



HFCD

Chilled Water Fan Coil Units

Concealed Type
1,400-2,000 CFM
HFCD Series 50 Hz





Model Nomenclature

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

MODEL		HFCD14	HFCD16	HFCD18	HFCD20
Rated - Volts/Ph/Hz		220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
INDOOR COIL					
Face Area	sq ft	3.5	3.5	4.08	4.08
Tube Size	in	3/8	3/8	3/8	3/8
Tube Type		Plain	Plain	Plain	Plain
Fin Type		Precoated Slit	Precoated Slit	Precoated Slit	Precoated Slit
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
FAN					
Fan Type		Centrifugal	Centrifugal	Centrifugal	Centrifugal
Dai. x Width		8 x 9	8 x 9	8 x 10	8 x 10
No. used		2	2	2	2
Drive Type		Direct	Direct	Direct	Direct
FAN MOTOR					
No. of Motor		1	1	1	1
Motor Power	W	394	394	453	453
No. of Speed		4	4	4	4
V/ph/Hz		220/1/50	220/1/50	220/1/50	220/1/50
RLA/LRA		3.33/5.08	3.33/5.08	4.30/6.98	4.30/6.98
RETURN AIR PLENUM					
Type		Standard	Standard	Standard	Standard
No. used		1	1	1	1
Size (W x L x D)	mm	350 x 901 x 25	350 x 901 x 25	350 x 1,054 x 25	350 x 1,054 x 25
DIMENSION (HxWxD)					
Crated (Shipping)	mm	1,168 x 782 x 490	1,168 x 782 x 490	1,317 x 782 x 490	1,317 x 782 x 490
Uncrated (Net)	mm	1,098 x 759 x 408	1,098 x 759 x 408	1,251 x 759 x 408	1,251 x 759 x 408
WEIGHT					
Crated (Shipping)	kg	53	53	60	60
Uncrated (Net)	kg	49	49	55	55

*Note : 1. 3-Row coil is standard coil
2. 4-Row coil is optional coil



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

(F)	Unit Size	Rated Airflow (F)	WTR	Entering Air Temp - EDB/EWB (F)															
				72/61				74/63				80/67				84/71			
				TC	SC	GPM	PD	TC	SC	GPM	PD	TC	SC	GPM	PD	TC	SC	GPM	PD
40	14	1400	8	39.10	29.80	9.73	6.45	45.32	31.76	11.28	8.34	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	40.81	29.82	8.13	4.69	54.43	36.50	10.84	7.73	69.23	40.42	13.79	11.76
			12	30.02	25.90	4.98	2.00	35.87	27.75	5.96	2.72	49.65	34.54	8.24	4.78	64.53	38.52	10.71	7.53
	16	1600	8	42.56	32.85	10.59	7.47	49.24	34.93	12.26	9.63	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	44.44	32.88	8.85	5.44	59.08	40.12	11.77	8.91	75.21	44.34	14.98	13.58
			12	33.09	28.82	5.49	2.36	39.27	30.73	6.52	3.18	53.99	38.05	8.96	5.52	69.98	42.24	11.62	8.67
	18	1800	8	49.92	37.95	12.43	11.52	57.69	40.37	14.36	14.82	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	52.62	38.18	10.48	8.52	69.37	46.44	13.82	13.77	87.83	51.27	17.49	20.80
			12	40.36	33.81	6.70	3.90	47.43	35.99	7.87	5.15	63.97	44.22	10.62	8.66	82.28	49.02	13.66	13.43
	20	2000	8	53.26	40.90	13.26	12.89	61.52	43.47	15.32	16.57	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	56.08	41.12	11.17	9.51	73.91	49.95	14.72	15.38	93.64	55.07	18.65	23.26
			12	43.26	36.61	7.18	4.39	50.65	38.86	8.41	5.78	68.10	47.59	11.31	9.66	87.59	52.67	14.54	14.97
43	14	1400	8	32.36	26.89	8.06	4.59	38.07	28.66	9.48	6.09	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	33.71	26.87	6.72	3.33	46.85	33.42	9.34	5.89	61.38	37.28	12.23	9.42
			12	23.79	23.36	3.95	1.32	28.92	24.96	4.80	1.85	42.21	31.60	7.01	3.56	56.41	35.36	9.37	5.89
	16	1600	8	35.30	29.74	8.79	5.34	41.39	31.60	10.31	7.04	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	36.80	29.72	7.33	3.87	50.86	36.80	10.13	6.79	66.57	40.92	13.26	10.85
			12	26.49	26.13	4.40	1.59	31.87	27.76	5.29	2.19	45.96	34.89	7.63	4.13	61.09	38.83	10.14	6.77
	18	1800	8	41.56	34.31	10.35	8.28	48.60	36.48	12.10	19.87	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	43.88	34.53	8.74	6.14	59.86	42.56	11.93	10.53	78.00	47.34	15.54	16.72
			12	32.69	30.64	5.43	2.67	38.90	32.54	3.61	3.61	54.79	40.56	9.10	6.54	72.19	45.09	11.99	10.57
	20	2000	8	44.36	37.06	11.05	9.27	51.81	39.34	12.90	12.14	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	46.81	37.28	9.33	6.87	63.74	45.85	12.70	11.75	83.06	50.89	16.55	18.65
			12	35.21	33.29	5.85	3.04	41.68	35.22	6.92	4.07	58.36	43.75	9.69	7.30	76.74	48.48	12.74	11.76
45	14	1400	8	28.14	25.12	7.01	3.58	33.38	26.73	8.31	4.81	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	29.21	25.06	5.82	2.58	42.03	31.47	8.41	4.82	55.93	35.18	11.15	7.96
			12	19.98	19.72	3.32	0.97	24.63	23.29	4.09	1.39	37.38	29.76	6.21	2.86	50.86	33.30	8.45	4.89
	16	1600	8	30.78	27.86	7.67	4.18	36.34	29.55	9.05	5.57	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	31.99	27.81	6.38	3.02	48.07	34.74	9.61	5.56	60.58	38.64	12.07	9.14
			12	22.58	21.51	3.75	1.20	27.31	25.99	4.54	1.67	40.80	32.95	6.78	3.33	55.11	36.63	9.15	5.62
	18	1800	8	36.33	32.13	9.05	6.50	42.78	34.10	10.66	8.64	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	38.31	32.28	7.64	4.82	54.10	40.13	10.82	8.66	71.19	44.72	14.19	14.15
			12	28.10	26.85	4.67	2.04	33.62	30.45	5.58	2.78	48.84	38.28	8.11	5.32	65.26	42.52	10.84	8.81
	20	2000	8	38.85	34.76	9.77	7.30	45.61	36.80	11.36	9.65	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	40.96	34.94	8.16	5.41	60.04	43.29	12.01	9.65	75.73	48.09	15.09	15.76
			12	30.39	29.03	5.05	2.34	36.13	33.05	6.00	3.15	52.09	41.34	8.65	5.95	69.35	45.74	11.52	9.78
50	14	1400	8	19.60	18.67	4.89	1.88	23.01	22.00	5.74	2.48	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	19.71	18.74	3.93	1.28	30.40	27.19	6.06	2.71	42.20	30.21	8.42	4.79
			12	10.96	10.82	1.82	0.34	15.52	15.30	2.58	0.62	26.59	25.82	4.42	1.56	37.48	28.59	6.23	2.83
	16	1600	8	21.67	20.61	5.40	2.23	25.27	24.13	6.30	2.91	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	21.88	20.78	4.36	1.54	33.25	30.17	6.63	3.17	45.70	33.31	9.12	5.50
			12	11.65	11.49	1.94	0.38	17.75	17.48	2.95	0.78	29.32	28.78	4.88	1.85	40.78	31.63	6.78	3.27
	18	1800	8	25.55	24.35	6.37	3.47	29.87	29.00	7.45	4.55	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	26.40	25.14	5.27	2.48	39.45	34.80	7.87	4.98	53.96	38.47	10.76	8.58
			12	18.02	17.77	3.00	0.93	22.49	21.29	3.74	1.37	35.41	33.34	5.89	2.99	48.79	36.68	8.11	5.22
	20	2000	8	27.54	26.21	6.87	3.95	32.03	31.49	7.99	5.13	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	28.45	27.06	5.68	2.82	42.16	37.69	8.41	5.58	57.35	41.47	11.44	9.53
			12	19.86	19.60	3.30	1.10	24.46	23.13	4.67	1.58	37.99	36.20	6.32	3.38	51.91	39.62	8.63	5.81

Mechanical Specification

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 3/8 inch O.D. seamless copper tubes. All coils are specifically designed and circuited for water use. All coils are tested at 380 psi.

Motorized Valve (Option)

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

Fan

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

Drain Pan

3-layer drain pan is integrally attached to coil casings and ended with drain hose. All pans are galvanized for corrosion resistance and cover the entire coil.

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.
- Fan Speeds - Low, Medium, High.
- Temperature adjustment between 16-30 C

Aeris Gaurd (Option)

Extend life of cooling coil working in corrosion condition. The coating chemical must be qualified Natural Salt Spay Test for 3,000 hours according to ASTM B117 standard.



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