Cassette fan coils with EC motor

ACQVARIA i 3 – 10 kW

JONIX

Inverter Technology

EC Motor | Supervision GARDA | 2 pipes systems | 4 pipes systems | Touch screen device | Recess ceiling-mount

PLUS

- GreenTech Technology
- Permanent magnet EC motor insures a precise, continuous control of operation
- Low energy consumption
- Fresh air with direct or mixed introduction
- Condensate drainage pump for height differences of up to 0.9 m
- Reduced installation and commissioning time
- Incorporable JONIX sanitizing module

Comfort, low noise, and efficiency in perfect harmony!

The new series of hydronic cassette units ACQVARIA i, with inverter-controlled permanent magnet EC motor, consists of six models for 2-pipe systems (10-20-30-40-50-60) and five models for 4-pipe systems (10-30-35-40-60). The engineering of the unit makes it possible to develop up to 5 kW in the cooling mode in a standard 600x600 mm modular suspended ceiling and over 10 kW in the 860x860 mm modularity, with exceptionally low noise levels in the phases for maintaining interior comfort.
The well-known advantages of EC motors are combined with GreenTech technology (in models 10, 20, 30 and 35), which integrates the inverter directly into the fan drive assembly.
ACQVARIA i leverages the entire Galletti, MYCOMFORT, EVO , and TED10 microprocessor controller platform that incorporate sophisticated adjustment logics based on air temperature, air humidity, and water temperature.
These benefits translate into greater accuracy in achieving and maintaining the desired comfort conditions through appropriate modulation of the fan speed as well as the reduction of noise emissions, which adapt to the actual thermal load.
Lastly, electricity consumption is reduced by up to 75% in comparison to conventional fixed-speed AC motors.
The suspended ceiling unit houses all the components, heat exchange coil, fan drive assembly, and condensate collection and drainage system. Its structure is designed for introducing fresh air into the space, mixing it with recovered air, and distributing the treated air from the cassette unit to adjacent rooms.
The design and colour, RAL9003 or RAL9010, of the air intake and diffusion louvre guarantee optimal integration into the suspended ceiling panels. Easy access to the air filter for cleaning operations.
The unit can be supplied complete with valves, including pressure-independent balancing and control valves, the use of which significantly reduces commissioning time.

AVAILABLE VERSIONS

In addition to the 2 ABS grilles with adjustable fins it is available EFFETTO and EFFETTO AirClissi.

EFFETTO, module for intake and diffusion air with the Coandă effect

EFFETTO Airclissi, new design concept which integrates light with the Coandă effect air diffusion.

White RAL9003

White RAL9010

STANDARD

Grey - natural brushed aluminium

White - RAL 9010

Black - black RAL 9005

EFFETTO

Hot light

Cold light

EFFETTO + AirClissi

MAIN COMPONENTS

Structure
Made of galvanised steel sheet with internal polyurethane foam coating and external flocked PES to guarantee heat and sound insulation. Fresh air can be introduced into the room directly through the unit due to the provision of connections for neutral or mixed introduction. Accessories are available for connection to ducts. There are systems on the unit for anchoring it to the ceiling. The electrical wiring is housed in a containment box and is easily accessible from the side for easy connection

Heat exchanger
Copper pipe and high efficiency aluminium fins secured to the pipe by mechanical expansion. With at least two rows in the models for 2-pipe systems, it is available in the 2+1 configuration in the models for 4-pipe systems. The coil comes complete with manual air vent valves. On request, valves can be connected to the coil to regulate and balance the operation of the unit.

Fan drive assembly
Inverter-controlled permanent magnet EC electric motor (integrated in the Greentech models) directly connected to a centrifugal fan with backward-curving blades with profile optimised for stable operation at all speeds.

Air filter
Honey-comb polypropylene washable air filter, easily removable for maintenance operations.

Condensate collection and drainage system
Located under the heat exchanger, the main drip tray is made of polystyrene and is inserted inside the profiles optimised for the distribution of air in the space. The condensate drainage pump is able to raise the condensate up to 0.9 m from the exit point from the unit. The operation of the pump is controlled by a float switch with three levels of action that activate it, stop it and, if the critical level is exceeded, stop the operation of the cassette unit fan and close the water valve. The supply is completed by the auxiliary water drip tray for the collection of condensate from the regulating valves.

Louvre
It is square shaped for the intake and diffusion of air in the space, and it is made of ABS, colour RAL9003 or RAL9010. The air intake louvre can be opened for access to the air filter. Air is diffused in the space through the 4 sides, each of which is equipped with an adjustable fin with suitable thermal insulation.
Also available from today the new alluminium design module EFFETTO for intake and diffusion air with the Coandă effect.

Control mode
Galletti renews the fan coil control modes by integrating, on the EVO platform, the new EVO-2-TOUCH user interface and the NAVEL device for management with a smartphone.

EVO-2-TOUCH
is a user-friendly user interface with a 2.8" capacitive display with built-in temperature and humidity probes.

NAVEL
is the device paired with EVOBOARD that makes possible Wi-Fi or Bluetooth communication with a smartphone containing GALLETTI APP (available for iOS and Android).

JONIX Non Thermal Plasma Technology
It sanitises rooms by taking advantage of the properties of the air when activated by the energy produced by JONIX's special patented NTP generators. The activated air is comprised of "excited" molecules (Reactive Species) that attack molecules of pollutants, disrupting them, and micro-organisms, causing them structural and functional damage that renders them inactive (biocidal and virucidal effects). Jonix Non-Thermal Plasma Technology devices, when properly used and of appropriate size, act on a wide variety of contaminants such as viruses, bacteria, moulds, allergens, volatile chemical compounds, and all types of odours, helping to prevent airborne diseases (including Covid-19).

ACCESSORIES

Electronic microprocessor control panels with display	
DIST	MY COMFORT controller spacer for wall mounting
EVO-2-TOUCH	2.8" touch screen user interface for EVO control
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
EYNAVEL	Device for Wi-Fi or Bluetooth communication between EVOBOARD and smartphone
MCLE	Microprocessor control with display MY COMFORT LARGE
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT and EVO controllers
Electronic microprocessor control panels	
TED 10	Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V
TED SWA	Water temperature sensor for TED controls
Valves	
PIC-AQ	PRESSURE-INDEPENDENT 2-way valves
V2-AQ	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for model with 1 or 2 heat exchangers
V3-AQ	3-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for model with 1 or 2 heat exchangers
Plenum, air intake modules, air inlet and outlet connectors and cabinets	
BAR	Spigot for introduction of mixed renewal air
MOB	Cabinet for cassette
PAR	Plenum for introduction of unmixed renewal air
PMAA	Air outlet plenum
Sanitisation system	
JONIX - on board	Sanitizing module JONIX for on-board installation

RATED TECHNICAL DATA 2 PIPES

ACQVARIA i			AQ10QIB0				AQ20QIB0				AQ30QIB0			
				min	med	max		min	med	max		min	med	max
Speed			1	2	3	4	1	2	3	4	1	2	3	4
Control voltage		V	2,00	3,50	4,50	6,00	2,00	4,00	5,50	8,00	2,00	4,00	6,50	10,0
Total cooling capacity	(1)(E)	kW	1,33	1,93	2,24	2,63	1,49	2,68	3,40	4,39	1,54	2,76	3,95	5,23
Sensible cooling capacity	(1)(E)	kW	0,99	1,51	1,81	2,20	1,03	1,94	2,54	3,41	1,05	1,98	2,96	4,11
FCEER class	(E)		A											
Water flow	(1)	l/h	229	331	385	452	256	460	584	754	264	473	678	898
Water pressure drop	(1)(E)	kPa	2	4	5	7	3	10	15	23	3	9	18	29
Heating capacity	(2)(E)	kW	1,49	2,27	2,70	3,25	1,42	2,69	3,48	4,58	1,47	2,77	4,09	5,55
FCCOP class	(E)		A				B				B			
Water flow	(2)	l/h	258	395	470	565	248	468	605	797	255	481	711	965
Water pressure drop	(2)(E)	kPa	2	5	6	9	3	8	13	21	3	8	16	27
Rated air flow		m^3/h	212	397	454	583	187	397	551	796	190	397	650	980
Power input	(E)	W	7	7	10	18	7	9	15	37	7	9	22	67
Total sound power level	(3)(E)	dB(A)	28	35	40	48	28	37	44	54	29	38	49	61

ACQVARIA i			AQ40QIB0				AQ50QIB0				AQ60QIB0			
			min	med	max			min	med	max		min	med	max
Speed			1	2	3	4	1	2	3	4	1	2	3	4
Control voltage		V	2,00	3,00	5,00	10,0	2,00	3,00	5,00	8,00	2,00	4,00	6,50	10,0
Total cooling capacity	(1)(E)	kW	4,80	5,36	6,39	8,27	5,17	5,92	7,26	9,01	5,26	6,70	8,37	10,5
Sensible cooling capacity	(1)(E)	kW	3,80	3,92	4,75	6,35	3,66	4,24	5,31	6,78	3,69	4,80	6,15	7,97
FCEER class	(E)		A				A				B			
Water flow	(1)	l/h	833	921	1097	1420	888	1015	1245	1545	902	1150	1436	1805
Water pressure drop	(1)(E)	kPa	12	16	21	34	10	13	18	27	10	15	22	33
Heating capacity	(2)(E)	kW	5,50	6,00	7,30	9,74	5,43	6,33	7,99	10,2	5,48	7,23	9,35	12,2
FCCOP class	(E)		A				B				B			
Water flow	(2)	l/h	953	1043	1269	1692	944	1100	1390	1779	952	1257	1625	2116
Water pressure drop	(2)(E)	kPa	3	16	23	38	9	12	19	29	9	15	23	36
Rated air flow		m^3/h	843	978	1276	1916	724	864	1143	1554	710	976	1321	1831
Power input	(E)	W	14	18	36	150	14	18	36	93	14	25	60	150
Total sound power level	(3)(E)	dB(A)	35	39	45	57	35	39	48	53	36	43	50	58

(1) Water temperature 7°C/12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2021
(2) Water temperature 45°C / 40°C, air temperature 20°C
(3) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data
Power supply 230-1-50 (V-ph-Hz)

RATED TECHNICAL DATA 4 PIPES

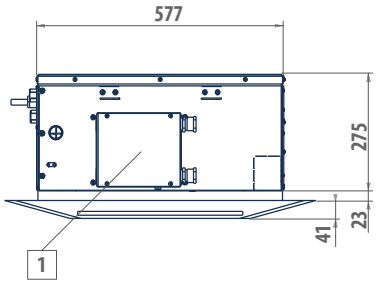
ACQVARIA i			AQ10QIBB				AQ30QIBB				AQ35QIBB			
				min	med	max		min	med	max		min	med	max
Speed			1	2	3	4	1	2	3	4	1	2	3	4
Control voltage		V	2,00	3,50	4,50	6,00	2,00	4,00	6,50	10,0	2,00	4,00	6,50	10,0
Total cooling capacity	(1)(E)	kW	1,24	1,85	2,18	2,60	1,55	2,62	3,53	4,41	2,34	3,03	3,83	5,01
Sensible cooling capacity	(1)(E)	kW	0,92	1,46	1,79	2,23	1,24	2,10	2,74	3,58	1,49	2,17	2,79	3,98
FCEER class DF	(E)		A											
Water flow	(E)	l/h	213	317	374	447	267	451	607	759	403	521	659	862
Water pressure drop	(E)	kPa	2	4	6	8	5	7	12	25	4	6	10	17
Heating capacity	(2)(E)	kW	2,03	2,90	3,34	3,86	2,35	3,73	4,38	5,51	1,92	2,39	2,88	3,43
FCCOP class	(E)		A				B				B			
Water flow	(2)	l/h	178	254	292	338	202	321	377	474	165	206	248	295
Water pressure drop	(2)(E)	kPa	3	6	8	11	3	4	8	11	4	5	10	16
Rated air flow		m^3/h	199	356	460	610	195	395	643	982	195	395	643	982
Power input	(E)	W	7	7	10	18	7	9	22	67	7	9	22	67
Total sound power level	(3)(E)	dB(A)	28	35	40	48	29	38	49	61	29	38	49	61

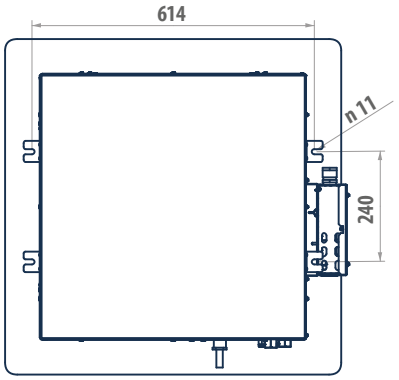
ACQVARIA i			AQ40QIBB				AQ60QIBB			
			min	med	max			min	med	max
Speed			1	2	3	4	1	2	3	4
Control voltage		V	2,00	3,00	5,00	10,0	2,00	4,00	6,50	10,0
Total cooling capacity	(1)(E)	kW	4,61	5,34	6,61	9,07	4,70	6,09	7,62	9,50
Sensible cooling capacity	(1)(E)	kW	3,34	3,94	5,03	7,29	3,37	4,50	5,82	7,56
FCEER class DF	(E)		A				B			
Water flow	(E)	l/h	792	917	1135	1555	806	1045	1307	1631
Water pressure drop	(E)	kPa	12	15	22	37	11	17	25	37
Heating capacity	(2)(E)	kW	7,01	7,96	9,53	12,3	7,15	8,96	10,8	12,9
FCCOP class	(E)		A				B			
Water flow	(2)	l/h	613	697	834	1078	626	785	947	1133
Water pressure drop	(2)(E)	kPa	11	14	19	30	12	18	24	33
Rated air flow		m^3/h	687	841	1137	1823	673	956	1314	1823
Power input	(E)	W	14	18	36	150	14	25	60	150
Total sound power level	(3)(E)	dB(A)	35	39	45	57	36	43	50	58

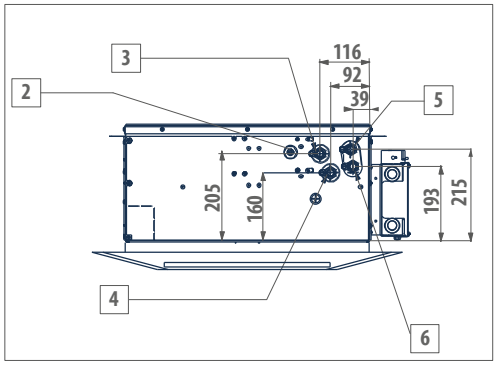
(1) Water temperature 7°C/12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2021
(2) Water temperature 65°C / 55°C, air temperature 20°C
(3) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data
Power supply 230-1-50 (V-ph-Hz)

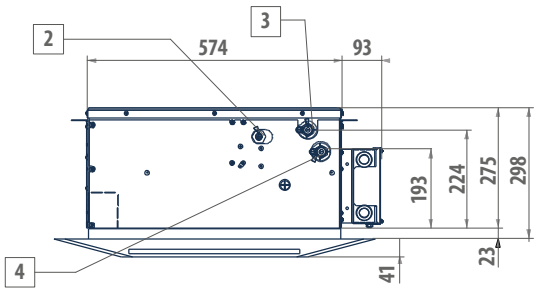
DIMENSIONAL DRAWINGS

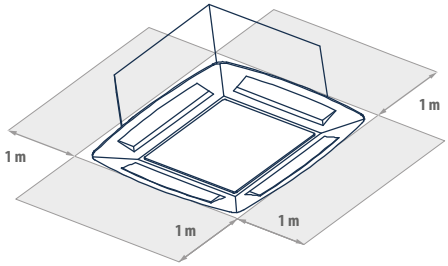
ACQVARIA i 10-20-30 (for 2 pipes) - 10-30-35 (for 4 pipes)

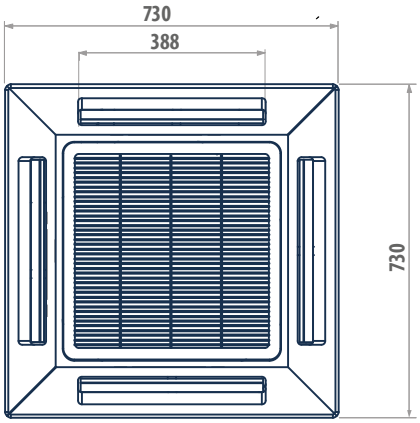












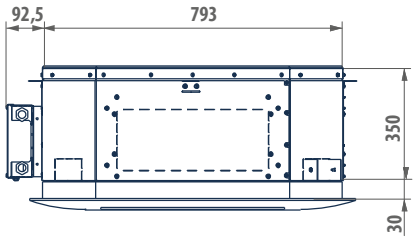
ACQVARIA i	kg
AQ10QIB0 - AQ10QIBB	23 + 2,5
AQ20QIB0 - AQ30QIB0 - AQ30QIBB - AQ35QIBB	24 + 2,5

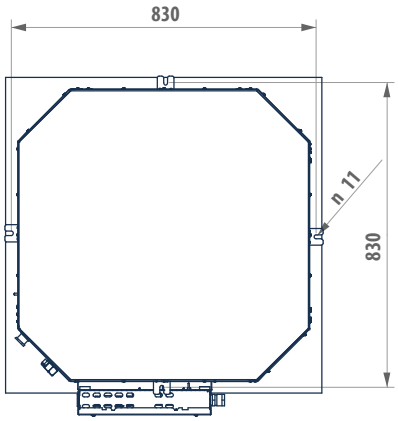
LEGEND	
1	Electrical cable passage
2	Condensate discharge ø 10
3	Water outlet ø 1/2" female gas
4	Water inlet ø 1/2" female gas
5	Water outlet ø 1/2" DF female gas
6	Water inlet ø 1/2" DF female gas

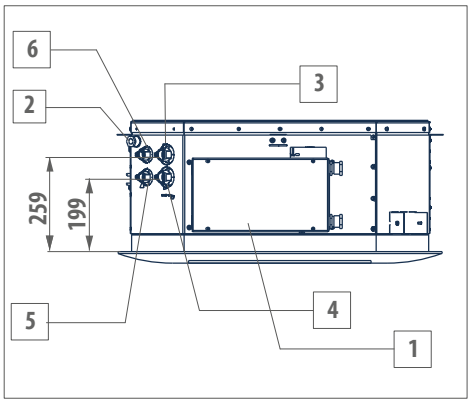
NOTE It is possible to combine the EFFETTO and EFFETTO AirClissi module with the ACQVARIA i 60x60 cm cassette, for the dimensional drawing refer to page 91

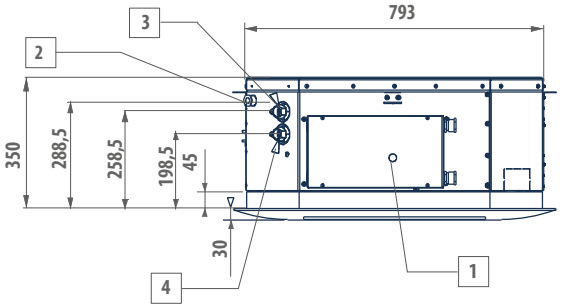
DIMENSIONAL DRAWINGS

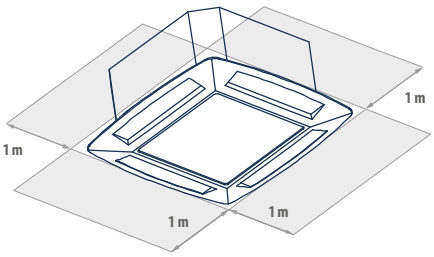
ACQVARIA i 40, 50, 60 (Size 50 not available for dual coil version)

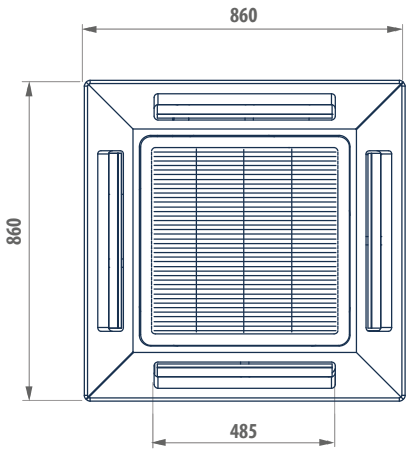












Mod.	kg
AQ40QIB0	42 + 5
AQ50QIB0	43 + 5
AQ60QIB0	43 + 5
AQ40QIBB	42 + 5
AQ60QIBB	43 + 5

LEGEND

1	Electric box
2	Condensate discharge ø 10
3	Water outlet ø 3/4" female gas
4	Water inlet ø 3/4" female gas
5	Water inlet ø 1/2" DF female gas
6	Water outlet ø 1/2" DF female gas