



LV Series Installation



Models:

LV-50

LV-70

LV-120

LV-140

From the Manufacturers of
Hi-Velocity Systems™



www.hi-velocity.com

Introduction

When sizing an LV air handler for a residential system, it is necessary to have an accurate heat loss/gain done for the structure. This will ensure the proper equipment is used for cooling and heating. A heat loss/gain is done for each room, with all rooms added together to find the total BTUH load for the building. With the total load known, the appropriate air handler can be chosen from Pg. 8.

IMPORTANT: The LV Air Handler is not to be used for temporary heating or cooling during the construction of the structure. If used in this capacity all warranties will be null and void.

Air handler units specified in this section shall be designed as a closed loop hydronic air handler system, with published BTUH ratings and entering water temperatures between 130°F and 190°F. The system shall allow for heating, DX or chilled water cooling, and heat pump applications with electric coil back-ups. Entering water temperature and BTUH outputs shall match performances listed on Pg. 8.

Quality Assurance

Air handler units shall be a total indoor air quality system complete with heating, cooling and air filtration, with the possibility of humidity control and fresh air make up. The air handler must be factory manufactured, assembled and tested.

All equipment furnished under this specification shall comply with the standards set out by the following standards organizations:

| | |
|-----|--------------------------------|
| CSA | Canadian Standards Association |
| CE | European Conformity |
| UL | Underwriters Laboratories |

The air handler units shall be designed, rated, and approved by CSA/UL.

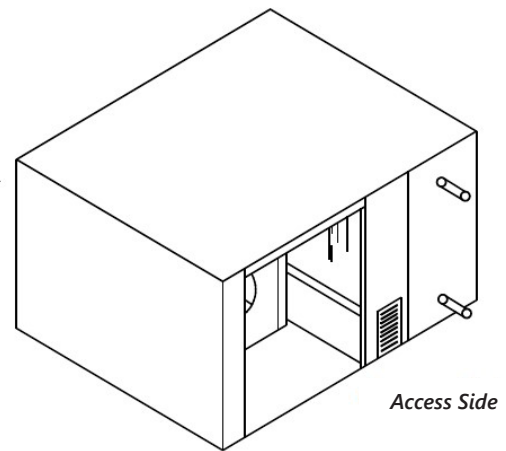
Clearances

Clearance is only needed on the access side of the units. However, ensure that there is a small space between the unit and any other surface to prevent vibration transfer. In order to maintain and service the air handler, the minimum clearances required on the access side are (Table 01).

Table 01 – Air Handler Clearances

| Unit | Inches |
|------------|--------|
| LV-50* | 18" |
| LV-70* | 21" |
| LV-120/140 | 29" |

*Add an additional 4" for Electric Strip Coils



LV Air Handler Installation

LV air handlers can be installed in the Hi-Boy, Horizontal, or Counter-Flow positions. The unit location should be chosen to maximize mechanical room space and minimize piping runs. Ensure that the piping, wiring, or mounting system does not hinder access to the front of the air handler.

Water connections are 3/4" Cu Sweat for the LV-50, LV-70, LV-120, and LV-140. All lines should be piped as to not restrict use of the access doors or filter section. Zone valves are to be normally closed, spring return valves, and be connected to the two terminals at the bottom of the board marked ZONE VALVE. There are two terminals marked FREEZE STAT for a refrigeration anti-ice control on the bottom terminal strip. If an anti-ice control is not used, a jumper wire must be installed in its place to complete the cooling circuit. The two 24v terminals marked COND UNIT are to be connected to the outdoor condensing unit or to a chilled water zone valve. For wiring diagrams, see pages 4-7.

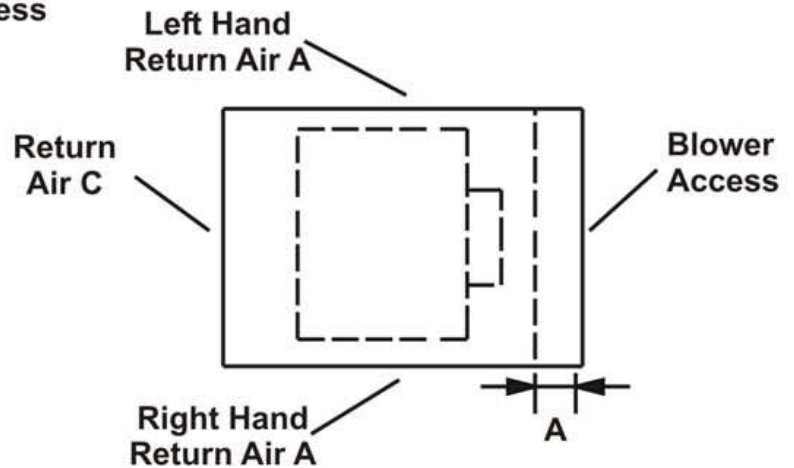
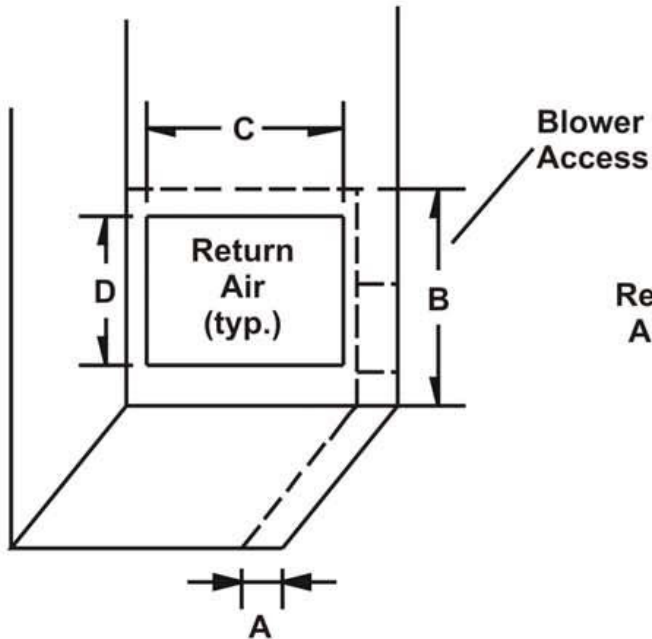
LV air handlers are factory wired for constant air circulation to take full advantage of humidification and air filtration equipment. Low speed can be turned off at the option of the installing contractor by disconnecting the low speed motor wire, or by installing a variable speed controller.

LV Air Handlers

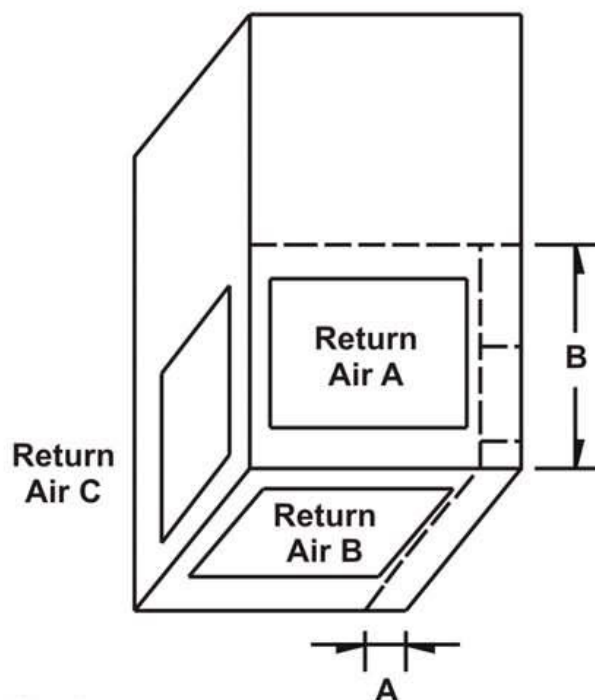
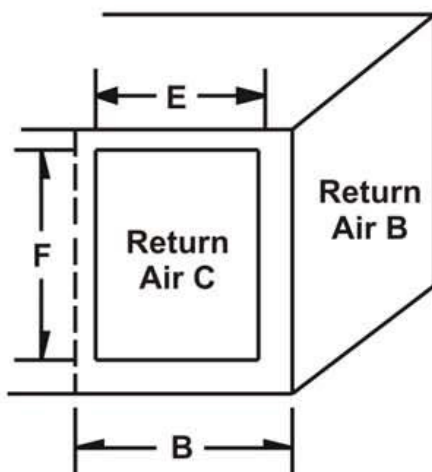
| Unit | A | B | C | D | E | F |
|------------|------|-------|-------|--------|-------|--------|
| LV-50* | 3.5" | 16.5" | 9.5" | 14.25" | 9.5" | 14.25" |
| LV-70* | 3.5" | 16.5" | 14.5" | 14.25" | 14.5" | 14.25" |
| LV-120/140 | 3.5" | 16.5" | 20.5" | 14.25" | N/A | N/A |

Notes:

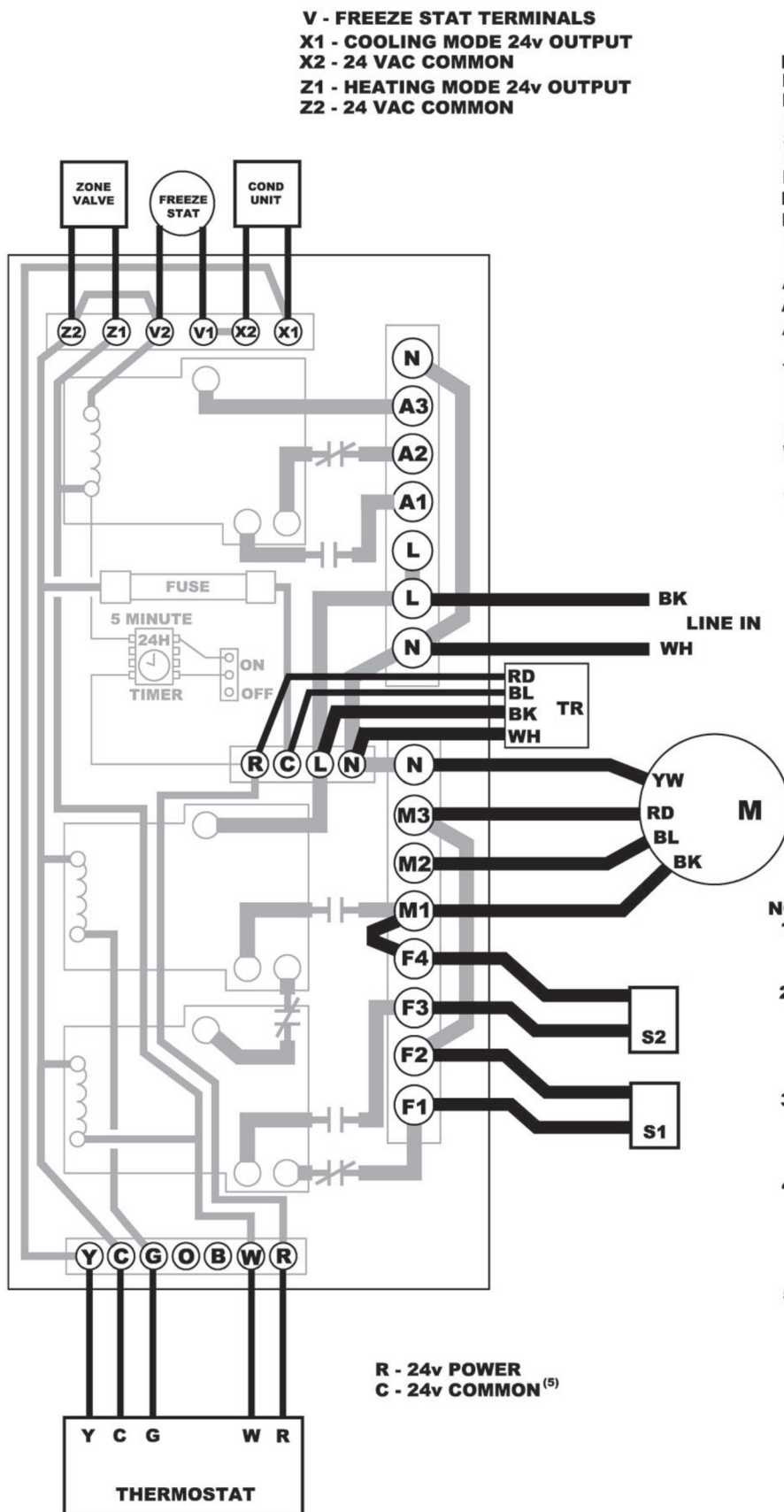
- Model LV-120/140 cannot use return air "C"
- Do not cut past the center plate or electrical box (Dim A & B)
- Return Air "A" can be either left hand or right hand



Rear View (Return Air B)



LV Air Handler - PSC Circuit Board Wiring Diagram (Standard)



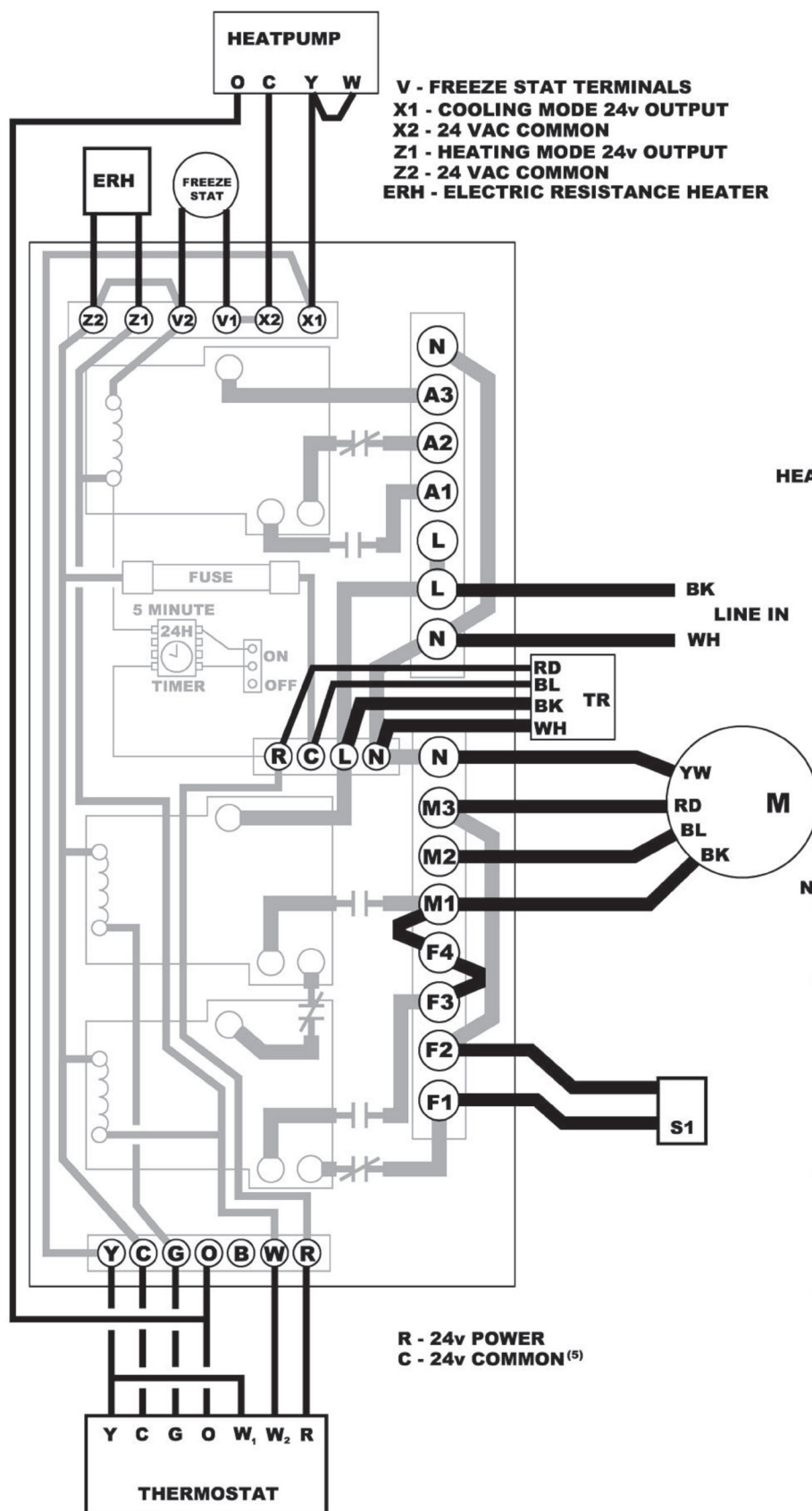
M1 - MOTOR HIGH SPEED
M2 - MOTOR MEDIUM SPEED
M3 - MOTOR LOW SPEED
S1 - CONSTANT FAN CONTROL
S2 - HEATING SPEED CONTROL
F1 - CONSTANT FAN CONTROL TO RELAY⁽¹⁾
F2 - CONSTANT FAN CONTROL TO MOTOR
F3 - HEATING SPEED CONTROL TO RELAY⁽²⁾
F4 - HEATING SPEED CONTROL TO MOTOR⁽³⁾
N - 115/1/60 NEUTRAL
L - 115/1/60 LINE
A1 - AUXILIARY NORMALLY OPEN
A2 - AUXILIARY NORMALLY CLOSED
A3 - AUXILIARY COMMON⁽⁴⁾

YW - YELLOW (NEUTRAL)
RD - RED
BL - BLUE
BK - BLACK
WH - WHITE
M - MOTOR
TR - 20 VA TRANSFORMER
(115 VAC PRIMARY, 24V SECONDARY)

NOTES:

- 1) CONSTANT FAN CONTROL OR JUMPER WIRE MUST BE USED TO COMPLETE THE F1 TO F2 CIRCUIT
- 2) HEATING SPEED CONTROL OR JUMPER WIRE MUST BE USED TO COMPLETE THE F3 TO F4 CIRCUIT. HEATING SPEED CONTROL IS NOT TO BE USED ON ELECTRIC HEAT SYSTEMS.
- 3) TERMINAL F4 REQUIRES AN EXTERNAL JUMPER TO TERMINAL M1 FOR HIGH SPEED HEATING OR M2 FOR MEDIUM SPEED HEATING
- 4) AUXILIARY RELAY COMMON(A3) CAN BE USED WITH A1 AND/OR A2 AS DRY CONTACTS, ARMED 24v FROM THE 'R' TERMINAL, OR ARMED 115v FROM THE 'L' TERMINAL
- 5) 'C' TERMINAL ON THERMOSTAT IS NOT NEEDED FOR SOME THERMOSTATS. CONSULT THERMOSTAT INSTRUCTIONS FOR DETAILS.

LV Air Handler - PSC Circuit Board Wiring Diagram (Heat Pump)



YW - YELLOW (NEUTRAL)
RD - RED
BL - BLUE
BK - BLACK
WH - WHITE
M - MOTOR
M1 - MOTOR HIGH SPEED
M2 - MOTOR MEDIUM SPEED
M3 - MOTOR LOW SPEED
S1 - CONSTANT FAN CONTROL
S2 - HEATING SPEED CONTROL
F1 - CONSTANT FAN CONTROL TO RELAY ⁽¹⁾
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TR - 20 VA TRANSFORMER
(115 VAC PRIMARY, 24V SECONDARY)

HEATPUMP NOTES:

HEATING SPEED CONTROL IS NOT TO BE USED ON ELECTRIC HEAT SYSTEMS.

REMOVE STATIC PRESSURE PLATE FROM BLOWER DISCHARGE WHEN INSTALLING THE ELECTRIC COIL.

DEPENDING ON THE REVERSING VALVE, SOME HEATPUMP UNITS REQUIRE 'B' INSTEAD OF 'O' CONNECTIONS ON BOTH THE THERMOSTAT AND THE OUTDOOR UNIT. CONSULT YOUR HEATPUMP MANUAL TO SEE IF THIS IS REQUIRED.

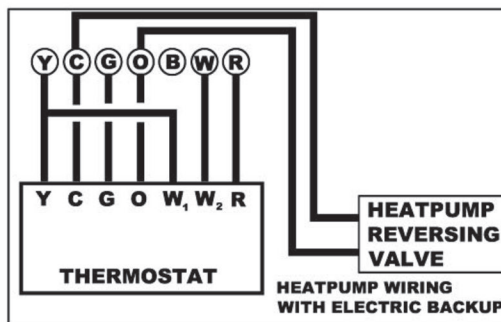
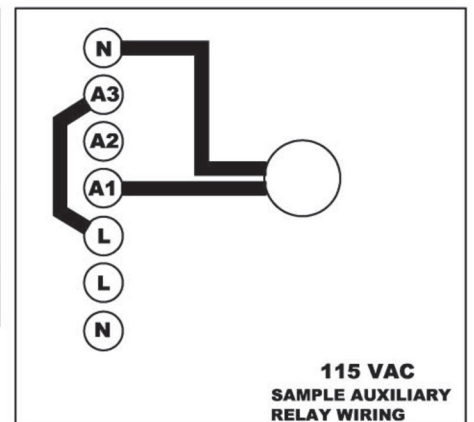
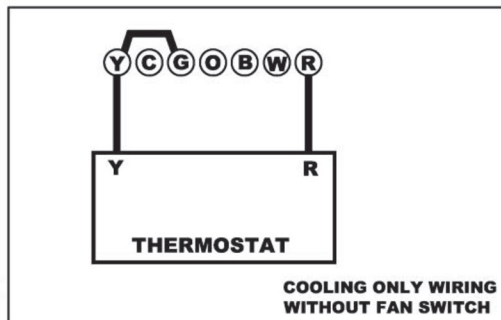
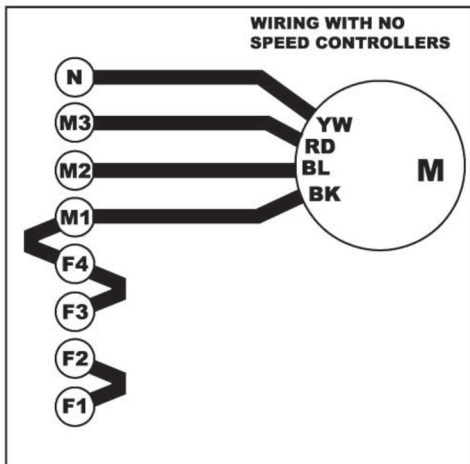
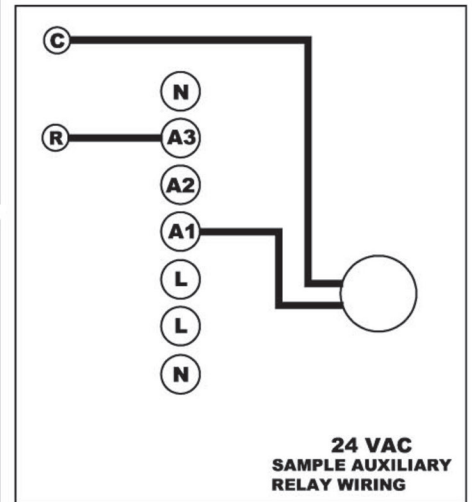
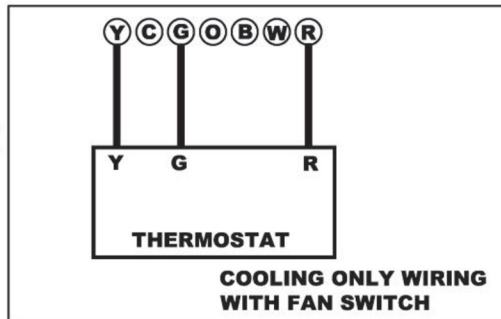
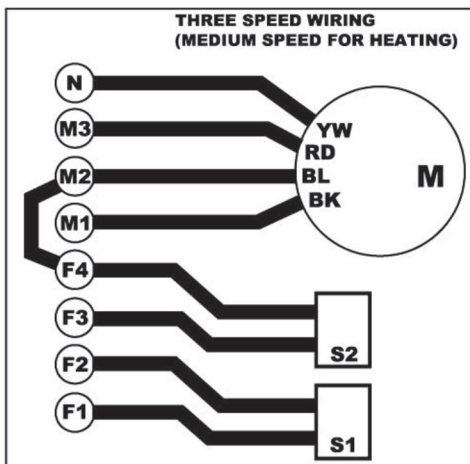
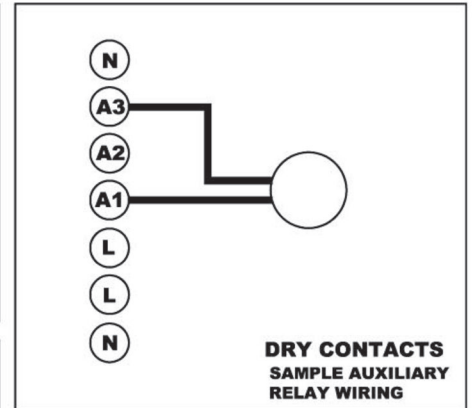
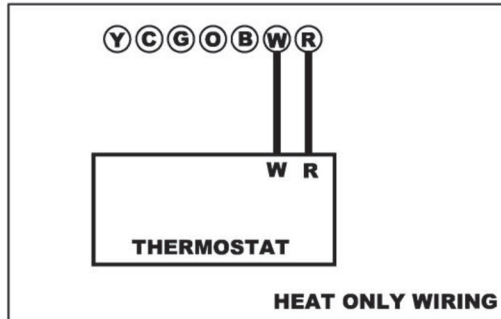
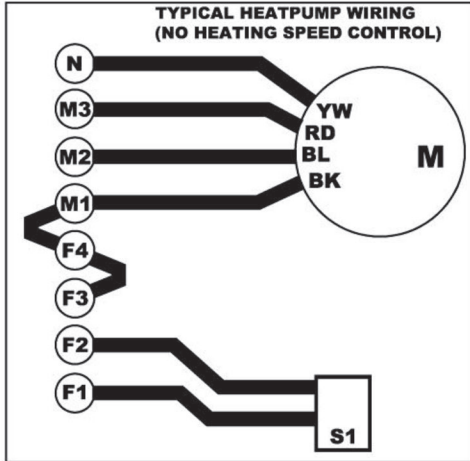
TIMER CIRCUIT CAN BE DISABLED WHEN USING A HEATPUMP AND ELECTRIC BACKUP HEAT

NOTES:

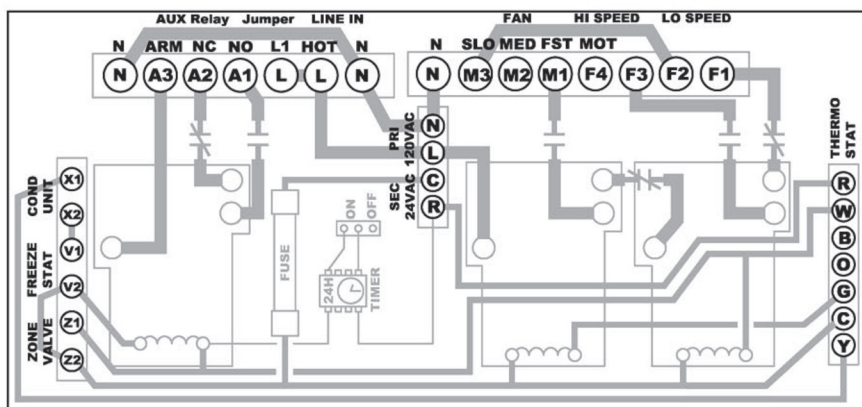
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- 5) 'C' TERMINAL ON THERMOSTAT IS NOT NEEDED FOR SOME THERMOSTATS. CONSULT THERMOSTAT INSTRUCTIONS FOR DETAILS.

R - 24v POWER
C - 24v COMMON ⁽⁵⁾

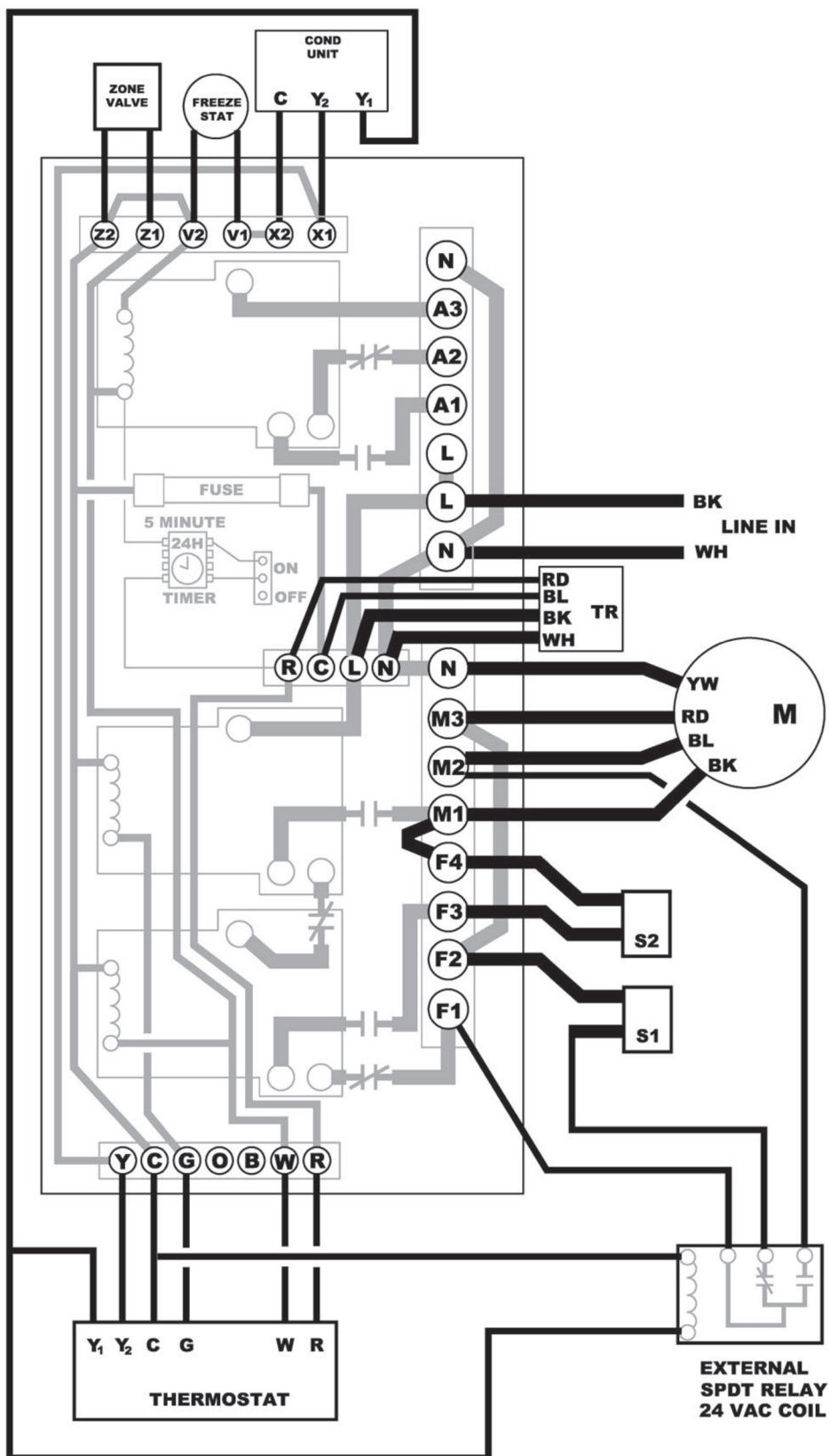
LV Air Handler - PSC Circuit Board Wiring Diagram (Extended)



**SEE HEATPUMP WIRING PAGE FOR MORE
DETAILED HEATPUMP INFORMATION**



LV Air Handler - PSC Circuit Board Wiring Diagram (1-Stage Heat, 2-Stage Cool)



YW - YELLOW (NEUTRAL)

RD - RED

BL - BLUE

BK - BLACK

WH - WHITE

M - MOTOR

TR - 20 VA TRANSFORMER

(115 VAC PRIMARY, 24V SECONDARY)

M1 - MOTOR HIGH SPEED

M2 - MOTOR MEDIUM SPEED

M3 - MOTOR LOW SPEED

S1 - CONSTANT FAN CONTROL

S2 - HEATING SPEED CONTROL

F1 - CONSTANT FAN CONTROL TO RELAY

F2 - CONSTANT FAN CONTROL TO MOTOR

F3 - HEATING SPEED CONTROL TO RELAY

F4 - HEATING SPEED CONTROL TO MOTOR

N - 115/1/60 NEUTRAL

L - 115/1/60 LINE

A1 - AUXILIARY NORMALLY OPEN

A2 - AUXILIARY NORMALLY CLOSED

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R - 24v POWER

C - 24v COMMON⁽⁵⁾

V - FREEZE STAT TERMINALS

X1 - COOLING MODE 24v OUTPUT

X2 - 24 VAC COMMON

Z1 - HEATING MODE 24v OUTPUT

Z2 - 24 VAC COMMON

Matching Coils
Refrigerant Coils
RBM/RBM-I/RPM-E/RCM/
RCM-I-50, 70
Chilled Water Coils
WBM/WCM-50, 70, 100
Hot Water Coils
HWC-50, 70, 100
Electrical Coils
ESH-650, 750, 1100



LV Series Specifications

Low Velocity Air Handler w/ PSC Motor

| | LV-50 | LV-70 | LV-120 | LV-140 |
|--|---|---|---|---|
| Hot Water Heating⁽¹⁾ | 2 Ton Airflow (7.0 kW) | 3 Ton Airflow (10.6 kW) | 4 Ton Airflow (14.1 kW) | 5 Ton Airflow (17.6 kW) |
| Coil Type | 6 row/10 FPI | 6 row/10 FPI | 6 row/10 FPI | 6 row/10 FPI |
| Max. BTUH @ 190°F E.W.T. (kW @ 88°C) | 74,300 (21.8 kW) | 98,900 (29.0 kW) | 148,700 (43.6 kW) | 177,000 (51.9 kW) |
| Max. BTUH @ 180°F E.W.T. (kW @ 82°C) | 68,000 (19.9 kW) | 90,500 (26.1 kW) | 136,100 (39.9 kW) | 162,000 (47.5 kW) |
| Max. BTUH @ 170°F E.W.T. (kW @ 77°C) | 61,600 (18.0 kW) | 82,100 (24.0 kW) | 123,500 (36.2 kW) | 147,000 (43.1 kW) |
| Max. BTUH @ 160°F E.W.T. (kW @ 71°C) | 55,400 (16.2 kW) | 73,800 (21.6 kW) | 110,900 (32.5 kW) | 132,000 (38.7 kW) |
| Max. BTUH @ 150°F E.W.T. (kW @ 66°C) | 49,100 (14.4 kW) | 65,400 (19.2 kW) | 98,400 (28.8 kW) | 117,000 (34.3 kW) |
| Max. BTUH @ 140°F E.W.T. (kW @ 60°C) | 42,800 (12.5 kW) | 57,100 (16.7 kW) | 85,900 (25.2 kW) | 102,100 (30.0 kW) |
| Max. BTUH @ 130°F E.W.T. (kW @ 54°C) | 36,600 (10.7 kW) | 48,800 (14.3 kW) | 76,400 (22.4 kW) | 87,300 (25.6 kW) |
| GPM Flow Ratings (L/s Flow Ratings) | 5 (0.32 L/s) | 6 (0.38 L/s) | 10 (0.63 L/s) | 10 (0.63 L/s) |
| Pressure Drop in Ft. H ₂ O (Drop in KPa) | 3 (8.97 KPa) | 5 (14.94 KPa) | 7 (20.92 KPa) | 7 (20.92 KPa) |
| Chilled Water Cooling⁽¹⁾ | WBM/WCM-50 | WBM/WCM-70 | WBM/WCM-100 | WBM/WCM-100 |
| Coil Type | 6 row/10 FPI | 6 row/10 FPI | 6 row/10 FPI | 6 row/10 FPI |
| WBM/WCM Modules in Cooling Mode | | | | |
| Max. BTUH @ 44°F E.W.T. (kW @ 6.7°C) | 22,547 (6.6 kW) | 34,486 (10.1 kW) | 50,968 (14.9 kW) | 56,100 (16.4 kW) |
| Max. BTUH @ 42°F E.W.T. (kW @ 5.6°C) | 24,149 (7.1 kW) | 37,046 (10.9 kW) | 54,761 (16.0 kW) | 60,237 (17.7 kW) |
| GPM Flow Ratings (L/s Flow Ratings) | 5 (0.32 L/s) | 6 (0.38 L/s) | 10 (0.63 L/s) | 10 (0.63 L/s) |
| Pressure Drop in Ft. H ₂ O (Drop in KPa) | 3 (8.97 KPa) | 5 (14.94 KPa) | 7 (20.92 KPa) | 7 (20.92 KPa) |
| WBM/WCM Modules in Heating Mode | | | | |
| Max. BTUH @ 110°F E.W.T. (kW @ 43°C) | 23,400 (6.9 kW) | 31,200 (9.1 kW) | 46,900 (13.7 kW) | 56,200 (16.5 kW) |
| Max. BTUH @ 120°F E.W.T. (kW @ 49°C) | 29,000 (8.5 kW) | 38,800 (11.4 kW) | 58,300 (17.1 kW) | 70,000 (20.5 kW) |
| GPM Flow Ratings (L/s Flow Ratings) | 5 (0.32 L/s) | 6 (0.38 L/s) | 10 (0.63 L/s) | 10 (0.63 L/s) |
| Pressure Drop in Ft. H ₂ O (Drop in KPa) | 3 (8.97 KPa) | 5 (14.94 KPa) | 7 (20.92 KPa) | 7 (20.92 KPa) |
| Refrigerant Cooling⁽¹⁾ | RBM/RPM-E/RCM-50 | RBM/RPM-E/RCM-70 | N/A | N/A |
| RBM/RPM-E/RCM Modules BTUH Refrigerant TX Cooling | 1.5-2.0 Tons (5.3-7.0 kW) | 2.5-3.0 Tons (8.8-10.6 kW) | - | - |
| Electrical Heating | ESH/VESH-650 | ESH/VESH-750 | ESH/VESH-1100 | ESH/VESH-1100 |
| Kilowatt Range | 10 - 15 kW / 5 - 15 kW | 10 - 18 kW / 5 - 18 kW | 10 - 23 kW | 10 - 23 kW |
| Specifications | LV-50 | LV-70 | LV-120 | LV-140 |
| Max Rated CFM @ 0.5" E.S.P. (L/s @ 125 Pa) | 750 (354 L/s) | 1000 (472 L/s) | 1500 (708 L/s) | 2000 (944 L/s) |
| Voltage | 115/1/50/60 F.L.A. 8 amp | 115/1/50/60 F.L.A. 8 amp | 115/1/50/60 F.L.A. 8 amp | 115/1/50/60 F.L.A. 8 amp |
| Nominal Operating Amperage | 4.2 | 4.2 | 4.2 | 7.5 |
| Integral Surge and Fuse System | Yes | Yes | Yes | Yes |
| Horse Power | 1/3 | 1/3 | 1/3 | 1/2 |
| Motor RPM | 1075 | 1075 | 1075 | 1625 |
| Slo-Blo Fuse AMPs | 2 | 2 | 2 | 2 |
| Supply Air Size | 13" x 17 ¹ / ₄ " (330mm x 438mm) | 18" x 17 ¹ / ₄ " (457mm x 438mm) | 24" x 17 ¹ / ₄ " (610mm x 438mm) | 24" x 17 ¹ / ₄ " (610mm x 438mm) |
| Return Size Needed | 140 in ² (0.09m ²) | 170 in ² (0.10m ²) | 220 in ² (0.14m ²) | 220 in ² (0.14m ²) |
| Shipping Weight (no coil) | 57 lbs (25.9 kg) | 63 lbs (28.6 kg) | 77 lbs (34.9 kg) | 83 lbs (37.6 kg) |
| Air Handler Dimensions (L x W x H) | 14 1/2" x 18 1/4" x 32 5/16" (368mm x 464mm x 821mm) | 19 1/2" x 18 1/4" x 32 5/16" (495mm x 464mm x 821mm) | 25 1/2" x 18 1/4" x 32 5/16" (648mm x 464mm x 821mm) | 25 1/2" x 18 1/4" x 32 5/16" (648mm x 464mm x 821mm) |

⁽¹⁾ **Heating** specs are rated at 65°F E.A.T., **Cooling** specs are rated at 80/67°F dB/wB

- Ratings based on water ONLY and will be reduced with glycol
- All dimensions may vary +/- by up to 0.5 of an inch.
- Smaller condensers may be matched to the air handler when needed, TXV to be matched with condenser size.
- Models LV-50 and LV-70 are factory wired for medium motor operating speed.

BTUH - British Thermal Units per Hour
E.W.T. - Entering Water Temperature
GPM - US Gallons per Minute
L/s - Litres per Second
CFM - Cubic Feet per Minute

F.L.A. - Full-Load Amperage
RPM - Revolutions per Minute
E.S.P. - External Static Pressure
E.A.T. - Entering Air Temperature
dB/wB - Dry Bulb/Wet Bulb

Quick Sizing Guide

ALL UNITS

| Item | Length | Width | Height |
|--------------------------|-------------|-----------------|-----------------|
| Cube Air Handlers | A | B | C |
| CU-31 | 14" (356mm) | 13 1/2" (343mm) | 14 1/2" (368mm) |
| CU-51 | 14" (356mm) | 18 1/4" (464mm) | 16 1/4" (413mm) |

| | | | |
|---------------------------------|-----------------|-----------------|------------------|
| Hi-Velocity Air Handlers | A | B | C |
| HE-Z/HE-B/HE/HV-50/51 | 14 1/2" (368mm) | 18 1/4" (464mm) | 32 5/16" (821mm) |
| HE-Z/HE-B/HE/HV-70/71 | 19 1/2" (495mm) | 18 1/4" (464mm) | 32 5/16" (821mm) |
| HE-Z/HE-B/HE-P/HE/HV-100/101 | 25 1/2" (648mm) | 18 1/4" (464mm) | 32 5/16" (821mm) |
| HE-P-240/241 | 26 3/4" (679mm) | 24 1/4" (616mm) | 38 3/4" (984mm) |

| | | | |
|---------------------------------|-----------------|-----------------|------------------|
| Lo-Velocity Air Handlers | A | B | C |
| JH-15/30 | 14" (356mm) | 12" (304mm) | 22" (559mm) |
| LV-Z/LV-B-750, LV-50 | 14 1/2" (368mm) | 18 1/4" (464mm) | 32 5/16" (821mm) |
| LV-Z/LV-B-1050, LV-70 | 19 1/2" (495mm) | 18 1/4" (464mm) | 32 5/16" (821mm) |
| LV-120/140 | 25 1/2" (648mm) | 18 1/4" (464mm) | 32 5/16" (821mm) |
| LV-Z/LV-B-1750 | 26 3/4" (679mm) | 24 1/4" (616mm) | 38 3/4" (984mm) |

| | | | | | | |
|---|---|-----------------|-----------------|-----------------|-------------------|-------------|
| RBM/RBM-I Refrigerant Base Modules | | G | H | I | J | K |
| RBM/RBM-I-50 | Fits HE-Z/HE-B/HE/HV-50/51/52, CU-51, LV-Z/LV-B-750/751, LV-50 (1.5 - 2 Tons) | 14 1/2" (368mm) | 18 1/4" (464mm) | 18 1/4" (464mm) | 3/8" (RBM-I 1/2") | 7/8" (22mm) |
| RBM/RBM-I-70 | Fits HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051, LV-70 (2.5 - 3 Tons) | 19 3/8" (492mm) | 18 1/4" (464mm) | 18 1/4" (464mm) | 3/8" (RBM-I 1/2") | 7/8" (22mm) |
| RBM/RBM-I-100 | Fits HE-Z/HE-P/HE-B/HE/HV-100/101 (3.5 - 5 Tons), HE-P-240 (x2 Coils 5-10 Tons) | 25 3/8" (645mm) | 18 1/4" (464mm) | 18 1/4" (464mm) | 3/8" (RBM-I 1/2") | 7/8" (22mm) |

| | | | | | | |
|--|---|-----------------|-----------------|-----------------|--------------|-------------|
| RPM-E Refrigerant Modules - Pre-Piped | | L | M | N | O | P |
| RPM-E-50 | Fits HE-Z/HE-B/HE/HV-50/51/52, CU-51, LV-Z/LV-B-750, LV-50 (1.5 - 2 Tons) | 19 1/4" (489mm) | 14 5/8" (371mm) | 18 1/2" (470mm) | 3/8" (9.5mm) | 7/8" (22mm) |
| RPM-E-70 | Fits HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051, LV-70 (2.5 - 3 Tons) | 24 1/4" (616mm) | 14 5/8" (371mm) | 18 1/2" (470mm) | 3/8" (9.5mm) | 7/8" (22mm) |
| RPM-E-100 | Fits HE-Z/HE-P/HE-B/HE/HV-100/101 (3.5 - 5 Tons), HE-P-240 (x2 Coils 5-10 Tons) | 32" (813mm) | 14 5/8" (371mm) | 18 1/2" (470mm) | 3/8" (9.5mm) | 7/8" (22mm) |

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|--------------------------------------|---|-----------------|-----------------|-----------------|--------------|---------------|
| RCM/RCM-I Refrigerant Modules | | L | M | N | O | P |
| RCM-30 | Fits JH 15/30, CU-31 (1 Ton) | 14 3/8" (365mm) | 12 1/4" (311mm) | 12 3/8" (314mm) | 3/8" (9.5mm) | 5/8" (15.9mm) |
| RCM/RCM-I-50 | Fits HE-Z/HE-B/HE/HV-50/51/52, CU-51, LV-Z/LV-B-750/751, LV-50 (1.5 - 2 Tons) | 14 3/8" (365mm) | 10 1/8" (257mm) | 18 1/2" (470mm) | 1/2" (13mm) | 7/8" (22mm) |
| RCM/RCM-I-70 | Fits HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051, LV-70 (2.5 - 3 Tons) | 19 3/8" (492mm) | 10 1/8" (257mm) | 18 1/2" (470mm) | 1/2" (13mm) | 7/8" (22mm) |
| RCM/RCM-I-100 | Fits HE-Z/HE-P/HE-B/HE/HV-100/101 (3.5 - 5 Tons), HE-P-240 (x2 Coils 5-10 Tons) | 25 3/8" (645mm) | 10 1/8" (257mm) | 18 1/2" (470mm) | 1/2" (13mm) | 7/8" (22mm) |

| | | | | | | |
|-------------------------------------|---|-----------------|-----------------|-----------------|-------------|-------------|
| WCM/WM Chilled Water Modules | | L | M | N | O | P |
| WCM-50 | Fits HE-Z/HE-B/HE/HV-50/51/52, CU-51, LV-Z/LV-B-750/751, LV-50 | 14 3/8" (365mm) | 10 1/8" (257mm) | 18 1/2" (470mm) | 3/4" (19mm) | 3/4" (19mm) |
| WCM-70 | Fits HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051, LV-70 | 19 3/8" (492mm) | 10 1/8" (257mm) | 18 1/2" (470mm) | 3/4" (19mm) | 3/4" (19mm) |
| WCM-100 | Fits HE-Z/HE-P/HE-B/HE/HV-100/101, LV-Z/LV-B/LV-E-1050/1051, LV-120/140 | 25 3/8" (645mm) | 10 1/8" (257mm) | 18 1/2" (470mm) | 3/4" (19mm) | 3/4" (19mm) |
| WM-1750 | Fits LV-Z/LV-B/LV-E-1750/1751 | 26 1/4" (667mm) | 8 1/4" (209mm) | 22 5/8" (575mm) | 1" (25mm) | 1" (25mm) |

| | | | | | | |
|---------------------------------------|---|-----------------|-----------------|-----------------|-------------|-------------|
| WBM Chilled Water Base Modules | | G | H | I | J | K |
| WBM-50 | Fits HE-Z/HE-B/HE/HV-50/51/52, CU-51, LV-Z/LV-B-750/751, LV-50 | 14 1/2" (368mm) | 18 1/4" (464mm) | 18 1/4" (464mm) | 3/4" (19mm) | 3/4" (19mm) |
| WBM-70 | Fits HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051, LV-70 | 19 3/8" (492mm) | 18 1/4" (464mm) | 18 1/4" (464mm) | 3/4" (19mm) | 3/4" (19mm) |
| WBM-100 | Fits HE-Z/HE-P/HE-B/HE/HV-100/101, LV-Z/LV-B/LV-E-1050/1051, LV-120/140 | 25 3/8" (645mm) | 18 1/4" (464mm) | 18 1/4" (464mm) | 3/4" (19mm) | 3/4" (19mm) |

| | | | | | | |
|----------------------------|---|-----------------|-----------------|----------------|--------------|--------------|
| HWC Hot Water Coils | | A | B | D | E | F |
| HWC-30 | Fits CU-31, JH-15/30 | 13 1/2" (343mm) | 12 1/2" (317mm) | 3 3/8" (85mm) | 3/8" (9.5mm) | 3/8" (9.5mm) |
| HWC-50 | Fits HE-Z/HE-B/HE/HV-50/51, CU-51, LV-Z/LV-B-750/751, LV-50 | 13 1/2" (343mm) | 16" (406mm) | 5 1/2" (140mm) | 3/4" (19mm) | 3/4" (19mm) |
| HWC-70 | Fits HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051, LV-70 | 19" (483mm) | 16" (406mm) | 5 1/2" (140mm) | 3/4" (19mm) | 3/4" (19mm) |
| HWC-100 | Fits HE-Z/HE-P/HE-B/HE/HV-100/101, LV-120/140 | 25" (635mm) | 16" (406mm) | 5 1/2" (140mm) | 3/4" (19mm) | 3/4" (19mm) |
| HWC-1750 | Fits HE-P-240/241, LV-Z/LV-B/LV-E-1750/1751 | 26" (660mm) | 22" (559mm) | 6" (152mm) | 1" (25mm) | 1" (25mm) |

Heating Coil Add-on does not come as a module, it slides into the Hi-Velocity Air Handler. Comes installed in all "H" Air Handlers.

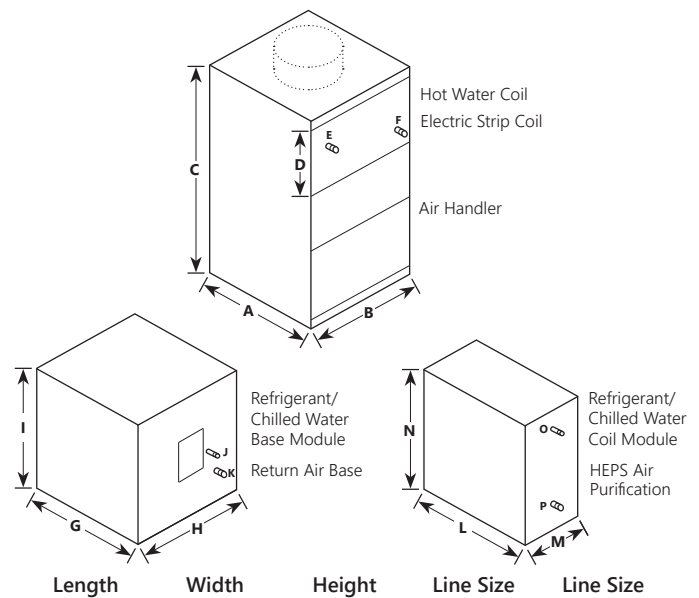
| | | | | |
|---|---|-----------------|-----------------|----------------|
| ESH/VESH Electrical Strip Heater | | A | B | D |
| ESH/VESH-400 (5-10 kW) | Fits CU-31 | 13 3/4" (349mm) | 12 1/8" (308mm) | 5 5/8" (143mm) |
| ESH/VESH-650 (5-15 kW) | Fits HE-Z/HE-B/HE/HV-50/51, LV-Z/LV-B-750/751, LV-50 | 13 3/4" (349mm) | 17" (432mm) | 5 5/8" (143mm) |
| ESH/VESH-750 (5-18 kW) | Fits HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051, LV-70 | 18 3/4" (476mm) | 17" (432mm) | 5 5/8" (143mm) |
| ESH/VESH-1100 (10-23 kW) | Fits HE-Z/HE-P/HE-B/HE/HV-100/101, LV-120/140 | 24 3/4" (629mm) | 17" (432mm) | 5 5/8" (143mm) |
| ESH/VESH-2500 (10-25 kW) | Fits HE-P-240 BU, LV-Z-1750/1751 BU | 25 3/4" (654mm) | 21 7/8" (556mm) | 6" (152mm) |

Dimensions for the ESH do not include the electrical access panel, add 4" to Length (5" for 2500)

| | | | | |
|--|---|------------------|------------------|-----------------|
| HEPS Hi-Velocity Air Purification System (See parts list for replacement filters) | | L | M | N |
| HEPS w/ Merv 13 Filt. | Fits All 50/51/70/71/750/751/100/101/120/140/1050 Units | 26 1/16" (662mm) | 10 5/16" (262mm) | 18 3/8" (467mm) |
| HEPS-1750 w/ Merv 13 | Fits HE-P-240/241, LV-Z/LV-B/LV-E-1750/1751 | 28 1/2" (723mm) | 10 5/16" (262mm) | 21 1/8" (537mm) |

| | | | | |
|------------------------|---|-----------------|-----------------|-----------------|
| Return Air Base | | G | H | I |
| RA-50 | Fits HE-Z/HE-B/HE/HV-50/51, CU-51, LV-Z/LV-B-750/751, LV-50 | 14 1/2" (368mm) | 18 1/2" (470mm) | 22 1/2" (572mm) |
| RA-70 | Fits HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051, LV-70 | 19 1/2" (495mm) | 18 1/2" (470mm) | 22 1/2" (572mm) |
| RA-100 | Fits HE-Z/HE-P/HE-B/HE/HV-100/101, LV-120/140 | 25 1/2" (648mm) | 18 1/2" (470mm) | 22 1/2" (572mm) |
| RA-1750 | Fits HE-P-240/241, LV-Z/LV-B/LV-E-1750/1751 | 26 1/2" (673mm) | 24 1/2" (622mm) | 24" (610mm) |

| | | | | |
|--|---|---------------|----------------|-----------------|
| HVS Series Variable Speed Heat Pump | | Length | Width | Height |
| HVS-24 | Can be used with HE-Z/HE-B/HE/HV-50/51, CU-51, LV-Z/LV-B-750/751, LV-50 | 38" (965mm) | 16.14" (410mm) | 32" (813mm) |
| HVS-36 | Can be used with HE-Z/HE-B/HE/HV-70/71, LV-Z/LV-B/LV-E-1050/1051 | 38" (965mm) | 16.14" (410mm) | 32" (813mm) |
| HVS-60 | Can be used with HE-Z/HE-P/HE-B/HE/HV-100/101, LV-120/140 | 37.5" (953mm) | 16.25" (413mm) | 52.5" (1,334mm) |



WARRANTY

Energy Saving Products Ltd. is proud to offer a limited warranty. This warranty applies strictly to the first purchaser at wholesale level and only to the Air Handler unit and module. It does not include connections, attachments and other products or materials furnished by the installer.

This warranty excludes any damages caused by changes, relocation to, or installation in a new site. This warranty does not cover any defects caused by failure to follow the installation and operating instructions furnished with the Air Handler. This warranty does not cover defects caused by failing to adhere to local building codes and following good industry standards. Failure to correctly install the Air Handler, or material related to the unit, may result in improper system performance and/or damages and will void this warranty. This warranty does not cover material installed in or exposed to a corrosive environment. This warranty does not cover products subjected to abnormal use, misuse, improper maintenance, or alteration of the product. Using the Air Handler and/or module as a source of temporary heating/cooling during construction will void this warranty.

A Five (5) Year Limited Warranty is extended on all components in products manufactured exclusively by Energy Saving Products. These components include Motors, WEG Controller, Circuit Boards, Dampers, Zoning Controls, Blowers, Motor & Blower Assemblies, Heating Coils, Chilled Water Coils, and Air Conditioning Coils. Note: If any product is installed in or exposed to a corrosive environment, warranty will be void.

A Three (3) Year Limited Warranty is extended on Electric Strip Heaters.

A One (1) Year Limited Warranty is extended on replacement parts.

Products sold by Energy Saving Products but manufactured by others, will carry the original manufacturer's warranty.

TERMS & CONDITIONS

- **Warranty will not be considered unless a contractor has contacted Energy Saving Products Ltd. Technical Support department for assistance, and received a tech code.**
- Any repair performed under warranty must be approved by Energy Saving Products Ltd. for this warranty to be valid.
- The liability of Energy Saving Products Ltd. is limited to and shall not exceed the cost of pre-approved replacement parts.
- This warranty does not cover shipping costs to and from the factory, labor costs or any other cost associated with the installation of the replacement part.
- Inoperative parts must be returned to Energy Saving Products Ltd. with an ESP RMA Form that includes model, serial number, and a detailed description of the entire problem. Inoperative parts must be returned in testable condition.
- Energy Saving Products Ltd. is not liable for any other damages, personal injury, or any other losses of any nature.

Follow these steps for Service or Repair:

1. Contact the installer of the product or a licensed service company
2. Contact the distributor
3. Contact Energy Saving Products Ltd. Mon-Fri 8 am – 4:30 pm MT 1-888-652-2219

This warranty replaces all other warranties expressed or implied.

www.hi-velocity.com

Energy Saving Products Ltd, established in 1983, manufactures the Hi-Velocity Systems™ product line for residential, commercial and multi-family markets. Our facilities house Administration, Sales, Design, Manufacturing, as well as Research & Development complete with an in-house test lab. Energy Saving Products prides itself on Customer Service and provides design services and contractor support.

For all of your Heating, Cooling and Indoor Air Quality needs, the Hi-Velocity System is the right choice for you!



Small Duct Heating, Cooling and IAQ Systems

Build Smart, Breathe *Easy*

Hi-Velocity HE-Z Air Handlers, **Green** Technology



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