
# 42C/D [300 to 2000 CFM]

## Chilled Water Fan Coil Units for Chiller (Standard ΔT) & District Cooling Application

## Ducted

MS ISO 9001 REG. NO. AR 0239

## CARRIER: A WORLD LEADER IN HEATING, AIR-CONDITIONING AND REFRIGERATION SOLUTIONS.

### MAKING THE WORLD A BETTER PLACE TO LIVE, WORK AND PLAY

Built on Willis Carrier's invention of modern air conditioning in 1902, Carrier is the world leader in heating, air-conditioning and refrigeration solutions. We constantly build upon our history of proven innovation with new products and services that improve global comfort and efficiency.

### ABOUT CARRIER INTERNATIONAL SDN BHD (CISB)

Carrier established its first foothold in Malaysia in 1959 when Carrier International (Malaysia) Ltd was formed as a distributor for Carrier air-conditioning equipment and components. The company was subsequently renamed as Carrier International Sdn Bhd (CISB). Today, CISB is one of the largest manufacturers of HVAC products in South-East Asia with products ranges setting the standard for performance, energy efficiency and sustainability.

With state of the art manufacturing technologies, the CISB invests heavily in product design/ development with dedicated engineering team and in house testing laboratories to carry out continuous development in thermal performance and air flow. The factory is ISO 9001:2015 certified which is a guarantee for the quality of our product offering and services provided. The factory also complies with EH&S regulations and takes a responsible approach to environment, health and safety.

As one of the market leader in HVAC industries, our products are manufactured with stringent sourcing, manufacturing and quality process that meets Carrier global QA/QC standard and control.

### ABOUT 42C/D FAN COIL UNITS

42C/D series fan coil units are manufactured in ISO Certified Carrier Malaysia facility under Carrier Corporation USA. These units are produced and designed with latest technology.

### COMPUTER SELECTION

We have made available a computer program to finalize your selections. Please contact your Carrier representative for a computer selection based on your "Quick Selection" plus the design parameters of your application.

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# PRODUCT FEATURES

If fan coil terminals are the answer to your job requirements, you can't afford to pass over Carrier's versatile and extensive range of fan coil units. With Carrier's 42 series fan coil units, you can select furred-in style, in capacities from 300 to 2,000 cfm. Units are ideal for installations in residential, hotels, motels, apartments, offices, hospitals, schools and other multi-room buildings.

Carrier room fan coil terminals provide unsurpassed year round comfort, with high cooling performance. Carrier 42 series terminal requires very little space and is easy to install. Piping, drain and wiring connections are readily accessible to save installation time and field labor expense.

Forget about expensive ductwork, forget about complex system controls, forget the aggravation and choose Carrier's easy to install room fan coil units – in pipe systems. Opt for quiet. Carrier room fan coil units operate at exceptionally low sound levels. Generous amount of insulation absorbs operating sound and rugged, rigid construction ensures vibration free operation at all fan speeds.

Carrier room fan coil units are economical. Three speed fans deliver just the right amount of conditioned air for your comfort needs at any load. And each individual unit can be shut off when not in use. Permanent Split Capacitor motors deliver peak operating efficiency. In choosing Carrier units, you can match your application with a wide range of custom-designed options and accessories. When you go for Carrier 42 series, the advantages to owner, installer and the room occupants are too great to ignore.

## Carrier 42 series fan coils give you design and equipment location flexibility

- Wide range of popular capacities, 300 – 2000 cfm
- Available up to 16 sizes.
- Furred-in units
- Select 3 row and 4 row coils (42CT,CET)
- Accommodates 2 pipe systems
- Fully or partially insulated and low fan speed means quiet operation
- Draw outside air for odor dilution
- Uses only minimal space

## Select Carrier fan coils for easy, low cost installation

- Easy wiring, piping connections
- Mounting holes, slots speed hanging
- Requires no expensive ductwork
- Ideal for new construction or renovation

## Save operating costs with Carrier fan coils

- Higher efficiency & reliability: Electronic Commutated Motor (42CT/CTL,DC/DCD) - optional
- Individual unit shut-off when not in use
- Efficient, 3 speed centrifugal fans
- Permanent Split Capacitor motors
- High efficiency heat transfer surface

## Carrier fan coils save your service and maintenance expense

- Nationwide Carrier service
- Insulated drain pan
- Easy access to components
- Rugged construction
- Factory leak test for coil
- Cleanable filters
- Long life, heavy duty bearings
- Quick clip filter removal for rear side access
- Foldable filter media for larger length filter (rear-bottom removal type)
- Threaded in/ out – water connection


ISO 9001 Certificate


IQ Net Certificate

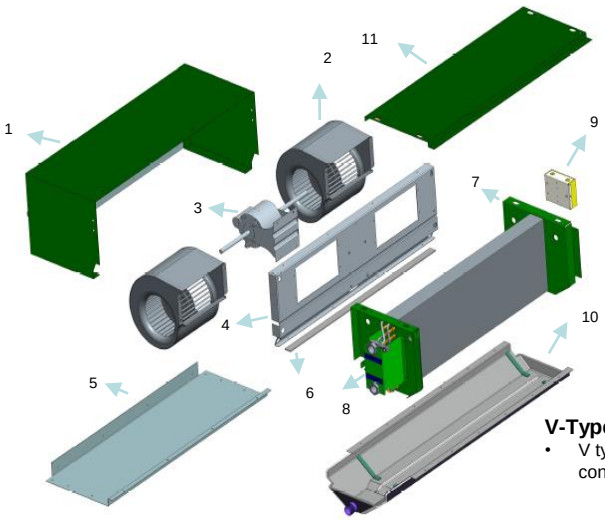
# NEW SERIES: 42CT EXPLODED VIEW & MAIN FEATURES

| No | Components |
|---|---|
| 1 | Top Plenum |
| 2 | Blower |
| 3 | Motor |
| 4 | Fan Deck |
| 5 | Bottom Plenum |
| 6 | Insulation Strip |
| 7 | Tube Sheet |
| 8 | Header Support |
| 9 | Control Box |
| 10 | Drain Pan |
| 11 | Top Panel |

**Filter**
6 mm Nylon Filter

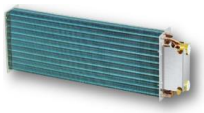
**AC/BLDC Motor Options**

**Integrated Return Air Plenum**
- Ensure better form and appearance. This integrated return air plenum also simplify assembly process.




**Coil**
3R/4R coil for chiller application
4R coil for district cooling application

**Control Options**
- Thermostat & Valves

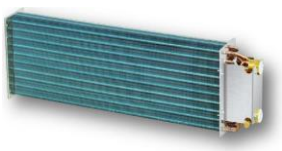


**Aluminum Blue Fin**
- Lanced sine wave Hydrophilic aluminum blue fin for improved performance.

**V-Type Drain Pan**
- V type drain pan for better condensate flow.

## High Efficiency

- 42CT unit coil were manufactured using the latest developed double-flanging structure of wide seam blue hydrophilic aluminum fin with an advance mechanical tube-expanding process. This 42CT hydrophilic aluminum fin will provide sufficient heat transfer channel for an efficient heat exchange. In addition, the wide impeller fan will provide a uniform air distribution that makes the heat transfer more effective and ensure a better cooling capacity.



## Low Noise

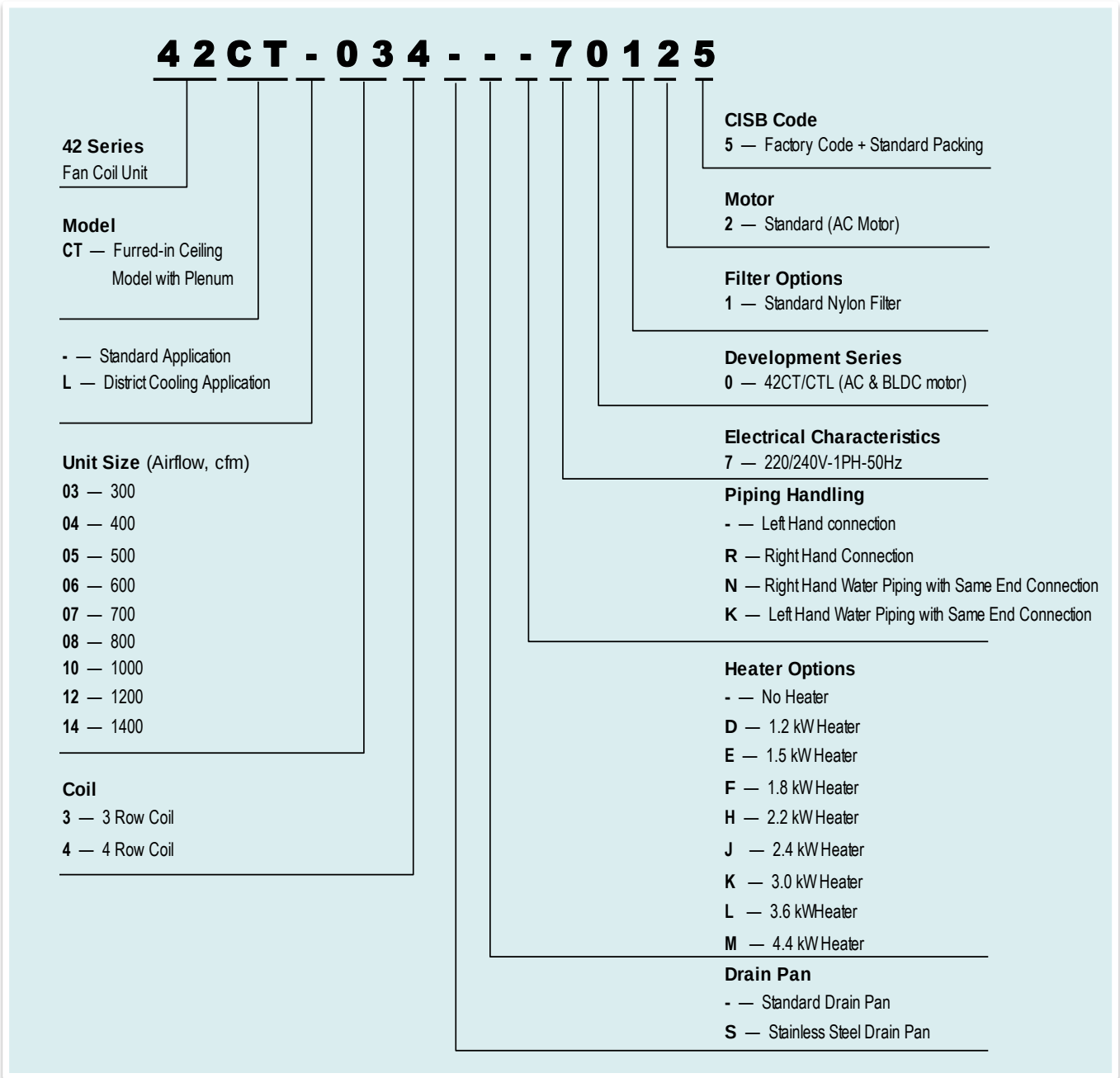
- 42CT unit series are equipped with a wide diameter impeller and a low speed forward multi-blade. The fan casing is strengthtened with reinforcing ribs that provides additional structure strength.
- It adopts NSK bearings which ensuring small vibration and low noise during operation.

## High Strength V Type Drain Pan

- 42CT unit series will come with a newly designed V-type drain pan that are produced using an integral molding process. The design of the drain outlet that are located at the lowest position of the unit will ensure condensate able to drain out smoothly. With this V-type design, it will also enhance the strength of the drain pan to avoid any deformation during transportation process.

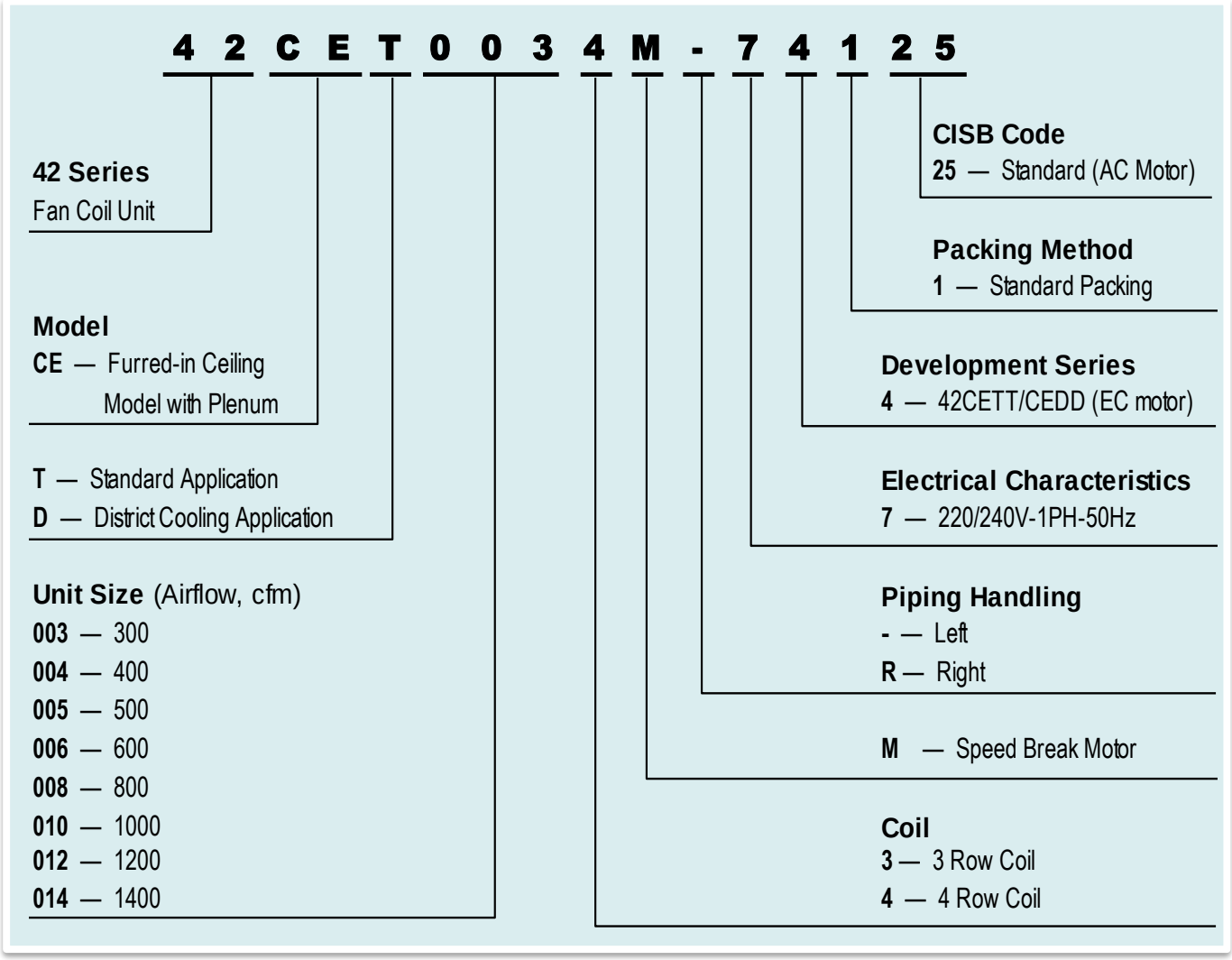
# MODEL NUMBER NOMENCLATURE

## MODEL
## 42CT/CTL (AC Motor)



# MODEL NUMBER NOMENCLATURE

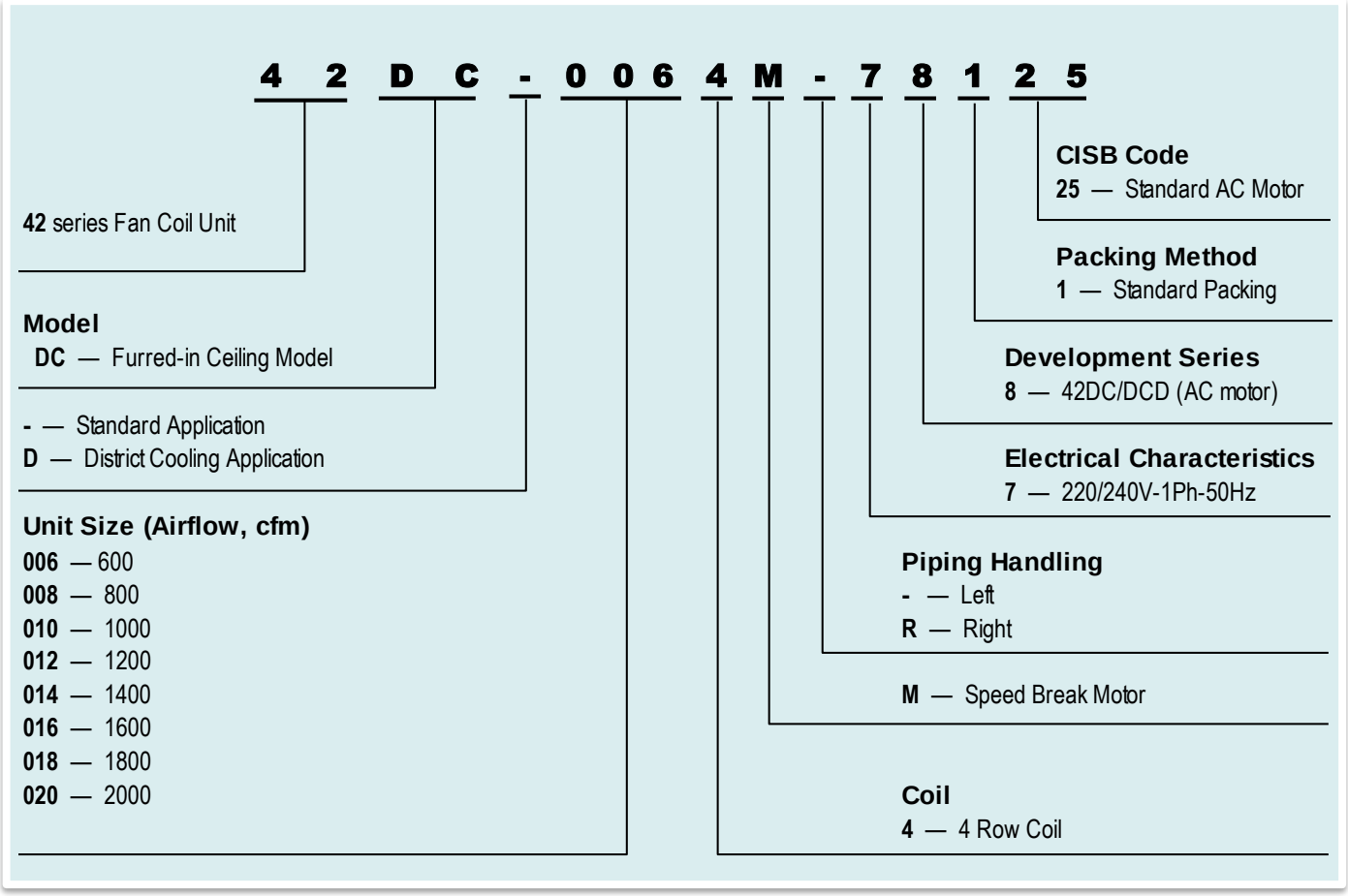
## MODEL
## 42CET/CED (M SERIES)




**NOTE**:
- For optional accessories (ie: Heater), refer factory for correct nomenclature.
- 42CED (M series) only have 4 rows coil

# MODEL NUMBER NOMENCLATURE

## MODEL
## 42DC/DCD (M SERIES)




**NOTE**:
- For optional accessories (ie: Heater), refer factory for correct nomenclature.

## 42CT Ceiling Suspended Ducted Unit with Plenum- Standard ΔT
## 3 Rows (AC Motor)

| PERFORMANCE | | | MODEL: 42CT | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 03 | 04 | 05 | 06 | 07 | 08 | 10 | 12 | 14 |
| | | | --70125 & -R70125 | | | | | | | | |
| Nominal Air Volume | High | CFM | 300 | 400 | 500 | 600 | 700 | 800 | 1000 | 1200 | 1400 |
| | | ℓ/s | 142 | 189 | 236 | 283 | 330 | 378 | 472 | 566 | 661 |
| Cooling Capacity (Fluid)* | | kW | 2.40 | 3.00 | 3.80 | 4.20 | 5.00 | 6.10 | 7.00 | 7.90 | 8.70 |
| | | Btu/hr | 8,196 | 10,246 | 12,978 | 14,344 | 17,076 | 20,833 | 23,906 | 26,980 | 29,712 |
| Motor power output | | W | 24 | 30 | 51 | 55 | 72 | 34 x 2 | 48 x 2 | 62 x 2 | 83 x 2 |
| Motor current | | Amp | - Refer to page 22 - | | | | | | | | |
| Sound Pressure** | High | dB(A) | 37.6 | 39.3 | 40.5 | 41.5 | 42.2 | 42.8 | 43.1 | 43.5 | 44.5 |
| | Med | | 35.9 | 37.8 | 38.3 | 39.6 | 40.2 | 40.8 | 40.9 | 41.5 | 42.7 |
| | Low | | 34.4 | 36.6 | 36.6 | 37.8 | 38.2 | 38.6 | 38.7 | 39.6 | 40.7 |
| Water Flow | | ℓ/s | 0.10 | 0.13 | 0.16 | 0.18 | 0.21 | 0.26 | 0.30 | 0.34 | 0.37 |
| Water Pressure Drop | | kPa | 11.4 | 9.1 | 15.8 | 12.4 | 12.0 | 15.9 | 18.0 | 18.7 | 17.8 |
| Fan Type | | | Centrifugal Forward-curved blades | | | | | | | | |
| Motor Type | | | Permanent Split Capacitor | | | | | | | | |
| Coil | No. of Row | | 3 | | | | | | | | |
| | Working Pressure | | 1.72 MPa | | | | | | | | |
| | Face Area ($m^2$) | | 0.12 | 0.14 | 0.16 | 0.19 | 0.21 | 0.26 | 0.27 | 0.32 | 0.35 |
| | Water Volume (ℓ) | | 0.63 | 0.71 | 0.80 | 0.97 | 1.05 | 1.30 | 1.35 | 1.56 | 1.73 |
| Connections | Water In-Out/ Material | | 3/4" FPT (BSP)/ Brass (Threaded Connections) | | | | | | | | |
| | Condensate Drain/ Material | | 3/4" MPT (BSP)/ GI Steel (Threaded Connections) | | | | | | | | |
| Cabinet Size | Height | mm | 242 | | | | | | | | |
| | Width | mm | 560 | | | | | | | | |
| | Length | mm | 781 | 861 | 941 | 1,101 | 1,181 | 1,421 | 1,471 | 1671 | 1,831 |
| Casing Material / Thickness | | | Galvanized Steel/ up to 1.0mm | | | | | | | | |
| Casing Treatment / External Finish | | | Galvanized Steel | | | | | | | | |
| Net Weight | | kg | 16.7 | 17.6 | 19.6 | 22.2 | 23.6 | 30.5 | 32.6 | 35.9 | 38.6 |

**NOTE**:

* Based on motor at high speed, standard air and wet coil operation; 5.6˚C water temperature rise; entering air temperature 24.4˚C DB; 17.2˚C WB; Entering water temperature 7.2˚C.

** Sound measurement in accordance with Standard JIS8616-2006 (1.5m below the unit bottom).

***- - For other design conditions, please apply the selection program to finalize your applications - -***

## 42CET M-Series Ceiling Suspended Ducted Unit with Plenum- Standard ΔT
## 3 Rows

| PERFORMANCE | | | MODEL: 42CET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 003M | 004M | 005M | 006M | 008M | 010M | 012M | 014M |
| Air Volume | High | CFM | 310 | 381 | 428 | 500 | 741 | 788 | 954 | 1296 |
| | | ℓ/s | 147 | 180 | 202 | 236 | 350 | 372 | 451 | 612 |
| Cooling Capacity (Fluid)* | | kW | 2.5 | 3.1 | 3.2 | 3.7 | 5.5 | 5.9 | 7.0 | 9.3 |
| | | Btu/hr | 8,531 | 10,578 | 10,919 | 12,625 | 18,767 | 20,132 | 23,885 | 31,733 |
| Motor nominal power output | | W | 30 | 51 | 55 | 58 | 46 (x2) | 55 (x2) | 58 (x2) | 50 (x3) |
| Motor current | | Amp | - Refer to page 23 - | | | | | | | |
| Sound Pressure ** | High | dB(A) | 38.7 | 40.6 | 42.8 | 44.6 | 44.1 | 44.5 | 47.1 | 46.5 |
| | Med | | 37.0 | 39.7 | 41.3 | 42.1 | 43.0 | 42.9 | 46.1 | 45.6 |
| | Low | | 35.4 | 37.2 | 37.3 | 40.0 | 40.7 | 40.7 | 43.7 | 42.1 |
| Water Flow | | ℓ/s | 0.11 | 0.13 | 0.14 | 0.16 | 0.23 | 0.25 | 0.30 | 0.40 |
| Water Pressure Drop | | kPa | 9.8 | 18.7 | 11.2 | 12.4 | 13.6 | 13.5 | 20.1 | 41.8 |
| Fan Type | | | Centrifugal Forward-curved blades | | | | | | | |
| Motor Type | | | Permanent Split Capacitor | | | | | | | |
| Coil | No. of Row | | 3 | | | | | | | |
| | Working Pressure | | 1.72MPa | | | | | | | |
| | Face Area ($m^2$) | | 0.123 | 0.149 | 0.167 | 0.21 | 0.262 | 0.288 | 0.339 | 0.391 |
| | Water Volume (ℓ) | | 0.6 | 0.8 | 0.9 | 1.1 | 1.3 | 1.4 | 1.7 | 1.9 |
| Connections | Water In-Out/ Material | | 3/4" FPT (BSP)/ Brass (Threaded Connections) | | | | | | | |
| | Condensate Drain/ Material | | 3/4" MPT (BSP)/ Steel (Threaded Connections) | | | | | | | |
| Cabinet Size | Height | mm | 242 | | | | | | | |
| | Width | mm | 558 | | | | | | | |
| | Length | mm | 789 | 909 | 989 | 1,189 | 1,429 | 1,549 | 1,789 | 2,027 |
| Casing Material/ Thickness | | | Galvanized Steel/ Up to 1.0mm | | | | | | | |
| Casing Treatment/ External Finish | | | Galvanized Steel | | | | | | | |
| Net Weight | | kg | 16.5 | 19.1 | 19.7 | 22.6 | 31.1 | 34.5 | 39.4 | 46.3 |

**NOTE**:

* Based on motor at high speed, standard air and wet coil operation; 5.6˚C water temperature rise; entering air temperature 24.4˚C DB; 17.2˚C WB; Entering water temperature 7.2˚C.

** Sound measurement in accordance with Standard JIS8616-2006 (1.5m below the unit bottom).

***- - For other design conditions, please apply the selection program to finalize your applications - -***

## 42CET M-Series Ceiling Suspended Ducted Unit with Plenum- Standard ΔT
## 4 Rows

| PERFORMANCE | | | MODEL: 42CET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 003M | 004M | 005M | 006M | 008M | 010M | 012M | 014M |
| Air Volume | High | CFM | 261 | 375 | 419 | 495 | 680 | 770 | 931 | 1238 |
| | | ℓ/s | 124 | 177 | 198 | 234 | 321 | 364 | 440 | 585 |
| Cooling Capacity (Fluid)* | | kW | 2.5 | 3.2 | 3.3 | 3.8 | 5.4 | 6.4 | 8.4 | 11.1 |
| | | Btu/hr | 8,531 | 10,919 | 11,261 | 12,967 | 18,426 | 21,838 | 28,662 | 37,875 |
| Motor nominal power output | | W | 30 | 51 | 55 | 58 | 46 (x2) | 55 (x2) | 58 (x2) | 50 (x3) |
| Motor current | | Amp | - Refer to page 23 - | | | | | | | |
| Sound Pressure ** | High | dB(A) | 38.0 | 39.4 | 41.7 | 41.6 | 43.8 | 43.2 | 46.6 | 45.8 |
| | Med | | 36.3 | 38.6 | 40.7 | 40.0 | 42.7 | 42.4 | 44.8 | 44.9 |
| | Low | | 34.5 | 35.7 | 35.3 | 37.3 | 39.8 | 39.9 | 42.5 | 40.2 |
| Water Flow | | ℓ/s | 0.11 | 0.14 | 0.14 | 0.16 | 0.23 | 0.27 | 0.36 | 0.47 |
| Water Pressure Drop | | kPa | 6.7 | 14.0 | 9.3 | 4.7 | 11.5 | 13.4 | 16.5 | 34.6 |
| Fan Type | | | Centrifugal Forward-curved blades | | | | | | | |
| Motor Type | | | Permanent Split Capacitor | | | | | | | |
| Coil | No. of Row | | 4 | | | | | | | |
| | Working Pressure | | 1.72MPa | | | | | | | |
| | Face Area ($m^2$) | | 0.123 | 0.149 | 0.167 | 0.21 | 0.262 | 0.288 | 0.339 | 0.391 |
| | Water Volume (ℓ) | | 0.9 | 1.0 | 1.1 | 1.4 | 1.7 | 1.9 | 2.2 | 2.6 |
| Connections | Water In-Out/ Material | | 3/4" FPT (BSP)/ Brass (Threaded Connections) | | | | | | | |
| | Condensate Drain/ Material | | 3/4" MPT (BSP)/ GI Steel (Threaded Connections) | | | | | | | |
| Cabinet Size | Height | mm | 242 | | | | | | | |
| | Width | mm | 558 | | | | | | | |
| | Length | mm | 789 | 909 | 989 | 1,189 | 1,429 | 1,549 | 1,789 | 2,027 |
| Casing Material/ Thickness | | | Galvanized Steel/ Up to 1.0mm | | | | | | | |
| Casing Treatment/ External Finish | | | Galvanized Steel | | | | | | | |
| Net Weight | | kg | 17.8 | 20.5 | 21.7 | 23.7 | 33.0 | 36.7 | 42 | 49.1 |

**NOTE**:

* Based on motor at high speed, standard air and wet coil operation; 5.6˚C water temperature rise; entering air temperature 24.4˚C DB; 17.2˚C WB; Entering water temperature 7.2˚C.

** Sound measurement in accordance with Standard JIS8616-2006 (1.5m below the unit bottom).

***- - For other design conditions, please apply the selection program to finalize your applications - -***

## 42CED M-Series Ceiling Suspended Ducted Unit with Plenum- District Cooling 4 Rows

| PERFORMANCE | | | MODEL: 42CED | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 003M | 004M | 005M | 006M | 008M | 010M | 012M | 014M |
| Air Volume | High | CFM | 261 | 375 | 419 | 495 | 680 | 770 | 931 | 1238 |
| | | ℓ/s | 124 | 177 | 198 | 234 | 321 | 364 | 440 | 585 |
| Cooling Capacity (Fluid)* | | kW | 2.6 | 3.4 | 3.6 | 3.9 | 5.3 | 6.2 | 7.5 | 9.4 |
| | | Btu/hr | 8,872 | 11,602 | 12,284 | 13,308 | 18,085 | 21,156 | 25,592 | 32,075 |
| Motor nominal power output | | W | 30 | 51 | 55 | 58 | 46 (x2) | 55 (x2) | 58 (x2) | 50 (x3) |
| Motor current | | Amp | - Refer to page 23 - | | | | | | | |
| Sound Pressure ** | High | dB(A) | 38.0 | 39.4 | 41.7 | 41.6 | 43.8 | 43.2 | 46.6 | 45.8 |
| | Med | | 36.3 | 38.6 | 40.7 | 40.0 | 42.7 | 42.4 | 44.8 | 44.9 |
| | Low | | 34.5 | 35.7 | 35.3 | 37.3 | 39.8 | 39.9 | 42.5 | 40.2 |
| Water Flow | | ℓ/s | 0.12 | 0.16 | 0.17 | 0.19 | 0.25 | 0.29 | 0.34 | 0.44 |
| Water Pressure Drop | | kPa | 15.6 | 35.0 | 19.3 | 23.9 | 48.8 | 68.1 | 23.5 | 53.7 |
| Fan Type | | | Centrifugal Forward-curved blades | | | | | | | |
| Motor Type | | | Permanent Split Capacitor | | | | | | | |
| Coil | No. of Row | | 4 | | | | | | | |
| | Working Pressure | | 1.72Mpa | | | | | | | |
| | Face Area ($m^2$) | | 0.123 | 0.149 | 0.167 | 0.21 | 0.262 | 0.288 | 0.339 | 0.391 |
| | Water Volume (ℓ) | | 0.9 | 1.0 | 1.1 | 1.4 | 1.7 | 1.9 | 2.2 | 2.6 |
| Connections | Water In-Out/ Material | | 3/4" FPT (BSP)/ Brass (Threaded Connections) | | | | | | | |
| | Condensate Drain/ Material | | 3/4" MPT (BSP)/ GI Steel Brass (Threaded Connections) | | | | | | | |
| Cabinet Size | Height | mm | 242 | | | | | | | |
| | Width | mm | 558 | | | | | | | |
| | Length | mm | 789 | 909 | 989 | 1,189 | 1,429 | 1,549 | 1,789 | 2,027 |
| Casing Material/ Thickness | | | Galvanized Steel/ Up to 1.0mm | | | | | | | |
| Casing Treatment/ External Finish | | | Galvanized Steel | | | | | | | |
| Net Weight | | kg | 17.8 | 20.5 | 21.7 | 23.7 | 33 | 36.7 | 42.0 | 49.1 |

**NOTE**:

* Based on motor at high speed, standard air and wet coil operation; 8.9˚C water temperature rise; entering air temperature 24.4˚C DB; 17.2˚C WB; Entering water temperature 5.5˚C.

** Sound measurement in accordance with Standard JIS8616-2006 (1.5m below the unit bottom).

***- - For other design conditions, please apply the selection program to finalize your applications - -***

## 42DC M-Series Ceiling Suspended Ducted Unit with Plenum- Standard ΔT 4 Rows

| PERFORMANCE | | | MODEL: 42DC | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 006M | 008M | 010M | 012M | 014M | 016M | 018M | 020M |
| Air Volume | High | CFM | 678 | 782 | 1111 | 1211 | 1656 | 1771 | 1931 | 2017 |
| | | ℓ/s | 320 | 370 | 525 | 572 | 782 | 836 | 912 | 952 |
| Cooling Capacity (Fluid)* | | kW | 3.9 | 4.9 | 6.0 | 6.7 | 9.3 | 10.4 | 12.0 | 13.0 |
| | | Btu/hr | 13,308 | 16,720 | 20,473 | 22,862 | 31,733 | 35,487 | 40,946 | 44,358 |
| Motor nominal power output | | W | 120 | | 200 | 120 (x2) | 425 | 510 | 510 | 510 |
| Motor current | | Amp | - Refer to page 24 - | | | | | | | |
| Sound Pressure ** | High | dB(A) | 44.0 | 44.6 | 48.2 | 46.5 | 50.1 | 50.1 | 49.9 | 49.8 |
| | Med | | 43.3 | 44.0 | 47.6 | 45.8 | 47.7 | 48.6 | 49.0 | 48.7 |
| | Low | | 39.8 | 40.6 | 39.7 | 42.4 | 44.6 | 47.1 | 44.5 | 45.5 |
| Water Flow | | ℓ/s | 0.19 | 0.24 | 0.30 | 0.34 | 0.46 | 0.52 | 0.59 | 0.63 |
| Water Pressure Drop | | kPa | 13.7 | 17.8 | 11.9 | 13.6 | 14.6 | 13.5 | 18.7 | 21.1 |
| Fan Type | | | Centrifugal Forward-curved blades | | | | | | | |
| Motor Type | | | Permanent Split Capacitor | | | | | | | |
| Coil | No. of Row | | 4 | | | | | | | |
| | Working Pressure | | 1.72 MPa | | | | | | | |
| | Face Area ($m^2$) | | 0.148 | 0.197 | 0.237 | 0.287 | 0.336 | 0.385 | 0.434 | 0.474 |
| | Water Volume (ℓ) | | 1.1 | 1.4 | 1.6 | 2.0 | 2.3 | 2.6 | 2.9 | 3.2 |
| Connections | Water In-Out/ Material | | 3/4"/ Brass (Threaded Connections) | | | | 1"/ Brass (Threaded Connections) | | | |
| | Condensate Drain/ Material | | 7/8"/ GI Steel (Threaded Connections) | | | | | | | |
| Cabinet Size | Height | mm | 420 | | | | | | | |
| | Width | mm | 764 | | | | | | | |
| | Length | mm | 587 | 714 | 817 | 942 | 1,070 | 1,197 | 1,323 | 1,425 |
| Casing Material/ Thickness | | | Galvanized Steel/ Up to 1.0mm | | | | | | | |
| Casing Treatment/ External Finish | | | Galvanized Steel | | | | | | | |
| Net Weight | | kg | 29.0 | 35.0 | 39.0 | 51.0 | 52.0 | 58.0 | 61.0 | 63.0 |

**NOTE**:

* Based on motor at high speed, standard air and wet coil operation; 5.6˚C water temperature rise; entering air temperature 24.4˚C DB; 17.2˚C WB; Entering water temperature 7.2˚C.

** Sound measurement in accordance with Standard JIS8616-2006 (1.5m below the unit bottom).

***- - For other design conditions, please apply the selection program to finalize your applications - -***

## 42DCD M-Series Ceiling Suspended Ducted Unit with Plenum- District Cooling 4 Rows

| PERFORMANCE | | | MODEL: 42DCD | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 006M | 008M | 010M | 012M | 014M | 016M | 018M | 020M |
| Air Volume | High | CFM | 678 | 782 | 1111 | 1211 | 1656 | 1771 | 1931 | 2017 |
| | | ℓ/s | 320 | 370 | 525 | 572 | 782 | 836 | 912 | 952 |
| Cooling Capacity (Fluid)* | | kW | 5.0 | 5.6 | 7.3 | 8.6 | 10.8 | 11.6 | 12.8 | 13.7 |
| | | Btu/hr | 17,061 | 19,108 | 24,909 | 29,345 | 36,852 | 39,581 | 43,676 | 46,747 |
| Motor nominal power output | | W | 120 | | 200 | 120 (x2) | 425 | 510 | 510 | 510 |
| Motor current | | Amp | - Refer to page 24 - | | | | | | | |
| Sound Pressure ** | High | dB(A) | 44.0 | 44.6 | 48.2 | 46.5 | 50.1 | 50.1 | 49.9 | 49.8 |
| | Med | | 43.3 | 44.0 | 47.6 | 45.8 | 47.7 | 48.6 | 49.0 | 48.7 |
| | Low | | 39.8 | 40.6 | 39.7 | 42.4 | 44.6 | 47.1 | 44.5 | 45.5 |
| Water Flow | | ℓ/s | 0.22 | 0.26 | 0.34 | 0.39 | 0.50 | 0.54 | 0.60 | 0.64 |
| Water Pressure Drop | | kPa | 64.1 | 33.7 | 38.7 | 52.6 | 31.9 | 48.6 | 42.9 | 46.7 |
| Fan Type | | | Centrifugal Forward-curved blades | | | | | | | |
| Motor Type | | | Permanent Split Capacitor | | | | | | | |
| Coil | No. of Row | | 4 | | | | | | | |
| | Working Pressure | | 1.72MPa | | | | | | | |
| | Face Area ($m^2$) | | 0.148 | 0.197 | 0.237 | 0.287 | 0.336 | 0.385 | 0.434 | 0.474 |
| | Water Volume (ℓ) | | 1.1 | 1.4 | 1.6 | 2.0 | 2.3 | 2.6 | 2.9 | 3.2 |
| Connections | Water In-Out/ Material | | 3/4"/ Brass (Threaded Connections) | | | | 1"/ Brass (Threaded Connections) | | | |
| | Condensate Drain/ Material | | 7/8"/ GI Steel Brass (Threaded Connections) | | | | | | | |
| Cabinet Size | Height | mm | 420 | | | | | | | |
| | Width | mm | 764 | | | | | | | |
| | Length | mm | 587 | 714 | 817 | 942 | 1,070 | 1,197 | 1,323 | 1,425 |
| Casing Material/ Thickness | | | Galvanized Steel/ Up to 1.0mm | | | | | | | |
| Casing Treatment/ External Finish | | | Galvanized Steel | | | | | | | |
| Net Weight | | kg | 29.0 | 35.0 | 39.0 | 51.0 | 52.0 | 58.0 | 61.0 | 63.0 |

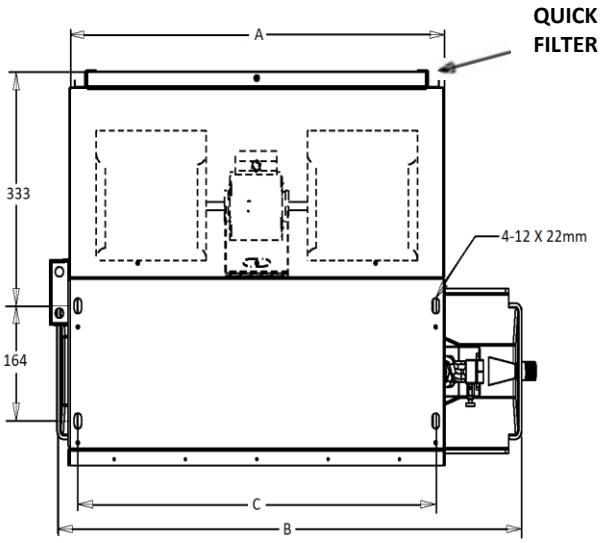
**NOTE**:

* Based on motor at high speed, standard air and wet coil operation; 8.9˚C water temperature rise; entering air temperature 24.4˚C DB; 17.2˚C WB; Entering water temperature 5.5˚C.

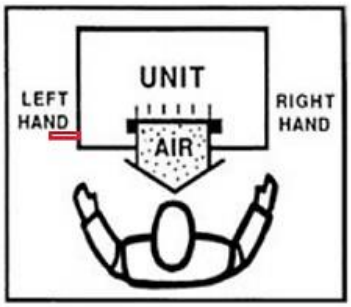
** Sound measurement in accordance with Standard JIS8616-2006 (1.5m below the unit bottom).

***- - For other design conditions, please apply the selection program to finalize your applications - -***

## 42CT Furred-in Ceiling FCU with Plenum

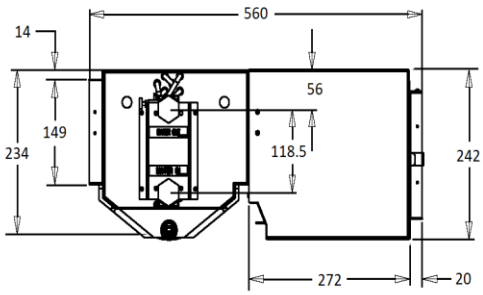



TOP VIEW




UNIT HANDLING

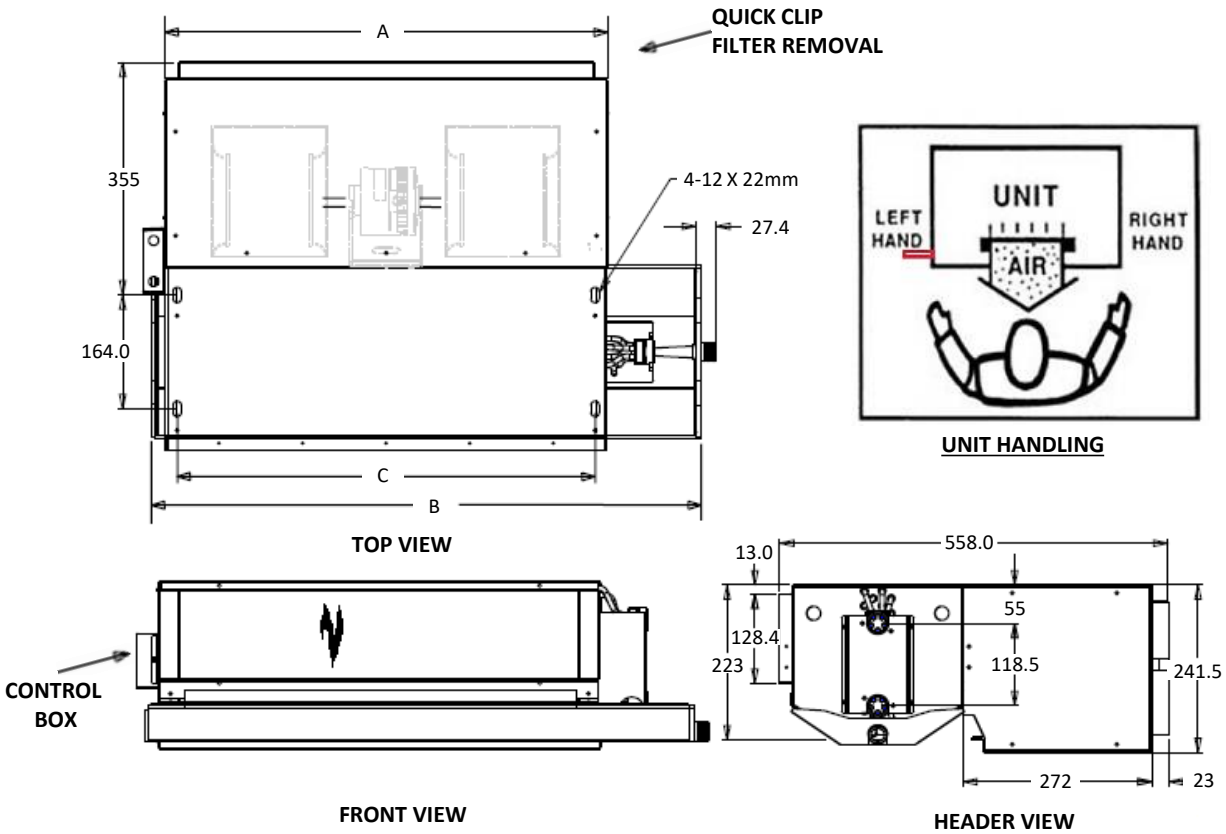

FRONT VIEW




HEADER VIEW

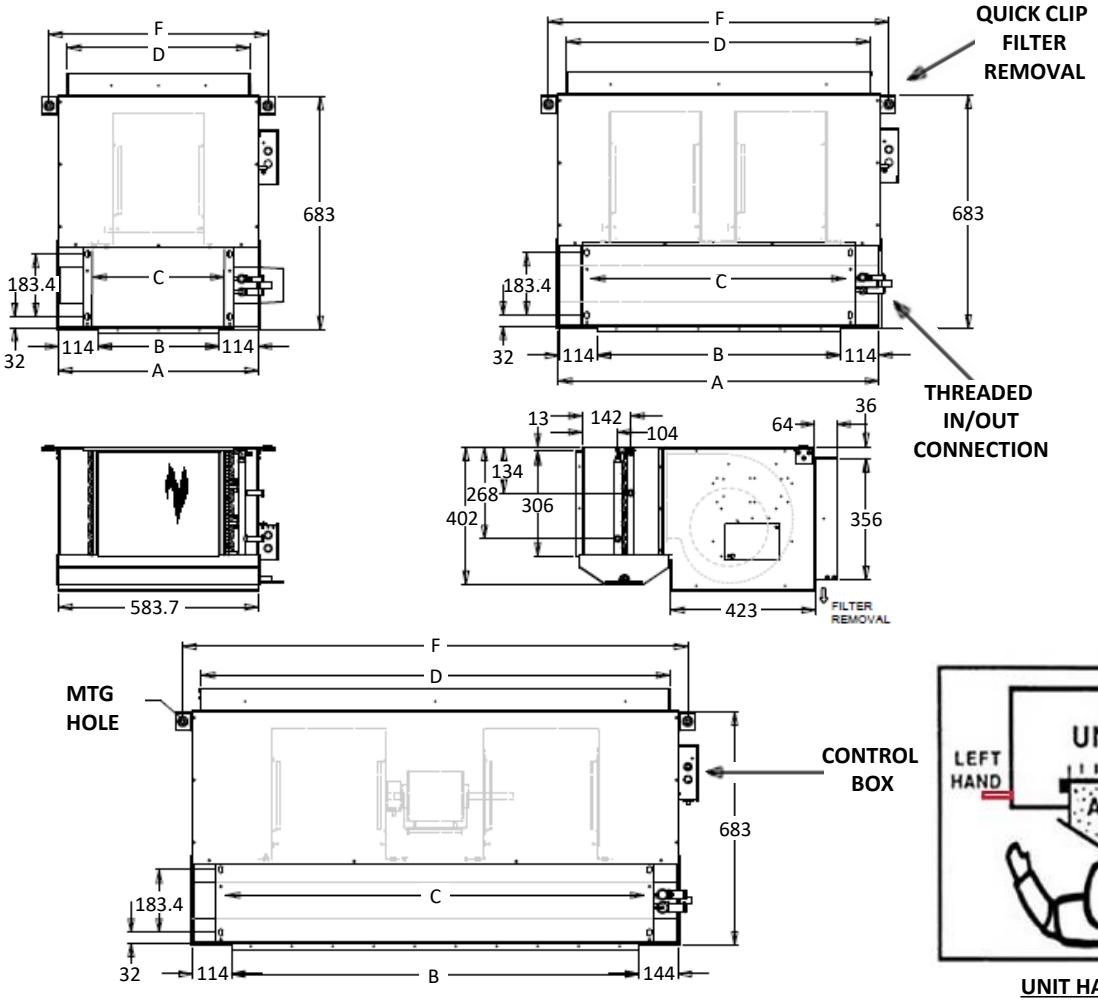
| MODEL 42CT-/CTL | DIMENSIONS (mm) | | | NET WEIGHT (kg) |
|---|---|---|---|---|
| | A | B | C | 3 Rows |
| 03 | 632 | 781 | 602 | 16.7 |
| 04 | 712 | 861 | 682 | 17.6 |
| 05 | 792 | 941 | 762 | 19.6 |
| 06 | 952 | 1101 | 922 | 22.2 |
| 07 | 1032 | 1181 | 1002 | 23.6 |
| 08 | 1272 | 1421 | 1242 | 30.5 |
| 10 | 1322 | 1471 | 1292 | 32.6 |
| 12 | 1522 | 1671 | 1492 | 35.9 |
| 14 | 1682 | 1831 | 1652 | 38.6 |

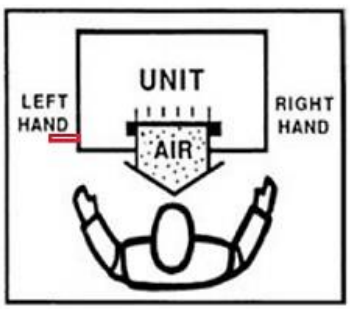
## 42CET/CED M-Series Furred-in Ceiling FCU with Plenum




| MODEL 42CET/CED | DIMENSIONS (mm) | | | NET WEIGHT (kg) | |
|---|---|---|---|---|---|
| | A | B | C | 3 Rows | 4 Rows |
| 003 | 636 | 770 | 600 | 16.5 | 17.8 |
| 004 | 756 | 890 | 720 | 19.1 | 20.5 |
| 005 | 836 | 970 | 800 | 19.7 | 21.7 |
| 006 | 956 | 1170 | 1000 | 22.6 | 23.7 |
| 008 | 1276 | 1410 | 1240 | 31.1 | 33.0 |
| 010 | 1396 | 1530 | 1360 | 34.5 | 36.7 |
| 012 | 1636 | 1770 | 1600 | 39.4 | 42.0 |
| 014 | 1876 | 2010 | 1840 | 46.3 | 49.1 |

## 42DC/DCD M-Series Furred-in Ceiling FCU with Plenum




UNIT HANDLING

| UNIT SIZE 42DC/DCD | DIMENSION (mm) | | | | | | NET WEIGHT (kg) |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | |
| **006** | 584 | 356 | 381 | 432 | 533 | 641 | 29.0 |
| **008** | 711 | 483 | 508 | 559 | 660 | 768 | 35.0 |
| **010** | 813 | 584 | 610 | 660 | 762 | 870 | 39.0 |
| **012** | 940 | 711 | 737 | 737 | 889 | 997 | 51.0 |
| **014** | 1067 | 838 | 864 | 914 | 1016 | 1124 | 52.0 |
| **016** | 1194 | 965 | 991 | 1041 | 1143 | 1251 | 58.0 |
| **018** | 1321 | 1092 | 1178 | 1168 | 1270 | 1378 | 61.0 |
| **020** | 1422 | 1194 | 1219 | 1270 | 1372 | 1479 | 63.0 |

# PERFORMANCE RATING

## 42CT Ceiling Suspended Ducted Unit with Plenum- Standard ΔT (3 Rows)

| Model 42CT | Speed | ESP Pa | Air Flow (CFM) | Capacity (kW) | | Air off FCU (°C) | | Water Flow (ℓ/s) | Water Pressure (kPa) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Sensible | DB | WB | | |
| 033 | High | 50 | 269 | 2.4 | 1.8 | 12.4 | 11.8 | 0.10 | 11.4 |
| | Medium | | 208 | 2.0 | 1.5 | 11.7 | 11.2 | 0.09 | 7.7 |
| | Low | | 115 | 1.2 | 0.9 | 10.7 | 10.2 | 0.05 | 3.0 |
| 043 | High | 50 | 355 | 3.0 | 2.3 | 12.8 | 12.2 | 0.13 | 9.1 |
| | Medium | | 278 | 2.5 | 1.9 | 12.1 | 11.6 | 0.11 | 6.5 |
| | Low | | 179 | 1.8 | 1.3 | 11.3 | 10.7 | 0.08 | 3.3 |
| 053 | High | 50 | 456 | 3.8 | 3.0 | 13.0 | 12.3 | 0.16 | 15.8 |
| | Medium | | 348 | 3.1 | 2.4 | 12.3 | 11.6 | 0.13 | 10.9 |
| | Low | | 257 | 2.5 | 1.9 | 11.5 | 10.9 | 0.11 | 7.0 |
| 063 | High | 50 | 540 | 4.2 | 3.4 | 13.5 | 12.6 | 0.18 | 12.4 |
| | Medium | | 435 | 3.6 | 2.9 | 12.8 | 12.1 | 0.15 | 9.2 |
| | Low | | 275 | 2.6 | 2.0 | 11.8 | 11.2 | 0.11 | 4.6 |
| 073 | High | 50 | 605 | 5.0 | 3.9 | 13.0 | 12.3 | 0.21 | 12.0 |
| | Medium | | 478 | 4.2 | 3.3 | 12.4 | 11.7 | 0.18 | 8.6 |
| | Low | | 344 | 3.3 | 2.5 | 11.6 | 11.0 | 0.14 | 5.2 |
| 083 | High | 50 | 725 | 6.1 | 4.8 | 12.9 | 12.2 | 0.26 | 15.9 |
| | Medium | | 556 | 5.0 | 3.9 | 12.2 | 11.6 | 0.21 | 11.0 |
| | Low | | 357 | 3.6 | 2.7 | 11.3 | 10.7 | 0.15 | 5.6 |
| 103 | High | 50 | 868 | 7.0 | 5.5 | 13.2 | 12.4 | 0.30 | 18.0 |
| | Medium | | 672 | 5.8 | 4.5 | 12.5 | 11.9 | 0.25 | 12.7 |
| | Low | | 476 | 4.5 | 3.4 | 11.7 | 11.1 | 0.19 | 7.8 |
| 123 | High | 50 | 1002 | 7.9 | 6.3 | 13.3 | 12.5 | 0.34 | 18.7 |
| | Medium | | 821 | 6.9 | 5.5 | 12.7 | 12 | 0.29 | 14.5 |
| | Low | | 611 | 5.6 | 4.3 | 12 | 11.4 | 0.24 | 9.6 |
| 143 | High | 50 | 1148 | 8.7 | 7.0 | 13.7 | 12.7 | 0.37 | 17.8 |
| | Medium | | 953 | 7.7 | 6.2 | 13.1 | 12.2 | 0.33 | 14.3 |
| | Low | | 725 | 6.4 | 5.0 | 12.3 | 11.6 | 0.27 | 10.0 |

**NOTE:** Air Conditions: EDB/EWB 24.4/17.2°C * Water Conditions: EWT/LWT 7.2/12.8˚C ΔT: 5.6˚C

***- - For other design conditions, please apply the selection program to finalize your applications - -***

# PERFORMANCE RATING (cont')

## 42CET- M Series Ceiling Suspended Ducted Unit with Plenum- Standard ΔT (3 Rows)

| Model 42CET | Speed | ESP Pa | Air Flow (ℓ/s) | Capacity (kW) | | Air off FCU (°C) | | Water Flow (ℓ/s) | Water Pressure (kPa) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Sensible | DB | WB | | |
| 003 | High | 50 | 310 | 2.5 | 1.9 | 13.4 | 12.5 | 0.11 | 9.8 |
| | Medium | | 270 | 2.3 | 1.7 | 13.2 | 12.3 | 0.10 | 7.9 |
| | Low | | 168 | 1.6 | 1.1 | 12.5 | 11.8 | 0.07 | 3.7 |
| 004 | High | 50 | 381 | 3.1 | 2.4 | 13.3 | 12.4 | 0.13 | 18.7 |
| | Medium | | 115 | 3.1 | 2.3 | 13.3 | 12.4 | 0.13 | 17.7 |
| | Low | | 71 | 1.9 | 1.4 | 12.4 | 11.7 | 0.08 | 7.0 |
| 005 | High | 50 | 428 | 3.2 | 2.6 | 13.7 | 12.9 | 0.14 | 11.2 |
| | Medium | | 408 | 3.1 | 2.5 | 13.6 | 12.9 | 0.13 | 10.4 |
| | Low | | 217 | 1.9 | 1.5 | 12.5 | 12.1 | 0.08 | 3.9 |
| 006 | High | 50 | 500 | 3.7 | 2.9 | 14.2 | 12.9 | 0.16 | 12.4 |
| | Medium | | 469 | 3.6 | 2.8 | 14.0 | 12.9 | 0.15 | 11.4 |
| | Low | | 380 | 3.1 | 2.3 | 13.6 | 12.5 | 0.13 | 8.4 |
| 008 | High | 50 | 741 | 5.5 | 4.4 | 13.9 | 13.0 | 0.23 | 13.6 |
| | Medium | | 689 | 5.2 | 4.2 | 13.7 | 12.9 | 0.22 | 12.4 |
| | Low | | 387 | 3.4 | 2.6 | 12.6 | 12.1 | 0.14 | 5.3 |
| 010 | High | 50 | 788 | 5.9 | 4.7 | 13.8 | 12.9 | 0.25 | 13.5 |
| | Medium | | 741 | 5.6 | 4.5 | 13.7 | 12.9 | 0.24 | 12.4 |
| | Low | | 430 | 3.8 | 2.9 | 12.6 | 12.1 | 0.16 | 5.7 |
| 012 | High | 50 | 954 | 7.0 | 5.7 | 14.0 | 13.0 | 0.30 | 20.1 |
| | Medium | | 883 | 6.7 | 5.4 | 13.8 | 12.9 | 0.28 | 18.2 |
| | Low | | 757 | 6.0 | 4.7 | 13.4 | 12.6 | 0.28 | 15.0 |
| 014 | High | 50 | 1296 | 9.3 | 7.3 | 14.5 | 13.1 | 0.40 | 41.8 |
| | Medium | | 1201 | 8.9 | 6.9 | 14.3 | 13.0 | 0.38 | 38.4 |
| | Low | | 877 | 7.2 | 5.4 | 13.5 | 12.5 | 0.30 | 26.1 |

**NOTE**: Air Conditions: EDB/EWB 24.4/17.2°C * Water Conditions: EWT/LWT 7.2/12.8˚C ΔT: 5.6˚C

## 42CET- M Series Ceiling Suspended Ducted Unit with Plenum- Standard ΔT (4 Rows)

| Model 42CET | Speed | ESP (Pa) | Air Flow (ℓ/s) | Capacity (kW) | | Air off FCU (°C) | | Water Flow (ℓ/s) | Water Pressure (kPa) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Sensible | DB | WB | | |
| 003 | High | 50 | 261 | 2.5 | 1.8 | 12.2 | 11.6 | 0.11 | 6.7 |
| | Medium | | 251 | 2.4 | 1.7 | 12.2 | 11.5 | 0.10 | 6.3 |
| | Low | | 172 | 1.8 | 1.2 | 11.7 | 11.1 | 0.08 | 3.4 |
| 004 | High | 50 | 375 | 3.2 | 2.4 | 13.0 | 12.2 | 0.14 | 14.0 |
| | Medium | | 358 | 3.1 | 2.3 | 12.9 | 12.1 | 0.13 | 13.0 |
| | Low | | 203 | 2.0 | 1.4 | 12.1 | 11.4 | 0.08 | 5.3 |
| 005 | High | 50 | 419 | 3.3 | 2.6 | 13.6 | 12.6 | 0.14 | 9.3 |
| | Medium | | 400 | 3.2 | 2.5 | 13.5 | 12.6 | 0.14 | 8.6 |
| | Low | | 222 | 2.0 | 1.5 | 12.7 | 12.0 | 0.08 | 3.3 |
| 006 | High | 50 | 495 | 3.8 | 3.1 | 13.5 | 12.7 | 0.16 | 4.7 |
| | Medium | | 461 | 3.6 | 2.9 | 13.4 | 12.7 | 0.15 | 4.2 |
| | Low | | 388 | 3.2 | 2.5 | 13.1 | 12.5 | 0.14 | 3.2 |
| 008 | High | 50 | 680 | 5.4 | 4.2 | 13.7 | 12.6 | 0.23 | 11.5 |
| | Medium | | 658 | 5.3 | 4.0 | 13.6 | 12.6 | 0.22 | 10.9 |
| | Low | | 357 | 3.2 | 2.4 | 12.7 | 11.9 | 0.14 | 4.1 |
| 010 | High | 50 | 770 | 6.4 | 4.8 | 13.4 | 12.4 | 0.27 | 13.4 |
| | Medium | | 723 | 6.1 | 4.6 | 13.3 | 12.3 | 0.26 | 12.2 |
| | Low | | 427 | 4.0 | 2.9 | 12.5 | 11.7 | 0.17 | 5.4 |
| 012 | High | 50 | 931 | 8.4 | 6.2 | 12.7 | 11.9 | 0.36 | 16.5 |
| | Medium | | 873 | 8.1 | 5.9 | 12.6 | 11.8 | 0.34 | 15.2 |
| | Low | | 745 | 7.1 | 5.1 | 12.3 | 11.6 | 0.30 | 11.9 |
| 014 | High | 50 | 1238 | 11.1 | 8.2 | 12.8 | 12.0 | 0.47 | 34.6 |
| | Medium | | 1109 | 10.3 | 7.5 | 12.6 | 11.8 | 0.44 | 29.9 |
| | Low | | 806 | 8.1 | 5.7 | 12.0 | 11.3 | 0.34 | 19.2 |

**NOTE:** Air Conditions: EDB/EWB 24.4/17.2°C * Water Conditions: EWT/LWT 7.2/12.8˚C ΔT: 5.6˚C

***- - For other design conditions, please apply the selection program to finalize your applications - -***

# PERFORMANCE RATING (cont')

## 42CED- M Series Ceiling Suspended Ducted Unit with Plenum- District Cooling (4 Rows)

| Model 42CED | Speed | ESP Pa | Air Flow (ℓ/s) | Capacity (kW) | | Air off FCU (°C) | | Water Flow (ℓ/s) | Water Pressure (kPa) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Sensible | DB | WB | | |
| 003 | High | 50 | 261 | 2.8 | 1.9 | 11.6 | 10.9 | 0.12 | 15.6 |
| | Medium | | 251 | 2.7 | 1.8 | 11.5 | 10.9 | 0.11 | 14.6 |
| | Low | | 172 | 1.9 | 1.3 | 11.1 | 10.5 | 0.08 | 7.7 |
| 004 | High | 50 | 375 | 3.7 | 2.6 | 12.2 | 11.5 | 0.16 | 35.0 |
| | Medium | | 358 | 3.5 | 2.5 | 12.1 | 11.4 | 0.15 | 33.0 |
| | Low | | 203 | 2.2 | 1.5 | 11.3 | 10.7 | 0.09 | 13.7 |
| 005 | High | 50 | 419 | 3.9 | 2.8 | 12.5 | 11.8 | 0.17 | 19.3 |
| | Medium | | 400 | 3.7 | 2.7 | 12.5 | 11.7 | 0.16 | 17.9 |
| | Low | | 222 | 2.3 | 1.6 | 11.7 | 11.0 | 0.10 | 6.9 |
| 006 | High | 50 | 495 | 4.4 | 3.3 | 12.8 | 12.0 | 0.19 | 23.9 |
| | Medium | | 461 | 4.2 | 3.1 | 12.6 | 11.9 | 0.18 | 21.4 |
| | Low | | 388 | 3.6 | 2.6 | 12.4 | 11.7 | 0.15 | 16.1 |
| 008 | High | 50 | 680 | 5.9 | 4.4 | 13.0 | 12.1 | 0.25 | 48.8 |
| | Medium | | 658 | 5.8 | 4.3 | 12.9 | 12.1 | 0.25 | 46.7 |
| | Low | | 357 | 3.5 | 2.5 | 12.1 | 11.4 | 0.15 | 18.7 |
| 010 | High | 50 | 770 | 6.8 | 5.1 | 12.9 | 12.0 | 0.29 | 68.1 |
| | Medium | | 723 | 6.5 | 4.8 | 12.7 | 12.0 | 0.28 | 62.6 |
| | Low | | 427 | 4.3 | 3.0 | 12.0 | 11.3 | 0.18 | 29.7 |
| 012 | High | 50 | 931 | 7.9 | 5.9 | 13.2 | 12.3 | 0.34 | 23.5 |
| | Medium | | 873 | 7.5 | 5.6 | 13.1 | 12.2 | 0.32 | 21.7 |
| | Low | | 745 | 6.7 | 4.9 | 12.8 | 12.0 | 0.28 | 17.3 |
| 014 | High | 50 | 1238 | 10.2 | 7.7 | 13.5 | 12.4 | 0.44 | 53.7 |
| | Medium | | 1109 | 9.4 | 7.1 | 13.2 | 12.3 | 0.40 | 46.8 |
| | Low | | 806 | 7.4 | 5.4 | 12.6 | 11.8 | 0.32 | 30.7 |

**NOTE:** Air Conditions: EDB/EWB 24.4/17.2°C Water Conditions: EWT/LWT 5.5/14.4˚C ΔT: 8.9˚C

*- - For other design conditions, please apply the selection program to finalize your applications - -*

# PERFORMANCE RATING (cont')

## 42DC- M Series Ceiling Suspended Ducted Unit with Plenum- Standard ΔT (4 Rows)

| Model 42DC | Speed | ESP Pa | Air Flow (ℓ/s) | Capacity (kW) | | Air off FCU (°C) | | Water Flow (ℓ/s) | Water Pressure (kPa) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Sensible | DB | WB | | |
| 006 | High | 50 | 678 | 4.6 | 3.8 | 14.5 | 13.4 | 0.19 | 13.7 |
| | Medium | | 657 | 4.5 | 3.7 | 14.4 | 13.3 | 0.19 | 13.2 |
| | Low | | 451 | 3.5 | 2.8 | 13.5 | 12.8 | 0.15 | 8.0 |
| 008 | High | 50 | 782 | 5.7 | 4.6 | 14.1 | 13.1 | 0.24 | 17.8 |
| | Medium | | 721 | 5.4 | 4.3 | 13.9 | 12.9 | 0.23 | 16.0 |
| | Low | | 454 | 3.9 | 3.0 | 12.8 | 12.2 | 0.17 | 8.5 |
| 010 | High | 50 | 1111 | 7.1 | 6.0 | 14.9 | 13.6 | 0.30 | 11.9 |
| | Medium | | 1030 | 6.7 | 5.7 | 14.7 | 13.5 | 0.29 | 10.8 |
| | Low | | 634 | 4.8 | 3.9 | 13.6 | 12.9 | 0.20 | 5.5 |
| 012 | High | 50 | 1211 | 8.0 | 6.7 | 13.6 | 13.6 | 0.34 | 13.6 |
| | Medium | | 1171 | 7.8 | 6.5 | 13.0 | 13.0 | 0.33 | 13.0 |
| | Low | | 869 | 6.3 | 5.2 | 8.7 | 8.7 | 0.27 | 8.7 |
| 014 | High | 50 | 1656 | 10.9 | 9.1 | 14.7 | 13.5 | 0.46 | 14.6 |
| | Medium | | 1436 | 9.9 | 8.2 | 14.4 | 13.3 | 0.42 | 12.1 |
| | Low | | 1196 | 8.8 | 7.1 | 14.0 | 13.0 | 0.37 | 9.5 |
| 016 | High | 50 | 1771 | 12.1 | 10.1 | 14.4 | 13.3 | 0.52 | 13.5 |
| | Medium | | 1663 | 11.6 | 9.6 | 14.3 | 13.2 | 0.49 | 12.4 |
| | Low | | 1301 | 9.9 | 7.9 | 13.7 | 12.9 | 0.42 | 9.0 |
| 018 | High | 50 | 1931 | 13.8 | 11.3 | 14.1 | 13.1 | 0.59 | 18.7 |
| | Medium | | 1852 | 13.5 | 10.9 | 14.0 | 13.1 | 0.57 | 17.7 |
| | Low | | 1375 | 11.0 | 8.7 | 13.3 | 12.6 | 0.47 | 11.9 |
| 020 | High | 50 | 2017 | 14.9 | 12.0 | 14.0 | 13.0 | 0.63 | 21.1 |
| | Medium | | 1965 | 14.6 | 11.8 | 13.9 | 12.9 | 0.62 | 20.4 |
| | Low | | 1444 | 11.9 | 9.3 | 13.2 | 12.5 | 0.51 | 13.5 |

**NOTE:** Air Conditions: EDB/EWB 24.4/17.2°C * Water Conditions: EWT/LWT 7.2/12.8˚C ΔT: 5.6˚C

## 42DCD- M Series Ceiling Suspended Ducted Unit with Plenum- District Cooling (4 Rows)

| Model 42DCD | Speed | ESP Pa | Air Flow (ℓ/s) | Capacity (kW) | | Air off FCU (°C) | | Water Flow (ℓ/s) | Water Pressure (kPa) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Sensible | DB | WB | | |
| 006 | High | 50 | 678 | 5.0 | 3.9 | 14.4 | 13.0 | 0.13 | 26.1 |
| | Medium | | 657 | 4.9 | 3.8 | 14.3 | 13.0 | 0.13 | 25.1 |
| | Low | | 451 | 3.8 | 2.8 | 13.4 | 12.3 | 0.10 | 15.4 |
| 008 | High | 50 | 782 | 5.6 | 4.4 | 14.6 | 13.2 | 0.15 | 12.2 |
| | Medium | | 721 | 5.3 | 4.1 | 14.4 | 13.0 | 0.14 | 10.9 |
| | Low | | 454 | 3.9 | 2.9 | 13.3 | 12.3 | 0.10 | 5.9 |
| 010 | High | 50 | 1111 | 7.3 | 6.1 | 14.8 | 13.5 | 0.20 | 13.7 |
| | Medium | | 1030 | 7.0 | 5.8 | 14.6 | 13.4 | 0.19 | 12.5 |
| | Low | | 634 | 5.0 | 4.0 | 13.4 | 12.7 | 0.13 | 6.5 |
| 012 | High | 50 | 1211 | 8.6 | 7.0 | 14.3 | 13.1 | 0.23 | 20.3 |
| | Medium | | 1171 | 8.4 | 6.8 | 14.2 | 13.1 | 0.23 | 19.4 |
| | Low | | 869 | 6.9 | 5.4 | 13.4 | 12.6 | 0.19 | 13.1 |
| 014 | High | 50 | 1656 | 10.8 | 9.0 | 14.9 | 13.5 | 0.29 | 11.6 |
| | Medium | | 1436 | 9.8 | 8.1 | 14.5 | 13.3 | 0.26 | 9.6 |
| | Low | | 1196 | 8.7 | 7.0 | 14.1 | 13.1 | 0.23 | 7.6 |
| 016 | High | 50 | 1771 | 11.6 | 9.7 | 14.8 | 13.5 | 0.31 | 17.1 |
| | Medium | | 1663 | 11.1 | 9.2 | 14.7 | 13.4 | 0.30 | 15.7 |
| | Low | | 1301 | 9.4 | 7.7 | 14.1 | 13.1 | 0.25 | 11.4 |
| 018 | High | 50 | 1930 | 12.8 | 10.6 | 14.7 | 13.4 | 0.34 | 15.3 |
| | Medium | | 1852 | 12.5 | 10.3 | 14.6 | 13.4 | 0.33 | 14.5 |
| | Low | | 1375 | 10.2 | 8.2 | 13.9 | 12.9 | 0.27 | 9.7 |
| 020 | High | 50 | 2017 | 13.7 | 11.2 | 14.6 | 13.4 | 0.37 | 16.5 |
| | Medium | | 1965 | 13.4 | 11.0 | 14.5 | 13.3 | 0.36 | 16.0 |
| | Low | | 1444 | 10.9 | 8.7 | 13.8 | 12.9 | 0.29 | 10.6 |

**NOTE:** Air Conditions: EDB/EWB 24.4/17.2°C Water Conditions: EWT/LWT 5.5/14.4˚C ΔT: 8.9˚C

***- - For other design conditions, please apply the selection program to finalize your applications - -***

## 42CT MOTOR DATA (AC)

| Model | Unit Size | Power Supply (V-Ph-Hz) | Fan Speed | Fan Speed (rpm) 3 Row | Nominal Power Output (W) | Power Input (W) 3 Rows | Motor Pole | Running Amps 3 rows | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 42CT | 03 | 230-1-50 | Hi | 1126 | 24 | 70 | 4 | 0.30 | * Total motor amps and watts shown for units with 2 motors (size 08 to 14). |
| | | | Med | 1048 | | 60 | | 0.27 | |
| | | | Low | 959 | | 49 | | 0.23 | |
| | 04 | | Hi | 1167 | 30 | 79 | 4 | 0.34 | |
| | | | Med | 1078 | | 67 | | 0.30 | |
| | | | Low | 981 | | 55 | | 0.25 | |
| | 05 | | Hi | 1250 | 51 | 101 | 4 | 0.44 | |
| | | | Med | 1118 | | 87 | | 0.40 | |
| | | | Low | 1035 | | 77 | | 0.36 | |
| | 06 | | Hi | 1279 | 55 | 109 | 4 | 0.48 | |
| | | | Med | 1166 | | 98 | | 0.43 | |
| | | | Low | 1075 | | 81 | | 0.36 | |
| | 07 | | Hi | 1309 | 72 | 139 | 4 | 0.61 | |
| | | | Med | 1156 | | 116 | | 0.52 | |
| | | | Low | 1049 | | 97 | | 0.44 | |
| | 08 * | | Hi | 1183 | 34(x2) | 164 | 4 | 0.72 | |
| | | | Med | 1067 | | 142 | | 0.64 | |
| | | | Low | 960 | | 119 | | 0.55 | |
| | 10 * | | Hi | 1304 | 48 (x2) | 198 | 4 | 0.87 | |
| | | | Med | 1151 | | 175 | | 0.77 | |
| | | | Low | 1060 | | 147 | | 0.65 | |
| | 12 * | | Hi | 1324 | 62 (x2) | 241 | 4 | 1.06 | |
| | | | Med | 1212 | | 215 | | 0.94 | |
| | | | Low | 1098 | | 189 | | 0.84 | |
| | 14 * | | Hi | 1363 | 83 (x2) | 325 | 4 | 1.60 | |
| | | | Med | 1232 | | 263 | | 1.15 | |
| | | | Low | 1106 | | 224 | | 0.98 | |

**Note:** Motor nameplate amps may vary.

# ELECTRICAL DATA (cont')

## 42CET/ CED MOTOR DATA

| Model | Unit Size | Power Supply (V-Ph-Hz) | Fan Speed | Fan Speed (rpm) | Nominal Power Output (W) | Power Input (W) | Motor Pole | Running Amps | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 42CET/ 42CED | 003 | 220/240-1-50 | Hi | 1,320 | 32 | 67 | 4 | 0.27 | * Total motor amps and watts shown for units with 2 motors (size 008 to 012).<br>** Total motor amps and watts shown for units with 3 motors (size 014). |
| | | | Med | 1,190 | | 63 | | 0.23 | |
| | | | Low | 1,080 | | 40 | | 0.19 | |
| | 004 | | Hi | 1,320 | 45 | 89 | 4 | 0.36 | |
| | | | Med | 1,190 | | 83 | | 0.32 | |
| | | | Low | 1,080 | | 45 | | 0.29 | |
| | 005 | | Hi | 1,320 | 70 | 108 | 4 | 0.42 | |
| | | | Med | 1,190 | | 94 | | 0.37 | |
| | | | Low | 1,080 | | 52 | | 0.33 | |
| | 006 | | Hi | 1,320 | 72 | 117 | 4 | 0.50 | |
| | | | Med | 1,190 | | 102 | | 0.42 | |
| | | | Low | 1,080 | | 85 | | 0.38 | |
| | 008 * | | Hi | 1,320 | 55 (x2) | 168 | 4 | 0.71 | |
| | | | Med | 1,190 | | 154 | | 0.61 | |
| | | | Low | 1,080 | | 86 | | 0.53 | |
| | 010 * | | Hi | 1,320 | 70 (x2) | 210 | 4 | 0.83 | |
| | | | Med | 1,190 | | 183 | | 0.68 | |
| | | | Low | 1,080 | | 0 | | 0.46 | |
| | 012 * | | Hi | 1,320 | 72 (x2) | 243 | 4 | 1.20 | |
| | | | Med | 1,190 | | 211 | | 0.96 | |
| | | | Low | 1,080 | | 177 | | 0.84 | |
| | 014 ** | | Hi | 1,320 | 70 (x3) | 332 | 4 | 1.32 | |
| | | | Med | 1,190 | | 274 | | 1.14 | |
| | | | Low | 1,080 | | 194 | | 1.04 | |

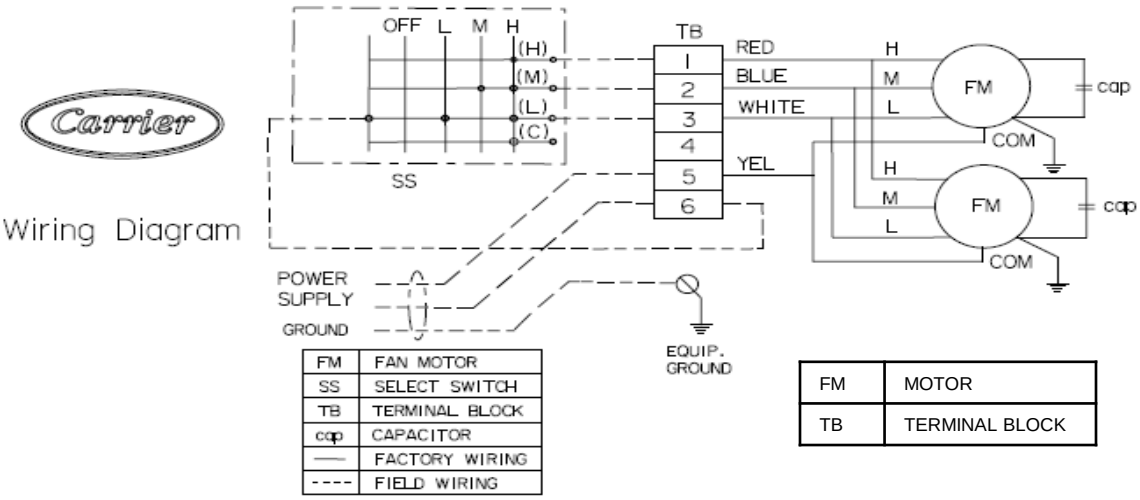
**Note:** Motor nameplate amps may vary.

## 42DC/DCD MOTOR DATA

| Model | Unit Size | Power Supply (V / Ph / Hz) | Fan Speed | Fan Speed (rpm) | Nominal Power Output (W) | Power Input (W) | Motor Pole | Running Amps | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 42DC/DCD | 006 | 220~240/1/50 | Hi | 1,000 | 120 | 223 | 4 | 1.13 | * Total motor amps and watts shown for units with 2 motors (size 012). |
| | | | Med | 870 | | 191 | | 0.68 | |
| | | | Low | 750 | | 111 | | 0.52 | |
| | 008 | | Hi | 1,000 | 120 | 234 | 4 | 1.21 | |
| | | | Med | 870 | | 205 | | 0.75 | |
| | | | Low | 750 | | 115 | | 0.57 | |
| | 010 | | Hi | 1,000 | 200 | 465 | 6 | 2.02 | |
| | | | Med | 870 | | 420 | | 1.65 | |
| | | | Low | 750 | | 236 | | 1.14 | |
| | 012 * | | Hi | 1,000 | 120 (x2) | 432 | 4 | 2.27 | |
| | | | Med | 870 | | 365 | | 1.33 | |
| | | | Low | 750 | | 220 | | 1.04 | |
| | 014 | | Hi | 1,000 | 300 | 630 | 4 | 2.96 | |
| | | | Med | 870 | | 495 | | 2.14 | |
| | | | Low | 750 | | 369 | | 1.88 | |
| | 016 | | Hi | 1,000 | 450 | 669 | 4 | 3.29 | |
| | | | Med | 870 | | 588 | | 2.77 | |
| | | | Low | 750 | | 437 | | 2.36 | |
| | 018 | | Hi | 1,000 | 450 | 704 | 4 | 3.68 | |
| | | | Med | 870 | | 679 | | 3.29 | |
| | | | Low | 750 | | 424 | | 2.35 | |
| | 020 | | Hi | 1,000 | 450 | 700 | 4 | 3.69 | |
| | | | Med | 870 | | 680 | | 3.27 | |
| | | | Low | 750 | | 427 | | 2.36 | |

**Note:** Motor nameplate amps may vary.

## 42CT Series Wiring Diagram (AC Motor)



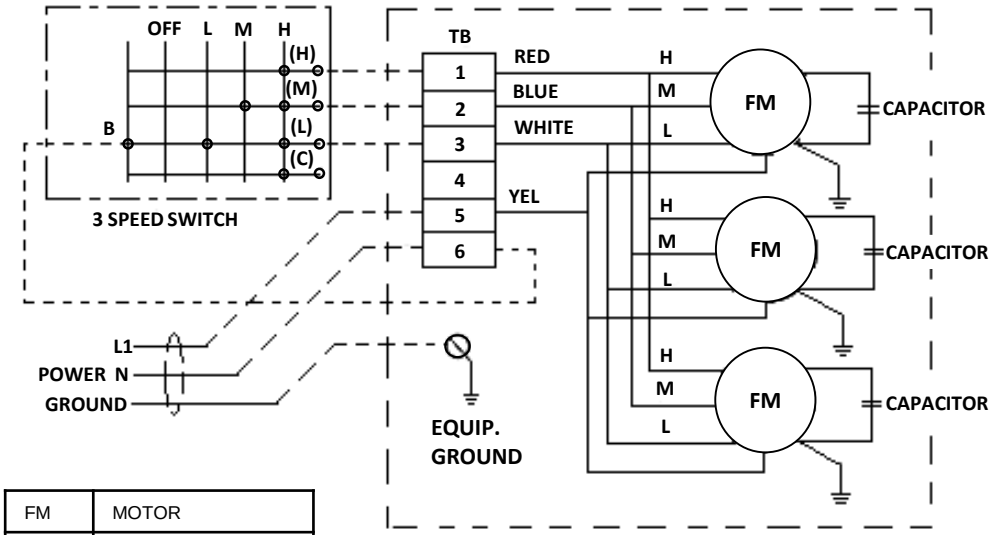

| | |
|---|---|
| FM | FAN MOTOR |
| SS | SELECT SWITCH |
| TB | TERMINAL BLOCK |
| cap | CAPACITOR |
| —— | FACTORY WIRING |
| ---- | FIELD WIRING |

| | |
|---|---|
| FM | MOTOR |
| TB | TERMINAL BLOCK |

**NOTE:**

1. Caution – Disconnect power before servicing.
2. Use 14 AWG, 75˚C MIN, copper conductor.
3. Motor(s) thermally protected.
4. Provide disconnect means and over current protection as required.
5. 42CT-/CTL 03 to 06 are single motor; 42CT/CTL 08 to 14 are double motors.
6. Snap apart carefully at hinge to separate cover from the control box.

## 42CET/CED Series Wiring Diagram (AC Motor)

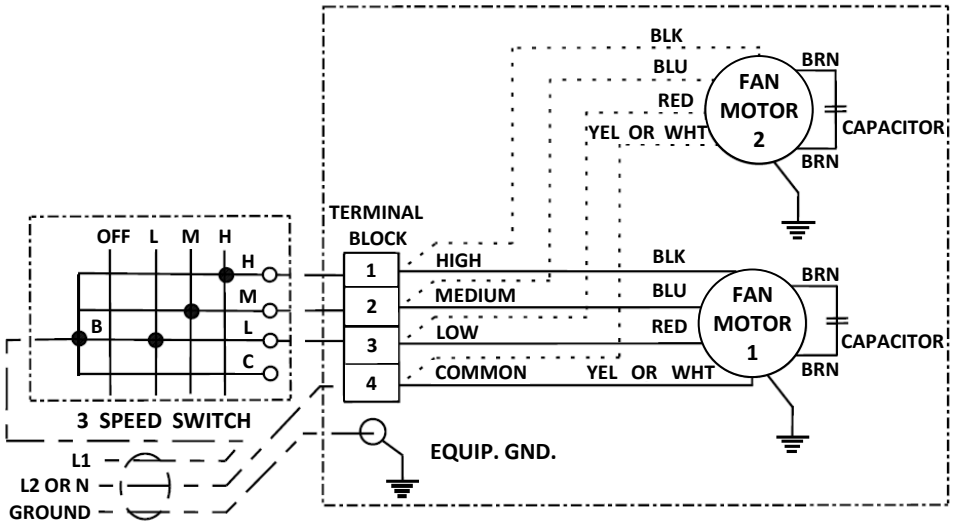



| | |
|---|---|
| FM | MOTOR |
| TB | TERMINAL BLOCK |

**NOTE:**

1. Caution – Disconnect power before servicing.
2. Use 14 AWG, 75˚C MIN, copper conductor.
3. Motor(s) thermally protected.
4. Provide disconnect means and over current protection as required.
5. 42CET 003 to 006 are single motor; 42CET008 to 012 are double motors & 014 is three fan motors.
6. Snap apart carefully at hinge to separate cover from the control box.

## 42DC/DCD 006~012 Wiring Diagram (AC Motor)

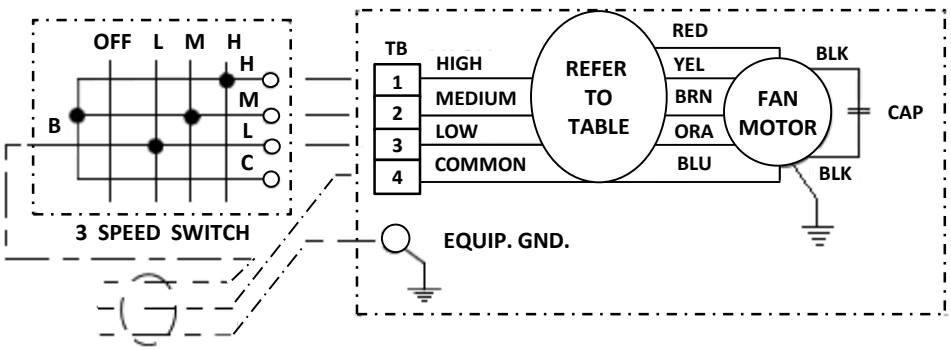



**NOTE**:
1. Caution – disconnect power before servicing.
2. Use 14 AWG, 75˚C MIN, copper conductor.
3. Motor(s) thermally protected.
4. Provide disconnect means & over current protection as required.
5. Unit 42DC/DCD 012 has 2 fan motors, rest are single motor.

**LEGEND:**

FIELD WIRING
FACTORY WIRING IF REQUIRED
FACTORY WIRING

## 42DC/DCD 014~020 Wiring Diagram (AC Motor)




| MODEL | FAN MOTOR SPEED USED / COLOR | | | |
|---|---|---|---|---|
| | HI | MED | LOW | UNUSED |
| 42DC/DCD014 | RED | BROWN | ORANGE | YELLOW |
| 42DC/DCD016 | YELLOW | BROWN | ORANGE | RED |
| 42DC/DCD018 | RED | YELLOW | ORANGE | BROWN |
| 42DC/DCD020 | RED | YELLOW | ORANGE | BROWN |

**LEGEND:**

FIELD WIRING
FACTORY WIRING IF REQUIRED
FACTORY WIRING

**NOTE**:
1. Caution – disconnect power before servicing.
2. Use 14 AWG, 75˚C MIN, copper conductor.
3. Motor(s) thermally protected.
4. Provide disconnect means & over current protection as required.

# HVAC GUIDE SPECIFICATIONS
**Size Range: 300 to 2000 Nominal Cfm**

## PART 1 – GENERAL

### 1.1 System Description

Horizontal, room fan coil unit with furred-in, above ceiling for ducting, or with cabinet for exposed ceiling installations.

### 1.2 Quality Assurance

A. Unit insulation to be MVSS302 compliance and drain pan insulation to be UL94 compliance.
B. Carrier fan coil unit is completely insulated in fan section as well as coil section.
C. Unit cabinet material to be galvanized steel sheet complying to ASTM A653 standard.
D. Each coils are tested with Nitrogen ($N_2$) under water at 400 psig while submerged in water.
E. Factory shall be ISO-9001 2015 certified.

### 1.3 Delivery Storage and Handling

Each unit shall be individually packaged from point of manufacture. Unit shall be handled and stored in accordance with the manufacturer's instructions.

## PART 2 - PRODUCTS

**EQUIPMENT**

### 2.1 General

Factory assembled, horizontal, blow-thru type fan coil for furred-in, exposed ceiling or ducted installations. Unit shall be complete with water coil(s), fan(s), motor(s), drain pan, filters and all required wiring, collars for ducted units. Carrier fan coil unit casing is manufactured from heavy gauge galvanized steel sheet as per ASTM A653 standard. Unit inner surfaces for the cooling coil section and entire return air plenum section (42CET/CED,42DC/DCD) are insulated for better thermal & sound performance.

### 2.2 42CT, CTL Furred-in Units

Base 42CT, CTL unit with factory installed plenum section and cleanable filter as shown on equipment drawings. The plenum shall be rear air return. Shall enclose the fan/motor assemblies. Units have 10mm thick PU insulation on coil top panel and ¼'' PE insulation 28.6kg/m³ density on the drain pan. Unit shall have a removable panel to provide access to fan/motor assemblies and unit identification label. Filter track with quick clip permanent Nylon filter and 18 mm supply collar for duct connection.

### 2.3 42DC/DCD Horizontal Base Unit with Plenum for Concealed Installation

Unit have a factory installed, galvanized steel plenum section and one-in permanent filter. The plenum shall be rear return, lined with 12.7mm PU insulation 20kg/m³ density and plenum box and 6.0mm PE insulation 28.6kg/m³ density on the drain pan, and include a removable bottom panel to provide access to the fan/motor assembly. Filter track with quick clip permanent aluminium filter and 18 mm supply collar for duct connection.

## 2.4 Fan

Direct driven, double width fan wheels with forward curved blades shall be statically and dynamically balanced. Fan scrolls and wheels shall be constructed of galvanized steel.

## 2.5 Coils

Standard base unit shall be equipped with a 3-row or 4-row coil for installation in a 2 pipe system. All coils shall have 7mm (42CT/CET/CED/DC/DCD) seamless copper tubes and "dual sine wave" corrugated aluminum fin plates. Coil fins are mechanically bonded to tube joints. All coils are tested with Nitrogen ($N_2$) underwater at 400psi while submerged in water. Coils performance shall be rated in accordance to AHRI410 Standard (refer to Technical Data for more detail information). Working pressure 1.72 MPa, 0.105 mm fin thickness and 0.24 mm tube wall thickness for 7 mm tube or 0.28 mm tube wall thickness for 3/8" tube.

## 2.6 Drain Pan

Galvanized drain pan covers entire length & width of coil till the headers. Drain pan is powder coated and insulated with ¼" closed cell PE insulation on the outside. The drain pan is with ¾" and $^{7}/_{8}$" male pipe thread connection for 42C ducted series and 42D ducted series furred in model respectively.

## 2.7 Operating Characteristics

A one coil unit installed in a 2-pipe system shall be capable of providing cooling as determined by the operating mode of the central water supply system.

## 2.8 Electrical Requirements

Standard unit shall operate on 220/240v, single phase, 50Hz electric power.42C series internal wiring shall be in flexible metal conduit and 42D series internal wiring shall be in PVC sleeve wire covering.

## 2.9 Motor(s)

Fan motors shall be 3-speed, 220/240v, single phase, 50Hz, permanent split capacitor type, with ball type bearings and oversized oil reservoirs to ensure lubrication. The fan motor(s) shall be equipped with integral automatic temperature reset for motor protection.

| Model | Type | Unit Size | Motor Insulation Class | End Closure Type |
|---|---|---|---|---|
| 42CET/CED | AC | All | E | Open Drip Proof |
| 42CT/CTL | AC | All | B | |
| 42DC/DCD | AC | All | E | Open |

## 3.0 Filter

### 42CET/CED/DC/DCD

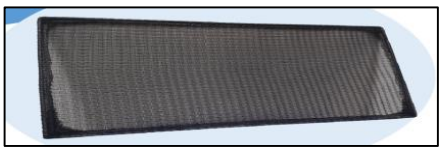
Permanent washable aluminum filters with 21mm thick and 70% gravimetric efficiency as per EN779 Standard.

| Arrestance or Dust Spot Efficiency | US Ashrae 52.2 | European Union EN779 Class | |
|---|---|---|---|
| AFI 65% - 70% | MERV 2 | G2 | 65%≤Am≤85% |

- Refer to factory for MERV 2, G2 efficiency of synthetic fiber filter option.
- Filter access by rear bottom removal.

### 42CT/CTL

Permanent washable Nylon filters (Honeycomb Polyolefin Network) with 6mm thickness and Ø4 frame material hard steel wire (BS EN10244 Class D or JIS G3532 class 2).



- Filter access by rear bottom removal.
- Aluminum Filter MERV 2, G2 filter class are available as a customization option upon request.

**Carrier International Sdn. Bhd. (3385-T)**
Lot 4, Jalan P/6, 43650 Bandar Baru Bangi,
Selangor Darul Ehsan, Malaysia.
Tel: 03-8913 7600

| | |
|---|---|
| **42CT/42CETCED/42DCDCD** | **NIL** |
| **NOVEMBER** | **2020** |

42CT/42CETCED/42DCDCD-K20-3PD supersede 42CETT/42CET/42CED-C19-2PD