Carrier

United Technologies

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Heating unit

42AM - 42AMA

Rated cooling capacity 2 - 24 kW
Rated heating capacity 12 - 140 kW
50Hz

Translation of the original document

CONTENTS

Thank you for purchasing an **AIR HEATER** or a **DESTRATIFIER** from the CARRIER 42AM range. We trust that this unit will give you complete satisfaction.

To ensure correct operation, all connections (electrical, hydraulic, etc.) must be made in accordance with industry practice and the regulations in force in the country of use.

Your unit must be maintained as recommended in this manual

1 - RECEIPT OF THE UNIT

The unit is supplied with a label on the packaging detailing all the specifications of the unit used to identify it (type, model etc.).

Each device bears a name plate. The reference number shown on the name plate must be quoted in all correspondence.

It is the recipient's duty to inspect the contents of the packages upon receipt:

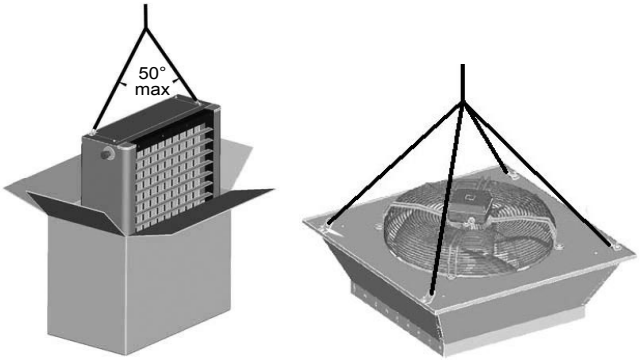
- In the event of missing items, the customer must provide the exact number of parcels delivered.
- All damaged or missing items must be reported on the delivery note in the presence of the driver before the delivery note is signed.

IMPORTANT: In accordance with Article 133 of the French Code of Commerce, these claims must be reported to the carrier by registered letter within three business days of receipt. The terms "conditional" and "pending unwrapping" shall have no value. The customer must unwrap the goods in the presence of the driver. Damage/shortages must be noted at time of delivery and described in detail. An air heater operating with more than 10% fresh air is not compliant with the Regulation (EU) No. 1253/2014.

2 - HANDLING

Handle the unit with care.

The unit can be installed with a forklift truck using the slings. These should be positioned on the 2 lifting rings as shown in the diagram below.



3 - TECHNICAL CHARACTERISTICS

3.1 - ROTOREX fan motor assembly

1 Ph/230 V AC motor

Use	Model	Motor	Rotation speed	Nom. current	Abs. pressure	IP	Thermal cut-out	Class	Operating temp
HEATING	42AM-AC35	1 Ph/230 V 50Hz	1330 rpm	0.70 A	150W	44	NO	F	-40°C / +60°C
	42AM-AC40/ 42AMAAC40		1400 rpm	1.30 A	300W	54	YES 6.3 A - 165 °C		-40°C/+70°C
	42AM-AC45/ 42AMAAC45		1380 rpm	2.01 A	480W				
	42AM-AC50/ 42AMAAC50		1403 rpm	2.78 A	630 W				
	42AM-AC63/ 42AMAAC63		913 rpm	2.60 A	580 W				

3 Ph/400 V AC motor

Use	Model	Motor	Rotation speed		Nom. current	Abs. pressure	IP	Thermal cut-out	Class	Operating temp
HEATING	42AM-AC35	3 Ph/400 V 50Hz	HS - Δ	1385 rpm	0.35 A	110W	44	NO	F	-40°C / +60°C
			LS - ✳	1175 rpm	0.15 A	70W				
	42AM-AC40/ 42AMAAC40		HS - Δ	1404 rpm	0.50 A	260 W	54	YES 6.3 A - 165 °C		-40°C/+70°C
			LS - ✳	1176 rpm	0.30 A	170 W				
	42AM-AC45/ 42AMAAC45		HS - Δ	1385 rpm	1.13 A	550 W				
			LS - ✳	1040 rpm	0.64 A	380 W				
	42AM-AC50/ 42AMAAC50		HS - Δ	1391 rpm	1.51 A	770 W				
			LS - ✳	1176 rpm	0.90 A	520 W				
	42AM-AC63/ 42AMAAC63		HS - Δ	1000 rpm	1.30 A	590W				
			LS - ✳	750 rpm	0.63 A	250 W				
	42AM-AC64		HS - Δ	870 rpm	1.30 A	590W				
			LS - ✳	750 rpm	0.63 A	250 W				

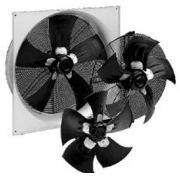
3.2 - CORROBLOC fan motor assembly with AC motor

3 Ph/400 V CORROBLOC AC motor

Use	Model	Motor	Rotation speed		Nom. current	Abs. pressure	IP	Thermal cut-out	Class	Operating temp
HEATING	42AM-AC35	3 Ph/400 V 50 Hz	HS - Δ	1260 rpm	0.5 A	200W	65	"YES 6.3 A - 165 °C"	F	-40°C/+70°C
			LS - ✳	950 rpm	0.2 A	120 W				
	42AM-AC40		HS - Δ	1350 rpm	0.8 A	300W				
			LS - ✳	1000 rpm	0.4 A	200W				
	42AM-AC45		HS - Δ	1230 rpm	1.0 A	500 W				
			LS - ✳	810 rpm	0.5 A	310 W				
	42AM-AC50		HS - Δ	1350 rpm	1.6 A	660 W				
			LS - ✳	1060 rpm	0.9 A	450W				
	42AM-AC63		HS - Δ	905 rpm	1.26 A	530 W				
			LS - ✳	650 rpm	0.6 A	300W				

3 - TECHNICAL CHARACTERISTICS

3.3 - EC fan motor assembly



1 Ph/230 V EC motor

Use	Model	Motor	ROTATION SPEED	I NOM (A)	P. (W) ABS	IP	Protection	Class	Operating temp.
HEATING	42AM-EC30	1 Ph/230 V 50/60 Hz	1500 rpm	0,80	85	54	TACH	B	-25 °C/+55 °C
	42AM-EC35		1480 rpm	1,35	165	54	TACH	B	-25 °C/+50 °C
	42AM-EC40/ 42AMAEC40		1760 rpm	2,2	500	55	NF 250 VAC/2 A	F	-25 °C/+60 °C
	42AM-EC45/ 42AMAEC45		1500 rpm	2,2	500	55	NF 250 VAC/2 A	F	-25 °C/+60 °C
	42AM-EC50/ 42AMAEC50		1440 rpm	3,25	740	55	NF 250 VAC/2 A	F	-40 °C/+60 °C
	42AM-EC63/ 42AMAEC63		1020 rpm	3,2	730	55	NF 250 VAC/2 A	F	-40 °C/+60 °C
COOLING	42AM-EC30	1 Ph/230 V 50/60 Hz	1500 rpm	0,80	85	54	TACH	B	-25 °C/+55 °C
	42AM-EC35		1040 rpm	0,65	73	54	TACH	B	-25 °C/+55 °C
	42AM-EC40/ 42AMAEC40		1760 rpm	2,2	500	55	NF 250 VAC/2 A	F	-25 °C/+60 °C
	42AM-EC45/ 42AMAEC45		1500 rpm	2,2	500	55	NF 250 VAC/2 A	F	-25 °C/+60 °C
	42AM-EC50/ 42AMAEC50		970 rpm	1,1	250	55	NF 250 VAC/2 A	F	-25 °C/+60 °C
	42AM-EC63/ 42AMAEC63		770 rpm	1,0	240	55	NF 250 VAC/2 A	F	-25 °C/+60 °C

Note: Warning: if the EC motor is being used without a control, please respect the rotation speeds (with control voltage) listed below

Use	Model	Rotation speed	Maximum control voltage (V)
HEATING	42AM-EC30	1500 rpm	10
	42AM-EC35	1359 rpm	9
	42AM-EC40/ 42AMAEC40	1605 rpm	7,7
	42AM-EC45/ 42AMAEC45	1507 rpm	9,9
	42AM-EC50/ 42AMAEC50	1325 rpm	8,1
	42AM-EC63/ 42AMAEC63	1000 rpm	7,7
COOLING	42AM-EC30	1280 rpm	8,5
	42AM-EC35	1095 rpm	9,5
	42AM-EC40/ 42AMAEC40	1111 rpm	5
	42AM-EC45/ 42AMAEC45	1018 rpm	5
	42AM-EC50/ 42AMAEC50	974 rpm	10
	42AM-EC63/ 42AMAEC63	772 rpm	10

4 - HEAT EXCHANGER

4.1 - Water/superheated water/steam coils

Copper tube

Aluminium honeycomb fins

Hot water/cold water coil	**30**	**35**		**40**		**45**		**50**		**63**	
Number of heating rows	2	1	3	1	3	1	3	1	3	1	3
Number of cooling rows	2	3									
Coil capacity (L)	0,8	0,68	1,66	0,96	2,28	1,38	3,22	2,18	4,55	2,97	6,4
Connection diameter	1/2”	¾"				1"		1’’ ¼			
Fin	Aluminium honeycomb										
Connection type	Threaded unions 243 GCU F/M										
Maximum operating pressure	13 bar										
Test pressure	24 bar										
Max T°	110°C										

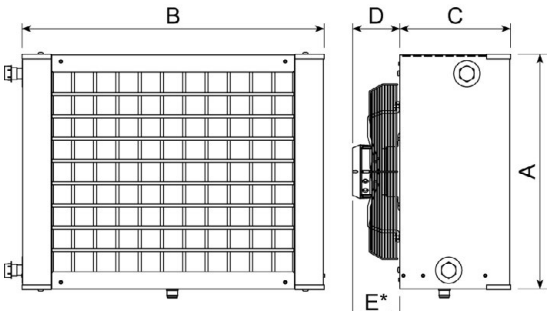
Superheated water coil	**30**	**35**	**40**	**45**	**50**	**63**
Number of heating rows	1					
Coil capacity (L)		1,19	1,69	-	2,66	3,69
Connection diameter		33.7 mm	42.4 mm	-	42.4 mm	
Fin	Aluminium honeycomb					
Connection type		Smooth 316L stainless steel tube (to be welded)				
Maximum operating pressure		16 bar				
Test pressure		24 bar				
Max T°		200°C				

Steam coil	**30**	**35**	**40**	**45**	**50**	**63**
Number of heating rows	1					
Coil capacity (L)		0,97	1,22	-	1,95	2,86
Connection diameter		26,9	33,7	-	48,3	
Fin	Aluminium honeycomb					
Connection type		Smooth 316L stainless steel tube (to be welded)				
Maximum operating pressure		16 bar				
Test pressure		24 bar				
Max T°		200°C				

5 - DIMENSIONS

5.1 - 42AM air heater

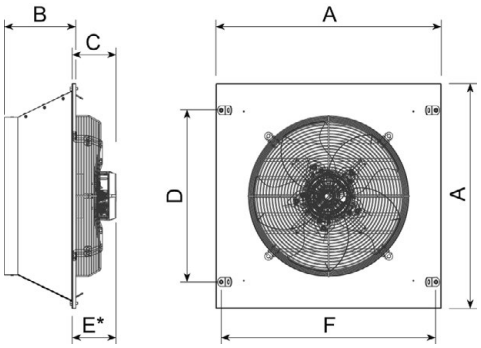
Size		42AM-AC30	42AM-AC35	42AM-AC40	42AM-AC45	42AM-AC50	42AM-AC63	42AM-AC64
A	mm	395	460	555	618	714	874	872
B		600	646	700	813	918	1050	1050
C		286	286	286	286	336	336	295
D		-	101	142	142	142	142	126
E*		126	126	143	143	188	200	-
Weight (kg)	1 row	-	21	30	40	50	62	60
	2 rows	18	-	-	-	-	-	-
	3 rows	-	26	34	44	56	72	-



E* = EC FMA (42AM-EC)

5.2 - 42AMA Destratifier

Size		42AMAAC40	42AMAAC45	42AMAAC50	42AMAAC63
A	mm	586	666	747	907
B		183	212	225	273
C		143	143	143	143
D		370	470	570	705
E*		143	143	188	200
F		552	632	712	872
Weight	kg	17	22	25	33



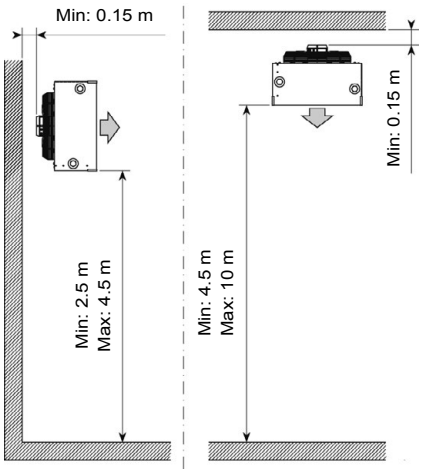
E* = EC FMA (42AMEC)

6.1 - 42AM air heater

To ensure correct air diffusion and to comply with the EN 294 standard relating to safety zones, you are recommended to position AIR HEATER units at a height of:

- Between 2.5 and 4.5 metres when wall-mounted
- Between 4.5 and 10 metres when ceiling-mounted.

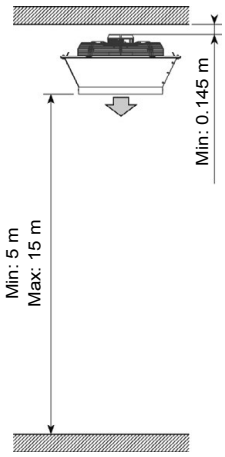
The rear of the unit must be at a sufficient distance from the wall to facilitate removal of the fan motor assembly when necessary.



6.2 - 42AMA Destratifier

It is recommended that destratifiers are positioned at a height of 5 to 15 metres.

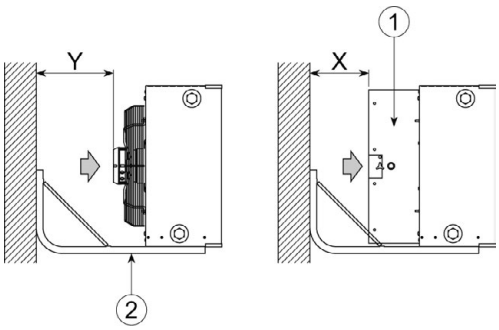
The rear of the unit must be at least 145 mm away from any walls to facilitate removal of the fan motor assembly when necessary.



6.3 - Wall-mounting the 42AM air heater

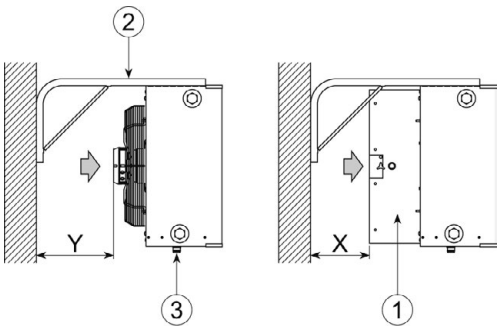
Installation using wall-mounting support kit

Installation mainly for HEATING purposes



Installation using low wall-mounting support kit

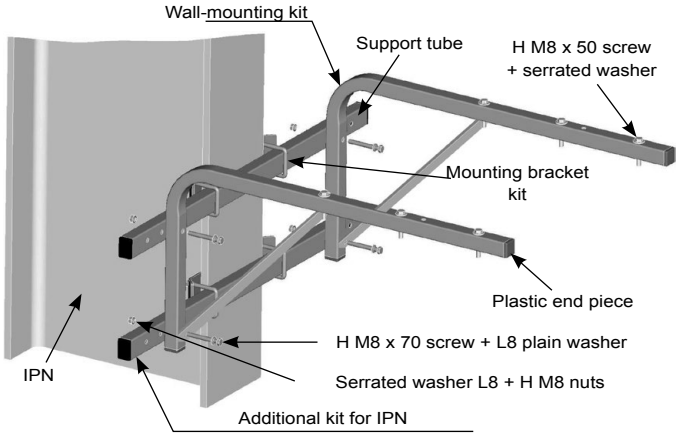
Installation mainly for COOLING or REVERSIBLE purposes



Size		42AM-EC30	42AM-AC35 42AM-EC35	42AM-AC40 42AM-EC40	42AM-AC45 42AM-EC45	42AM-AC50 42AM-EC50	42AM-AC63 42AM-EC63	42AM-AC64
①		Filter box wall bracket						
②		Wall bracket (Code 7181226)						
③		Drain sleeve in cooling mode, outer diameter 32						
X	mm	310				260		
Y	mm	390				340		

Distance to allow between the wall bracket legs for mounting the AIR HEATER								
Dimensions	mm	512	558	610	710	808	943	943

Installation with wall-mounting kit + additional kit on IPN



Assembly procedure:

1. Pre-assemble the clamping plates on the brackets using the Ø 8 mm serrated washers and the H M8 nuts (not tightened).
2. Fit the bracket assemblies onto the support tubes by sliding them over the end.
3. Fix the legs of the wall bracket (7181226) using the 4 H M8x70 screws, the 4 x Ø 8 mm plain washers, the 4 x Ø 8 mm serrated washers and the 4 x H M8 nuts, allowing the distances detailed above.
4. Move the support assembly onto the IPN and slide the bracket assemblies so that the lips are clamped onto the IPN. Tighten the bracket nuts to lock the assembly in place.
5. Fix the AIR HEATER unit using the 4 x H M8 x 50 screws supplied with the wall bracket.

Size		42AM-EC30	42AM-AC35 42AM-EC35	42AM-AC40 42AM-EC40	42AM-AC45 42AM-EC45	42AM-AC50 42AM-EC50	42AM-AC63 42AM-EC63	42AM-AC64
Distance	mm	512	558	610	710	808	943	943

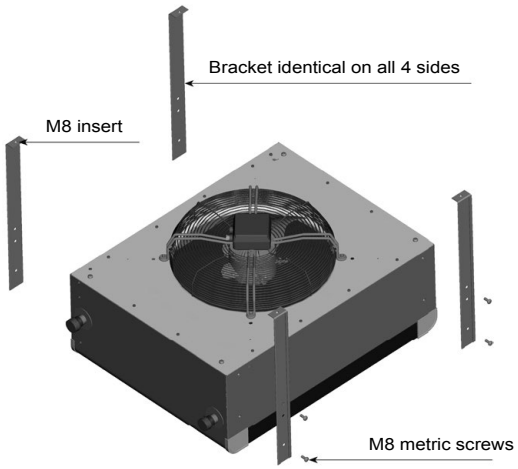
Code for additional kit for fastening on an IPN		
Reference	7181228	7181230

6.4 - Ceiling-mounting the 42AM air heater

Installation with ceiling-mounting kit

Installation only possible for HEATING applications.

Ceiling mounting using fluids at temperatures above 90°C is prohibited if the heat exchanger is still supplied with fluid when the ventilation is switched off. (Motor warranty invalidated if the motor is damaged due to the thermal inertia of the coil)



To be provided by the client:

- M8 threaded rods
- Lock nuts underneath the inserts

Assembly procedure:

1. Remove the 8 x M8 screws. (Upper and lower section of the AIR HEATER)
2. Fit the ceiling brackets and refit the M8 screws in their original locations.

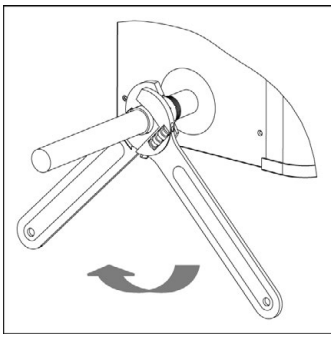
7 - WATER CONNECTIONS

7.1 - Screw connections (AIR HEATER used for heating)

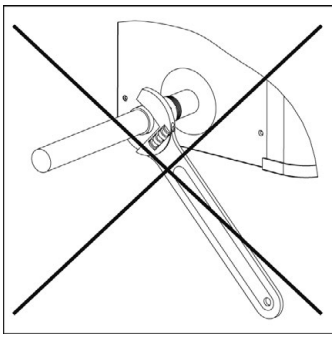
The side of the AIR HEATER hydraulic connection may also be positioned to the left or right of the air flow direction simply by turning it (for HEATING applications). Ensure that the cable glands on the motor terminal box are facing downwards to ensure the assembly is correctly sealed.

The hydraulic connection on the AIR HEATER LP water version is screwed in using threaded unions. The coil supply pipes and the general supply pipes must be connected and tightened according to good working practice, namely, using two adjustable wrenches to avoid any torsion of the coil collector.

CARRIER shall in no way be held liable for damage to the coil if these installation instructions are not followed and the warranty shall be invalidated.



Two keys are used to ensure the counter torque; the unit's connection tube will not be pierced.

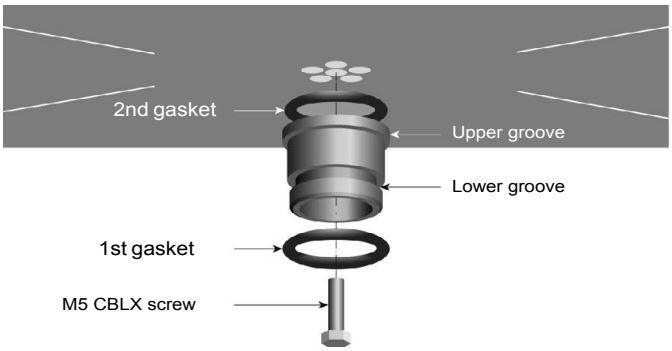


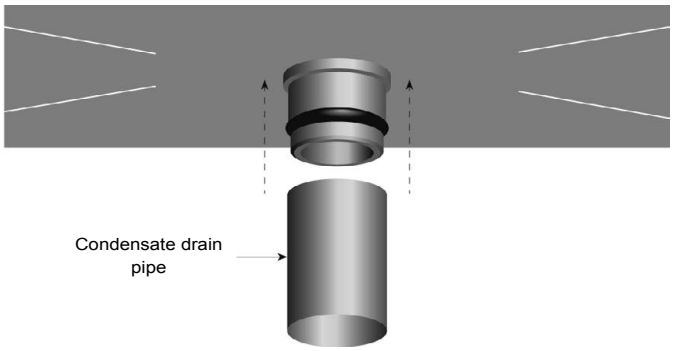
If only one key is used, the connection tube may twist and be pierced.

This is not covered by the CARRIER warranty

7.2 - Condensate drain connection (AIR HEATER used for cooling or in reversible mode)

For COOLING applications, the condensate drain pan is integrated into the AIR HEATER. This is of antibacterial design thanks to its diamond pointed based.





Procedure for fitting the union on the pan:

1. Position the 1st gasket into the lower groove on the union
2. Position the 2nd gasket into the upper groove on the union
3. Fix the assembly onto the condensate drain pan using the M5 CBLX screw supplied in the threaded insert fixed onto the pan.

Condensate drain pan connection

Once the union is fitted with these gaskets, fit the pipe onto the union (outer diameter 32 mm). The gaskets provide an adequate seal for the union.

Nevertheless, it is important to ensure that this connection between the union and the pipe does not bear all the weight of the drain column fitted with a siphon which must be installed according to good working practice (risk of detachment).

8 - ELECTRICAL CONNECTIONS

Before connecting the unit to the mains, ensure that the voltage matches that given on the unit's data plate (230V - 50 Hz for **single-phase** and 400V - 50 Hz for **three-phase**).

The unit must be connected to earth.

CIAT shall not be liable for incidents resulting from faulty or non-existent earthing.

- **42AM air heater and 42AMA destratifier:**
  - **Direct connection to AC Single-Phase and AC Three-Phase fan motor assembly**
  - Diagram 7433969
  - **AC single-phase fan motor assembly**
  - 42AM-AC + 1-speed proximity switch + RTR + Autotransformer connection → Diagram 7528225
  - 42AM-AC + 1-speed proximity switch + AC thermostat (type A 33TA-AC01 thermostat) + Autotransformer connection → Diagram 7528226
  - **EC single-phase fan motor assembly**
  - Direct connection → Diagram 7489644
  - 42AM-EC +1-speed proximity switch + 3V-EC thermostat (type C 33TC-EC01) connection → Diagram 7528227
  - 42AM-EC+SINGLE-PHASE EC BOX wiring diagram → Diagram 7512267
  - 42AM-EC+SINGLE-PHASE EC BOX field connection → Diagram 7568152
- **42AM air heater:**
  - **3-phase fan motor assembly**
  - 2-speed in MANUAL mode schematic diagram (42AM-AC + 2-speed proximity switch + LS/HS switch + Industrial 1-stage thermostat) → Diagram 7433975
  - 2-speed in AUTO mode schematic diagram (42AM-AC + 2-speed proximity switch + Industrial 2-stage thermostat) → Diagram 7433972

9 - POWERING UP

When switching on for the first time:

- Remove the bridge on the terminal strip (see "Motor connection" diagram [7433969]).
- Ensure that the motor rotates in the right direction (see marking indicating the fan's normal direction of rotation).
- Measure the current consumed by the motor:
  - If this is equal to or less than the current indicated on the unit's data plate, the installation is in good working order.
  - If the operating current consumed is greater than that indicated on the data plate, stop the motor immediately and check the installation and the connections. If the motor appears to be the source of the fault, contact the supplier.

10 - MAINTENANCE

Although no specific servicing is required for CARRIER DESTRATIFIERS and AIR HEATERS, the following operations should be carried out once a year:

- Retighten all the electrical connections
- Retighten all the screws on the unit
- Clean the propeller with a slightly damp cloth
  Clean the coil by blowing it with air
  Clean the casing and the diffuser using a slightly damp cloth
- **These actions must be carried out by qualified personnel, with the power switched off**

11 - FREQUENTLY ASKED QUESTIONS

Questions/Problems	Possible causes	Remedies
The heating capacity is insufficient	The propeller is not turning in the right direction. The flow rate (or the water temperature) supplied by the AIR HEATER is not sufficient.	See the information on the "Switching on" page Refer to the pages on "Heat, air and sound performance" relating to your AIR HEATER unit and compare your data to the information in the table.
The flow rate is not as it should be	The propeller is not turning in the right direction. The coil is fouled The filter is clogged	See the information on "Switching on" See the information on "Maintenance" Wash the filter using an environmentally-friendly detergent or replace the filter.
The unit is making an unusual noise	The propeller is dirty which unbalances it, creating an awkward noise. The fan motor assembly is not sufficiently secured to the casing and the assembly vibrates.	See the information on the "Maintenance" page See the information on the "Maintenance" page
The fan motor assembly is consuming more current than the value indicated on the data plate	The propeller is not turning in the right direction.	See the information on the "Switching on" page
The fan motor assembly is not turning	The coil is fouled (or the filter is clogged), the motor therefore overheats and the thermal cut-out cuts the electrical supply to the motor.	Clean the coil (or the filter) according to the information on "Maintenance" and wait for the thermal cut-out to cool down.
I ordered an AIR HEATER for HEATING purposes. I want to change my installation to also provide COOLING for my premises. Is this possible?	-	Yes. It is essential that the supply air speeds on the coil be controlled however to avoid the creation of droplets (this can be done easily using the 5-speed autotransformer with a fan motor assembly with 1-PHASE). It is also important to allow condensate to drain.

12 - TESTS AND WARRANTY

All our units are tested and proven before leaving the factory.

They are guaranteed against all manufacturing defects. CIAT shall not be held liable for any type of corrosion.

The motors are not covered by the warranty in cases of incorrect electrical connection or inadequate protection.

Under no circumstances must the fitter carry out work on the motor. This will invalidate any future claims on the warranty.

CE CARRIER's products carry the CE mark, demonstrating that they may be sold throughout the European Union. This mark is your assurance that the products are safe to use.

13 - ASSEMBLY OPTIONS

Assembly option (assembly accessories, modules for return, for diffusion, distribution)

Wall bracket and Additional IPN kit

Model	Wall bracket product code	Additional IPN kit product code	Assembly diagram
42AM-EC30	7181226	7181228	7194594
42AM-AC35 **42AM-EC35**			
42AM-AC40 **42AM-EC40**			
42AM-AC45 **42AM-EC45**			
42AM-AC50 **42AM-EC50**		7181230	
42AM-AC63 **42AM-EC63**			
42AM-AC64			

Ceiling bracket

Model	Code	Assembly diagram
42AM-EC30	7282116	7193136
42AM-AC35 **42AM-EC35**		
42AM-AC40 **42AM-EC40**		
42AM-AC45 **42AM-EC45**		
42AM-AC50 **42AM-EC50**		
42AM-AC63 **42AM-EC63**		
42AM-AC64		

Filter box

Model	Code	Assembly diagram
42AM-EC30	7417083	7193132 Appendix F
42AM-AC35 **42AM-EC35**	7185105	
42AM-AC40 **42AM-EC40**	7185106	
42AM-AC45 **42AM-EC45**	7185107	
42AM-AC50 **42AM-EC50**	7185108	
42AM-AC63 **42AM-EC63**	7185110	
42AM-AC64	7185110	

Diffuser on door

Model	Code	Assembly diagram
42AM-EC30	7417084	7204354 Appendix H
42AM-AC35 **42AM-EC35**	7185133	
42AM-AC40 **42AM-EC40**	7185134	
42AM-AC45 **42AM-EC45**	7185135	
42AM-AC50 **42AM-EC50**	7185136	
42AM-AC63 **42AM-EC63**	7185137	
42AM-AC64	7185137	

Diffuser for large spaces

Model	Code	Assembly diagram
42AM-EC30	-	-
42AM-AC35 **42AM-EC35**	-	-
42AM-AC40 **42AM-EC40**	7185138	7204355 Appendix I
42AM-AC45 **42AM-EC45**	7185139	
42AM-AC50 **42AM-EC50**	7185140	
42AM-AC63 **42AM-EC63**	7185141	
42AM-AC64	7185141	

SINGLE-PHASE EC BOX (for air heaters or destratifier units fitted with SINGLE-PHASE EC motors)

Thank you for purchasing the "SINGLE-PHASE EC BOX" electronic control solution for AIR HEATER or DESTRATIFIER units fitted with SINGLE-PHASE EC motors. Up to 6 AIR HEATER or 6 DESTRATIFIER units or even 3 AIR HEATER + 3 DESTRATIFIER units can be controlled using a single box.

This box allows the following:

- Proportional variation of the supply air speed for the EC single-phase fan motor assembly (0-10 V FMA) according to the heating requirements of your building.
  - ⇨ **Heat or cool as precisely as possible in accordance with your needs.**
- Supply water to one or more heat exchangers according to your building's heat requirements (available with the optional valve kit).
  - ⇨ **Control your supply air temperature to improve comfort levels and maintain the range of the air streams.**
- Choose between fresh air only or mix with frost protection via the servomotor to be installed on the 2-channel mixing box with built-in filter (available with the fresh air kit damper servomotor + frost protection thermostat kit) or 100% recirculated air.
  - ⇨ **Adjust the fresh air rates in your building to meet current requirements or based on room occupancy levels (built-in timer).**
- The internal timer can be configured on a weekly basis using 3 operating modes (Comfort, Eco, Frost protection), allowing you to make environmentally-sound use of your air heaters.
  - ⇨ **The heating requirements of your building will depend on its occupancy level.**
- Centralised management of the AIR HEATER units via the master controller allowing up to 10 SINGLE-PHASE EC BOX slave units to be controlled (one EC BOX master or slave unit controls 6 AIR HEATER units or 3 AIR HEATER units + 3 DESTRATIFIERS).
  - ⇨ **The display shows the operating status of each individual AIR HEATER unit (fresh air or return air, motor fault, risk of frost, etc.)**
- All of the protective devices necessary to connect 6 units (air heaters or destratifiers) as well as 6 valve kits.
  - ⇨ **Plug & Play solution**
- A remote on/off control is available as well as a two separate fault summaries. Possibility to communicate via ModBus, JBUS or Bacnet IP.
  - ⇨ **Networked solution**

Refer to the instruction manual supplied in the packaging of your SINGLE-PHASE EC BOX for further information **or contact your CARRIER agent.**

3 speed EC thermostat

- **Functions**

The EC control includes a temperature selector (range from 10°C to 30°C) that maintains the room temperature at the selected value.

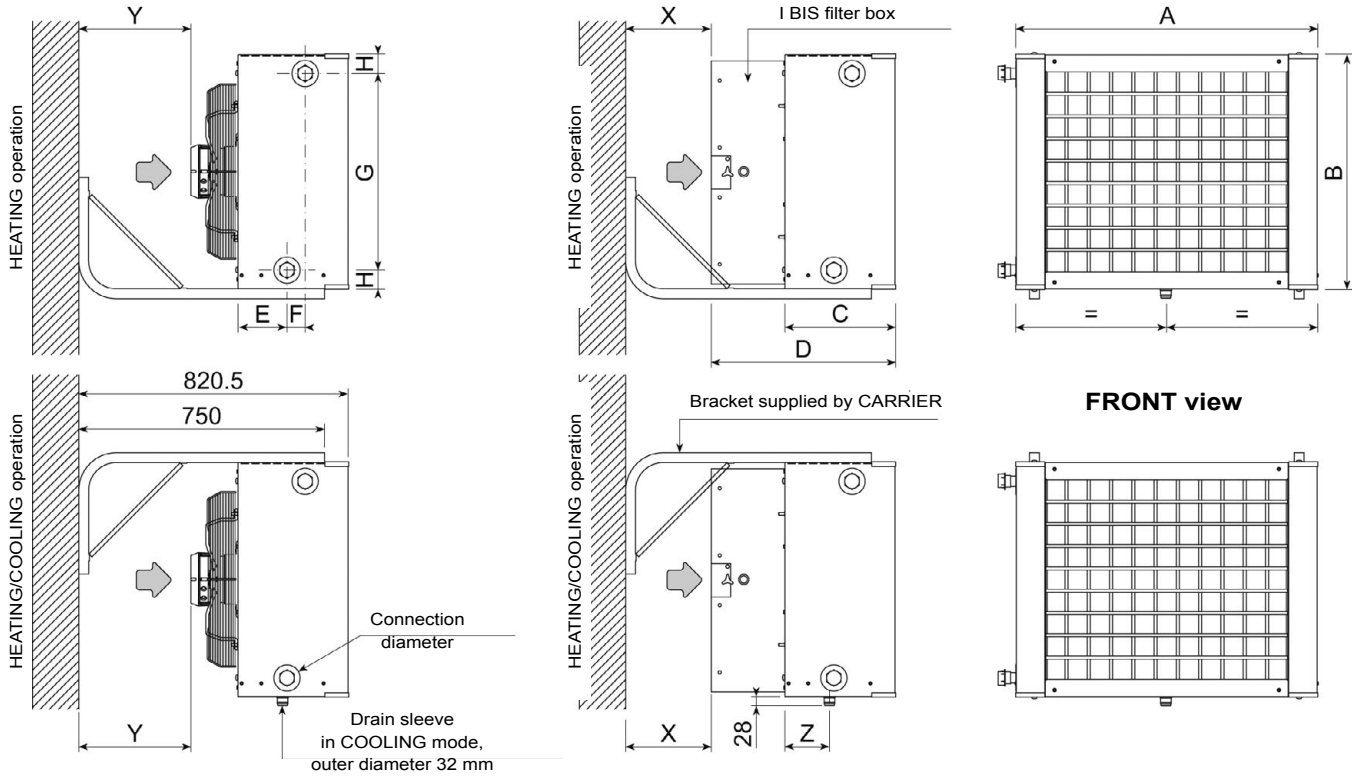
- **FAN operation**

The user can use the fan speed selector button to set the fan's operating mode to manual or automatic.

- ⇨ **In manual mode**, three types of speed can be selected (low, mid, high) depending on the requirements or energy saving mode. This energy saving mode is particularly useful for air conditioning in rooms at night or rooms left unoccupied for long periods.
- ⇨ **In automatic mode**, the fan speeds are controlled by a microprocessor housed in the control unit, according to the temperature selected. (see table below. 3 speeds possible depending on the heliotherme model)

Shunt 6	Shunt 7	Shunt 8		LOW	MID	HIGH	Heliotherme model	
							Heating	Cooling
Closed	Closed	Closed	→	2 V	6 V	10 V	42AM-EC30/ 42AM-EC45	42AM-EC50/ 42AM-EC63
Closed	Closed	Open	→	2 V	4 V	6 V	-	-
Closed	Open	Closed	→	6 V	8 V	10 V	-	-
Closed	Open	Open	→	2 V	3 V	4 V	-	42AM-EC40/ 42AM-EC45
Open	Closed	Closed	→	8 V	9 V	10 V	-	-
Open	Closed	Open	→	5 V	6 V	7 V	42AM-EC40/ 42AM-EC63	-
Open	Open	Closed	→	4 V	6 V	8 V	42AM-EC50	42AM-EC30
Open	Open	Open	→	3 V	6 V	9 V	42AM-EC35	42AM-EC35

15 - WALL BRACKET



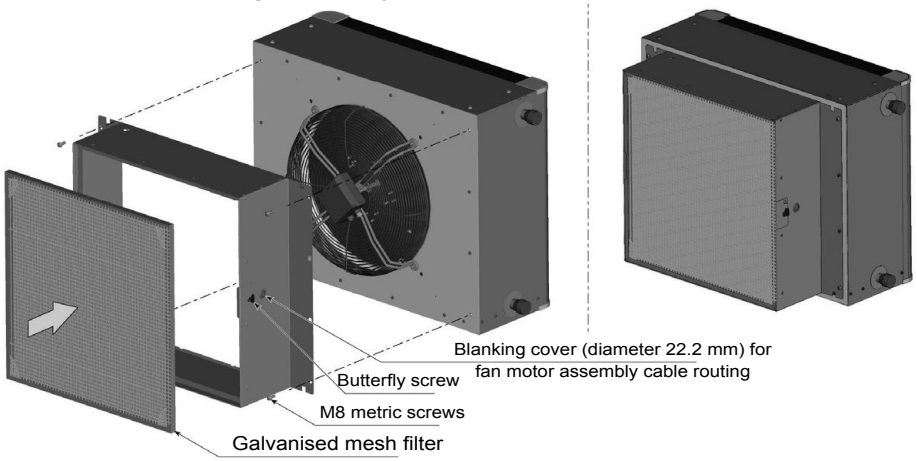
Model	A	B	C	D	E	F	G	H	Connection diameter	X	Y	Z
42AM-EC30	600	395	286	506	115	0	290	52	G 1/2" union	260	340	110
42AM-AC35 **42AM-EC35**	646	459	286	506	100	53	357	51	G 3/4" union	310	390	110
42AM-AC40 **42AM-EC40**	700	555	286	506	100	53	451	52	G 3/4" union	310	390	110
42AM-AC45 **42AM-EC45**	813	618	286	506	100	53	510	54	G 1" union	310	390	110
42AM-AC50 **42AM-EC50**	918	714	336	556	149	53	600	57	G 1" 1/4 union	260	340	135
42AM-AC63 **42AM-EC63**	1050	874	336	556	149	51	758	58	G 1" 1/4 union	260	340	135
42AM-AC64	1050	874	336	556	149	51	758	58	G 1" 1/4 union	260	340	135

16 - FILTER BOX

Assembly procedure:

1. Remove the galvanised mesh filter to facilitate handling.
2. Remove the 4 x M8 screws found at the ends of the air heater.
3. Fit the filter box in position on the unit.
4. Refit the 4 x M8 screws in their original positions to secure the filter box in place.
5. Refit the galvanised mesh filter, held in place by the 2 brackets and the 2 butterfly screws.

Filter box during assembly **Assembled filter box**



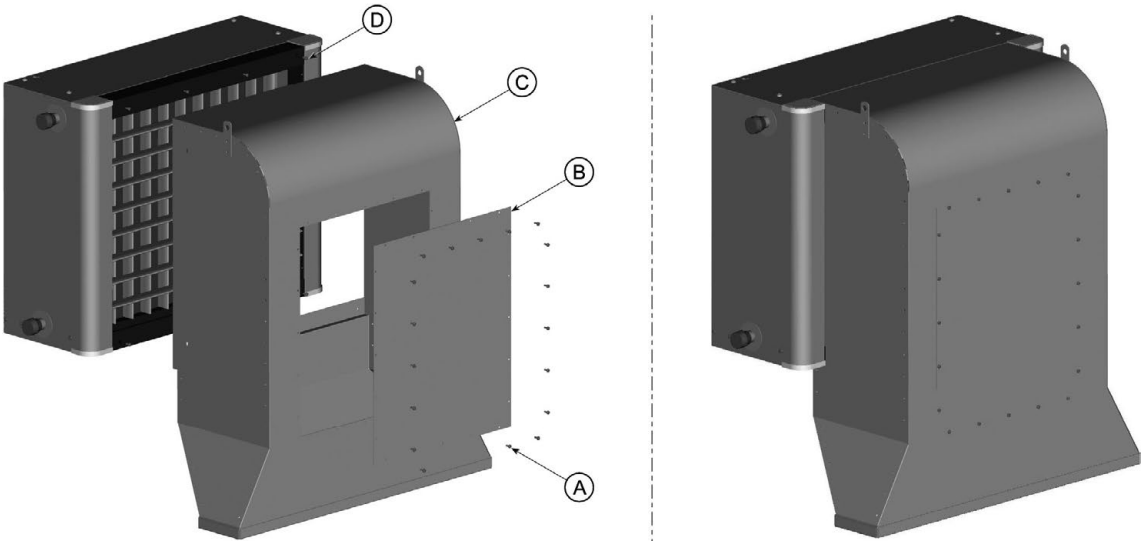
17 - DIFFUSER ON DOOR

Assembly procedure:

1. Remove the double deflection grille fitted as standard on the Air Heater if this is present
2. Remove the CBLX 4.85x14.5 screws (A) which secure the guard plate (B) on the diffuser (C)
3. Fit the diffuser support against the Air Heater and secure it in place using the CBLX screws (D) provided
4. Refit the guard plate (B) and secure it with the CBLX screws (A)

Diffuser on door + unit during assembly **Diffuser on door + Unit as assembled**

ATTENTION: Use a suitable system to mount the diffuser

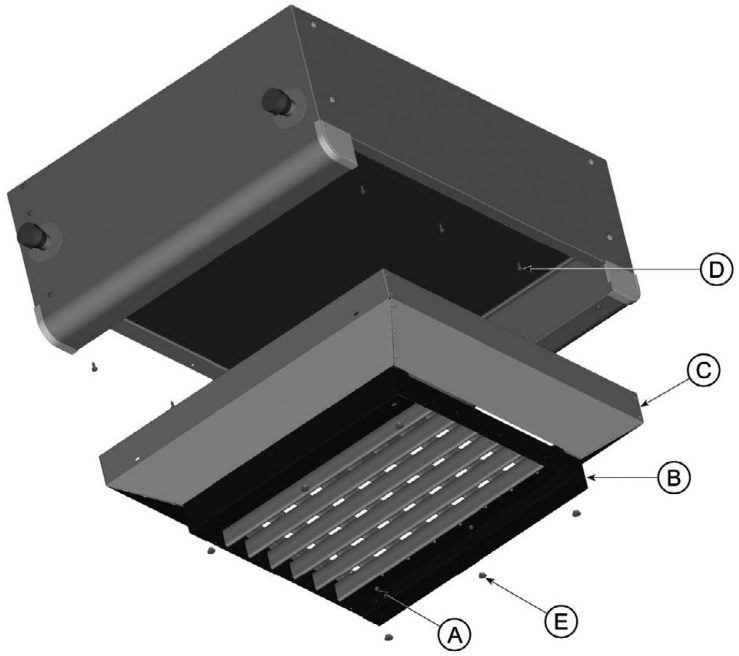


18 - DIFFUSER FOR LARGE SPACES

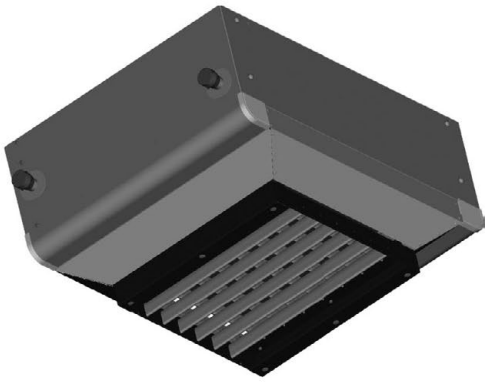
Assembly procedure:

1. Remove the double deflection grille fitted as standard on the Air Heater if this is present
2. Remove the 6 CBLX 4.85x14.5 screws (A) which secure the grille (B) on the support (C)
3. Fit the diffuser support against the Air Heater and secure it in place using the CBLX screws (D) provided
4. Refit the grille (B) and secure it with the CBLX screws (A)
5. Fit the matching grille blanking covers supplied with this accessory (E)

Extra height diffuser + Unit during assembly



Extra height diffuser + Unit as assembled



19 - FINAL SHUTDOWN

Shutting down

- Separate the units from their energy sources, allow them to cool then drain them completely.

Recommendations for disassembly

- Use the original lifting equipment.
- Sort the components according to their material for recycling or disposal, in accordance with regulations in force.
- Check whether any part of the unit can be recycled for another purpose.

Fluids to be recovered for treatment

- Energy transfer fluid depending on the installation, water, glycol/water mix, oil etc.

Materials to be recovered for recycling

- Depending on the installation: steel, copper, aluminium, plastics

Waste Electrical and Electronic Equipment (WEEE)

- At the end of its life, this equipment must be disassembled and contaminated fluids removed by professionals and processed via approved channels for electrical and electronic equipment (WEEE).
  - In France, CARRIER has formed a partnership with ECOLOGIC for the collection and recovery of professional waste governed by European Directive WEEE 2012/19/EU. This partnership simplifies the mandatory administrative procedures and ensures that old equipment is recovered via an official, structured channel. In terms of renovation work in France (mainland and overseas), for every CARRIER unit installed, our partner will collect and dismantle your existing equipment (see conditions with Ecologic). To request collection, please contact Ecologic:
    Tel.: 01 30 57 79 14 - E-mail: operation-pro@ecologic-france.com
  - For other countries, please refer to the legislation in force and the specific solutions available to ensure your waste is processed legally.

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