

# COMPACTAIR

Vertical packaged air conditioners



R410A



AIR COOLED *Inverter*

❄️ 22 - 82 kW

🔥 20 - 80 kW

🌀 5400 - 18700 m<sup>3</sup>/h


- # Vertical design **offering a reduced footprint.**
- # Indoor unit **preserving the building's architecture.**
- # Packaged and split versions allowing **high adaptability** in any building configuration.
- # **Optimised efficiency** at full and part load operation, thanks to variable speed compressor and EC fans on both sides.
- # Variable speed technology stabilising the air flow and providing accurate supply temperature for **improved indoor air quality.**

## AIR TREATMENT

- # EC motor fans ensuring a precise temperature for better comfort and energy savings.
- # Analogue filter detection to inform when the filters must be changed.
- # IAQ kits for improved indoor air quality inside buildings:
  - G4 (standard)
  - M5 (ePM10) + F7 (ePM1) available as an option.



## THERMODYNAMIC SYSTEM

- # Inverter scroll compressor allowing capacity modulation. 
- # Variable refrigerant control with electronic expansion valve.
- # Variable speed EC axial fans with optimised blade geometry to improve efficiency and reduce noise level.
- # Large surface exchangers for highly efficient heat transfer.
- # Dynamic defrost cycles.

## AUXILIARY HEATING DEVICES

- # Electric heater made of welded blinded elements, with two safety switches to prevent overloading. Available in three different sizes:
  - Standard capacity
  - Medium capacity with a one-stage regulation
  - High modulating capacity

CAIH - INDOOR UNIT



## CASING & DESIGN

- # Vertical design for machine room installation.
- # Casing built with pre-coated galvanized steel (White).
- # A1 (M0) fire-proof insulation.
- # Blue fin coated coil protection for outdoor and indoor coil (option)

CAMH - PACKAGED UNIT



## ADAPTABILITY

- # Packaged (CAMH) and split versions (CASH+CAIH), adaptable to any building configuration.
- # Allows connection up to 30m between condensing unit and air treatment unit.
- # Two configurations available:
  - Packaged unit (CAMH);
  - Split version, with outdoor condensing unit (CASH) and indoor air treatment unit (CAIH).

## CONTROL

- # eCLIMATIC electronic controller and intelligent control parameters optimising part-load efficiency.
- # Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet LonWorks®).
- # Several display solutions for different access levels.

### eCLIMATIC



### DS

Service display



### DM

Multi-unit display



### DC

Comfort display

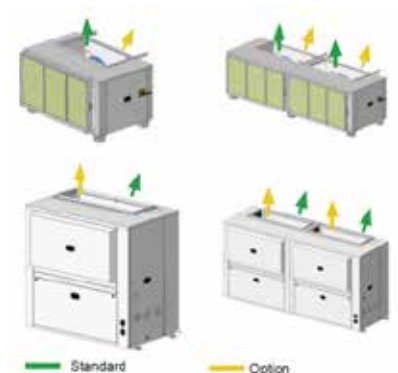


CASH - OUTDOOR UNIT



## AIRFLOW

- # Horizontal or vertical air discharges on both configurations.
- # Economiser option allows energy savings with free-cooling operation.
- # eDrive: high efficiency ventilation with direct transmission and variable speed drives.
- # Fresh air and free cooling management.



# CA<sub>(A)</sub> M<sub>(B)</sub> H<sub>(C)</sub> 020<sub>(D)</sub> S<sub>(E)</sub> M<sub>(F)</sub> 2<sub>(G)</sub> M<sub>(H)</sub>

(A) CA = COMPACTAIR

(B) M = Packaged unit - S = Condensing unit (Outdoor unit / Split version) - I = Air treatment unit (Indoor unit / Split version)

(C) H = Heat pump unit

(D) Maximum cooling capacity in kW

(E) S = 1 circuit - D = 2 circuits

(F) M = R410A

(G) 2 = Revision number

(H) M = 400V/3/50Hz - T = 230V/1/50Hz



## Air cooled version

## Heat pump units

COMPACTAIR		CAMH : PACKAGED UNIT					
		020	035	045	060	075	085
<b>Nominal thermal performances - Cooling mode</b>							
Cooling capacity <sup>(1)</sup>	kW	17,6	26,3	38,3	53,1	64,5	79,6
Total Power Input	kW	5,5	8,7	13,2	18,1	22,7	27,7
EER net <sup>(1)</sup>		3,19	3,02	2,90	2,92	2,83	2,88
<b>Nominal thermal performances - Heating mode</b>							
Heating capacity <sup>(2)</sup>	kW	15,7	23,7	30,8	46,4	57,0	66,8
Total Power Input	kW	3,8	6,8	9,0	13,7	18,9	21,9
COP net <sup>(2)</sup>		4,09	3,5	3,41	3,39	3,02	3,05
<b>Seasonal efficiencies - Cooling mode</b>							
Seasonal Energy Efficiency Ratio - SEER <sup>(3)</sup>		3,78	4,38	4,59	3,86	3,99	3,98
Seasonal energy efficiency - η <sub>s,c</sub> <sup>(4)</sup>	%	148,1	172,2	180,5	151,2	156,5	156,1
Eurovent energy efficiency class - Part load operation		A	A	B	B	B	B
<b>Seasonal efficiencies - Heating mode</b>							
Seasonal Coefficient of Performance - SCOP <sup>(5)</sup>		3,33	3,38	3,30	3,41	3,36	3,35
Seasonal energy efficiency - η <sub>s,h</sub> <sup>(6)</sup>	%	130,3	132,3	128,9	133,3	131,2	131,1
Eurovent energy efficiency class - Part load operation		A	A	A	B	C	C
<b>Auxiliary heating</b>							
Gas heating capacity	kW	-	-	-	-	-	-
Electric heater capacity - Standard / High		10 / 20	10 / 20	10 / 20	15 / 40	15 / 40	15 / 40
Electric pre-heater capacity - Standard / High		-	-	-	-	-	-
Hot water coil capacity Air inlet 20°C/Water		-	-	-	-	-	-
<b>Ventilation data</b>							
Minimum airflow rate	m <sup>3</sup> /h	1800	2800	3700	6200	6700	7500
Nominal airflow rate		3700	5800	7500	12500	13500	15000
Maximum airflow rate		4500	6200	7500	12500	13500	15000
<b>Acoustic data - Standard unit</b>							
Outdoor sound power	dB(A)	84	88	95	90	95	98
Indoor blower outlet sound power		69	78	83	83	85	87
<b>Electrical data</b>							
Maximum power	kW	15,1	20,8	29,0	50,1	57,5	64,5
Maximum current	A	27,3	36,8	50,1	81,7	96,7	108,1
Starting current	A	27,3	36,8	50,1	124,6	183,4	194,8
Short circuit current	kA	10	10	10	10	10	10
<b>Refrigeration circuit</b>							
Number of circuits		1	1	1	2	2	2
Number of compressors		1	1	1	3	3	3
Refrigerant load	kg	6,7	6,7	9	12	14	18

(1) Cooling mode : According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB

(2) Heating mode : According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB

(3) SEER in accordance with standard EN14825.

(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281

(5) SCOP in accordance with standard EN 14825 (average climate conditions).

(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

# CA<sup>(A)</sup> M<sup>(B)</sup> H<sup>(C)</sup> 020<sup>(D)</sup> S<sup>(E)</sup> M<sup>(F)</sup> 2<sup>(G)</sup> M<sup>(H)</sup>

(A) **CA** = COMPACTAIR

(B) **M** = Packaged unit - **S** = Condensing unit (Outdoor unit / Split version) - **I** = Air treatment unit (Indoor unit / Split version)

(C) **H** = Heat pump unit

(D) Maximum cooling capacity in kW

(E) **S** = 1 circuit - **D** = 2 circuits

(F) **M** = R410A

(G) **2** = Revision number

(H) **M** = 400V/3/50Hz - **T** = 230V/1/50Hz



## Air cooled version

## Heat pump units

COMPACTAIR		CASH + CAIH : SPLIT VERSION					
		020	035	045	060	075	085
<b>Nominal thermal performances - Cooling mode</b>							
Cooling capacity <sup>(1)</sup>	kW	17,6	26,3	38,3	53,1	64,5	79,6
Total Power Input	kW	5,5	8,7	13,2	18,1	22,7	27,7
EER net <sup>(1)</sup>		3,19	3,02	2,90	2,92	2,83	2,88
<b>Nominal thermal performances - Heating mode</b>							
Heating capacity <sup>(2)</sup>	kW	15,7	23,7	30,8	46,4	57,0	66,8
Total Power Input	kW	3,8	6,8	9,0	13,7	18,9	21,9
COP net <sup>(2)</sup>		4,09	3,49	3,41	3,39	3,02	3,0
<b>Seasonal efficiencies - Cooling mode</b>							
Seasonal Energy Efficiency Ratio - <b>SEER</b> <sup>(3)</sup>		3,78	4,38	4,59	3,86	3,99	3,98
Seasonal energy efficiency - <b>η<sub>s,c</sub></b> <sup>(4)</sup>	%	148,1	172,2	180,5	151,2	156,5	156,1
Eurovent energy efficiency class - Part load operation		A	A	B	B	B	B
<b>Seasonal efficiencies - Heating mode</b>							
Seasonal Coefficient of Performance - <b>SCOP</b> <sup>(5)</sup>		3,33	3,38	3,30	3,41	3,36	3,35
Seasonal energy efficiency - <b>η<sub>s,h</sub></b> <sup>(6)</sup>	%	130,3	132,3	128,9	133,3	131,2	131,1
Eurovent energy efficiency class - Part load operation		A	A	A	B	C	C
<b>Auxiliary heating</b>							
Gas heating capacity	kW	-	-	-	-	-	-
Electric heater capacity - Standard / High		10 / 20	10 / 20	10 / 20	15 / 40	15 / 40	15 / 40
Electric pre-heater capacity - Standard / High		-	-	-	-	-	-
Hot water coil capacity Air inlet 20°C/Water		-	-	-	-	-	-
<b>Ventilation data</b>							
Minimum airflow rate	m <sup>3</sup> /h	1800	2800	3700	6200	6700	7500
Nominal airflow rate		3700	5800	7500	12500	13500	15000
Maximum airflow rate		4500	6200	7500	12500	13500	15000
<b>Acoustic data - Standard unit</b>							
Outdoor sound power	dB(A)	84	88	95	90	95	98
Indoor blower outlet sound power		69	78	83	83	85	87
<b>Electrical data</b>							
Maximum power	kW	2,7 / 12,4	2,7 / 18,2	3,9 / 25,2	5,4 / 44,8	7,7 / 49,9	7,7 / 56,9
Maximum current	A	4,3 / 23,2	4,3 / 32,7	6,1 / 44,2	8,4 / 73,5	12 / 84,9	12 / 96,3
Starting current	A	4,3 / 23,2	4,3 / 32,7	6,1 / 44,2	8,4 / 116,4	12 / 171,6	12 / 183
Short circuit current	kA	10	10	10	10	10	10
<b>Refrigeration circuit</b>							
Number of circuits		1	1	1	2	2	2
Number of compressors		1	1	1	3	3	3
Refrigerant load	kg	6,7	6,7	9	12	14	18

(1) **Cooling mode** : According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB

(2) **Heating mode** : According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB

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**Air cooled version**

**Heat pump units**

COMPACTAIR		CAMH : PACKAGED UNIT					
		020	035	045	060	075	085
A	mm	1445	1445	1445	2813	2813	2813
B		895	895	895	895	895	895
C		2145	2145	2145	2145	2145	2145
<b>Weight of standard units</b>							
Basic unit	kg	460	485	488	995	1040	1060



**Air cooled version**

**Heat pump units**

COMPACTAIR		CASH : OUTDOOR UNIT					
		020	035	045	060	075	085
A	mm	1445	1445	1445	2813	2813	2813
B		895	895	895	895	895	895
C		1410	1410	1410	1410	1410	1410
<b>Weight of standard units</b>							
Basic unit	kg	288	286	306	622	642	662



**Air cooled version**

**Heat pump units**

COMPACTAIR		CAIH : INDOOR UNIT					
		020	035	045	060	075	085
A	mm	1445	1445	1445	2813	2813	2813
B		895	895	895	895	895	895
C		836	836	836	836	836	836
<b>Weight of standard units</b>							
Basic unit	kg	172	204	186	378	398	408

