

MFCKM-AECM



Hydronic cassette units are ideal for retrofit applications and modernizations with suspended ceilings. Ceiling cassette units make each served area an independent controlled temperature zone to suit diverse requirements.

- » Performance in accordance to Standard AHRI 440
- » Sound Performance tested as per AHRI Standard 350-2000 (non-ducted equipment)
- » ETL-Listed, Constructed in compliance with ANSI/UL 1995 Standard
- » High-efficiency Variable speed ECM motor available for higher energy efficiency
- » Completed controller with VAV & VWV control logic;
- » Merv 4 class filter as standard;
- » 2-way /3-way modulating valve kit with Isolation ball valves & strainer as optional;
- » 6-way valve as optional;

MFCKM - 300 - V X - S - AECM

	AECM	EC motor configuration
	S	Complete controller with VAV&VWV control logic
	W	EC motor driver suitable for connection to AC or EC modulating thermostat
	X	220V/1P/60Hz EC motor
	Y	115V/1P/60Hz EC motor
	P	Chilled/Hot Water, 4-Pipe
	V	Chilled/Hot Water, 2-Pipe
	VEH	Chilled Water, 2-Pipe with Electric Heater
	300~1200	Unit Sizes. See General Specification Section A for cooling and heating capacities
	MFCKM	Hydronic Cassette Series

Technical Data



MFCKM



MFCKM-V-AECM

Product range: MFCKM-V~AECM Hydronic Cassette 2-pipe with EC Motor

MFCKM-[Size]-V~AECM					300	500	800	1200	1600	
Unit Configuration		Configuration			2-pipe					
		Number Of Fan Blowers			Single					
		Power Supply		(V/Ph/Hz)	115/1/60 or 220/1/60					
		Operation Control			~S: Complete controller with VAV&VWV control logic					
					~W: EC motor driver suitable for connection to AC or EC modulating thermostat					
Performance Data	Air	Air Flow	H	CFM	338	476	765	1200	1618	
			M		224	425	618	941	1494	
			L		118	118	212	482	600	
	Cooling	Cooling Capacity	H	Btu/Hr	11907	19132	24201	37785	50990	
			M		8762	17181	20606	31527	48387	
			L		5220	6042	8526	18830	23557	
		Sensible Cooling Capacity	H		7880	12724	16230	25285	34245	
			M		5687	11373	13677	20843	32386	
			L		3323	3904	5556	12154	15168	
	Heating	Heating Capacity	H	Btu/Hr	18509	29741	37622	58739	79266	
			M		13621	26708	32034	49009	75219	
			L		8115	9393	13255	29272	36620	
		Max. Electric Heater Capacity		kW	1	2	3	4	4	
	Sound	Sound Pressure Level			dB(A)	43/39/27	50/40/26	56/53/32	58/52/35	64/61/49
		Sound Power Level				52/48/36	59/49/35	65/62/41	67/63/44	73/70/50
	Electrical	Power input in cooling mode	H	W	21	47	82	224	250	
			M		14.8	18	37	132	178	
			L		11	11	16	27	50	
		Power input in heating mode	H	W	16	42	77	219	115	
			M		9.8	13	32	127	173	
			L		6	6	11	22	45	
	Hydraulic	Water flow rate	H	GPM	2.4	3.8	4.8	7.5	10.1	
			M		1.7	3.4	4.1	6.2	9.6	
			L		1.0	1.2	1.7	3.7	4.7	
		Pressure Drop	H	ft WG	12.08	17.31	16.8	16.11	19.63	
			M		6.95	14.26	12.58	11.63	17.86	
			L		2.74	2.17	2.57	4.6	4.89	
		Heating Water Flow Rate	H	GPM	2.4	3.8	4.8	7.5	10.1	
			M		1.7	3.4	4.1	6.2	9.6	
			L		1.0	1.2	1.7	3.7	4.7	
		Heating Pressure Drop	H	ft.wg	10.87	15.58	15.12	14.49	17.67	
			M		6.26	12.84	11.32	10.46	16.07	
			L		2.46	1.96	2.31	4.14	4.4	
	Water Content			Us gal	0.33	0.41	0.47	0.64	0.79	
Construction and Packing Data	Type				Socket(Threaded Female)					
	Water Connections	In	inch	3/4"						
		Out		1"						
	Condensate Drainage Connection			1"						
	Dimensions	L	inch	22-15/16	22-15/16	28-3/4	32-11/16	37-13/16		
		W		22-15/16	22-15/16	28-3/4	32-11/16	37-13/16		
		H		10-1/16	11-7/16	10-1/4	11-7/16	11-7/16		
	Panel Dimensions			26-3/4 x 26-3/4 x 1-1/8		32-11/16 x 32-11/16x 1-1/8	38-9/16 x 38-9/16x 1-1/8	44-7/8 x 44-7/8x 1-1/8		
	Net Weight			lbs	61.7	66.1	79.4	110	119	

Testing conditions:

a. Cooling mode:

~Return air temperature: 80F DB/ 67F WB.

~Inlet/ outlet water temperature: 45F/ 55F.

b. Heating mode:

~ Return air temperature: 70F.

~ Inlet water temperature: 140F

~ Water flow same to cooling mode

Technical Data



MFCKM



MFCKM-P-AECM

Product range: MFCKM-P~AECM Hydronic Cassette 4-pipe with EC Motor

MFCKM-[Size]-P~-AECM				300	500	800	1200	1600	
Unit Configuration		Configuration		4-pipe					
		Number Of Fan Blowers		Single					
		Power Supply	(V/Ph/Hz)	115/1/60 or 220/1/60					
		Operation Control		~S: Complete controller with VAV&VWV control logic ~W: EC motor driver suitable for connection to AC or EC modulating thermostat					
Performance Data	Air	Air Flow	H	CFM	338	476	765	1200	1618
			M		224	425	618	941	1494
			L		118	118	212	482	600
	Cooling	Cooling Capacity	H	Btu/Hr	9408	13472	18493	28587	42324
			M		6923	12098	15746	23852	40163
			L		4125	4255	6515	14246	19553
		Sensible Cooling Capacity	H		6303	9092	12641	19475	29024
			M		4549	8126	10653	16053	27449
			L		2658	2789	4327	9361	12855
	Heating	Heating Capacity	H	Btu/Hr	14759	19914	28805	44401	59537
			M		10862	18289	24584	37130	55767
			L		6495	6679	10749	22183	27652
	Sound	Sound Pressure Level		dB(A)	43/39/27	50/40/26	56/53/32	58/54/35	64/61/41
		Sound Power Level			52/48/36	59/49/35	65/62/41	67/63/44	73/70/50
	Electrical	Power input in cooling mode	H	W	21	47	82	224	250
			M		14.8	18	67	132	178
			L		11	11	16	27	50
		Power input in heating mode	H	W	16	42	77	219	115
			M		9.8	13	62	127	173
			L		6	6	11	22	45
	Hydraulic	Chilled Water flow rate	H	GPM	1.9	2.7	3.7	5.7	8.4
			M		1.4	2.4	3.1	4.7	7.9
			L		0.8	0.8	1.3	2.8	3.9
		Chilled water Pressure Drop	H	ft WG	17.58	11.97	13.18	9.62	16.99
			M		10.12	9.86	9.86	6.95	15.47
			L		3.98	1.5	2.01	2.75	4.23
		Hot Water flow rate	H	GPM	0.7	1.0	1.4	2.2	3.0
			M		0.5	0.9	1.2	1.9	2.8
			L		0.3	0.3	0.5	1.1	1.4
		Hot water Pressure Drop	H	ft WG	2.66	2.61	5.07	6.59	3.2
			M		1.53	2.24	3.81	4.77	2.85
			L		0.61	0.37	0.86	1.89	0.81
Chilled Water Content		Us gal	0.22	0.27	0.31	0.43	0.53		
Hot Water Content		Us gal	0.11	0.14	0.16	0.21	0.26		
Construction and Packing Data	Type			Socket(Threaded Female)					
	Water Connections	In	inch	3/4"					
		Out		1"					
	Condensate Drainage Connection		1"						
	Dimensions	L	inch	22-15/16	22-15/16	28-3/4	32-11/16	37-13/16	
		W		22-15/16	22-15/16	28-3/4	32-11/16	37-13/16	
		H		10-1/16	11-7/16	10-1/4	11-7/16	11-7/16	
	Panel Dimensions		26-3/4 x 26-3/4 x 1-1/8		32-11/16 x 32-11/16x 1-1/8		38-9/16 x 38-9/16x 1-1/8		44-7/8 x 44-7/8x 1-1/8
Net Weight		lbs	61.7	66.1	79.4	110	119		

Testing conditions:

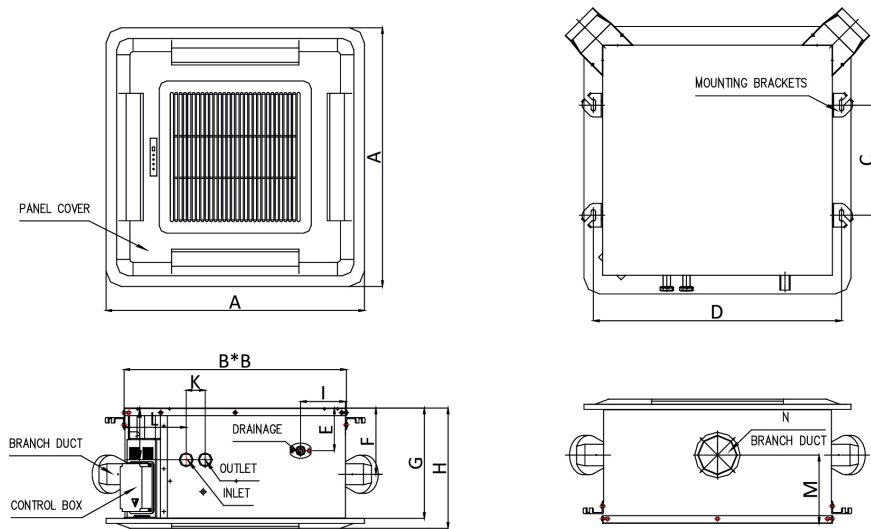
a. Cooling mode:
~Return air temperature: 80F DB/ 67F WB.
~Inlet/ outlet water temperature: 45F/ 55F.

b. Heating mode:
~ Return air temperature: 70F.
~ Inlet/outlet water temperature: 180F/140F

Technical Data

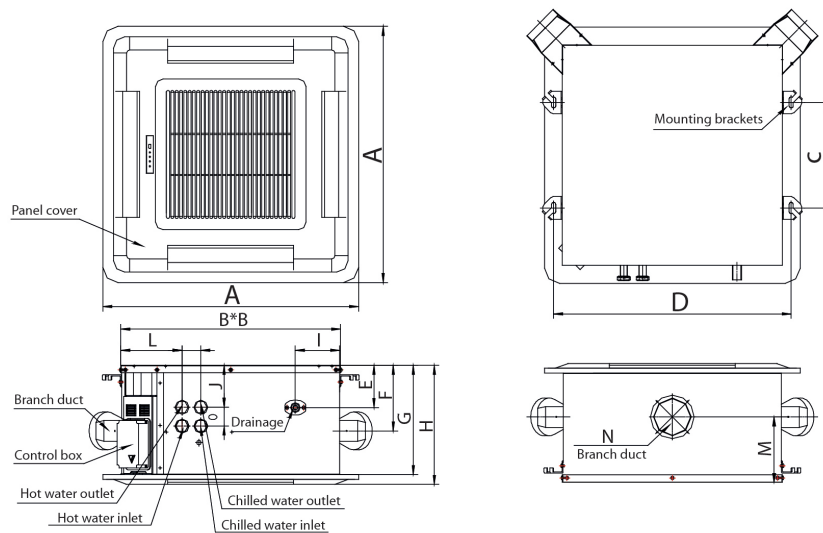


Dimensional Drawings of 2-Pipe Unit



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
MFCKM-300-V-AECM	26-3/4	22-15/16	11	24-1/2	2-7/16	4-7/8	10-1/16	11-1/8	4-5/8	4-5/16	2	6-3/8	4-7/8	Φ3-15/16
MFCKM-500-V-AECM	26-3/4	22-15/16	11	24-1/2	4-7/16	6-7/8	11-7/16	12-1/2	4-5/8	5-3/8	2	6-3/8	6-7/8	Φ3-15/16
MFCKM-800-V-AECM	32-11/16	28-3/4	13-9/16	30	3-5/16	5-7/8	10-1/4	11-5/16	4-15/16	6-7/16	2	6-3/8	5-3/16	Φ3-15/16
MFCKM-1200-V-AECM	38-9/16	32-11/16	19-1/8	34	4-3/16	7	11-7/16	12-1/2	4-5/8	5-3/4	2	6-1/8	5-3/4	Φ3-15/16
MFCKM-1600-V-AECM	44-7/8	37-13/16	19-5/16	39-3/4	4-3/16	7	11-7/16	12-1/2	4-5/8	5-3/4	2	6-1/8	5-3/4	Φ3-15/16

Dimensional Drawings of 4-Pipe Unit



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
MFCKM-300-P-AECM	26-3/4	22-15/16	11	24-1/2	2-7/16	4-7/8	10-1/16	11 1/8	4-5/8	3-7/16	1-15/16	6-3/8	4 7/8	Φ3-15/16	2
MFCKM-500-P-AECM	26-3/4	22-15/16	11	24-1/2	4-7/16	6-7/8	11-7/16	12-1/2	4-5/8	4-5/16	1-15/16	6-3/8	6-7/8	Φ3-15/16	2
MFCKM-800-P-AECM	32-11/16	28-3/4	13-9/16	30	3-5/16	5-7/8	10-1/4	11-5/16	4-15/16	4-7/16	1-15/16	6-3/8	5-3/16	Φ3-15/16	2
MFCKM-1200-P-AECM	38-9/16	32-11/16	19-1/8	34	4-3/16	7	11-7/16	12-1/2	4-5/8	3-15/16	1-15/16	6-1/8	5-3/4	Φ3-15/16	2
MFCKM-1600-P-AECM	44-7/8	37-13/16	19-5/16	39-3/4	4-3/16	6-15/16	11-7/16	12-1/2	4-5/8	3-3/8	1-15/16	6-1/8	5-3/4	Φ3-15/16	2

(All dimensions are approximate within 1/16 of an inch of those indicated.)

Technical Data



MFCKM



Accessories (Optional Parts)

Accessories	Photo	Code	Description
1. Valve Kit		BCP25-RCS-VALVE-MFCKM-001	24VAC 3/4" 2-way thermal valve kit
		BCP25-RCS-VALVE-MFCKM-002	24VAC 3/4" 3-way thermal valve kit
		BCP25-RCS-VALVE-MFCKM-003	24VAC 3/4" Modulating 2-way thermal valve kit
		BCP25-RCS-VALVE-MFCKM-004	Belimo 24VAC 3/4" Modulating 2-way thermal valve kit
2. ABS		AA06-KMH-001	ABS flange for fresh air duct connection
		AA06-KM-002	ABS flange for branch duct connection
3. G4 filter		AA14-M8-KM-001	G4 filter for MFCKM-300/500
		AA14-M8-KM-003	G4 filter for MFCKM-800
		AA14-M8-KM-004	G4 filter for MFCKM-1200
		AA14-M8-KM-005	G4 filter for MFCKM-1600
4. E-heater kit		BCP25-EH-220-MFCKM-001	1 KW 230Vac electric heater kit
		BCP25-EH-220-MFCKM-002	2 KW 230Vac electric heater kit
		BCP25-EH-220-MFCKM-004	3 KW 230Vac electric heater kit
		BCP25-EH-220-MFCKM-005	4 KW 230Vac electric heater kit
		BCP25-EH-220-MFCKM-006	4 KW 230Vac electric heater kit
5. Controller system		BCP25-RCS-EC-MFCKM-001	Plug-and-play control box with complete function PCB (MFCU-EC-S1) for iFCKM-300-500-800
		BCP25-RCS-EC-MFCKM-002	Plug-and-play control box with complete function PCB (MFCU-EC-S3) for iFCKM-1200-1600



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