

WATER SYSTEMS

Water systems are, without a doubt, the TRANE area of expertise.

Scroll technology has promoted the development of these products which have advantages in complex installations.

The units are small in size, easy to install and reduce maintenance to a minimum. Advantages for the user are good performance and a very low noise level.

A good solution at very competitive installation and purchase costs.





Small Chillers

Features and main characteristics



The 10 and 15-ton air-cooled Cold Generator™ chillers, with Trane direct drive hermetic scroll compressors, has outstanding standard features and additional benefits that make selection, installation, and servicing easy.

Flexibility

Footprint

Central to the design of any project is the operating envelope of the air-cooled packaged chiller. With this in mind, Trane builds the chillers to make the most efficient use of the available installation space. The Trane CGA model chillers are extremely compact. They have the lightest weight, the smallest footprint, and the lowest silhouette of any chiller in the industry.

Less Weight

These lightweight models afford less stress on building supports and greater handling ease.

Installation

Installation time and effort are reduced when dealing with a significantly smaller and lighter unit. In addition, having electrical and water connections on the same side of the unit and a single-point main power connection serves to make installation easier. The unit arrives at the jobsite fully assembled, tested, charged and ready to provide chilled water.



Trane's 20-60 ton chillers offer the same time-tested and proven control technology that is applied to the IntelliPak™ Air Cooled rooftops.

Superior control makes the IntelliPak a truly advanced chiller.

Other Standard Features

- Trane 3-D™ Scroll compressors
- Advanced motor protection
- 300 psi waterside evaporator Evaporator insulation (¾-inch Armaflex II or equivalent)
- Evaporator heat tape (thermostat controlled)
- Condenser coil guards
- Operation down to 30°F without additional wind baffles or head pressure control
- Loss of flow protection
- Packed stock availability
- Control Power Transformer
- Low ambient lockout
- Plain English (Spanish/French) Human Interface display
- Smart Lead/Lag operation
- Integrated chilled solution pump control
- Selectable process or comfort control algorithm
- External auto/stop
- Electronic low ambient damper control integrated into UCM

Enhanced Controls

IntelliPak™ Chiller Unit Control Module (UCM)

Microprocessor Control

The brain of the 20 through 60 ton air-cooled chiller is its Unit Control Module (UCM). The UCM is an innovative, modular microprocessor control design, which coordinates the actions of the chiller in an efficient manner, providing stand-alone operation of the unit.

Access to the unit controls is via a Human Interface (HI) Panel, a standard component of the IntelliPak chiller. This panel provides a high degree of control. Superior monitoring capability and unmatched diagnostic information is provided through a 2 line 40 character per line, English language display. There are no diagnostic "codes" requiring a translation key for interpretation. All system status information and control adjustments can be made from the onboard Human Interface Panel.



Remote Human Interface (RHI) — The optional Remote Human Interface (RHI) performs the same functions as the Human Interface, with the exception of the service mode. The RHI can be used with up to 4 air-cooled chillers from a single panel.

LIQUID CHILLERS

 10 - 60 TR



These are products offering easy outdoor installation thanks to their small size. They have all of the latest TRANE technological advances : electronic control, low-speed fans, etc. And these are technologies which ensure their reliability, operating silence, compactness and respect for the environment.

FOR WHOM? FOR WHAT?

This range of products is ideal for air-conditioning applications of a residential type (e.g. villas and apartments) or for buildings within the service sector (banks, offices, hotels ...) containing more than 3 or 4 rooms requiring air-conditioning.

They can be used together with indoor units such as console/ceiling, cassette or fan-coil installations.

These products are also widely used for process applications.



TRANE'S ADVICE

This product is to be recommended for the air-conditioning of a building where :

- there are more than three or four zones*
- only one outdoor installation is allowed*
- a very low sound level is required.*

LIGHT COMMERCIAL RANGE



CGA

R22 10 - 60 TR

Air-cooled liquid chiller Axial fan



General Data — 10–60 Ton Units

	10 Ton	15 Ton	20Ton	25Ton	30Ton	40Ton	50Ton	60Ton
	CGA120	CGA180	CGAF-C20	CGAF-C25	CGAF-C30	CGAF-C40	CGAF-C50	CGAF-C60
Compressor Data								
Model	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Quantity	2	2	2	1/1	2	4	2/2	4
Nominal Tons per Compressor	5	7.5	10	10/15	15	10	10/15	15
Evaporator								
Nominal Size (Tons)	10	15	20	25	30	40	50	60
Water Storage Capacity (Gallons) ²	1.4	1.5	11.7	10.7	16.3	13.8	21.0	37.8
Min. Flow Rate (GPM)	12.0	18.0	24	30	36	48	60	72
Max. Flow Rate (GPM)	36.0	54.0	72	90	108	144	180	216
Max EWT At Start-Up — Deg F ³	100	100	108	108	108	108	108	108
Condenser								
Nominal Size (Tons)	10	15	20	25	30	40	50	60
Number of Coils	1	2	1	2	2	2	2	2
Coil Size (ea., Inches) ⁴	28 x 108	28 x 83	61 x 71	45 x 71/35 x 71	56 x 70	56 x 70	57 x 96	57 x 96
Number of Rows	2	2	3	3	3	3	4	4
Subcooler Size (ea., Inches)	4 x 108	4 x 83	10 x 71	14 x 71	9 x 70	9 x 70	9 x 96	9 x 96
Condenser Fans								
Quantity	1	2	2	3	4	4	6	6
Diameter (Inches)	28	26	26	26	26	26	26	26
CFM (Total)	8,120	11,600	15,000	21,650	29,200	29,200	42,300	40,700
Nominal RPM	1100	1100	1140	1140	1140	1140	1140	1140
Tip Speed (Ft/Min)	8060	7490	7750	7750	7750	7750	7750	7750
Motor HP (ea.)	1.0	1/2	1.0	1.0	1.0	1.0	1.0	1.0
Drive Type	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct
Minimum Outdoor Air Temperature Permissible For Mechanical Cooling¹								
Standard Ambient Control Unit (°F)	50	50	30	30	30	30	30	30
Standard Ambient w/Hot Gas Bypass (°F)	60	60	40	40	40	40	40	40
Low Ambient Option (°F)	0	0	0	0	0	0	0	0
Low Ambient Control w/Hot Gas Bypass(°F)	15	15	10	10	10	10	10	10
General Unit								
Unload Steps	100-50	100-50	100-50	100-60-40	100-50	100-75-50-25	100-80-60-30	100-75-50-25
No. of Independent Refrig. Circuits	2	2	1	1	1	2	2	2
Refrigerant Charge (lbs. R22/Circuit)	8.25	11.5	40.5	54.0	72.0	38.0	47.0	67.0
Oil Charge (Pints/Circuit)	4.1	7.5	8.0	8.0/14.0	14.0	8.0	8.0/14.0	14.0

*Unloading steps depend upon which compressor is lead compressor.

Notes:

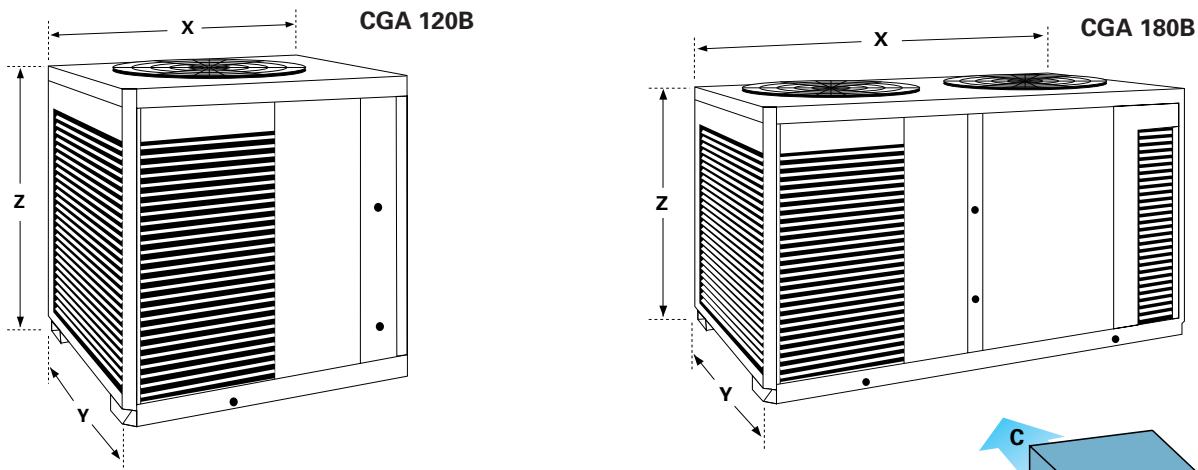
¹ Minimum start-up ambient based on unit at minimum step of unloading and a 5 mph wind across the condenser.

² Includes piping internal to chiller.

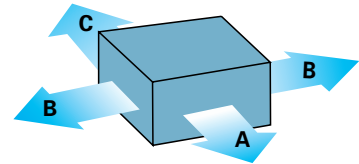
³ At 95° F ambient.

⁴ Does not include subcooling portion of coil.

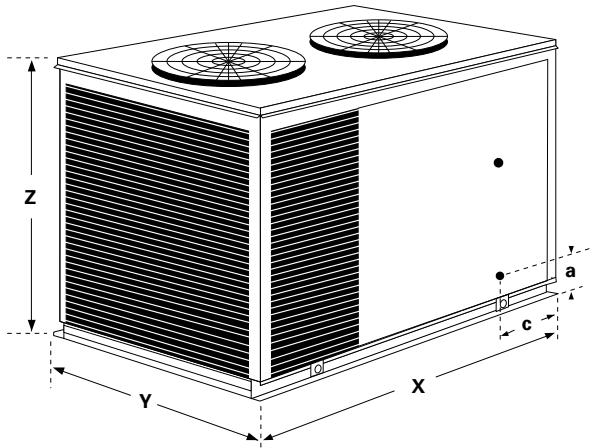
CGA 120 -150



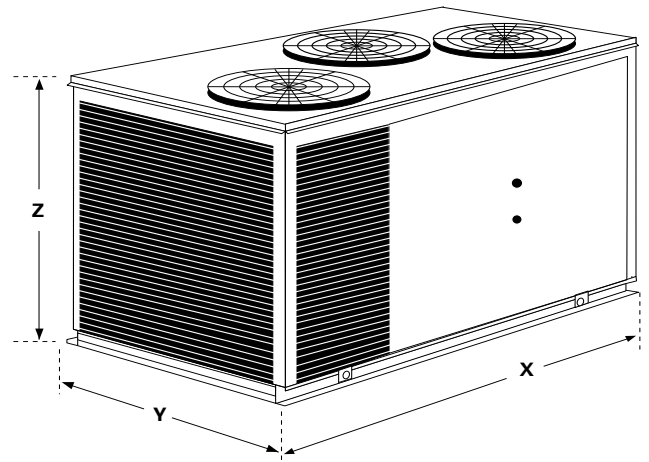
Minimum clearance around the perimeter of the unit is 3 feet.



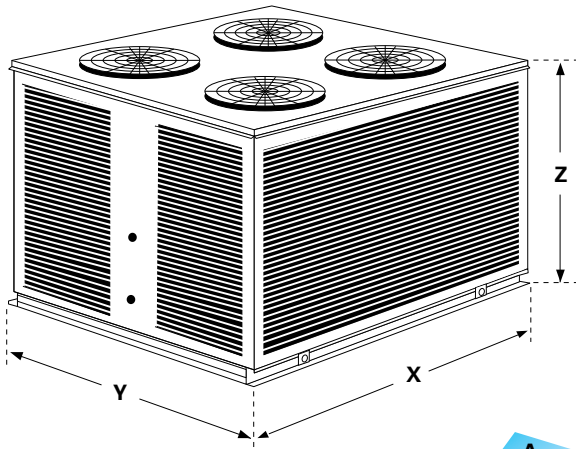
Model and size	CGA 120B	CGA 180B
Width x depth x height (X x Y x Z) (mm)	1300 x 983 x 964	2240 x 983 x 983
Weight (lb)	529	788
Evaporator Connection Type	NPTF	NPTF
Water Connection diameter (in)	1½	2



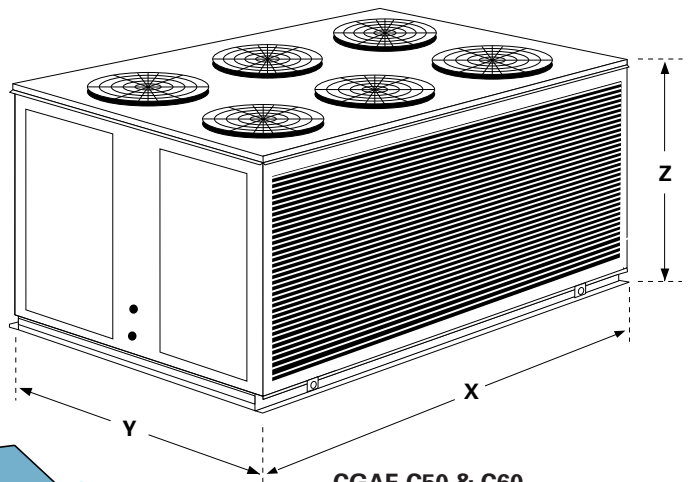
CGAF-C20



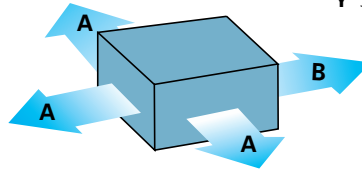
CGAF-C25



CGAF-C30 & C40



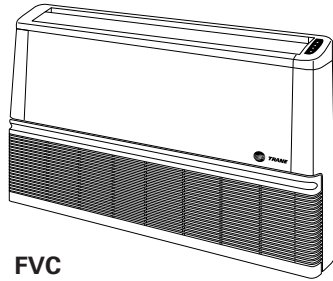
CGAF-C50 & C60



Model and size		CGAF	C20	C25	C30	C40	C50	C60
Dimensions	Length (X)	(mm)	2242	2242	2242	2242	2892	2892
	Width (Y)	(mm)	1527	1527	2245	2245	2245	2245
	Height (Z)	(mm)	1588	1727	1854	1854	1854	1854
	Clearance (A)	(mm)	2438	2438	2438	2438	2438	2438
	Clearance (B)	(mm)	1067	1067	1067	1067	1067	1067
Operating weight		(lbs)	2308	2563	3708	3944	4738	6474
Evaporator	Connection type		NPS Female				Grooved Pipe	
	Water connection diameter	(Inch)	2	2	2½	2½	3	4

Chilled water terminals

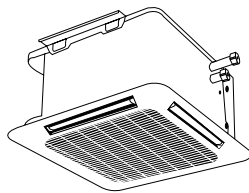
The water terminal range offers an ideal solution for all installation types. Comfort and silence are the key words for all this units. They can be fitted either on the floor or on the ceiling, visible or integrated in a false ceiling. Thanks to this solution using a hydraulic network, the installation becomes easier.



FVC

Capacity (MBH)

	04	06	08	10	12	14	16	20
(1)	11	17.2	25.5	29.4	35.7	42.7	50	56.9



CWS

Capacity (MBH)


	16	18	20	24	28	32	40
(1)	16	18	20	24	28	32	40



(1) 7/12°C Entering/Leaving water temp., 27/19°C DB/WB air temp. at medium speed.



CFEA/CWCS

 1 - 5 TR



AQUA STYLUS

The only visible parts of an installation are the chilled water terminals and even they know how to be discrete.

They can be integrated perfectly into the look of the room through installation in small spaces or false ceilings.

Hydronic heating is available in CFEA models.

FOR WHOM? FOR WHAT?

Trane offers two configuration which adapt to different building constraints.

Ceiling installation terminals, installed in false ceilings, an obvious solution for equipping offices, buildings ...



CWCS

TRANE'S ADVICE

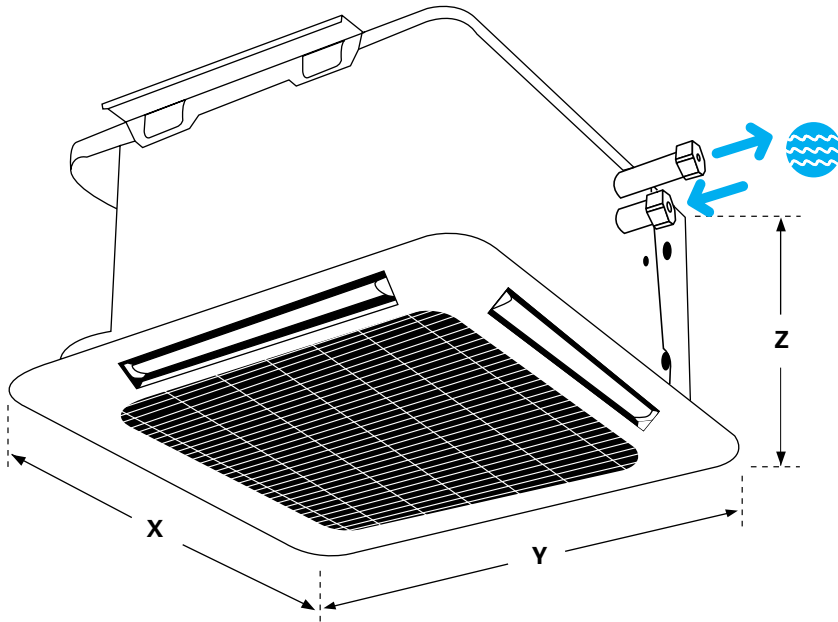
In order to choose the type and quantity of terminals needed, it is necessary to check carefully the air-conditioning profile.

CWCS 16 - 40

1.3 - 3.3 TR



Chilled water blower unit -Cassette type



Main features :

Popularity

- One dimension for all sizes
- 3/4" water connection same as general fan coil unit

Four-Direction below

Cover maximum area

Low Noise Design

Air-Foil blade centrifugal fan, high efficiency and quiet. Four walls coil even the air flow and reduce sound

Auto water pump

Auto drain water detection and pump out of drain pan

Filter

Easily clean PP Wavy filter

Model	Dimensions (mm)			Net weight (kg)
	X	Y	Z	
CWCS 16	840	840	340	26
CWCS 18	840	840	340	26
CWCS 20	840	840	340	29.5
CWCS 24	840	840	340	29.5
CWCS 28	840	840	340	29.5
CWCS 32	840	840	340	32
CWCS 40	840	840	340	32
Front panel	950	950	22	6

Model		CWCS 16	CWCS 18	CWCS 20	CWCS 24	CWCS 28	CWCS 32	CWCS 40
Cooling capacity ¹	(MBH)	16	18	20	24	28	32	40
Power supply		Single phase 220V / 50Hz; 220 V / 60Hz						
Fan		Centrifugal air foil fan / 135C thermal cutout						
Air flow high	CMM	17	21	17.5	21	27	26	34
Standard function		Drain pump; InfraRed Remote Control; PP waving filter						
Water								
Rated flow	LPM	13.5	15.2	16.5	20.9	23.2	27.2	34.9
Pressure drop	kg/cm2	0.5	0.6	0.2	0.4	0.6	0.5	0.5
Connection	inch	3/4" FPT inlet/outlet						
Drain pipe	inch	3/4" smooth plastic						

¹ Capacity test condition high speed; entering air 27 DB / 19.5 EB; chilled water entering 7C, leaving 12C.

LIGHT COMMERCIAL RANGE



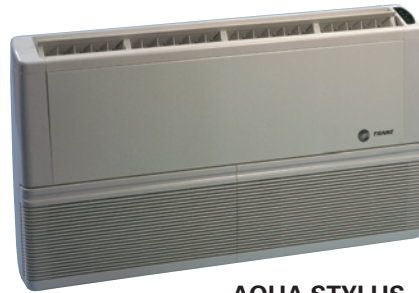
CFEA 1 - 5 TR AQUASTYLUS

Main features :

- Comfort and Reliability**
- Full Capacity and Energy Savings.
 - Washable Filter.
 - Low Maintenance.
 - Attractive Style.
 - Effective Air Discharge.
 - 3 Minute Anti-Recycle Timer helps to preserve the life of system components.
 - Optional Electric Heater offers a better selection of the right unit to meet your needs.
 - **NEW** hydronic heat option.
 - Power Failure Recovery saves settings during a power failure and restarts the system automatically when power resumes.

Flexibility

- Aquastylus' convertible design allows for flexibility in installation. Aquastylus may be installed under the ceiling, low on the wall, or on the floor, depending on the space available in your room.



AQUA STYLUS

Water Temperature Rise (F)

Unit Size	EWT Degree	10			
		TC	SC	GPM	PD
04	40	14.5	9.8	2.9	7.9
	45	11.0	8.3	2.2	4.8
	50	7.7	7.0	1.5	2.6
06	40	22.1	14.5	4.4	8.1
	45	17.2	12.3	3.4	5.2
	50	12.3	10.4	2.5	2.9
08	40	32.0	20.5	6.4	12.5
	45	25.5	17.5	5.1	8.3
	50	18.6	14.6	3.7	4.7
10	40	37.5	24.2	7.5	7.1
	45	29.4	20.5	5.9	4.6
	50	21.0	17.1	4.2	2.5
12	40	44.4	28.0	8.9	9.5
	45	35.7	23.9	7.1	6.4
	50	26.2	19.9	5.2	3.7
14	40	54.6	36.4	10.9	19.2
	45	42.7	31.2	8.5	12.3
	50	31.2	26.6	6.2	7.0
16	40	63.5	42.2	12.7	22.9
	45	50.0	36.3	10.0	14.8
	50	36.9	31.0	7.4	8.6
18	40	71.7	46.4	14.3	13.3
	45	56.9	39.7	11.4	8.7
	50	41.6	33.4	8.3	4.7

TC = Total Capacity, MBh

SC = Sensible Capacity, MBh

GPM = Water Flow, Gallon per Minute

PD = Water Pressure Drop, ft of water

Notes:

1. Air Entering Coil Conditions are 80/67 in FDB/FWB
2. Cooling capacities are rated at nominal CFM (Hi Fan Speed)
3. EWT = Entering Water Temp (F)

DIMENSIONS (HxWxD)	627x1085x243		627x1085x268		627x1335x268		627x1585x268		627x1585x268		627x1835x268		627x2085x268		627x2085x268	
Uncrated (mm)	627x1085x243		627x1085x268		627x1335x268		627x1585x268		627x1585x268		627x1835x268		627x2085x268		627x2085x268	
WEIGHT (kg)	36		37		45		61		61		72		79		84	
Net (uncrated)	36		37		45		61		61		72		79		84	
Without Electric Heater	36		37		45		61		61		72		79		84	
With Electric Heater	37		38		46		63		63		74		81		87	

GENERAL DATA 220-240/1/50

INDOOR UNITS								
Model	CFEA04CO CFEA04CE(*)	CFEA06CO CFEA06CF(*)	CFEA08CO CFEA08CB(*)	CFEA10CO CFEA10CH(*)	CFEA12CO CFEA12CJ(*)	CFEA14CO CFEA14CJ(*)	CFEA16CO CFEA16CK(*)	CFEA20CO CFEA20CL(*)
Water Flow Rate (gpm)	2.4	3.6	4.8	6.0	7.2	8.4	9.6	12.0
Control Valve	Yes**	Yes**	Yes**	Yes**	Yes**	-	-	- Drain
Connection (in)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Air Flow (Hi/Med/Lo)	425/360/300	425/360/300	600/475/375	850/750/650	850/750/650	1,200/1,050/950	1,350/1,100/975	1,350/1,100/975
CFM @ 0.0 in. wg	1(1/20)	1(1/20)	1(1/10)	2(1/20)	2(1/20)	2(1/10)	2(1/10)	2(1/10)
No Motors (HP)	0.36	0.42	0.56	2x0.54	2x0.54	2x0.69	2x0.69	2x0.69
R.L.Amps	0.48	0.59	0.67	2x0.89	2x0.89	2x2.28	2x2.28	2x2.28
L.R.Amps	0.48	0.59	0.67	2x0.89	2x0.89	2x2.28	2x2.28	2x2.28
Electric Heater Data(*)	2.0	2.5	3.5	4.0 (2 elem.)	5.0 (2 elem.)	5 (2 elements)	6 (2 elements)	7 (2 elements)
Heater Rating (kW)	2.0	2.5	3.5	4.0 (2 elem.)	5.0 (2 elem.)	5 (2 elements)	6 (2 elements)	7 (2 elements)

GENERAL DATA 220-240/1/60

INDOOR UNITS								
Model	CFEA04CO CFEA04CE(*)	CFEA06CO CFEA06CF(*)	CFEA08CO CFEA08CB(*)	CFEA10CO CFEA10CH(*)	CFEA12CO CFEA12CJ(*)	CFEA14CO CFEA14CJ(*)	CFEA16CO CFEA16CK(*)	CFEA20CO CFEA20CL(*)
Water Flow Rate (gpm)	2.4	3.6	4.8	6.0	7.2	8.4	9.6	12.0
Control Valve	Yes**	Yes**	Yes**	Yes**	Yes**	-	-	- Drain
Connection (in)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Air Flow (Hi/Med/Lo)	425/360/300	425/360/300	600/475/375	850/750/650	850/750/650	1,200/1,050/950	1,350/1,100/975	1,350/1,100/975
CFM @ 0.0 in. wg	1(1/20)	1(1/15)	1(1/10)	2(1/15)	2(1/15)	2(1/10)	2(1/10)	2(1/10)
No Motors (HP)	1,080	1,150	1,200	1,350	1,350	1,450	1,450	1,450
Motor Speed (RPM)	220/1/60	220/1/60	220/1/60	220/1/60	220/1/60	220/1/60	220/1/60	220/1/60
V/Ph/Hz	0.48	0.53	0.67	2x0.65	2x0.65	2x0.73	2x0.73	2x0.73
R.L.Amps	0.53	0.59	0.68	2x0.85	2x0.85	2x1.15	2x1.15	2x1.15
L.R.Amps	0.53	0.59	0.68	2x0.85	2x0.85	2x1.15	2x1.15	2x1.15
Electric Heater Data(*)	2.0	2.5	3.5	4.0 (2 elem.)	5.0 (2 elem.)	5 (2 elements)	6 (2 elements)	7 (2 elements)
Heater Rating (KW)	2.0	2.5	3.5	4.0 (2 elem.)	5.0 (2 elem.)	5 (2 elements)	6 (2 elements)	7 (2 elements)

(*) Models with electric heaters have an alphabetic letter in the eight digit, i,e,E,F,B,H,J,K and L.

MCA-Minimum Circuit Ampacity; calculated as follows:125 % of heater R.L.Amps plus the fan motor R.L.Amps.

(**) The control valve is optional for vertical installation only.