HFCA

Chilled Water Fan Coil Units

HFCA 400-1,200 CFM
Concealed Type
HFCA Series 50 Hz

Model Nomenclature

H	F	C	A	0	4	C	0	0	1	0	A
1	2	3	4	5	6	7	8	9	10	11	12

Digit 1 - Position
H = Horizontal

Digit 2 - Unit Type
F = Fan Coil

Digit 3 - Casing
C = Concealed

Digit 4 - Development Sequence
A = Development Sequence

Digit 5, 6 - Size / Nominal Airflow
04 = 400 CFM
06 = 600 CFM
08 = 800 CFM
10 = 1,000 CFM
12 = 1,200 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

Digit 8 - Electric Heater
0 = No Electric Heater

Digit 9 - Motor Size
0 = Standard Motor

Digit 10-Voltage / Phase / Hertz
1 = 220 / 1 / 50
2 = 220 / 1 / 60

Digit 11 - Plenum / Filter
0 = Without Return Plenum
A = With Return Plenum

Digit 12 - Design Sequence
A = Design Sequence

General Data

Product Specification

MODEL		HFCA04	HFCA06	HFCA08	HFCA10	HFCA12
Rated - Volts/Ph/Hz		220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
System Data						
Nominal Airflow	cfm	400	600	800	1,000	1,200
Cooling Capacity	Btu/h	12,000	18,000	24,000	30,000	36,000
Water Inlet Connection Size	in	5/8	5/8	5/8	5/8	5/8
Water Outlet Connection Size	in	5/8	5/8	5/8	5/8	5/8
Water Connection Size		Brazed	Brazed	Brazed	Brazed	Brazed
INDOOR COIL						
Face Area	sq ft	1.26	1.72	2.11	2.00	2.33
Tube Size	in	3/8	3/8	3/8	3/8	3/8
Fin Type		Slit	Slit	Slit	Louver	Louver
Fins per inch*						
3-Row coil		12	12	15	18	18
4-Row coil		14	15	16	15	15
Drain Connection Size	in	1/2	1/2	1/2	1/2	1/2
FAN						
Fan Type		Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Dai. x Width		6 x 7	6 x 7	6 x 7	7 x 9	7 x 9
No. used		2	2	2	2	2
Drive Type		Direct	Direct	Direct	Direct	Direct
STANDARD FAN MOTOR						
No. of Motor		1	1	1	1	1
Motor Power	W	13	47	59	162	186
No. of Speed		3	3	3	4	4
V/ph/Hz		220/1/50	220/1/50	220/1/50	220/1/50	220/1/50
RLA/LRA		0.20/0.35	0.49/0.71	0.56/0.69	1.36/2.31	1.35/2.41
DIMENSION (H x W x D)						
Crated (Shipping)	mm	295 x 1,000 x 498	324 x 1,000 x 498	324 x 1,160 x 498	335 x 1,158 x 565	335 x 1,311 x 565
Crated with plenum (Shipping)	mm	335 x 1,010 x 565	335 x 1,010 x 565	335 x 1,311 x 565	311 x 1,111 x 641	311 x 1,264 x 641
Uncrated (Net)	mm	230 x 946 x 445	260 x 946 x 445	260 x 1,098 x 445	258 x 1,098 x 531	258 x 1,251 x 531
Uncrated with plenum (Net)	mm	230 x 946 x 510	260 x 946 x 510	260 x 1,251 x 510	300 x 1,098 x 625	300 x 1,251 x 625
WEIGHT						
Crated (Shipping)	kg	21	23	27	29	32
Crated with plenum (Shipping)	kg	26	30	35	40	45
Uncrated (Net)	kg	17	20	23	26	28
Uncrated with plenum (Net)	kg	23	27	32	38	42

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

Performance Data
Cooling Capacities
Models HFCA04-12

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)															
(F)	Size	Airflow	(F)	72/61				74/63				80/67				84/71			
		CFM		TC	SC	GPM	PD	TC	SC	GPM	PD	TC	SC	GPM	PD	TC	SC	GPM	PD
40	04	400	8	11.71	8.69	2.92	9.29	13.56	9.29	3.38	11.99	17.49	11.19	4.35	18.67	21.77	12.33	5.42	27.38
			10	10.61	8.20	2.11	5.28	12.38	8.77	2.47	6.91	16.35	10.70	3.26	11.20	20.64	11.84	4.11	16.80
			12	9.44	7.70	1.57	3.13	11.15	8.24	1.85	4.18	15.11	10.18	2.51	7.07	19.44	11.35	3.23	10.97
			15	7.52	6.90	1.00	1.43	9.13	7.41	1.21	2.00	13.13	9.37	1.74	3.74	17.45	10.55	2.32	6.12
	06	600	8	16.72	12.59	4.16	7.39	19.41	13.45	4.83	9.57	25.11	16.23	6.25	14.99	31.34	17.86	7.80	22.08
			10	15.01	11.84	2.99	4.14	17.58	12.66	3.50	5.44	23.36	15.48	4.65	8.91	29.58	17.13	5.89	13.45
			12	13.16	11.05	2.19	2.39	15.64	11.84	2.60	3.22	21.42	14.67	3.56	5.56	27.75	16.37	4.61	8.71
			15	9.95	9.73	1.32	0.99	12.36	10.50	1.64	1.45	18.34	13.44	2.44	2.86	24.61	15.14	3.27	4.76
	08	800	8	22.75	18.97	5.66	15.49	26.23	20.26	6.53	19.85	33.67	24.36	8.38	30.69	41.77	26.84	10.40	44.80
			10	20.92	18.03	4.17	9.03	24.23	19.23	4.83	11.66	31.67	23.37	6.31	18.58	39.79	25.86	7.93	27.69
			12	18.98	17.06	3.15	5.53	22.20	18.23	3.69	7.26	29.53	22.32	4.90	11.91	37.69	24.84	6.26	18.22
			15	15.77	15.50	2.10	2.71	18.85	16.61	2.50	3.69	26.30	20.78	3.49	6.56	34.27	23.25	4.55	10.39
	10	1000	8	29.42	24.40	7.32	10.45	33.80	25.92	8.41	13.31	43.53	31.20	10.84	20.69	54.30	34.35	13.52	30.47
			10	26.73	23.08	5.33	5.97	30.95	24.54	6.17	7.70	40.55	29.78	8.08	12.31	51.12	32.86	10.18	18.44
			12	23.80	21.68	3.95	3.54	27.93	23.11	4.64	4.67	37.56	28.39	6.24	7.80	47.78	31.35	7.93	11.86
			15	18.67	18.34	2.48	1.57	22.73	20.75	3.02	2.20	32.77	26.25	4.35	4.14	42.77	29.15	5.68	6.58
	12	1200	8	35.88	29.56	8.93	17.25	41.01	31.43	10.21	21.78	52.15	37.89	12.98	33.16	64.38	41.79	16.03	47.99
			10	32.92	28.10	6.56	10.01	37.83	29.87	7.53	12.75	48.85	36.26	9.73	19.91	60.95	40.11	12.14	29.31
			12	29.90	26.64	4.96	6.14	34.64	28.34	5.75	7.92	45.53	34.69	7.56	12.75	57.32	38.40	9.52	19.05
			15	24.86	24.28	3.30	3.00	29.63	25.92	3.91	4.02	40.52	32.35	5.38	7.00	51.81	35.88	6.88	10.74
43	04	400	8	9.72	7.82	2.42	6.64	11.43	8.36	2.85	8.80	15.32	10.27	3.82	14.66	19.59	11.41	4.88	22.51
			10	8.69	7.38	1.73	3.70	10.30	7.89	2.05	4.96	14.12	9.77	2.81	8.58	18.40	10.93	3.67	13.60
			12	7.61	6.94	1.26	2.14	9.11	7.40	1.51	2.91	12.91	9.28	2.14	5.33	17.14	10.43	2.85	8.71
			15	5.71	5.64	0.76	0.88	7.20	6.64	0.96	1.31	11.01	8.55	1.46	2.72	15.01	9.62	1.99	4.66
	06	600	8	13.85	11.34	3.45	5.26	16.30	12.11	4.06	6.99	21.95	14.89	5.47	11.72	28.14	16.54	7.01	18.08
			10	12.25	10.67	2.44	2.88	14.56	11.39	2.90	3.88	20.12	14.14	4.01	6.79	26.31	15.80	5.24	10.84
			12	10.54	9.97	1.75	1.61	12.69	10.64	2.11	2.22	18.25	13.40	3.03	4.16	24.36	15.04	4.05	6.87
			15	7.32	7.22	0.97	0.58	9.50	9.07	1.26	0.91	15.25	12.25	2.03	2.06	21.05	13.80	2.80	3.59
	08	800	8	19.01	17.07	4.73	11.20	22.23	18.25	5.54	14.71	29.60	22.35	7.37	24.22	37.68	24.84	9.38	36.97
			10	17.28	16.22	3.44	6.40	20.34	17.33	4.05	8.50	27.50	21.34	5.48	14.36	35.59	23.85	7.09	22.53
			12	15.45	15.35	2.57	3.83	18.35	16.38	3.05	5.16	25.47	20.40	4.23	9.10	33.35	22.83	5.54	14.56
			15	12.41	12.28	1.65	1.77	15.12	14.89	2.01	2.49	22.27	18.96	2.96	4.86	29.77	21.24	3.96	8.05
	10	1000	8	24.58	22.05	6.12	7.55	28.66	23.45	7.14	9.86	38.17	28.67	9.50	16.26	48.69	31.76	12.13	24.90
			10	22.03	20.84	4.39	4.22	25.91	22.18	5.16	5.59	35.23	27.33	7.02	9.53	45.39	30.29	9.04	14.82
			12	19.25	18.38	3.20	2.42	22.95	20.84	3.81	3.28	32.31	26.04	5.37	5.94	42.09	28.86	6.99	9.41
			15	14.16	13.93	1.88	0.96	17.85	17.41	2.37	1.43	27.58	24.01	3.66	3.04	37.06	26.76	4.92	5.07
	12	1200	8	30.05	26.70	7.48	12.51	34.86	28.45	8.68	16.21	45.81	34.82	11.41	26.13	57.85	38.66	14.41	39.35
			10	27.33	25.43	5.45	7.16	31.82	27.02	6.34	9.33	42.55	33.29	33.29	8.48	54.26	36.99	10.81	23.66
			12	24.48	24.10	4.07	4.29	28.76	25.61	4.78	5.67	39.32	31.82	6.53	9.76	50.62	35.35	8.41	15.17
			15	19.68	19.56	2.62	1.99	23.71	23.36	3.15	2.74	34.43	29.65	4.58	5.22	45.15	32.97	6.00	8.36
45	04	400	8	8.46	7.29	2.11	5.18	10.04	7.78	2.50	6.97	13.82	9.65	3.44	12.15	18.08	10.80	4.50	19.42
			10	7.51	6.90	1.50	2.85	8.96	7.34	1.79	3.87	12.66	9.18	2.52	7.04	16.85	10.32	3.36	11.58
			12	6.52	6.24	1.08	1.62	7.85	6.90	1.30	2.23	11.48	8.73	1.91	4.31	15.53	9.81	2.58	7.28
			15	4.75	4.68	0.63	0.63	6.01	5.73	0.80	0.95	9.66	8.04	1.28	2.16	13.41	9.03	1.78	3.81
	06	600	8	12.04	10.59	3.00	4.10	14.30	11.28	3.56	5.52	19.75	14.00	4.92	9.68	25.93	15.65	6.46	15.56
			10	10.57	9.98	2.11	2.21	12.63	10.61	2.52	3.01	18.00	13.30	3.59	5.56	24.04	14.92	4.79	9.20
			12	8.97	8.56	1.49	1.21	10.88	9.92	1.81	1.69	16.19	12.60	2.69	3.35	21.99	14.15	3.65	5.71
			15	6.17	6.09	0.82	0.43	7.67	7.55	1.02	0.62	13.31	11.54	1.77	1.61	18.73	12.97	2.49	2.91
	08	800	8	16.61	15.90	4.14	8.79	19.62	16.98	4.89	11.74	26.76	21.69	6.67	20.17	34.83	23.51	8.68	31.98
			10	14.99	14.26	2.99	4.97	17.80	16.13	3.55	6.69	24.76	20.08	4.94	11.87	32.66	22.52	6.51	19.25
			12	13.29	13.21	2.21	2.93	15.90	15.25	2.64	3.99	22.78	19.18	3.78	7.45	30.32	21.48	5.04	12.25
			15	10.36	10.26	1.38	1.29	12.80	12.66	1.70	1.85	19.68	17.82	2.62	3.90	26.81	19.97	3.56	6.66
	10	1000	8	21.50	20.60	5.36	5.94	25.29	22.26	6.30	7.87	34.55	27.03	8.61	13.56	44.81	30.03	11.16	21.37
			10	19.12	18.53	3.81	3.27	22.65	21.08	4.51	4.39	31.70	25.77	6.32	7.87	41.53	28.62	8.28	12.60
			12	16.15	15.75	2.68	1.77	19.81	19.45	3.29	2.53	28.86	24.55	4.79	4.84	38.25	27.26	6.35	7.91
			15	11.12	11.00	1.48	0.63	14.80	14.64	1.97	1.03	24.26	22.63	3.23	2.42	33.24	25.23	4.42	4.17
	12	1200	8	26.33	24.96	6.56	9.87	30.81	26.55	7.67	12.98	41.53	32.82	10.34	21.85	53.33	36.56	13.29	33.88
			10	23.83	23.80	4.75	5.60	27.95	25.25	5.57	7.39	38.35	31.38	7.64	12.81	49.72	34.95	9.91	20.17
			12	21.18	21.15	3.52	3.31	25.03	23.94	4.16	4.42	35.25	30.01	5.86	8.01	46.11	33.37	7.66	12.80
			15	16.50	16.46	2.19	1.45	20.18	19.95	2.68	2.06	30.52	27.98	4.06	4.20	40.71	31.09	5.41	6.93
50	04	400	8	5.85	5.58	1.46	2.69	6.91	6.54	1.72	3.58	10.19	8.24	2.54	7.02	14.07	9.27	3.51	12.32
			10	5.16	5.09	1.03	1.46	6.09	5.81	1.22	1.95	9.21	7.88	1.84	3.98	12.79	8.81	2.55	7.04
			12	4.23	4.17	0.70	0.49	5.20	4.93	0.86	1.08	8.24	7.53	1.37	2.38	11.54	8.37	1.92	4.27
			15	3.11	3.06	0.41	0.30	3.68	3.63	0.49	0.40	6.72	6.41	0.89	1.13	9.62	7.73	1.28	2.11
	06	600	8	8.36	7.96	2.08	2.14	9.46	9.34	2.36	2.65	14.54	11.99	3.63	5.58	20.07	13.45	5.00	9.78
			10	7.22	7.12	1.44	1.12	8.45	8.35	1.69	1.48	13.06	11.44	2.61	3.13	18.16	12.77	3.62	5.55
			12	5.37	5.30	0.89	0.49	7.09	7.00	1.18	0.79	11.56	10.90	1.92	1.84	16.24	12.10	2.70	3.32
			15	4.20	4.14	0.56	0.22	4.99	4.93	0.66	0.29	9.11	8.66	1.21	0.82	13.28	11.11	1.77	1.58
	08	800	8	11.49	11.35	2.86	4.55	13.61	13.36	3.39	6.11	19.89	17.92	4.96	11.81	27.28	20.17	6.80	20.49
			10	10.30	10.02	2.06	2.55	12.19	11.95	2.43	3.41	18.20	17.19	3.63	6.83	25.04	19.24	4.99	11.90
			12	8.86	8.81	1.47	1.43	10.66	10.42	1.77	1.97	16.51	16.48	2.74	4.18	22.88	18.37	3.80	7.37
			15	5.43	5.41	0.72	0.42	7.59	7.53	1.01	0.74	13.88	13.84	1.85	2.09	19.60	17.07	2.61	3.80
	10	1000	8	15.04	14.27	3.75	3.14	17.66	17.45	4.40	4.15	25.76	23.25	6.42	7.99	34.94	25.91	8.71	13.60
			10	13.21	12.64	2.64	1.70	15.56	15.47	3.10	2.25	23.37	22.28	4.66	4.55	31.83	24.67	6.35	7.79
			12	10.46	10.17	1.74	0.82	13.20	13.04	2.19	1.23	20.93	18.68	3.48	2.73	28.82	23.50	4.79	4.75
			15	6.02	5.97	0.80	0.22	7.24	6.87	0.96	0.30	16.75	15.80	2.23	1.25	24.10	21.73	3.21	2.35
	12	1200	8	18.51	18.42	4.61	5.26	21.63	20.90	5.39	6.89	31.05	28.20	7.74	12.92	41.75	31.52	10.41	21.69
			10	16.65	16.60	3.32	2.96	19.43	19.00	3.88	3.86	28.39	27.08	5.66	7.46	38.29	30.10	7.64	12.56
			12	14.25	14.22	2.37	1.64	17.04	16.87	2.83	2.24	25.83	24.82	4.30	4.59	34.95	28.76	5.81	7.76
			15	7.08	7.03	0.94	0.33	11.89	11.78	1.58	0.81	21.78	21.46	2.90	2.31	30.03	26.83	4.00	4.02

Mechanical Specitication

General
HFCA : Ceiling Concealed Models
Designed specifically to meet many various requirements demanded for concealed type installation. Commonly used for low static (free blow or short duct) application within the closets of hotels, motels and apartments. Available in 400-1,200 cfm sizes.

Return Air Plenum (Option)
The unit shall be factory installed return air plenum that encloses the fan section of the 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.

Casing
Casings are constructed of heavy gauge 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 3-row as standard design together with 4-row design as option. High efficient aluminium 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 ^{O}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.

Digital Air Grille (Option)
Distribute cool air smoothly throughout the room
- Available for unit up to 800 CFM
- Auto sweep horizontal supply blades
- Intelligent control with no additional thermostat required

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เลขที่ 1126/2 ชั้น 30-31 อาคารวานิช 2 ถ.เพชรบุรีตัดใหม่ แขวงมักกะสัน เขตราชเทวี กรุงเทพฯ 10400