

# VARIABLE REFRIGERANT FLOW SYSTEMS



## VRF V8MS

### Mode Selection Box for VRA Heat Recovery - 60HZ

Bulletin No. 210701  
March 2016  
Supersedes July 2014

## PRODUCT SPECIFICATIONS

Allows simultaneous heating and cooling of multiple zones. Used with VRA Heat Recovery outdoor units. Comprised of a series of solenoid valves that control refrigerant flow through each indoor unit based on the operational mode selected for that indoor unit.

*NOTE - For indoor use only.*

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**V8MSBB01**



**V8MSBB02**



**V8MSBB03**



**V8MSBB04**

### **FEATURES**

- **V8MSBB01 (12A53)** - 1 group, 1 indoor unit maximum.
- **V8MSBB02 (12A54)** - 2 groups of 4, 8 indoor units maximum.
- **V8MSBB03 (12A55)** - 4 groups of 4, 16 indoor units maximum.
- **V8MSBB04 (12A56)** - 6 groups of 4, 24 indoor units maximum.
- **Linear Expansion Design** - Regulates the flow of refrigerant and reduces sound levels.
- **Flare Fittings** - For indoor unit pipe connections.
- **Sweat Fittings** - For outdoor unit pipe connections.
- **Removable Panels** - Removable side and bottom panels for maintenance access.

**Adaptors Furnished** - Includes two kits to adjust to a larger pipe size for smaller indoor units. (1/4 in. to 3/8 in. and 1/2 in. to 5/8 in.).

### **APPROVALS**

Units are ETL certified for the U.S. and Canada.

### **WARRANTY**

**Components** - Limited one year.

## SPECIFICATIONS

General Data		Model Number	V8MSBB01	VBMSBB02	V8MSBB03	V8MSBB04
Maximum Number of Indoor Unit Groups			1	2	4	6
Maximum Number of Indoor Units in Each Group			1	4	4	4
Maximum Number of all Downstream Indoor Units			1	8	16	24
Valve Type			Solenoid	Solenoid	Solenoid	Solenoid
Capacity Maximum Capacity Each Indoor Unit Group (Btuh)			96,000	54,000	54,000	54,000
Total Capacity of all Downstream Indoor Units (Btuh)			68,000 - 96,000	≤ 96,000	≤ 154,000	≤ 154,000
Piping Connections	Connection to Outdoor Unit	Liquid line O.D. - in.	1/2	1/2	5/8	5/8
		High Pressure Gas Pipe O.D. - in.	3/4	3/4	7/8	7/8
		Low Pressure Gas Pipe O.D. - in.	7/8	7/8	1-1/8	1-1/8
	Connection to Indoor Unit	<sup>1</sup> Liquid Pipe O.D. - in.	3/8	3/8	3/8	3/8
		<sup>2</sup> Gas Pipe O.D. - in.	5/8	5/8	5/8	5/8
		<sup>3</sup> Drain connection O.D. - in.	1	1	1	1
Dimensions and Weight Data	Unit dimensions (H x W x L)		9 x 23-5/8 x 24-3/4	9 x 23-5/8 x 24-3/4	9 x 23-5/8 x 37-3/4	9 x 23-5/8 x 37-3/4
	Unit weight (net / shipping) - lbs.		43 / 60	43 / 60	69 / 88	77 / 98
Control Wiring (AWG)			18 gauge (3-core shielded)			

## ELECTRICAL DATA

Line voltage data - 60 hz - 1ph		208/230V	208/230V	208/230V	208/230V
Input (W)		30	30	50	70
<sup>3</sup> Maximum Overcurrent Protection (amps)		15	15	15	15
<sup>4</sup> Minimum Circuit Ampacity		0.20	0.20	0.35	0.50

<sup>1</sup> 3/8 x 1/4 in. adaptor furnished for liquid pipe connection to indoor unit (if required).

<sup>2</sup> 5/8 x 1/2 in. adaptor furnished for gas pipe connection to outdoor unit (if required).

<sup>3</sup> 1 x 3/4 in. condensate drain adaptor furnished for field installation (if required).

<sup>4</sup> HACR type circuit breaker or fuse.

<sup>5</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

## SOUND DATA

Model No.	Sound Pressure Level - dBA - STEADY STATE		
	V8MSBB01 VBMSBB02	V8MSBB03	V8MSBB04
Heating	37	32	31
Cooling	34	32	36
<sup>1</sup> Main Heating	39	36	34
<sup>1</sup> Main Cooling	33	36	32

Model No.	Sound Pressure Level - dBA - MODE SWITCHING		
	V8MSBB01 VBMSBB02	V8MSBB03	V8MSBB04
<sup>2</sup> Minimum	50	48	51
<sup>2</sup> Maximum	53	51	61

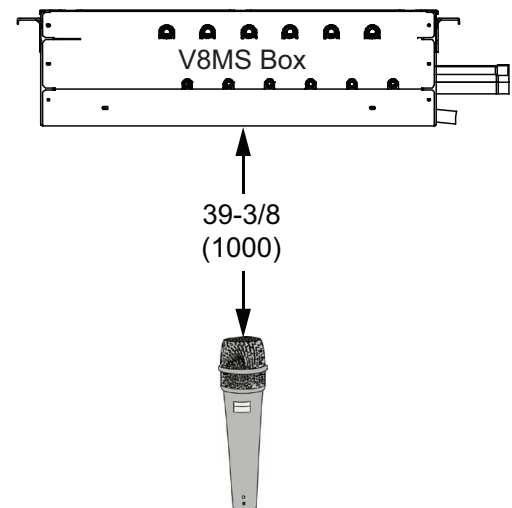
<sup>1</sup> The majority of indoor units are operating in cooling or heating mode.

<sup>2</sup> This data represents the instantaneous peak data during mode switching.

NOTES:

Sound measured at 68°F ambient temperature at MS Box.

Tested in semi-anechoic room.

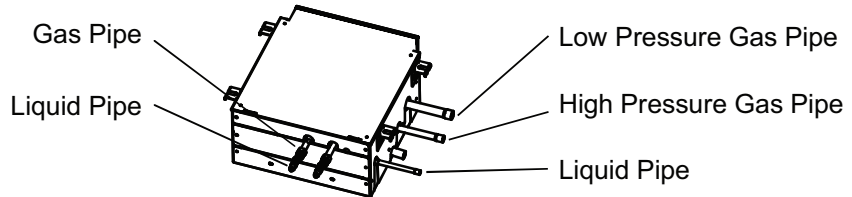


Measured from the bottom of the unit.

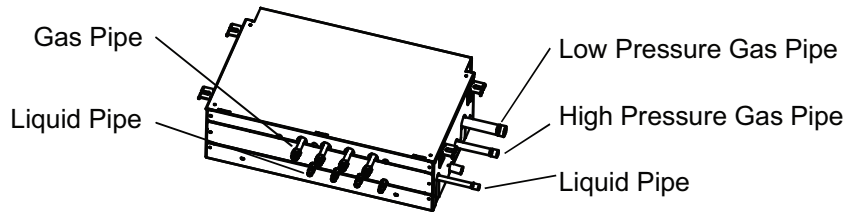
**MODE SELECTION BOX FOR HEAT RECOVERY OUTDOOR UNITS**

**V8MSBB01 (Maximum No. of Groups x Indoor Units - 1 x 1 = 1)**

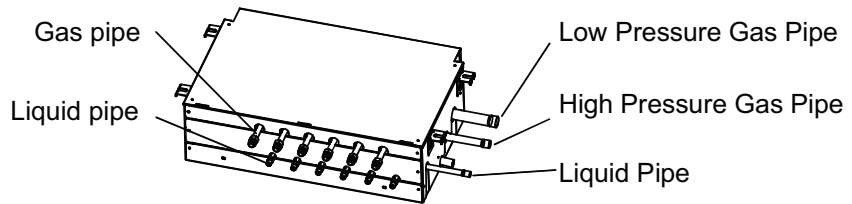
**V8MSBB02 (Maximum No. of Groups x Indoor Units - 2 x 4 = 8)**



**V8MSBB03 (Maximum No. of Groups x Indoor Units - 4 x 4 = 16)**

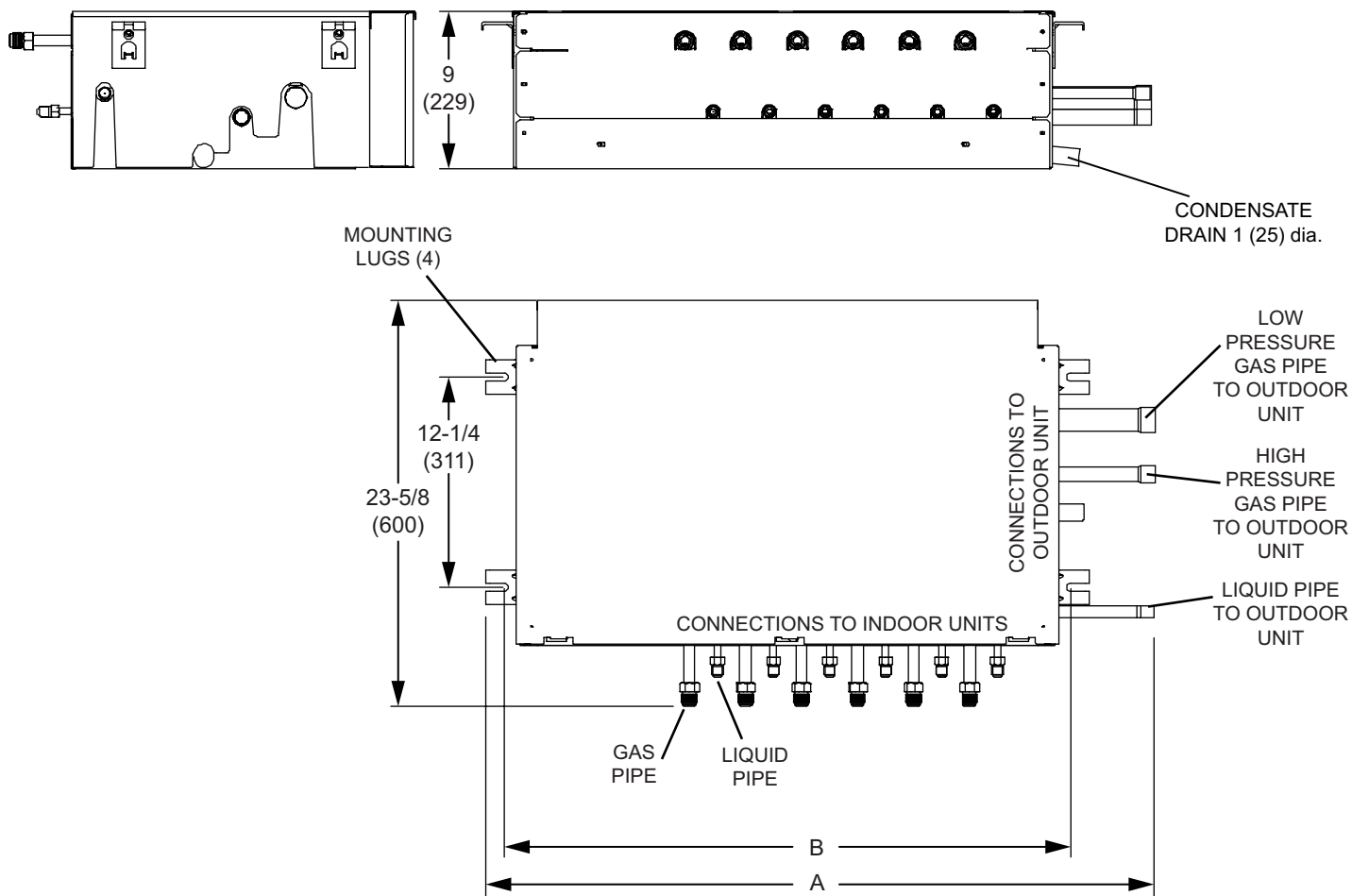


**V8MSBB04 (Maximum No. of Groups x Indoor Units - 6 x 4 = 24)**



## DIMENSIONS - INCHES (MM)

### V8MSBB01, V8MSBB02, V8MSBB03, V8MSBB04



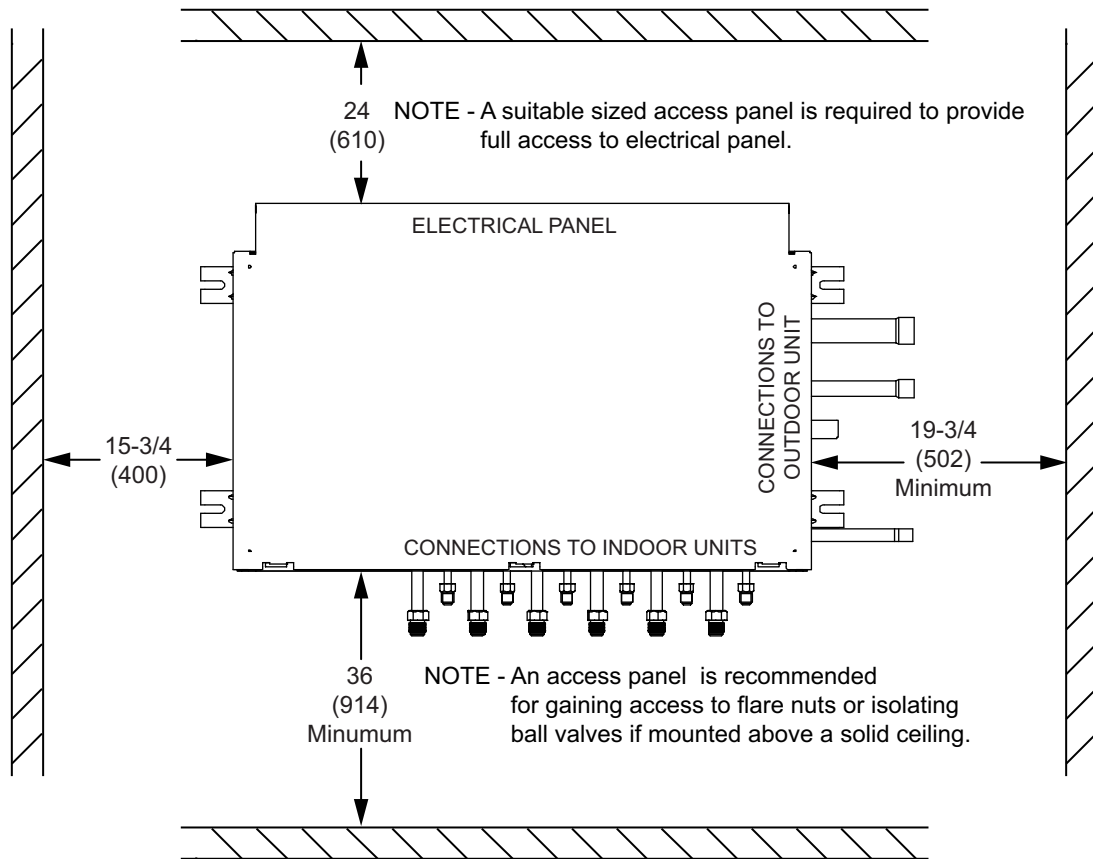
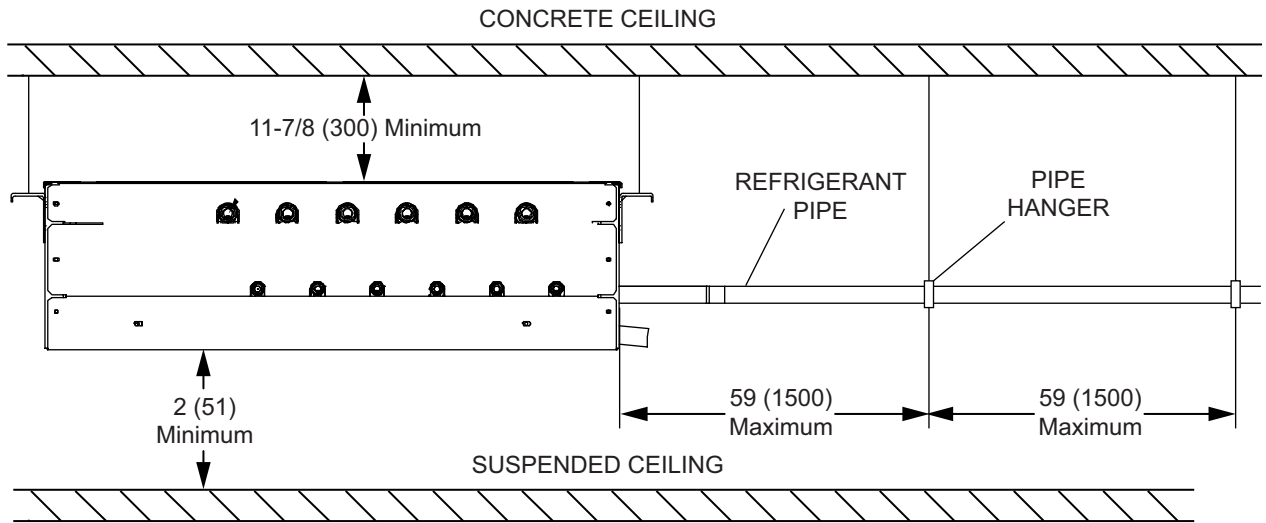
Model No.	A		B	
	in.	mm	in.	mm
V8MSBB01	24-3/4	629	19-1/4	489
V8MSBB02	24-3/4	629	19-1/4	489
V8MSBB03	37-3/4	959	32-1/4	819
V8MSBB04	37-3/4	959	32-1/4	819

Model No.	Pipe Diameter - in.				
	Connections to Outdoor Unit			Connections to Indoor Unit	
	Low Pressure Gas Pipe	High Pressure Gas Pipe	Liquid Pipe	<sup>1</sup> Liquid Pipe	<sup>2</sup> Gas Pipe
V8MSBB01	7/8	3/4	1/2	3/8	5/8
V8MSBB02	7/8	3/4	1/2	3/8	5/8
V8MSBB03	1-1/8	7/8	5/8	3/8	5/8
V8MSBB04	1-1/8	7/8	5/8	3/8	5/8

<sup>1</sup> 3/8 x 1/4 in. adaptor furnished for liquid pipe connection to outdoor unit (if required).

<sup>2</sup> 5/8 x 1/2 in. adaptor furnished for gas pipe connection to outdoor unit (if required).

# INSTALLATION CLEARANCES - INCHES (MM)







## REVISIONS

Sections	Description of Change
Electrical Data	New section.
Sound Data	New section



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