



**TRANE®**



# HFCD

*Chilled Water Fan Coil Units  
Concealed Type 1,400-2,000 CFM  
HFCD Series 50 Hz  
for District Cooling Plant*



# Performance Data Cooling Capacities Ceiling Models HFCD14-20

TC = Total Capacity, MBH  
 SC = Sensible Capacity, MBH  
 GPM = Water Flow Rate, gpm  
 PD = Water Pressure Drop, Ft of Water  
 EWT = Entering Water Temperature  
 WTR = Water Temperature Rise

## Cooling Capacity for 3-Row Coil

	EWT Unit Rated WTR			Entering Air Temp - EDB/EWB (F)											
	Airflow			72/61				80/67				84/71			
	(F)	Size (CFM)	(F)	TC	SC	GPM	PD	TC	SC	GPM	PD	TC	SC	GPM	PD
40	14	1400	8	39.10	29.80	9.73	6.45	58.91	38.40	14.67	13.16	73.73	42.29	18.36	19.48
			10	34.79	27.92	6.93	3.56	54.43	36.50	10.84	7.73	69.23	40.42	13.79	11.76
			15	20.34	20.07	2.70	0.69	41.80	31.44	5.55	2.39	56.43	35.38	7.50	4.02
	16	1600	8	42.56	32.85	10.59	7.47	64.08	42.22	15.95	15.24	80.26	46.40	19.98	22.59
			10	38.02	30.88	7.57	4.15	59.08	40.12	11.77	8.91	75.21	44.34	14.98	13.58
			15	24.12	23.02	3.20	0.92	45.78	34.82	6.08	2.79	61.30	38.92	8.14	4.64
	18	1800	8	49.92	37.95	12.43	11.52	74.66	48.69	18.59	23.25	93.16	53.47	23.19	34.25
			10	45.29	35.92	9.02	6.56	69.37	46.44	13.82	13.77	87.83	51.27	17.49	20.80
			15	31.99	30.35	4.25	1.76	55.71	40.92	7.40	4.59	73.36	45.54	9.74	7.40
	20	2000	8	53.26	40.90	13.26	12.89	79.68	52.38	19.84	26.04	99.47	57.46	24.76	38.42
			10	48.36	38.78	9.63	7.35	73.91	49.95	14.72	15.38	93.64	55.07	18.65	23.26
			15	34.78	33.11	4.62	2.03	59.47	44.16	7.90	5.14	77.97	48.93	10.36	8.22
43	14	1400	8	32.36	26.89	8.06	4.59	51.31	35.23	12.78	10.23	66.06	39.13	16.45	15.89
			10	28.31	25.20	5.64	2.46	46.85	33.42	9.34	5.89	61.38	37.28	12.23	9.42
			15	15.01	14.81	2.00	0.40	34.52	28.69	4.59	1.70	48.19	32.34	6.40	3.02
	16	1600	8	35.30	29.74	8.79	5.34	55.72	38.75	13.88	11.80	71.80	42.97	17.88	18.38
			10	31.08	27.98	6.19	2.89	50.86	36.80	10.13	6.79	66.57	40.92	13.26	10.85
			15	16.44	16.21	2.18	0.47	38.04	31.91	5.05	2.00	52.42	35.67	6.97	3.50
	18	1800	8	41.56	34.31	10.35	8.28	65.16	44.68	16.23	18.11	83.54	49.53	20.80	27.99
			10	37.27	32.52	7.43	4.63	59.86	42.56	11.93	10.53	78.00	47.34	15.54	16.72
			15	24.57	23.75	3.27	1.15	46.80	37.50	6.22	3.35	63.21	41.76	8.40	5.65
	20	2000	8	44.36	37.06	11.05	9.27	69.44	48.13	17.29	20.24	89.10	53.25	22.19	31.33
			10	39.90	35.20	7.95	5.21	63.74	45.85	12.70	11.75	83.06	50.89	16.55	18.65
			15	27.06	25.74	3.60	1.30	50.10	40.60	6.66	3.77	67.23	44.96	8.93	6.29
45	14	1400	8	28.14	25.12	7.01	3.58	46.18	33.14	11.50	8.45	60.74	37.03	15.13	13.63
			10	24.39	23.61	4.87	1.89	42.03	31.47	8.41	4.82	55.93	35.18	11.15	7.96
			15	13.27	13.09	1.76	0.33	29.94	27.02	3.98	1.32	42.73	30.40	5.68	2.44
	16	1600	8	30.78	27.86	7.67	4.18	50.14	36.51	12.49	9.75	65.95	40.67	16.43	15.73
			10	26.90	26.28	5.36	2.23	48.07	34.74	9.61	5.56	60.58	38.64	12.07	9.14
			15	14.00	13.82	1.86	0.36	33.21	30.15	4.41	1.57	46.59	33.61	6.19	2.83
	18	1800	8	36.33	32.13	9.05	6.50	58.68	42.09	14.62	14.98	76.90	46.91	19.15	24.03
			10	32.37	30.51	6.45	3.60	54.10	40.13	10.82	8.66	71.19	44.72	14.19	14.15
			15	19.62	19.35	2.61	0.74	41.18	35.43	5.47	2.67	56.55	39.37	7.52	4.62
	20	2000	8	38.85	34.76	9.77	7.30	62.53	45.37	15.57	16.73	81.94	50.45	20.41	26.86
			10	34.76	33.11	6.93	4.07	60.04	43.29	12.01	9.65	75.73	48.09	15.09	15.76
			15	22.19	21.90	2.95	0.92	44.21	38.43	5.88	3.02	60.19	42.47	8.00	5.15
50	14	1400	8	19.60	18.67	4.89	1.88	34.06	28.53	8.49	4.89	46.79	31.84	11.66	8.49
			10	16.45	16.22	3.28	0.94	30.40	27.19	6.06	2.71	42.20	30.21	8.42	4.79
			15	8.92	8.80	1.19	0.16	20.00	19.66	2.66	0.64	29.93	26.08	3.98	1.29
	16	1600	8	21.67	20.61	5.40	2.23	37.06	31.56	9.24	5.66	50.68	35.05	12.63	9.76
			10	18.41	18.16	3.67	1.14	33.25	30.17	6.63	3.17	45.70	33.31	9.12	5.50
			15	9.36	9.24	1.25	0.18	22.72	21.54	3.02	0.80	33.05	29.08	4.40	1.53
	18	1800	8	25.55	24.35	6.37	3.47	43.46	36.27	10.83	8.72	59.42	40.39	14.81	15.05
			10	22.47	22.17	4.48	1.88	39.45	34.80	7.87	4.98	53.96	38.47	10.76	8.58
			15	10.78	10.64	1.43	0.26	28.88	27.52	3.84	1.42	40.88	34.04	5.44	2.59
	20	2000	8	27.54	26.21	6.87	3.95	46.35	39.21	11.56	9.75	63.20	43.53	15.75	16.75
			10	24.32	24.00	4.85	2.15	42.16	37.69	8.41	5.58	57.35	41.47	11.44	9.53
			15	11.17	11.02	1.49	0.28	31.34	29.84	4.17	1.64	43.78	36.91	5.83	2.92

Note : Product design and specification are subject to change without notice.



## Model Nomenclature

<b><u>H</u></b> 1	<b><u>F</u></b> 2	<b><u>C</u></b> 3	<b><u>D</u></b> 4	<b><u>1</u></b> 5	<b><u>4</u></b> 6	<b><u>C</u></b> 7	<b><u>0</u></b> 8	<b><u>0</u></b> 9	<b><u>1</u></b> 10	<b><u>A</u></b> 11	<b><u>A</u></b> 12
<b>Digit 1 - Position</b> H = Horizontal						<b>Digit 8 - Electric Heater</b> 0 = No Electric Heater					
<b>Digit 2 - Unit Type</b> F = Fan Coil						<b>Digit 9 - Future Use</b> 0 = Option					
<b>Digit 3 - Casing</b> C = Concealed						<b>Digit 10 - Voltage / Phase / Hertz</b> 1 = 220 / 1 / 50 2 = 220 / 1 / 60					
<b>Digit 4 - Development Sequence</b> D = Development Sequence						<b>Digit 11 - Plenum / Filter</b> O = Without Return Plenum A = With Return Plenum					
<b>Digit 5,6 - Size / Nominal Airflow</b> 14 = 1,400 CFM 16 = 1,600 CFM 18 = 1,800 CFM 20 = 2,000 CFM						<b>Digit 12 - Design Sequence</b> C = Design Sequence					
<b>Digit 7 - Coil Row, Connection Side</b> C = 3 Row Cooling, Right Hand D = 3 Row Cooling, Left Hand E = 4 Row Cooling, Right Hand F = 4 Row Cooling, Left Hand											

## General Data HFCD 50 Hz

### Product Specification

UNIT MODELS		HFCD14	HFCD16	HFCD18	HFCD20
<b>POWER CONNECTION</b>	V/ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
<b>SYSTEM DATA</b>					
Nominal Airflow	cfm	1,400	1,600	1,800	2,000
Cooling Capacity	Btu/hr	42,000	48,000	54,000	60,000
Water Outlet Connection Size	in	3/4	3/4	3/4	3/4
Water Inlet Connection Size	in	3/4	3/4	3/4	3/4
Water Connection Type		Brazed	Brazed	Brazed	Brazed
<b>COIL</b>					
Fin Type		Corrugate	Corrugate	Corrugate	Corrugate
Fins per inch*					
3-row coil		14	14	14	14
4-row coil		16	16	16	16
Drain Connection Size	in	1/2	1/2	1/2	1/2
<b>FAN</b>					
Fan Type		Centrifugal	Centrifugal	Centrifugal	Centrifugal
Qty		2	2	2	2
Drive Type		Direct	Direct	Direct	Direct
<b>STANDARD FAN MOTOR</b>					
Qty		1	1	1	1
Motor Output Power	W	399	399	450	450
No. of Speed		4	4	4	4
V/ph/Hz		220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
RLA	A	3.11	3.11	3.94	3.94
<b>RETURN AIR PLENUM</b>					
Standard for unit		Yes	Yes	Yes	Yes
Filter		Yes	Yes	Yes	Yes
<b>DIMENSION (HxWxD)</b>					
Packing (Shipping)	mm	490x1,168x782	490x1,168x782	490x1,317x782	490x1,317x782
Unit (Net)	mm	408x1,098x759	408x1,098x759	408x1,251x759	408x1,251x759
<b>WEIGHT</b>					
Unit (Net) 3-Row Coil	kg	49	49	56	56
Unit (Net) 4-Row Coil	kg	52	52	60	60

\* Note: 1. 3-row coil is standard coil  
 2. 4-row coil is optional coil  
 3. Product design and specification are subject to change without notice.

TC = Total Capacity, MBH  
 SC = Sensible Capacity, MBH  
 GPM = Water Flow Rate, gpm  
 PD = Water Pressure Drop, Ft. of Water  
 EWT = Entering Water Temperature  
 WTR = Water Temperature Rise

## Cooling Capacity for 4-Row Coil

EWT (F)	Unit Size	Rated Airflow CFM	WTR (F)	Entering Air Temp - EDB/EWB (F)											
				72 /61				80 /67				84 /71			
				TC	SC	GPM	PD	TC	SC	GPM	PD	TC	SC	GPM	PD
40	14	1400	8	41.51	33.34	10.34	13.90	72.19	48.08	17.97	36.96	89.16	52.86	22.20	53.52
			10	38.18	31.79	7.61	8.12	68.51	45.83	13.65	22.71	85.55	50.80	17.04	33.50
			15	28.77	27.59	3.82	2.44	58.54	41.23	7.78	8.42	75.19	46.07	9.99	13.02
	16	1600	8	54.14	41.33	13.48	22.35	79.30	52.93	19.74	43.56	98.03	58.33	24.41	63.21
			10	50.29	39.46	10.02	13.25	75.08	50.92	14.95	26.65	93.87	56.37	18.70	39.40
			15	39.80	34.55	5.29	4.32	63.95	45.81	8.49	9.82	82.07	51.02	10.90	15.16
	18	1800	8	61.87	46.77	15.40	22.36	90.59	59.92	22.55	43.54	112.00	66.05	27.87	63.15
			10	57.50	44.67	11.45	13.27	85.82	57.65	17.09	26.67	107.30	63.84	21.36	39.40
			15	45.34	39.00	6.02	4.30	73.15	51.87	9.72	9.84	93.89	57.83	12.47	15.19
	20	2000	8	66.92	50.73	16.66	25.63	98.11	64.93	24.42	50.07	121.40	71.50	30.21	72.74
			10	62.09	48.43	12.37	15.16	92.75	62.43	18.47	30.54	116.10	69.05	23.12	45.22
			15	49.23	42.53	6.54	4.95	78.82	56.16	10.47	11.20	101.10	62.45	13.43	17.29
43	14	1400	8	41.51	33.34	10.34	13.90	63.81	43.61	15.89	29.44	80.75	49.02	20.11	44.49
			10	38.18	31.79	7.61	8.12	59.97	41.86	11.95	17.80	76.91	46.83	15.32	27.50
			15	28.77	27.59	3.82	2.44	50.01	37.50	6.65	6.34	66.00	42.12	8.77	10.26
	16	1600	8	45.48	37.17	11.32	16.30	69.97	48.52	17.42	34.59	88.66	53.97	22.08	52.40
			10	41.82	35.47	8.33	9.51	65.62	46.56	13.07	20.83	84.24	51.98	16.78	32.24
			15	31.90	31.02	4.24	2.91	54.66	41.77	7.26	7.39	71.92	46.70	9.56	11.92
	18	1800	8	51.98	42.05	12.94	16.31	79.96	54.94	19.91	34.60	101.30	61.11	25.23	52.39
			10	47.81	40.13	9.53	9.52	75.03	52.71	14.95	20.85	96.30	58.88	19.19	32.27
			15	36.21	34.98	4.81	2.88	62.51	47.28	8.31	7.40	82.31	52.91	10.94	11.95
	20	2000	8	56.18	45.68	13.99	18.67	86.46	59.54	21.53	39.67	109.60	66.16	27.30	60.19
			10	51.64	43.62	10.29	10.88	80.99	57.11	16.14	23.83	104.00	63.69	20.73	36.93
			15	39.54	38.28	5.25	3.35	67.38	51.30	8.95	8.44	88.54	57.20	11.76	13.57
45	14	1400	8	36.35	30.96	9.06	10.95	72.19	48.08	17.97	36.96	74.90	45.93	18.66	38.71
			10	33.19	29.53	6.62	6.32	68.51	45.83	13.65	22.71	70.87	44.19	14.12	23.66
			15	24.73	24.64	3.23	1.81	58.54	41.23	7.78	8.42	59.80	39.57	7.95	8.58
	16	1600	8	39.83	34.56	9.92	12.84	63.54	45.62	15.83	29.01	82.14	51.06	20.46	45.50
			10	36.43	33.02	7.26	7.42	59.31	43.76	11.82	17.33	77.52	49.06	15.45	27.68
			15	27.83	27.76	3.60	2.18	48.58	39.25	6.46	5.98	65.13	43.94	8.66	9.96
	18	1800	8	45.53	39.10	11.34	12.85	72.63	51.64	18.09	29.03	93.87	57.81	23.38	45.51
			10	41.62	37.34	8.29	7.42	67.82	49.55	13.52	17.36	88.64	55.56	17.67	27.71
			15	31.55	31.15	4.07	2.14	55.53	44.39	7.38	5.99	74.55	49.76	9.91	9.99
	20	2000	8	49.22	42.51	12.26	14.71	78.48	56.01	19.55	33.24	101.50	62.60	25.28	52.20
			10	45.04	40.67	8.98	8.51	73.16	53.73	14.58	19.81	95.65	60.13	19.06	31.65
			15	34.64	33.98	4.47	2.52	59.94	48.26	7.97	6.83	80.13	53.84	10.65	11.32

Note : Product design and specification are subject to change without notice.

## Product Specifications and Options

### GENERAL

#### HFCD: Concealed Ceiling Models-with Return Plenum

The unit shall be factory installed return air plenum that encloses the fan section of the HFCD unit. No field fabrication is required. Filter should be accessible from return air grille. The return air arrangement is adaptable between bottom or rear return of the plenum. Unit sizes offer a wide capacity range in 1,400-2,000 cfm.

### CASING

Casings are constructed of zinc coated, heavy gauge, galvanized steel. Interior surface of unit panels are acoustically and thermally insulated with Polyethylene foam. Units are furnished as standard with a 1 inch duct collar to facilitate connection of the supply air duct.

### WATER COIL

Coils are of 3 rows or 4 rows design with highly efficient aluminum fins. Aluminum fins are mechanically bonded to seamless copper tubes. All coils are specifically designed and circuited for water use. All coils are tested at 380 psi.

### FAN

Fans are double width, double inlet multiblade centrifugal type. All fans are statically and dynamically balanced.

### DRAIN PAN

Improves accuracy of temperature control, and ready-to-install connection on coil is also provided by Trane factory for easier installation, time saving and money.

### MOTOR

Single-phase motors are suitable for 220/1/50. All motors have 10 percent voltage utilization range and wired to unit terminal box. Motors are designed for long life.

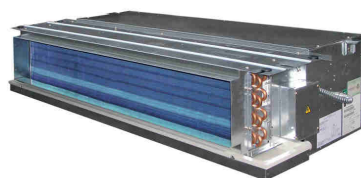
### ROOM THERMOSTAT (OPTION)

Room thermostat has the following features:

- Power - On/Off
- Speeds Fan - Low, Medium, High.
- Temperature adjustment between 16-30 °C.

### MOTORIZED VALVE (OPTION)

The valve is driven by synchronous motor with spring to keep the room temperature within the setting range.



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