HCNA

Medium ductable terminal units with Brushless DC and AC Asynchronous motor

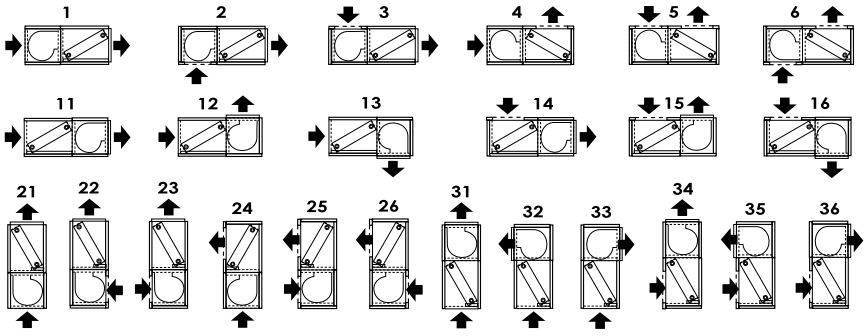
7 kW÷68 kW

The HCNA are small air handling units, which can be freely configured. It is possible to select between 2 motors (6 Poles or Brushless), 2 types of housing cases (S or D), the version of 2/4 pipes and a wide range of coupled accessories.

The wide flexibility combined with the full range of capacity rating is the HCNA winning idea that allows to find the best solution for suiting your needs.

Technical Features

- It has a self-supporting structure made of thick galvanized sheet making it resistant to rust, corrosion, chemical agents, solvents, aliphatic and alcohols.
- Self-supporting panels and removable; assembling with self-tapping screws for quick and easy inspection/maintenance. They are available in housing cases "S"-version (Simple panel) and "D"-version (Sandwich double panels 20mm thick with outer painted sheet with white RAL 9002).
- The units provide heat exchange coils (without air vent valves) with high-efficiency made of copper tubes and aluminium fins.
- Standard connections located on the right; on request for left connections at additional charges.
- The sections with cooling coil are equipped with a drain pan in galvanized sheet + external thermal insulation (optional, with additional charges, made of stainless steel AISI 304) with a single slope in order to ensure the optimal condensate draining, with drain hole of Ø30mm.
- The standard electrical equipment includes: "Mammoth" type terminal board IP20 installed outside the unit on the same side of the water connections. For units with 2 motors, it is recommended the installation of 3 relays or the interface card.
- All the standard versions are supplied with free air inlet and air outlet openings, without any grill/protection and without air filter.
- N° 2 motor types:6 Poles or Brushless



Versions

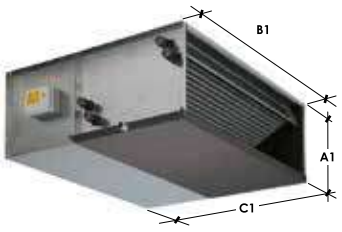
S	Concealed version - Single panel	**D**	With cabinet version - Double panel

HCNA		71	117	143	165	216 (7)	290(7)	240(7)	293(7)	330(7)	565(7)	685(7)
Cooling cap. (1)	kW	7,3	11,7	14,6	17,0	22,2	29,8	24,1	30,1	34,0	58,1	70,1
Sensible capacity (1)	kW	5,9	9,8	12,0	14,0	18,3	24,3	20,2	24,6	28,1	44,5	55,4
Heating cap. (2)	kW	17,2	28,3	34,9	40,7	52,9	69,9	58,8	71,2	80,9	125,7	157,2
Heating cap (3)	W	8.350	14.100	17.000	19.700	25.650	34.100	29.300	34.600	39.150	60.950	76.650
Air flow (3)	m³/h	1500	2500	3000	3500	5000	6000	5000	6000	7000	10000	12000
Water flow (4)												
Cooling	l/h	1256	2012	2511	2924	3818	5126	4145	5177	5848	9993	12057
Heating	l/h	1479	2434	3001	3500	4549	6011	5057	6123	6957	10810	13519
Pressure drop water (4)												
Cooling	kPa	27,7	27,3	29,7	27,5	28,1	32,8	25,7	27,4	29,0	32,4	35,0
Heating	kPa	30,0	31,1	33,1	30,7	31,0	35,2	30,1	30,0	32,0	29,6	34,3
Sound pressure (5)												
Min-Med-Max	dB(A)	35-41-46	42-48-54	40-45-54	43-47-53	48-52-58	47-51-57	45-51-57	43-48-57	46-50-56	51-55-61	50-54-60
Motors/Fans	n°/n°	1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
Absorbed current	A	1x2,4	1x5,0	1x5,0	1x7,0	1x7,2	1x9	2x5	2x5	2x7	2x7,2	2x9
Power supply		230Vac - 1 Ph - 50Hz										
Poles		4										
Coil/Rows	n°	3R	3R	3R	3R	3R	3R	3R	3R	3R	4R	4R
Water connections	Ø	3/4"M	1"M	1"M	1"M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M
Drain pipe	Ø (mm)	30	30	30	30	30	30	30	30	30	30	30

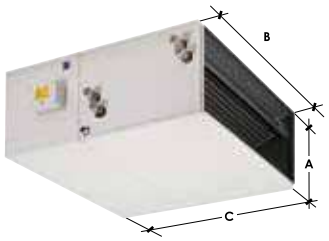
Heating coil

HCNA		71	117	143	165	216 (7)	290(7)	240(7)	293(7)	330(7)	565(7)	685(7)
Heating cap. (2)	W	13,3	21,7	27,3	31,7	40,4	54,5	44,8	55,3	62,4	85,2	103,1
Water flow (5)												
Heating	l/h	1144	1866	2348	2726	3474	4687	3853	4756	5366	7327	8867
Pressure drop water (5)												
Heating	kPa	35,1	36,3	37,7	38,6	40,4	37,3	37,7	34,7	37,1	37	40,2
Coil/Rows	n°	2R	2R	2R	2R	2R	2R	2R	2R	2R	2R	2R
Water connections	Ø	3/4"M	1"M	1"M	1"M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M	1"1/4M

(1) Entering air temp.: 27°C d.b./19°C w.b. - In/Out water temp.: 7°C /12°C Max speed
(2) Entering air temp.: 20°C d.b. - In/Out water temperature: 70°C / 60°C Max speed
(3) Entering air temp.: 20°C d.b. In/Out water temperature: 45°C / 40°C Max speed
(4) Nominal data measured with casing ref. AMCA210-74 standards and plenum + diaphragm ref. CNR-UNI10023 standards.
(6) Free field sound pressure, 3 m distance. Data calculated based on sound power measured in riverberation room ref. ISO 3741 - ISO 3742 standards.
(7) With CBP-CRA accessories. For units equipped with a motor with electrical absorption greater than 3A, or with 2 motors, add 1 SDI.2x10A interface card.
(1)(2)(3)(4)(5) Nominal technical data , refer air flow (3) to the max speed and unit with free air flow
(*) DN: Nominal diameter; F=Female gas water coil connections



S
Concealed version - Single panel



D
With cabinet version - Double panel

Version "S"

HCNA		71	117	143	165	216	290	240	293	330	565	685
A1	mm	360	425	425	480	550	550	425	425	480	580	580
B1	mm	560	660	760	760	1.160	1.360	1.160	1.360	1.360	1.660	1.660
C1	mm	840	995	1.105	1.160	1.140	1.240	995	1.105	1.160	1.450	1.450
Weight	kg	35,8	46,6	55,7	60,6	93,7	107,8	78,5	94,8	103,5	179,1	181,1

Version "D"

HCNA		71	117	143	165	216	290	240	293	330	565	685
A	mm	380	440	440	480	570	570	440	440	480	600	600
B	mm	520	620	720	720	1.120	1.320	1.120	1.320	1.320	1.620	1.620
C	mm	870	1.020	1.120	1.160	1.150	1.250	1.020	1.120	1.160	1.470	1.470
Weight	kg	45,1	59,5	71,3	77,3	118,9	138,7	99,7	121,4	131,4	224,4	226,4

Version "S" - con batteria calda / hot water exchanger

HCNA		71	117	143	165	216	290	240	293	330	565	685
A1	mm	360	425	425	480	550	550	425	425	480	580	580
B1	mm	560	660	760	760	1.160	1.360	1.160	1.360	1.360	1.660	1.660
C1	mm	840	995	1.105	1.160	1.140	1.240	995	1.105	1.160	1.450	1.450
Weight	kg	40,2	52,1	62,3	67,2	104,7	123,8	89,5	110,8	119,5	203,1	205,1

Version "D" - con batteria calda / hot water exchanger

HCNA		71	117	143	165	216	290	240	293	330	565	685
A	mm	380	440	440	480	570	570	440	440	480	600	600
B	mm	520	620	720	720	1.120	1.320	1.120	1.320	1.320	1.620	1.620
C	mm	870	1.020	1.120	1.160	1.150	1.250	1.020	1.120	1.160	1.470	1.470
Weight	kg	49,5	65,0	77,9	83,9	129,9	154,7	110,7	137,4	197,4	248,4	250,4

*WARNING: verify if the electrical absorption of the units motors are compatible with the remote control contact rating. If the electrical absorption is higher, or the unit is provided with 2 motors, it's recommended to use SDI chart.
(1) All HCNA units are supplied with standard Mammoth type terminal board, without thermostat.
(2) Each control panel can control only one unit (see accessory "SDI").

Fitted accessories

BC Auxiliary heating coil, 2 raws

PFA-S
PFA-D
Ductable air filter section + flat air filter, EU3 filtering level (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

TEL Remote control management system. Motherboard + Air sensor + Water sensor - I.R. reciever + I.R. Remote control (control 2-4 pipe units, with/ without valves). Fan 7A-230Vac. Valves: 2A-230Vac.

PFO-S
PFO-D
Ductable air filter section + HIGH EFFICIENCY undulated air filter H=100mm, EU5 filtering level (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

3V-2,8
3V-5,2
3V-13
3V-16
3-way valve with actuator 230V

2V-2,8
2V-5,2
2V-13
2V-16
2-way valve with actuator 230V

3VM-2,8
3VM-5,2
3VM-13
3VM-16
3-way valve with actuator 24Vac, modulating signal 0-10V

2VM-2,8
2VM-5,2
2VM-13
2VM-16
2-way valve with actuator 24Vac, modulating signal 0-10V

MB Brushless motor with continuos variation 0-100% of the air flow (signal 0..10 Vdc) Digital wall thermostat is an essential accessory for the operation of a unit with Brushless motor. Should not be combined with accessory TEL

Loose accessories

CRA (1) 230V wall thermostat. 3 speeds fan selector + Off/On selector + 2 pipes plant management with or without 230V on-off valves

CBP (1) Digital wall thermostat 230V/24V. On-off or brushless fan, 2 or 4 pipes plant management with or without on-off valve or 0..10V with 230V or 24V alimentation.

AIRMUST 3V Wall-mounted thermostat function control for 3-speed fancoil with Wi-Fi and Modbus, with or without valves

AIRMUST 010 Wall-mounted thermostat function control for Brushless motor 0-10V fancoil, with Wi-Fi and Modbus, with or without valves

(1) Each control panel can control only one unit. To controll more units see SDI accessory

Loose accessories

MOR-TMB

Mammoth type terminal board + water low temperature thermostat. Tset 32°C. All HCN units are supplied with standard Mammoth type terminal board, without thermostat.

SND-W4

Water temperature probe (type NTC 4700 Ohm @ 25°C) with minimum temperature settable. Cable length 1 meter. Alternative to TMB thermostat.

SDI.4X3A

Card with 4 by 3A output (suitable to control up to max No. 4 3-Speed 3A motors ; ex. No. 4 small fan-coils)
Contatti-Contacts: 4x 3(0,3)A 230Vac

SDI.2X10A

Card with 2 by 10A output (suitable to control up to max No. 2 3-Speed motors of 10A ; ex. No. 1 large unit with 2 motors)
Contatti-Contacts: 2x l0A-230Vac

PFT-S
PFT-D

Ductable air filter section+VERY HIGH EFFICIENCY POCKET BAGS air filter h=400mm with EU7 filtering level (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

P2S-S
P2S-D

Closed section +2 regulation/ adjustment louvers (1 louver below + 1 louver on the rear side). Louvers without controls, can be either manual or motorized control. (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

PMA-S
PMA-D

External/internal mixing section "external air 0-33% - internal air 100-67%" (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

MS

Motor "230Vac on-off" suitable for air damper

P90-S
P90-D

90° sectiom (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

PCR-S
PCR-D

Steel section with spigots "Ø", internal insulation.
(S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

PSL-S
PSL-D

Labyrinth noise level attenuator section, suitable for both air intake/supply outlets (S=single skin panel made of galvanized steel, D=double skin panel pre-painted)

PMP

Condensate pump including 0,5 litres condensate tank, provided with 4A (250V)

COIL characteristics

	HCNA	71	117	143	165	216	290	240	293	330	565	685
Heat/cool coil	Kvs characteristic	2,33	3,78	4,58	5,65	6,65	9,00	8,22	9,91	11,04	16,36	19,73
	User side connection DN	3/4"M	1"M	1"M	1"M	1"-1/4M	1"-1/2M	1"-1/4M	1"-1/2M	1"-1/2M	1"-1/2M (4R)	1"-1/2M (4R)
Heat coil	Kvs characteristics	1,66	2,56	3,23	3,94	4,64	6,46	5,73	7,14	7,98	9,67	11,53
	User side connection DN	3/4"M	1"M	1"M	1"M	1"-1/4M	1"-1/4M	1"-1/4M	1"-1/4M	1"-1/4M	1"-1/4M	1"-1/4M

Valve characteristics

3-way valve	**(1) Every single kit includes 1 intercept valve only**			
3V / 3VM	DN 3/4" Kvs 2,8	DN 1" Kvs 5,2	DN 1 1/4" Kvs 13,0	DN 1 1/2" Kvs 16,0
2-way valve	**(1) Every single kit includes 1 intercept valve only**			
2V / 2VM	DN 3/4" Kvs 2,8	DN 1" Kvs 5,2	DN 1 1/4" Kvs 13,0	DN 1 1/2" Kvs 16,0

(1) Each valve kit is suitable for any HCNA unit size.
with on-off valve it is recommended to use valves with high Kvs - with modulating valves it is recommended to use valves with Kvs - comparable with the one of the coil

The heat coil of HCNA units (4-pipes system) require the same type valves. So the 4-pipes system need n°2 valves (n° 2 codes)