



Chilled Water Fan Coil Unit

Model: HFCE02~HFCE14

Airflow Range: 200~2400m³/h



Features and Benefits

The Best Choice for Comfort

■ The Best Results

- Quiet Comfort
- Low noise permanent split capacitor motor.
- Metal fan wheel both statically and dynamically balanced.
- Threaded 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 comfort applications at home, office and shop. HFCF is easily installed in a false ceiling or closet, HFCF is the ideal solution for new or replacement applications.

■ The Best Fit

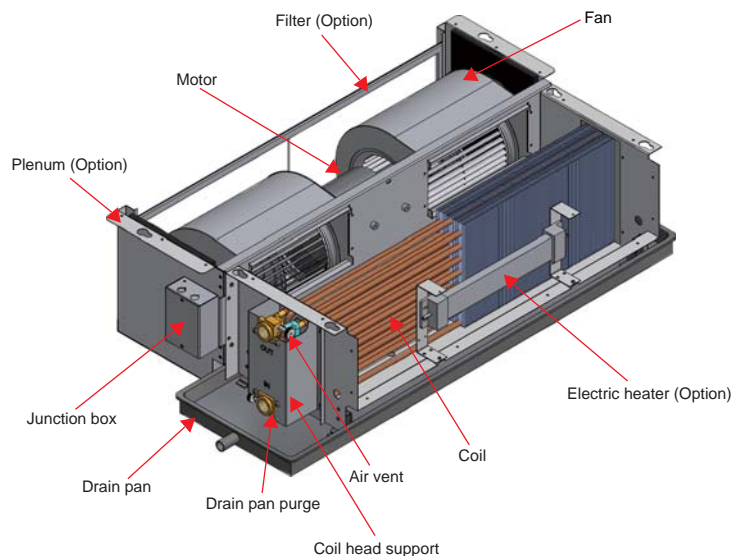
- Nine sizes to meet capacity requirements
- One unit provides total comfort requirements: both cooling and heating
- Low height of just 230mm on all sizes means no difficulty in fitting tight ceiling applications

■ Flexibility

- Easy to change water hand connections on the field.

■ 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.



HFCF Accessories



LCD Thermostat (except for DCBL)



ZN510/520 (for Trane ICS)



Zone Sensor (for Trane ICS)



TDG/Control Options



Water Control Valve

Model Nomenclatures

H F C F 0 3 L 3 N N 1 N A N A N N A
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

- Digit 1:** H = Horizontal
- Digit 2:** F = Fan Coil
- Digit 3:** C = Concealed Type
- Digit 4:** F = Design Sequence
- Digit 5, 6:** Size / Nominal Airflow
 02 = 200 CFM
 03 = 300 CFM
 04 = 400 CFM
 05 = 500 CFM
 06 = 600 CFM
 08 = 800 CFM
 10 = 1000 CFM
 12 = 1200 CFM
 14 = 1400 CFM
- Digit 7:** Connection Side
 L = Left Connection
 R = Right Connection
- Digit 8:** Coil Rows
 2 = 2 Rows Cooling
 3 = 3 Rows Cooling
 4 = 4 Rows Cooling
 A = 2 Rows Cooling, 1 Row Heating
 B = 3 Rows Cooling, 1 Row Heating
- Digit 9:** Electric Heater (Size)
 N = None
 A = 0.5 kW Heater (02)
 B = 1.0 kW Heater (03)
 C = 1.4 kW Heater (04)
 D = 1.6 kW Heater (05)
 E = 1.8 kW Heater (06)
 F = 2.8 kW Heater (08)
 G = 3.2 kW Heater (10)
 H = 3.6 kW Heater (12)
 J = 4.6 kW Heater (14)
- Digit 10:** Motor Type
 N = Normal
 H = High Static
 A = DCBL Normal (w/ LCD Thermostat)
 B = DCBL High Static (w/ LCD Thermostat)
 C = Hermetic Motor Normal Type
 D = Hermetic Motor High Static Type
- Digit 11:** Voltage/Hz/Phase
 1 = 220/50/1
 2 = 220-240/60/1
 3 = 115/60/1
- Digit 12:** Factory Mounted Control / Valve Package
 N = None
 A = 2-pipe, with 2-way Valve
 B = 2-pipe, with 3-way Valve
 C = 4-pipe, with 2-way Valves
 D = 2-pipe, with 2-way Valve & LCD Thermostat
 E = 2-pipe, with 2-way Valve & LCD Thermostat (Configured with VVV System only)
 F = 2-pipe, with 3-way Valve & LCD Thermostat
- G = 4-pipe, with 2-way Valves & LCD Thermostat
 H = 2-pipe, with 2-way Valve & ZN510 w/ Zone Sensor
 J = 2-pipe, with 3-way Valve & ZN510 w/ Zone Sensor
 K = 4-pipe, with 2-way Valves & ZN510 w/ Zone Sensor
 L = 2-pipe, with 2-way Valve & ZN520 w/ Zone Sensor
 M = 2-pipe, with 3-way Valve & ZN520 w/ Zone Sensor
 P = 4-pipe, with 2-way Valves & ZN520 w/ Zone Sensor
 Q = 2-pipe, with 2-way Floating Valve & ZN520 w/ Zone Sensor
 R = 2-pipe, with 3-way Floating Valve & ZN520 w/ Zone Sensor
 S = 4-pipe, with 2-way Floating Valves & ZN520 w/ Zone Sensor
- Digit 13:** Terminal Box
 A = Standard Wiring w/ Terminal Box
 B = Electric Heater Wiring w/ Terminal Box
 C = DCBL Wiring w/ Terminal Box
 D = ZN Wiring w/ Terminal Box
 E = VVV w/ Terminal Box
- Digit 14:** Return Plenum / Filter
 N = None
 A = with Rear Plenum Only
 B = with Rear Plenum/ 6mm Nylon Filter
 C = with Rear Plenum/ 20mm Aluminum Filter
 D = with Bottom Return Plenum Only
 E = with Bottom Return Plenum/ 6mm Nylon Filter
 F = with Bottom Return Plenum/ 20mm Aluminum Filter
- Digit 15:** Drain Pan
 A = STD. Galvanized Steel w/ 7mm PE Insulation
 B = STD. Galvanized Steel w/ 7mm PE Insulation & Extended 200mm
 C = STD. Galvanized Steel w/ 7mm PE Insulation & Extended 310mm
 D = Stainless Steel w/ 7mm PE Insulation
 E = Stainless Steel w/ 7mm PE Insulation & Extended 200mm
 F = Stainless Steel w/ 7mm PE Insulation & Extended 310mm
 G = STD. Galvanized Steel w/ 6mm Non-flammable Close Cell Insulation
 H = STD. Galvanized Steel w/ 6mm Non-flammable Close Cell Insulation & Extended 200mm
 J = STD. Galvanized Steel w/ 6mm Non-flammable Close Cell Insulation & Extended 310mm
- K = Stainless Steel w/ 6mm Non-flammable Close Cell Insulation
 L = Stainless Steel w/ 6mm Non-flammable Close Cell Insulation & Extended 200mm
 M = Stainless Steel w/ 6mm Non-flammable Close Cell Insulation & Extended 310mm
 N = STD. Galvanized Steel w/ 10mm Non-flammable Close Cell Insulation
 P = STD. Galvanized Steel w/ 10mm Non-flammable Close Cell Insulation & Extended 200mm
 Q = STD. Galvanized Steel w/ 10mm Non-flammable Close Cell Insulation & Extended 310mm
 R = Stainless Steel w/ 10mm Non-flammable Close Cell Insulation
 S = Stainless Steel w/ 10mm Non-flammable Close Cell Insulation & Extended 200mm
 T = Stainless Steel w/ 10mm Non-flammable Close Cell Insulation & Extended 310mm
 U = STD. Galvanized Steel w/ 25mm Non-flammable Close Cell Insulation
 V = STD. Galvanized Steel w/ 25mm Non-flammable Close Cell Insulation & Extended 200mm
 W = STD. Galvanized Steel w/ 25mm Non-flammable Close Cell Insulation & Extended 310mm
 X = Stainless Steel w/ 25mm Non-flammable Close Cell Insulation
 Y = Stainless Steel w/ 25mm Non-flammable Close Cell Insulation & Extended 200mm
 Z = Stainless Steel w/ 25mm Non-flammable Close Cell Insulation & Extended 310mm
- Digit 16:** Trane Digital Grille(TDG)
 N = None
 A = with Remote Controller Only
 B = with TDG LCD Thermostat Only
 C = with TDG LCD Thermostat & Remote Controller
 D = with Remote Controller & UV Light
 E = with TDG LCD Thermostat & UV Light
 F = with TDG LCD Thermostat, Remote Controller & UV Light
- Digit 17:** Future Use
 N = None
- Digit 18:** Region
 A = APR
 B = MAIR
 C = LAR



Performance Data

Cooling Capacity (Example)

Cooling Capacity: kW	Cooling Rows : 3	SH: Sensible Cooling Capacity, kW
EAT: 26°C/ 60.0%	Motor Frequency: 50Hz/ 60Hz	WPD: Water Pressure Drop, kpa
ESP: 12/50 Pa (Normal / Hi-Static)	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
02	340	3.0	1.86	3.43	0.27	3.43	1.67	2.99	0.24	2.67	1.47	2.52	0.20	1.96
		5.0	1.70	3.07	0.15	1.16	1.50	2.60	0.12	0.85	1.29	2.08	0.10	0.57
		7.0	1.50	2.59	0.09	0.48	1.28	2.04	0.07	0.31	1.07	1.47	0.05	0.17
03	510	3.0	2.86	5.29	0.42	11.14	2.57	4.64	0.37	8.73	2.27	3.94	0.31	6.49
		5.0	2.67	4.88	0.23	3.92	2.37	4.19	0.20	2.97	2.07	3.45	0.16	2.09
		7.0	2.45	4.37	0.15	1.80	2.14	3.62	0.12	1.26	1.81	2.79	0.10	0.80
04	680	3.0	3.81	7.00	0.56	6.58	3.42	6.11	0.49	5.12	3.02	5.17	0.41	3.76
		5.0	3.51	6.33	0.30	2.24	3.11	5.39	0.26	1.67	2.70	4.36	0.21	1.14
		7.0	3.14	5.47	0.19	0.96	2.71	4.38	0.15	0.65	2.39	3.39	0.12	0.39
05	850	3.0	4.48	8.22	0.65	10.43	4.02	7.18	0.57	8.11	3.55	6.08	0.48	5.97
		5.0	4.15	7.48	0.36	3.58	3.68	6.39	0.30	2.68	3.21	5.21	0.25	1.86
		7.0	3.77	6.60	0.22	1.59	3.27	5.38	0.18	1.10	2.79	4.09	0.14	0.68
06	1020	3.0	5.21	9.53	0.76	14.26	4.67	8.32	0.66	11.07	4.14	7.03	0.56	8.13
		5.0	4.82	8.66	0.41	4.88	4.28	7.39	0.35	3.65	3.74	6.02	0.29	2.52
		7.0	4.40	7.67	0.26	2.18	3.84	6.28	0.21	1.52	3.29	4.82	0.16	0.95
08	1360	3.0	6.70	12.17	0.97	4.18	6.00	10.55	0.84	3.22	5.30	8.84	0.70	2.33
		5.0	6.06	10.70	0.51	1.36	5.35	8.96	0.43	0.99	4.61	7.04	0.34	0.64
		7.0	5.20	8.58	0.29	0.51	4.60	6.73	0.23	0.32	3.80	4.13	0.14	0.13
10	1700	3.0	8.39	15.26	1.21	7.48	7.52	13.26	1.05	5.77	6.65	11.15	0.89	4.20
		5.0	7.67	13.63	0.65	2.49	6.80	11.53	0.55	1.84	5.92	9.26	0.44	1.24
		7.0	6.83	11.61	0.40	1.04	5.89	9.19	0.31	0.68	4.97	6.65	0.23	0.39
12	2040	3.0	9.91	18.02	1.43	11.15	8.89	15.67	1.24	8.61	7.87	13.18	1.05	6.28
		5.0	9.11	16.17	0.77	3.74	8.08	13.71	0.65	2.77	7.06	11.08	0.53	1.88
		7.0	8.22	14.05	0.48	1.62	7.15	11.31	0.39	1.09	6.12	8.49	0.29	0.66
14	2380	3.0	11.34	20.57	1.63	15.19	10.18	17.89	1.42	11.72	9.02	15.05	1.20	8.54
		5.0	10.44	18.50	0.88	5.10	9.28	15.70	0.75	3.78	8.12	12.71	0.61	2.58
		7.0	9.48	16.20	0.55	2.23	8.29	13.15	0.45	1.53	7.14	10.04	0.34	0.95

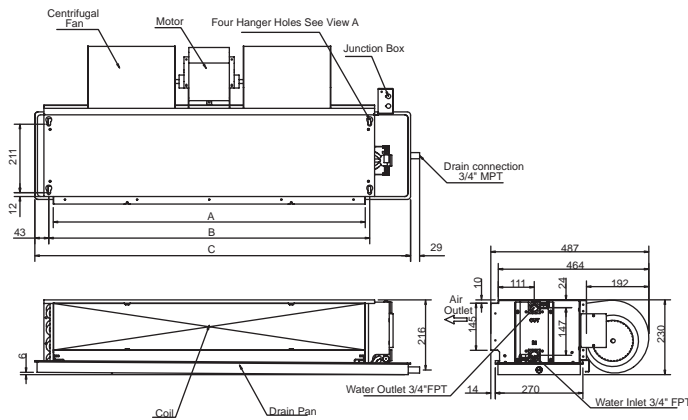
Spec./ Input Power

Model	02	03	04	05	06	08	10	12	14
Nominal Airflow(CMH)	340	510	680	850	1020	1360	1700	2040	2380
Input Power(Watt)*									
Hi-Static Motor	44	56	64	85	92	145	176	216	286
Normal Motor	23	29	43	67	77	117	142	173	195
*Available with 115V/60Hz, 220V/50Hz, or 230V/60Hz									
Options									
*Heat Capacity Type(KW)									
Hot Water 1Row	1.63	2.42	2.97	3.55	3.97	5.02	6.06	6.89	7.64
EWT=55°C; EAT=21°C; WFR=0.3L/S									
Electric Sheathed Element	0.5	1.0	1.4	1.6	1.8	2.8	3.2	3.6	4.6
* Plenum / Filters	Return air plenum with filters — PP nylon or aluminum								

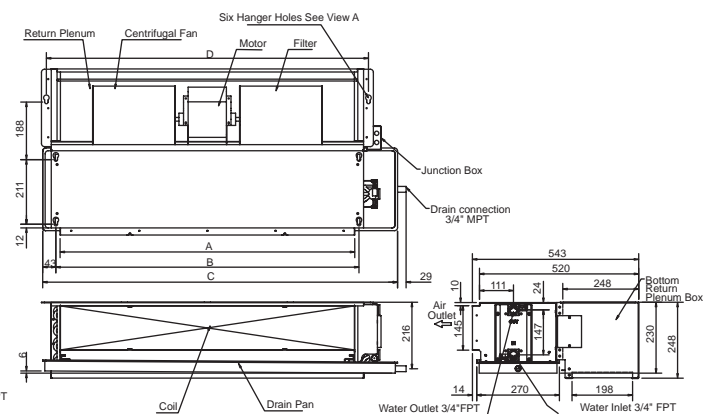
Note: Trane has right to reserve any changes without notice

Dimension Data and Weight

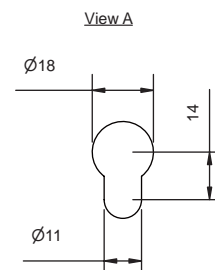
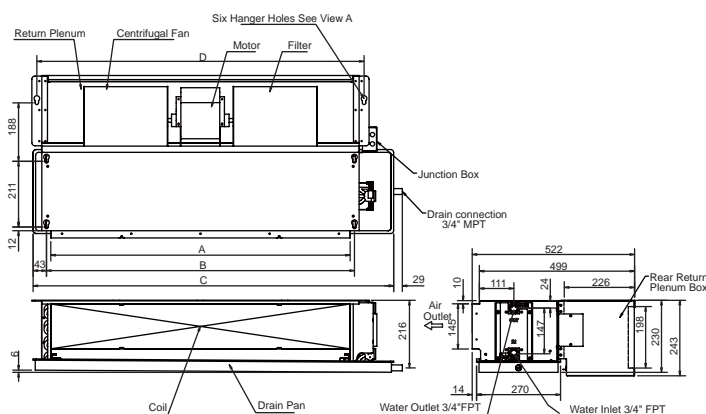
HFCF Standard Unit



HFCF Bottom Return Plenum and Filter



HFCF Rear Return Plenum and Filter



Notes:

1. Dimension in mm.
2. Above shown with right hand coil connection.
3. Wiring connection is located at the same side as coil and drain connections.
4. Wiring and junction box will be supplied by Trane.

Unit Model	Dimension (mm)				Motor Qty.	Fan Qty.	Net Weight (kg) without Plenum Box and Filter						Net Weight (kg) with Plenum Box and Filter					
							Normal Static			High Static			Normal Static			High Static		
	A	B	C	D			2 Row	3 Row	4 Row	2 Row	3 Row	4 Row	2 Row	3 Row	4 Row	2 Row	3 Row	4 Row
HFCF02	458	485	648	547	1	1	12	13	14	13	14	15	15	16	17	16	17	18
HFCF03	693	720	883	782	1	2	16	18	20	17	19	21	20	22	24	21	24	25
HFCF04	793	820	983	882	1	2	17	19	21	18	20	22	21	23	25	22	25	26
HFCF05	913	940	1103	1002	1	2	19	21	23	20	22	24	24	26	28	24	28	28
HFCF06	963	990	1153	1052	1	2	20	22	24	21	23	25	25	27	29	25	29	29
HFCF08	1243	1270	1433	1332	2	3	28	30	32	29	31	33	34	36	38	35	38	39
HFCF10	1493	1520	1683	1582	2	4	30	33	36	32	35	38	37	40	43	39	43	45
HFCF12	1663	1690	1853	1752	2	4	35	38	41	36	39	42	43	46	49	44	49	50
HFCF14	1793	1820	1983	1882	2	4	37	40	43	38	41	44	45	48	51	46	51	52

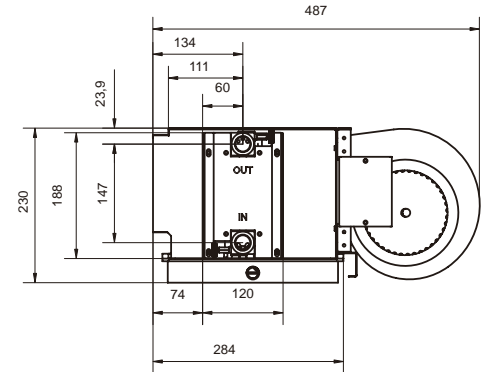
Sound Pressure Data/ Wiring Diagram/ Coil Connection

Sound Pressure Data

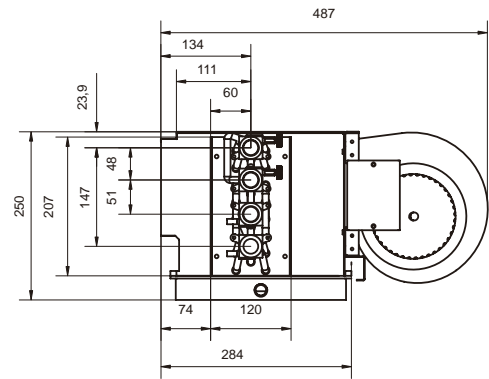
Unit Model	Motor Type Speed	Normal								Hi-Static							
		Octave Band (dB) & Center Frequency (Hz)								Octave Band (dB) & Center Frequency (Hz)							
		63	125	250	500	1000	2000	4000	8000	63	125	250	500	1000	2000	4000	8000
02	High	20	15	25	27	31	29	17	10	19	24	28	33	37	37	25	13
	Med	20	14	19	23	23	19	11	9	19	22	26	31	34	33	21	11
	Low	19	13	15	19	21	11	11	9	19	15	17	23	24	22	12	9
03	High	12	12	21	28	28	24	14	11	16	24	28	35	38	37	27	13
	Med	10	8	13	19	18	14	13	11	11	19	22	29	31	29	17	9
	Low	13	4	6	15	16	11	12	11	6	13	14	22	23	18	11	9
04	High	16	17	25	31	33	32	18	9	15	26	33	38	41	39	28	15
	Med	17	16	18	25	25	21	11	9	17	21	25	32	34	31	19	10
	Low	17	16	15	19	19	11	10	8	13	12	16	23	24	17	11	9
05	High	18	19	34	35	37	37	25	12	14	29	33	39	42	41	31	19
	Med	20	17	27	31	33	30	18	12	12	23	29	33	36	34	23	11
	Low	29	24	28	31	32	27	24	21	12	16	20	27	28	22	13	9
06	High	17	19	32	36	39	38	27	14	17	31	34	39	43	42	33	20
	Med	19	14	22	28	29	26	15	9	21	26	30	35	38	37	26	13
	Low	17	11	14	22	22	14	10	9	14	19	23	30	31	26	16	10
08	High	19	23	32	37	39	41	31	16	18	32	36	41	45	46	38	25
	Med	26	20	28	32	33	34	21	10	17	27	31	37	41	41	31	18
	Low	19	18	25	27	28	25	14	10	16	21	25	32	34	32	22	12
10	High	18	22	33	39	43	42	31	19	17	32	36	43	47	46	38	26
	Med	19	17	25	32	34	31	19	11	16	26	30	37	40	38	29	16
	Low	18	14	15	24	23	16	11	9	14	19	22	29	30	26	16	12
12	High	19	26	37	42	45	45	35	21	19	36	41	47	50	49	41	28
	Med	15	25	32	38	39	37	26	16	17	32	37	44	46	45	35	21
	Low	13	19	24	30	31	26	15	10	14	24	29	35	37	35	23	11
14	High	16	28	41	45	47	47	38	25	22	38	43	49	52	51	44	31
	Med	15	25	36	40	42	40	29	16	21	32	37	42	45	44	34	21
	Low	14	22	27	36	34	30	18	11	20	23	27	33	34	30	19	13

Note: Above performance determined with both Normal static motor and Hi-static motor operating at 0 Pa ESP (no ducting, ceiling enclosed or other sound attenuating materials used).

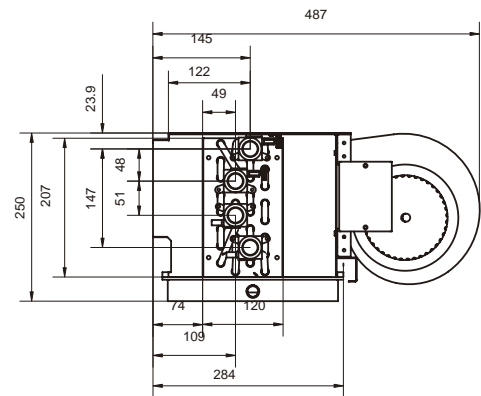
Piping Connection



2, 3, 4 Row

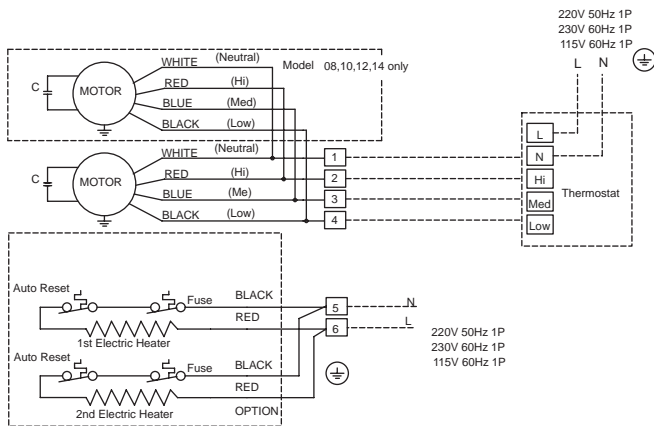


2+1 Row



3+1 Row

Wiring Diagram



Note: Contactor or relay shall be installed by others for an electric heater option.

Product Specification

■ General

- 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 coil casing were insulated with high-density non-flammable foam.
- The coil casing shall be provided with collars, with screw holes for supply air duct and plenum box connections.

■ Fan and Motor

- Motors are of permanent split capacitor type for maximum efficiency and minimum noise with permanently lubricated, sealed ball bearings.
- Fan motor shall be capable of providing at least 3 fan speeds (LOW-MEDIUM-HIGH) and built-in with thermal cut-out to prevent overloading at any speed and duty of the fans.
- 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, and factory wired to a terminal block inside a factory installed junction box.
- An optional item of hermetic fan motor shall be identical performance as typical under rated of IP21 or equivalent.
- The motor shall be with CE and GB safety certified.

■ Coil

- The coil shall have 2,3 or 4 rows configuration with seamless copper tubes mechanically bonded into blue aluminum fins and collars.
- The coil shall be designed with bottom accessible for ease of switching coil hands/water connections at jobsite.
- Water inlet /outlet connections shall be with 3/4-inch female pipe thread (GBT19001-2000). Header assembly shall be one-piece brass casting which accepts steel pipe directly.
- Coil assembly shall be tested over 25kg/cm³ (360 psi), no obvious leakage under working pressure at 16kg/cm³ (230 psi).
- A water drain pan purge is located at the bottom of the coil header

■ Drain Pan

- The drain pan shall be thermally insulated galvanized steel, pretreated with epoxy resin coating at an inner surface.
- For maximum security from leaks, drain pan shall be one-piece stamping with no seam or joint.
- The drain pan shall have galvanized steel male with 3/4-inch connection.
- The drain pan shall be removable and have a slight fall towards the drain connection.

Options

■ Heater

- Either hot water heating or positive temperature coefficient (PTC) electric heater is available as for heating option.

■ Plenum & Filters

- The filter shall be selected with permanent, dry type, washable nylon or flameproof aluminum foil.
- Bottom return air plenum/ rear return air plenum.

■ Stainless Steel Drain Pan

- The material shall have graded SUS 304 or equivalent.

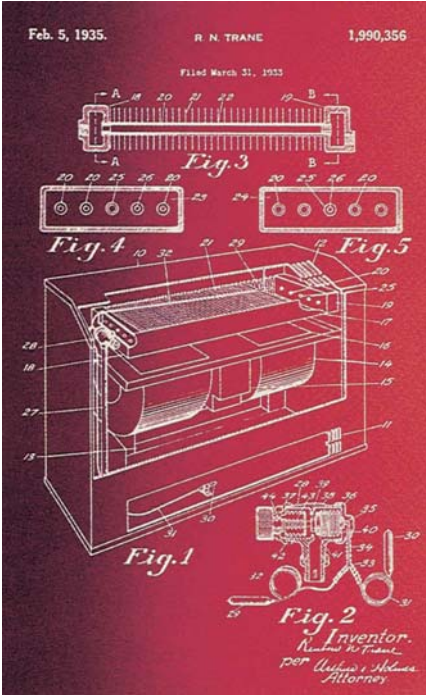
■ Factory-mounted Control valve Package

- Factory mounted 2-way or 3-way control valve with fitting to the coil, it shall be tested against the maximum working pressure of coil.
- Factory mounted and functional test done for Trane ICS fan coil controller. All cables are wired to a terminal block inside a factory installed junction box.

■ Trane Building Management System

- The Tracer Summit™ system is designed for monitoring and control air conditioning system, lighting and other controllable devices for building.
- Such Building Control Unit (BCU) manages all Unit Control Modules (UCM) for different zones management. Each UCM performs scan on couples of HFCF equips ZN controller in specific zone and regularly report to the central system.

*The Trane Fan Coil...
 ...Invented by Trane
 ...Perfected 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 70 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.



ISO 9001 / ISO 14001 / OHSAS18001 Qualified Factory - Trane Zhongshan

Literature Order Number UNT-PRC010-EN

Date June 2008

Supersedes New

www.trane.com

For more information, contact your local Trane office or e-mail us at comfort@trane.com

Trane has a policy of continuous product and data improvement and reserves the right to change design specific ations without notice.