

## FE Series

Front-loading dishwasher



# Five good reasons to choose the FE Series

## 1 Hygiene

Tank with rounded edges to prevent soil accumulation along with the self-draining pump and automatic washing cycle to provide thorough cleaning of the washing chamber.

## 2 Reliability

The user-friendly electronic card provides information on the operating status. Diagrams and spare parts may be consulted 24/7 on the internet.

## 3 Performance

The patented WRIS washing system creates a double jet of water constantly acting on the dish surfaces, thus granting top washing results even with the utmost soil and short cycles.

## 4 Economy

Energy saving mode: the FE series front-loading dishwashers, while waiting for a new rack to load, heat up the water at lower temperatures. Furthermore some models are equipped with an ECO cycle that cuts down the rinse water consumption.

## 5 Quality

Machines built in a plant operating with an ISO 9001:2008 certified quality.





# FE SERIES

## Front-loading dishwasher



F3EHR



F3E+1



F4EHR



F44E

### THE RANGE

Applied in pastry shops, cafés, restaurants, hotels, canteens and hospitals, FE Series front loading dishwashers feature innovative systems and meet the highest standards in terms of performance, hygiene, dependability, consumption and noise reduction.

Available with two clearance heights (300 or 400 mm), the double wall structure in stainless steel AISI 304 helps in reducing the noise emissions. To ensure maximum hygiene and avoid the build-up of dirt all models feature rounded inside edges, moulded basket guides, self-draining pumps and automatic self-washing cycle. FE Series dishwashers feature the patented WRIS washing system: with its nozzles developed to create a double jet of water constantly acting on the dish surfaces, this system grants top washing results even with the utmost soil. The innovative built-in water softener automatically regenerates the resins according to water hardness and number of cycles performed.

Digital temperature display and user console with backlit program button that changes colour according to the machine status (heating, ready, in operation) are standard features of all the models in the FE Series.

Alongside models with traditional washing systems, the FE Series includes the HR models: DUMPER Dishwasher with Partial or Complete drain.

### DISHWASHER WITH TRADITIONAL WASHING

Each of the 4 available wash cycles with dripping and final rinse at 85 °C of the traditional washing type FE units grant excellent results.

User friendly and intuitive front control panel with digital interface displaying temperatures and machine operating status, along with alarms and gravity overflow drainage are standard features of these units.

A drainage pump can be easily installed or retrofitted in the machine structure upon request.

### HR UNITS: DUMPER DISHWASHERS WITH PARTIAL OR COMPLETE DRAIN

HR units are equipped with advanced devices such as the HAC electronic card for independent management of washing, dripping and rinsing times; the QHS (Quick Heating System) for heating water quickly during filling and optimising consumption; the Dynamic filtering system which constantly cleans rinse water, retaining solid wastes and releasing them prior to the rinse phase. Four wash cycles: three of them perform a partial draining before rinsing, the dirtier water, with residues retained by the filter, is drained down. Consequently the clean and 85 °C rinse water regenerates the water level in the tank.

Developed for moderately dirty dishes the ECO cycle reduces water, chemicals and energy consumption.

Selecting the fourth cycle, set for the dirtiest crockery, the machine performs a complete drainage of the tank water.

# Applications



• Pastry shops



• Bars



• Restaurants



• Hotels



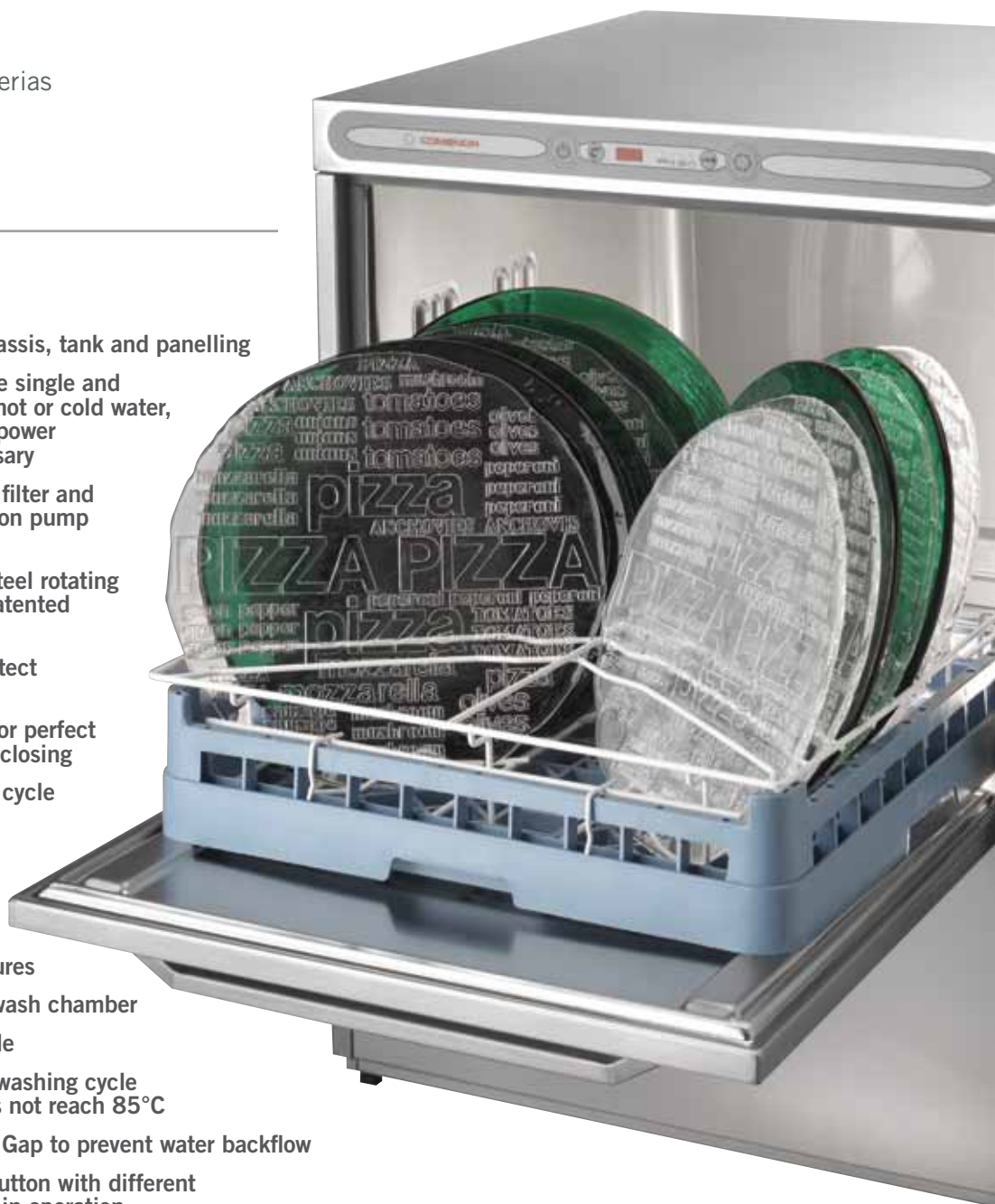
• Canteens & Cafeterias



• Hospitals

## ADVANTAGES

- Stainless steel AISI 304 chassis, tank and panelling
- Multipower voltage to enable single and three-phase connection for hot or cold water, reducing the total installed power of the machine when necessary
- Full tank flat stainless steel filter and DYNAMIC filter on the suction pump to retain soil
- Upper and lower stainless steel rotating wash and rinse arms with patented WRIS system
- Wash pump soft start to protect fragile crockery
- Perimeter labyrinth gasket for perfect sealing and cushioned door closing
- Automatic start of the wash cycle when the door is closed or button is pushed
- Double wall structure with moulded tank and self-draining pump
- Digital display for temperatures
- Wash columns outside the wash chamber
- Automatic self cleaning cycle
- Thermostop prolonging the washing cycle until rinse temperature does not reach 85°C
- Machine standard with Air Gap to prevent water backflow
- Multipurpose backlit start button with different colours (machine on, ready, in operation)
- Built-in rinse aid dispenser
- Detergent dispenser ready



< Detailed features



# FEATURES

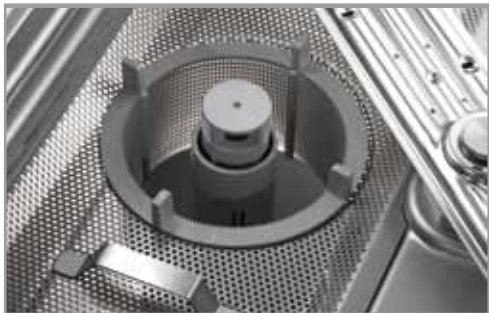
## and details

GREY  
line



### WASHING SYSTEM

Patented WRIS washing system: through a double jet of water constantly acting on the dish surfaces, this system grants top washing results even with the utmost soil.



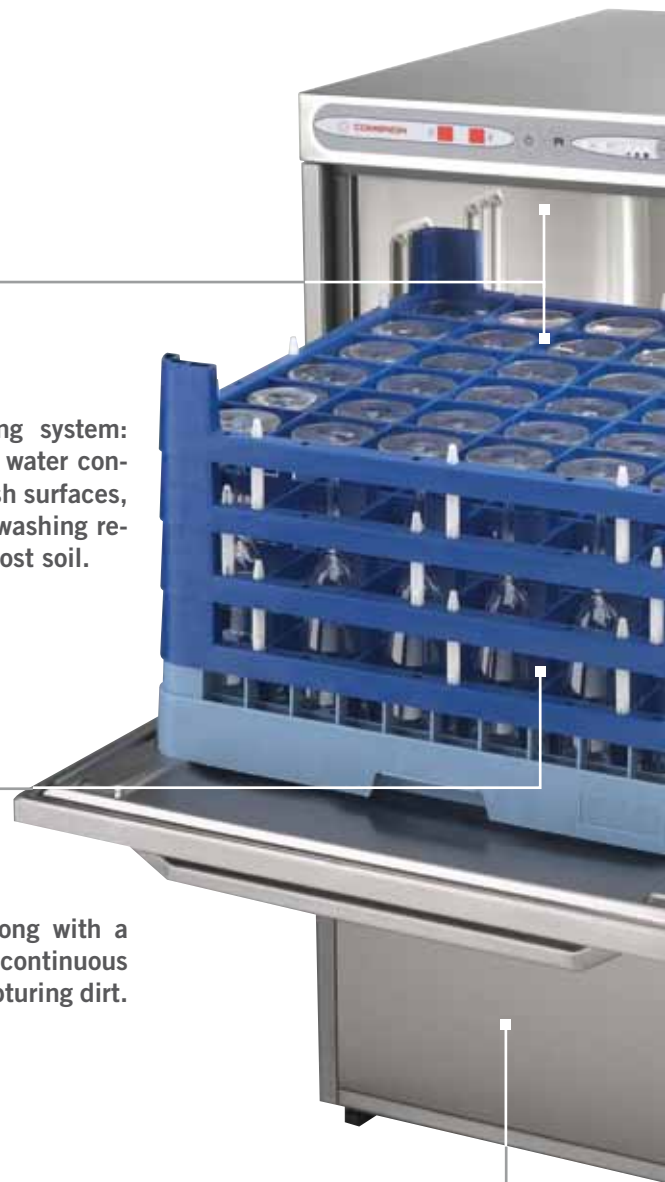
### TANK FILTERS

A flat all tank filter along with a DYNAMIC filter ensure continuous filtration of water by capturing dirt.



### ROUNDED EDGES

The washing chamber with rounded edges prevents the build up of soil and allows the housing of the vertical self draining pump.



### CONTROL PANEL

User interface with backlit program button that changes colour according to the machine status:

RED machine heating,  
GREEN machine ready for use,  
BLUE wash cycle running,  
YELLOW alarm mode



### DOOR SEAL

Perimeter gasket for perfect sealing and cushioned door closing.



### INTEGRATED REVERSE OSMOSIS SYSTEM

A reverse osmosis module can be mounted inside the machine and purifies water for shiny and spot-less glasses and cutlery.



### DOOR

Counterbalanced door with external springs provided with an easy grip handle and intermediate stop position for air recirculation.



# Advanced TECHNOLOGIES

## HPS CONNECT

An advanced system which in the event of machine malfunction automatically sends an sms to the field engineer. The HAC electronic card also makes it possible – through an RS232 serial port – to send the parameters characterising the washing cycle underway and any alarms directly to a printer or PC, in compliance with HAC-CP procedures.



## HAC control panel

HR units are standard equipped with a HAC card which allows reprogramming washing, pause and rinse times to best suit user's specifications. It also displays the washing cycle counter, the progress of each cycle with a countdown to zero and QHS (Quick Heating System). The card also has a self-diagnosis program capable of identifying possible errors.

## 100% hygiene



### RCD

The RCD (Rinse Control Device) is an advanced system which uses an atmospheric boiler and a pressure booster pump to keep water pressure constant during rinsing phase, which is performed not only with mains water pressure but with rinse pump pressure. Furthermore the RCD keeps the temperature constant at 85 °C throughout the entire rinse cycle. The system helps saving energy while guaranteeing hygienic results well above the standard.

## Technology against limescale



### Automatic water softener

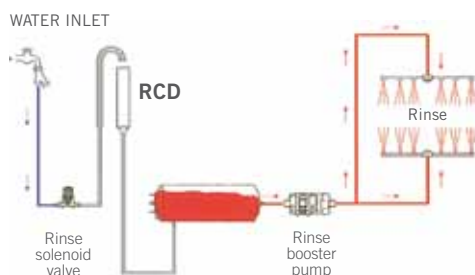
A new generation built-in water softener automatically regenerates resins according to the hardness of the incoming water and the number of wash cycles performed, without prolonging the duration of the wash cycle. Operator intervention is therefore limited to the addition of salt in the dedicated container when the "SALT LEAKING" sign is on.

## Always pure water

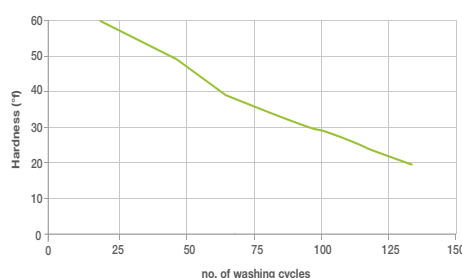


### AQUA+1 Integrated reverse osmosis system

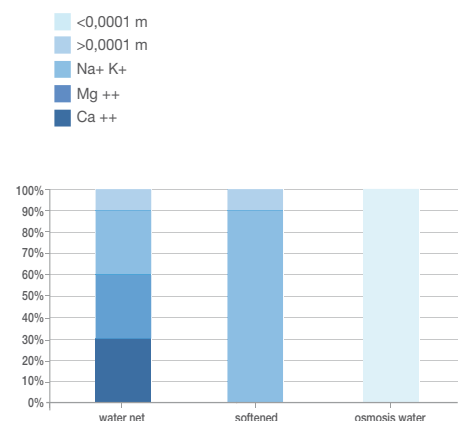
AQUA+1: reverse osmosis system which purifies water for shiny and spotless glasses and cutlery. The system, integrated in the machine structure, operates in two stages: the first stage uses a carbon filter with 5 micron filtration; the second stage, forcing water at high pressure through a semi-permeable membrane, ensures a high level of purity. Connection to softened cold water and periodic inspections by trained personnel ensure proper and consistent operation over time.



Rinse cycle with RCD



Graphic hardness/no. of cycles



Graphic substances dissolved in the water



# Technical info

FE SERIES	F3E F3EA	F3E+1	F3EHR F3EHRA	F4E F4EA	F44E F44EA	F4EHR F4EHRA
wash cycle (secs.)	60-100-150-480	60-100-150-480	60-100-150-480	60-100-150-480	60-100-150-480	60-100-150-480
theoretical* max. output racks/h	60	24	60	60	60	60
EXTERNAL DIMENSIONS						
width (mm)	600	600	600	600	600	600
height (mm)	720	850	720	820	1260	820
depth (mm)	600	600	600	600	600	600
OTHER DIMENSIONS						
rack dimensions (mm)	500 x 500	500 x 500	500 x 500	500 x 500	500 x 500	500 x 500
clearance (mm)	300	300	300	400	400	400
drain height (mm)	35	155	35	35	475	35
tank capacity (L)	14	14	14	14	14	14
rinse water consumption	3,2	3,2	2,7 / 3,2 / 10	3,2	3,2	2,7 / 3,2 / 10
weight (kg)	58 / 63	65	58 / 63	68 / 73	79 / 84	69 / 75
POWER AND ELECTRICAL HEATING						
wash pump (kW)	0,75	0,75	0,75	0,75	0,75	0,75
tank heater (kW)	2	2	0,5	2	2	0,5
boiler heater (kW)	7	7	7	7	7	7
min. installed power (kW)	3,10	3,10	3,10	3,10	3,10	3,10
max. installed power (kW)	7,75	7,75	7,75	7,75	7,75	7,75
power supply	multipower	multipower	multipower	multipower	multipower	multipower
OPTIONAL AND DEATILED						
RCD	optional/yes	yes	yes	optional/yes	optional/yes	yes
built in water treatment	manual water softener	osmosis	automatic water softener	manual water softener	manual water softener	automatic water softener
Sanitizing system	yes/no	no	yes	yes/no	yes/no	yes
rinse aid dispenser	yes	yes	yes	yes	yes	yes
detergent dispenser	optional	optional	optional	optional	optional	optional
drain pump	optional	optional	yes	optional	optional	yes

\* In the case of consecutive washing, might increase the duration of the cycle to ensure proper rinse temperature.  
A= Built-in water softener

Technical variations reserved



## ECO2: THE FORMULA FOR ENERGY SAVING

Comenda's philosophy is represented by a green petal defining the company commitment to research and application of high-tech formulas which combine high performance with energy savings. ECO2 is the key to the entire production: eco-friendly solutions granting excellent results and a healthier working environment. This "green" philosophy also inspires the FE Series: a vast range of washing systems that can adapt to a great variety of different needs, always guaranteeing top performance with very low operating costs and reduced water and detergent consumption.

Comenda have obtained the UNI EN ISO 14001:2004 environmental certification, tangible proof of the company's awareness of ecological issues.



## AFTER SALES SERVICE IN JUST A CLICK

In line with our corporate mission, we not only make excellent products, we also offer a comprehensive technical service. As well as a capillary network of service engineers all over the world, we provide an easy-to-use online tool to support our customers in real time.

Our website [www.comenda.eu](http://www.comenda.eu) contains a section where today's 700+ users can request advice, request assistance and order spare parts.

Each of our authorised service centres can access this password-controlled area and consult or download the user manual and the wiring, plumbing and layout diagrams. They also have direct access to exploded drawings and can send fully-compiled customer orders to the local spare parts provider.

