

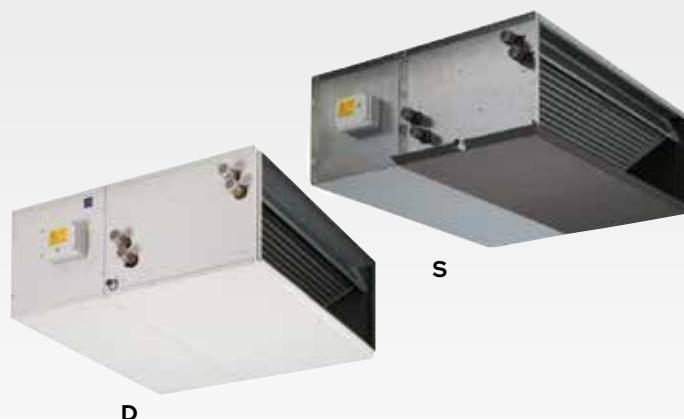
HCNA

Medium ductable terminal units with Brushless DC and AC Asynchronous motor

7 kW ÷ 68 kW

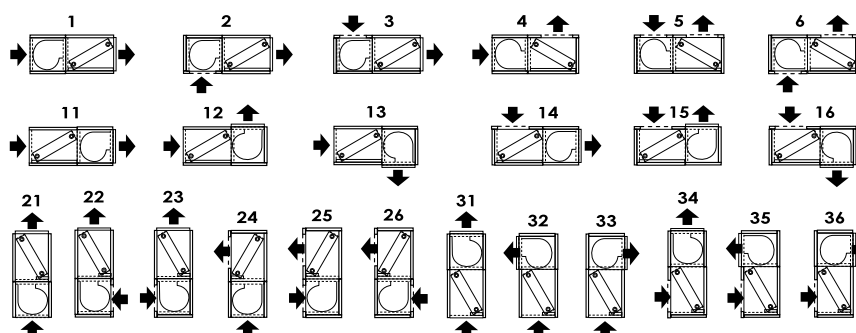
The HCNA are small air handling units, which can be freely configured. It is possible to select between 2 motors (6 Poles or Brushless), 2 types of housing cases (S or D), the version of 2/4 pipes and a wide range of coupled accessories.

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

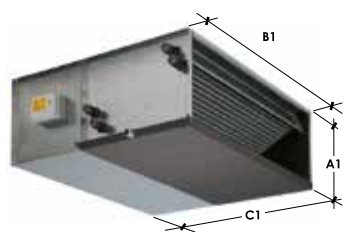
| HCNA | | 71 | 117 | 143 | 165 | 216 ⁽⁷⁾ | 290 ⁽⁷⁾ | 240 ⁽⁷⁾ | 293 ⁽⁷⁾ | 330 ⁽⁷⁾ | 565 ⁽⁷⁾ | 685 ⁽⁷⁾ |
|-------------------------|--------|----------------------|----------|----------|----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 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 | ∅ | 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 | ∅ (mm) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

Heating coil

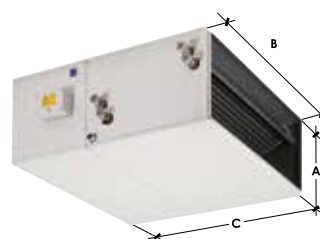
| HCNA | | 71 | 117 | 143 | 165 | 216 ⁽⁷⁾ | 290 ⁽⁷⁾ | 240 ⁽⁷⁾ | 293 ⁽⁷⁾ | 330 ⁽⁷⁾ | 565 ⁽⁷⁾ | 685 ⁽⁷⁾ |
|-------------------------|-----|-------|------|------|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 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 | ∅ | 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 "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"

| 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 |

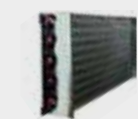
Version "D" - con batteria calda / hot water exchanger

| 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 rows



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. receiver + 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 continuous 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 control 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 10A-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° section (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)