

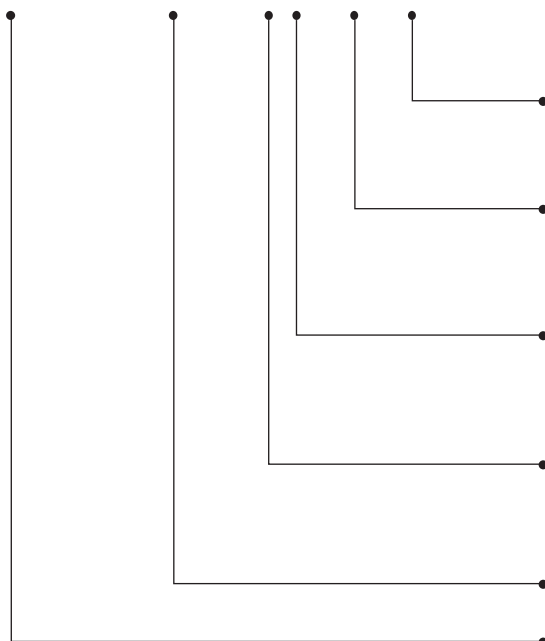
MFCKM-AECM



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-V-AECM

Hydronic Cassette 2-pipe with EC Motor

MFCKM-[Size]-V~-AECM				300	500	800	1200	
Unit Configuration		Configuration		2-pipe				
		Number Of Fan Blowers		Single				
		Power Supply	(V/Ph/Hz)	115/1/60 or 220/1/60			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	1300
			M		224	306	482	812
			L		118	118	212	482
	Cooling	Cooling Capacity	H	Btu/Hr	12079	16298	24365	34421
			M		8857	11371	16788	28163
			L		5220	5106	8526	19245
		Sensible Cooling Capacity	H		7999	10814	16344	22842
			M		5750	7385	11010	18556
			L		3323	3290	5556	12401
	Heating	Heating Capacity	H	Btu/Hr	21000	28700	42400	69300
			M		14900	26200	35700	63300
			L		8500	8800	14700	31000
		Max. Electric Heater Capacity		kw	1	2	3	4
	Sound	Sound Pressure Level		dB(A)	43/39/27	50/40/26	56/45/32	58/50/37
		Sound Power Level			52/48/36	59/49/35	65/54/41	67/59/46
	Electrical	Power input in cooling mode	H	W	21	47	82	224
			M		14.8	18	37	79
			L		11	11	16	27
		Power input in heating mode	H	W	16	42	77	219
			M		9.8	13	32	74
L			6		6	11	22	
Hydraulic	Water flow rate	H	GPM	2.39	3.22	4.81	6.8	
		M		1.75	2.25	3.32	5.56	
		L		1.03	1.01	1.68	3.8	
	Pressure Drop	H	ft WG	9.94	10.91	13.55	8.79	
		M		5.86	5.91	7.19	6.25	
		L		2.39	1.52	2.27	3.27	
	Water Content			Us gal	0.33	0.41	0.47	0.64
Construction and Packing Data	Water Connections	Type		Socket(Threaded Female)				
		In	inch	3/4"				
		Out		1"				
	Condensate Drainage Connection							
	Dimensions	L	inch	2022/5/8	2022/5/8	2028/3/4	1932/11/16	
		W		2022/5/8	2022/5/8	2028/3/4	1932/11/16	
		H		9-13/16	2011/7/16	2010/1/4	2011/7/16	
	Panel Dimensions		inch	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
Net Weight			kg	61.7	66.1	79.4	110	

a. Cooling mode (2-pipe):
 ~Return air temperature: 80F DB/ 67F WB.
 ~Inlet/ outlet water temperature: 45F/ 55F.

b. Heating mode (2-pipe):
 ~ Return air temperature: 70F.
 ~ Inlet water temperature: 140F
 ~ Water flow same to cooling mode

Technical Data



MFCKM-P-AECM

Hydronic Cassette 4-pipe with EC Motor

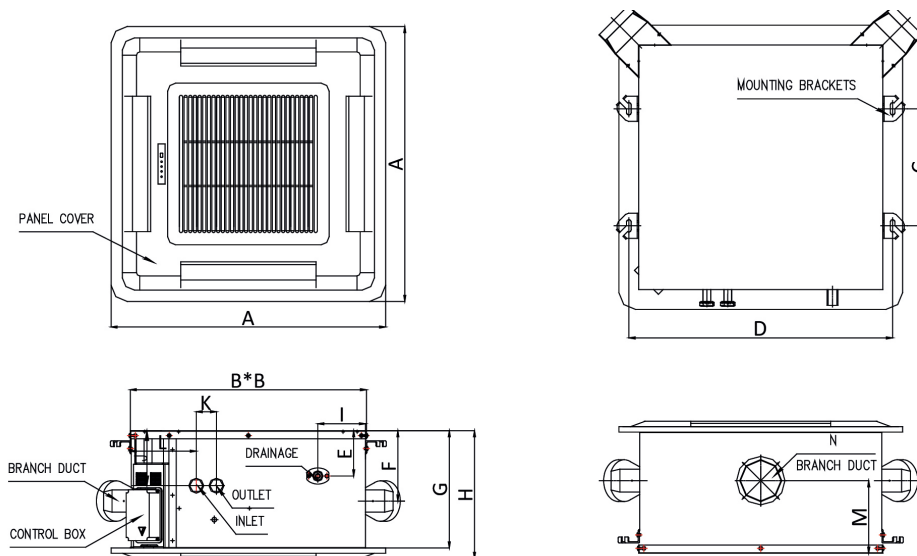
MFCKM-[Size]-P-AECM				300	500	800	1200	
Unit Configuration		Configuration		2-pipe				
		Number Of Fan Blowers		Single				
		Power Supply	(V/Ph/Hz)	115/1/60			220/1/60	
		Operation Control		~S: Complete controller with VAV&VWV control logic ~W: EC motor driver suitable for connection to AC or EC modulating thermostat				
Performance Data	Air	Air Flow	H	CFM	338	476	765	1300
			M		224	306	482	812
			L		118	118	212	482
	Cooling	Cooling Capacity	H	Btu/Hr	9544	12739	18618	26042
			M		6998	8888	12828	21307
			L		4125	3991	6515	14560
		Sensible Cooling Capacity	H		6399	8577	12730	17593
			M		4599	5857	8575	14292
			L		2658	2610	4327	9551
	Heating	Heating Capacity	H	Btu/Hr	11353	15318	22158	36223
			M		8355	11043	15814	25391
			L		4996	5138	8268	17064
	Sound	Sound Pressure Level		dB(A)	43/39/27	50/40/26	56/45/32	58/50/37
		Sound Power Level			52/48/36	59/49/35	65/54/41	67/59/46
	Electrical	Power input in cooling mode	H	W	21	47	82	224
			M		14.8	18	37	79
			L		11	11	16	27
		Power input in heating mode	H	W	16	42	77	219
			M		9.8	13	32	74
			L		6	6	11	22
	Hydraulic	Chilled Water flow rate	H	GPM	1.88	2.52	3.68	5.14
			M		1.38	1.76	2.53	4.21
			L		0.81	0.79	1.29	2.88
		Chilled water Pressure Drop	H	ft WG	9.63	8.68	9.31	6.64
M			5.68		4.71	4.94	4.72	
L			2.31		1.21	1.56	2.47	
Hot Water flow rate		H	GPM	0.57	0.76	1.1	1.8	
		M		0.42	0.55	0.79	1.26	
		L		0.25	0.26	0.41	0.85	
Hot water Pressure Drop		H	ft WG	1.45	3	5.97	6.74	
		M		0.86	1.72	3.36	3.69	
		L		0.36	0.47	1.12	1.88	
Chilled Water Content		Us gal	0.22	0.27	0.31	0.43		
Hot Water Content		Us gal	0.11	0.14	0.16	0.21		
Construction and Packing Data	Water Connections	Type		Socket(Threaded Female)				
		In	inch	3/4"				
		Out		1"				
	Condensate Drainage Connection		1"					
	Dimensions	L	inch	2022/5/8	2022/5/8	2028/3/4	1932/11/16	
		W		2022/5/8	2022/5/8	2028/3/4	1932/11/16	
		H		9-13/16	2011/7/16	2010/1/4	2011/7/16	
	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	
Net Weight		kg	61.7	66.1	79.4	110		

a. Cooling mode (4-pipe):
~Return air temperature: 80F DB/ 67F WB.
~Inlet/ outlet water temperature: 45F/ 55F.

b. Heating mode (4-pipe):
~ Return air temperature: 70F.
~ Inlet/outlet water temperature: 180F/140F

Technical Data

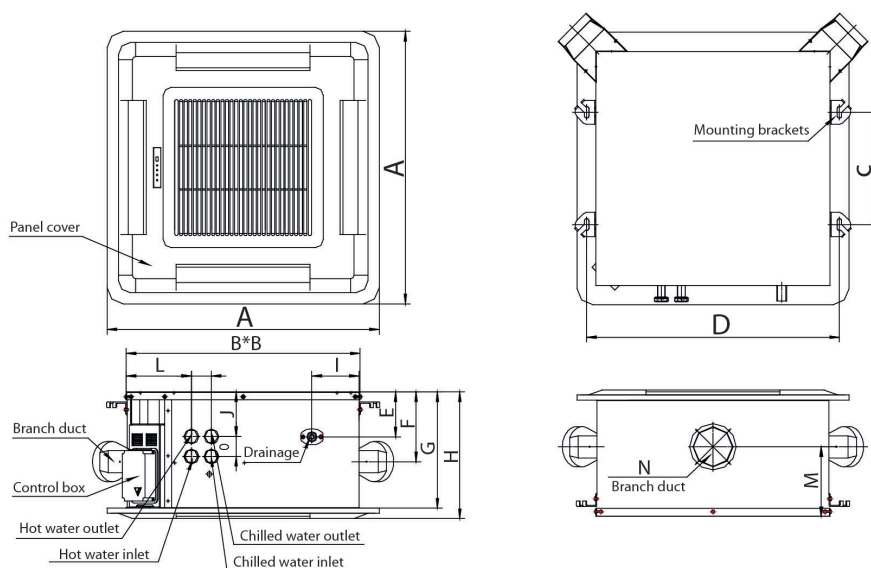
Dimensional Drawings of 2-Pipe Units



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	24-11/16	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	Ø3-15/16
MFCKM-500-V-AECM	26-3/4	22-15/16	11	24-11/16	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	Ø3-15/16
MFCKM-800-V-AECM	32-11/16	28-3/4	13-9/16	30-1/2	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	Ø3-15/16
MFCKM-1200-V-AECM	38-9/16	32-11/16	19-3/16	34-7/16	4-3/16	7	11-7/16	12-1/2	4-5/8	5-3/4	2	6-1/8	5-3/4	Ø3-15/16

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

Dimensional Drawings of 4-Pipe Units



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
MFCKM-500-P-AECM	26-3/4	22-15/16	11	24-11/16	4-7/16	6-7/8	11-7/16	12-1/2	4-5/8	4-5/16	2	6-3/8	6-7/8	Ø3-15/16	2
MFCKM-800-P-AECM	32-11/16	28-3/4	13-9/16	30-1/2	3-5/16	5-7/8	10-1/4	11-5/16	4-15/16	4-7/16	2	6-3/8	5-3/16	Ø3-15/16	2
MFCKM-1200-P-AECM	38-9/16	32-11/16	19-3/16	34-7/16	4-3/16	7	11-7/16	12-1/2	4-5/8	4-5/16	2	6-1/8	5-3/4	Ø3-15/16	2

Technical Data



Accessories / Options

Accessories	Photo	Code	Description
Valve Kits		BCP18-RCS-VALVE-MFCKM-001	115~240VAC 3/4" 2-way on/off thermal valve kit
		BCP18-RCS-VALVE-MFCKM-002	115~240VAC 3/4" 3-way on/off thermal valve kit
		BCP18-RCS-VALVE-MFCKM-003	24VAC 3/4" Modulating 2-way thermal valve kit
		BCP18-RCS-VALVE-MFCKM-004	24VAC 3/4" Modulating 3-way thermal valve kit
ABS Flanges		AA06-MFCKM-001	ABS flange for fresh air duct connection
		AA06-MFCKM-002	ABS flange for branch duct connection
Merv8 filters		AA14-M8-MFCKM-001	G4 HAF 3M filter
		AA14-M8-MFCKM-003	G4 HAF 3M filter
		AA14-M8-MFCKM-004	G4 HAF 3M filter
		AA14-M8-MFCKM-005	G4 HAF 3M filter
Electric heaters		BCP18-EH-MFCKM-001	1 kW 230Vac electric heater kit
		BCP18-EH-MFCKM-002	2 kW 230Vac electric heater kit
		BCP18-EH-MFCKM-004	3 kW 230Vac electric heater kit
		BCP18-EH-MFCKM-005	4 kW 230Vac electric heater kit
Controller systems		BCP18-RCS-AC-MFCKM-001	Plug-and-play control box with complete function PCB
		BCP18-RCS-EC-MFCKM-001	Plug-and-play control box with complete function PCB-EC-S1



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