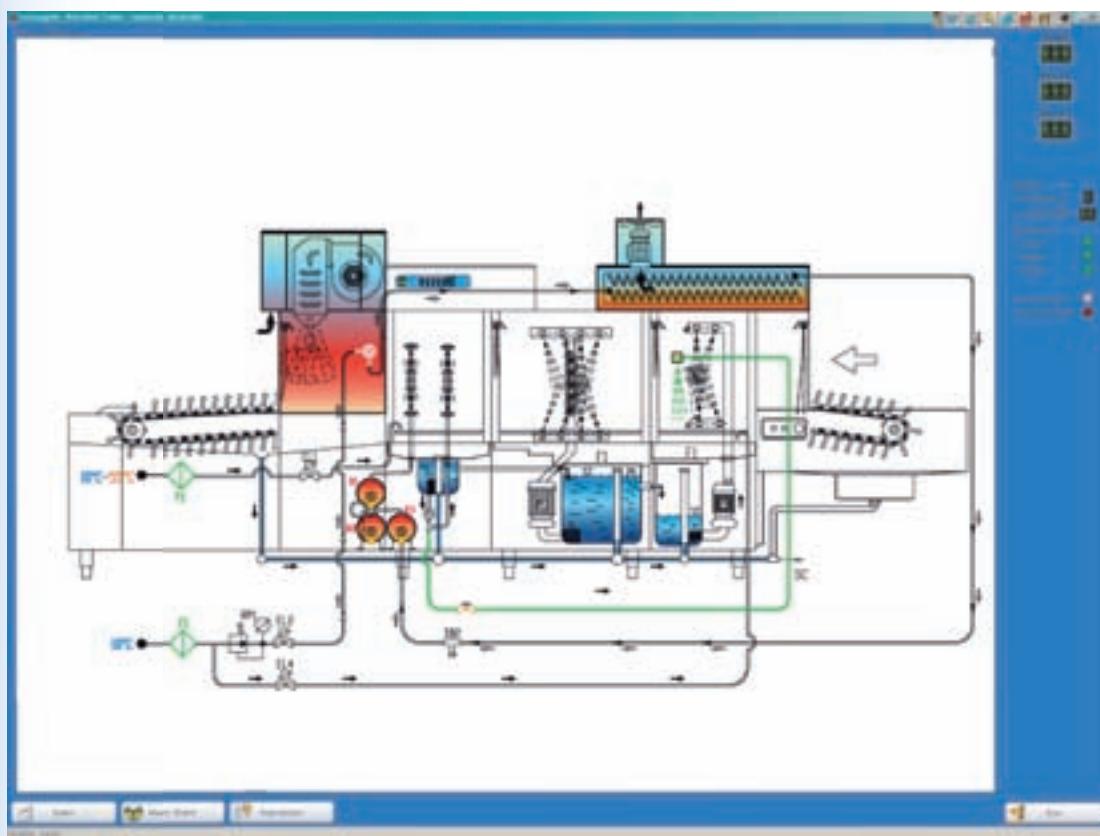
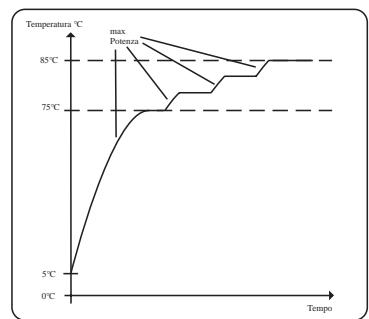
This occurs when heating the water at the start of the day or when the rinsing zone is in standby.

The heating is described as being "in steps" because of the temperature trend, with the power going to maximum in the heating stage and then to zero in the subsequent stage.

This kind of heating is used to avoid the overheating of the water in the boiler and reduce energy waste.

If the water temperature in the tanks or boiler gets too high or too low when the machine is running, the continuous monitoring system emits an alarm signal, in order to ensure the efficient operation of the machine.

By connecting the board to a pc and using a user interface program, you can monitor the machine behaviour in real time and save the HACCP data readings taken during operation.

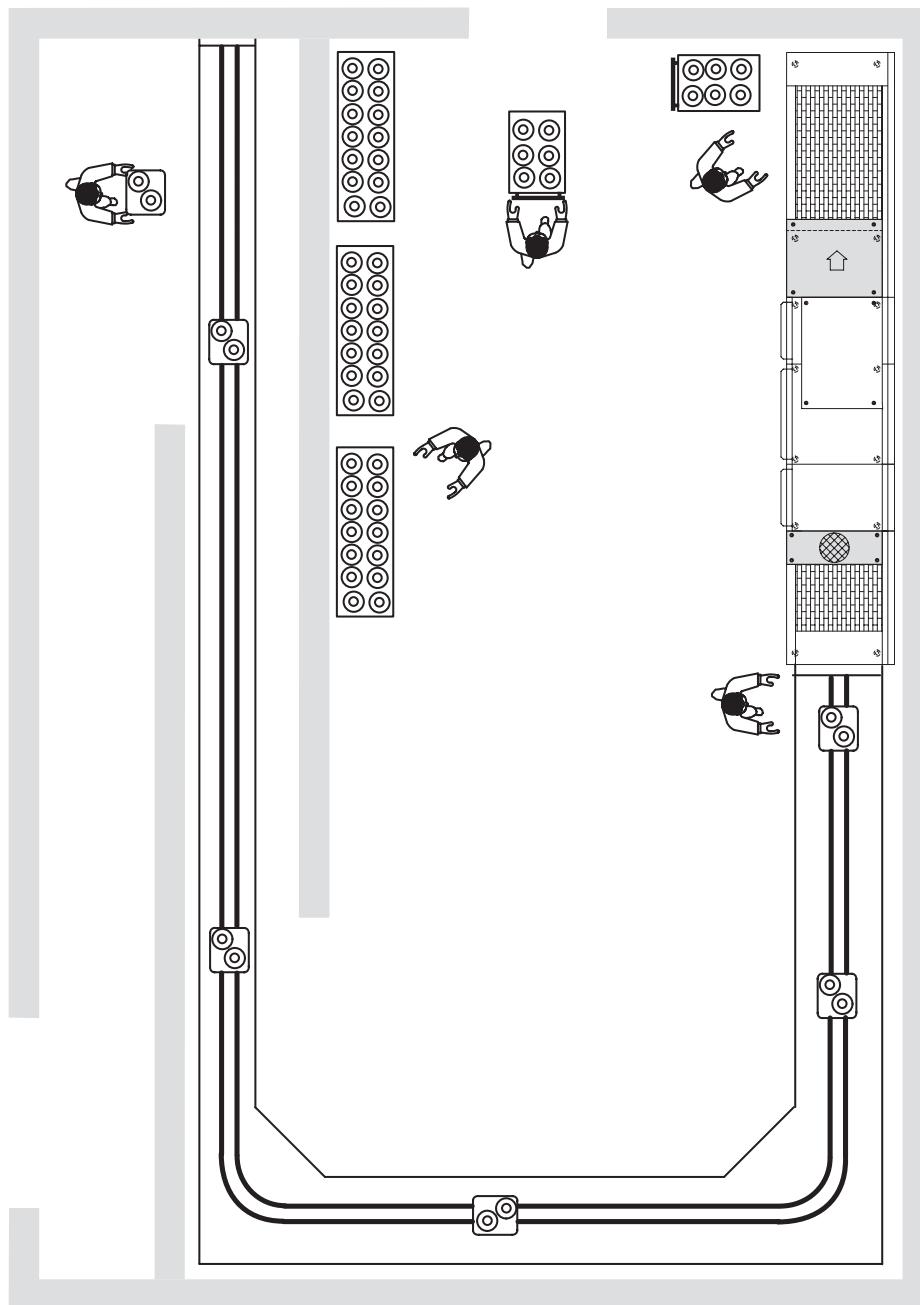


OUR DESIGN AT YOUR SERVICE

The machine design is guided by the company philosophy, which puts customer satisfaction at the centre.

Our team of expert, experienced designers is ready to meet your every need and demand, coming up with the best possible solutions in terms of effectiveness and efficiency and guaranteeing a top quality service.

The aim of our organisation is to stay with the customer all the way, from the design of the conveyor dishwasher right through to its installation, devising the best and fastest way to achieve the goal.



THE OPTIONALS, MAKING THE DISHWASHER EVEN MORE 'YOURS'

F12 drying on 600 mm shelf.

- Air flow rate at diffuser 1400 m³/h.
- Installed heating power 12 kW.
- Fan power 0.55/1.1 kW.
- Air temperature at diffuser outlet: thermostat controlled at 75°C.
- Tilted diffuser to increase drying speed for trays and oven trays.

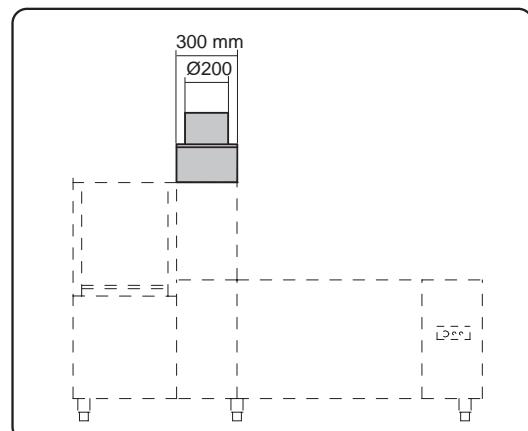
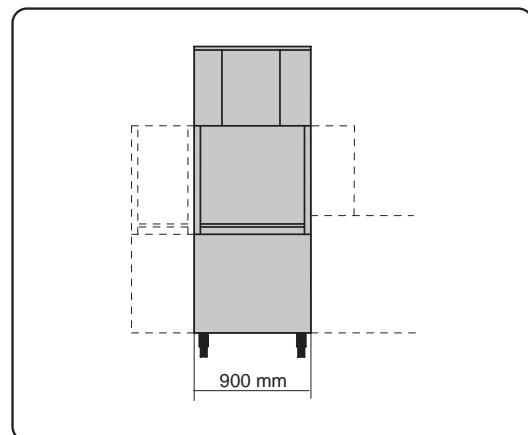
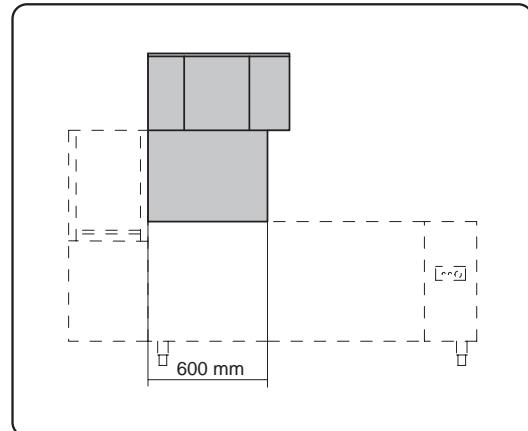
F12M stage dryer

- Gives better results than the F12 as it has a fully dedicated module of length 900 mm with independent cleaning door.
- Air flow rate at diffuser 1400 m³/h.
- Installed heating power 12 kW.
- Fan power 0.55 kW.
- Air temperature at diffuser outlet: thermostat controlled at 75°C.
- Tilted diffuser to increase drying speed for trays and oven trays.
- Possibility of installing additional drying stages in series, or linked to an F12.
- Turbine installation available for maximum moisture reduction on trays, insulated plastic items, etc.
- If turbines are installed, you are advised to fit the FNO dryer separator between the rinsing and drying zone, to prevent the steam in the washing and rinsing zone being blown out by the large quantities of air sent in by the blowers.

F14 steam condensation

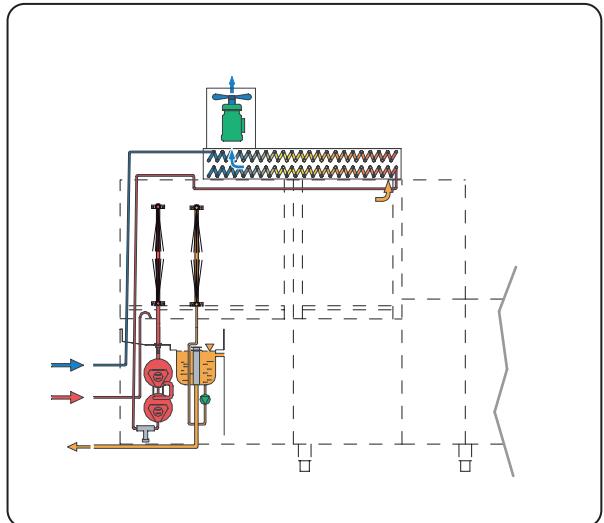
- Air flow rate 350 m³/h.
- Fan power 0.18 kW.
- Air temperature at outlet 23°C.
- Water flow rate at unit settable from 0 to 6 litres/minute.

Note: If there is no suitable extractor hood, optionals F26 or F26PC1 are essential requirements in the room.



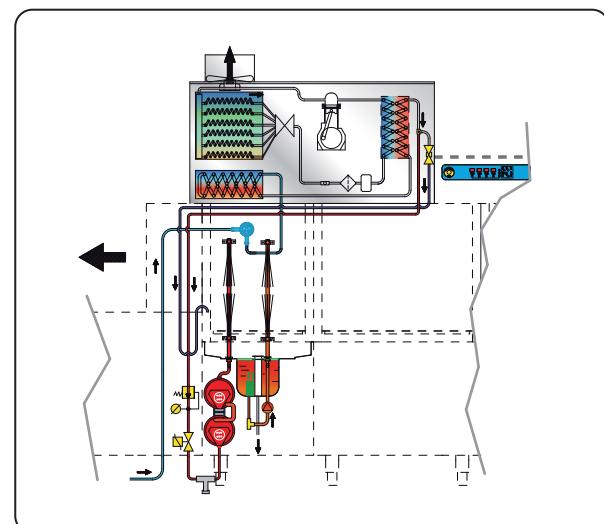
F26 heat recovery

- The energy recovered with the infeed supply temperature at 15°C and the machine running (pumps and rinsing on) is greater than 12 kW.
- Recovery heat exchange surface: 50 m², i.e. a good compromise between the amount of energy recovered and the cost of the unit with its copper tubes and aluminium fins.
- Fan air flow rate 350 m³/h, maximised on the basis of the quantity of steam produced.
- The positioning of the recovery unit intake depends on the optionals installed, e.g. if a dryer is installed the rinsing steam is pushed a long way from the rinsing zone and therefore the recovery unit intake has to be moved accordingly.
- This device allows the machine to be run with a cold water supply, saving heating power by recovering the heat of the rinsing steam, energy that would otherwise be lost.



F26PC1 heat recovery with heat pump

- Energy recovered with intake at 15°C with machine running (i.e. pumps and rinsing on) is over 21 kW.
- Recovery heat exchange surface: 35 m², i.e. a good compromise between the amount of energy recovered and the cost of the heat pump.
- Copper tubes and aluminium fins.
- 4 kW compressor.
- Minimum temperature of air emitted into environment: 10°C, which can be used to condition the environment in the kitchen by emitting cool, dry air.
- Fan air flow rate 350 m³/h, maximised on the basis of the quantity of steam produced.
- The positioning of the recovery unit intake depends on the optionals installed, e.g. if a dryer is installed the rinsing steam is pushed a long way from the rinsing zone and therefore the recovery unit intake has to be moved accordingly.
- This device allows the machine to be run with a cold water supply, saving heating power by recovering the heat of the rinsing steam, energy that would otherwise be lost.

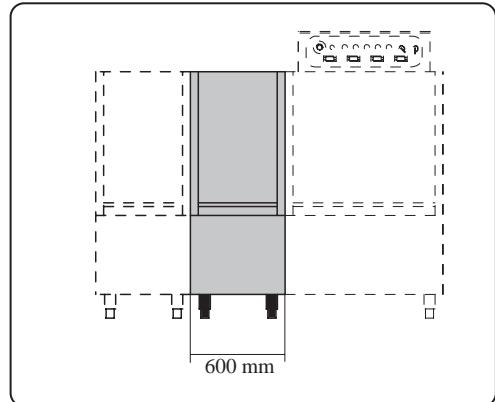


N.B.: An F14 cannot be combined with an F26 or F26PC1 recovery unit.

FN neutral zone

- 600 mm machine extension

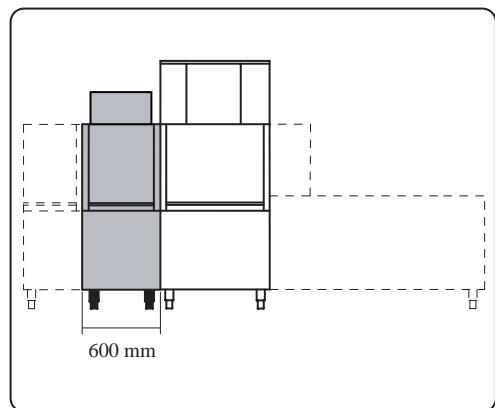
Specially recommended to avoid contamination between tanks when washing EURONORM trays or particularly long items.



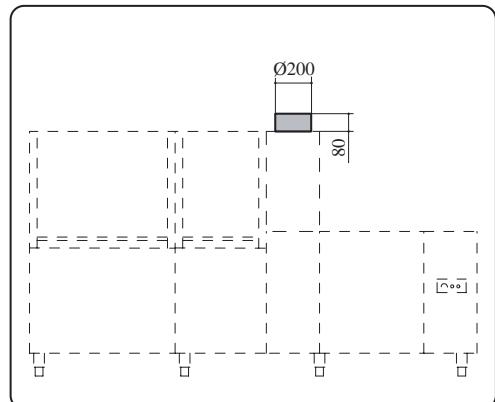
FNO dryer separator

- Recommended between the rinse and drying area, when turbo-blowers or several drying modules are installed on the machine. This separator prevents the drying-air to cool the machine tunnel down.

Not applicable if the machine is equipped with thermal-recovery device or steam condensing unit.



K17 splash guards with vent



Stainless steel pumps

More strong mechanically and not attachable from chemical aggressions

System of speed by variable inverter

It allows to select ten different speeds of washing, in according to the typology of dirt.

		F3300	F3300V	F4900	F4900V	F5700	F5700V
	UM	DW077	DW077	DW077	DW077	DW077	DW077
GENERAL SPECIFICATIONS							
dimensions (w ⁽⁶⁾ x d x h)	mm	4500 x 950 x 1770/2200		5100 x 950 x 1770/2200		5400 x 950x 1770/2200	
useful passage (w x h)	mm	710x450		710x450		710x450	
Belt speed	m/min	0.8/1.23	0.8/1.23	0.9/1.35	0.9/1.35	1/1.6	1/1.6
plates / hour ⁽⁷⁾	piatti/h	2400/3710	2400/3710	2700/4080	2700/4080	3200/4820	3200/4820
Belt speed	m/min	0,65 ⁽³⁾	0,65 ⁽³⁾	0,9	0,9	1	1
plates / hour DIN 10510 ⁽²⁾	piatti/h	1960 ⁽³⁾	1960 ⁽³⁾	2700	2700	3200	3200
Contact time referred to minimum speed	s	98	98	126	126	132	132
power supply STD ⁽¹⁾	Vac	400/3N	400/3N	400/3N	400/3N	400/3N	400/3N
driving motor	kW	0,22	0,22	0,22	0,22	0,22	0,22
Min/Max washing pressure	kPa	150/600	150/600	150/600	150/600	150/600	150/600
Min/Max steam pressure	kPa	-	50/70	-	50/70	-	50/70
1 m noise	dB(A)	-	-	72	72	72	72
net weight	kg	595	595	730	730	745	745
net weight	kg	180	180	200	200	220	220
Division in 2/3 pieces	n°	-	-	-	-	2	2
ENTRY SHELF							
Length module	mm	1200		1200		1200	
EXIT SHELF							
Length module	mm	1800		1800		1800	
PRE-WASHING							
Length module	mm	-	-	600		900	
pump	kW	-	-	1,15	1,15	2,18	2,18
capacity	l/min	-	-	400	400	700	700
tank capacity	l	-	-	70	70	110	110
operating temperature	°C	-	-	45	45	45	45
1st CHEMICAL WASH							
Length module	mm	900		900		900	
pump	kW	2,18	2,18	2,18	2,18	2,18	2,18
capacity	l/min	700	700	700	700	700	700
tank capacity	l	110	110	110	110	110	110
tank heating element	kW/kg/h	14	23 kgv/h	14	23 kgv/h	14	23 kgv/h
operating temperature	°C	55	55	55	55	55	55
2st CHEMICAL WASH							
Length module	mm	-	-	-	-	-	-
pump	kW	-	-	-	-	-	-
capacity	l/min	-	-	-	-	-	-
tank capacity	l	-	-	-	-	-	-
tank heating element	kW/kg/h	-	-	-	-	-	-
operating temperature	°C	-	-	-	-	-	-
3rd CHEMICAL WASH							
Length module	mm	-	-	-	-	-	-
pump	kW	-	-	-	-	-	-
capacity	l/min	-	-	-	-	-	-
tank capacity	l	-	-	-	-	-	-
tank heating element	kW/kg/h	-	-	-	-	-	-
operating temperature	°C	-	-	-	-	-	-
4th CHEMICAL WASH							
Length module	mm	-	-	-	-	-	-
pump	kW	-	-	-	-	-	-
capacity	l/min	-	-	-	-	-	-
tank capacity	l	-	-	-	-	-	-
tank heating element	kW	-	-	-	-	-	-
operating temperature	°C	-	-	-	-	-	-
PUMP-RINSE							
Length module	mm	600		600		600	
pump	kW	0,2	0,2	0,2	0,2	0,2	0,2
capacity	l/min	120	120	120	120	120	120
tank capacity	l	12	12	12	12	12	12
operating temperature	°C	75	75	75	75	75	75
RINSING							
consumption (at pressure calibration)	l/h	260	260	280	280	340	340
operating temperature	°C	85	85	85	85	85	85
Water supply 55°C							
total power	kW	28,6	2,6	31,25	3,75	35,28	4,78
boiler heating element B1-B2-B3-B4 [W13 400]	kW	6+6 [Z]	20 kgv/h : [V]	4,5+9[3]	22 kgv/h : [V]	4,5+12 [2]	27 kgv/h : [V]
boiler capacity	l	2x10	7,5	2x10	7,5	2x10	7,5
steam consumption (50kPa)	kg/h	-	43 kgv/h	-	45 kgv/h	-	50 kgv/h
Water supply 10°C							
total power	kW	42,6	2,6	44,75	3,75	51,78	4,78
boiler heating element B1-B2-B3-B4 [W13 400]	kW	6+6+14 [4]	43 kgv/h : [V]	9+9+9 [F]	44 kgv/h : [V]	9+12+12 [H]	54 kgv/h : [V]
boiler capacity	l	3x10	7,5	3x10	7,5	3x10	2x7,5
steam consumption (50kPa)	kg/h	-	66 kgv/h	-	67 kgv/h	-	77 kgv/h
Heat recovery FC91R (Water supply 10°C)							
Power required	kW	0,18	0,18	0,18	0,18	-	-
total power	kW	36,78	2,78	38,93	3,93	-	-
boiler heating element B1-B2-B3-B4 [W13 400]	kW	6+14 [W]	33 kgv/h : [V]	9+12 [G]	34 kgv/h : [V]	9+14 [1]	38 kgv/h : [V]
boiler capacity	l	2x10	7,5	2x10	7,5	2x10	7,5
steam consumption (50kPa)	kg/h	-	56 kgv/h	-	57 kgv/h	-	-
Heat recovery FC98 (Water supply 10°C)							
Power required	kW	-	-	0,18	0,18	0,18	0,18
total power	kW	-	-	35,93	3,93	41,96	4,96
boiler heating element B1-B2-B3-B4 [W13 400]	kW	-	-	6+12 [B]	29 kgv/h : [V]	9+14 [1]	38 kgv/h : [V]
boiler capacity	l	-	-	2x10	7,5	2x10	7,5
steam consumption (50kPa)	kg/h	-	-	-	52 kgv/h	-	61 kgv/h
Heat recovery FC99/1 (Water supply 10°C)							
Power required	kW	-	-	4,16	4,16	4,16	4,16
total power	kW	-	-	35,41	7,91	39,44	8,94
boiler heating element B1-B2-B3-B4 [W13 400]	kW	-	-	4,5+9[3]	22 kgv/h : [V]	4,5+12 [2]	27 kgv/h : [V]
boiler capacity	l	-	-	2x10	7,5	2x10	7,5
steam consumption (50kPa)	kg/h	-	-	-	45 kgv/h	-	50 kgv/h
Measure A - hydraulic diagram	mm	80	80	80	80	80	80
Measure B - hydraulic diagram	mm	250	250	250	250	250	250
Measure C - hydraulic diagram	mm	380	380	380	380	380	380

* Standard

** Plates Ø 230mm

(1)Special voltage available

Water supply 50°C

Water hardness 2°- 10 °F

Technical data subject to alteration without prior notice

F7200	F7200V	F7600	F7600V	F9500	F9500V	F9800	F9800V	F10000	F10000V
DW077	DW077	DW077	DW077	DW077	DW077	DW077	DW077	DW077	DW077
<i>6000 x 950 x 1770/2200 710x450</i>									
1,4/2,15	1,4/2,15	1,45/2,25	1,45/2,25	1,75/2,7	1,75/2,7	1,95/3	1,95/3	2,15/3,3	2,15/3,3
4200/6360	4200/6360	4500/6800	4500/6800	5400/8160	5400/8160	6000/9070	6000/9070	6600/10000	6000/10000
1,4	1,4	1,45	1,45	1,75	1,75	1,95	1,95	2,15	2,15
4200	4200	4500	4500	5400	5400	6000	6000	6600	6600
120	120	128	128	127	127	123	123	128	128
400/3N	400/3N	400/3N	400/3N	400/3N	400/3N	400/3N	400/3N	400/3N	400/3N
0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22
150/600	150/600	150/600	150/600	150/600	150/600	150/600	150/600	150/600	150/600
-	50/70	-	50/70	-	50/70	-	50/70	-	50/70
-	-	-	-	-	-	-	-	-	-
880	880	895	895	1030	1030	1045	1045	1180	1180
240	240	250	250	2900	290	300	300	330	330
2	2	2	2	2	2	2/3	2/3	2/3	2/3
STD M.S.	STD M.S.	STD M.S.	STD M.S.	STD M.S.	STD M.S.	STD M.S.	STD M.S.	STD M.S.	STD M.S.
1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
600	900	600	900	600	900	600	900	600	900
1,15	1,15	2,18	2,18	1,15	1,15	2,18	2,18	1,15	1,15
400	400	700	700	400	400	700	700	400	400
70	70	110	110	70	70	110	110	70	70
45	45	45	45	45	45	45	45	45	45
900	900	900	900	900	900	900	900	900	900
2,18	2,18	2,18	2,18	2,18	2,18	2,18	2,18	2,18	2,18
700	700	700	700	700	700	700	700	700	700
110	110	110	110	110	110	110	110	110	110
12	20 kgv/h	12	20 kgv/h	12	20 kgv/h	12	20 kgv/h	12	20 kgv/h
55	55	55	55	55	55	55	55	55	55
900	900	900	900	900	900	900	900	900	900
2,18	2,18	2,18	2,18	2,18	2,18	2,18	2,18	2,18	2,18
700	700	700	700	700	700	700	700	700	700
110	110	110	110	110	110	110	110	110	110
14	23 kgv/h	14	23 kgv/h	12	20 kgv/h	12	20 kgv/h	12	20 kgv/h
60	60	60	60	60	60	60	60	60	60
-	-	-	-	900	900	900	900	900	900
-	-	-	-	2,18	2,18	2,18	2,18	2,18	2,18
-	-	-	-	700	700	700	700	700	700
-	-	-	-	110	110	110	110	110	110
-	-	-	-	14	23 kgv/h	14	23 kgv/h	12	20 kgv/h
-	-	-	-	65	65	65	65	65	65
-	-	-	-	-	-	-	-	-	900
-	-	-	-	-	-	-	-	2,18	2,18
-	-	-	-	-	-	-	-	700	700
-	-	-	-	-	-	-	-	110	110
-	-	-	-	-	-	-	-	14	23 kgv/h
-	-	-	-	-	-	-	-	70	70
600	600	600	600	600	600	600	600	600	600
0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
120	120	120	120	120	120	120	120	120	120
12	12	12	12	12	12	12	12	12	12
75	75	75	75	75	75	75	75	75	75
460	460	480	480	565	565	640	640	670	670
85	85	85	85	85	85	85	85	85	85
54,93	5,93	56,96	6,96	72,11	8,11	74,14	9,14	90,29	10,29
9+14 [1]	38 kgv/h : [V]	12+12 [D]	39 kgv/h : [V]	12+14 [E]	43 kgv/h : [V]	9+9+9 [F]	44 kgv/h : [V]	9+9+12 [G]	49 kgv/h : [V]
2x10	7,5	2x10	2x7,5	2x10	2x7,5	3x10	2x7,5	3x10	2x7,5
-	81 kgv/h	-	82 kgv/h	-	106 kgv/h	-	107 kgv/h	-	132 kgv/h
79,93	5,93	82,96	6,96	100,11	8,11	N.D.	N.D.	N.D.	N.D.
12+12+12+12 [5]	79 kgv/h : [V]	12+12+12+14 [6]	82 kgv/h : [V]	12+14+14+14 [7]	88 kgv/h : [V]	-	-	-	-
4x10	2x7,5	4x10	2x7,5	4x10	2x7,5	-	-	-	-
-	122 kgv/h	-	125 kgv/h	-	151 kgv/h	-	-	-	-
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
0,18	0,18	0,18	0,18	0,18	0,18	0,18	0,18	0,18	0,18
68,11	6,11	71,14	7,14	89,29	8,29	99,32	9,32	114,47	10,47
12+12+12 [I]	59 kgv/h : [V]	12+12+14 [Y]	62 kgv/h : [V]	6+9+14+14 [8]	70 kgv/h : [V]	12+12+14+14 [9]	85 kgv/h : [V]	12+14+14+14 [7]	88 kgv/h : [V]
3x10	2x7,5	3x10	2x7,5	4x10	2x7,5	4x10	2x7,5	4x10	2x7,5
-	102 kgv/h	-	105 kgv/h	-	133 kgv/h	-	148 kgv/h	-	171 kgv/h
4,16	4,16	4,16	4,16	4,16	4,16	4,16	4,16	4,16	4,16
66,09	10,09	70,12	11,12	88,27	12,27	99,3	8,94	114,45	10,09
9+9+12 [G]	49 kgv/h : [V]	9+12+12 [H]	54 kgv/h : [V]	12+12+14 [Y]	62 kgv/h : [V]	12+12+12+12 [5]	79 kgv/h : [V]	12+12+12+14 [6]	82 kgv/h : [V]
3x10	2x7,5	3x10	2x7,5	3x10	2x7,5	4x10	2x7,5	4x10	2x7,5
-	92 kgv/h	-	97 kgv/h	-	125 kgv/h	-	142 kgv/h	-	165 kgv/h
80	80	80	80	80	80	80	80	80	80
250	250	250	250	250	250	250	250	250	250
380	380	380	380	380	380	380	380	380	380

* Standard

** Plates Ø 230mm

(1)Special voltages available

Water supply 50°C

Water hardness 2°-10 °F

Technical data subject to alteration without prior notice

Property right reserved in accordance with the law- Reproduction or dissemination forbidden without written authorisation.

FP5000	FP5000V	FP7500	FP7500V	FP10000	FP10000V	FP12500	FP12500V
DW084	DW084	DW084	DW084	DW084	DW084	DW084	DW084
4900 x 950 x 1770/2200 710x450		5800 x 950 x 1770/2200 710x450		6700 x 950 x 1770/2200 710x450		7600 x 950 x 1770/2200 710x450	
2,2/3,45	2,2/3,45	3,25/5,1	3,25/5,1	4,45/6,95	4,45/6,95	5,27/8,23	5,27/8,23
400/3N	400/3N	400/3N	400/3N	400/3N	400/3N	400/3N	400/3N
0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22
150/600	150/600	150/600	150/600	150/600	150/600	150/600	150/600
-	50/70	-	50/70	-	50/70	-	50/70
-	-	72	72	-	-	-	-
625	625	775	775	925	925	1075	1075
200	200	230	230	270	270	270	270
-	-	2	2	2	2	2	2
STD M.S	STD M.S						
1200	1200	1200	1200	1200	1200	1200	1200
1800		1800		1800		1800	
-	-	900		900		900	
-	-	2,18	2,18	2,18	2,18	2,18	2,18
-	-	650	650	650	650	650	650
-	-	110	110	110	110	110	110
-	-	45	45	45	45	45	45
1300		1300		900		900	
2,18	2,18	2,18	2,18	2,18	2,18	2,18	2,18
650	650	650	650	650	650	650	650
110	110	110	110	110	110	110	110
14	23 kgv/h	14	23 kgv/h	12	20 kgv/h	12	20 kgv/h
55	55	63	63	55	55	55	55
-	-	-	-	1300		900	
-	-	-	-	2,18	2,18	2,18	2,18
-	-	-	-	650	650	650	650
-	-	-	-	110	110	110	110
-	-	-	-	14	23 kgv/h	12	20 kgv/h
-	-	-	-	65	65	60	60
-	-	-	-	-	-	1300	
-	-	-	-	-	-	2,18	2,18
-	-	-	-	-	-	650	650
-	-	-	-	-	-	110	110
-	-	-	-	-	-	14	23 kgv/h
-	-	-	-	-	-	65	65
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
600		600		600		600	
0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
120	120	120	120	120	120	120	120
12	12	12	12	12	12	12	12
75	75	75	75	75	75	75	75
315	315	370	370	500	500	600	600
85	85	85	85	85	85	85	85
31,6	2,6	36,78	4,78	56,96	6,96	74,14	9,14
6+9 [A]	25 kgv/h : [V]	6+12 [B]	29 kgv/h : [V]	12+12 [D]	39 kgv/h : [V]	9+9+9 [F]	44 kgv/h : [V]
2x10	7,5	2x10	7,5	2x10	7,5	3x10	2 x 7,5
-	48 kgv/h	-	52 kgv/h	-	82 kgv/h	-	107 kgv/h
46,6	2,6	54,78	4,78	82,96	6,96	N.D.	N.D.
9+9+12 [G]	49 kgv/h : [V]	12+12+12 [I]	59 kgv/h : [V]	12+12+12+14 [6]	82 kgv/h : [V]	-	-
3x10	7,5	3x10	2 x 7,5	4x10	2 x 7,5	-	-
-	72 kgv/h	-	82 kgv/h	-	125 kgv/h	-	-
0,18	0,18	0,18	0,18	0,18	0,18	0,18	0,18
40,78	2,78	91,92	4,96	78,14	4,96	83,14	4,96
12+12 [D]	39 kgv/h : [V]	9+9+12 [G]	49 kgv/h : [V]	9+12+12+12 [0]	74 kgv/h : [V]	12+12+14+14 [9]	85 kgv/h : [V]
3x10	7,5	3x10	2 x 7,5	4x10	2 x 7,5	4x10	2 x 7,5
-	62 kgv/h	-	72 kgv/h	-	94 kgv/h	-	105 kgv/h
0,18	0,18	0,18	0,18	0,18	0,18	0,18	0,18
36,78	2,78	44,96	4,96	71,14	7,14	95,32	9,32
6+14 [W]	33 kgv/h : [V]	12+14 [E]	43 kgv/h : [V]	12+12+14 [Y]	62 kgv/h : [V]	12+12+12+12 [5]	79 kgv/h : [V]
2x10	7,5	2x10	7,5	3x10	2 x 7,5	4x10	2 x 7,5
-	56 kgv/h	-	66 kgv/h	-	105 kgv/h	-	142 kgv/h
4,16	4,16	4,16	4,16	4,16	4,16	4,16	4,16
35,76	6,76	40,94	8,94	70,12	11,12	94,3	13,3
6+9[A]	25 kgv/h : [V]	6+12 [B]	29 kgv/h : [V]	9+12+12 [H]	54 kgv/h : [V]	6+9+14+14 [8]	70 kgv/h : [V]
2x10	7,5	2x10	7,5	3x10	2 x 7,5	4x10	2 x 7,5
-	48 kgv/h	-	52 kgv/h	-	97 kgv/h	-	133 kgv/h
80	80	80	80	80	80	80	80
250	250	250	250	250	250	250	250
380	380	380	380	380	380	380	380

* Standard

** Plates Ø 23mm

(1)Special voltage available

Water supply 50°C

Water hardness 2°- 10 °F

Technical data subject to alteration without prior notice

Property right reserved in accordance with the law- Reproduction or dissemination forbidden without written authorisation.

FP850	FP850V	FP1100	FP1100V
DW084	DW084	DW084	DW084
6200 x 950 x 1770/2200 710x450		7500 x 950 x 1770/2200 710x450	
1,4/2,15	1,4/2,15	1,95/3	1,95/3
400/3N	400/3N	400/3N	400/3N
0,22	0,22	0,22	0,22
150/600	150/600	150/600	150/600
-	50/70	-	50/70
-	-	-	-
785	785	1050	1050
240	240	300	300
2	2	2/3	2/3
STD M.S		STD M.S	
1200	1200	1200	1200
1800	1800	1800	1800
1300	1300	1300	1300
3	3	3	3
1000	1000	1000	1000
110	110	110	110
45	45	45	45
1300	1300	1300	1300
3,25	3,25	3,25	3,25
1000	1000	1000	1000
110	110	110	110
14	23 kgv/h	12	20 kgv/h
63	63	55	55
-	-	1300	1300
-	-	3,25	3,25
-	-	1000	1000
-	-	110	110
-	-	14	23 kgv/h
-	-	65	65
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
600	600	600	600
0,2	0,2	0,2	0,2
120	120	120	120
12	12	12	12
75	75	75	75
340	340	450	450
85	85	85	85
37,17	6,67	55,92	9,92
4,5+12 [2]	27 kgv/h : [V]	6+14 [W]	33 kgv/h : [V]
2x10	7,5	2x10	7,5
-	50 kgv/h	-	76 kgv/h
53,67	6,67	80,92	9,92
9+12+12 [H]	54 kgv/h : [V]	9+12+12+12 [0]	74 kgv/h : [V]
3x10	2x7,5	4x10	2x7,5
-	77 kgv/h	-	117 kgv/h
0,18	0,18	0,18	0,18
47,85	6,85	74,1	10,1
9+9+9 [F]	44 kgv/h : [V]	12+12+14 [Y]	62 kgv/h : [V]
3x10	7,5	3x10	2 x 7,5
-	67 kgv/h	-	105 kgv/h
0,18	0,18	0,18	0,18
43,85	6,85	71,1	10,1
9+14 [I]	38 kgv/h : [V]	9+12+14 [X]	57 kgv/h : [V]
2x10	7,5	3x10	2x7,5
-	61 kgv/h	-	100 kgv/h
4,16	4,16	4,16	4,16
41,33	10,83	70,08	14,08
4,5+12 [2]	27 kgv/h : [V]	9+9+12 [G]	49 kgv/h : [V]
2x10	7,5	3x10	2x7,5
-	50 kgv/h	-	92 kgv/h
80	80	80	80
250	250	250	250
380	380	380	380

* Standard

** Plates Ø 230mm

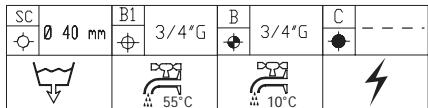
(1)Special voltage available

Water supply 50°C

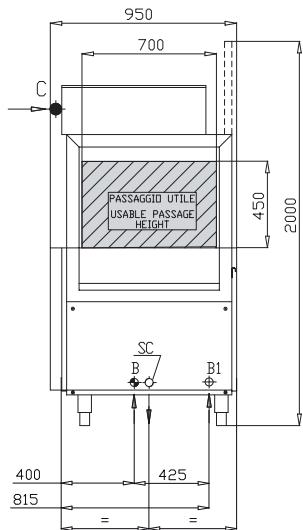
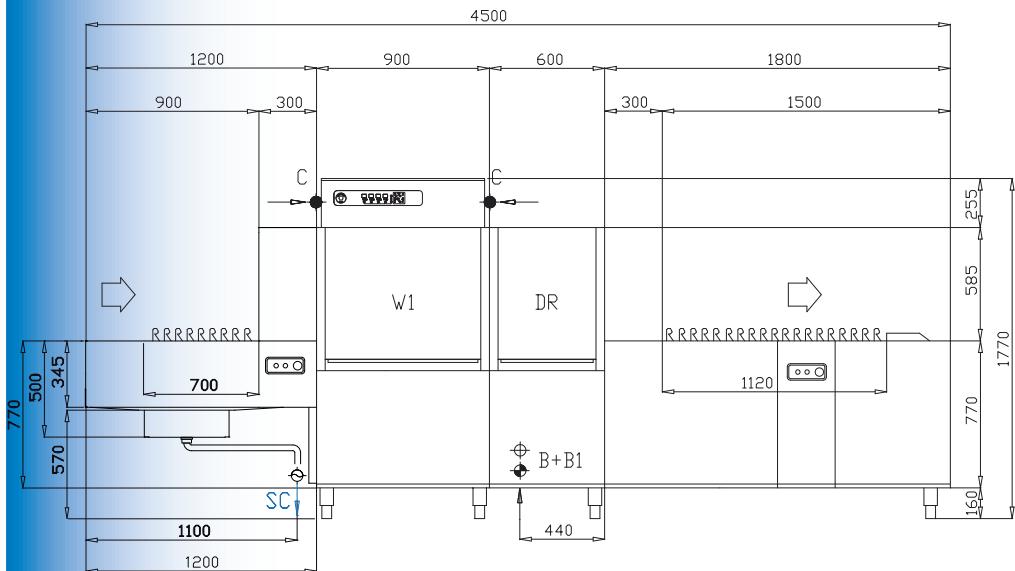
Water hardness 2°- 10 °F

Technical data subject to alteration without prior notice

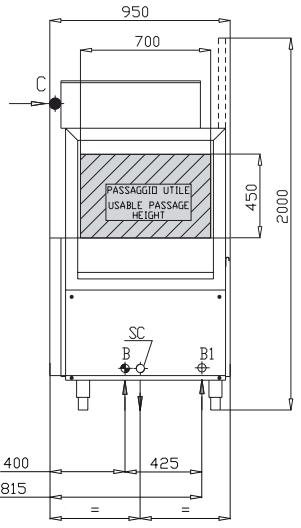
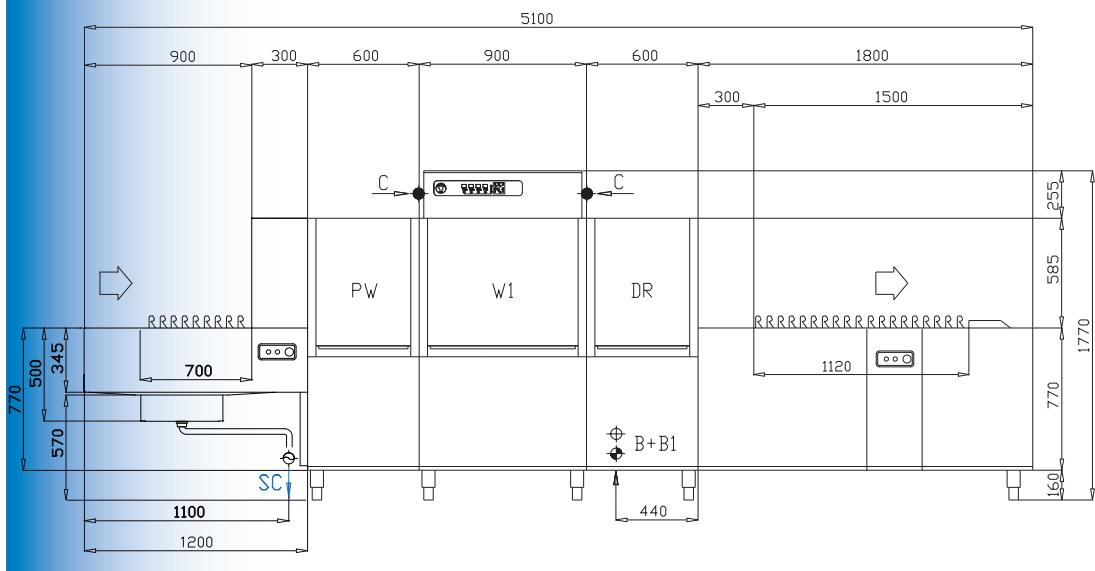
Property right reserved in accordance with the law- Reproduction or dissemination forbidden without written authorisation.



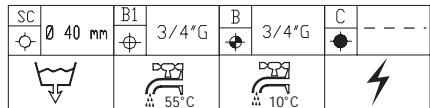
F3300



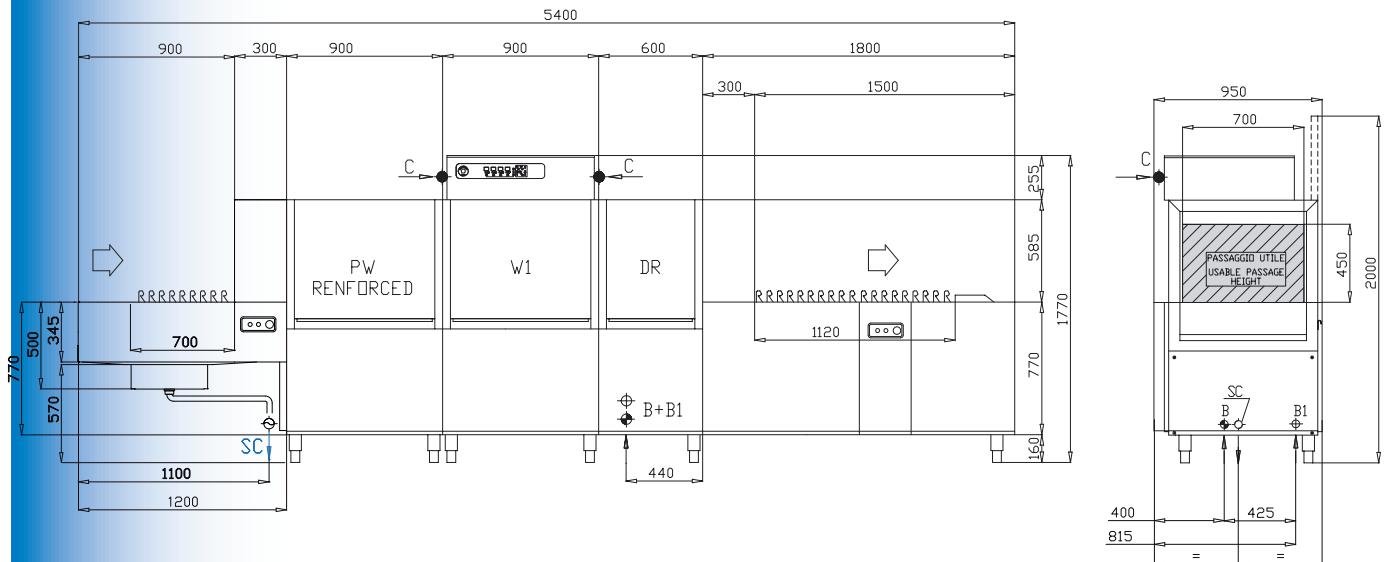
F4900



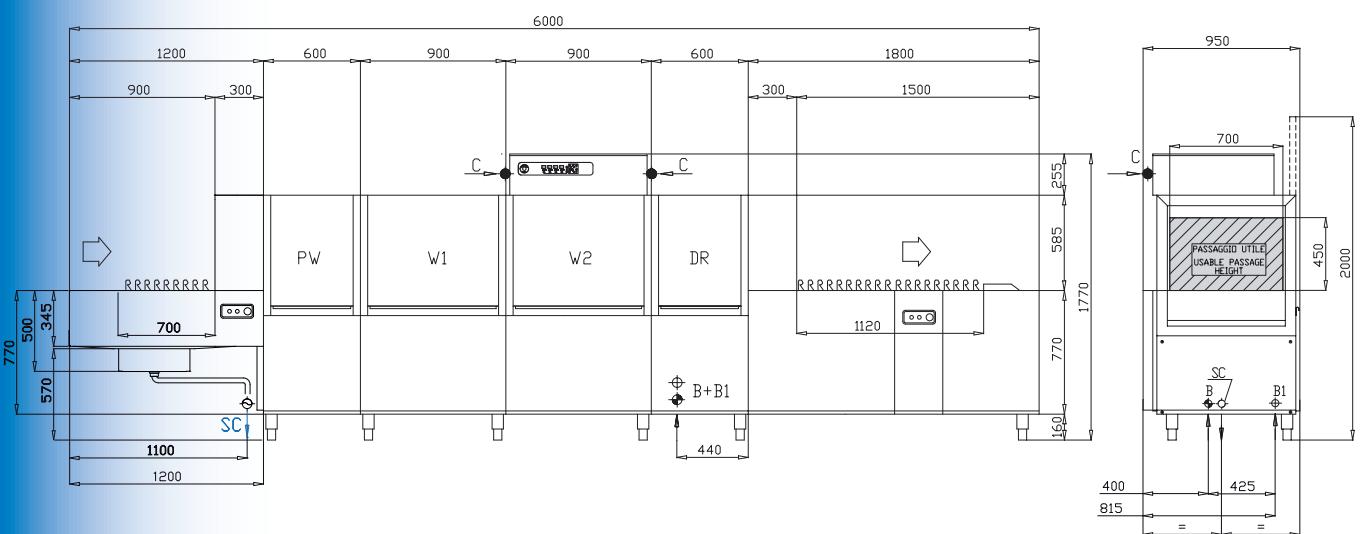
Technical data subject to alteration without prior notice



F5700

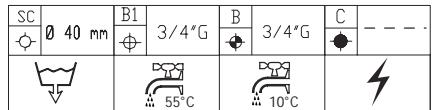


F7200

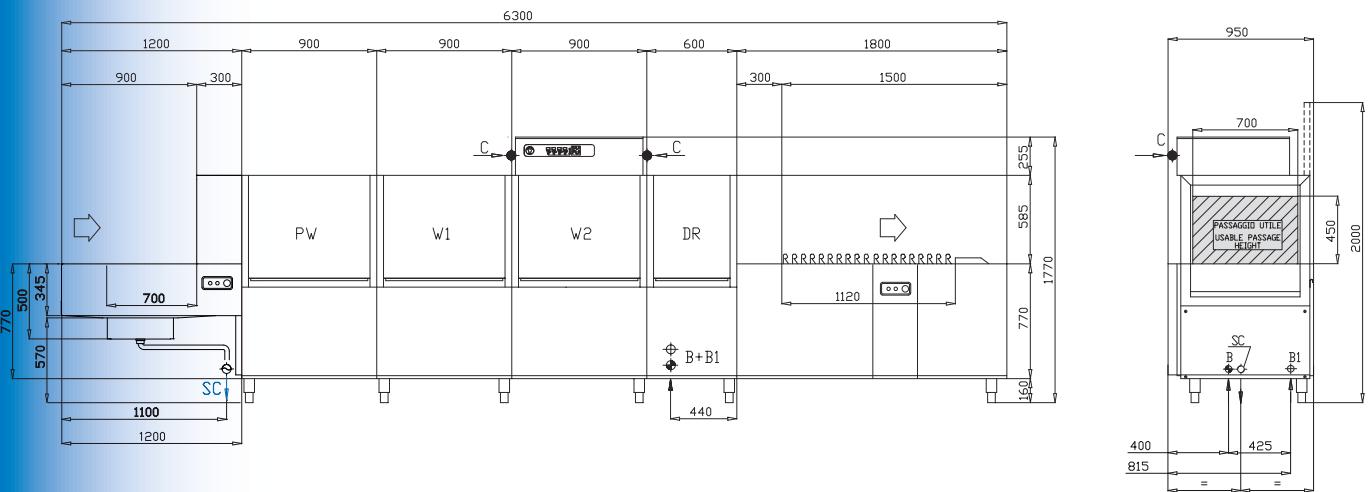


Technical data subject to alteration without prior notice

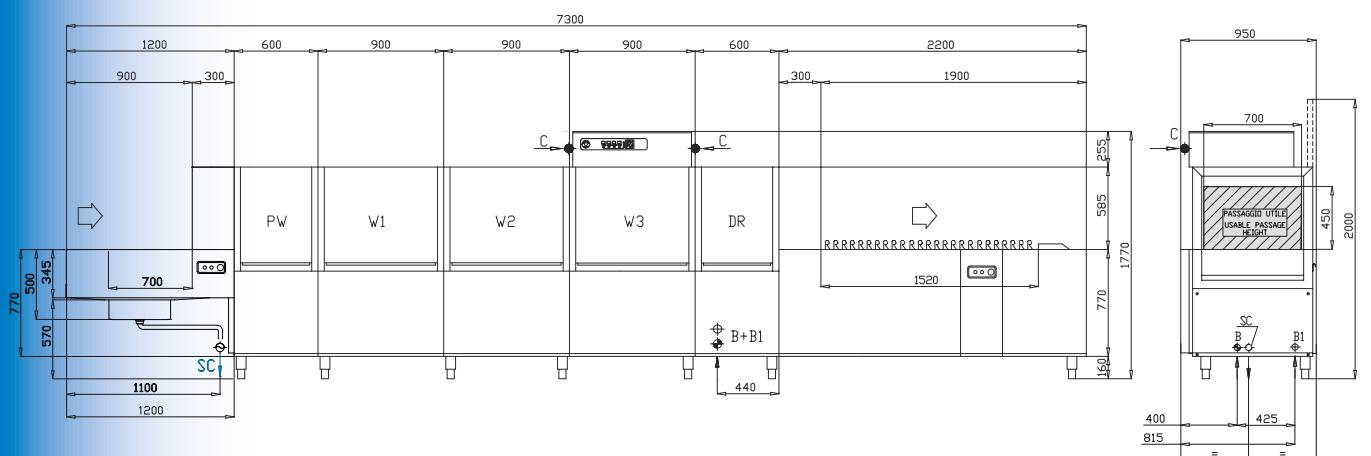
Property right reserved in accordance with the law- Reproduction or dissemination forbidden without written authorisation.



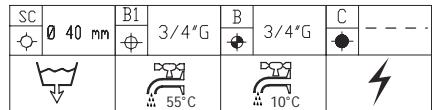
F7600



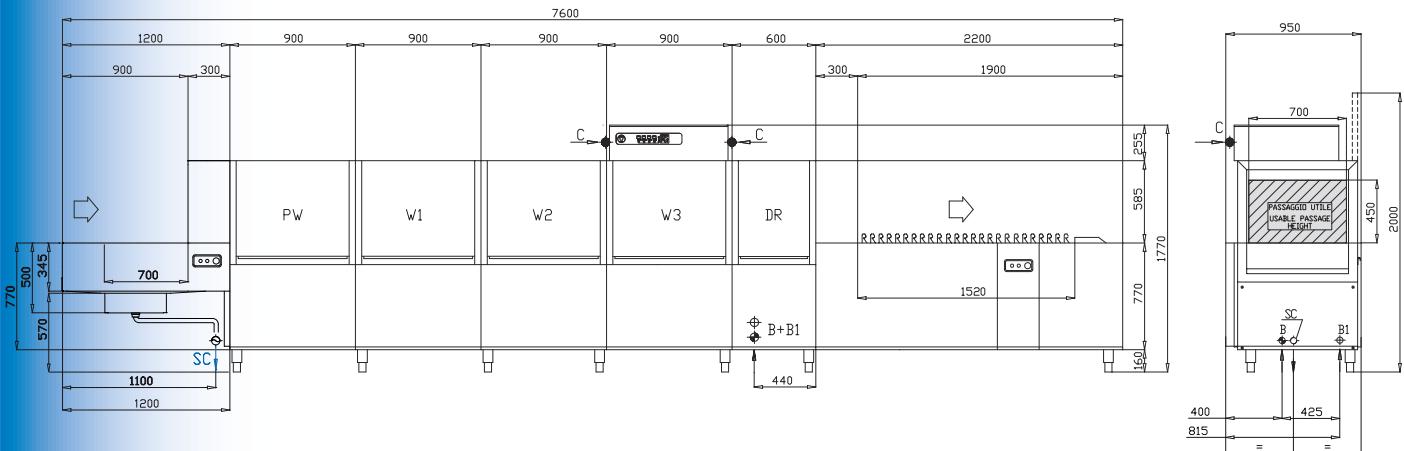
F9500



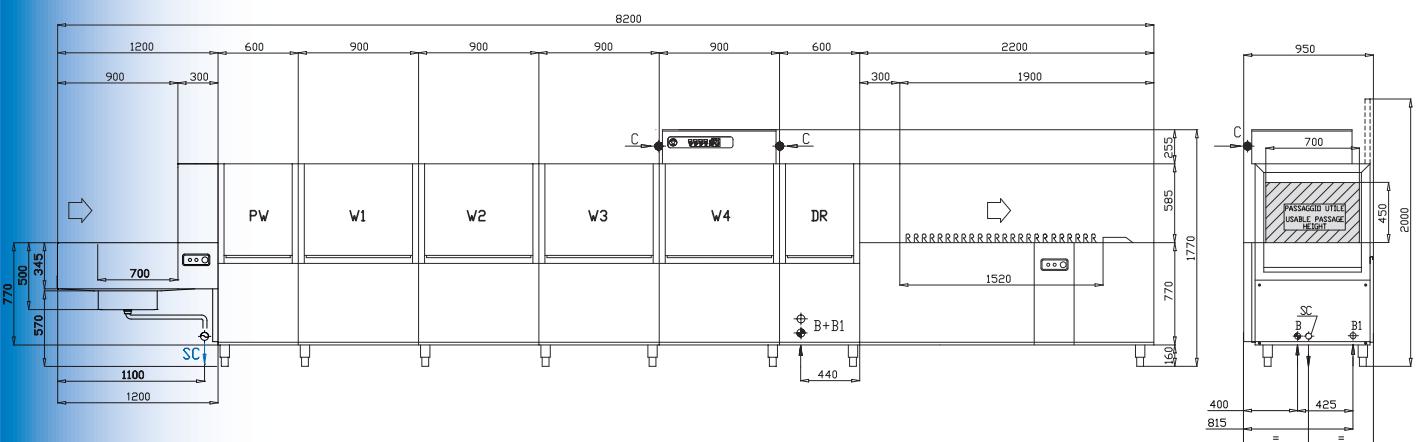
Technical data subject to alteration without prior notice



F9800

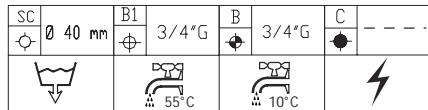


F10000

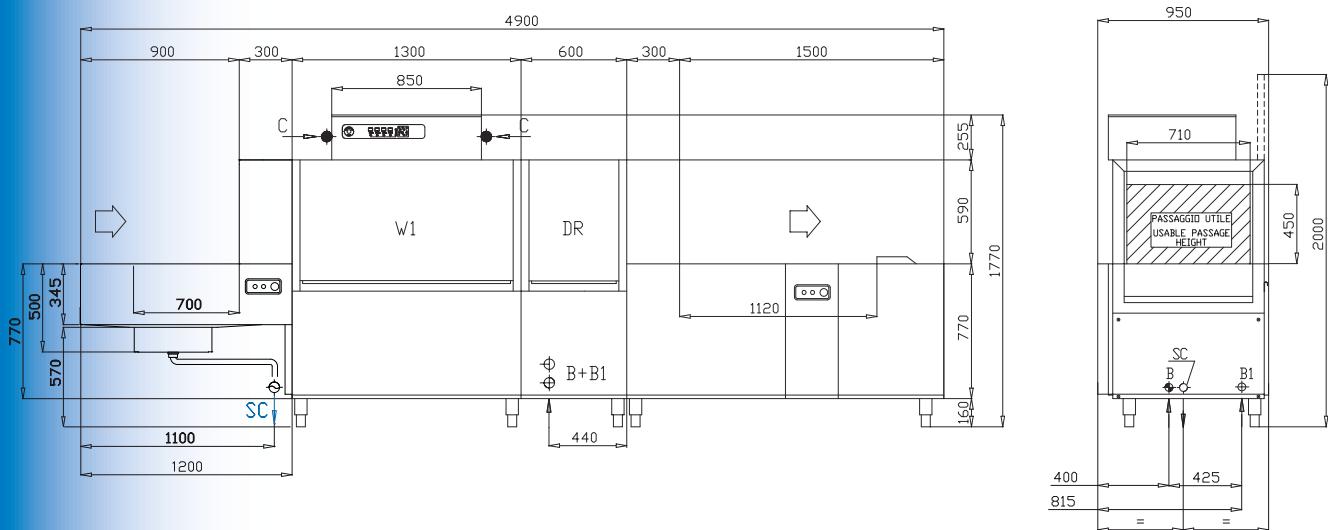


Technical data subject to alteration without prior notice

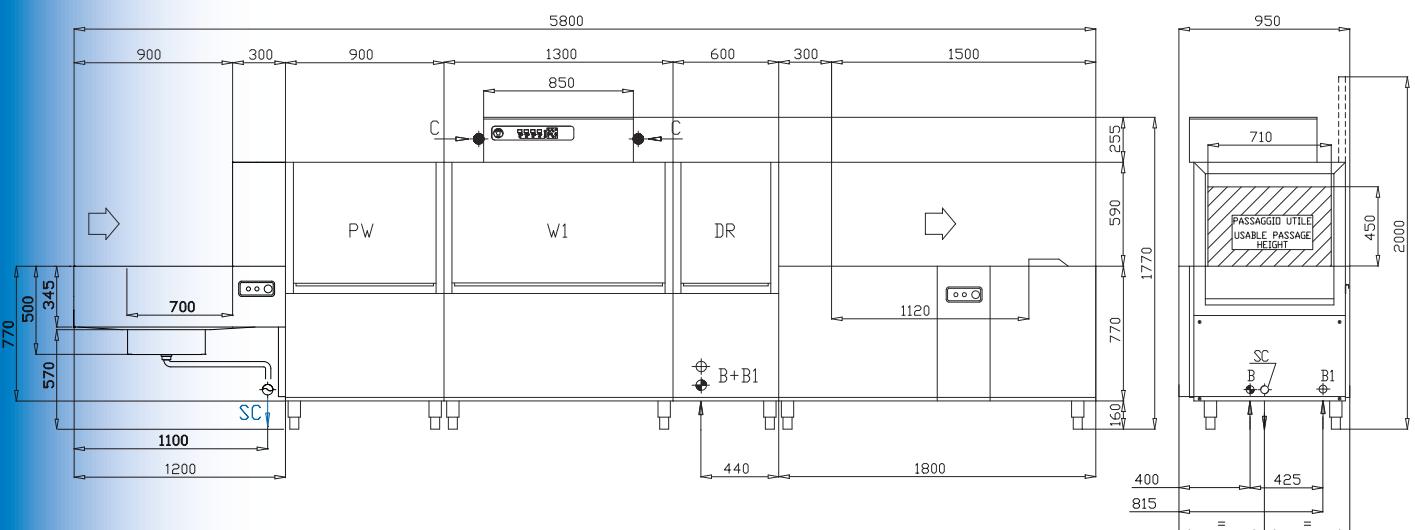
Property right reserved in accordance with the law- Reproduction or dissemination forbidden without written authorisation.



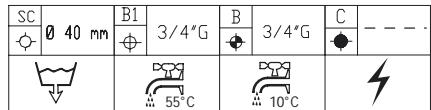
FP5000



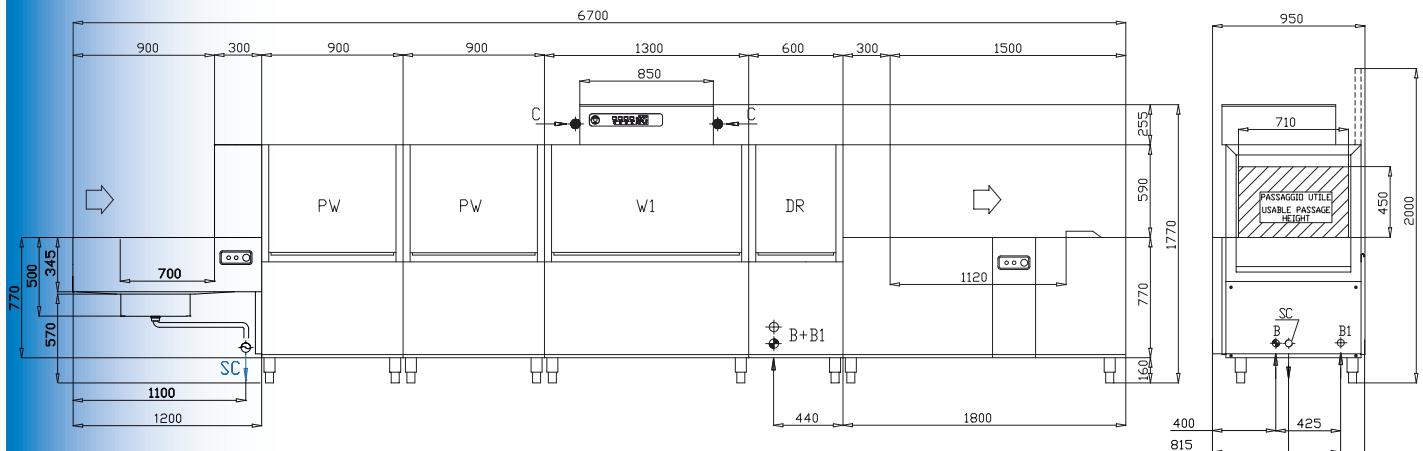
FP7500



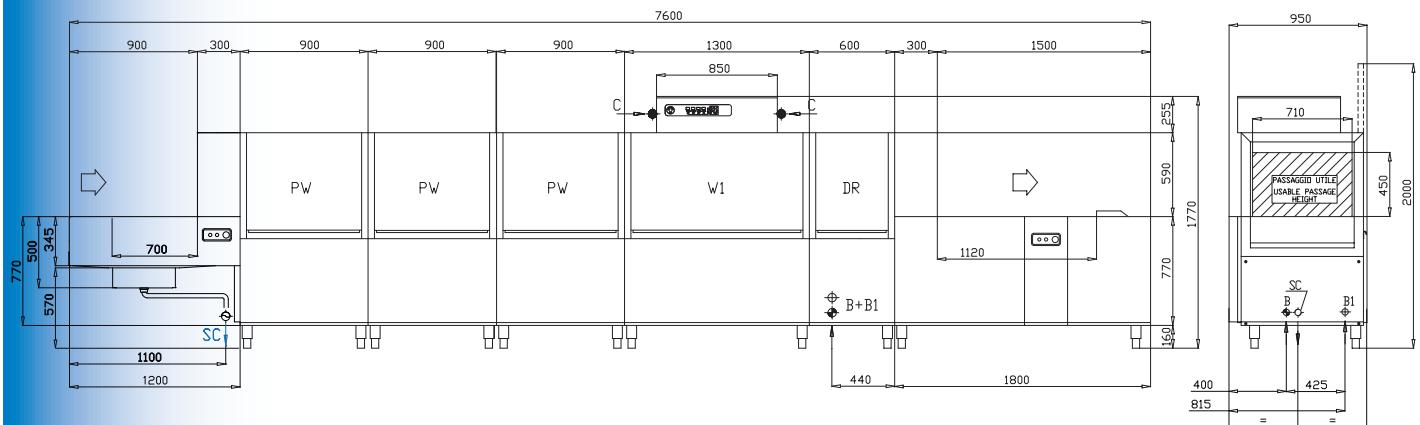
Technical data subject to alteration without prior notice



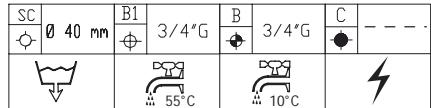
FP10000



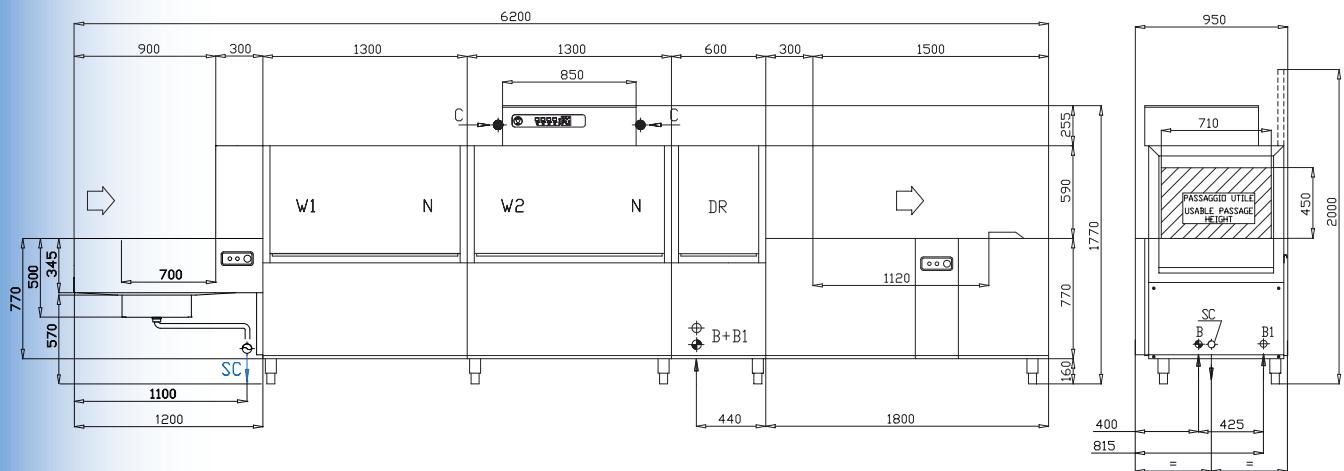
FP12500



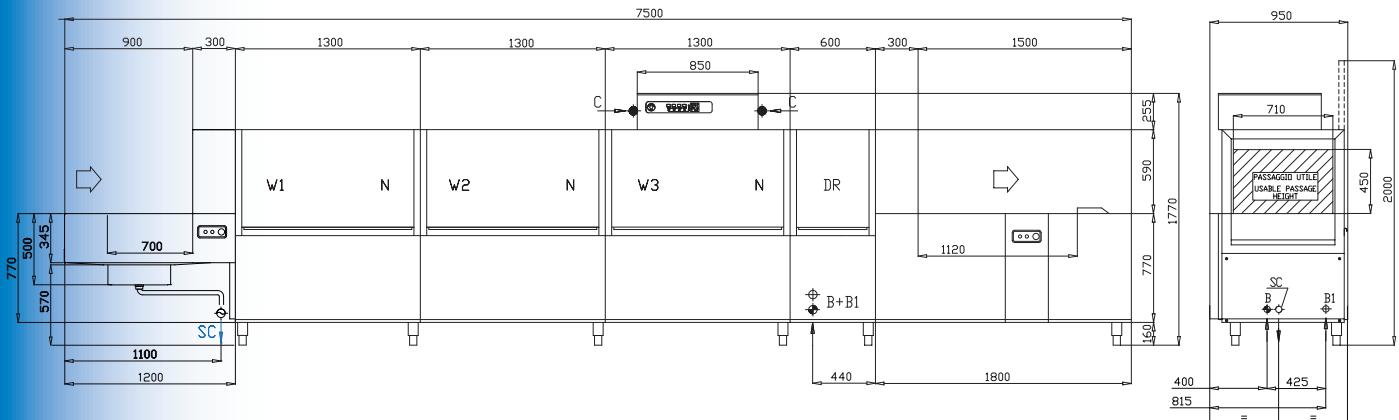
Technical data subject to alteration without prior notice



FP850



FP1100



Technical data subject to alteration without prior notice

NOTE