



TRANE®

Chilled Water Fan Coil Unit

Model: HFCA

Size 03-14





The Best Choice for Comfort

■ The Best Results

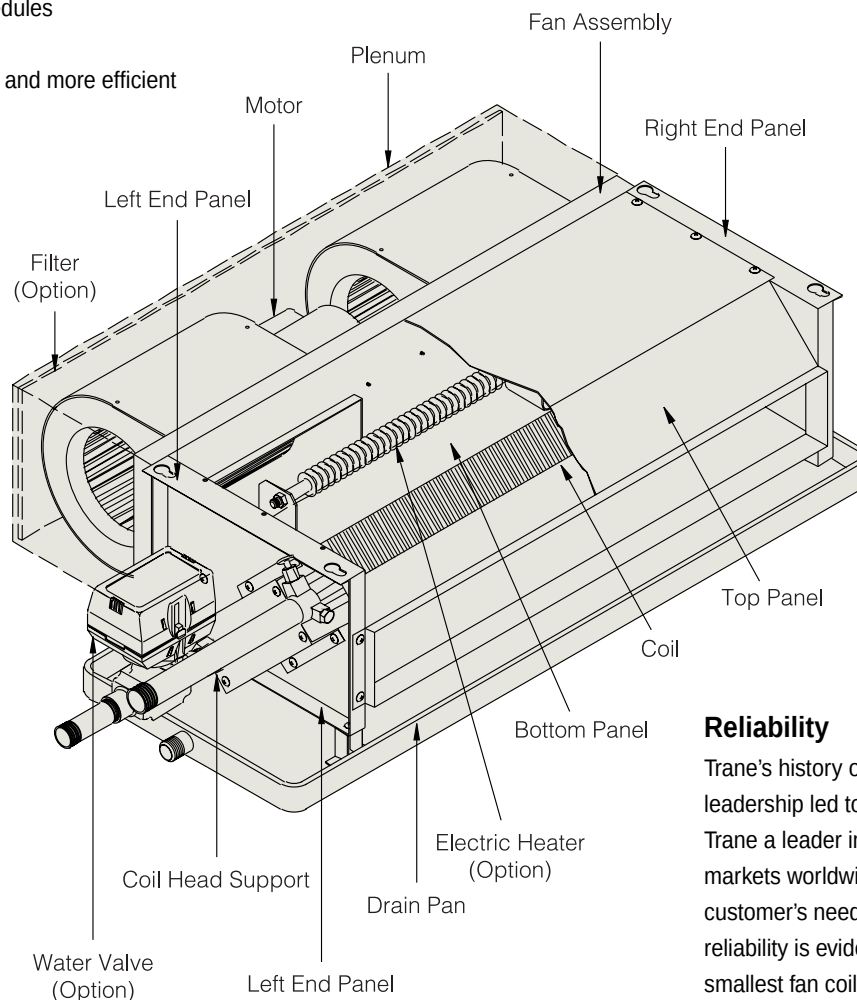
- Quiet Comfort
 - Slope coil avoid air flow perpendicular impact
 - Low noise permanent split capacitor motor
 - Metal fan wheel both statically and dynamically balanced
 - Treaded connection, match up duct collars and keyholes for hangers shorten installation time
 - Quick delivery helps meet tight installation schedules
- Latest Perfection
 - Cleaner, quieter and more efficient fin design.

■ The Best System

- Design for hidden comfort in home, office or shop. HFCA is easily installed in a false ceiling or closet, HFCA is the ideal solution for new or replacement applications.

■ The Best Fit

- Seven sizes to meet capacity requirements while minimizing the size fan coil needed
- One unit provides total comfort requirements: both cooling and heating
- Low height of just 250mm on all sizes means no difficulty in fitting tight ceiling applications



Reliability

Trane's history of innovation and technology leadership led to quality products making Trane a leader in the air conditioning markets worldwide. Trane's commitment to customer's needs for quality, efficiency and reliability is evident from the largest chiller to smallest fan coil.



HFCA Model Nomenclature

H	F	C	A	03	A	N	H	1	N	A	N	B
1	2	3	4	5,6	7	8	9	10	11	12	13	14

DIGIT 1 - Position

H=Horizontal

DIGIT 2 - Unit Type

F=Fan Coil

DIGIT 3 - Casing

C=Concealed

DIGIT 4 - Development Sequence

A=First

DIGIT 5.6 - Size/Nominal CFM

03=300 CFM
04=400 CFM
06=600 CFM
08=800 CFM
10=1000 CFM
12=1200 CFM
14=1400 CFM

DIGIT 7 - Coil Row, Connection Side

A=2 Row Cooling, Right Hand
B=2 Row Cooling, Left Hand
C=3 Row Cooling, Right Hand
D=3 Row Cooling, Left Hand
E=4 Row Cooling, Right Hand
F=4 Row Cooling, Left Hand
G=2 Row Cooling, 1 Row Heating, Right Hand
H=2 Row Cooling, 1 Row Heating, Left Hand
J=3 Row Cooling, 1 Row Heating, Right Hand
K=3 Row Cooling, 1 Row Heating, Left Hand
S=Special

DIGIT 8 - Electric Heat 115V/220V(240V)

N=None
A=1.0 kW(1.2 kW) Heater (Size 03~14)
B=1.5 kW(1.8 kW) Heater (Size 04~14)
C=2.0 kW(2.4 kW) Heater (Size 06~14)
D=2.5 kW(3.0 kW) Heater (Size 08~14)
E=3.0 kW(3.6 kW) Heater (Size 08~14)
F=3.5 kW(4.2 kW) Heater (Size 10~14)
G=4.0 kW(4.8 kW) Heater (Size 12~14)
S=Special

DIGIT 9 - Motor Type

N=Normal Duty Without Temperature Cutout-standard
M=Normal Duty With Temperature Cutout
H=High Static Without Temperature Cutout
G=High Static With Temperature Cutout
S=Special

DIGIT 10 - Voltage/Hertz/Phase

1=220-240/50/1
2=220-240/60/1
5=115/60/1
S=Special

DIGIT 11 - Control Valve Package

N=Standard Piping/Without Valve Package
B=2 Pipe System/With Single 2-Way 2 Position Valve/Without Thermostat
C=2 Pipe System/With Single 2-Way 2 Position Valve/With Cooling Only Thermostat
D=2 Pipe System/With Single 2-Way 2 Position Valve/With Cool/Heat Thermostat
E=2 Pipe System/With Single 3-Way 2 Position Valve/Without Thermostat
F=2 Pipe System/With Single 3-Way 2 Position Valve/With Cooling Only Thermostat
G=2 Pipe System/With Single 3-Way 2 Position Valve/With Cool/Heat Thermostat
H=4 Pipe System/With Two Sets 2-Way 2 Position Valve/Without Thermostat
I=4 Pipe System/With Two Sets 2-Way 2 Position Valve/With Cool/Heat Thermostat
J=2 Pipe System(Cooling Only)/With Single 2-Way 2 Position Valve/With Trane Wall Mounted Zone Sensor/TUC
K=2 Pipe System(Cooling/Heating)/With Single 2-Way 2 Position Valve/With Trane Wall Mounted Zone Sensor/TUC
L=2 Pipe System(Cooling Only)/With Single 2-Way Floating Valve/With Trane Wall Mounted Zone Sensor/TUC
M=2 Pipe System(Cooling/Heating)/With Single 2-Way Floating Valve/With Trane Wall Mounted Zone Sensor/TUC
P=2 Pipe System(Cooling Only)/With Single 3-Way 2 Position Valve/With Trane Wall Mounted Zone Sensor/TUC
Q=2 Pipe System(Cooling/Heating)/With Single 3-Way 2 Position Valve/With Trane Wall Mounted Zone Sensor/TUC
R=2 pipe System(Cooling Only)/With Single 3-Way Floating Valve/With Trane Wall Mounted Zone Sensor/TUC
S=2 Pipe System(Cooling/Heating)/With Single 3-Way Floating Valve/With Trane Wall Mounted Zone Sensor/TUC
T=4 Pipe System/With Two Sets 2-Way 2 Position Valve/With Trane Wall Mounted Zone Sensor/TUC

U=4 Pipe System/With Two Sets 2-Way Floating Valve/With Trane Wall Mounted Zone Sensor/TUC

V=Standard Piping/Without Valve Package/With Remote Control

W=2 Pipe System/With Single 2-Way 2 Position Valve/With Remote Control

X=2 Pipe System/With Two Sets 2-Way Floating Valve/With Remote Control

DIGIT 12 - Drain Pan

A=Std. Galvanized Steel/5mm PE Insulation
B=Long Galvanized Steel/5mm PE Insulation
C=Std. SUS/5mm PE Insulation
D=Long SUS/5mm PE Insulation
E=Std. Galvanized Steel/6mm Non-Flammable BS476, PART7 Insulation
F=Long Galvanized Steel/6mm Non-Flammable BS476, PART7 Insulation
G=Std. SUS/6mm Non-Flammable BS476, PART7 Insulation
H=Long SUS/6mm Non-Flammable BS476, PART7 Insulation
I=Std. Galvanized Steel/10mm PE Insulation
J=Long Galvanized Steel/10mm PE Insulation
K=Std. SUS/10mm PE Insulation
L=Long SUS/10mm PE Insulation
P=Std. Galvanized Steel/9mm Non-Flammable BS476, PART7 Insulation
Q=Long Galvanized Steel/9mm Non-Flammable BS476, PART7 Insulation
S=Special

DIGIT 13 - Plenum/Filters

N=Without Return Plenum/No Filter
A=With Return Plenum/4mm P.P Nylon Filter
B=With Return Plenum/12mm Al Media
C=With Return Plenum/12mm Foam Media
D=With Return Plenum/20mm Al Media
E=With Return Plenum/20mm Foam Filter
F=With Return Plenum/No Filter
S=Special

DIGIT 14 - Design Sequence

B=Second

NOTE:

1. HFCA will not support sweat connection for standard piping.
2. The wiring of thermostat or zone sensor to motors, TUC or valves must be done on job site.
3. None-flammable PU insulation meet the regulation of BS476 part7 class1, Heater option meet BS476 part6 class O.



Performance Data

Cooling Capacity (Example)

Cooling Capacity : kW	Cooling Rows : 3	SH : Sensible Cooling Capacity, kW
EAT : 26.0°C/ 60.0%	Motor Frequency : 50Hz	WPD : Water Pressure Drop, M
ESP : 0 Pa	TH : Total Cooling Capacity, kW	WFR : Water Flow Rate, L / S

Model	Nominal Airflow (CMH)	WTR (°C)	Entering Water Temperature											
			5°C				7°C				9°C			
			SH	TH	WFR	WPD	SH	TH	WFR	WPD	SH	TH	WFR	WPD
03	509	3.0	3.19	5.17	0.41	7.60	2.86	4.43	0.35	5.74	2.54	3.65	0.29	4.03
		5.0	2.92	4.55	0.22	2.47	2.59	3.78	0.18	1.77	2.30	3.02	0.14	1.18
		7.0	2.62	3.85	0.13	1.02	2.32	3.10	0.11	0.69	2.06	2.39	0.08	0.44
04	678	3.0	4.81	7.81	0.62	21.93	4.32	6.72	0.53	16.63	3.84	5.57	0.44	11.80
		5.0	4.45	7.02	0.33	7.35	3.97	5.87	0.28	5.31	3.52	4.74	0.23	3.60
		7.0	4.08	6.13	0.21	3.20	3.63	5.02	0.17	2.23	3.22	3.97	0.14	1.45
06	1018	3.0	5.32	8.58	0.68	9.38	4.78	7.35	0.58	7.06	4.24	6.05	0.48	4.96
		5.0	4.86	7.55	0.36	3.04	4.33	6.27	0.30	2.17	3.85	5.03	0.24	1.46
		7.0	4.39	6.41	0.22	1.26	3.90	5.16	0.18	0.86	3.46	3.99	0.14	0.54
08	1357	3.0	6.92	11.15	0.89	17.68	6.23	9.56	0.76	13.33	5.55	7.88	0.63	9.39
		5.0	6.38	9.90	0.47	5.80	5.69	8.24	0.39	4.16	5.06	6.63	0.32	2.81
		7.0	5.81	8.55	0.29	2.48	5.19	6.97	0.24	1.72	4.62	5.48	0.19	1.12
10	1696	3.0	8.42	13.48	1.07	4.87	7.56	11.50	0.91	3.64	6.71	9.40	0.75	2.53
		5.0	7.60	11.60	0.55	1.52	6.77	9.54	0.46	1.07	5.98	7.53	0.36	0.70
		7.0	6.66	9.27	0.32	0.57	5.85	7.15	0.24	0.36	5.12	5.15	0.18	0.20
12	2036	3.0	10.34	16.56	1.32	8.05	9.30	14.14	1.12	6.03	8.26	11.60	0.92	4.22
		5.0	9.41	14.41	0.69	2.56	8.40	11.93	0.57	1.82	7.46	9.53	0.45	1.21
		7.0	8.43	12.03	0.41	1.03	7.48	9.56	0.33	0.68	6.62	7.25	0.25	0.42
14	2366	3.0	11.19	17.92	1.43	14.15	10.06	15.06	1.24	11.51	8.93	13.15	1.05	8.21
		5.0	10.30	16.10	0.77	4.23	9.17	13.67	0.65	3.32	8.04	11.09	0.53	2.24
		7.0	9.35	14.08	0.48	2.15	8.21	11.49	0.39	1.40	7.13	8.89	0.30	0.91

Spec./ Input Power

Model	03	04	06	08	10	12	14
Nominal Airflow (CMH)	509	678	1018	1357	1696	2036	2366
Input Power (Watts)*							
Hi-Static Motor	88	110	138	180	218	250	317
Normal Motor	73	82	114	132	162	198	226

*Available with 115V/60Hz, 220V/50Hz, or 220V/60Hz

Options:

* Heat Capacity Type

- Hot Water 1Row (kW)

2.86 3.71 4.95 6.16 6.91 7.94 9.26

EWT=55°C; EAT=21°C; WFR=0.3L/S (Hot Water EWT must be below 60°C)

- Electric Sheathed Element

1.0 1.5 2 3 3.5 4 4

Available with high temperature cutout (Electric heater starts when the T_{amb} is below 27°C)

* Plenum/Filters

Return air plenum with filters-washable foam or aluminum

Note: It reserves the right to change design and specification without notice.



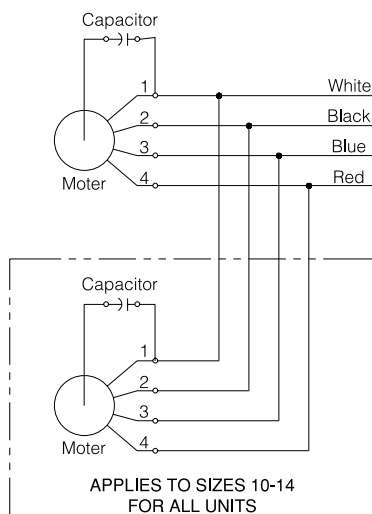
Sound Pressure Level

Motor Type	Unit Model	Octave Band (dB) & Center Frequency (Hz)							
		63	125	250	500	1000	2000	4000	8000
Normal	03	35	48	46	47	44	42	35	31
	04	36	49	47	48	45	43	35	32
	06	39	52	47	48	46	44	37	32
	08	41	54	52	53	50	49	39	38
	10	39	52	51	52	49	46	41	35
	12	44	56	52	53	51	47	41	36
	14	46	57	53	55	52	49	42	37
Hi-Static	03	39	54	52	53	49	48	37	36
	04	39	52	48	50	49	47	39	36
	06	41	55	51	54	51	50	43	38
	08	44	59	58	59	58	55	44	41
	10	42	56	56	58	54	52	47	42
	12	48	61	57	59	57	55	47	40
	14	49	63	58	60	57	56	48	41

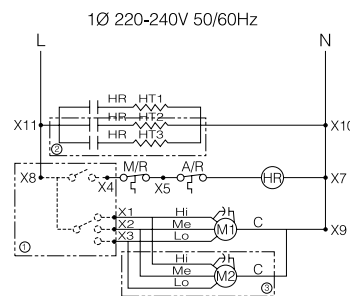
Notes:

- The Data are referenced to 10⁻¹² Watts and obtained based on test standard ARI 885.
- Static Pressure Level:
 - Normal Motor : 3mmAg
 - Hi-Static Motor : 5mmAg
- Above performance determined with hi-speed operating and no ceiling material or other sound attenuating material used.

Wiring Diagram



MOTOR SPEED CONTROL
 White and Black Wires = High Speed
 White and Blue Wires = Medium Speed
 White and Red Wires = Low Speed

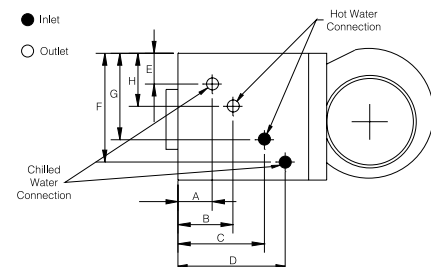


JUNCTION BOX SUPPLIED WITH ALL UNITS WITH ELECTRIC HEAT OPTION

- Field wiring (Thermostat)
 - For multiple heaters unit
 - For 10, 12 unit (two motors)
- HR: Heater Relay
 M/R: Manual reset klaxon
 A/R: Auto reset klaxon
 L: Active power (220-240V)
 N: Neutral (0V)
 X1-X12: Terminals

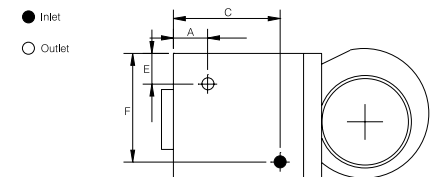
Connection / Piping

Model HFCA Coil Connections



Cooling & Heating Coil Connection Dimensions

Unit Size	3 Row (2 Row Cooling, 1 Row Heating)							
	A	B	C	D	E	F	G	H
03-14	57	91.5	143.5	178	51	181	144	88
Left Hand								
Right Hand								
Unit Size	4 Row (3 Row Cooling, 1 Row Heating)							
	A	B	C	D	E	F	G	H
03-14	56	80	136.5	189	44	160	143.5	94
Left Hand								
Right Hand								



Cooling Connection Dimensions

Unit Size	2 Row Coil				3 Row Coil				4 Row Coil			
	A	C	E	F	A	C	E	F	A	C	E	F
03-14	57	178	51	181	57	178	51	181	41	174	60	176
Left Hand												
Right Hand												

Note:

- Dimension in mm
- 25.4 mm=1 in.

General Information (Features)

Unit Data

- Fabricated with a rigid galvanized steel casing.
- The DIDW centrifugal fans have balanced, galvanized steel, and forward curved blades.
- The fan board and the top of casing have insulation of 6mm thickness, 108 kg/m³ high-density non-flammable PU foam.
- An optional return air plenum is available to allow the connection of a variety of filters.
- IEC 60335 safety certified.

Motor

- Motors are of permanent split capacitor type for maximum efficiency and minimum noise with permanently lubricated, sealed sleeve bearings.
- The motor capacitor is totally enclosed in a metal shield, and attached to the motor. The motor lead-out wires are enclosed in a flexible metal conduit to provide protection against damage.
- Optional ball bearing.
- CE and CAS safety certified.

Coil

- The coil can have 2,3 or 4 rows, with copper tubes mechanically bonded into slit aluminum fin collars.
- Water inlet / outlet connections are 3/4-inch female pipe thread (JIS B 0203-1966). Header assembly is a one-piece casting, which accepts steel pipe directly.
- Coil assembly is tested over 20 kg/cm².
- A manual air vent is fitted with a drain line to the drain pan to avoid any water drips when venting.
- A water drain is located at the bottom of the coil header.

Drain Pan

For maximum security from leaks, standard drain pan is a one-piece stamping with no seam or joint. The insulation material is 5mm thickness, 27 kg/m³ density PE foam. The drain pan has one 3/4-inch male pipe thread (JIS B 0203-1966) connection.

Options

Heater

Two types of heating available from Trane: Hot Water and Electric Sheathed heating Element. Please check mechanical specification for heating capacity.
Meet Australia safety code AS 3102.

Plenum & Filters

S304 Stainless Steel Drain Pan

Blue Fin

The blue coating is a vinyl-epoxy-based coating. Such material, which is under corrosion resistance test ASTM B117, improved corrosion resistance in comparison to uncoated fin stock.

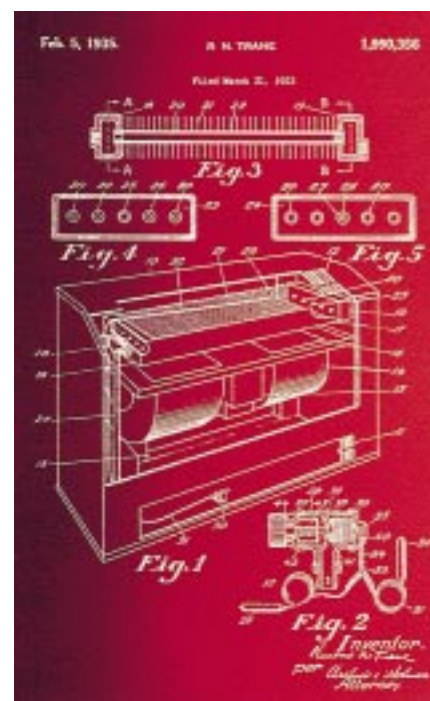
Factory-mounted Control Valve Package

Optional control valve package available as factory built, installed, and tested option. The control and piping package consists of factory-mounted valve, factory-mounted TUC, thermostat and zone sensor according to the type of your assignment. See individual control valve package catalog.

Tracer Summit™ System

The Tracer Summit™ system is design to control a building's climate, lighting, and other controllable devices. Individual HVAC equipment such as HFCA is controlled by Unit Control Modules. Building Control Unit manages these processes, in turn.

*The Trane Fan Coil...
...Invented by Trane
...Perfect by Trane*



Since 1885, Trane has been at the technological forefront of air conditioning. The company's pioneering spirit, commitment to research and pursuit of quality have made it a world leader in the manufacture of water chillers.

Over 60 years ago Trane produced the first fan coil unit and in so doing created a product which is now built worldwide. The universal acceptance of this product has prompted Trane to focus the same engineering experience to the fan coil as given to the refrigeration products.



TRANE®

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An American-Standard Company



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ISO 9002 Qualified factory - Trane Taiwan

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Stocking location	Taipei Taiwan

Since The Trane Company has a policy of continuous product improvement, it reserves the right to change design and specifications without notice.