

**mitsubishi electric**  
**HYDRONICS & IT COOLING SYSTEMS S.p.A.**

COMFORT

HYDRONIC TERMINALS

# FAN COIL RANGE

**FOR PROFESSIONAL APPLICATIONS**

# A NEW WAY OF LIVING COMFORT



This document can be subjected to variations. Descriptions, performance data, images and diagrams are indicative only and refer to the standard installation in the EU. For further information contact Mitsubishi Electric Commercial Department.

Climaveneta branded hydronic terminals have been designed taking your wellbeing in mind. Each single product achieves the best comfort standards together with high efficiency levels.

# FAN COIL RANGE

FOR PROFESSIONAL APPLICATIONS

## **a-LIFE3** **i-LIFE3**

4/5

Fan-coil for professional applications, with cabinet or built-in version.

## **a-LIFE2 HP** **i-LIFE2 HP**

10/11

High head built-in version fan coil unit for professional applications.

## **a-HWD2** **i-HWD2**

16/17

High head ducted type terminal.

## **CONTROLLERS**

22/23

# a-LIFE3

# i-LIFE3



**Fan-coil for professional applications,  
with cabinet or built-in version**



LIFE3 is the new range of fancoils for professional and commercial applications.

Thanks to a stylish and clean design, LIFE3 fits any kind of ambient and application, even those sensible to aesthetics.



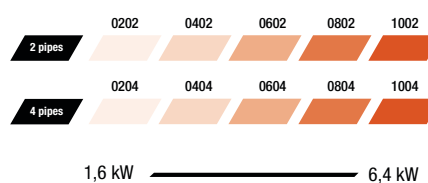
## THE RANGE

The units are available for installation in 2 or 4-pipe systems and in five sizes to meet any kind of installation requirement.

### a-LIFE3 Fan-coil unit with AC fan



### i-LIFE3 Fan-coil unit with EC fan



#### DIMENSIONS



Total cooling capacity at maximum speed: 12/7 °C inlet/outlet water temperature;  
27 °C (19 °C) Air temperature [inlet dry bulb (inlet wet bulb)]

# Uncompromising comfort, efficiency and design

## i-LIFE3 CONTINUOUS CAPACITY MODULATION FOR THE HIGHEST EFFICIENCY

**EC FAN**

### REAL SAVINGS

The EC motor technology allows continuous, stepless airflow and capacity modulation so that the unit can easily follow any variation in the thermal load.

The extreme efficiency offers a reduction in energy use: up to 50% in comparison to a traditional AC fan. EC fan coil units are key in cutting the yearly energy consumption and related cost of buildings.



### VERY SILENT OPERATION

Designed for the maximum acoustic comfort, the unit operates always at the lowest fan speed to keep the temperature set-point stable and ensure low noise emissions.



### ELEGANT AND STYLISH DESIGN

LIFE3 is an advanced professional solution to meet the requirements of modern contemporary residential and commercial architecture.

The clean and stylish design perfectly fits in any ambient, adding refined aesthetics to any interior environment.

### QUICK AND EASY INSTALLATION

A vast array of already mounted options together with the smart unit design ensures a quick installation as well as easy maintenance operations.

The units can be equipped with several options to be easily adapted to the most different applications:

- ▶ On/Off 2-way valves
- ▶ On/Off 3-way valves
- ▶ Modulating valves (PWM, 3 Points, 0-10V)
- ▶ Electric heater

### ACTIVE CARBON FILTER

a-LIFE3 and i-LIFE3 have been designed for better air quality. The optional Active Carbon filter is based on the capacity of activated carbon to adsorb, through its porosity, most of the organic compounds responsible for unpleasant odours.

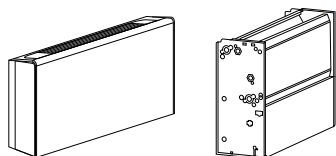


### COMPLETELY RELIABLE OPERATION

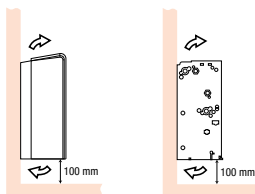
All components used in the LIFE3 range are in line with the high quality standards of Mitsubishi Electric Hydronics and IT Cooling Systems.

## INSTALLATION

### Low air intake



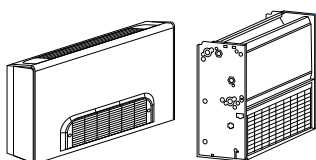
### Vertical



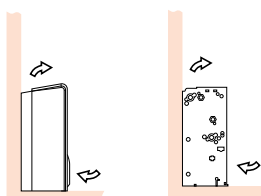
### Horizontal



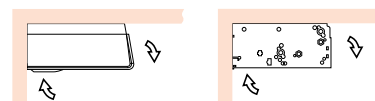
### Front air intake



### Vertical



### Horizontal



# a-LIFE2 HP

# i-LIFE2 HP



**High head built-in version fan coil unit featuring high pressure centrifugal fans for professional applications**



**LIFE2 HP features more powerful, high pressure centrifugal fans for ducted installations.**

The range is available in the AC motor version or with modulating EC Brushless motor.

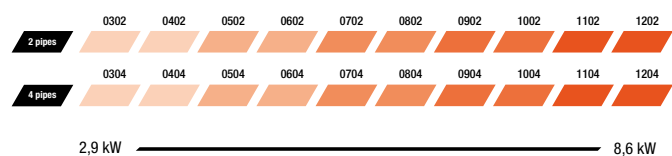
LIFE2 HP is the ideal solution for built-in systems and installations in tertiary and commercial sectors.



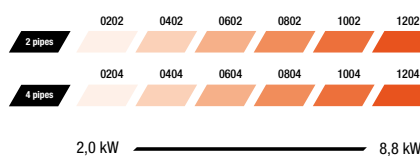
## THE RANGE

Thanks to the different versions, with cabinet or built in, low air intake or front air intake, vertical or horizontal installation, it is very easy to find the perfect solution for any system request.

### a-LIFE2 HP High head fan coil unit with AC fan



### i-LIFE2 HP High head fan coil unit with EC fan



#### DIMENSIONS

Size A Size B Size C Size D Size E Size F

Total cooling capacity at maximum speed: 12/7 °C inlet/outlet water temperature; 27 °C (19 °C) Air temperature [inlet dry bulb (inlet wet bulb)]

# Uncompromising comfort, efficiency and design

## i-LIFE2 HP CONTINUOUS CAPACITY MODULATION FOR THE HIGHEST EFFICIENCY


**EC FAN**

### VERY SILENT OPERATION

Designed for the maximum acoustic comfort, the unit operates always at the lowest fan speed to keep the temperature set-point stable and ensure low noise emissions.

### REAL SAVINGS

The EC motor technology allows continuous, airflow and capacity modulation so that the unit can easily follow any variation in the thermal load.

The extreme efficiency offers a reduction in energy use: up to 50% in comparison to a traditional AC fan. EC fan coil units are key in cutting the yearly energy consumption and related cost of buildings.

### HIGH CONFIGURABILITY

A wide range of already mounted options ensures a quick and easy installation as well as easy maintenance activities.

#### WATER VALVES KITS

- ▶ 2-way valves (both on/ff and modulating)
- ▶ 3-way valves (both on/ff and modulating)

#### ELECTRICAL HEATER

- ▶ Electrical heater from 0,7 to 3,0 kW

#### AIR INTAKE & SUPPLY PLENUM KITS

The plenum kit allows connection to the ductwork:

- ▶ Straight Plenum
- ▶ 90° Plenum
- ▶ Round Pipes Plenum

#### AIR INTAKE & OUTLET GRIDS

Optional grid for air intake or outlet in duct systems, supplied with filter.

#### FRESH AIR INTAKE DAMPER KIT

The air intake damper can be installed on LIFE2 HP fan coils with air intake from below, in the built-in version:

- ▶ KIT A – Manual fresh air intake damper kit.
- ▶ KIT B – Motorised fresh air intake damper kit.

### NEW ACTIVE CARBON FILTER

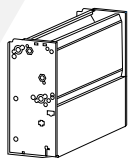
a-LIFE2 HP and i-LIFE2 HP have been designed for better air quality.

The innovative AC CARBON filter is based on the capacity of activated carbon to adsorb, through its porosity, most of the organic compounds from allergens and harsh pollutants to unpleasant tastes and odors.

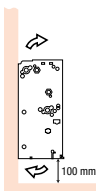


## INSTALLATION

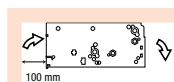
### Low air intake



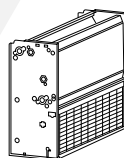
### Vertical



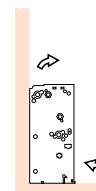
### Horizontal



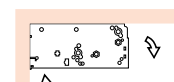
### Front air intake



### Vertical



### Horizontal



# a-HWD2

# i-HWD2



## High head ducted type terminal



a-HWD2 and i-HWD2 are ducted high head hydronic terminals for professional and commercial applications.

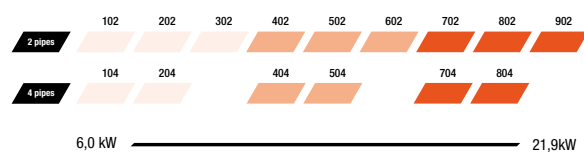
The possibility of vertical or horizontal installation, together with its compactness and the wide range of accessories or ductwork panels, make these units very flexible in installation and adaptable to any system type. The internal insulation of HWD2 units ensures excellent acoustic comfort, with imperceptible noise emissions.



## THE RANGE

Thanks to the different versions, with cabinet or built in, low air intake or front air intake, vertical or horizontal installation, it is very easy to find the perfect solution for any system request.

### a-HWD2 Fan-coil unit with AC motor



#### DIMENSIONS

Size A      Size B      Size C

Total cooling capacity at maximum speed: 12/7 °C inlet/outlet water temperature; 27 °C (19 °C) Air temperature [inlet dry bulb (inlet wet bulb)]

### i-HWD2 Fan-coil unit with Inverter EC motor



## i-HWD2 CONTINUOUS CAPACITY MODULATION FOR THE HIGHEST EFFICIENCY

**EC FAN**

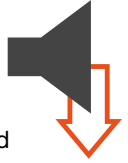
### REAL SAVINGS



The inverter technology allows continuous, stepless airflow and capacity modulation so that the unit can easily follow any variation in the thermal load.

The extreme efficiency offers a reduction in energy use: up to 50% in comparison to a traditional AC fan. EC fan coil units are key in cutting the yearly energy consumption and related cost of buildings.

### VERY SILENT OPERATION



Designed for the maximum acoustic comfort, the unit operates always at the lowest fan speed to keep the temperature set-point stable and ensure low noise emissions.

## YOUR CUSTOMISED SOLUTION

A wide range of already mounted options ensures a quick and easy installation as well as easy maintenance activities.

### WATER VALVES KITS

- ▶ 2-way valves (both on/ff and modulating)
- ▶ 3-way valves (both on/ff and modulating)

### AIR FILTERS

The standard units are supplied without filters A. The units can be equipped with vast range of filters:

- ▶ flat filter
- ▶ corrugated air filters
- ▶ filter rating pocket air filters

### ELECTRICAL HEATER

Electrical heater section from 0.7 to 3.0 kW

### AIR INTAKE & SUPPLY PLENUM KITS

The plenum kit allows connection to the ductwork:

- ▶ Straight Plenum
- ▶ 90° Plenum
- ▶ Round Pipes Plenum

### AIR INTAKE & SUPPLY PLENUM KITS

Optional grid for air intake or outlet in duct systems, supplied with filter.


### FRESH AIR INTAKE DAMPER KIT

- ▶ Manual fresh air intake damper kit.
- ▶ Motorised fresh air intake damper kit.

### SILENCER

New Silencer accessory section on air intake/supply for lower noise emissions.

102-302 -6 dB(A) 

102-302 -7 dB(A) 

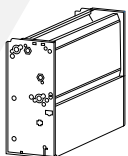
102-302 -8 dB(A) 

## HIGHLY RESISTANT CASING

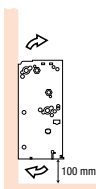
HWD2 terminals feature a bearing structure made of thick galvanized steel sheet, resistant to rust, corrosion and aggressive chemical agents.

## INSTALLATION

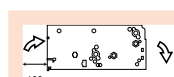
### Low air intake



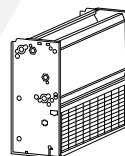
### Vertical



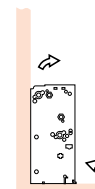
### Horizontal



### Front air intake



### Vertical



### Horizontal



# CONTROLLERS

A wide range of wall-mounted controls for managing the fan coil units. Each device can be easily integrated in any home automation system, centralized HVAC plant, or BMS.

COMPATIBILITY	a-LIFE3	i-LIFE3	a-LIFE2 HP	i-LIFE2 HP	a-HWD2	i-HWD2
SmarT 1C	✓	✓	✓	✓	✓	✓
SmarT D+SmarT PCB	✓	✓	✓	✓	✓	✓
AT/ATW	✓	✓	✓	✓	✓	✓
AT-EC/ATW-EC		✓		✓		✓
EK/EKW	✓*	✓*	✓*	✓*	✓*	✓*
iK/iKW	✓*	✓*	✓*	✓*	✓*	✓*
IR REMOTE CONTROL	✓*	✓*	✓*	✓*	✓*	✓*

\* with HB/iHB power board



**SmarT 1C**  
Advanced remote control



**SmarT D+SmarT PCB**  
Advanced remote control



**AT** on board thermostat  
**ATW** wall mounted thermostat



**AT-EC** on board thermostat  
**ATW-EC** wall mounted thermostat



**EK** on board thermostat  
**EKW** wall mounted thermostat  
(available in coupling with HB or i-HB power board)



**iK** On board programmable thermostat  
**iKW** Wall mounted programmable thermostat  
(available in coupling with HB or i-HB power board)

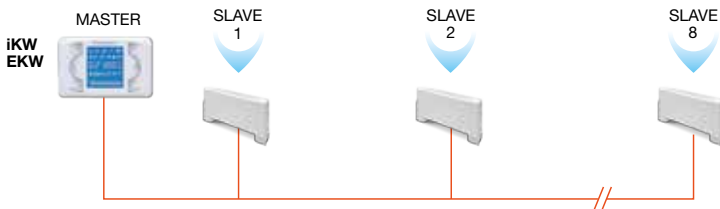


**IR REMOTE CONTROL**  
(available in coupling with HB or i-HB power board)

	ATW	ATW-EC	EKW + (i)HB	IKW + (i)HB	SmarT 1C	SmarT D + SmarT PCB	IR
PCB on board FCU	Not required	Not required	Necessary	Necessary	Not required	Necessary	Necessary
Operating modes selection	✓	✓	✓	✓	✓	✓	✓
Fan speed control _ AC motor (Max/Med/Min / AUTO)	✓	✗	With HB card	With HB card	✓	✓	✗
Fan speed control _ EC motor (1-10Vdc / AUTO)	✗	✓	With i-HB card	With i-HB card	✓	✓	✓
ON/OFF valve	✓	✓	✓	✓	✓	✓	✓
0-10V modulating valve	✗	✗	Optional card	Optional card	Integrated	Integrated	✗
Integration in BMS systems	Optional device (Modbus only)	✗	Optional card (Modbus only)	Optional card (Modbus only)	Integrated (Modbus or BacNet)	Integrated (Modbus or BacNet)	Optional card (Modbus only)
Master-Client system	✗	✗	✓ Max 8 units	✓ Max 8 units	✗	✓ Up to 63 units	✓ Max 20 units
Weekly program	✗	✗	✗	✓	✓	✓	✗
Display	✗	✗	✗	LCD	TOUCHSCREEN	TOUCHSCREEN	✓

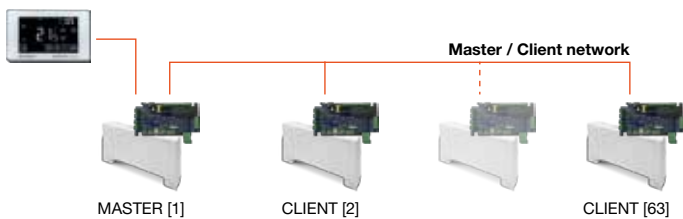
# MULTIPLE CONNECTIONS

## Integration in a Master / Slave network up to 8 units



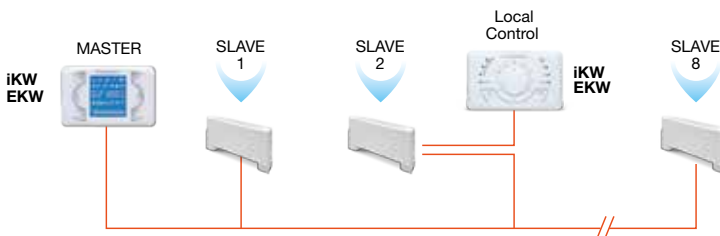
All units are equipped with HB or i-HB power board.

## Integration in a Master / Slave network up to 63 units



Possibility to create a network of FCUs connected together. **MASTER UNIT** should be equipped with SmarT PCB + SmarT D, while **CLIENTS** need only SmarT PCB. The **maximum number of units in a single network is 63 FCUs** ([1] MASTER + [2 to 63] CLIENTS).

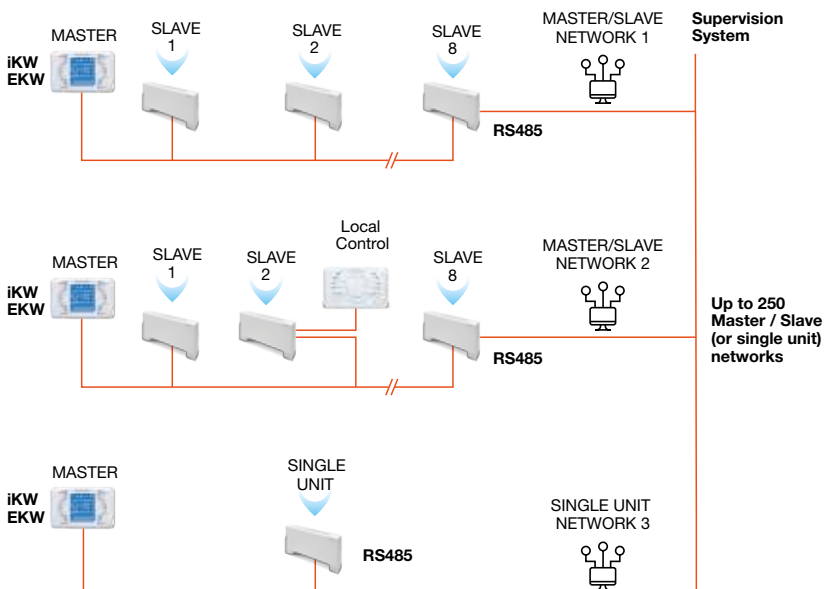
## Integration in a Master / Slave network up to 8 units with local control



All units are equipped with HB or i-HB power board.

The local controller manages the connected unit by setting: set-point ( $\pm 2$  °C set-point compared to the master control), local On/Off, fan speed.

## Integration in a supervision system



All units are equipped with HB or i-HB power board.

The RS485 board is installed in one unit of the network.

Also with SmarT PCB card the unit can always be integrated into BMS systems, thanks to the embedded RS485 port.

The PCB includes two communication protocols: Modbus and BACnet



for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.



## MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS S.p.A.

Head Office: Via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

Tel (+39) 0424 509 500 - Fax (+39) 0424 509 509

[www.climaveneta.com](http://www.climaveneta.com)

[www.melcohit.com](http://www.melcohit.com)