

CU AIR CONDITIONING INDUSTRIES LLC



CLIMA UNO FAN COIL UNITS

CUHD, CULD



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AN AL SHIRAWI GROUP COMPANY



ABOUT THE GROUP

OUR CORE VALUES

**Excellence | Transparency
| Compassion | Honesty |
Empowerment | Discipline**



- Started in 1971
- One of the largest conglomerates in the Middle East
- Consolidated group of over 48 successful and specialised companies
- Turnover of USD 1.1 billion
- Audited by KPMG and financials listed on D&B
- Employee strength of 8500+

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CU AIR CONDITIONING INDUSTRIES LLC



ABOUT US

- Originated in Italy currently owned by Al Shirawi Group
- Eurovent-certified product range is custom-built for maximum performance
- Fully-integrated state of the art 100,000 sq. ft. facility in Dubai which is ISO 9001:2015 certified by LRQA
- Core production team with over 25 years of technical experience
- Products are expertly designed using CCSI software
- Eurovent certified AHU/FAHU with premium components that include AHRI certified coils, Eurovent & UL Listed filters, AMCA certified fans, CE certified motors.
- Wide range of AHRI Certified Fan Coil Units.
- Project references in residential and commercial buildings, cinemas, sports complexes, hotels, hospitals, and shopping malls

QUALITY HEALTH SAFETY & ENVIRONMENT



We, have competent and trained quality Engineers and inspectors to make sure our product quality is controlled at the various stages of production with the help of stringent incoming, in-process and final inspections. All the inspections are conducted and recorded in our Q-Clima App for future reference and easy traceability.

We are an ISO 9001:2015 certified facility from Lloyd's Register Quality Assurance. Our Eurovent-certified product range is custom-built for maximum performance Our factory has an internal testing laboratory, which is certified by TUV for the method of testing of Air Flow and Air leakage test according to BS EN 13053:2001 & EN 1886:2007



Mr. Krishna Kumar

Quality Health safety and environment is of paramount importance to us. Our strong QHSE record is a clear testimony of what we wanted to portray and we are confident it will serve as a true differentiator and the most important competitive advantage.

OUR MANUFACTURING FACILITY

Mr. Kumar Abhishek (GM)

At Clima Uno, we supply Eurovent and AHRI certified high performance products, to cater to the region's harsh climatic conditions.

SHEET METAL FABRICATION

Mechanical swing beam shear is a frequently used shearing machine in sheet metal cutting. Whole welded structure, hydraulic transmission, high mechanical strength and good rigidity contribute to excellent shearing performance and productivity.



BENDING

Bending machines are developed for high flexibility and low setup times. These machines are able to bend single pieces as well as small batches with the same precision and efficiency as series-produced parts in an economical way. A simple plug-in system supports quick and easy exchange of tools.



CNC PUNCHING

Our CNC machines ensure maximum precision with sophisticated technology and are used for production of air handling units casing work including panels, base frame, drain pan etc.



FOAM INJECTION

In the production of polyurethanes, accuracy in the mixing of the liquid components is the most important and decisive phase. Versatility and user friendliness are the main features that make the HPE series an ideal choice for every type of foam as they are rigid, flexible, integral, elastomeric etc. All panels are manufactured with 44 kg/m³ density as standard.



COIL SHOP

The highly-efficient and well-equipped coil shop ensures robust coil manufacturing capabilities with short lead times.



ASSEMBLY LINE

Our efficient manufacturing process ensures greater production volumes, consistency in quality and faster delivery times.



CULD®

Low static pressure
Fan coil unit



AC/EC Motor
Software

> advantages

- Available Pressure: 0 to 50 Pa.
- Extra flat: 245mm or 295mm height.
- Optional: Double-skin casing.
- EC motor is available.

> range

- 2 sizes : - Size 1 : max. flow : 2380 m³/h.
- Size 2 : max. flow : 3400 m³/h.
- 3 versions : - 2 tubes + 3 rows (standard).
- 2 tubes + 4 rows.
- 4 tubes + 3+1 rows.

> application

- CULD unit for air conditioning of commercial buildings like Hotel rooms and offices of cooling and heating .

> construction / composition

- **Structure :**
 - Galvanized steel casing with corner reinforced hanging holes. Suspension by M8 nuts, crimped into the structure.
 - Powder coating of RAL color code is as option for high humidity and rust conditions.
 - Double-skin casing is also as option.

In between: Density of 40kg/m³ PE insulation.
Total thickness: 25mm

- **Fan :**
 - Forward curved centrifugal, double inlet with direct drive.
 - Fan and filter access by access door.

- **Motor :**
 - Built-in single-phase motor IP20.
 - Thermal protection.

-Heat Exchanger:

- Copper tubes 3/8"(9.52mm)of refrigeration quality.
- Connection : 3/4" male.
- Blades in aluminum, mechanically crimped.
- Mounted on slides and interchangeable on site.
- 100% coil leakage test of 350PSI.

- Filters :

- Different filter thickness (12.5mm/25mm) is available.

> packaging

- Individual in carton of FCL sea shipment worthy quality.
- Extra pallet will be provided of LCL or air shipment. Pallet is with corner protection and forklift gap.

* For Actual data , please refer to the project specific Technical datasheet.

> specifications

The CULD low static pressure fan-coil unit is to have a low profile of 245 or 295 mm. The airflow is from 340 to 3400 m³/h; cooling capacity from 1.5kw to 11kw (sensible at medium speed).Project selection software is available for standard EUROVENT conditions, AHRI (ARI-440-2008) and district cooling conditions. Customerized requirements and OEM productions are available.

technical description

> General features

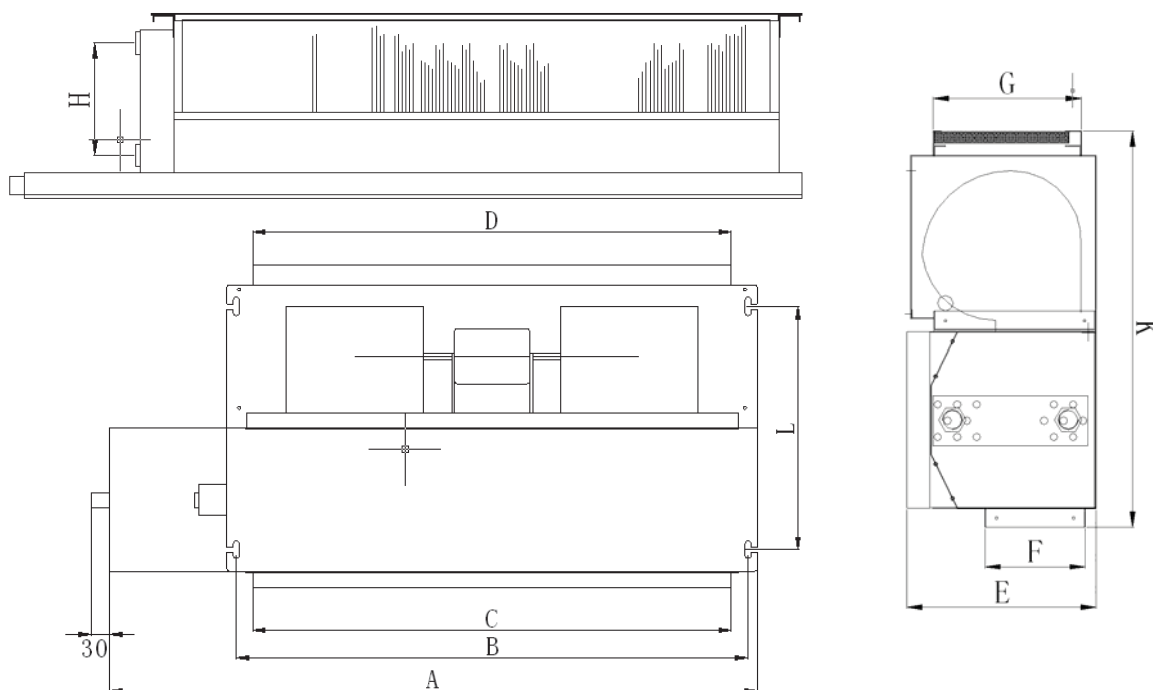
| Model | 02 | 03 | 04 | 05 | 06 | |
|-----------------|---|---|-----|-----|-----|-----|
| Coil | Tube | 3/8"(9.52mm) diameter copper tube | | | | |
| | Fin | 12pcs/inch corrugated aluminum blue fin | | | | |
| | L(mm) | 490 | 590 | 690 | 790 | 920 |
| | H(mm) | 200 | 200 | 200 | 200 | 200 |
| Fan | GI wheel direct driven double inlet centrifugal fan | | | | | |
| Power Input(W) | 64 | 88 | 118 | 132 | 151 | |
| Noise dB(A) | 27 | 29 | 34 | 35 | 37 | |
| Coil Connector | 3/4"(female connection) | | | | | |
| Drain Connector | 3/4"(male connection) | | | | | |
| Net Weight(kg) | 19 | 21 | 22 | 24 | 26 | |

| 08 | 10 | 12 | 14 | 16 | 18 | 20 |
|---|------|------|------|------|------|------|
| 3/8"(9.52mm) diameter copper tube | | | | | | |
| 12pcs/inch corrugated aluminum blue fin | | | | | | |
| 1240 | 1440 | 1650 | 1750 | 1640 | 1800 | 1900 |
| 200 | 200 | 200 | 200 | 250 | 250 | 250 |
| GI wheel direct driven double inlet centrifugal fan | | | | | | |
| 186 | 205 | 245 | 285 | 320 | 385 | 450 |
| 38 | 39 | 46 | 47 | 48 | 52 | 56 |
| 3/4"(female connection) | | | | | | |
| 3/4"(male connection) | | | | | | |
| 36 | 37 | 45 | 48 | 52 | 56 | 58 |



technical description

> Drawings



> Dimensions List

| ITEM mm | A | B | C | D | E | F | G | H | K | L |
|------------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| CULD02 | 740 | 522 | 470 | 470 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD03 | 840 | 622 | 570 | 570 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD04 | 940 | 722 | 670 | 670 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD05 | 1040 | 822 | 770 | 770 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD06 | 1240 | 952 | 900 | 900 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD08 | 1540 | 1272 | 1220 | 1220 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD10 | 1770 | 1472 | 1420 | 1420 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD12 | 1940 | 1682 | 1630 | 1630 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD14 | 2040 | 1782 | 1730 | 1730 | 245 | 130 | 192 | 150 | 517 | 390 |
| CULD16 | 1940 | 1672 | 1620 | 1620 | 295 | 180 | 242 | 200 | 577 | 450 |
| CULD18 | 2040 | 1832 | 1780 | 1780 | 295 | 180 | 242 | 200 | 577 | 450 |
| CULD20 | 2100 | 1932 | 1880 | 1880 | 295 | 180 | 242 | 200 | 577 | 450 |

> Performance Data

Conditions Reference:

A. Entering air temperature: +27°C DB; 19.5°C WB; Water Inlet/Outlet: +7/12°C; Standard Reference: EUROVENT.

B. District Cooling Rating: Entering air temperature: +24.4°C DB; 17.2°C WB; Water Inlet/Outlet: +5.5/14.4°C.

C. Entering air temperature: +80°F DB; +67°F WB; Water Inlet/Outlet: +45/55°F; Standard Reference: ARI-440:2008.

This catalogue performance data is only based on condition A and standard 2-pipe and 3-row coil fan coil unit. please contact for more careful data.

-Air Flow (m³/h)

| Model | 02 | 03 | 04 | 05 | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 |
|---------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| Nominal | 340 | 510 | 680 | 850 | 1020 | 1360 | 1700 | 2040 | 2380 | 2720 | 3060 | 3400 |
| H | 386 | 548 | 728 | 848 | 1028 | 1342 | 1680 | 1980 | 2310 | 2580 | 2905 | 3280 |
| M | 328 | 480 | 576 | 615 | 755 | 881 | 1132 | 1403 | 1598 | 1909 | 2168 | 2380 |
| L | 289 | 336 | 368 | 398 | 597 | 629 | 775 | 1006 | 1182 | 1394 | 1476 | 1635 |

technical description

-Cooling (kw)

| Model | | 02 | 03 | 04 | 05 | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 |
|-------|----------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| H | Total | 2.52 | 3.66 | 4.12 | 4.57 | 5.72 | 7.02 | 9.47 | 10.84 | 11.97 | 13.73 | 15.20 | 17.57 |
| M | | 2.15 | 3.18 | 3.29 | 3.68 | 4.59 | 5.59 | 7.17 | 8.87 | 9.61 | 11.78 | 12.44 | 13.52 |
| L | | 1.80 | 1.93 | 2.24 | 2.28 | 3.87 | 4.35 | 5.41 | 6.93 | 8.00 | 9.34 | 9.71 | 10.35 |
| H | Sensible | 1.80 | 2.60 | 3.01 | 3.27 | 4.05 | 4.94 | 6.63 | 7.52 | 8.28 | 9.54 | 10.74 | 12.37 |
| M | | 1.52 | 2.24 | 2.35 | 1.60 | 3.20 | 3.87 | 4.94 | 6.08 | 6.57 | 8.10 | 8.67 | 9.36 |
| L | | 1.25 | 1.54 | 1.66 | 1.84 | 2.67 | 2.96 | 3.66 | 4.68 | 5.41 | 6.34 | 6.66 | 7.05 |

-Heating (kw)

| Model | 02 | 03 | 04 | 05 | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 |
|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| H | 2.94 | 4.12 | 4.82 | 5.23 | 6.41 | 7.87 | 10.44 | 11.82 | 12.97 | 14.98 | 16.95 | 19.42 |
| M | 2.48 | 3.57 | 3.82 | 4.21 | 5.14 | 6.23 | 7.88 | 9.64 | 10.40 | 12.81 | 13.81 | 14.90 |
| L | 2.10 | 2.51 | 2.71 | 3.01 | 4.29 | 4.81 | 5.91 | 7.50 | 8.63 | 10.14 | 10.72 | 11.33 |

-Water Flow (l/s)

| Model | 02 | 03 | 04 | 05 | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| H | 0.12 | 0.17 | 0.20 | 0.22 | 0.27 | 0.34 | 0.45 | 0.52 | 0.57 | 0.66 | 0.73 | 0.84 |
| M | 0.10 | 0.15 | 0.16 | 0.18 | 0.22 | 0.27 | 0.34 | 0.42 | 0.46 | 0.56 | 0.59 | 0.65 |
| L | 0.09 | 0.11 | 0.11 | 0.13 | 0.18 | 0.21 | 0.26 | 0.33 | 0.38 | 0.45 | 0.46 | 0.49 |

-Water Pressure Drop (kpa)

| Model | 02 | 03 | 04 | 05 | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| H | 10.21 | 19.71 | 10.51 | 13.81 | 21.58 | 19.59 | 33.67 | 46.13 | 55.66 | 46.61 | 27.43 | 36.11 |
| M | 8.26 | 16.38 | 7.82 | 10.43 | 16.19 | 14.51 | 23.37 | 35.44 | 41.72 | 38.10 | 21.09 | 25.57 |
| L | 6.62 | 10.35 | 5.13 | 6.85 | 12.93 | 10.44 | 16.13 | 25.61 | 32.78 | 28.10 | 15.24 | 18.00 |

> Accessories

-Thermostat

Mechanical or Digital Thermostat can be equipped as control parts. Various types of thermostats can be selected.



-Control Valve

Mechanical or thermal types of valve can be selected. DN15(1/2"), 20(3/4") and 25(1") are the most frequently used type. Valve kit can be factory assembled for easy project site installation.



-Electrical Heater

Electrical heater can be as optional requirement for projects need high heating capacity. All heaters are with thermal protection under safety approval. Heating capacity ranges from 1.0kw to 6kw. Wiring of the electrical heater is in the same terminal box of fan coil units.



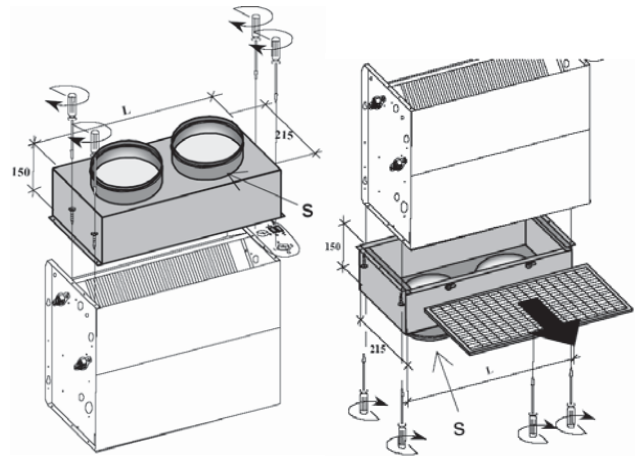
-Auxiliary Drain Tray

G.I. material with power coating. This accessory is mainly used for condensate water from valve kit.



-Air Outlet Or Inlet Plenum With Circular Connector

Air outlet or inlet plenum with circular connector. The plenum is insulated.



Fan Coil Unit



CUHD®

High static pressure
Fan coil unit

AC/EC Motor
Software

> advantages

- Available Pressure: 75 to 150 Pa.
- Duct flange seal connection.
- Optional: Double-skin casing.
- EC motor is available.

> range

- Air flow range:- max air volume 5100 m³/h
Cooling capacity:- max cooling capacity 30kw
- 3 versions : - 2 tubes + 4 rows (standard).
- 2 tubes + 6 rows.
- 4 tubes + 3+1 rows.
- 4 tubes + 4+2 rows.

> application

- CUHD unit for air conditioning of commercial buildings like Hotel rooms and offices of cooling and heating .

> construction / composition

- **Structure :**
 - Galvanized steel casing with corner reinforced hanging holes. Suspension by M8 nuts, crimped into the structure.
 - Powder coating of RAL color code is as option for high humidity and rust conditions.
 - Double-skin casing is also as option.

In between: Density of 40kg/m³ PE insulation.
Total thickness: 25mm

- **Fan :**
 - Forward curved centrifugal, double inlet with direct drive.
 - Fan and filter access by access door.

- **Motor :**
 - Built-in single-phase motor IP20/IP44.
 - Thermal protection.

-Heat Exchanger:

- Copper tubes 3/8"(9.52mm)of refrigeration quality.
- Connection : 3/4" male.
- Blades in aluminum, mechanically crimped.
- Mounted on slides and interchangeable on site.
- 100% leakage test of 350PSI.

- Filters :

- Different filter thickness (12.5mm/25mm) is available.

> packaging

- Individual in carton of FCL sea shipment worthy quality.
- Extra pallet will be provided of LCL or air shipment. Pallet is with corner protection and forklift gap.

* For Actual data , please refer to the project specific Technical datasheet.

> specifications

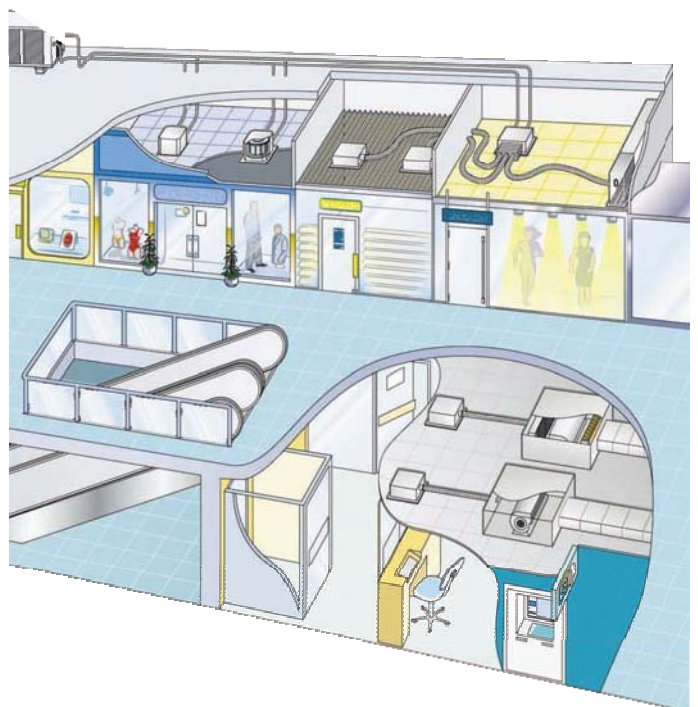
The CUHD high static pressure fan-coil unit is mainly used for ceiling ducted occasion. The airflow is from 1360 to 5100 m³/h; cooling capacity from 5.94kw to 30kw (sensible at medium speed).Project selection software is available for standard EUROVENT conditions, AHRI (ARI-440-2008) and district cooling conditions. Customerized requirements and OEM productions are available.

technical description

> General features

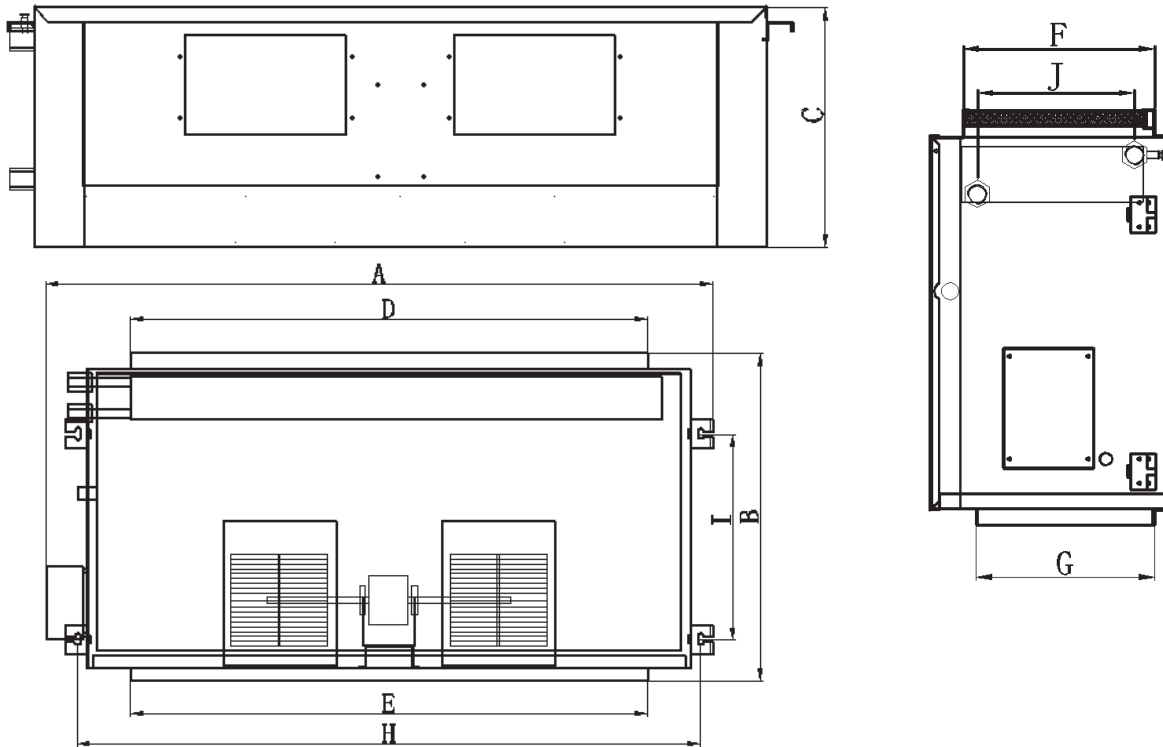
| Model | 08 | 10 | 12 | 14 | 18 | |
|-----------------|---|---|-----|------|------|------|
| Coil | Tube | 3/8"(9.52mm) diameter copper tube | | | | |
| | Fin | 12pcs/inch corrugated aluminum blue fin | | | | |
| | L(mm) | 800 | 900 | 1000 | 1160 | 1200 |
| | H(mm) | 200 | 200 | 200 | 200 | 200 |
| Fan | GI wheel direct driven double inlet centrifugal fan | | | | | |
| Power Input(W) | 368 | 460 | 564 | 650 | 845 | |
| Noise dB(A) | 44 | 45 | 46 | 49 | 49 | |
| Coil Connector | 3/4"F | 3/4"F | 1"F | 1"F | 1"F | |
| Drain Connector | 3/4"(male connection) | | | | | |
| Net Weight(kg) | 42 | 50 | 55 | 72 | 76 | |

| 20 | 24 | 30 |
|---|------|------|
| 3/8"(9.52mm) diameter copper tube | | |
| 12pcs/inch corrugated aluminum blue fin | | |
| 1330 | 1350 | 1680 |
| 200 | 200 | 200 |
| GI wheel direct driven double inlet centrifugal fan | | |
| 934 | 1128 | 1445 |
| 51 | 53 | 57 |
| 1"F | 1"F | 1"F |
| 3/4"(male connection) | | |
| 83 | 93 | 108 |



technical description

> Drawings



> Dimensions List

| ITEM mm | A | B | C | D | E | F | G | H | I | J |
|------------|------|-----|-----|------|------|-----|-----|------|-----|-----|
| CUHD08 | 1090 | 568 | 340 | 780 | 780 | 255 | 255 | 1000 | 280 | 213 |
| CUHD10 | 1190 | 568 | 340 | 880 | 880 | 255 | 255 | 1100 | 280 | 213 |
| CUHD12 | 1290 | 568 | 390 | 980 | 980 | 305 | 305 | 1200 | 280 | 260 |
| CUHD14 | 1450 | 688 | 390 | 1140 | 1000 | 305 | 305 | 1360 | 425 | 260 |
| CUHD18 | 1490 | 688 | 450 | 1180 | 1100 | 365 | 305 | 1400 | 425 | 310 |
| CUHD20 | 1620 | 863 | 450 | 1310 | 1200 | 365 | 305 | 1530 | 425 | 310 |
| CUHD24 | 1640 | 863 | 500 | 1330 | 1200 | 415 | 355 | 1550 | 575 | 360 |
| CUHD30 | 1970 | 863 | 500 | 1660 | 1500 | 415 | 355 | 1880 | 575 | 360 |

> Performance Data

Conditions Reference:

A. Entering air temperature: +27°C DB; 19.5°C WB; Water Inlet/Outlet: +7/12°C; Standard Reference: EUROVENT.

B. District Cooling Rating: Entering air temperature: +24.4°C DB; 17.2°C WB; Water Inlet/Outlet: +5.5/14.4°C.

C. Entering air temperature: +80°F DB; +67°F WB; Water Inlet/Outlet: +45/55°F; Standard Reference: ARI-440:2008.

This catalogue performance data is only based on condition A and standard 2-pipe and 4-row coil fan coil unit. please contact for more careful data.

-Air Flow (m³/h)

| Model | 08 | 10 | 12 | 14 | 18 | 20 | 24 | 30 |
|---------|------|------|------|------|------|------|------|------|
| Nominal | 1001 | 1516 | 2053 | 2406 | 3267 | 3590 | 4108 | 5070 |
| H | 892 | 1213 | 1643 | 1925 | 2613 | 2684 | 3286 | 3802 |
| M | 669 | 910 | 1232 | 1444 | 1960 | 2013 | 2465 | 2851 |
| L | 1001 | 1516 | 2053 | 2406 | 3267 | 3590 | 4108 | 5070 |

technical description

-Cooling (kw)

| Model | | 08 | 10 | 12 | 14 | 18 | 20 | 24 | 30 |
|-------|----------|------|------|-------|-------|-------|-------|-------|-------|
| H | Total | 6.44 | 9.12 | 12.56 | 15.06 | 19.82 | 22.20 | 25.56 | 32.57 |
| M | | 5.94 | 7.82 | 10.76 | 12.89 | 16.99 | 18.11 | 21.87 | 26.55 |
| L | | 4.83 | 6.38 | 8.76 | 10.47 | 13.83 | 14.70 | 17.78 | 21.48 |
| H | Sensible | 4.53 | 6.48 | 8.84 | 10.50 | 13.88 | 15.43 | 17.74 | 22.33 |
| M | | 4.14 | 5.47 | 7.47 | 8.87 | 11.74 | 12.39 | 15.00 | 17.95 |
| L | | 3.30 | 4.37 | 5.97 | 7.08 | 9.40 | 9.90 | 12.00 | 14.31 |

-Heating (kw)

| Model | 08 | 10 | 12 | 14 | 18 | 20 | 24 | 30 |
|-------|------|-------|-------|-------|-------|-------|-------|-------|
| H | 7.67 | 10.90 | 14.80 | 17.47 | 23.05 | 25.53 | 29.34 | 36.68 |
| M | 7.00 | 9.20 | 12.51 | 14.77 | 19.52 | 20.52 | 24.82 | 29.50 |
| L | 5.58 | 7.35 | 10.01 | 11.79 | 15.64 | 16.39 | 19.87 | 23.53 |

-Water Flow (l/s)

| Model | 08 | 10 | 12 | 14 | 18 | 20 | 24 | 30 |
|-------|------|------|------|------|------|------|------|------|
| H | 0.31 | 0.44 | 0.60 | 0.72 | 0.95 | 1.06 | 1.22 | 1.56 |
| M | 0.28 | 0.37 | 0.51 | 0.62 | 0.81 | 0.86 | 1.04 | 1.27 |
| L | 0.23 | 0.30 | 0.42 | 0.50 | 0.66 | 0.70 | 0.85 | 1.03 |

-Water Pressure Drop (kpa)

| Model | 02 | 03 | 04 | 05 | 06 | 08 | 10 | 12 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| H | 11.24 | 19.17 | 25.08 | 36.16 | 43.19 | 54.83 | 56.14 | 93.36 |
| M | 10.21 | 15.94 | 20.86 | 30.01 | 35.93 | 42.99 | 46.60 | 73.09 |
| L | 7.96 | 12.48 | 16.30 | 23.41 | 28.09 | 33.50 | 36.39 | 56.73 |

> Accessories

-Thermostat

Mechanical or Digital Thermostat can be equipped as control parts. Various types of thermostats can be selected.



-Control Valve

Mechanical or thermal types of valve can be selected. DN15(1/2"), 20(3/4") and 25(1") are the most frequently used type. Valve kit can be factory assembled for easy project site installation.



-Electrical Heater

Electrical heater can be as optional requirement for projects need high heating capacity. All heaters are with thermal protection under safety approval. Heating capacity ranges from 1.0kw to 6kw. Wiring of the electrical heater is in the same terminal box of fan coil units.



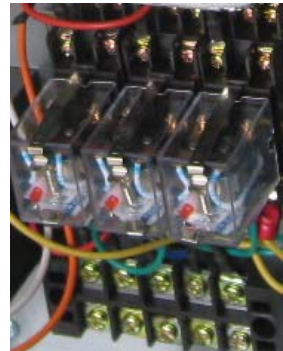
-Auxiliary Drain Tray

G.I. material with power coating. This accessory is mainly used for condensate water from valve kit.



-Control Relay

Control relay can be added into the TAHD terminal box for project site easy connection of the thermostat because the TAHD units is with big capacity and the current in the circuit might over standard thermostat limited current.



CONSULTANT APPROVALS:



PROJECT REFERENCES:

PSE CONSULTANTS

EMAAR

ATKINS

KHATIB ALAMI

HOSMAC

GAJ

DUBAI HEALTH AUTHORITY

NEB

CLARKE SAMADHIN ASSO.



AMERICANA GROUP



FAN COIL UNITS

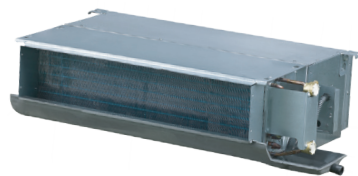
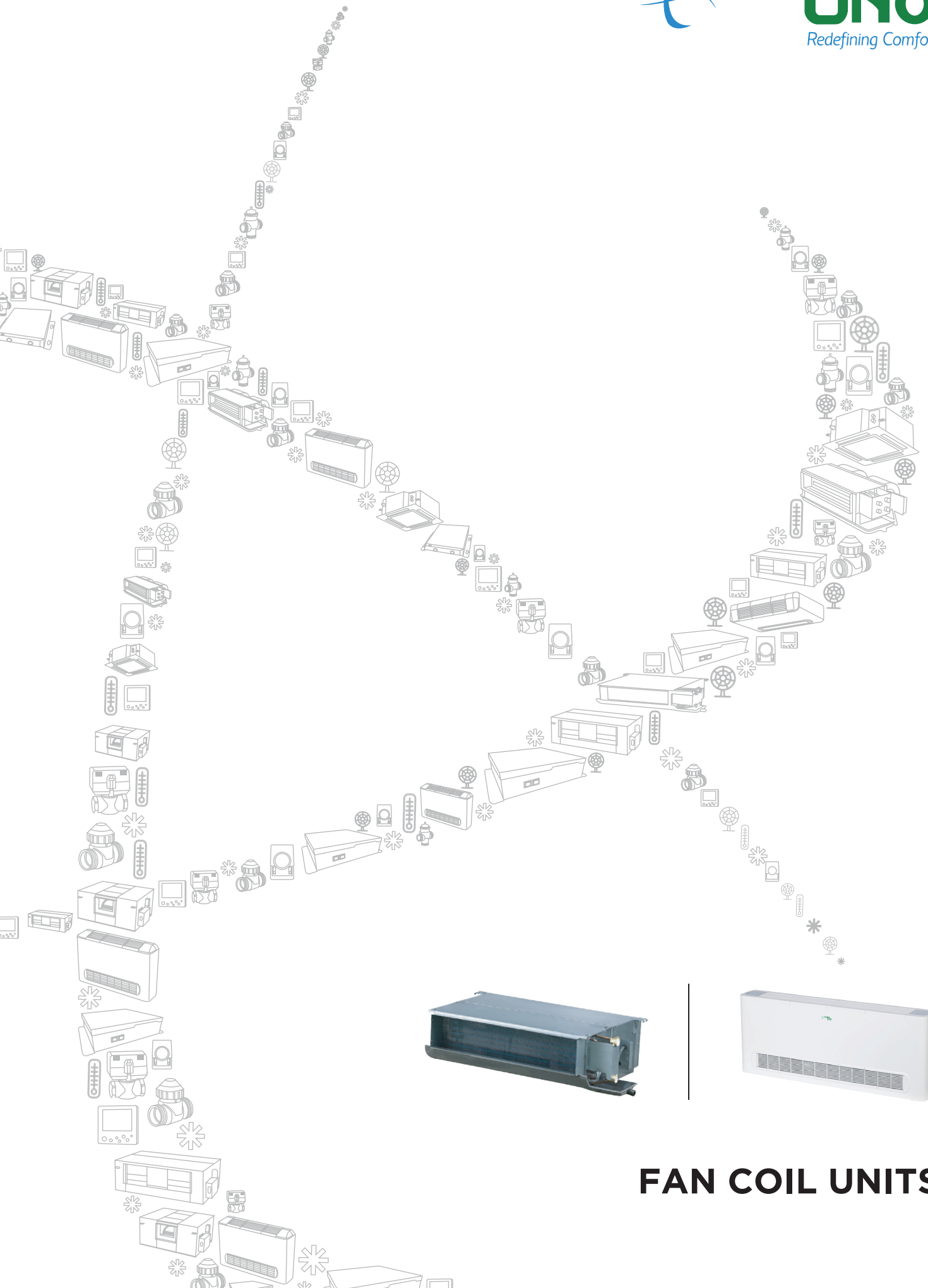
CUHD, CULD

 **CLIMA UNO**[®]
Redefining Comfort

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WWW.CLIMAUNOGLOBAL.COM





FAN COIL UNITS

COMPANY PROFILE

Clima Uno is a well-established brand for air-handling units and fan coil units, which originated in Italy and is owned today by the Al Shirawi Group of Companies. Clima Uno's Eurovent-certified product range is custom-built for maximum performance in the region's harsh climatic conditions.

Founded in Dubai in 1971, the Al Shirawi Group is one of the largest private business conglomerates in the UAE. The Group has an annual turnover of USD 1 Billion and has 40 companies in diverse business sectors such as Printing and Packaging, Oil and Gas, Logistics, Heavy Equipment, Manufacturing, Electronics, Engineering Services, Trading, Online Media and Publishing, and Education.

Clima Uno units are manufactured in a fully integrated facility in Dubai, equipped with the most modern machinery. Our core production team has 25 years of technical experience and each product has been expertly designed using Unilab software. The product range features premium components with AHRI certified coils, UL listed filters, AMCA certified fans and CE certified motors.

Clima Uno's ISO 9001:2015 certification from UKAS assures that the quality of all manufactured centralized air-conditioning and kitchen ventilation equipment meets the highest international standards. We are committed to continuous quality improvement and maintain focus on enhanced customer satisfaction levels.

Clima Uno units are ideal for installation in residential and commercial buildings, cinemas, sports complexes, hotels, hospitals, and shopping malls. Our units have been supplied to numerous projects in the Middle East including UAE projects such as The Arcadia Preparatory School, BMW Showroom, ARJ Tower, Thumbay Hospital and Aster Medical Centre as well as projects in Iraq such as Basrah Sports City and Shat Al Arab Hotel.

We offer our clients impeccable after-sales services and round-the-clock assistance. Clima Uno units will soon be manufactured in a new, state-of-the-art, 100,000 square feet facility in the UAE, enabling us to serve our clients more efficiently.

CONTENTS

04 Nomenclature

05 Product line up

28 Dimensions

33 Selection software

FAN COIL UNITS

CASSETTE SERIES



1-way cassette

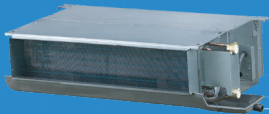


4-way cassette

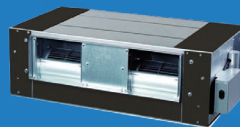


Compact 4-way cassette

2 PIPE DUCT SERIES



Duct



High static pressure Duct

DECORATIVE SERIES



Wall mounted



Ceiling & floor



Floor standing

DISTRICT COOLING SERIES



Floor standing

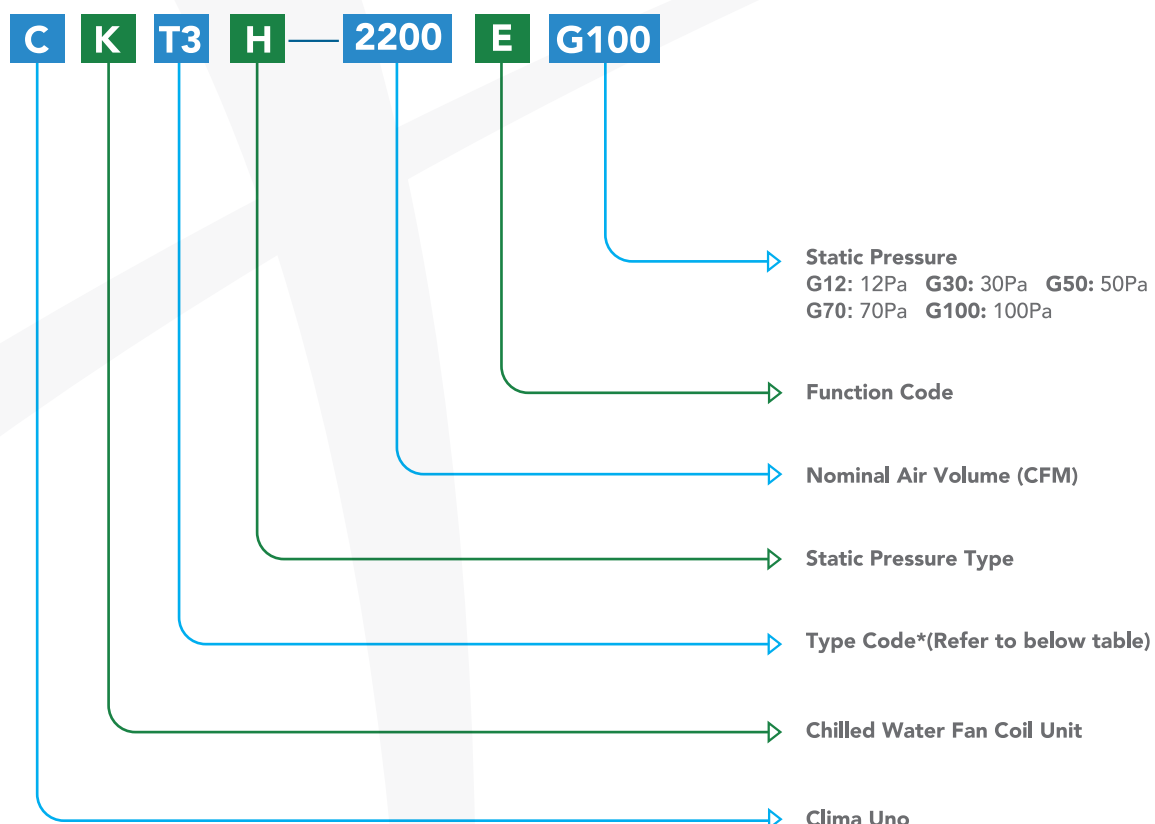


4-way cassette



Duct







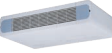

NOMENCLATURE






| MEANING OF THE CODE | |
|---------------------|--|
| Type Code | Meaning |
| A | 4-way cassette |
| C | 1-way cassette |
| D | Compact 4-way cassette |
| F1 | Exposed floor-standing (air return from side) with curved diffuser |
| F2 | Exposed floor-standing (air return from bottom) with curved diffuser |
| F3 | Concealed floor-standing |
| F4 | Exposed floor-standing (air return from side) with flat diffuser |
| F5 | Exposed floor-standing (air return from bottom) with flat diffuser |
| G | Wall-mounted |
| H1 | Exposed ceiling & floor (air return from side) |
| H2 | Exposed ceiling & floor (air return from bottom) |
| H3 | Concealed ceiling & floor |
| T2 | 2-row duct |
| T3 | 3-row duct |
| T4 | 4-row duct |
| T3***F | 4-pipe duct |
| T3H***G*** | High static pressure duct |
| Q | District cooling (High temp. difference) |

PRODUCT LINE UP

2-PIPE FCUs

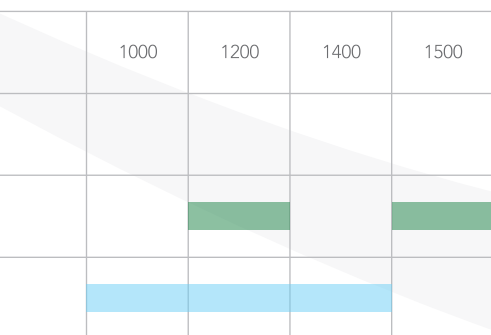
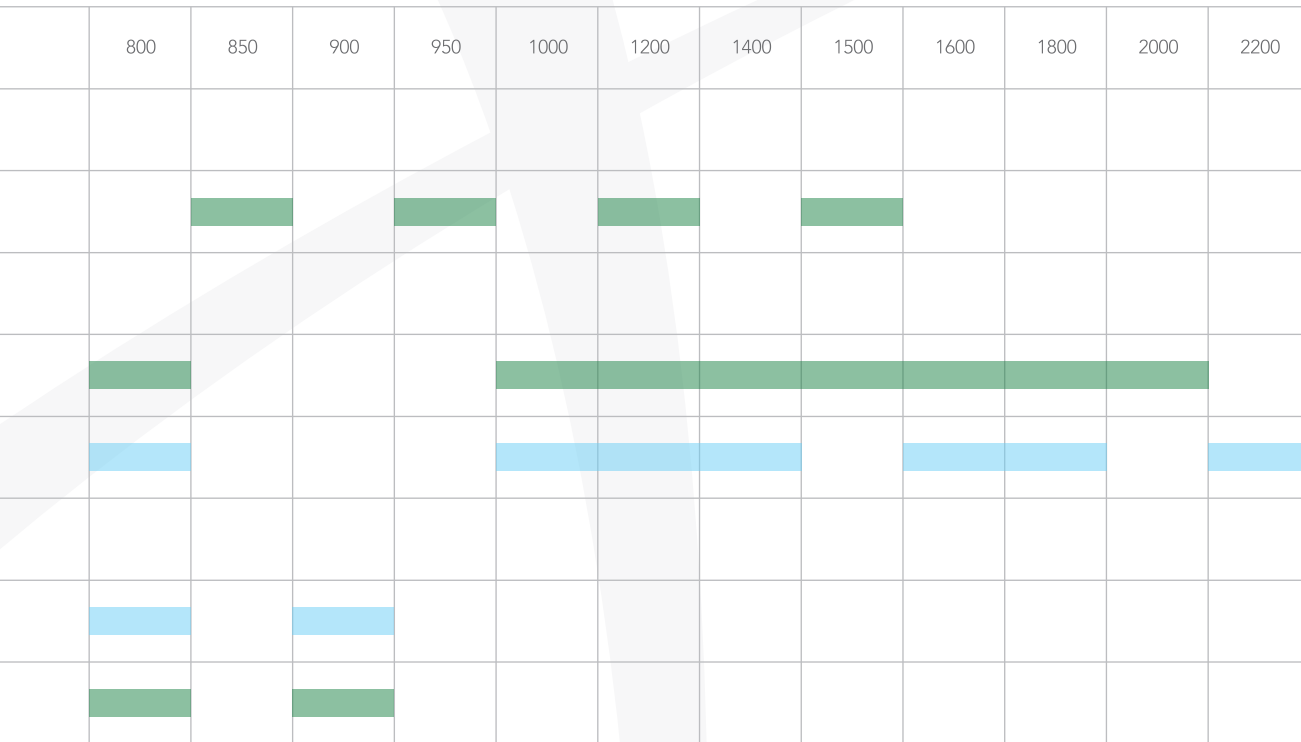
| Air volume (CFM) | | 150 | 200 | 250 | 300 | 400 | 450 | 500 | 600 | 750 |
|---------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1-way cassette |  | | | | ■ | | | | ■ | |
| 4-way cassette |  | | | | | | | | ■ | |
| Compact 4-way cassette |  | | | | ■ | | | ■ | | |
| Duct |  | | ■ | | ■ | | | ■ | | |
| High static pressure Duct |  | | | | | | | | | |
| Wall mounted |  | | | ■ | | | | ■ | | |
| Ceiling & floor |  | ■ | | ■ | | | | | | |
| Floor standing |  | ■ | | ■ | | | | | | |

4-PIPE FCUs

| Air volume (CFM) | | 200 | 300 | 400 | 500 | 600 | 750 | 800 | 850 | 950 |
|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Compact 4-way cassette |  | | ■ | | | | | | | |
| 4-way cassette |  | | | | | ■ | | ■ | | |
| Duct |  | ■ | | | | | | ■ | | |

Note:

The standard power supply for all fan coil units is 220V-240V/50Hz; 208-230V/60Hz can be customized for all fan coil units.



CASSETTE SERIES



1-WAY CASSETTE



COMPACT 4-WAY CASSETTE



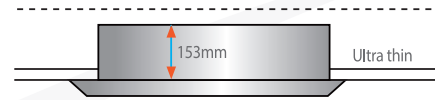
4-WAY CASSETTE



1-WAY CASSETTE

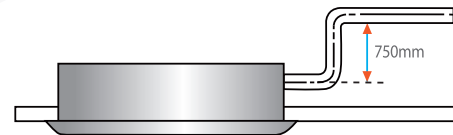
MIN. 153MM THICKNESS

Compact design, ultra slim body with a minimum thickness of 153mm, especially suitable for narrow ceiling, such as in lobbies and small meeting rooms.



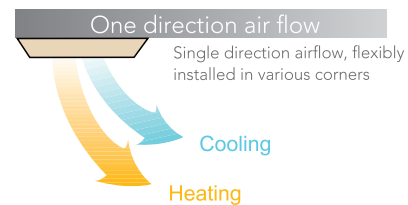
HIGH-LIFT PUMP

Standard built-in drain pump with 750mm pump head.



ONE DIRECTION AIR FLOW

One direction air flow guarantees quick cooling and flexible installation.



SPECIFICATIONS

| Model | | Non-AEH With-AEH | CKC-300R-B CKC-300RA-B | CKC-400R-B CKC-400RA-B | CKC-600HRN4 |
|---------------------------------|------------------------|------------------------------------|---------------------------|---------------------------|-----------------|
| Power supply | | V/Ph/Hz | | 220-240/1/50 | |
| Air flow (H/M/L) | | m ³ /h | 510/450/400 | 630/560/500 | 1000/880/800 |
| | | CFM | 300/270/240 | 370/330/300 | 590/520/470 |
| Cooling | Capacity (H/M/L) | kW | 3.04/2.79/2.56 | 3.79/3.58/3.38 | 5.709/4.85/4.36 |
| | Water flow rate | l/h | 520 | 650 | 982 |
| | Water pressure drop | kPa | 14 | 20 | 20.2 |
| Heating | Capacity (H/M/L) | kW | 5.13/4.69/4.04 | 6.41/5.86/5.11 | 9.6/8.36/7.48 |
| | Water pressure drop | kPa | 9 | 16 | 18.1 |
| Power input (H/M/L) | | W | 32/22/15 | 40/30/25 | 125/88/65 |
| Auxiliary electric heater (AEH) | | W | 750 | 750 | / |
| Sound pressure level (H/M/L) | | dB(A) | 36/34/32 | 37/35/34 | 42/39/37 |
| Fan motor | Type | Low noise 3-speed fan motor | | | |
| | Quantity | 1 | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | |
| | Quantity | 1 | | | |
| Coil | Row | 2 | | 2 | 3 |
| | Max. working pressure | MPa | | | |
| | Diameter | mm | | | |
| Panel | Net dimensions (W×H×D) | mm | | 1180x25x465 | 1420x10x755 |
| | Packing size (W×H×D) | mm | | 1232x107x517 | 1500x110x870 |
| | Net weight | kg | | 3.5 | 9 |
| | Gross weight | kg | | 5.2 | 12 |
| | Body | Net dimensions (W×H×D) | mm | | 1054x153x425 |
| Packing size (W×H×D) | | mm | | 1155x245x490 | 1380x265x720 |
| Net weight (non-AEH/with-AEH) | | kg | | 12.8/13.1 | 32.6 |
| Gross weight (non-AEH/with-AEH) | | kg | | 16.6/17.1 | 36.3 |
| Pipe connections | | Water inlet/outlet pipe | Inch | | RC1/2 |
| | Drain pipe | mm | | ODØ25 | |

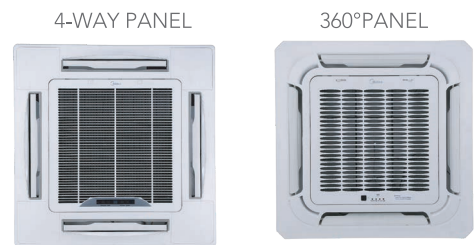
Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
3. Noise is tested in a semi-anechoic test room.

4-WAY CASSETTE

VARIOUS SELECTIONS

- Versions for 2/4 pipe systems.
- Versions for compact/normal size.

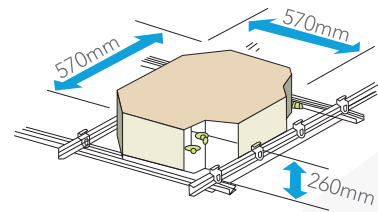


STYLISH PANEL WITH LARGE AIRFLOW OUTLET

- 4-way air supply panel is standard for 4-way cassette.
- 360° air supply panel is standard for compact 4-way cassette.

COMPACT DESIGN, EASY INSTALLATION

- For Compact 4-way Cassette: Extremely compact casing, suits any room's decor and requires little space for installation on a low ceiling.
- Due to compact body and light weight, all models can be installed without a hoist.

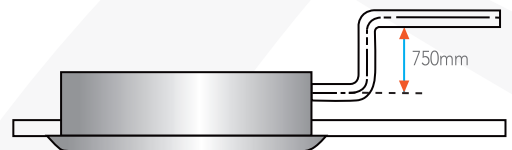


VARIOUS ACCESSORIES SELECTIONS

- Safe factory-installed electric heater is optional.
- Extended drainage pan for better ceiling protection is optional.

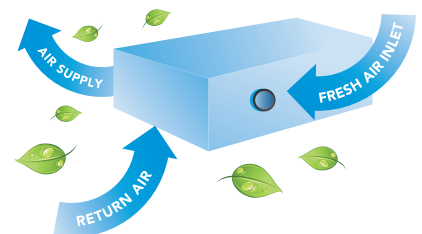
HIGH-LIFT DRAIN PUMP

Standard built-in drain pump with 750mm pump head for normal size and 500mm for compact size.



FRESH AIR INTAKE

Fresh air can enter through the cassette unit so you can enjoy even fresher air in a room.



2-PIPE 4-WAY CASSETTE



| Model | | Non-AEH With-AEH | CKA-600R CKA-600RA | CKA-750R CKA-750RA | CKA-850R CKA-850RA |
|---------------------------------|---------------------------------|------------------------------------|-----------------------|-----------------------|-----------------------|
| Power supply | | V/Ph/Hz | 220-240/1/50 | | |
| Air flow (H/M/L) | | m³/h | 1000/850/720 | 1250/1060/900 | 1400/1190/1010 |
| | | CFM | 590/500/420 | 740/620/530 | 820/700/590 |
| Cooling | Capacity (H/M/L) | kW | 5.7/4.73/3.96 | 7/5.62/4.72 | 7.27/6.46/5.71 |
| | Water flow rate | l/h | 980 | 1204 | 1250 |
| | Water pressure drop | kPa | 23.8 | 25.2 | 27 |
| Heating | Capacity (H/M/L) | kW | 9.66/7.72/6.27 | 11.55/9.24/7.51 | 12.42/9.93/8.07 |
| | Water pressure drop | kPa | 16.4 | 11.8 | 14.6 |
| Power input (H/M/L) | | W | 125/84/74 | 130/102/93 | 150/124/106 |
| Auxiliary electric heater (AEH) | | W | 2100 | 2100 | 2850 |
| Sound pressure level (H/M/L) | | dB(A) | 45/41/36 | 46/42/37 | 47/43/38 |
| Fan motor | Type | Low noise 3-speed fan motor | | | |
| | Quantity | 1 | | | |
| Fan | Type | Centrifugal, forward-curved blades | | | |
| | Quantity | 1 | | | |
| Coil | Row | 2 | | | |
| | Max. working pressure | MPa | 1.6 | | |
| | Diameter | mm | Ø7 | | |
| Panel | Net dimensions (W×H×D) | mm | 950×45×950 | | |
| | Packing size (W×H×D) | mm | 1035×90×1035 | | |
| | Net weight | kg | 6 | | |
| | Gross weight | kg | 9 | | |
| Body | Net dimensions (W×H×D) | mm | 840×230×840 | 840×230×840 | 840×300×840 |
| | Packing size (W×H×D) | mm | 900×260×900 | 900×260×900 | 900×330×900 |
| | Net weight (non-AEH/with-AEH) | kg | 25/27 | 25/27 | 30.5/33 |
| | Gross weight (non-AEH/with-AEH) | kg | 30/32 | 30/32 | 36.2/39 |
| Pipe connections | Water inlet/outlet pipe | Inch | RC3/4 | | |
| | Drain pipe | mm | ODØ32 | | |

| Model | | Non-AEH With-AEH | CKA-950R CKA-950RA | CKA-1200R CKA-1200RA | CKA-1500R |
|---------------------------------|---------------------------------|------------------------------------|-----------------------|-------------------------|------------------|
| Power supply | | V/Ph/Hz | 220-240/1/50 | | |
| Air flow (H/M/L) | | m³/h | 1600/1360/1150 | 2000/1700/1440 | 2550/2170/1840 |
| | | CFM | 940/800/680 | 1180/1000/850 | 1500/1280/1080 |
| Cooling | Capacity (H/M/L) | kW | 8.22/7.39/6.54 | 10.39/9.25/8.2 | 12.9/11.51/10.21 |
| | Water flow rate | l/h | 1414 | 1787 | 2219 |
| | Water pressure drop | kPa | 31.2 | 44 | 40 |
| Heating | Capacity (H/M/L) | kW | 13.85/11.08/9 | 17.58/14.06/11.42 | 17.6/14.08/11.44 |
| | Water pressure drop | kPa | 14.8 | 34.7 | 36.7 |
| Power input (H/M/L) | | W | 155/131/106 | 190/127/109 | 190/136/109 |
| Auxiliary electric heater (AEH) | | W | 2850 | 2850 | / |
| Sound pressure level (H/M/L) | | dB(A) | 48/44/39 | 49/45/40 | 50/46/41 |
| Fan motor | Type | Low noise 3-speed fan motor | | | |
| | Quantity | 1 | | | |
| Fan | Type | Centrifugal, forward-curved blades | | | |
| | Quantity | 1 | | | |
| Coil | Row | 2 | | 2 | 3 |
| | Max. working pressure | MPa | 1.6 | | |
| | Diameter | mm | Ø7 | | |
| Panel | Net dimensions (W×H×D) | mm | 950×45×950 | | |
| | Packing size (W×H×D) | mm | 1035×90×1035 | | |
| | Net weight | kg | 6 | | |
| | Gross weight | kg | 9 | | |
| Body | Net dimensions (W×H×D) | mm | 840×300×840 | | |
| | Packing size (W×H×D) | mm | 900×330×900 | | |
| | Net weight (non-AEH/with-AEH) | kg | 30.5/33 | 30.5/33 | 31.8 |
| | Gross weight (non-AEH/with-AEH) | kg | 36.2/39 | 36.2/39 | 36 |
| Pipe connections | Water inlet/outlet pipe | Inch | RC3/4 | | |
| | Drain pipe | mm | ODØ32 | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
3. Noise is tested in a semi-anechoic test room.

4-PIPE 4-WAY CASSETTE



| Model | | CKA-600F | | CKA-750F | | CKA-850F | |
|------------------------------|-------------------------|------------------------------------|--|-------------------------------------|--|----------------|--|
| Power supply | | V/Ph/Hz | | 220-240/1/50 | | | |
| Air flow (H/M/L) | | m ³ /h | | 1150/800/690 | | 1460/1020/880 | |
| | | CFM | | 680/470/410 | | 860/600/510 | |
| Cooling | Capacity (H/M/L) | kW | | 5.1/4.08/3.76 | | 5.93/4.41/3.94 | |
| | Water flow rate | l/h | | 877 | | 1020 | |
| | Water pressure drop | kPa | | 15 | | 17 | |
| Heating | Capacity (H/M/L) | kW | | 6.67/5.87/5.07 | | 7.87/6.85/5.9 | |
| | Water flow rate | l/h | | 574 | | 677 | |
| | Water pressure drop | kPa | | 37 | | 41 | |
| Power input (H/M/L) | | W | | 170/120/85 | | 188/135/90 | |
| Sound pressure level (H/M/L) | | dB(A) | | 42/32/26 | | 44/34/28 | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | |
| | Quantity | 1 | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | |
| | Quantity | 1 | | | | | |
| Coil | Row | 2 | | | | | |
| | Max. working pressure | MPa | | 1.6 | | | |
| | Diameter | mm | | Ø7 | | | |
| Panel | Net dimensions (W×H×D) | mm | | 950×45×950 | | | |
| | Packing size (W×H×D) | mm | | 1035×90×1035 | | | |
| | Net weight | kg | | 6 | | | |
| | Gross weight | kg | | 9 | | | |
| Body | Net dimensions (W×H×D) | mm | | 840×300×840 | | | |
| | Packing size (W×H×D) | mm | | 900×307×900 | | | |
| | Net weight | kg | | 35 | | | |
| | Gross weight | kg | | 41 | | | |
| Pipe connections | Water inlet/outlet pipe | Inch | | Cold water: RC3/4; Hot water: RC1/2 | | | |
| | Drain pipe | mm | | ODØ32 | | | |

| Model | | CKA-950F | | CKA-1200F | | CKA-1500F | |
|------------------------------|-------------------------|------------------------------------|--|-------------------------------------|--|------------------|--|
| Power supply | | V/Ph/Hz | | 220-240/1/50 | | | |
| Air flow (H/M/L) | | m ³ /h | | 1720/1200/1030 | | 1860/1300/1110 | |
| | | CFM | | 1010/700/610 | | 1090/760/650 | |
| Cooling | Capacity (H/M/L) | kW | | 6.7/5.48/4.85 | | 9.28/7.45/6.5 | |
| | Water flow rate | l/h | | 1152 | | 1596 | |
| | Water pressure drop | kPa | | 22 | | 32 | |
| Heating | Capacity (H/M/L) | kW | | 8.67/7.63/6.59 | | 11.65/10.49/8.85 | |
| | Water flow rate | l/h | | 746 | | 1002 | |
| | Water pressure drop | kPa | | 42 | | 57 | |
| Power input (H/M/L) | | W | | 205/145/105 | | 197/135/103 | |
| Sound pressure level (H/M/L) | | dB(A) | | 47/38/32 | | 48/40/34 | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | |
| | Quantity | 1 | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | |
| | Quantity | 1 | | | | | |
| Coil | Row | 2 | | 3 | | 3 | |
| | Max. working pressure | MPa | | 1.6 | | | |
| | Diameter | mm | | Ø7 | | | |
| Panel | Net dimensions (W×H×D) | mm | | 950×45×950 | | | |
| | Packing size (W×H×D) | mm | | 1035×90×1035 | | | |
| | Net weight | kg | | 6 | | | |
| | Gross weight | kg | | 9 | | | |
| Body | Net dimensions (W×H×D) | mm | | 840×300×840 | | | |
| | Packing size (W×H×D) | mm | | 900×307×900 | | | |
| | Net weight | kg | | 35 | | 38 | |
| | Gross weight | kg | | 41 | | 44 | |
| Pipe connections | Water inlet/outlet pipe | Inch | | Cold water: RC3/4; Hot water: RC1/2 | | | |
| | Drain pipe | mm | | ODØ32 | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 70°C, temperature drop 10°C DB, entering air temperature 20°C DB.
3. Noise is tested in a semi-anechoic test room.

2-PIPE COMPACT 4-WAY CASSETTE



| Model | | CKD-300 | CKD-400 | CKD-500 |
|------------------------------|-------------------------|------------------------------------|-------------|---------------|
| Power supply | | V/Ph/Hz | | 220-240/1/50 |
| Air flow (H/M/L) | | m ³ /h | 510/440/360 | 680/580/480 |
| | | CFM | 300/260/210 | 400/340/280 |
| Cooling | Capacity (H/M/L) | kW | 3/2.58/2.16 | 3.7/3.18/2.66 |
| | Water flow rate | l/h | 516 | 636 |
| | Water pressure drop | kPa | 14 | 15 |
| Heating | Capacity (H/M/L) | kW | 4/3.5/3.08 | 5.1/4.3/3.83 |
| | Water pressure drop | kPa | 12 | 13 |
| Power input (H/M/L) | | W | 50/40/30 | 70/50/40 |
| Sound pressure level (H/M/L) | | dB(A) | 36/33/28 | 42/39/32 |
| Fan motor | Type | Low noise 3-speed fan motor | | |
| | Quantity | 1 | | |
| Fan | Type | Centrifugal, forward-curved Blades | | |
| | Quantity | 1 | | |
| Coil | Row | 2 | | |
| | Max. working pressure | MPa | 1.6 | |
| | Diameter | mm | Ø7 | |
| Panel | Net dimensions (W×H×D) | mm | 647×50×647 | |
| | Packing size (W×H×D) | mm | 715×123×715 | |
| | Net weight | kg | 2.5 | |
| | Gross weight | kg | 4.5 | |
| Body | Net dimensions (W×H×D) | mm | 575×261×575 | |
| | Packing size (W×H×D) | mm | 670×290×670 | |
| | Net weight | kg | 16.5 | |
| | Gross weight | kg | 20 | |
| Pipe connections | Water inlet/outlet pipe | Inch | G3/4 | |
| | Drain pipe | mm | ODØ25 | |

4-PIPE COMPACT 4-WAY CASSETTE

| Model | | CKA-300S | CKA-400S | CKA-500S |
|------------------------------|-------------------------|------------------------------------|-----------------------------------|---------------|
| Power supply | | V/Ph/Hz | | 220-240/1/50 |
| Air flow (H/M/L) | | m ³ /h | 510/440/360 | 680/580/480 |
| | | CFM | 300/260/210 | 400/340/280 |
| Cooling | Capacity (H/M/L) | kW | 2.5/2.2/1.76 | 2.9/2.55/2.04 |
| | Water flow rate | l/h | 430 | 499 |
| | Water pressure drop | kPa | 22 | 16 |
| Heating | Capacity (H/M/L) | kW | 3.7/3.29/2.92 | 4.6/3.82/3.4 |
| | Water flow rate | l/h | 318 | 396 |
| | Water pressure drop | kPa | 17 | 23 |
| Power input (H/M/L) | | W | 50/40/30 | 70/50/40 |
| Sound pressure level (H/M/L) | | dB(A) | 36/33/28 | 42/39/32 |
| Fan motor | Type | Low noise 3-speed fan motor | | |
| | Quantity | 1 | | |
| Fan | Type | Centrifugal, forward-curved Blades | | |
| | Quantity | 1 | | |
| Coil | Row | 2 | | |
| | Max. working pressure | MPa | 1.6 | |
| | Diameter | mm | Ø7 | |
| Panel | Net dimensions (W×H×D) | mm | 647×50×647 | |
| | Packing size (W×H×D) | mm | 715×123×715 | |
| | Net weight | kg | 2.5 | |
| | Gross weight | kg | 4.5 | |
| Body | Net dimensions (W×H×D) | mm | 575×261×575 | |
| | Packing size (W×H×D) | mm | 655×290×655 | |
| | Net weight | kg | 16.5 | |
| | Gross weight | kg | 20 | |
| Pipe connections | Water inlet/outlet pipe | Inch | Cold water: G3/4; Hot water: G1/2 | |
| | Drain pipe | mm | ODØ25 | |

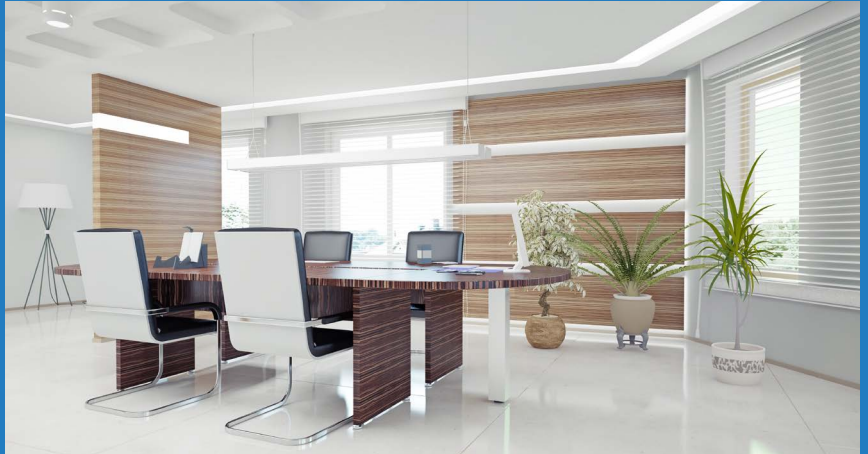
Notes:

- H: High fan speed; M: Medium fan speed; L: Low fan speed.
- Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: 2 pipe: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
Heating conditions: 4 pipe: entering water 70°C, temperature drop 10°C DB, entering air temperature 20°C DB.
- Noise is tested in a semi-anechoic test room.

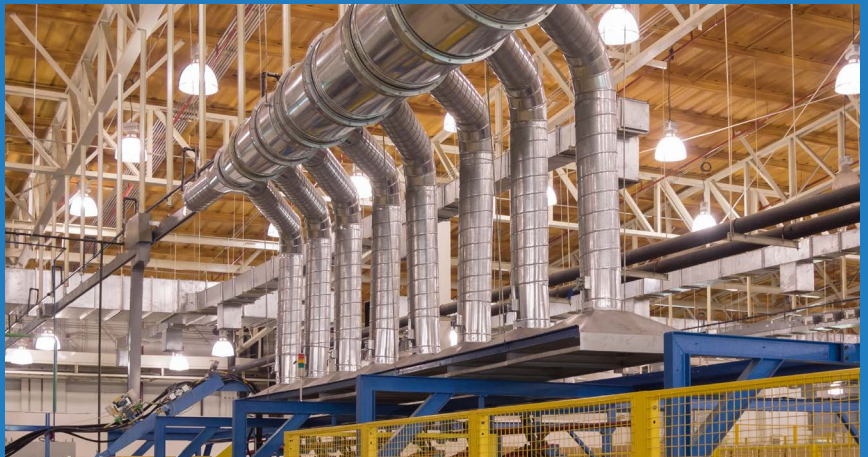
DUCT SERIES



DUCT



HIGH STATIC PRESSURE DUCT



DISTRICT COOLING DUCT



DUCT

VARIOUS SELECTIONS

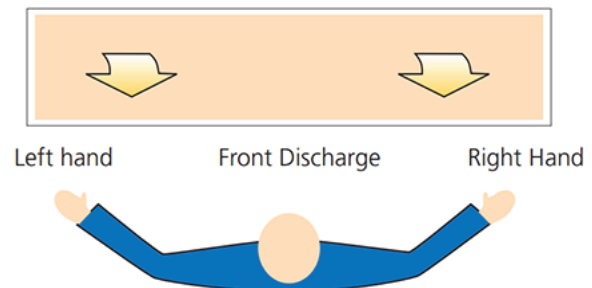
- Versions for 2/4 pipe systems.
- Versions for normal/high temperature different systems.
- 2, 3 or 4 row coils for 2-pipe systems.
- Large range of available static pressure.

HIGH EFFICIENCY

Highly efficient heat exchange for complete counterflow.

FLEXIBLE INSTALLATION

Left and right hand piping connections are optional.

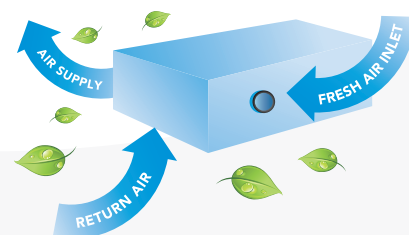


STANDARD RETURN AIR PLENUM AND FILTER

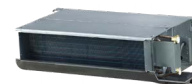
Standard return air plenum and filter guarantee clean air supply and stable air flow rate.

FRESH AIR INTAKE

Fresh air can enter through the duct unit so you can enjoy even fresher air in a room.



2-ROW DUCT



| Model | Non-AEH | | CKT2-200G12 | CKT2-300G12 | CKT2-400G12 | CKT2-500G12 | CKT2-600G12 | |
|-----------------------------------|-----------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|--|
| | With-AEH | | CKT2-200G30 | CKT2-300G30 | CKT2-400G30 | CKT2-500G30 | CKT2-600G30 | |
| Power supply | V/Ph/Hz | | 220-240/1/50 | | | | | |
| Air flow (H/M/L) | m³/h | | 340/255/170 | 510/385/255 | 680/510/340 | 850/640/425 | 1020/765/510 | |
| | CFM | | 200/150/100 | 300/225/150 | 400/300/200 | 500/375/250 | 600/450/300 | |
| Standard external static pressure | Pa | G12 models: 12; G30 models: 30 | | | | | | |
| Cooling | Capacity (H/M/L) | kW | 2/1.74/1.52 | 2.7/2.31/2.03 | 3.6/3.11/2.66 | 4.4/3.74/3.25 | 5.5/4.58/4.09 | |
| | Water flow rate | l/h | 344 | 464 | 619 | 757 | 946 | |
| | Water pressure drop | kPa | 5 | 11 | 19 | 22 | 14 | |
| Heating | Capacity (H/M/L) | kW | 3.2/2.75/2.37 | 4.3/3.74/3.23 | 5.4/4.64/4.05 | 6.8/5.78/5.07 | 8.1/6.77/5.92 | |
| | Water pressure drop | kPa | 4.2 | 9.5 | 15.5 | 18.3 | 11.8 | |
| Power input | 12Pa (H/M/L) | W | 31/25/22 | 50/40/35 | 60/48/42 | 80/64/56 | 97/78/68 | |
| | 30Pa (H/M/L) | W | 45/36/32 | 60/48/42 | 67/54/47 | 89/71/62 | 110/88/77 | |
| Auxiliary electric heater (AEH) | W | | 550 | 650 | 1100 | 1100 | 1600 | |
| Sound pressure level | 12Pa (H/M/L) | dB(A) | 36/34/29 | 38/33/29 | 38/35/31 | 39/36/32 | 40/36/33 | |
| | 30Pa (H/M/L) | dB(A) | 41/37/31 | 41/37/32 | 42/39/33 | 45/41/34 | 46/41/35 | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | | |
| | Quantity | 1 | | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | | |
| | Quantity | 1 | 2 | 2 | 2 | 2 | | |
| Coil | Row | 2 | | | | | | |
| | Max. working pressure | MPa | 1.6 | | | | | |
| | Diameter | mm | Ø9.52 | | | | | |
| Net dimensions (W×H×D) | mm | 741×241×522 | 841×241×522 | 941×241×522 | 941×241×522 | 1161×241×522 | | |
| Packing size (W×H×D) | mm | 790×260×550 | 890×260×550 | 990×260×550 | 990×260×550 | 1210×260×550 | | |
| Net weight (non-AEH/with-AEH) | kg | 13.9/15.4 | 16.5/18 | 19.2/20.7 | 19.2/20.7 | 22/24 | | |
| Gross weight (non-AEH/with-AEH) | kg | 16.2/17.7 | 19/20.5 | 21.6/23.1 | 21.6/23.1 | 25/27 | | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | | | | |
| Drain pipe | mm | ØDØ24 | | | | | | |

| Model | Non-AEH | | CKT2-800G12 | CKT2-1000G12 | CKT2-1200G12 | CKT2-1400G12 | | |
|-----------------------------------|-----------------------|------------------------------------|---------------|------------------|------------------|------------------|--|--|
| | With-AEH | | CKT2-800G30 | CKT2-1000G30 | CKT2-1200G30 | CKT2-1400G30 | | |
| Power supply | V/Ph/Hz | | 220-240/1/50 | | | | | |
| Air flow (H/M/L) | m³/h | | 1360/1020/680 | 1700/1275/850 | 2040/1530/1020 | 2380/1785/1190 | | |
| | CFM | | 800/600/400 | 1000/750/500 | 1200/900/600 | 1400/1050/700 | | |
| Standard external static pressure | Pa | G12 models: 12; G30 models: 30 | | | | | | |
| Cooling | Capacity (H/M/L) | kW | 7.5/6.33/5.68 | 8.9/7.61/6.41 | 10.8/9.13/7.93 | 12.3/10.46/9.27 | | |
| | Water flow rate | l/h | 1290 | 1531 | 1858 | 2116 | | |
| | Water pressure drop | kPa | 14 | 22 | 39 | 46 | | |
| Heating | Capacity (H/M/L) | kW | 11/9.48/8.25 | 13.5/11.72/10.03 | 16.5/14.05/12.24 | 19.5/16.85/14.63 | | |
| | Water pressure drop | kPa | 12.5 | 19 | 32.6 | 40.1 | | |
| Power input | 12Pa (H/M/L) | W | 140/112/98 | 172/138/120 | 205/164/144 | 216/173/151 | | |
| | 30Pa (H/M/L) | W | 130/104/91 | 171/137/120 | 212/170/148 | 249/200/174 | | |
| Auxiliary electric heater (AEH) | W | | 2200 | 2200 | 3200 | 3200 | | |
| Sound pressure level | 12Pa (H/M/L) | dB(A) | 42/37/33 | 44/39/34 | 46/40/35 | 48/42/37 | | |
| | 30Pa (H/M/L) | dB(A) | 46/41/36 | 47/43/37 | 48/44/38 | 49/44/39 | | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | | |
| | Quantity | 2 | | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | | |
| | Quantity | 4 | | | | | | |
| Coil | Row | 2 | | | | | | |
| | Max. working pressure | MPa | 1.6 | | | | | |
| | Diameter | mm | Ø9.52 | | | | | |
| Net dimensions (W×H×D) | mm | 1461×241×522 | 1566×241×522 | 1856×241×522 | 1856×241×522 | 2022×241×522 | | |
| Packing size (W×H×D) | mm | 1510×260×550 | 1615×260×550 | 1905×260×550 | 1905×260×550 | 2070×260×550 | | |
| Net weight (non-AEH/with-AEH) | kg | 30.9/33.4 | 33.4/36.4 | 38.5/42 | 38.5/42 | 42.1/46.1 | | |
| Gross weight (non-AEH/with-AEH) | kg | 34.5/37 | 37/40 | 42/45.5 | 42/45.5 | 47.5/51.5 | | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | | | | |
| Drain pipe | mm | ØDØ24 | | | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. The data are test under standard external static pressure.
3. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
4. Noise is tested in a semi-anechoic test room.

3-ROW DUCT



| Model | Non-AEH With-AEH | CKT3-200G12 CKT3-200G30 CKT3-200EG30 | CKT3-300G12 CKT3-300G30 CKT3-300EG30 | CKT3-400G12 CKT3-400G30 CKT3-400EG30 | CKT3-500G12 CKT3-500G30 CKT3-500EG30 | CKT3-600G12 CKT3-600G30 CKT3-600EG30 | |
|-----------------------------------|-----------------------|--|--|--|--|--|---------------|
| Power supply | V/Ph/Hz | | 220-240/1/50 | | | | |
| Air flow (H/M/L) | m ³ /h | 340/255/170 | 510/385/255 | 680/510/340 | 850/640/425 | 1020/765/510 | |
| | CFM | 200/150/100 | 300/225/150 | 400/300/200 | 500/375/250 | 600/450/300 | |
| Standard external static pressure | Pa | G12 models: 12; G30 models: 30 | | | | | |
| Cooling | Capacity (H/M/L) | kW | 2.2/1.9/1.68 | 3.1/2.7/2.3 | 4/3.4/2.95 | 4.6/3.96/3.45 | 5.8/4.88/4.45 |
| | Water flow rate | l/h | 378 | 533 | 688 | 791 | 998 |
| | Water pressure drop | kPa | 14 | 26 | 18 | 24 | 36 |
| Heating | Capacity (H/M/L) | kW | 3.5/3.08/2.59 | 5.3/4.61/3.98 | 6.8/5.85/5.1 | 7.9/6.95/6 | 9.8/8.6/7.4 |
| | Water pressure drop | kPa | 10.5 | 21.8 | 16.9 | 22.3 | 31.6 |
| Power input | 12Pa (H/M/L) | W | 33/25/22 | 53/41/35 | 66/53/48 | 87/53/44 | 100/65/55 |
| | 30Pa (H/M/L) | W | 49/37/33 | 64/49/42 | 75/61/54 | 93/56/47 | 114/74/63 |
| Auxiliary electric heater (AEH) | W | 550 | 650 | 1100 | 1100 | 1600 | |
| Sound pressure level | 12Pa (H/M/L) | dB(A) | 35/32/26 | 36/33/27 | 37/34/28 | 40/36/30 | 42/38/32 |
| | 30Pa (H/M/L) | dB(A) | 41/37/31 | 42/38/32 | 43/39/33 | 44/40/34 | 45/41/35 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | |
| | Quantity | 1 | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | |
| | Quantity | 1 | 2 | 2 | 2 | 2 | |
| Coil | Row | 3 | | | | | |
| | Max. working pressure | MPa | 1.6 | | | | |
| | Diameter | mm | Ø9.52 | | | | |
| Net dimensions (W×H×D) | mm | 741×241×522 | 841×241×522 | 941×241×522 | 941×241×522 | 1161×241×522 | |
| Packing size (W×H×D) | mm | 790×260×550 | 890×260×550 | 990×260×550 | 990×260×550 | 1210×260×550 | |
| Net weight (non-AEH/with-AEH) | kg | 14.6/16.1 | 17/18.5 | 20.2/21.7 | 20.2/21.7 | 23/25 | |
| Gross weight (non-AEH/with-AEH) | kg | 16.9/18.4 | 19.5/21 | 22.6/24.1 | 22.6/24.1 | 26/28 | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | | | |
| Drain pipe | mm | ODØ24 | | | | | |

| Model | Non-AEH With-AEH | CKT3-800G12 CKT3-800G30 CKT3-800EG30 | CKT3-1000G12 CKT3-1000G30 CKT3-1000EG30 | CKT3-1200G12 CKT3-1200G30 CKT3-1200EG30 | CKT3-1400G12 CKT3-1400G30 CKT3-1400EG30 | |
|-----------------------------------|-----------------------|--|---|---|---|----------------|
| Power supply | V/Ph/Hz | | 220-240/1/50 | | | |
| Air flow (H/M/L) | m ³ /h | 1360/1020/680 | 1700/1275/850 | 2040/1530/1020 | 2380/1785/1190 | |
| | CFM | 800/600/400 | 1000/750/500 | 1200/900/600 | 1400/1050/700 | |
| Standard external static pressure | Pa | G12 models: 12; G30 models: 30 | | | | |
| Cooling | Capacity (H/M/L) | kW | 8.2/6.88/6.25 | 9/7.8/6.57 | 11/9.8/8.35 | 12.5/10.8/9.44 |
| | Water flow rate | l/h | 1410 | 1548 | 1892 | 2150 |
| | Water pressure drop | kPa | 39 | 32 | 39 | 45 |
| Heating | Capacity (H/M/L) | kW | 13.6/11.97/10.2 | 16/14.24/12 | 20.1/18.27/15.43 | 21/18.7/15.75 |
| | Water pressure drop | kPa | 33.8 | 30.7 | 34.6 | 40.1 |
| Power input | 12Pa (H/M/L) | W | 145/121/108 | 180/114/97 | 210/140/120 | 222/179/155 |
| | 30Pa (H/M/L) | W | 154/129/114 | 180/114/97 | 220/147/126 | 278/224/194 |
| Auxiliary electric heater (AEH) | W | 2200 | 2200 | 3200 | 3200 | |
| Sound pressure level | 12Pa (H/M/L) | dB(A) | 43/39/33 | 45/41/35 | 46/42/36 | 48/44/38 |
| | 30Pa (H/M/L) | dB(A) | 46/42/36 | 47/43/37 | 48/44/38 | 49/45/39 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| | Quantity | 2 | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | |
| | Quantity | 4 | | | | |
| Coil | Row | 3 | | | | |
| | Max. working pressure | MPa | 1.6 | | | |
| | Diameter | mm | Ø9.52 | | | |
| Net dimensions (W×H×D) | mm | 1461×241×522 | 1566×241×522 | 1856×241×522 | 2022×241×522 | |
| Packing size (W×H×D) | mm | 1510×260×550 | 1615×260×550 | 1905×260×550 | 2070×260×550 | |
| Net weight (non-AEH/with-AEH) | kg | 31.9/34.4 | 34.4/37.4 | 39.5/43 | 43.1/47.1 | |
| Gross weight (non-AEH/with-AEH) | kg | 35.5/38 | 38.1/41.1 | 43/46.5 | 48.4/52.4 | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | | |
| Drain pipe | mm | ODØ24 | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. The data are test under standard external static pressure.
3. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
4. Noise is tested in a semi-anechoic test room.

4-ROW DUCT



| Model | | CKT4-200G30 | CKT4-300G30 | CKT4-400G30 | CKT4-500G30 | CKT4-600G30 | CKT4-800G30 | CKT4-1000G30 | |
|-----------------------------------|-----------------------|------------------------------------|---------------|---------------|---------------|---------------|----------------|------------------|------------------|
| Power supply | | V/Ph/Hz 220-240/1/50 | | | | | | | |
| Air flow (H/M/L) | | m ³ /h | 340/255/170 | 510/385/255 | 680/510/340 | 850/640/425 | 1020/765/510 | 1360/1020/680 | 1700/1275/850 |
| | | CFM | 200/150/100 | 300/225/150 | 400/300/200 | 500/375/250 | 600/450/300 | 800/600/400 | 1000/750/500 |
| Standard external static pressure | | Pa 30 | | | | | | | |
| Cooling | Capacity (H/M/L) | kW | 2.5/2.16/1.87 | 3.3/2.85/2.47 | 4.4/3.72/3.22 | 4.8/4.18/3.64 | 6.2/5.38/4.65 | 8.8/7.43/6.57 | 9.5/8.18/7.06 |
| | Water flow rate | l/h | 430 | 568 | 757 | 826 | 1066 | 1514 | 1634 |
| | Water pressure drop | kPa | 2.6 | 5 | 8.1 | 9.8 | 15.4 | 12.3 | 18 |
| Heating | Capacity (H/M/L) | kW | 4.1/3.51/3.03 | 5.8/5.05/4.35 | 7.1/6.11/5.33 | 8.5/7.04/6.28 | 10.5/9.03/7.77 | 14.5/12.38/10.88 | 16.3/13.45/12.05 |
| | Water pressure drop | kPa | 2.2 | 4.2 | 6.9 | 8.1 | 12.7 | 10 | 15.4 |
| Power input (H/M/L) | | W | 50/40/35 | 65/52/46 | 80/64/56 | 98/78/69 | 110/88/77 | 155/124/109 | 180/144/126 |
| Sound pressure level | | dB(A) | 37/33/27 | 38/34/28 | 38/35/29 | 40/35/30 | 41/36/31 | 42/37/32 | 44/39/33 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | | | |
| | Quantity | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | | | |
| | Quantity | 1 | 2 | 2 | 2 | 2 | 4 | 4 | |
| Coil | Row | 4 | | | | | | | |
| | Max. working pressure | MPa | 1.6 | | | | | | |
| | Diameter | mm | Ø9.52 | | | | | | |
| Net dimensions (W×H×D) | | mm | 741×241×522 | 841×241×522 | 941×241×522 | 941×241×522 | 1161×241×522 | 1461×241×522 | 1566×241×522 |
| Packing size (W×H×D) | | mm | 790×260×550 | 890×260×550 | 990×260×550 | 990×260×550 | 1210×260×550 | 1510×260×550 | 1615×260×550 |
| Net weight | | kg | 15.3 | 17.5 | 20.7 | 20.7 | 23.5 | 32.9 | 35.4 |
| Gross weight | | kg | 17.6 | 20 | 23.1 | 23.1 | 26.5 | 36.5 | 39.1 |
| Water inlet/outlet pipe | | Inch | RC3/4 | | | | | | |
| Drain pipe | | mm | ODØ24 | | | | | | |

| Model | | CKT4-1200G30 | CKT4-1400G30 | CKT4-1500 | CKT4-1500G50 | CKT4-2000 | CKT4-2000G50 | |
|-----------------------------------|-----------------------|------------------------------------|------------------|----------------|----------------|----------------|----------------|----------------|
| Power supply | | V/Ph/Hz 220-240/1/50 | | | | | | |
| Air flow (H/M/L) | | m ³ /h | 2040/1530/1020 | 2380/1785/1190 | 2550/2100/1300 | 2550/2100/1300 | 3400/2550/1700 | 3400/2550/1700 |
| | | CFM | 1200/900/600 | 1400/1050/700 | 1500/1240/760 | 1500/1240/760 | 2000/1500/1000 | 2000/1500/1000 |
| Standard external static pressure | | Pa 30 | | | | | | |
| Cooling | Capacity (H/M/L) | kW | 11.8/9.82/8.74 | 13/11.23/9.83 | 13.5/11.5/10.1 | 13.5/11.5/10.1 | 18/15.3/13.5 | 18/15.3/13.5 |
| | Water flow rate | l/h | 2030 | 2236 | 2322 | 2322 | 3096 | 3096 |
| | Water pressure drop | kPa | 21.2 | 24.7 | 11.5 | 11.5 | 26.2 | 26.2 |
| Heating | Capacity (H/M/L) | kW | 16.5/14.05/12.23 | 17/14.31/12.69 | 17.5/14.9/13.2 | 17.5/14.9/13.2 | 23.4/19.8/17.5 | 23.4/19.8/17.5 |
| | Water pressure drop | kPa | 17.6 | 20.8 | 10 | 10 | 24.3 | 24.3 |
| Power input (H/M/L) | | W | 220/176/154 | 275/220/193 | 236/189/165 | 474/379/332 | 360/288/252 | 665/532/466 |
| Sound pressure level | | dB(A) | 45/40/34 | 47/42/36 | 48/44/39 | 51/47/42 | 50/46/41 | 53/49/44 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | | |
| | Quantity | 2 | 2 | 1 | 1 | 1 | 1 | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | | |
| | Quantity | 4 | 4 | 2 | 2 | 3 | 3 | |
| Coil | Row | 4 | | | | | | |
| | Max. working pressure | MPa | 1.6 | | | | | |
| | Diameter | mm | Ø9.52 | | | | | |
| Net dimensions (W×H×D) | | mm | 1856×241×522 | 2022×241×522 | 1369×342×612 | 1369×342×612 | 1500×342×612 | 1500×342×612 |
| Packing size (W×H×D) | | mm | 1905×260×550 | 2070×260×550 | 1421×381×619 | 1421×381×619 | 1552×381×619 | 1552×381×619 |
| Net weight | | kg | 40.5 | 44.1 | 46 | 46 | 57 | 53.7 |
| Gross weight | | kg | 44 | 49.4 | 49.8 | 50 | 61 | 58.6 |
| Water inlet/outlet pipe | | Inch | RC3/4 | | | | | |
| Drain pipe | | mm | ODØ24 | | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. The data are test under standard external static pressure.
3. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
4. Noise is tested in a semi-anechoic test room.

A4 TYPE DUCT



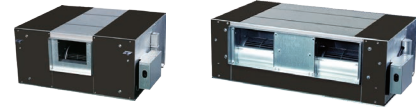
| Model | | CKT3-800G50-A4 | CKT4-800G50-A4 | CKT3-1000G50-A4 | CKT4-1000G50-A4 | |
|-----------------------------------|-----------------------|------------------------------------|----------------|-----------------|------------------|-------------------|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | | |
| Air flow (H/M/L) | m³/h | 1500/1412/1265 | 1400/1342/1200 | 1700/1664/1554 | 1650/1527/1405 | |
| | CFM | 882/831/745 | 824/790/706 | 1000/980/915 | 970/900/827 | |
| Standard external static pressure | Pa | 50 | | | | |
| Cooling | Capacity (H/M/L) | kW | 6.97/6.66/6.28 | 7.92/7.56/7.09 | 7.77/7.58/7.33 | 8.15/7.93/7.54 |
| | Water flow rate | l/h | 1198 | 1363 | 1336 | 1402 |
| | Water pressure drop | kPa | 19.0 | 13.5 | 24.5 | 21.4 |
| Heating | Capacity (H/M/L) | kW | 9.57/9.09/8.43 | 10.42/9.89/9.12 | 10.61/10.25/9.82 | 11.25/10.72/10.06 |
| | Water pressure drop | kPa | 16.9 | 39.7 | 21.1 | 23.3 |
| Power input (H/M/L) | W | 151/130/111 | 144/124/105 | 174/147/130 | 176/146/128 | |
| Sound pressure level | dB(A) | 49.7/47.8/45.6 | 48.4/47.9/46.6 | 50.1/48/45.8 | 49.5/48.1/47.3 | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| | Quantity | 1 | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | |
| | Quantity | 2 | | | | |
| Coil | Row | 3 | 4 | 3 | 4 | |
| | Max. working pressure | MPa | | | | |
| | Diameter | mm | | | | |
| Net dimensions (W×H×D) | mm | 1180x340x612 | | | | |
| Packing size (W×H×D) | mm | 1310x380x693 | | | | |
| Net weight | kg | 38.3 | 39.3 | 39.8 | 40.8 | |
| Gross weight | kg | 47.2 | 47 | 48.6 | 49.6 | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | | |
| Drain pipe | mm | ODØ24 | | | | |

| Model | | CKT4-1200G50-A4 | CKT4-1400G50-A4 | CKT4-1600G50-A4 | CKT4-1800G50-A4 | CKT4-2000G50-A4 | |
|-----------------------------------|-----------------------|------------------------------------|------------------|-------------------|------------------|-------------------|-------------------|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | | | |
| Air flow (H/M/L) | m³/h | 2040/1851/1666 | 2420/1851/1666 | 2430/1917/1742 | 3380/2239/1878 | 3670/2544/2199 | |
| | CFM | 1200/1090/981 | 1424/1090/981 | 1431/1128/1025 | 1990/1318/1105 | 2160/1497/1294 | |
| Standard external static pressure | Pa | 50 | | | | | |
| Cooling | Capacity (H/M/L) | kW | 10.8/10.17/9.55 | 12.14/10.17/9.55 | 12.19/10.54/9.87 | 16.16/12.35/11.01 | 17.34/13.75/12.44 |
| | Water flow rate | l/h | 1890 | 2089 | 2096 | 2779 | 2983 |
| | Water pressure drop | kPa | 27.8 | 32.5 | 33.4 | 58.3 | 61.5 |
| Heating | Capacity (H/M/L) | kW | 14.3/13.23/12.22 | 16.08/13.23/12.22 | 16.55/13.83/12.9 | 21.7/15.79/13.91 | 23.4/17.92/16.08 |
| | Water pressure drop | kPa | 24.8 | 29.2 | 30.0 | 52.3 | 52.9 |
| Power input (H/M/L) | W | 320/284/250 | 392/284/250 | 482/338/296 | 538/358/308 | 583/387/334 | |
| Sound pressure level | dB(A) | 50.9/50/48.5 | 51.7/50/49.5 | 52.9/50.7/50 | 53.6/51.1/50.2 | 54.4/52.7/51.6 | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | |
| | Quantity | 1 | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | |
| | Quantity | 2 | 2 | 2 | 3 | 3 | |
| Coil | Row | 4 | | | | | |
| | Max. working pressure | MPa | | | | | |
| | Diameter | mm | | | | | |
| Net dimensions (W×H×D) | mm | 1369x340x612 | 1369x340x612 | 1369x340x612 | 1500x340x612 | 1500x340x612 | |
| Packing size (W×H×D) | mm | 1490x380x693 | 1490x380x693 | 1490x380x693 | 1620x380x693 | 1620x380x693 | |
| Net weight | kg | 46.3 | 46.3 | 46.3 | 54.8 | 54.8 | |
| Gross weight | kg | 56.4 | 56.4 | 56.4 | 64.6 | 64.6 | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | | | |
| Drain pipe | mm | ODØ24 | | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. The data are test under standard external static pressure.
3. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
4. Noise is tested in a semi-anechoic test room.

HIGH STATIC PRESSURE DUCT



| Model | Non-AEH With-AEH | CKT3H-800G70 CKT3H-800EG70 | CKT3H-1000G70 CKT3H-1000EG70 | CKT3H-1200G70 CKT3H-1200EG70 | CKT3H-1400G70 CKT3H-1400EG70 | |
|--|-----------------------|--|---------------------------------|---|---------------------------------|------|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | | |
| Air flow (H/M/L) | m ³ /h | 1360/1220/1090 | 1700/1530/1380 | 2040/1880/1610 | 2380/2120/1860 | |
| | CFM | 800/720/640 | 1000/900/810 | 1200/1105/950 | 1400/1250/1095 | |
| Standard external static pressure | Pa | 70 | | | | |
| Cooling | Capacity (H/M/L) | 6.6/6.37/6.12 | 8.8/8.19/7.57 | 10/9.44/8.53 | 12/11.47/10.24 | |
| | Water flow rate | l/h | 1135 | 1514 | 1720 | 2064 |
| | Water pressure drop | kPa | 8 | 24 | 24 | 36 |
| Heating | Capacity (H/M/L) | 9.7/8.54/7.18 | 13.2/11.48/9.9 | 15/12.9/11.25 | 17.9/15.75/13.6 | |
| | Water pressure drop | kPa | 8.4 | 25 | 23.4 | 34.2 |
| Power input (H/M/L) | W | 320/300/285 | 350/320/300 | 350/320/290 | 350/300/285 | |
| Auxiliary electric heater (AEH) | W | 5000 | 5000 | 5000 | 5000 | |
| Sound pressure level | dB(A) | 49/42/35 | 50/43/36 | 51/44/37 | 52/45/38 | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| | Quantity | 1 | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | |
| | Quantity | 1 | | | | |
| Coil | Row | 2 | 3 | 3 | 4 | |
| | Max. working pressure | MPa | 1.6 | | | |
| | Diameter | mm | Ø9.52 | | | |
| Net dimensions (W×H×D) | mm | 946×400×816 | | | | |
| Packing size (non-AEH/with-AEH)(W×H×D) | mm | Left connection: 1075×480×857/1075×480×925 | | Right connection: 1015×480×857/1015×480×925 | | |
| Net weight (non-AEH/with-AEH) | kg | 50/53 | 52/55 | 52/55 | 54/57 | |
| Gross weight (non-AEH/with-AEH) | kg | 55/58 | 57/60 | RC3/4 57/60 | 59/62 | |
| Water inlet/outlet pipe | Inch | ØDØ32 | | | | |
| Drain pipe | mm | | | | | |

| Model | Non-AEH With-AEH | CKT3H-1600G100 CKT3H-1600EG100 | CKT3H-1800G100 CKT3H-1800EG100 | CKT3H-2200G100 CKT3H-2200EG100 | |
|--|-----------------------|--|-----------------------------------|---|------|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | |
| Air flow (H/M/L) | m ³ /h | 2720/2450/2170 | 3060/2750/2450 | 3740/3360/2990 | |
| | CFM | 1600/1440/1280 | 1800/1620/1440 | 2200/1980/1760 | |
| Standard external static pressure | Pa | 100 | | | |
| Cooling | Capacity (H/M/L) | 14.1/13.03/11.87 | 15.8/14.6/13.46 | 19.9/18.58/17.24 | |
| | Water flow rate | l/h | 2425 | 2718 | 3423 |
| | Water pressure drop | kPa | 52 | 90 | 130 |
| Heating | Capacity (H/M/L) | 21.2/18.23/15.69 | 23.8/20.94/17.85 | 30/26.7/22.5 | |
| | Water pressure drop | kPa | 51 | 85 | 121 |
| Power input (H/M/L) | W | 550/520/500 | 800/680/620 | 950/860/760 | |
| Auxiliary electric heater (AEH) | W | 9500 | 9500 | 9500 | |
| Sound pressure level | dB(A) | 54/47/40 | 60/53/46 | 61/54/47 | |
| Fan motor | Type | Low noise 3-speed fan motor | | | |
| | Quantity | 1 | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | |
| | Quantity | 2 | | | |
| Coil | Row | 3 | | | |
| | Max. working pressure | MPa | 1.6 | | |
| | Diameter | mm | Ø9.52 | | |
| Net dimensions (W×H×D) | mm | 1290×400×809 | | | |
| Packing size (non-AEH/with-AEH)(W×H×D) | mm | Left connection: 1448×460×877/1448×460×950 | | Right connection: 1383×422×877/1368×460×950 | |
| Net weight (non-AEH/with-AEH) | kg | 76/82 | | | |
| Gross weight (non-AEH/with-AEH) | kg | 83/89 | | | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | |
| Drain pipe | mm | ODØ32 | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. The data are test under standard external static pressure.
3. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
4. Noise is tested in a semi-anechoic test room.

DISTRICT COOLING DUCT



| Model | | CKS4-200G30 | CKS4-300G30 | CKS4-400G30 | CKS4-500G30 | CKS4-600G30 | CKS4-800G30 | |
|-----------------------------------|-----------------------|------------------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|
| Power supply | | V/Ph/Hz 220-240/1/50 | | | | | | |
| Air flow (H/M/L) | | m³/h | 430/380/340 | 600/540/480 | 700/630/520 | 900/810/720 | 1160/1040/930 | 1400/1342/1200 |
| | | CFM | 253/224/200 | 353/318/282 | 412/370/305 | 530/476/424 | 682/612/547 | 824/789/705 |
| Standard external static pressure | | Pa | 30 | 30 | 30 | 30 | 30 | 50 |
| Cooling | Capacity (H/M/L) | kW | 2.05/1.742/1.55 | 2.61/2.21/1.98 | 4.03/3.42/3.06 | 4.57/3.88/3.47 | 6.39/5.43/4.85 | 6.93/5.89/5.26 |
| | Water flow rate | l/h | 196 | 249 | 385 | 437 | 610.6 | 662 |
| | Water pressure drop | kPa | 10 | 10 | 21 | 25 | 53.8 | 13.3 |
| Power input (H/M/L) | | W | 47/38/33 | 65/52/46 | 78/62/55 | 92/74/64 | 116/93/81 | 144/115/101 |
| Sound pressure level | | dB(A) | 38/33/27 | 39/34/28 | 39/35/29 | 41/35/30 | 42/36/31 | 48/47/46 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | | |
| | Quantity | 1 | | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | | |
| | Quantity | 1 | 2 | 2 | 2 | 2 | 2 | |
| Coil | Row | 4 | | | | | | |
| | Max. working pressure | MPa | 1.6 | | | | | |
| | Diameter | mm | Ø9.52 | | | | | |
| Net dimensions (W×H×D) | | mm | 741×241×522 | 841×241×522 | 941×241×522 | 941×241×522 | 1161×241×522 | 1180×340×612 |
| Packing size (W×H×D) | | mm | 790×260×550 | 890×260×550 | 990×260×550 | 990×260×550 | 1210×260×550 | 1310×380×693 |
| Net weight | | kg | 15.3 | 17.5 | 20.7 | 20.7 | 23.5 | 39.3 |
| Gross weight | | kg | 17.6 | 20 | 23.1 | 23.1 | 26.5 | 47 |
| Water inlet/outlet pipe | | Inch | RC3/4 | | | | | |
| Drain pipe | | mm | ODØ24 | | | | | |

| Model | | CKS4-1000G50-A4 | CKS4-1200G50-A4 | CKS4-1400G50-A4 | CKS4-1600G50-A4 | CKS4-1800G50-A4 | CKS4-2000G50-A4 | |
|-----------------------------------|-----------------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| Power supply | | V/Ph/Hz 220-240/1/50 | | | | | | |
| Air flow (H/M/L) | | m³/h | 1650/1527/1405 | 2040/1851/1666 | 2420/1850/1657 | 2580/2320/2060 | 3380/2239/1878 | 3660/2544/2199 |
| | | CFM | 970/898/826 | 1200/1089/980 | 1424/1088/975 | 1518/1365/1212 | 1988/1317/1105 | 2153/1496/1295 |
| Standard external static pressure | | Pa | 50 | 50 | 50 | 50 | 50 | 50 |
| Cooling | Capacity (H/M/L) | kW | 7.57/6.43/5.75 | 10.11/8.59/7.68 | 11.5/9.7/8.74 | 11.74/9.97/8.92 | 14.74/12.52/11.2 | 16.1/13.68/12.23 |
| | Water flow rate | l/h | 723 | 966 | 1099 | 1122 | 1408 | 1538 |
| | Water pressure drop | kPa | 16.3 | 21 | 25.3 | 27.8 | 37.9 | 48.1 |
| Power input (H/M/L) | | W | 176/141/123 | 320/256/224 | 392/314/274 | 482/386/337 | 538/430/376 | 583/466/408 |
| Sound pressure level | | dB(A) | 49/48/47 | 51/50/48 | 52/50/49 | 53/51/50 | 54/51/50 | 54/52/51 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | | |
| | Quantity | 1 | | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | | |
| | Quantity | 2 | 2 | 2 | 2 | 3 | 3 | |
| Coil | Row | 4 | | | | | | |
| | Max. working pressure | MPa | 1.6 | | | | | |
| | Diameter | mm | Ø9.52 | | | | | |
| Net dimensions (W×H×D) | | mm | 1180×340×612 | 1369×340×612 | 1369×340×612 | 1369×340×612 | 1500×340×612 | 1500×340×612 |
| Packing size (W×H×D) | | mm | 1310×380×693 | 1490×380×693 | 1490×380×693 | 1490×380×693 | 1620×380×693 | 1620×380×693 |
| Net weight | | kg | 40.8 | 46.3 | 46.3 | 46.3 | 54.8 | 54.8 |
| Gross weight | | kg | 49.6 | 56.4 | 56.4 | 56.4 | 64.6 | 64.6 |
| Water inlet/outlet pipe | | Inch | RC3/4 | | | | | |
| Drain pipe | | mm | ODØ24 | | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. The data are test under standard external static pressure.
3. Cooling conditions: entering water 5.5°C, temperature rise 9°C, entering air temperature 27°C DB/19°C WB.
4. Noise is tested in a semi-anechoic test room.

4-PIPE DUCT



| Model | | CKT3-200FG12 CKT3-200FG30 | CKT3-300FG12 CKT3-300FG30 | CKT3-400FG12 CKT3-400FG30 | CKT3-500FG12 CKT3-500FG30 | CKT3-600FG12 CKT3-600FG30 | |
|-----------------------------------|-----------------------|------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|---------------|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | | | |
| Air flow (H/M/L) | m ³ /h | 340/255/170 | 510/385/255 | 680/510/340 | 850/640/425 | 1020/765/510 | |
| | CFM | 200/150/100 | 300/225/150 | 400/300/200 | 500/375/250 | 600/450/300 | |
| Standard external static pressure | Pa | G12 models: 12; G30 models: 30 | | | | | |
| Cooling | Capacity (H/M/L) | kW | 2/1.76/1.52 | 2.7/2.35/2.13 | 3.6/3.15/2.76 | 4.3/3.74/3.32 | 5/4.32/3.84 |
| | Water flow rate | l/h | 344 | 464 | 619 | 740 | 860 |
| | Water pressure drop | kPa | 7.6 | 14.4 | 8.2 | 9.5 | 17.2 |
| Heating | Capacity (H/M/L) | kW | 3/2.64/2.22 | 4/3.48/3 | 5.2/4.47/3.9 | 5.7/5.02/4.33 | 7.2/6.19/5.33 |
| | Water flow rate | l/h | 258 | 344 | 447 | 490 | 619 |
| | Water pressure drop | kPa | 6.8 | 12.5 | 23.5 | 24.0 | 40.7 |
| Power input | 12Pa (H/M/L) | W | 33/26/23 | 53/38/31 | 66/48/42 | 87/54/44 | 100/67/56 |
| | 30Pa (H/M/L) | W | 49/39/34 | 64/50/42 | 75/55/48 | 96/58/48 | 114/76/64 |
| Sound pressure level | 12Pa (H/M/L) | dB(A) | 35/32/26 | 36/33/27 | 37/34/28 | 40/36/30 | 42/38/32 |
| | 30Pa (H/M/L) | dB(A) | 41/37/31 | 42/38/32 | 43/39/33 | 44/40/34 | 45/41/35 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | | |
| | Quantity | 1 | | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | | |
| | Quantity | 1 | 2 | 2 | 2 | 2 | |
| Coil | Row | 3 | | | | | |
| | Max. working pressure | MPa | 1.6 | | | | |
| | Diameter | mm | Ø9.52 | | | | |
| Net dimensions (W×H×D) | mm | 741×241×522 | 841×241×522 | 941×241×522 | 941×241×522 | 1161×241×522 | |
| Packing size (W×H×D) | mm | 790×260×550 | 890×260×550 | 990×260×550 | 990×260×550 | 1210×260×550 | |
| Net weight | kg | 15.1 | 17.5 | 20.7 | 20.7 | 23.5 | |
| Gross weight | kg | 17.4 | 20 | 23.1 | 23.1 | 26.5 | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | | | |
| Drain pipe | mm | ODØ24 | | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. The data are test under standard external static pressure.
3. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 70°C, temperature drop 10°C DB, entering air temperature 20°C DB.
4. Noise is tested in a semi-anechoic test room.

4-PIPE DUCT



| Model | | CKT3-800FG12 CKT3-800FG30 | CKT3-1000FG12 CKT3-1000FG30 | CKT3-1200FG12 CKT3-1200FG30 | CKT3-1400FG12 CKT3-1400FG30 | |
|-----------------------------------|-----------------------|------------------------------------|--------------------------------|--------------------------------|--------------------------------|------------------|
| Power supply | | V/Ph/Hz 220-240/1/50 | | | | |
| Air flow (H/M/L) | | m ³ /h | 1360/1020/680 | 1700/1275/850 | 2040/1530/1020 | 2380/1785/1190 |
| | | CFM | 800/600/400 | 1000/750/500 | 1200/900/600 | 1400/1050/700 |
| Standard external static pressure | | Pa | G12 models: 12; G30 models: 30 | | | |
| Cooling | Capacity (H/M/L) | kW | 6.8/5.78/5.11 | 7.8/6.74/5.88 | 10.2/8.89/7.85 | 11.5/9.9/8.86 |
| | Water flow rate | l/h | 1170 | 1342 | 1754 | 1978 |
| | Water pressure drop | kPa | 18.8 | 30.0 | 40.3 | 51.9 |
| Heating | Capacity (H/M/L) | kW | 9.6/8.45/7.2 | 10.8/9.61/8.1 | 13.5/12.15/10.26 | 15.5/13.48/11.78 |
| | Water flow rate | l/h | 826 | 929 | 1161 | 1333 |
| | Water pressure drop | kPa | 20.7 | 34.7 | 28.6 | 55.2 |
| Power input | 12Pa (H/M/L) | W | 145/130/111 | 180/104/88 | 210/140/123 | 222/201/182 |
| | 30Pa (H/M/L) | W | 154/132/113 | 193/114/97 | 230/157/131 | 278/262/228 |
| Sound pressure level | 12Pa (H/M/L) | dB(A) | 43/39/33 | 45/41/35 | 46/42/36 | 48/44/38 |
| | 30Pa (H/M/L) | dB(A) | 46/42/36 | 47/43/37 | 48/44/38 | 49/45/39 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| | Quantity | 2 | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | |
| | Quantity | 4 | | | | |
| Coil | Row | 3 | | | | |
| | Max. working pressure | MPa | 1.6 | | | |
| | Diameter | mm | Ø9.52 | | | |
| Net dimensions (W×H×D) | mm | 1461×241×522 | 1566×241×522 | 1856×241×522 | 2022×241×522 | |
| Packing size (W×H×D) | mm | 1510×260×550 | 1615×260×550 | 1905×260×550 | 2070×260×550 | |
| Net weight | kg | 32.4 | 34.9 | 40 | 43.6 | |
| Gross weight | kg | 36 | 38.6 | 43.5 | 48.9 | |
| Water inlet/outlet pipe | Inch | RC3/4 | | | | |
| Drain pipe | mm | ODØ24 | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. The data are test under standard external static pressure.
3. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 70°C, temperature drop 10°C DB, entering air temperature 20°C DB.
4. Noise is tested in a semi-anechoic test room.

WALL-MOUNTED

C type panel

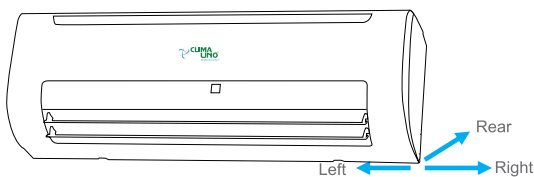


S type panel



STYLISH PANEL

Stylish front panel blends easily within any interior décor, ideal for use in shops, restaurants or offices with no or narrow false ceilings.



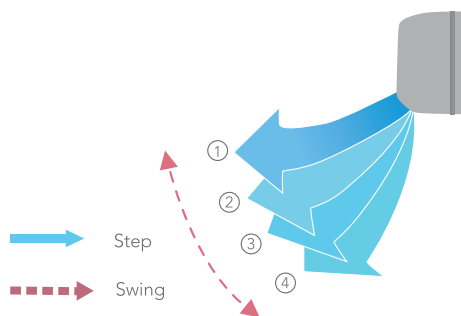
CONVENIENT INSTALLATION

Multi-directional outlet pipe features: left\right\rear, to meet the needs of different rooms.

BUILT-IN 3-WAY ELECTROMAGNETIC VALVE

THE AUTO SWING LOUVER

The Auto Swing Louver function ensures that the air direction corresponds to the mode selected.



Step
Swing

Open panel



EASY MAINTENANCE

Removable front panel making maintenance convenient.

WALL MOUNTED (C PANEL)



| Model | | CKG-250 | CKG-300 | CKG-450 | CKG-500 | CKG-600 |
|-------------------------|-----------------------|-----------------------------|----------------|----------------|----------------|----------------|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | | |
| Air flow (H/M/L) | m³/h | 425/360/320 | 510/430/380 | 680/580/510 | 850/720/640 | 1020/870/770 |
| | CFM | 250/210/190 | 300/250/220 | 400/340/300 | 500/420/380 | 600/510/450 |
| Cooling | Capacity (H/M/L) | kW 2.2/1.84/1.65 | 2.64/2.24/2.05 | 3.08/2.62/2.27 | 4.07/3.73/3.24 | 4.45/4.18/3.74 |
| | Water flow rate | l/h 378 | 454 | 530 | 700 | 765 |
| | Water pressure drop | kPa 12 | 18 | 22 | 26 | 29 |
| Heating | Capacity (H/M/L) | kW 3.02/2.6/2.23 | 3.69/3.25/2.77 | 4.34/3.86/3.25 | 5.69/5.12/4.32 | 6.3/5.67/4.73 |
| | Water pressure drop | kPa 10 | 16.4 | 20.8 | 25.1 | 27.9 |
| Power input (H/M/L) | W | 28/22/20 | 40/32/28 | 44/35/31 | 50/40/35 | 60/48/42 |
| Sound pressure level | dB(A) | 30/24/20 | 35/29/24 | 37/31/26 | 39/33/28 | 40/34/29 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| | Quantity | 1 | | | | |
| Fan | Type | Tangential fan | | | | |
| | Quantity | 1 | | | | |
| Coil | Row | 2 | | | | |
| | Max. working pressure | MPa | 1.6 | | | |
| | Diameter | mm | Ø7 | | | |
| Net dimensions (W×H×D) | mm | 915×290×210 | 915×290×210 | 915×290×210 | 1070×315×210 | 1070×315×210 |
| Packing size (W×H×D) | mm | 1020×385×300 | 1020×385×300 | 1020×385×300 | 1180×410×300 | 1180×410×300 |
| Net weight | kg | 12 | 12 | 12 | 15 | 15 |
| Gross weight | kg | 16 | 16.7 | 17 | 19 | 19 |
| Water inlet/outlet pipe | Inch | G3/4 | | | | |
| Drain pipe | mm | ODØ20 | | | | |

WALL MOUNTED (S PANEL)



| Model | | CKG-250-B | CKG-300-B | CKG-400-B | CKG-500-B | CKG-600-B |
|-------------------------|-----------------------|-----------------------------|----------------|----------------|----------------|--------------|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | | |
| Air flow (H/M/L) | m³/h | 425/390/350 | 510/470/390 | 680/550/460 | 850/745/620 | 1020/915/780 |
| | CFM | 250/230/205 | 300/275/230 | 400/325/270 | 500/440/365 | 600/540/460 |
| Cooling | Capacity (H/M/L) | kW 2.63/2.41/2.16 | 2.97/2.47/2.12 | 3.28/2.83/2.41 | 4.25/3.85/3.32 | 5/4.47/3.97 |
| | Water flow rate | l/h 452 | 511 | 564 | 731 | 860 |
| | Water pressure drop | kPa 29.4 | 35.6 | 43.5 | 31.8 | 42.5 |
| Heating | Capacity (H/M/L) | kW 3.36/3.1/2.79 | 3.91/3.26/2.77 | 4.37/3.73/3.17 | 5.81/5.17/4.43 | 6.7/6/5.28 |
| | Water pressure drop | kPa 27.3 | 32.9 | 40.8 | 30.2 | 39.7 |
| Power input (H/M/L) | W | 24/19/17 | 37/29/26 | 40/32/28 | 50/40/35 | 66/53/46 |
| Sound pressure level | dB(A) | 30/24/20 | 35/29/24 | 37/31/26 | 39/33/28 | 40/34/29 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| | Quantity | 1 | | | | |
| Fan | Type | Tangential fan | | | | |
| | Quantity | 1 | | | | |
| Coil | Row | 2 | | | | |
| | Max. working pressure | MPa | 1.6 | | | |
| | Diameter | mm | Ø7 | | | |
| Net dimensions (W×H×D) | mm | 915×290×230 | 915×290×230 | 915×290×230 | 1072×315×230 | 1072×315×230 |
| Packing size (W×H×D) | mm | 1020×390×315 | 1020×390×315 | 1020×390×315 | 1180×415×315 | 1180×415×315 |
| Net weight | kg | 13 | 13 | 13.3 | 15.8 | 15.8 |
| Gross weight | kg | 16.3 | 16.3 | 16.7 | 19.4 | 19.4 |
| Water inlet/outlet pipe | Inch | G3/4 | | | | |
| Drain pipe | mm | ODØ20 | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
3. Noise is tested in a semi-anechoic test room.

FLOOR-STANDING AND CEILING & FLOOR



Concealed Type
F3/H3 Series



Exposed Type
(air return from side)
F4/H4 Series



Exposed Type
(air return from bottom)
F5/H5 Series



Floor installation



Ceiling installation

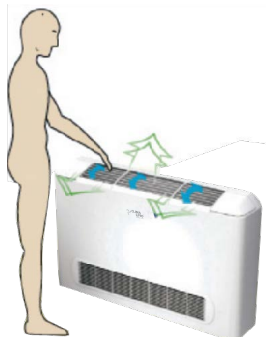
FLEXIBLE INSTALLATION

- Cabinet and concealed versions meet various installation requirements.
- Horizontal or vertical installation.
- Optional built-in 3-way electromagnetic valve.



FLEXIBLE AIR RETURN TYPE

Air return can be from the unit side or bottom.



MOVABLE LOUVER

Adjustable louver for wide angle of air flow.

FLOOR-STANDING

| Model | | CKF3-150 CKF4-150 CKF5-150 | CKF3-250 CKF4-250 CKF5-250 | CKF3-300 CKF4-300 CKF5-300 | CKF3-400 CKF4-400 CKF5-400 |
|-------------------------|------------------------|--|----------------------------------|----------------------------------|----------------------------------|
| Power supply | | V/Ph/Hz 220-240/1/50 | | | |
| Air flow (H/M/L) | | m³/h 255/215/190 425/360/320 510/430/380 680/580/510 | | | |
| | | CFM 150/125/110 250/210/190 300/250/220 400/340/300 | | | |
| Cooling | Capacity (H/M/L) | kW 1.15/0.93/0.89 1.87/1.74/1.59 2.53/2.25/1.88 3.27/2.84/2.54 | | | |
| | Water flow rate | l/h 198 322 435 562 | | | |
| | Water pressure drop | kPa 18.3 10.1 14.2 26.3 | | | |
| Heating | Capacity (H/M/L) | kW 2.54/2.24/1.88 4.17/3.36/3.13 5.64/4.85/4.23 7.22/6.35/5.49 | | | |
| | Water pressure drop | kPa 16 8.8 13.7 24 | | | |
| Power input (H/M/L) | | W 27/22/19 29/23/20 40/32/28 46/37/32 | | | |
| Sound pressure level | F3 (H/M/L) | dB(A) 30/27/24 33/30/28 35/32/30 37/34/32 | | | |
| | F4 (H/M/L) | dB(A) 32/29/26 35/32/30 37/34/32 39/36/34 | | | |
| | F5 (H/M/L) | dB(A) 30/27/24 33/30/28 35/32/30 37/34/32 | | | |
| Fan motor | Type | Low noise 3-speed fan motor | | | |
| Fan | Quantity | 1 | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | |
| | Quantity | 1 2 2 | | | |
| Coil | Row | 3 3 2 2 | | | |
| | Max. working pressure | MPa 1.6 | | | |
| | Diameter | mm Ø9.52 | | | |
| Body (F3 series) | Net dimensions (W×H×D) | mm 550×545×212 550×545×212 750×545×212 750×545×212 | | | |
| | Packing size (W×H×D) | mm 639×639×305 639×639×305 839×639×305 839×639×305 | | | |
| | Net weight | kg 17 17 20 20 | | | |
| | Gross weight | kg 19 19 23.5 23.5 | | | |
| Body (F4/F5 series) | Net dimensions (W×H×D) | mm 800×592×225 800×592×225 1000×592×225 1000×592×225 | | | |
| | Packing size (W×H×D) | mm 889×683×312 889×683×312 1089×683×312 1089×683×312 | | | |
| | Net weight | kg 22.5/22.5 22.5/22.5 26/26 26/26 | | | |
| | Gross weight | kg 26.5/26.5 26.5/26.5 31/31 31/31 | | | |
| Water inlet/outlet pipe | | Inch G3/4 | | | |
| Drain pipe | | mm ODØ16 | | | |

| Model | | CKF3-450 CKF4-450 CKF5-450 | CKF3-500 CKF4-500 CKF5-500 | CKF3-600 CKF4-600 CKF5-600 | CKF3-800 CKF4-800 CKF5-800 | CKF3-900 CKF4-900 CKF5-900 |
|-------------------------|------------------------|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Power supply | | V/Ph/Hz 220-240/1/50 | | | | |
| Air flow (H/M/L) | | m³/h 765/650/570 850/720/640 1020/870/765 1360/1160/1020 1530/1300/1150 | | | | |
| | | CFM 450/380/335 500/420/375 600/510/450 800/680/600 900/760/675 | | | | |
| Cooling | Capacity (H/M/L) | kW 3.97/3.58/3.15 4.85/4.41/3.72 5.64/5.02/4.46 6.52/5.75/4.36 7.85/7.19/6.55 | | | | |
| | Water flow rate | l/h 683 834 970 1121 1350 | | | | |
| | Water pressure drop | kPa 23.1 20 11.4 21 24.3 | | | | |
| Heating | Capacity (H/M/L) | kW 8.85/7.61/6.55 10.28/9.05/7.71 12.24/10.89/9.18 15.35/13.82/11.67 18.2/16.38/13.65 | | | | |
| | Water pressure drop | kPa 22 17.4 10 20.2 21.5 | | | | |
| Power input (H/M/L) | | W 39/31/27 49/39/34 63/50/44 88/70/62 137/109/96 | | | | |
| Sound pressure level | F3 (H/M/L) | dB(A) 39/36/34 41/38/36 42/39/37 44/41/38 46/43/40 | | | | |
| | F4 (H/M/L) | dB(A) 41/38/36 43/40/38 44/41/39 46/43/40 48/45/42 | | | | |
| | F5 (H/M/L) | dB(A) 39/36/34 41/38/36 42/39/37 44/41/38 46/43/40 | | | | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| Fan | Quantity | 1 | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | |
| | Quantity | 2 2 3 3 3 | | | | |
| Coil | Row | 3 3 2 2 2 | | | | |
| | Max. working pressure | MPa 1.6 | | | | |
| | Diameter | mm Ø9.52 | | | | |
| Body (F3 series) | Net dimensions (W×H×D) | mm 950×545×212 950×545×212 1250×545×212 1250×545×212 1250×545×212 | | | | |
| | Packing size (W×H×D) | mm 1039×639×305 1039×639×305 1339×639×305 1339×639×305 1339×639×305 | | | | |
| | Net weight | kg 25 25 32 32 32 | | | | |
| | Gross weight | kg 29 29 36 36 36 | | | | |
| Body (F4/F5 series) | Net dimensions (W×H×D) | mm 1200×592×225 1200×592×225 1500×592×225 1500×592×225 1500×592×225 | | | | |
| | Packing size (W×H×D) | mm 1289×683×312 1289×683×312 1589×683×312 1589×683×312 1589×683×312 | | | | |
| | Net weight | kg 32.5/32.5 32.5/35 39/36.6 39/39 39/39 | | | | |
| | Gross weight | kg 38/38 38/40 45/42.6 45/45 45/45 | | | | |
| Water inlet/outlet pipe | | Inch G3/4 | | | | |
| Drain pipe | | mm ODØ16 | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.
3. Noise is tested in a semi-anechoic test room.

CEILING & FLOOR

| Model | | CKH3-150 CKH4-150 CKH5-150 | CKH3-250 CKH4-250 CKH5-250 | CKH3-300 CKH4-300 CKH5-300 | CKH3-400 CKH4-400 CKH5-400 | |
|-------------------------|------------------------|------------------------------------|----------------------------------|----------------------------------|----------------------------------|--|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | | |
| Air flow (H/M/L) | m ³ /h | 255/215/190 | 425/360/320 | 510/430/380 | 680/580/510 | |
| | CFM | 150/125/110 | 250/210/190 | 300/250/220 | 400/340/300 | |
| Cooling | Capacity (H/M/L) | 1.15/0.93/0.89 | 1.87/1.74/1.59 | 2.53/2.25/1.88 | 3.27/2.84/2.54 | |
| | Water flow rate | l/h | 198 | 322 | 435 | |
| | Water pressure drop | kPa | 18.3 | 10.1 | 14.2 | |
| Heating | Capacity (H/M/L) | 1.52/1.22/1.14 | 2.53/2.28/2.1 | 3.49/2.97/2.44 | 4.58/3.89/3.44 | |
| | Water pressure drop | kPa | 16 | 8.8 | 13.7 | |
| Power input (H/M/L) | W | 27/22/19 | 29/23/20 | 40/32/28 | 46/37/32 | |
| Sound pressure level | H3 (H/M/L) | dB(A) | 30/27/24 | 33/30/28 | 35/32/30 | |
| | H4 (H/M/L) | dB(A) | 32/29/26 | 35/32/30 | 37/34/32 | |
| | H5 (H/M/L) | dB(A) | 30/27/24 | 33/30/28 | 35/32/30 | |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| | Quantity | 1 | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | |
| | Quantity | 1 | 1 | 2 | 2 | |
| Coil | Row | 3 | 3 | 2 | 2 | |
| | Max. working pressure | MPa | 1.6 | | | |
| | Diameter | mm | Ø9.52 | | | |
| Body (H3 series) | Net dimensions (W×H×D) | mm | 550×545×212 | 550×545×212 | 750×545×212 | |
| | Packing size (W×H×D) | mm | 639×639×305 | 639×639×305 | 839×639×305 | |
| | Net weight | kg | 17 | 17 | 20 | |
| | Gross weight | kg | 19 | 19 | 23.5 | |
| Body (H4/H5 series) | Net dimensions (W×H×D) | mm | 800×592×225 | 800×592×225 | 1000×592×225 | |
| | Packing size (W×H×D) | mm | 889×683×312 | 889×683×312 | 1089×683×312 | |
| | Net weight | kg | 22.5/22.5 | 22.5/22.5 | 26/26 | |
| | Gross weight | kg | 26.5/26.5 | 27/26.5 | 31/31 | |
| Water inlet/outlet pipe | Inch | G3/4 | | | | |
| Drain pipe | mm | ODØ16 | | | | |

| Model | | CKH3-450 CKH4-450 CKH5-450 | CKH3-500 CKH4-500 CKH5-500 | CKH3-600 CKH4-600 CKH5-600 | CKH3-800 CKH4-800 CKH5-800 | CKH3-900 CKH4-900 CKH5-900 |
|-------------------------|------------------------|------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Power supply | V/Ph/Hz | 220-240/1/50 | | | | |
| Air flow (H/M/L) | m ³ /h | 765/650/570 | 850/720/640 | 1020/870/765 | 1360/1160/1020 | 1530/1300/1150 |
| | CFM | 450/380/335 | 500/420/375 | 600/510/450 | 800/680/600 | 900/760/675 |
| Cooling | Capacity (H/M/L) | 3.97/3.58/3.15 | 4.85/4.41/3.72 | 5.64/5.02/4.46 | 6.52/5.75/4.36 | 7.85/7.19/6.55 |
| | Water flow rate | l/h | 683 | 834 | 970 | 1121 |
| | Water pressure drop | kPa | 23.1 | 20 | 11.4 | 21 |
| Heating | Capacity (H/M/L) | 5.64/4.79/4.23 | 6.98/6.28/5.23 | 8.23/6.58/5.59 | 9.58/8.14/6.32 | 11.69/10.52/9.35 |
| | Water pressure drop | kPa | 22 | 17.4 | 10 | 20.2 |
| Power input (H/M/L) | W | 39/31/27 | 49/39/34 | 63/50/44 | 88/70/62 | 137/109/96 |
| Sound pressure level | H3 (H/M/L) | dB(A) | 39/36/34 | 41/38/36 | 42/39/37 | 44/41/38 |
| | H4 (H/M/L) | dB(A) | 41/38/36 | 43/40/38 | 44/41/39 | 46/43/40 |
| | H5 (H/M/L) | dB(A) | 39/36/34 | 41/38/36 | 42/39/37 | 44/41/38 |
| Fan motor | Type | Low noise 3-speed fan motor | | | | |
| | Quantity | 1 | | | | |
| Fan | Type | Centrifugal, forward-curved Blades | | | | |
| | Quantity | 2 | 2 | 3 | 3 | |
| Coil | Row | 3 | 3 | 2 | 2 | |
| | Max. working pressure | MPa | 1.6 | | | |
| | Diameter | mm | Ø9.52 | | | |
| Body (H3 series) | Net dimensions (W×H×D) | mm | 950×545×212 | 950×545×212 | 1250×545×212 | |
| | Packing size (W×H×D) | mm | 1039×639×305 | 1039×639×305 | 1339×639×305 | |
| | Net weight | kg | 25 | 25 | 32 | |
| | Gross weight | kg | 29 | 29 | 36 | |
| Body (H4/H5 series) | Net dimensions (W×H×D) | mm | 1200×592×225 | 1200×592×225 | 1500×592×225 | |
| | Packing size (W×H×D) | mm | 1289×683×312 | 1289×683×312 | 1589×683×312 | |
| | Net weight | kg | 32.5/32.5 | 32.5/32.5 | 39/39 | |
| | Gross weight | kg | 38/38 | 38/38 | 45/45 | |
| Water inlet/outlet pipe | Inch | G3/4 | | | | |
| Drain pipe | mm | ODØ16 | | | | |

Notes:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.

2. Cooling conditions: entering water 7°C, temperature rise 5°C, entering air temperature 27°C DB/19°C WB.

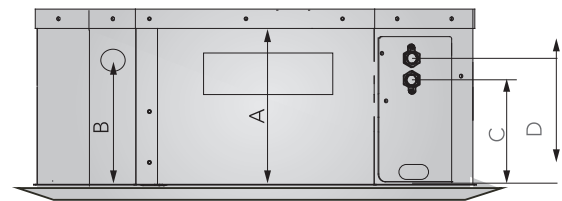
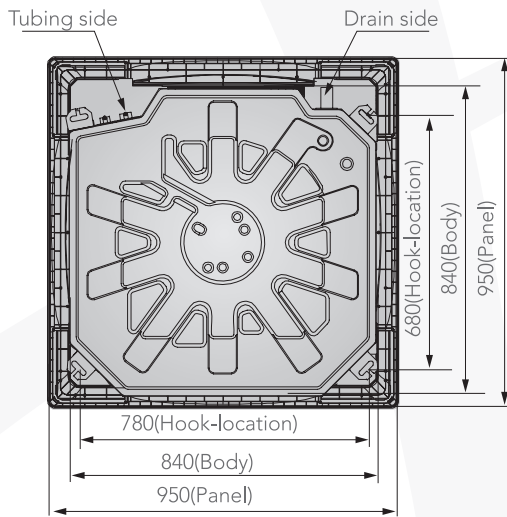
Heating conditions: entering water 50°C, entering air temperature 20°C DB, the same water flow as the cooling conditions.

3. Noise is tested in a semi-anechoic test room.

DIMENSIONS

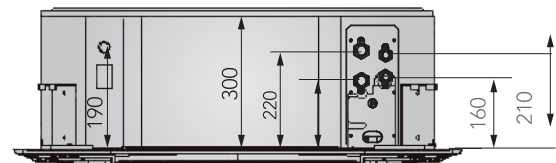
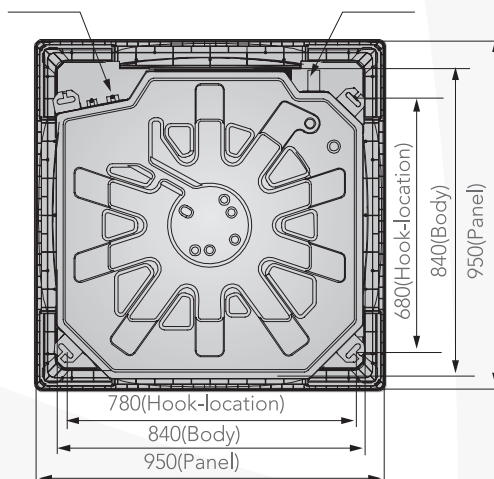
4-WAY CASSETTE

2-pipe 4-way cassette
Dimensions (unit:mm)

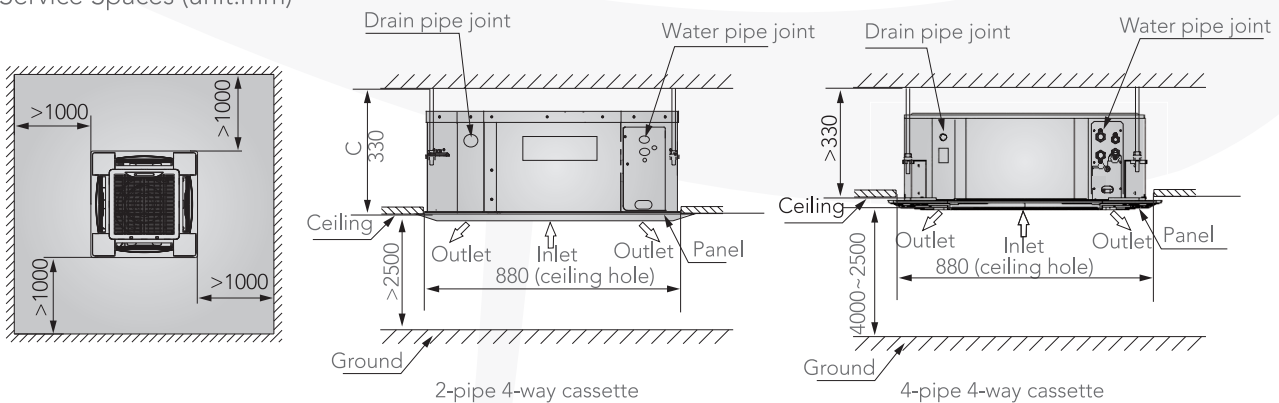


| Model | Size | A | B | C | D |
|---|------|-----|-----|-----|-----|
| CKA-600R(A) CKA-750R(A) | | 230 | 170 | 135 | 185 |
| CKA-950R(A) CKA-1200R(A) CAK-1500R(A) | | 300 | 190 | 145 | 195 |

4-Pipe 4-way cassette
Dimensions (unit:mm)



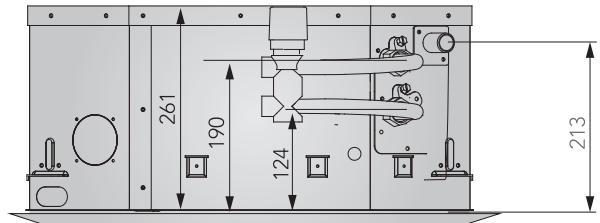
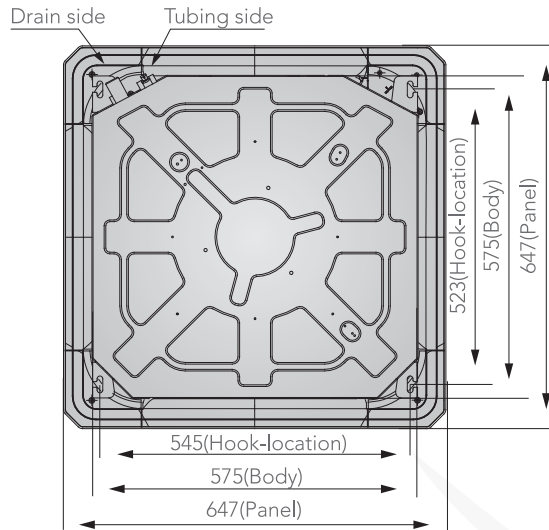
Service Spaces (unit:mm)



COMPACT 4-WAY CASSETTE

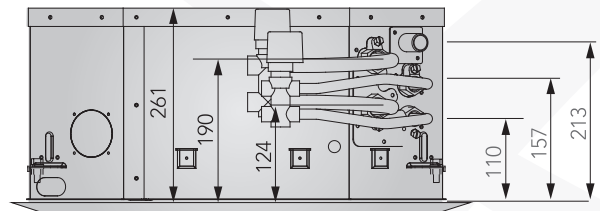
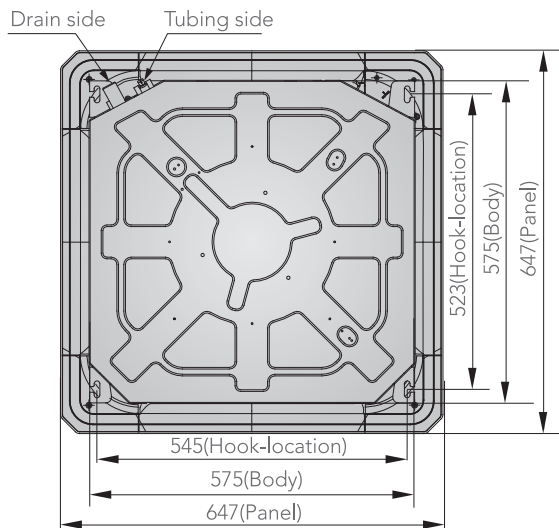
2-pipe compact 4-way cassette

Dimensions (unit:mm)

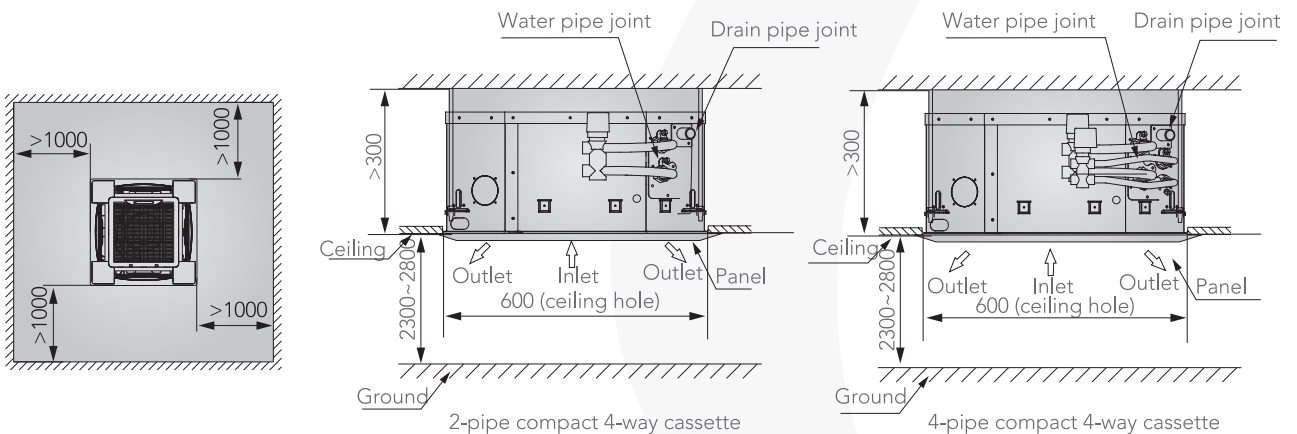


4-pipe compact 4-way cassette

Dimensions (unit:mm)



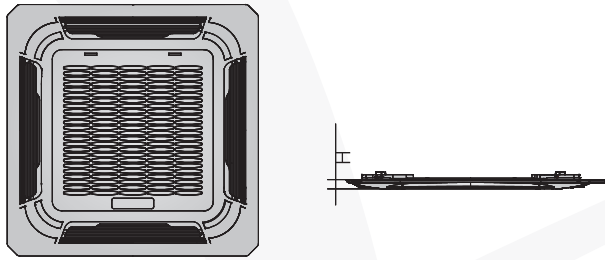
Service Spaces (unit:mm)



2-pipe compact 4-way cassette

4-pipe compact 4-way cassette

Height of the front panel

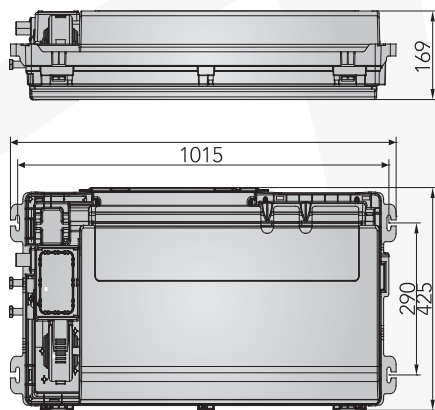


| Type | H (mm) |
|------------------------|--------|
| 4-way cassette | 45 |
| Compact 4-way cassette | 50 |

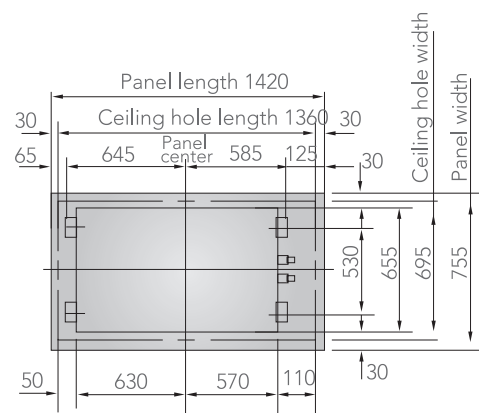
1-WAY CASSETTE

Dimensions (unit:mm)

CKC-300R(A)-B CKC-400R(A)-B

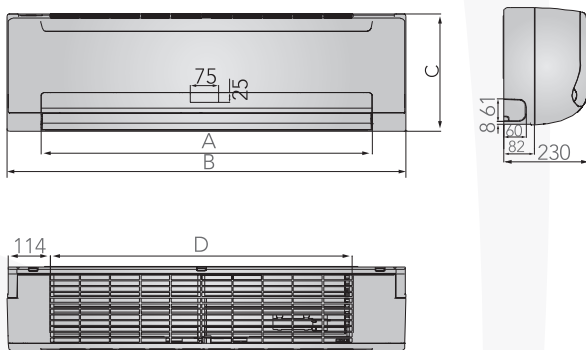


CKC-600HRN4



WALL MOUNTED - S PANEL

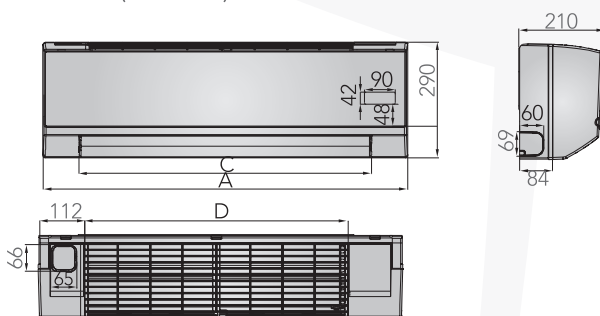
Dimensions (unit:mm)



| Model | CKG-250-B CKG-300-B CKG-400-B | CKG-500-B CKG-600-B |
|-------|-------------------------------------|------------------------|
| A | 732 | 892 |
| B | 915 | 1072 |
| C | 290 | 315 |
| D | 663 | 813 |

WALL MOUNTED - C PANEL

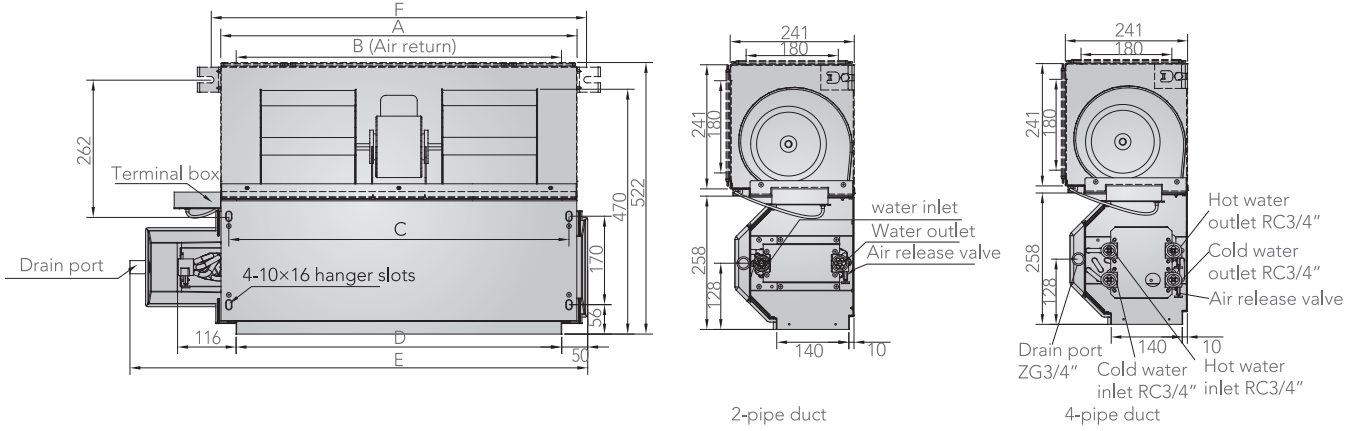
Dimensions (unit:mm)



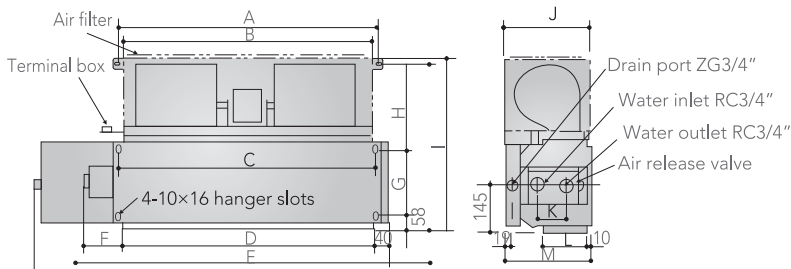
| Model | CKG-250 CKG-300 CKG-400 | CKG-500 CKG-600 |
|-------|-------------------------------|--------------------|
| A | 915 | 1070 |
| B | 290 | 315 |
| C | 725 | 885 |
| D | 670 | 815 |

DUCT

Dimensions (unit:mm)



| Size | A | B | C | D | E | F |
|---------|------|------|------|------|------|------|
| 200CFM | 545 | 485 | 513 | 485 | 741 | 583 |
| 300CFM | 645 | 585 | 613 | 585 | 841 | 683 |
| 400CFM | 745 | 685 | 713 | 685 | 941 | 783 |
| 500CFM | 745 | 685 | 713 | 685 | 941 | 783 |
| 600CFM | 965 | 905 | 933 | 905 | 1161 | 1003 |
| 800CFM | 1265 | 1205 | 1233 | 1205 | 1461 | 1303 |
| 1000CFM | 1370 | 1310 | 1338 | 1310 | 1566 | 1408 |
| 1200CFM | 1660 | 1600 | 1628 | 1600 | 1856 | 1698 |
| 1400CFM | 1826 | 1766 | 1794 | 1766 | 2022 | 1864 |

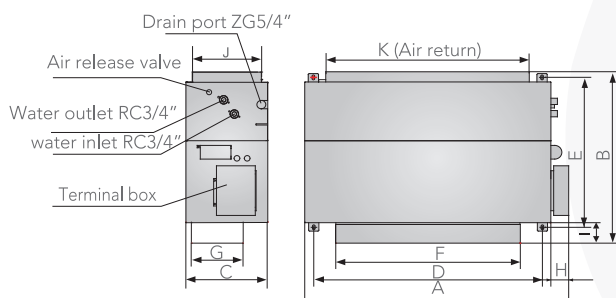


| Size | Model | CKT3-800/1000G50-A4 CKT4-800/1000G50-A4 | CKT4-1200/1400/ 1500/1600G50-A4 | CKT4-1800/ 2000G50-A4 |
|------|-------|--|------------------------------------|--------------------------|
| A | | 960 | 1085 | 1277 |
| B | | 900 | 1135 | 1327 |
| C | | 910 | 1112 | 1308 |
| D | | 885 | 1085 | 1277 |
| E | | 1180 | 1369 | 1500 |
| F | | 150 | 160 | 160 |
| G | | 195 | 195 | 195 |
| H | | 335 | 335 | 335 |
| I | | 612 | 612 | 612 |
| J | | 342 | 342 | 342 |
| K | | 231 | 231 | 231 |
| L | | 230 | 230 | 230 |
| M | | 340 | 340 | 340 |

Notes:
This figure is for reference only, actual product may differ.
The dotted line in the figure is the dimension for air return plenum.
Units with air return plenum is standard, units without air return plenum can be customized.

HIGH STATIC PRESSURE DUCT

Dimensions (unit:mm)

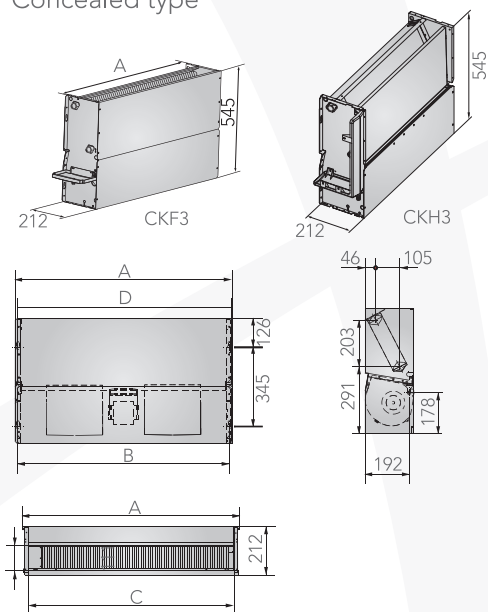


| Model | CKT3H-800G70 | CKT3H-800EG70 | CKT3H-1600G100 | CKT3H-1600EG100 |
|-------|---------------|----------------|----------------|-----------------|
| Size | CKT3H-1000G70 | CKT3H-1000EG70 | CKT3H-1800G100 | CKT3H-1800EG100 |
| | CKT3H-1200G70 | CKT3H-1200EG70 | CKT3H-2200G100 | CKT3H-2200EG100 |
| | CKT3H-1400G70 | CKT3H-1400EG70 | | |
| A | 946 | 946 | 1290 | 1290 |
| B | 816 | 876 | 809 | 874 |
| C | 400 | 400 | 400 | 400 |
| D | 778 | 778 | 1118 | 1118 |
| E | 767 | 767 | 765 | 765 |
| F | 306 | 306 | 900 | 900 |
| G | 219 | 219 | 249 | 249 |
| H | 88 | 88 | 88 | 88 |
| I | 37 | 97 | 39 | 104 |
| J | 338 | 338 | 320 | 320 |
| K | 512 | 512 | 995 | 995 |

FLOOR STANDING / CEILING & FLOOR

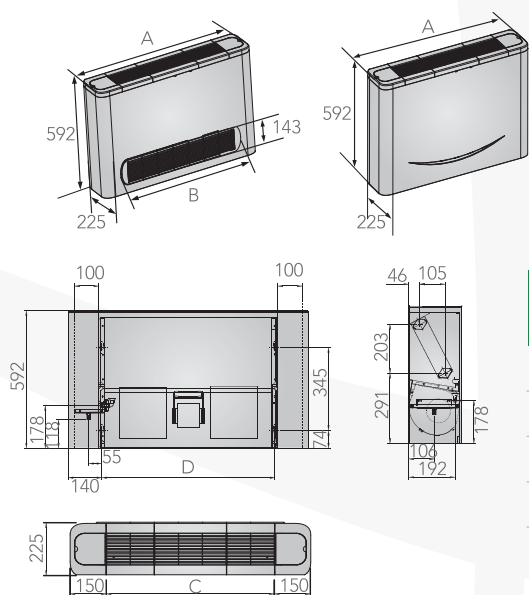
Dimensions (unit:mm)

Concealed type



| Model | CKF(H)3-150/250 | CKF(H)3-300/400 | CKF(H)3-450/500 | CKF(H)3-600~900 |
|-------|-----------------|-----------------|-----------------|-----------------|
| A(mm) | 550 | 750 | 950 | 1250 |
| B(mm) | 526 | 726 | 926 | 1226 |
| C(mm) | 500 | 700 | 900 | 1200 |
| D(mm) | 532 | 732 | 932 | 1232 |

Exposed type



| Model | CKF(H)4-150/250 CKF(H)5-150/250 | CKF(H)4-300/400 CKF(H)5-300/400 | CKF(H)4-450/500 CKF(H)5-450/500 | CKF(H)4-600~900 CKF(H)5-600~900 |
|-------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| A(mm) | 800 | 1000 | 1200 | 1500 |
| B(mm) | 584 | 784 | 984 | 1284 |
| C(mm) | 500 | 700 | 900 | 1200 |
| D(mm) | 526 | 726 | 926 | 1226 |

SELECTION SOFTWARE

FEATURES



- Select by entering air and water conditions as well as fan speed.
- Easy to operate interface and visual display.
- Powerful project management function.

MAIN INTERFACE

Menu Project Operation Area Selection Button Product Operation Area

| Equipment Code | Series | Type | Model | Air Volume | ESP |
|----------------|----------|------|--------------|------------|------|
| AHU AHU-1 | Vertical | | CES120LA-11 | 12000 | 32.7 |
| AHU Fan. B. | Vertical | | CES100LA2-12 | 10000 | 30.0 |

Selection (Equipment List)

Property

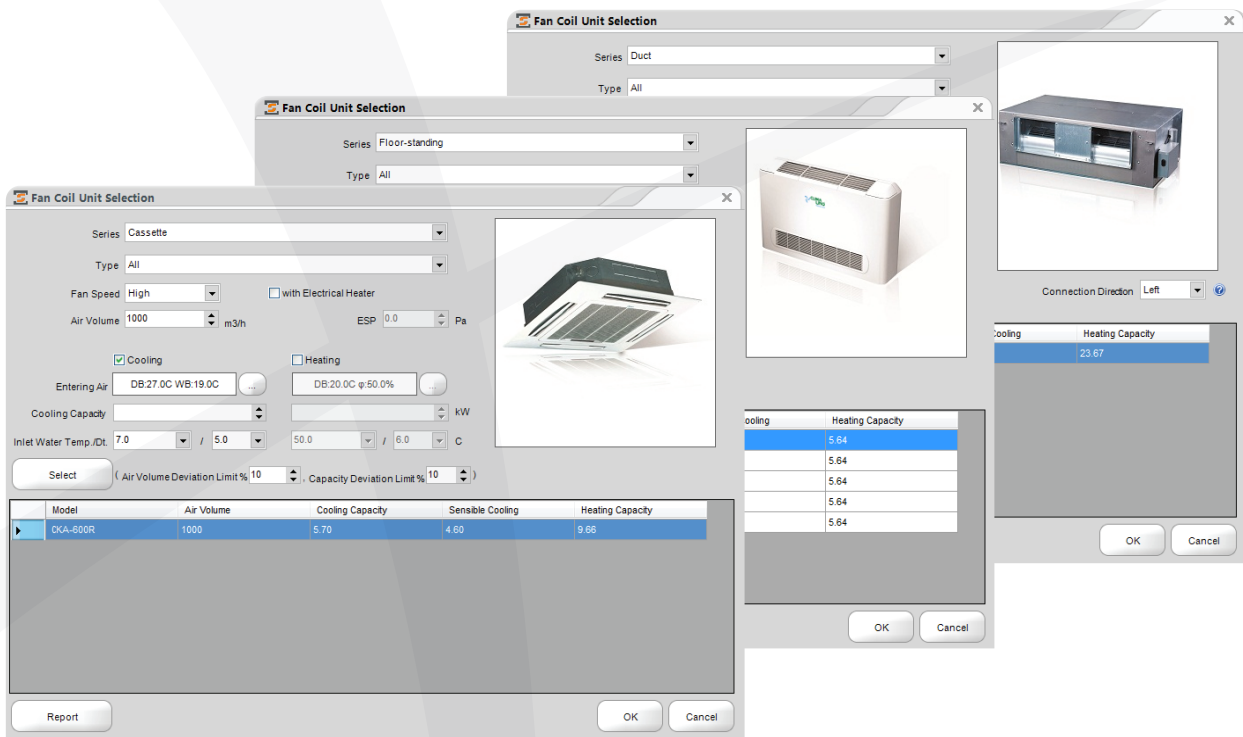
Equipment Code: New No. Qty: 1

| General Information | | | |
|------------------------|--------------------------------|-------------------|---------------------|
| Quantity | | Equipment Code | |
| Air Volume | 18000 m³/h | Entering Air Cond | DB:27.00, WB:19.50 |
| ESP | 32.0 mmH2O | Entering Air Cond | DB:21.00, RH:60.00% |
| Cooling Capacity | 117.15 kW | | |
| Series | Vertical | Total Power Input | 5.5 |
| Model No. | CES180LA2-12 | Elevation | 30 |
| Atmospheric Pr. | 101.325 | Dimensions (W×D) | 2520×1000×2000 |
| Noise Level | 67 | Weight | 620 |
| Running Condit. | (60/3) | | |
| Optional Acces. | | | |
| Fan Section | | | |
| Fan Qty. | 1 | | |
| Model | SY118-13R2 | | |
| Total Pressure | 617 | | |
| Static Pressure | 551 | | |
| Dynamic Pressure | 66 | | |
| Outlet Velocity | Simple Report (Specifications) | | |
| Fan RPM | 1430 | | |
| Fan Efficiency | 0.637 | | |
| Motor Power | 5.5 | | |
| Motor RPM | 1430 | | |
| Frequency | 60-HZ | | |
| Fan Pulley/Bush: Shaft | 212mm/2012-35mm | | |

Unit Settings

Unit: Air Volume(m³/h); ESP(mmH2O); Temperature(°C); Capacity(kW); Water Flowrate(m³/h); Water Resistance(kPa)

SELECTION INTERFACE

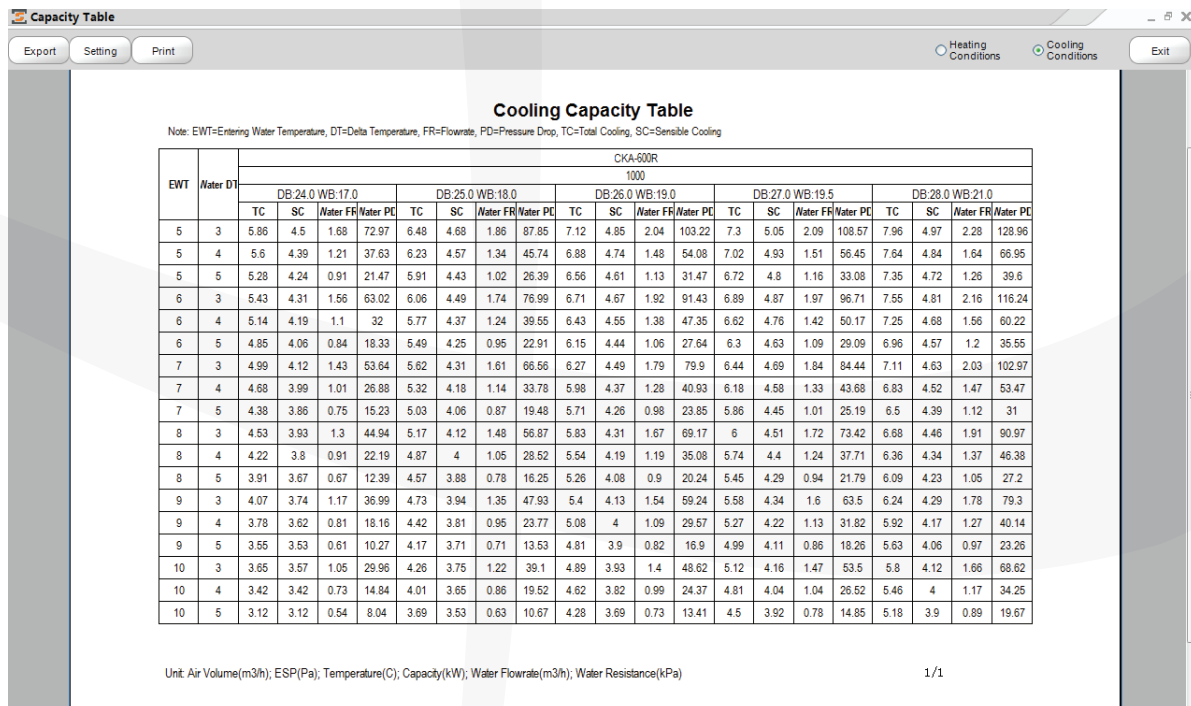


Fan Coil Unit Selection - Cassette

Series: Cassette
Type: All
Fan Speed: High
Air Volume: 1000 m³/h
ESP: 0.0 Pa
Cooling Capacity: [] kW
Inlet Water Temp./DT: 7.0 / 5.0 C

| Model | Air Volume | Cooling Capacity | Sensible Cooling | Heating Capacity |
|----------|------------|------------------|------------------|------------------|
| CKA-600R | 1000 | 5.70 | 4.60 | 9.66 |

REPORT DATA INTERFACE



Capacity Table

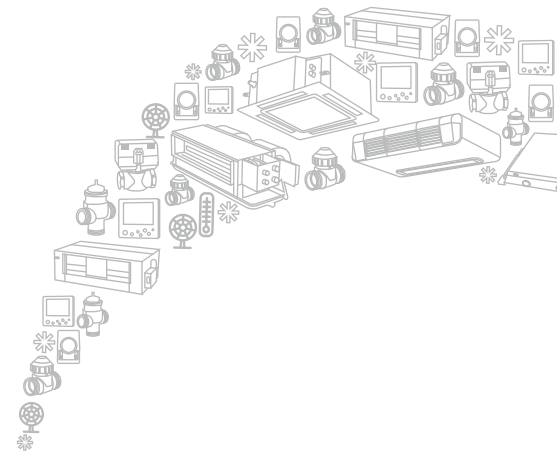
Export Setting Print Heating Conditions Cooling Conditions Exit

Cooling Capacity Table
Note: EWT=Entering Water Temperature, DT=Delta Temperature, FR=Flowrate, PD=Pressure Drop, TC=Total Cooling, SC=Sensible Cooling

| EWT | Water DT | CKA-600R | | | | | | | | | | | | | | | | | | | |
|-----|----------|-----------------|------|----------|----------|-----------------|------|----------|----------|-----------------|------|----------|----------|-----------------|------|----------|----------|-----------------|------|----------|----------|
| | | 1000 | | | | | | | | | | | | | | | | | | | |
| | | DB:24.0 WB:17.0 | | | | DB:25.0 WB:18.0 | | | | DB:26.0 WB:19.0 | | | | DB:27.0 WB:19.5 | | | | DB:28.0 WB:21.0 | | | |
| | | TC | SC | Water FR | Water PR | TC | SC | Water FR | Water PR | TC | SC | Water FR | Water PR | TC | SC | Water FR | Water PR | TC | SC | Water FR | Water PR |
| 5 | 3 | 5.86 | 4.5 | 1.68 | 72.97 | 6.48 | 4.68 | 1.86 | 87.85 | 7.12 | 4.85 | 2.04 | 103.22 | 7.3 | 5.05 | 2.09 | 108.57 | 7.96 | 4.97 | 2.28 | 128.96 |
| 5 | 4 | 5.6 | 4.39 | 1.21 | 37.63 | 6.23 | 4.57 | 1.34 | 45.74 | 6.88 | 4.74 | 1.48 | 54.08 | 7.02 | 4.93 | 1.51 | 56.45 | 7.64 | 4.84 | 1.64 | 66.95 |
| 5 | 5 | 5.28 | 4.24 | 0.91 | 21.47 | 5.91 | 4.43 | 1.02 | 26.39 | 6.56 | 4.61 | 1.13 | 31.47 | 6.72 | 4.8 | 1.16 | 33.08 | 7.35 | 4.72 | 1.26 | 39.6 |
| 6 | 3 | 5.43 | 4.31 | 1.56 | 63.02 | 6.06 | 4.49 | 1.74 | 76.99 | 6.71 | 4.67 | 1.92 | 91.43 | 6.89 | 4.87 | 1.97 | 96.71 | 7.55 | 4.81 | 2.16 | 116.24 |
| 6 | 4 | 5.14 | 4.19 | 1.1 | 32 | 5.77 | 4.37 | 1.24 | 39.55 | 6.43 | 4.55 | 1.38 | 47.35 | 6.62 | 4.76 | 1.42 | 50.17 | 7.25 | 4.68 | 1.56 | 60.22 |
| 6 | 5 | 4.85 | 4.06 | 0.84 | 18.33 | 5.49 | 4.25 | 0.95 | 22.91 | 6.15 | 4.44 | 1.06 | 27.64 | 6.3 | 4.63 | 1.09 | 29.09 | 6.96 | 4.57 | 1.2 | 35.55 |
| 7 | 3 | 4.99 | 4.12 | 1.43 | 53.64 | 5.62 | 4.31 | 1.61 | 66.56 | 6.27 | 4.49 | 1.79 | 79.9 | 6.44 | 4.69 | 1.84 | 84.44 | 7.11 | 4.63 | 2.03 | 102.97 |
| 7 | 4 | 4.68 | 3.99 | 1.01 | 26.88 | 5.32 | 4.18 | 1.14 | 33.78 | 5.98 | 4.37 | 1.28 | 40.93 | 6.18 | 4.58 | 1.33 | 43.68 | 6.93 | 4.52 | 1.47 | 53.47 |
| 7 | 5 | 4.38 | 3.86 | 0.75 | 15.23 | 5.03 | 4.06 | 0.87 | 19.48 | 5.71 | 4.26 | 0.98 | 23.85 | 5.86 | 4.45 | 1.01 | 25.19 | 6.5 | 4.39 | 1.12 | 31 |
| 8 | 3 | 4.53 | 3.93 | 1.3 | 44.94 | 5.17 | 4.12 | 1.48 | 56.87 | 5.83 | 4.31 | 1.67 | 69.17 | 6 | 4.51 | 1.72 | 73.42 | 6.68 | 4.46 | 1.91 | 90.97 |
| 8 | 4 | 4.22 | 3.8 | 0.91 | 22.19 | 4.87 | 4 | 1.05 | 28.52 | 5.54 | 4.19 | 1.19 | 35.08 | 5.74 | 4.4 | 1.24 | 37.71 | 6.36 | 4.34 | 1.37 | 46.38 |
| 8 | 5 | 3.91 | 3.67 | 0.67 | 12.39 | 4.57 | 3.88 | 0.78 | 16.25 | 5.26 | 4.08 | 0.9 | 20.24 | 5.45 | 4.29 | 0.94 | 21.79 | 6.09 | 4.23 | 1.05 | 27.2 |
| 9 | 3 | 4.07 | 3.74 | 1.17 | 36.99 | 4.73 | 3.94 | 1.35 | 47.93 | 5.4 | 4.13 | 1.54 | 59.24 | 5.58 | 4.34 | 1.6 | 63.5 | 6.24 | 4.29 | 1.78 | 79.3 |
| 9 | 4 | 3.78 | 3.62 | 0.81 | 18.16 | 4.42 | 3.81 | 0.95 | 23.77 | 5.08 | 4 | 1.09 | 29.57 | 5.27 | 4.22 | 1.13 | 31.82 | 5.92 | 4.17 | 1.27 | 40.14 |
| 9 | 5 | 3.55 | 3.53 | 0.61 | 10.27 | 4.17 | 3.71 | 0.71 | 13.53 | 4.81 | 3.9 | 0.82 | 16.9 | 4.99 | 4.11 | 0.86 | 18.26 | 5.63 | 4.06 | 0.97 | 23.26 |
| 10 | 3 | 3.65 | 3.57 | 1.05 | 29.96 | 4.26 | 3.75 | 1.22 | 39.1 | 4.89 | 3.93 | 1.4 | 48.62 | 5.12 | 4.16 | 1.47 | 53.5 | 5.8 | 4.12 | 1.66 | 68.62 |
| 10 | 4 | 3.42 | 3.42 | 0.73 | 14.84 | 4.01 | 3.65 | 0.86 | 19.52 | 4.62 | 3.82 | 0.99 | 24.37 | 4.81 | 4.04 | 1.04 | 26.52 | 5.46 | 4 | 1.17 | 34.25 |
| 10 | 5 | 3.12 | 3.12 | 0.54 | 8.04 | 3.69 | 3.53 | 0.63 | 10.67 | 4.28 | 3.69 | 0.73 | 13.41 | 4.5 | 3.92 | 0.78 | 14.85 | 5.18 | 3.9 | 0.89 | 19.67 |

Unit: Air Volume(m³/h); ESP(Pa); Temperature(C); Capacity(kW); Water Flowrate(m³/h); Water Resistance(kPa)

1/1



CU AIR CONDITIONING INDUSTRIES L.L.C

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AIR HANDLING UNITS



FOUNDER'S MESSAGE

AL SHIRAWI GROUP



ABDULLAH M. AL SHIRAWI
Chairman

Oasis Investment Company, the holding company of the Al Shirawi Group of Companies, was founded on the basis of pure business passion. From the very start, we embedded a sense of pragmatism in the culture of the group. It is this pragmatism that has not only seen us through the most difficult of times but also allowed us to achieve greater success during times of economic growth.

Our journey from a trading house to an industrial complex and then on to a conglomerate comprising of trading, industrial, distribution, contracting and service industries has been with its fair share of trials and tribulations but we can honestly say that today, our 10,000 employees are richer in experience than their counterparts.

The foundations of our group are rock solid. These foundations, for all our companies, have been cast in the United Arab Emirates but today all our companies look at the world as their marketplace. In this age of globalization, we continue to grow at breathtaking speed.

Speed is a virtue that we stand by at all times. The successful induction of our next generation into the business has allowed us to retain the advantages of remaining a family concern but at the same time enabled us to act with speed in the hiring of top grade professionals.



MOHAN G. VALRANI
Sr. Vice Chairman

Our Group has been built on the premise of sheer hard work. We have progressed this far by believing in our values and never shying away from putting in the effort needed to grow any business. Our values: Excellence, Transparency, Compassion, Honesty, Empowerment and Discipline are inculcated in all our employees.

For us, the journey has been a long one but we see it as just the beginning of bigger things to come. Our next generation is now fully equipped to take the Group forward and to unimaginable heights.

"We want everyone who deals with us to see, understand and experience the high-quality solutions we provide and reap the full benefits of working with a company where innovation, unrivalled quality and the pursuit of excellence are day-to-day realities."

OUR BUSINESSES



COMPANY PROFILE

Clima Uno is a well-established brand for air-handling units and fan coil units, which originated in Italy and is owned today by the Al Shirawi Group of Companies. Clima Uno's Eurovent-certified product range is custom-built for maximum performance in the region's harsh climatic conditions.

Founded in Dubai in 1971, the Al Shirawi Group is one of the largest private business conglomerates in the UAE. The Group has an annual turnover of USD 1 Billion and has 40 companies in diverse business sectors such as Printing and Packaging, Oil and Gas, Logistics, Heavy Equipment, Manufacturing, Electronics, Engineering Services, Trading, Online Media and Publishing, and Education.

Clima Uno units are manufactured in a fully integrated facility in Dubai, equipped with the most modern machinery. Our core production team has 25 years of technical experience and each product has been expertly designed using Unilab software. The product range features premium components with AHRI certified coils, UL listed filters, AMCA certified fans and CE certified motors.

Clima Uno's ISO 9001:2008 certification from UKAS assures that the quality of all manufactured centralized air-conditioning and kitchen ventilation equipment meets the highest international standards. We are committed to continuous quality improvement and maintain focus on enhanced customer satisfaction levels.

Clima Uno units are ideal for installation in residential and commercial buildings, cinemas, sports complexes, hotels, hospitals, and shopping malls. Our units have been supplied to numerous projects in the Middle East including UAE projects such as The Arcadia Preparatory School, BMW Showroom, ARJ Tower, Thumbay Hospital and Aster Medical Centre as well as projects in Iraq such as Basrah Sports City and Shat Al Arab Hotel.

We offer our clients impeccable after-sales services and round-the-clock assistance. Clima Uno units are manufactured in a new, state-of-the-art, 100,000 square feet facility in the UAE, enabling us to serve our clients more efficiently.



CEO'S MESSAGE

Over forty years, Al Shirawi Group has continued to build on the in-depth knowledge of key industry sectors and the operational expertise of diversified businesses to propel unified growth. Our commitment to delivering quality products and services, our determination to fulfill the evolving needs of customers and the strong foundation of our core values, has driven our business value over the years.

The Al Shirawi Group of Companies has a strong foothold in the region's HVAC sector. Clima Uno, owned by the Group, is a strategic initiative to widen our valuable HVAC portfolio. We manufacture, sell, supply, install and service Clima Uno air-handling units. Our in-house logistics and manufacturing proficiency will optimize end-to-end operations of Clima Uno. Moreover, the expanded manufacturing base will increase production volumes, accelerate production times and improve project delivery

times. Our vision is to support every residential and commercial project with our products and affirm the Group's position as the region's leading HVAC manufacturer and supplier with a global vision.

I wish to thank our strategic partners for their continued support. I am confident that Clima Uno will develop new opportunities, create strong partnerships and deliver premium-quality services. I firmly believe that Clima Uno will be your air-handling unit of choice because of our experience, integrity and relentless commitment to quality.

NAVIN VALRANI
CEO



OUR MANUFACTURING FACILITY

SHEET METAL FABRICATION

Mechanical swing beam shear is a frequently used shearing machine in sheet metal cutting. Whole welded structure, hydraulic transmission, high mechanical strength and good rigidity contribute to excellent shearing performance and productivity.



BENDING

Bending machines are developed for high flexibility and low setup times. These machines are able to bend single pieces as well as small batches with the same precision and efficiency as series-produced parts in an economical way. A simple plug-in system supports quick and easy exchange of tools.



CNC PUNCHING

Our CNC machines ensure maximum precision with sophisticated technology and are used for production of air handling units casing work including panels, base frame, drain pan etc.



FOAM INJECTION

In the production of polyurethanes, accuracy in the mixing of the liquid components is the most important and decisive phase. Versatility and user friendliness are the main features that make the HPE series an ideal choice for every type of foam as they are rigid, flexible, integral, elastomeric etc. All panels are manufactured with 44 kg/m density as standard.



COIL SHOP

The highly-efficient and well-equipped coil shop ensures robust coil manufacturing capabilities with short lead times.



ASSEMBLY LINE

Our efficient manufacturing process ensures greater production volumes, consistency in quality and faster delivery times.



AIR HANDLING UNITS PRODUCT RANGE

RECIRCULATING AIR HANDLING UNITS



- Available in 32 sizes
- Airflow ranges from 765 CFM to 48000 CFM
- Chilled water, District cooling, DX-type coil are available
- Drain pan of stainless steel 304 as standard
- Framework is made of Thermal Break Extruded Anodized Aluminum Profile
- Casing is made of 50 mm thick, double insulated panels
- Centrifugal fans tested and certified by AMCA in accordance to AMCA 210 IE1/IE2/NEMA efficiency motors
- TEFC, IP55 degree of protection, Class F insulated, VFD compatible electric motors
- Pre filter of synthetic media, G3/G4 class as per EN 779 standards
- Bag type fine filter of synthetic media, F6/F9 class as per EN 779 standards

ECOLOGY UNITS



- Airflow ranges from 880 CFM to 30870 CFM
- Casing is made of 25 mm thick, double insulated panels with stainless steel inner skin
- UL certified filters in accordance to EN 779 standards
- Washable type, 2 inches thick metallic panel filters, G2 class, dust weight arrestance of 75% to 85%
- Electrostatic Precipitator with honeycomb structured filter cell having fumed and mist elimination efficiency $\geq 95\%$
- Available in programmable auto wash option
- Washable type 4 inches thick synthetic panel filters, G4 class, dust weight arrestance more than 90%
- Disposable type, 24 inches deep, synthetic pocket filters, F7 class, dust spot efficiency between 80% to 90%
- Refillable type, 24 inches deep, canister type activated carbon filters
- Centrifugal fans in accordance to AMCA 210 IE1/IE2, TEFC, IP55 degree of protection, Class F insulated, VFD compatible electric motors
- HEPA Filters

FRESH AIR HANDLING UNITS

- Available in 32 sizes
- Airflow ranges from 765 CFM to 48000 CFM
- Heat Recovery Wheel, horse shoe heat pipe, plate type heat exchangers and run around coil options are available
- Chilled water, district cooling and DX-type coils are available
- Drain pan of stainless steel 304 as standard
- Framework is made of Thermal Break Extruded Anodized Aluminum Profile
- Casing is made of 50 mm thick, double insulated panels
- Centrifugal fans tested and certified by AMCA in accordance to AMCA 210 IE1/IE2/NEMA efficiency motors
- TEFC, IP55 degree of protection, Class F insulated, VFD compatible electric motors



EUROVENT CERTIFICATION

Clima Uno participates in the Eurovent Certification Programme, which certifies quality and efficiency of air handling units in UAE.

CONSTRUCTION CERTIFICATION

CU-S units are certified by Eurovent for construction according to the directive EN 1886 Air Handling Units - Mechanical Performance. The units have been planned with exceptional mechanical performance to avoid energy loss through casing and structure.



| EUROVENT CERTIFICATION ACCORDING TO EN 1886 MODEL BOXES | CU-Pr Series | CU-S Series |
|--|--------------|-------------|
| Casing Mechanical Strength Deflection in the casing at 1000 Pa (mm/m) | D1 | D1 |
| Casing Air Leakage at -400 Pa Maximum leakage rate l/m ³ | L1 | L2 |
| Casing Air Leakage at +700 Pa Maximum leakage rate l/m ³ | L1 | L2 |
| Filter Bypass Leakage % of the volume airflow m ³ /h at -400 Pa | F9 | F9 |
| Filter Bypass Leakage % of the volume airflow m ³ /h at +400 Pa | F9 | F9 |
| Thermal Transmittance Thermal Transmittance (U) W/m ² ·K | T2 | T3 |
| Thermal Bridging of the casing Thermal Bridging factor (kb) W/m ² ·K | TB3 | TB4 |

| SOUND INSERTION LOSS OF THE CASING (DB) | | | | | | | | |
|---|----|------|------|------|------|------|------|------|
| Octave Bands | Hz | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| CU-Pr | dB | 12.8 | 12.9 | 14.1 | 17.8 | 15.3 | 25 | 38.3 |
| CU-S | dB | 15.6 | 12.9 | 16.2 | 19.9 | 18 | 23.8 | 33.7 |

COMPONENT CERTIFICATION

| | |
|-----------------------------------|----------------------------|
| <p>HEAT RECOVERY WHEEL</p> | <p>FAN</p> |
| <p>MOTOR</p> | <p>COOLING COIL</p> |
| <p>HEAT PIPE</p> | <p>FILTER</p> |

*All heat wheel models of 200mm depth are Eurovent certified.

AIR FLOW CHART

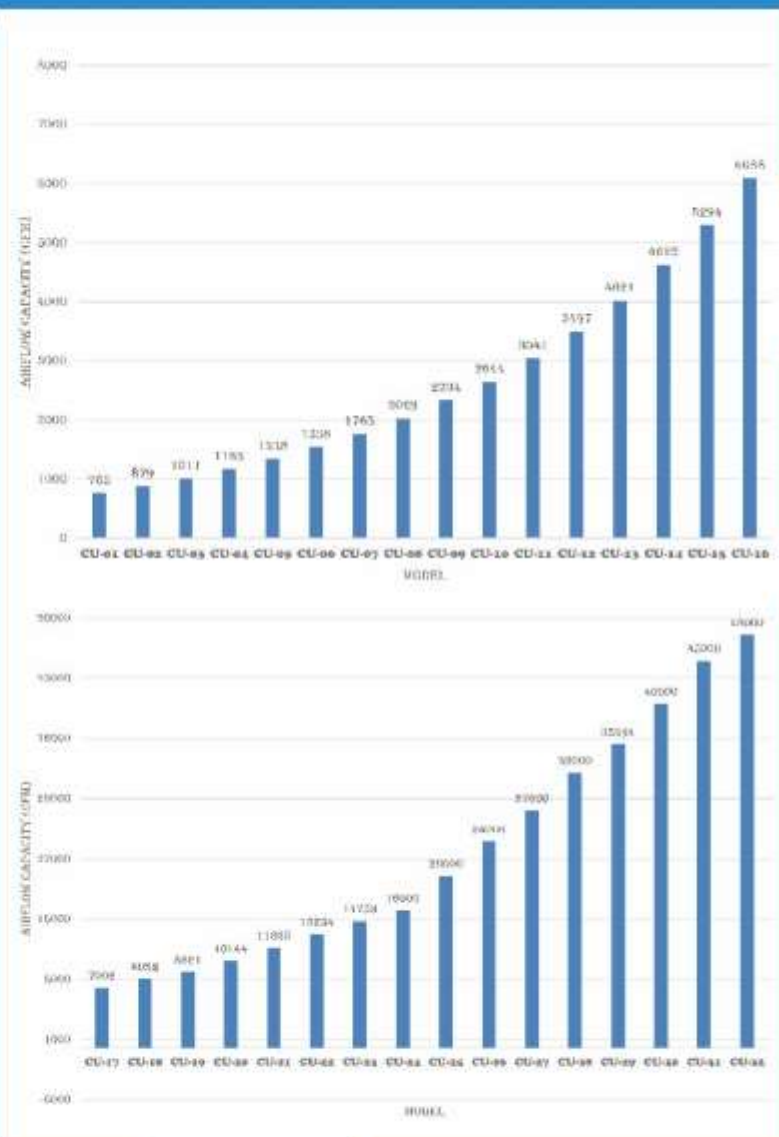
The CU-S series are developed for 32 standard sizes to fulfill the indoor air quality requirement, the air flow range is from 765 CFM to 48000 CFM and Static pressure at low, medium and high. The airflow speed across the cooling coil is from 2.0 to 2.5 m/s (till 3 m/s only for heating operation).

All model configuration are available for indoor or outdoor application and the arrangement will be in vertical, horizontal, double deck and 'U' shape installation.

AHU selection software programme is available, to optimise the best arrangement and performance for either chilled water system or DX system. Standard components can be selected and be placed according to customer requirement. Once the unit is defined, the output will be generated automatically.

Thanks to CU-S flexibility and modularity, the designer can easily transform the concept into real plant.

| AHU Model | AHU Airflow Capacity |
|-----------|----------------------|
| No. | CFM |
| CU-01 | 765 |
| CU-02 | 879 |
| CU-03 | 1011 |
| CU-04 | 1163 |
| CU-05 | 1338 |
| CU-06 | 1538 |
| CU-07 | 1765 |
| CU-08 | 2029 |
| CU-09 | 2334 |
| CU-10 | 2644 |
| CU-11 | 3041 |
| CU-12 | 3497 |
| CU-13 | 4021 |
| CU-14 | 4625 |
| CU-15 | 5294 |
| CU-16 | 6088 |
| CU-17 | 7002 |
| CU-18 | 8052 |
| CU-19 | 8821 |
| CU-20 | 10144 |
| CU-21 | 11665 |
| CU-22 | 13234 |
| CU-23 | 14753 |
| CU-24 | 16000 |
| CU-25 | 20000 |
| CU-26 | 24000 |
| CU-27 | 27600 |
| CU-28 | 32000 |
| CU-29 | 35294 |
| CU-30 | 40000 |
| CU-31 | 45000 |
| CU-32 | 48000 |



FRAMEWORK



- Structure with aluminium profile of 50 mm
- Solid connecting corners made of glass-reinforced nylon, complete with thermal break
- Concealed intermediate aluminium profile to obtain a better thermal break and to reduce the unit length
- Modular frame for an easier transport and lifting in plant
- The base frame, independent for each section, is made of galvanized steel sheet



PANEL CONSTRUCTION

SHEET THICKNESS

| Sheet Thickness (mm) | 0.6 | 0.8 | 1.0 | 1.2 |
|-----------------------|-----|-----|-----|-----|
| Galvanized steel | ✓ | ✓ | ✓ | ✓ |
| Aluminium | x | x | ✓ | ✓ |
| Stainless steel | ✓ | ✓ | ✓ | ✓ |
| Galvanized pre-coated | ✓ | ✓ | ✓ | ✓ |

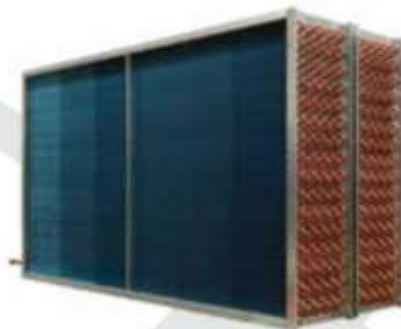
INSULATION

- Polyurethane 44 kg/m³ density
- Mineral wool 90 kg/m³ density

COIL SECTION



- AHRI certified coil
- Chilled water coil
- Direct expansion coil
- Copper tubes with aluminum fins
- Mounted on sliding guides for easy maintenance
- Stainless steel drain pan
- Moisture eliminator (optional)
- Anti-corrosive coating (optional)



COIL GEOMETRY

| TUBE DIA | FIN SURFACE | TUBE GEOMETRY | FPI |
|----------|----------------------------------|----------------------------|---------|
| 1/2" OD | Corrugated Fin with Rippled Edge | Triangular 1.250" X 1.082" | 8 to 16 |
| 1/2" OD | Louvre Fin with Rippled Edge | Triangular 1.250" X 1.082" | 8 to 16 |
| 5/8" OD | Corrugated Fin with Rippled Edge | Triangular 1.50" X 1.299" | 8 to 16 |
| 5/8" OD | Corrugated Fin with Rippled Edge | Triangular 2.360" X 1.181" | 8 to 16 |

FILTER

METALLIC PRE-FILTER (MEDIUM EFFICIENCY)



Metallic Washable Filters are made of galvanized steel frame and multi-layer aluminium mesh filter media. These filters have applications in greasy exhausts, aggressive atmospheres as well as civil and industrial air conditioning systems with high relative humidity and dust load.

- Class: G1, G2 according to EN 779:2002
- Efficiency: 50% <G1< 65% / 65% <G2< 80%
- Clean pressure drop: 15 Pa
- Final pressure drop: 150 Pa
- Face Velocity: 2.5 m/s

SYNTHETIC PRE-FILTER (MEDIUM EFFICIENCY)



Synthetic Filters are made of galvanized steel frames and synthetic fiber filter media and are most effective for filtration of large dust particles in civil and industrial air conditioning systems.

- Class: G3, G4 according to EN 779:2002
- Efficiency: 80% <G3< 90% / 90% <G4< 95%
- Clean pressure drop: 70 Pa
- Final pressure drop: 250 Pa
- Face Velocity: 2.5 m/s

SOFT BAG FILTER (HIGH EFFICIENCY)



Soft Bag Filters are made of galvanized steel frames and multi-layer high-density synthetic fiber, equipped with external high-resistance film for increased filtration of solid particles and acts as a pre-filtration stage of HEPA filters.

- Class: F5, F6, F7 according to EN 779:2002
- Efficiency: F5< 65%, 65% <F6< 80%, 80% <F7< 90%
- Clean pressure drop: 70 Pa
- Final pressure drop: 250 Pa
- Face Velocity: 2.5 m/s

RIGID BAG FILTER (HIGH EFFICIENCY)



Rigid Bag Filters are made of plastic frame and water-repellent fiberglass paper, with a calibrated step pleated filter media with continuous thermoplastic thread separator. Rigid Bag Filters have been uniquely designed for efficient filtration of airborne particles and acts as a pre-filtration stage for HEPA filters.

- Class: F7, F8, F9 according to EN 779:2002
- Efficiency: 80% <F7< 90%, 90% <F8< 95%, F9= 95%
- Clean pressure drop: 80 Pa
- Final pressure drop: 150 Pa
- Face Velocity: 2.5 m/s

ABSOLUTE FILTER (HEPA FILTER)



Absolute Filters are made of galvanized steel frame with side handles, and water-repellent fiber paper with constantly calibrated spacing, separated through continuous thermoplastic threads. Absolute Filters are most effective for filtration of airborne solid particles and removal of a majority of air contaminants in controlled environments.

- Class: H12, H13, H14 according to EN 779:2002
- Efficiency: H12 >= 99.5%, H13 >= 99.95%, H14 >= 99.995%
- Clean pressure drop: 200 Pa
- Final pressure drop: 450 Pa
- Face Velocity: 2.5 m/s

ACTIVATED CARBON FILTER (DEODORIZATION FILTER)



Activated Carbon Filters are commonly used for the chemical/physical absorption and the deodorization of gaseous pollutants. The frame is made of galvanized steel and cylindrical cartridges of active carbon minerals, designed to eliminate organic odors.

- Class: CA-1
- Clean pressure drop: 200 Pa
- Maximum operating temp: 50 °C
- Maximum relative humidity: 70%
- Face Velocity: 2.5 m/s

ENERGY RECOVERY SECTION

Energy Recovery is the process of exchange and transfer of energy contained in the exhaust air stream that is used to treat the incoming outdoor fresh air in residential and commercial HVAC systems.

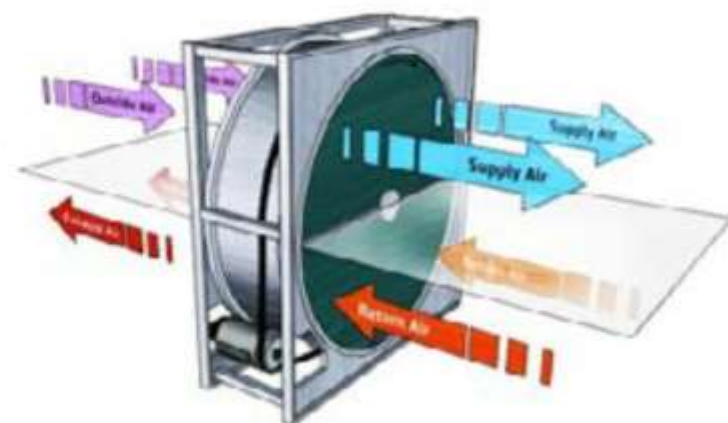
Energy Recovery offers the benefit of meeting ASHRAE ventilation and energy standards, while improving indoor air quality and reducing total HVAC equipment capacity.

Clima Uno Air Handling Units can be supplied with different energy recovery systems:

- Heat Recovery Wheels
- Cross Flow Plate Heat Exchangers
- Run-Around Coils
- Heat Pipe Systems

HEAT RECOVERY WHEEL

A thermal wheel consists of a circular honeycomb matrix of heat-absorbing material, which is slowly rotated within the supply and exhaust air streams of an air-handling system.



As the thermal wheel rotates, heat is picked up from the exhaust air stream in one half of the rotation and given up to the fresh air stream in the other half of the rotation. Thus, waste heat energy from the exhaust air stream is transferred to the matrix material and then from the matrix material to the fresh air stream, increasing the temperature of the supply air stream by an amount proportional to the temperature differential between air streams, or 'thermal gradient,' depending upon the efficiency of the device.

Heat exchange is most efficient when the streams flow in opposite directions as this causes a favorable temperature gradient across the thickness of the wheel. The principle of course works in reverse, and 'cooling' energy can be recovered to the supply air stream if so desired and if the temperature differential so allows.

ADVANTAGES

- Sensible and latent recovery
- 70% + effectiveness
- Compact

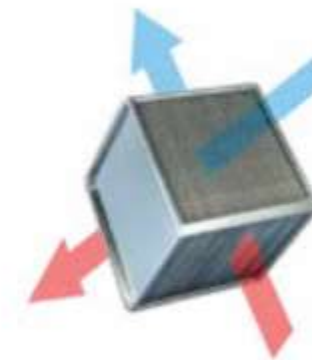
CROSS-FLOW PLATE HEAT EXCHANGER

Heat exchangers operate within the guidelines for heat recovery as re-cuperators with joint faces. The heat releasing and heat absorbing air streams pass along the joint face, through which the heat is directly transmitted. Supply and exhaust air must therefore be brought together and flow through the heat exchanger.

Heat transmission in plate heat exchangers operates on the cross-flow principle. Heat is transmitted via the plates from the warm to the cold air stream.

ADVANTAGES

- No cross-contamination of air streams
- 60-70% sensible effectiveness
- No moving parts

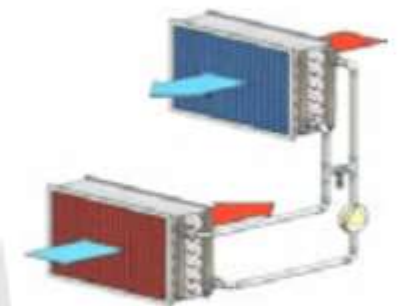


RUN-AROUND COIL

A run-around coil system is the optimal heat recovery system, comprising two or more multi-row finned tube coils connected to each other by a pumped pipework circuit. The pipework is charged with a heat exchange fluid, normally water, which picks up heat from the exhaust air coil and gives up heat to the supply air coil before returning again. Thus, heat from the exhaust air stream is transferred through the pipework coil to the circulating fluid, and then from the fluid through the pipework coil to the supply air stream.

ADVANTAGES

- High-efficiency
- Supply and exhaust stream need not be together
- No possibility of air stream for cross-contamination
- Flexibility in design



HEAT PIPE SYSTEM

Heat pipes are thermal transfer devices capable of moving large amounts of heat from the return air stream to the supply air stream of any AC system.

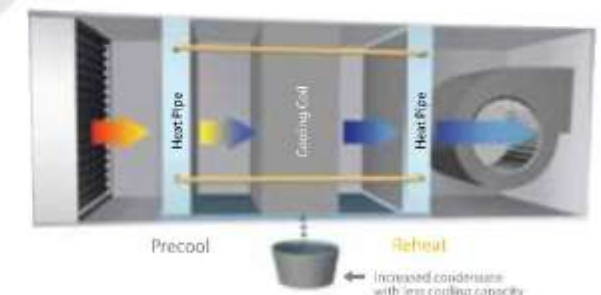
Heat pipes consist of two sections. The first section is placed in the incoming air stream before the AC cooling coil. When warm air passes over the first section, the liquid refrigerant vaporizes, moving heat to the section, placed downstream from the cooling coil.

Before entering the evaporator coils, heat is removed from the air. As the air passes through the cooling coil, it drops to a lower temperature, resulting in efficient moisture removal.

The overcooled air is then reheated to the desired temperature and a lower relative humidity by the second section, utilizing the same heat that was absorbed by the first section early in the process.

ADVANTAGES

- Reduces humidity
- Saves energy: replace or reduce reheat
- No moving parts - little maintenance
- Reduction of equipment load and tonnage
- Durable
- Low static pressure



FAN AND MOTOR

Standard Clima Uno units are equipped with plug-in or double inlet centrifugal fans. All fans used are AMCA certified and completed with frames according to the operating pressure.

Fans are statically and dynamically balanced and are available in the following varieties:

- Forward curved impeller blades
- Backward curved impeller blades
- Backward airfoil curved impeller blades
- Plug fans with backward curved impeller blades



Fans are driven by a three-phase electrical motor through belt and pulleys transmission, installed on a base frame with anti-vibration mounts and equipped with flexible connection on the outlet.

Standard motors are available with the following specifications:

- TEFC Squirrel Cage Induction Type
- Class of Insulation: F
- Protection: IP 55
- 3-Phase/1-Phase
- Motor Efficiency-IE/NEMA



SELECTION SOFTWARE

The main goal of utilizing software for the selection of an air handling unit is the automation of the quotation process that normally follows a client request. This is accompanied by the generation of a printout with complete information about the selected machine.

This goal can be achieved by outlining a simple five-step process, which also defines the functional specification for the software:

- Specification of the unit components
- Technical selection of each component, based on information given by the customer
- Price calculation, based on data computed in the previous step
- Assembly drawings of the unit
- Detailed drawings, DWG files with exact dimensions of the unit

