



DIRECT-DRIVE AIR HANDLING FAN COIL AIR CONDITIONERS ENGINEERING GUIDE

Models: YMB, YMB-HW, YMBE

YMB Series
(2-pipe, cooling and heating)
(replaces the MH Series)



00780VIP

YMB-HW Series
(4-pipe, cooling and heating)
(replaces the MH-HW Series)



00781VIP

YMBE Series
(2-pipe, cooling with electric heat)
(replaces the MHE Series)



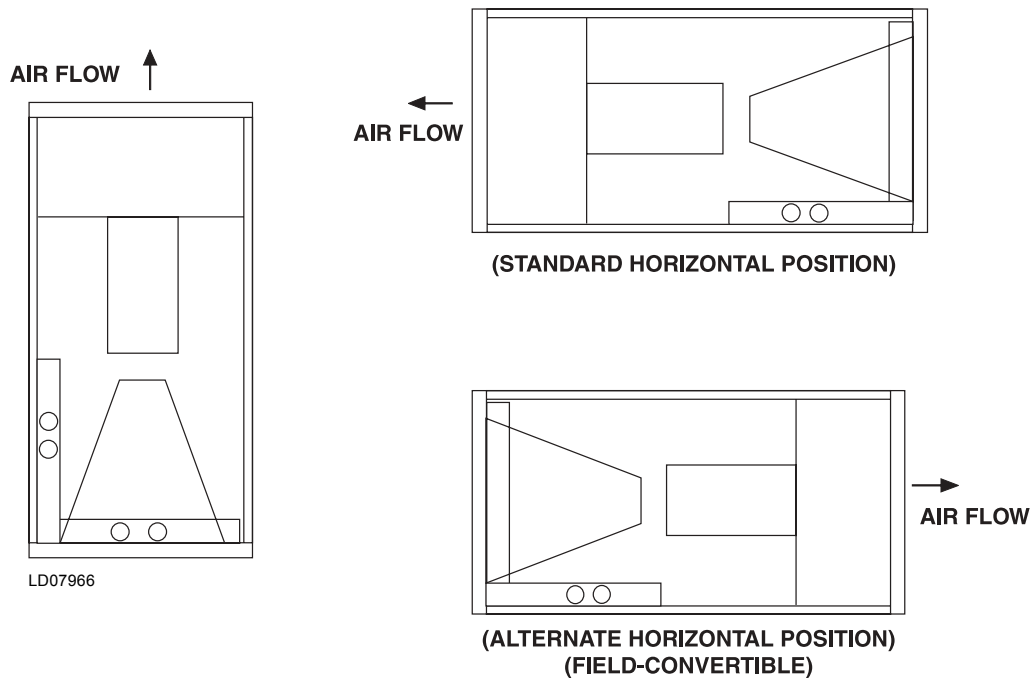
00780VIP



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3-WAY AIRFLOW (YMB, YMBE, YMB-HW)



General Construction Features

Basic Unit

All models are manufactured with heavy gauge galvanized steel to resist corrosion.

Each Cabinet is full insulated.

Coil connections are stubbed out the cabinet for easier installation.

Coils

Coils have 3/8" copper tubing expanded to high efficiency aluminum fins. Manual air vents are provided and all coils are pressure tested to 350 psig.

Drain Pans

All fan coils can be installed vertically or horizontally (right-to-left airflow) with no modification. Horizontal drain pans can be repositioned within the cabinet to allow horizontal installation with left-to-right airflow. Each drain pan is coated with a "mastic" material to reduce corrosion.

Threaded primary and secondary drain connections are also provided.

Motors

Standard motors are PSC type with internal thermal overload protection and are mounted with rubber isolating bushings.

Blower wheels are centrifugal, forward curved, and dynamically balanced.

Filters

One inch throw away filters are factory installed.

Agency Listing

All standard models are U.L. Listed.

ADDITIONAL FEATURES

YMB Series

The **YMB** Series 2-pipe fan coil comes with a 4 row cooling / heating coil and a 120V multi-speed motor. No controls are furnished.

YMBE Series (240V)

The **YMBE** Series 2-pipe fan coil comes with a 4 row cooling coil, 240V multi-speed motor, 240/24 transformer, and up to 25kW of factory installed electric heat. Models with more than 10kW also include a circuit breaker for branch circuit protection. Control voltage is 24V.

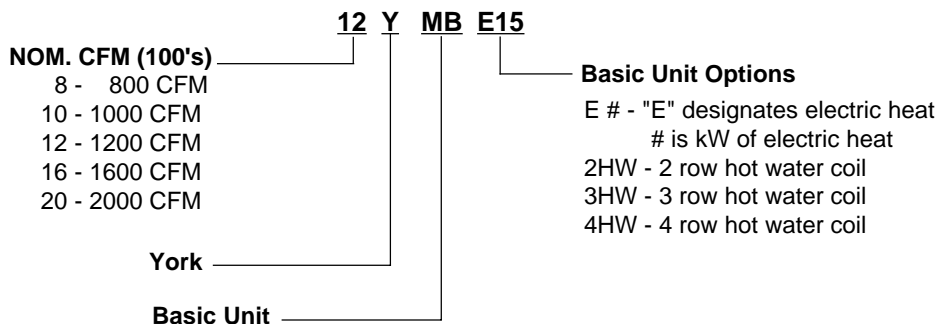
YMBE Series (277V)

The **YMBE** Series fan coil comes with a 4 row cooling coil, 277V multi-speed motor, and up to 10kW of factory installed electric heat. A unit mounted disconnect is standard. All models are U.L. Listed.

YMB-HW Series

The **YMB-HW** Series 4-pipe fan coil includes a 4 row cooling coil, a 2, 3, or 4 row heating coil installed in the reheat position, and a 120V multi-speed motor. No controls are furnished.

Nomenclature



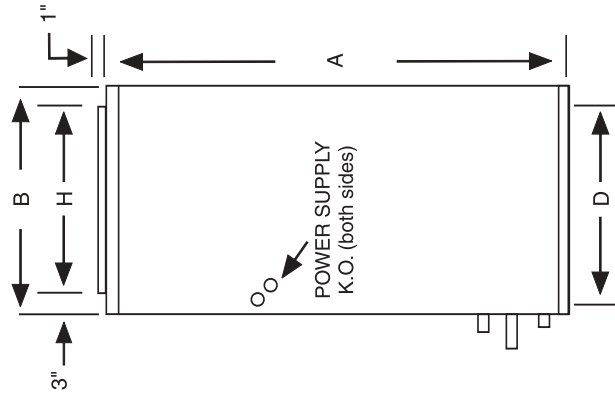
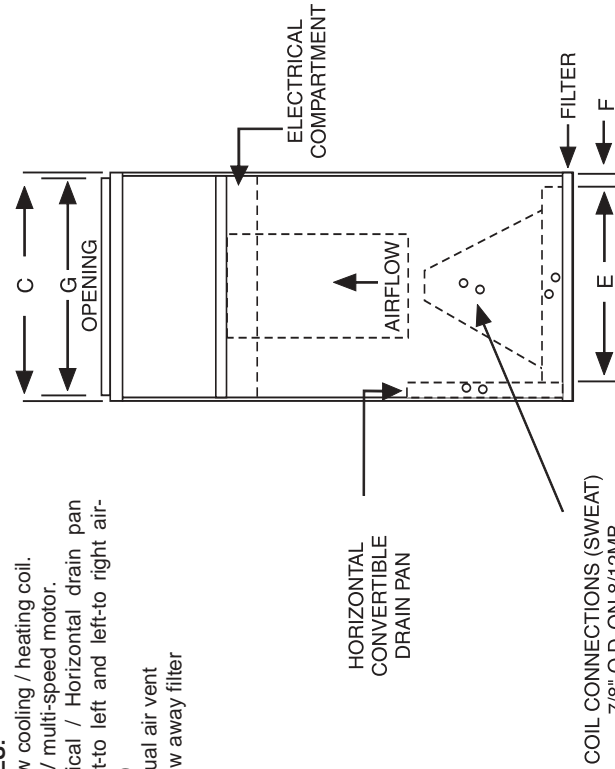
Product Dimensions

GENERAL DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	COIL CONNECTIONS	FILTER SIZE	SHIP WT. (LBS)
8YMB	40	20	20	18-1/2	16	2	18	16	7/8 SWEAT	18 X 20 X 1	115
12YMB	42	23	20	21-1/2	16	2	18	19	7/8 SWEAT	20 X 22 X 1	120
16/20YMB	48	28	21-1/4	26-1/4	17-1/4	2	18	24	1-1/8 SWEAT	20 X 25 X 1	210

FEATURES:

- 1) 4 row cooling / heating coil.
- 2) 120V multi-speed motor.
- 3) Vertical / Horizontal drain pan (right-to left and left-to right air-flow)
- 4) Manual air vent
- 5) Throw away filter



DRAIN CONNECTIONS 3/4 MPT

COIL CONNECTIONS (SWEAT)
7/8" O.D. ON 8/12MB
1-1/8" O.D. ON 16/20MB

PRODUCT DRAWING:

FAN COIL UNITS - DIRECT DRIVE
MODEL YMB
NOT FOR CONSTRUCTION

Sold To:
Cust Purch Order #:

Quote Date:
Rev. Date:
Form No.:
Dwg. Lev.:
Dwg. Scale: NTS



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Supersedes: Nothing

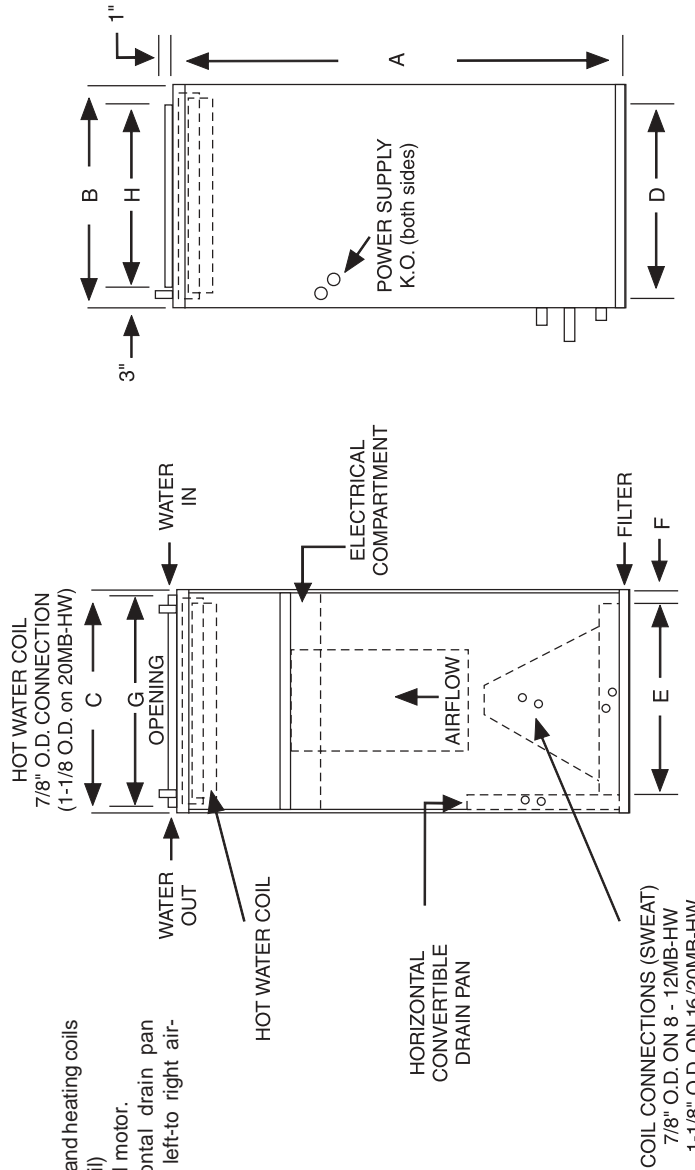
FORM 115.20-PA14 (1202)

GENERAL DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	FILTER SIZE	SHIP WT. (LBS)
8YMB-HW	40	20	20	18-1/2	16	2	18	16	18 X 20 X 1	120
10/12YMB-HW	42	23	20	21-1/2	16	2	18	19	20 X 22 X 1	135
16YMB-HW	48	28	21-1/4	26-1/4	17-1/4	2	18	24	20 X 25 X 1	210
20YMB-HW	52	28	25-1/4	26-1/2	21-14	2	22	24	14 X 24 X 1 (2 required)	260

FEATURES:

- 1) Separate cooling and heating coils (4 row cooling coil)
- 2) 120V multi-speed motor.
- 3) Vertical / Horizontal drain pan (right-to left and left-to right air flow)
- 4) Manual air vent
- 5) Throw away filter



PRODUCT DRAWING:
 FAN COIL UNITS - DIRECT DRIVE
 MODEL YMB-HW
 NOT FOR CONSTRUCTION

Project Name:
 Location:
 Engineer:
 Contractor:
 For: REFERENCE

Sold To:
 Cust Purch Order #:
 .
 .
 .

Quote Date:
 Rev. Date:
 Form No.:
 Dwg. Lev.:
 Dwg. Scale: NTS



Product Dimensions



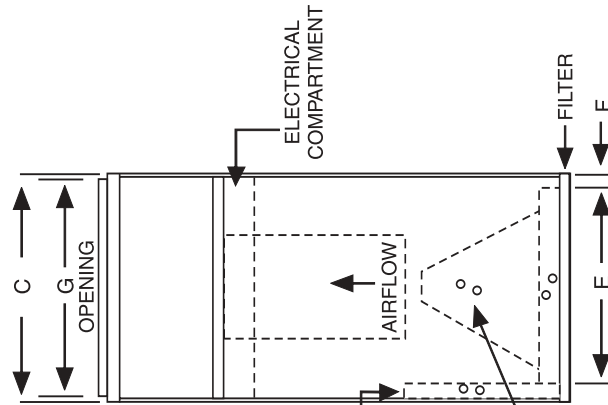
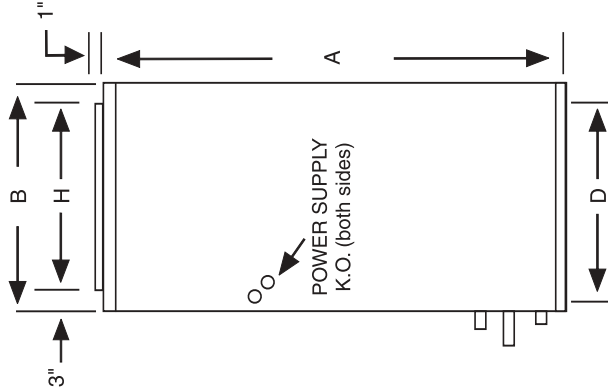
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FORM 115.20-PA16 (1202)

GENERAL DIMENSIONS											
MODEL	A	B	C	D	E	F	G	H	COIL CONNECTIONS	FILTER SIZE	SHIP WT. (LBS)
8YMBE	40	20	20	18-1/2	16	2	18	16	7/8 SWEAT	18 X 20 X 1	115
12YMBE	42	23	20	21-1/2	16	2	18	17	7/8 SWEAT	20 X 22 X 1	120
16/20YMBE	48	28	21-1/4	26-1/4	17	2	19-7/8	18-1/2	1-1/8 SWEAT	20 X 25 X 1	210

FEATURES:

- 1) Factory installed electric heat
- 2) 4 Row cooling coil
- 3) 208/240 volt Motor
- 4) 240/24 transformer
- 5) Circuit breaker disconnect (above 10 kW)
- 6) Manual air vent
- 7) Throwaway filter
- 8) Vertical / Horizontal drain pan (right-to left and left-to right air-flow)
- 9) 277 available / 10 kW maximum



HORIZONTAL CONVERTIBLE DRAIN PAN

COIL CONNECTIONS (SWEAT)
7/8" O.D. ON 8/12YMBE
1-1/8" O.D. ON 16/20YMBE

DRAIN CONNECTIONS 3/4 MPT

PRODUCT DRAWING:

FAN COIL UNITS - DIRECT DRIVE
MODEL YMBE
NOT FOR CONSTRUCTION
Project Name:
Location:
Engineer:
Contractor:
For: REFERENCE

Sold To:
Cust Purch Order #:

Quote Date:
Rev. Date:
Form No.:
Dwg. Lev.:
Dwg. Scale: NTS

Supersedes: Nothing

CHILLED WATER COOLING CAPACITY - 4 ROW (YMB, YMB-HW, YMBE SERIES)															
UNIT MODEL	CFM	GPM	P.D. (FT. WTR.)	45°F ENTERING WATER						42°F ENTERING WATER					
				80°F DB/67°F WB ENT. AIR			75°F DB/63°F WB ENT. AIR			80°F DB/67°F WB ENT. AIR			75°F DB/63°F WB ENT. AIR		
				TOTAL MBH	SENS. MBH	TEMP. RISE	TOTAL MBH	SENS. MBH	TEMP. RISE	TOTAL MBH	SENS. MBH	TEMP. RISE	TOTAL MBH	SENS. MBH	TEMP. RISE
8YMB	600	3.0	2.5	19.0	13.8	12.7	14.5	12.1	9.7	20.7	14.4	13.8	15.8	12.6	10.5
		4.5	5.5	22.4	15.1	9.9	17.1	13.1	7.6	24.4	15.9	10.8	18.6	13.7	8.3
		6.0	9.5	24.4	15.9	8.2	18.7	13.7	6.2	26.6	16.8	8.9	20.3	14.4	6.8
8YMB	800	3.5	3.4	23.1	17.3	13.2	17.6	15.2	10.1	25.2	18.1	14.4	19.2	15.8	11.0
		5.0	6.7	26.9	18.7	10.7	20.5	16.3	8.2	29.3	19.6	11.7	22.4	17.1	8.9
		6.5	11.0	29.2	19.6	9.0	22.3	17.0	6.9	31.8	20.6	9.8	24.3	17.8	7.5
10/12YMB	1000	4.0	2.4	28.3	21.6	14.1	21.6	19.0	10.8	30.8	22.5	15.4	23.6	19.7	11.8
		6.0	4.8	33.9	23.7	11.3	25.9	20.6	8.6	36.9	24.8	12.3	28.2	21.6	9.4
		8.0	7.9	37.3	25.0	9.3	28.5	21.7	7.1	40.6	26.3	10.2	31.0	22.7	7.8
10/12YMB	1200	5.0	3.5	33.7	25.5	13.5	25.8	22.4	10.3	36.8	26.6	14.7	28.1	23.3	11.3
		6.5	5.5	38.0	27.1	11.7	29.1	23.7	8.9	41.5	28.4	12.8	21.7	24.7	9.7
		8.0	7.9	41.0	28.2	10.3	31.3	24.6	7.8	44.7	29.6	11.2	34.1	25.7	8.5
16YMB	1400	4.5	2.0	36.2	29.2	16.1	27.7	25.8	12.3	39.5	30.3	17.6	30.1	26.7	13.4
		6.0	3.3	42.4	31.4	14.1	32.4	27.6	10.8	46.2	32.8	15.4	35.3	28.7	11.8
		7.5	4.8	46.9	33.1	12.5	35.8	28.9	9.6	51.1	34.7	13.6	39.0	30.2	10.4
16YMB	1600	6.0	3.3	44.2	34.1	14.7	33.8	30.0	11.3	48.2	35.5	16.1	36.8	31.2	12.3
		8.0	5.4	51.0	36.6	12.7	38.9	32.0	9.7	55.5	38.3	13.9	42.4	33.4	10.6
		10.0	7.9	55.7	38.4	11.1	42.5	33.4	8.5	60.7	40.3	12.1	46.3	34.9	9.3
20YMB	1600	6.5	3.8	46.1	34.8	14.2	35.2	30.6	10.8	50.3	36.3	15.5	38.4	31.8	11.8
		8.5	6.0	52.3	37.1	12.3	39.9	32.4	9.4	57.0	38.8	13.4	43.5	33.8	10.2
		10.5	8.6	56.6	38.7	10.8	43.2	33.7	8.2	61.7	40.7	11.8	47.1	35.2	9.0
20YMB	2000	7.0	4.3	52.4	40.9	15.0	40.0	36.1	11.4	57.1	42.6	16.3	43.6	37.4	12.5
		10.0	7.9	61.7	44.3	12.3	47.1	38.8	9.4	67.3	46.4	13.5	51.4	40.5	10.3
		13.0	12.5	67.5	46.5	10.4	51.6	40.5	7.9	73.6	48.8	11.3	56.2	42.4	8.6

LD07967

NOTES:

1. All cooling coils have four rows.
2. Contact factory for capacities at other conditions.

INDIVIDUAL COMPONENTS: (field installed) for YMB, YMB-HW, YMBE Series	
Power Heads: (two power heads required for 4-pipe) - For all units	
E50131180 E50132180 E50137180 E50138180	24V 110V/50Hz - 120V/60 Hz 277V 220V/50 Hz – 230V/60 Hz
Separate Valve Bodies: (order power heads separately)	
E421317 E431317 E421417 E431417	3/4" 2-way - For 8-12YMB/YMBE/YMB-HW (and 8-16 YMB-HW htg. coil) 3/4" 3-way - For 8-12YMB/YMBE/YMB-HW (and 8-16 YMB-HW htg. coil) 1" 2-way - For 16-20YMB/YMBE/YMB-HW (and 20 YMB-HW htg. coil) 1" 3-way - For 16-20YMB/YMBE/YMB-HW (and 20 YMB-HW htg. coil)
Hand Valves: (Combination balance / shut-off)	
CP90	3/4 "

LD07968

NOTE:

1. Power head leads are 18".

