

redge[®]



COMPACTAIR ADVANCED

Vertical packaged air conditioners



AIR COOLED

Inverter

R410A



22 - 82 kW

20 - 80 kW

5400 - 18700 m³/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.)
- # Several display solutions for different access levels.

eCLIMATIC



DS

Service display



DM

Multi-unit display



DC

Comfort display

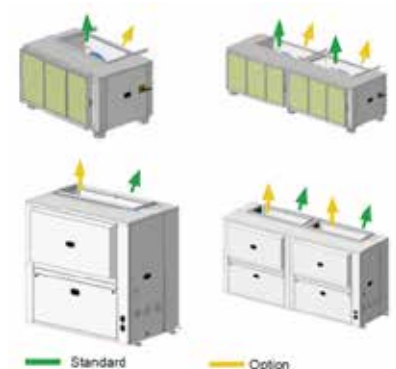


CASH - OUTDOOR UNIT



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_(A) M_(B) H_(C) 020_(D) S_(E) M_(F) 2_(G) M_(H)

(A) CA = COMPACTAIR ADVANCED

(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 ADVANCED		CAMH : PACKAGED UNIT					
		020	035	045	060	075	085
Nominal thermal performances - Cooling mode							
Cooling capacity ⁽¹⁾	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 ⁽¹⁾		3,19	3,02	2,90	2,92	2,83	2,88
Nominal thermal performances - Heating mode							
Heating capacity ⁽²⁾	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 ⁽²⁾		4,09	3,5	3,41	3,39	3,02	3,05
Seasonal efficiencies - Cooling mode							
Seasonal Energy Efficiency Ratio - SEER ⁽³⁾		3,78	4,38	4,59	3,86	3,99	3,98
Seasonal energy efficiency - η_{s,c} ⁽⁴⁾	%	148,1	172,2	180,5	151,2	156,5	156,1
Seasonal efficiencies - Heating mode							
Seasonal Coefficient of Performance - SCOP ⁽⁵⁾		3,33	3,38	3,30	3,41	3,36	3,35
Seasonal energy efficiency - η_{s,h} ⁽⁶⁾	%	130,3	132,3	128,9	133,3	131,2	131,1
Auxiliary heating							
Electric heater capacity - Standard / High	kW	10 / 20	10 / 20	10 / 20	15 / 40	15 / 40	15 / 40
Ventilation data							
Minimum airflow rate	m ³ /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
Acoustic data - Standard unit							
Outdoor sound power	dB(A)	84	88	95	90	95	98
Indoor blower outlet sound power		69	78	83	83	85	87
Electrical data							
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
Refrigeration circuit							
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_(A) M_(B) H_(C) 020_(D) S_(E) M_(F) 2_(G) M_(H)

(A) CA = COMPACTAIR ADVANCED

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(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 ADVANCED		CASH + CAIH : SPLIT VERSION					
		020	035	045	060	075	085
Nominal thermal performances - Cooling mode							
Cooling capacity ⁽¹⁾	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 ⁽¹⁾		3,19	3,02	2,90	2,92	2,83	2,88
Nominal thermal performances - Heating mode							
Heating capacity ⁽²⁾	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 ⁽²⁾		4,09	3,49	3,41	3,39	3,02	3,0
Seasonal efficiencies - Cooling mode							
Seasonal Energy Efficiency Ratio - SEER ⁽³⁾		3,78	4,38	4,59	3,86	3,99	3,98
Seasonal energy efficiency - η_{s,c} ⁽⁴⁾	%	148,1	172,2	180,5	151,2	156,5	156,1
Seasonal efficiencies - Heating mode							
Seasonal Coefficient of Performance - SCOP ⁽⁵⁾		3,33	3,38	3,30	3,41	3,36	3,35
Seasonal energy efficiency - η_{s,h} ⁽⁶⁾	%	130,3	132,3	128,9	133,3	131,2	131,1
Auxiliary heating							
Electric heater capacity - Standard / High	kW	10 / 20	10 / 20	10 / 20	15 / 40	15 / 40	15 / 40
Ventilation data							
Minimum airflow rate	m³/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
Acoustic data - Standard unit							
Outdoor sound power	dB(A)	84	88	95	90	95	98
Indoor blower outlet sound power		69	78	83	83	85	87
Electrical data							
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
Refrigeration circuit							
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.



Air cooled version

Heat pump units

COMPACTAIR ADVANCED		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
Weight of standard units							
Basic unit	kg	460	485	488	995	1040	1060



Air cooled version

Heat pump units

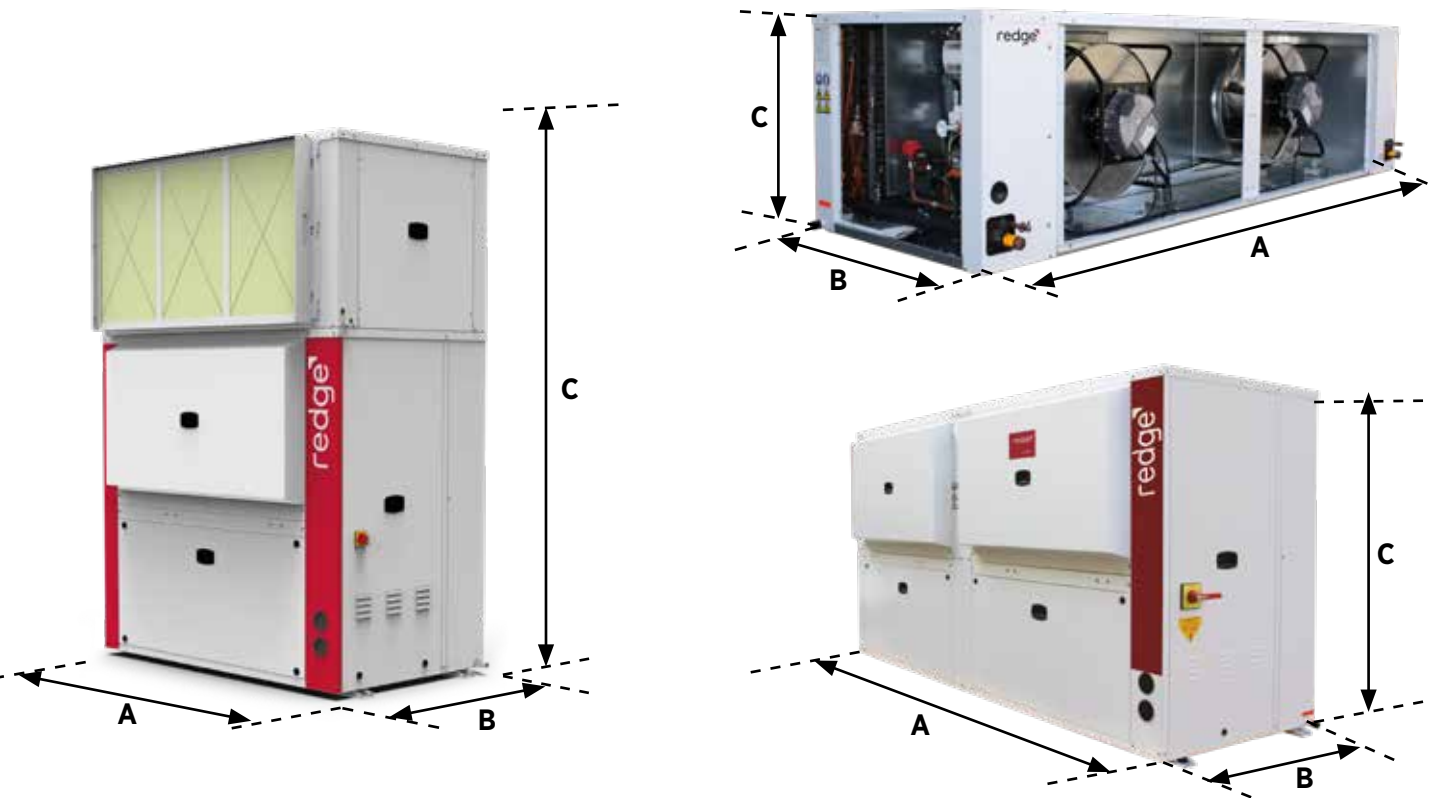
COMPACTAIR ADVANCED		CASH : OUTDOOR UNIT					
		020	035	045	060	075	085
A	mm	1445	1445	1445	2813	2813	2813
B		895	895	895	895	895	895
C		1410	1410	1410	1410	1410	1410
Weight of standard units							
Basic unit	kg	288	286	306	622	642	662



Air cooled version

Heat pump units

COMPACTAIR ADVANCED		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
Weight of standard units							
Basic unit	kg	172	204	186	378	398	408



Air treatment unit

CIC/CIH

19 - 135 kW



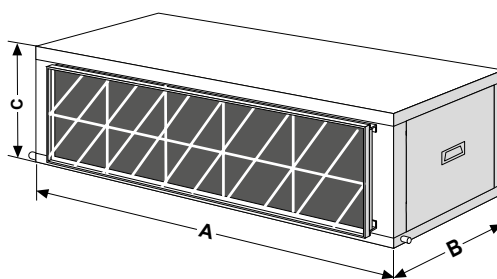
CIC/CIH		20S	25S	30S	35S	40S	45D	55D	70D	85D	100D	120D*	140D*
Cooling mode - CIC													
Gross cooling capacity ⁽¹⁾	kW	19,9	24,2	27,9	36,5	41,9	48,7	57,3	72,4	86,0	103,9	116,2	140,6
Net cooling capacity ⁽¹⁾		19,5	23,5	27,0	35,5	40,5	46,5	55,5	69,5	82,0	100,0	111,0	135,0
Heating mode - CIH													
Net heating capacity ⁽²⁾	kW	19,5	25	28,5	36	40	49,5	56,5	72,5	80	108	118	137
Electrical heater capacity (option) Standard/Medium/High		10	10	10	15	15	15	20	20	20	27	27	27
		15	15	15	20	20	20	27	27	27	40	40	40
		20	20	20	27	27	27	40	40	40	50	50	50
Hot water coil capacity ⁽²⁾		31	38	40	56	61	66	91	105	113	171	183	192
Ventilation													
Minimum airflow rate	m³/h	3150	4250	4650	6200	6950	7950	9950	12450	14000	17350	19300	21000
Maximum airflow rate		4100	5500	6000	8050	9050	9750	12850	15090	16725	22450	24950	24750
Maximum available static pressure	Pa	685	672	650	729	833	812	747	711	680	812	784	828
Acoustic data ⁽³⁾													
Blower outlet sound power level (Lw)		75	82	82	82	85	86	80	85	87	85	87	89

*The sizes 120D and 140D can be combined only with Condensing Unit AIRCOOLAIR (see page 145)

(1) Evaporating temperature = 7 °C / Ambient air temperature = 35 °C

(2) Condensing temperature = 50 °C / Ambient air temperature = 7 °C BS/6 °C BH

Dimensions



CIC/CIH		20 S	25 S	30 S	35 S	40 S	45 D	55 D	70 D	85 D	100 D	120 D	140 D
A	mm	1195			1445			2250			2900		
B		840			960			960			1140		
C		645			735			735			1140		
Operating weight ⁽¹⁾	kg	108	111	115	150	160	170	242	259	276	470	480	490

(1) Standard unit - Heat pump version

Vertical ductable condensing unit

CSC/CSH

20→100 kW



CSC/CSH		20S	25S	30S	35S	40S	45D	55D	70D	85D	100D
Cooling mode											
Net cooling capacity ⁽¹⁾	kW	18,8	23,1	26,0	33,8	38,8	43,5	54,0	66,2	78,0	96,8
Absorbed power ⁽¹⁾		7,3	9,3	11,0	13,7	15,9	18,9	21,5	27,8	32,6	40,7
Heating mode											
Net heating capacity ⁽¹⁾	kW	19,7	25,9	30,4	37,2	43,7	52,0	61,0	72,8	86,0	105,1
Absorbed power ⁽¹⁾		6,6	8,6	10,7	12,4	14,0	17,4	20,3	24,8	28,5	35,4
Electrical data											
Electrical supply	400V/3Ph/50Hz										
Refrigeration circuit											
Number of compressors / Number of circuits	1/1										
Total refrigerant load	kg	4,3/	5,4/	6,0/	7,8/	9,0/	10,3/	12,5/	15,5/	18,5/	23,0/
Cooling only / Heat pump		4,5	5,5	6,2	8,0	9,3	10,6	12,6	16,0	19,1	25,2
Ventilation data											
Nominal airflow rate	m³/h	7600	8500	10000	12000	11700	14000	20000	21000	22000	15500 + 11700
Maximum available static pressure	Pa	178	223	272	209	205	237	299	272	277	239 + 201
Acoustic data											
Blower outlet sound power level (Lw)	dB(A)	82	85	86	85	85	88	87	88	89	92

⁽¹⁾ EUROVENT conditions data

Cooling :

Outdoor temperature = 35°C DB

Entering coil temperature 27°C DB / 19°C WB

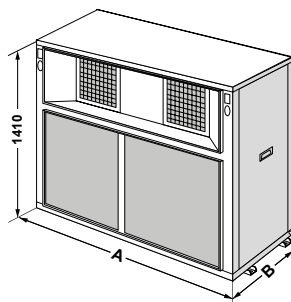
Heating :

Outdoor temperature = 7°C DB / 6°C WB

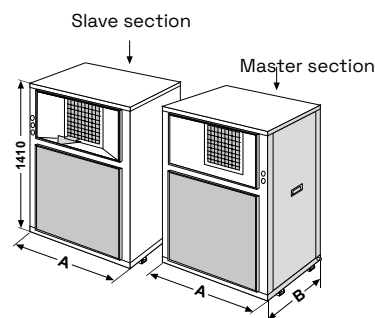
Indoor temperature = 20°C DB

Dimensions

Sizes 20S to 85D



Sizes 100D



CSC/CSH		20S	25S	30S	35S	40S	45D	55D	70D	85D	100D
A	mm	1194			1445			2251			2 x 1450
B		745			870			870			870
Operating weight ⁽¹⁾	kg	262	295	302	357	370	448	529	554	586	2 x 435

⁽¹⁾ Standard unit - Heat pump version