

Humidity Controls Air Conditioner Ceiling Concealed Split Type Unit

The first humidity control air conditioner without additional electric heater and humidifier.

°C +
%RH



Design for household, hospital, commercial building or where humidity control is required.



*With ENERCOV's
temperature & humidity
controller*



iFDH Series

DC Motor

Cooling capacity range 3.5 - 17.6 kW

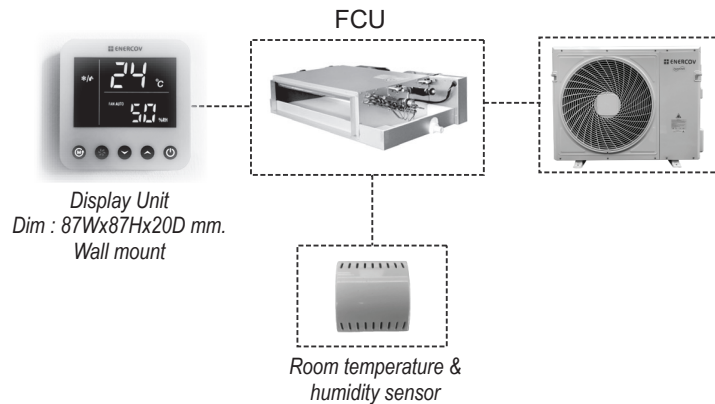
iFDH Series

ENERCOV air conditioner for humidity control with fresh air intake system

iFDH series, Air conditioner system for special function room application to maintain environment such as temperature and humidity at desirably range. It is a new innovation of Enercov's method to control temperature and relative humidity at the same time. We can control temperature within ± 3.0 deg C and humidity $\pm 10\%$ RH without any additional waste energy devices such as electric heater or humidifier. Energy saving more than 40% is guaranteed. iFDH series's fan coil unit is ceiling concealed and provides with fresh air intake system for ventilation purpose.

Micro-processor controls with FUZZY algorithm

Intelligent temperature & humidity controller and patented FUZZY algorithm of ENERCOV's method are applied for this application. The controller is micro processor based with pre configured programme will adjust fan and compressor speed to maintain sensible and latent load in term of temperature and humidity parameters. Room condition is very precisely. Controller consist of display unit, room temperature & relative humidity sensors, fan motor speed control and compressor driver. LCD display on the display unit shows real time temperature and relative humidity including control modes capabilities.



Display unit functions



Heating Element On/Off



Temperature and Humidity Control Mode



Cooling Control Mode

FILTER Filter Clog Indicator

ALARM Unit Alarm Indicator

FAN AUTO Fan Automatic Control Status Indicator

25.°C

Actual Room Temperature or Setpoint Indicator

50 %RH

Actual Room Humidity or Setpoint Indicator



Fan Speed Running Indicator



Function Keypads



Wireless Remote Control

Control Functions

1. Room temp. & humidity are controlled by FUZZY adaptive algorithm.
2. Cooling mode and temperature/humidity control mode selectable.
3. Aux HEATER lights up means hot gas reheat coil energized.
4. Room temperature and relative humidity real time display
5. Supply air fan can config to vary speed to maintain room condition by automatically.
6. Room sensors faulty alarm codes.
7. Condensing fan is adjust speed to control refrigerant discharge pressure.
8. Room temperature & humidity sensors calibration is also available.
9. Proportional, integral gain and calculation time are configurable.
10. FCU fan minimum speed is configurable.
11. Alarm display codes.
12. Compressor speed controls (inverter).
13. Pre configuration programmable software.
14. Supply with infrared wireless remote control.

iFDH Series

Technical specification



iSPA012 - 018



iSPA024 - 040

Unit Model	Indoor Unit Outdoor Unit	Unit	iFDH012 iSPA012	iFDH018 iSPA018	iFDH024 iSPA024	iFDH030 iSPA030	iFDH036 iSPA036	iFDH040 iSPA040
Nominal cooling capacity		Btu/hr	12800	18700	25200	31500	36000	40000
		W	3600	5400	7500	8800	10600	11800
Power supply		V/Ph/Hz	220-240/1/50					
Power consumption	Cooling Full Load	W	920	1,390	1,910	2,350	2,900	3,200
	Cooling (Min - Max)		330 - 1150	440 - 1730	620 - 2060	800 - 2700	1000 - 3200	1050 - 4400
Efficiency	EER (#5)	Btu/hr.W	13.91	13.45	13.19	13.40	12.41	12.50
Control	Type		Wall Mount Temp & Humidity LCD Display W/Wireless Remote Control					
Piping connection	Type		Flare					
	Liq., Gas	mm	Ø1/4", Ø3/8"	Ø1/4", Ø1/2"	Ø1/4", Ø5/8"	Ø3/8", Ø5/8"	Ø3/8", Ø5/8"	Ø3/8", Ø5/8"
	Drain	mm	Outside Diameter 16 mm.					
	Max. Length	m	15	15	30	30	30	30
Model	Indoor unit	Unit	iFDH012	iFDH018	iFDH024	iFDH030	iFDH036	iFDH040
Power supply		V/Ph/Hz	220-240/1/50					
Nominal air flow rate		CFM	400	600	800	1,000	1,200	1,400
Aux. Electric Heater	Provides	-	Option					
	Power supply	V/Ph/Hz	220-240/1/50					
	Heat Capacity	kW	1.5	1.5	2.0	2.4	3.0	3.0
Unit Dimension	Height	mm	220	220	220	220	220	220
	Width	mm	1022	1022	1022	1422	1422	1422
	Dept	mm	726	726	726	726	726	726
Net weight		Kg	10	16	16	33	33	33
Model	Outdoor unit	Unit	iSPA012	iSPA018	iSPA024	iSPA030	iSPA036	iSPA040
Power supply		V/Ph/Hz	220-240/1/50					
Compressor	Type		Rotary					
Refrigerant	Type		R-32					
Unit Dimension	Height	mm	567	567	777	777	777	777
	Width	mm	840	840	970	970	970	970
	Dept	mm	340	340	340	340	340	340
Net weight		Kg	37	40	48	53	59	59

Note : - Technical specifications are subject to change without prior notice.
 - Cooling capacity based on 35°C outdoor air, evaporating temperature 7.2°C and air on coil 26.7 deg CDB 50%RH.