INSTALLATION TIPS

1. Use flat flooring in the floor section under the bulkhead.
2. Provide a thermal break in the floor under the bulkhead. For movable location bulkheads, use rubberized hardwood floors.
3. Cover refrigerant lines to avoid impact damage.
4. Install a guard around the evaporator to prevent impact damage.

INSULATION REQUIREMENTS

Outside Layer
- Vertical Framing (Non-Conductive)
- 1/2-13 Stud, Threaded Full Length
- Must Support Weight of Evap. (Grade 5 or Better)
- Torque Hardware to 60 FT-LBS [81 Nm]
1. Bells on tubes from host are meant to accept 3/8" and 1 1/8" refrigeration tubing.
2. Make tubing connections using items 40, 45, 50, 55 & 60.
3. Route tubing to rear evaporators to minimize exposure to damage.
4. For copper to copper brazing it is required that a brazing material of 15% silver, 5% phosphorous is used (flux is not required for copper to copper joints). Soft solder brazing material is not recommended.
5. Closed cell foam insulation is provided to cover the entire suction and liquid line length.
6. If a ceiling trough is installed for a MJD evapor, the trough should angle to the side wall at the center of the evapor.
7. It is recommended to remove access panel from back panel and move electrical cables away from tubing before brazing refrigerant tubing at host unit.

**Single Discharge Remote (MJS-1100 and MJS-2200)**

**Dual Discharge Remote (MJD-1100 and MJD-2200)**

**SINGLE AND DUAL DISCHARGE REMOTE EVAP INSTALLATION**

**COMPARTMENT NO. 1**

\[ A + B = 4.0' \text{ MIN} \]

\( \text{WHERE:} \ A \text{ IS AT LEAST 1.0' MIN. AND} \ B \text{ IS AT LEAST 1.0' MIN.} \)

**TROUGH TO BE LOCATED WITHIN THIS AREA TO AVOID EVAPORATOR MOUNTING STUDS**

**REFRIGERANT LINE ROUTING**

**CEILING TROUGH CONFIGURATION**

(WIRING NOT SHOWN FOR CLARITY)

**WALL TROUGH CONFIGURATION**

(WIRING NOT SHOWN FOR CLARITY)

**ACCESS PANEL**

(SEE NOTE #8)

**ADD PLUG (ITEM #85) AFTER BRAZING IS COMPLETE**
2 COMPARTMENT PIPING & WIRING INSTALLATION

WARNING: 
HIGH VOLTAGE

CAUTION: 12V LINES ARE NOT TO BE CLAMPED TO THE 460V LINES.

REMOTE HOST UNIT
LIQUID CONNECTION
-0.387
0.381
-9.8
29.6
[9.5][]
I.D X 0.38

REMOTE UNIT
SUCTION CONNECTION
-1.138
1.132
-28.8
28.75
[22.2][2]
I.D X 0.88

2 COMPARTMENT REMOTE HARNESS

GROMMET WILL NEED TO BE REMOVED FOR 3 COMPARTMENT HV CABLE INSTALLATION.

2 COMPARTMENT CABLE SLOT

3 COMPARTMENT CABLE SLOT

SECTION "A-A"

TRAILER WALL

TRAILER CEILING

0.375
9.5[2]
OD LIQUID LINE

1.88
47.6[2]
OD INSULATION

1.13
28.6[2]
OD SUCTION LINE

0.50
12.7[2]
OD 12V ELECTRICAL CABLE

TROUGH

TROUGH COVER

HIGH VOLTAGE LABELS-PLACE ON TROUGH COVER APPROXIMATELY EVERY 5.0'.

WARNING

PLACE SUCTION LINE AS CLOSE TO TROUGH WALL AS POSSIBLE, SO THAT THERE IS SPACE FOR LIQUID LINE, AND ELECTRICAL "HV & LV" HARNESS.

REMOVE TRAILER HARNESS SHIPPING BLACK WIRE TIES AND CLAMP TUBES & CABLES SECURELY INSIDE TROUGH TO PREVENT DAMAGE FROM VIBRATION. SPACING BETWEEN TUBING CLAMPS NOT TO EXCEED 24". SPACING BETWEEN HARNESS CLAMPS NOT TO EXCEED 12". (SEE SHEET 7 FOR CLAMPING REQUIRED FOR COPPER TROUGH INSTALLATIONS)

SEE GROUNDING PROCEDURES ON SHEET 6

REMOTE - REAR UPPER LEFT VIEW TO SHOW ELECTRICAL LINE ROUTING

2 COMPARTMENT - HOST UNIT
3 COMPARTMENT PIPING & WIRING INSTALLATION

REMOTE UNIT LIQUID CONNECTION
0.38 [9.8] I.D X 0.38 [9.5] DP BELL

REMOTE UNIT SUCTION CONNECTION
1.13 [28.7] I.D X 0.88 [22.2] DP BELL

NOTE: DIMENSIONS SHOWN ARE APPROXIMATE (NOT PROVIDED)

WARNING:
HIGH VOLTAGE

CAUTION: 12V LINES ARE NOT TO BE CLAMPED TO THE 460V LINES

REMOTE LOW VOLT HARNESS

REMOTE HIGH VOLT HARNESS

3 COMPARTMENT HIGH VOLT SPLINTER HARNESS

2 & 3 COMPARTMENT HI VOLT CONNECTOR

3 COMPARTMENT REAR VIEW TO SHOW ELECTRICAL LINE ROUTING

SECTION "A-A"

REMOTE HOST

PLACE SUCTION LINE AS CLOSE TO TROUGH WALL AS POSSIBLE, SO THAT THERE IS SPACE FOR LIQUID LINE, AND ELECTRICAL "HV & LV" HARNESS.

SEE GROUNDING PROCEDURES ON SHEET 6

PULL HARNESS THRU WIRE TIE TO HAVE ENOUGH SLACK TO DOUBLE BACK ON ITSELF TO TIE-WRAP IT TO ITSELF, AS SHOWN.

QTY.
30 FOR -01
80 FOR -02

REMOVE GROMMET SUPPLIED ON HOST UNIT BEFORE INSTALLING GROMMET SUPPLIED ON REMOTE COMPARTMENT HARNESS.

2 & 3 COMPARTMENT LOW VOLT CONNECTOR

SEE INSTALLATION INSTRUCTIONS

TRAILER WALL

TRAILER CEILING
3CPT SYSTEM ROUTING PIPING AND WIRING

3CPT SYSTEM ROUTING OF PIPING AND WIRING - REFER TO FIGURE EE. IN 3CPT SYSTEMS THE FOLLOWING REQUIREMENTS OF INSTALLATION MUST BE FOLLOWED:

HIGH VOLTAGE WIRING: A 3-WAY HIGH VOLTAGE "SPLITTER" HARNESS IS INCLUDED IN THE 3CPT INSTALLATION KIT WHICH CONTAINS THREE [4-PIN] CONNECTORS. THIS HARNESS MUST BE INSTALLED AT THE HOST UNIT TO THE EXISTING HIGH VOLTAGE CONNECTION AS SHOWN IN FIGURE EE. FROM THAT HARNESS THE INDIVIDUAL HIGH VOLTAGE CABLES ARE ROUTED TO EACH REMOTE UNIT.

LOW VOLTAGE WIRING: A 3-WAY LOW VOLTAGE "SPLITTER" HARNESS IS INCLUDED IN THE 3CPT INSTALLATION KIT WHICH CONTAINS TWO [8-PIN] AND ONE [10-PIN] CONNECTORS. HOWEVER, THE LOW VOLTAGE SPLITTER HARNESS IS NOT INSTALLED AT THE HOST UNIT. ONE LOW VOLTAGE CABLE IS CONNECTED TO THE HOST UNIT AND ROUTED TO ONE OF THE [8-PIN] UNITS (NOTE THAT THIS UNIT WILL ALWAYS BE "CPT1" AT THE DISPLAY). THE LOW VOLTAGE SPLITTER HARNESS IS THEN INSTALLED AT THE REMOTE UNIT. THE LOW VOLTAGE CABLE TO THE 2ND REMOTE UNIT (OR THE 3RD CPT) IS ROUTED FROM THE "SPLITTER" HARNESS TO THE 2ND UNIT. IT IS TYPICALLY ROUTED ALONG WITH THE REFRIGERANT PIPING TO THAT UNIT. THIS MEANS FOR SOME SYSTEM CONFIGURATIONS, IT MAY NEED TO BE ROUTED BACK TO THE HOST UNIT IN ORDER TO FOLLOW THE PIPING (SEE FIGURE EE). ROUTING THE CABLE ALONG WITH THE PIPING IS NOT MANDATORY, BUT FREQUENTLY PREFERRED BY THE INSTALLER OR CUSTOMER FOR ADEQUATE PROTECTION OF THE CABLE.

FIGURE EE - 3CPT ROUTING OF POWER AND LOW VOLTAGE CABLES
**Recommended Grounding Procedure**

**For Aluminum Troughs without Existing Ground Hardware**

1. **Grounding the Host Unit**
   - Locate the 8 GA. green ground wire from the host unit and route to trough. Attach ground plate (Item 115) to trough using method described in Notes 3 & 4.
   - If necessary, cut wire to length and terminate with M6 ring terminal (Item 15) and heat shrink tubing (Item 90). Use the proper crimping tool (Greenlee K05-1GL). Attach wire to plate assy using the hardware from plate assy.
   - Secure wire to the high voltage lines using wire ties (Item 80).

**Important**

Make sure all wires are properly secured away from any surfaces or edges that can result in chafing.

2 & 3 Compartment

**Alternate Grounding Procedure**

**For Aluminum Troughs with Existing Ground Hardware**

1. **Grounding the Host Unit**
   - Locate and route the 8 GA. ground wire from the host unit to the trough.
   - If necessary, cut wire to length and terminate using M6 ring terminal (Item 15) and heat shrink tubing (Item 90). Use the proper crimping tool (Greenlee K05-1GL). Attach wire to trough using the hardware provided in the trough as shown below.
   - Secure wire to the high voltage lines using wire ties (Item 80).

**To Ground Guards**

5. Guards are recommended to protect wire and piping from remote evaporators to trough.
6. Skip Step 6 if the remote evaporator has an aluminum ground plate already in place as a substitute.
7. Use the ground plate provided with the remote evaporator and attach to ground stud as in note 4.
8. Use the host unit guard with the ground wire to the trough and align to ground end as in note 4.

**Important**

Make sure all wires are properly secured away from any surfaces or edges that can result in chafing.

2 & 3 Compartment

**Grounding Notes**

1. Do not use self-tapping screws for ground connection to trough or to connection point.
2. Use high quality 250-350A aluminum. Thinner gauge wire may be damaged by crimping.
3. Do not terminate the ground wire at the ground terminal on remote or host.
4. Connect ground wires to proper connections provided by equipment manufacturer.
5. Connect all ground wires to the proper connection provided by equipment manufacturer.

---

**High Voltage Lines**

**Low Voltage Lines**

**Ground Wire**

**Bracket**

**Clamping**

Clamp spacing not to exceed 12" between clamps.
FIGURE AA - 2CPT SYSTEM WIRING TO REMOTE UNIT
(FOR 3CPT SYSTEMS, SEE ALSO FIG.BB)

FIELD CABLE ASSEMBLY 22-03007

HOST UNIT

REMOTE EVAPORATOR UNIT

COLOR MM2 TAG WIRE COLOR ADDRESS
BLK
WHT
RED
GRN

REMOTE EVAPORATOR UNIT (10-PIN) AT REMOTE C1 CONNECTOR

NOTE:
1. CHECK THE PLUGGED END OF CONNECTOR CJH AND SPLICE PARTS SUPPLIED TO REMOTE EVAPORATOR. ROUTE AND TERMINATE LEADS TO THE LOW VOLTAGE HARNESS.
2. CRIMP THE 8-WAY CABLE USING CRIMPING TOOL CTD P/N 07-00519-00, AND BUTT SPLICE TO HIGH VOLTAGE CABLE FROM REMOTE EVAPORATOR. STRIP BACK LEADS (4) AND BUTT SPLICE PARTS ARE PROVIDED IN BAG ON REMOTE CABLE ASSY. TERMINATE LEADS WITH 10 PIN CONNECTOR C1 CONNECTOR AT HOST UNIT.
3. CRIMP THE APPROPRIATE TERMINALS TO THE 8-WAY CABLE USING CRIMPING TOOL CTD P/N 07-00519-00, AND BUTT SPLICE TO HIGH VOLTAGE CABLE FROM REMOTE EVAPORATOR. STRIP BACK LEADS (4) AND BUTT SPLICE PARTS ARE PROVIDED IN BAG ON REMOTE CABLE ASSY. TERMINATE LEADS WITH 10 PIN CONNECTOR C1 CONNECTOR AT HOST UNIT.

NOTES:
- MUST USE HEAT SHRINK WITH EPOXY MELT LINER CRIMPING TOOL CTD P/N 07-00496-00.
- SPLICE MATERIALS AND HEAT SHRINK TUBING SUPPLIED USING THE PROPER HIGH VOLTAGE HARNESS. WIRE ACCORDING TO CHART AND SPLICE USING THE BUTT SPLICE.
- CUT THE 22-03007 CABLE ASSEMBLY TO LENGTH.
- LOCATE THE PLASTIC BAG OF CONNECTOR AND SPLICE PARTS SUPPLIED (22-50078-45) AND RECONNECT CONNECTOR CDWR TO THE DRAIN HEATER REMOTE EVAPORATOR, ROUTE IT ALONG AND SECURE IT WITH WIRE TIES TO THE LOW VOLTAGE HARNESS, POWER. LOCKOUT HOST UNIT POWER BEFORE SERVICING.

WARNING! REMOTE UNIT CIRCUITS ARE LIVE (460VAC) WHENEVER HOST UNIT IS RUNNING OR ON STANDBY POWER, LOCKOUT HOST UNIT POWER BEFORE SERVICING.
3 COMPARTMENT SYSTEMS WITH TWO 1100 SIZE REMOTE EVAPORATORS

SYSTEM 5
- COMP 1 - ONE MJS 1100 SINGLE DISCHARGE EVAPORATOR
- COMP 2 - ONE MJD 1100 DUAL DISCHARGE EVAPORATOR
- COMP 3 - ONE MJS 1100 SINGLE DISCHARGE EVAPORATOR

SYSTEM 6
- COMP 1 - ONE MJD 1100 DUAL DISCHARGE EVAPORATOR
- COMP 2 - ONE MJD 1100 DUAL DISCHARGE EVAPORATOR
- COMP 3 - ONE MJS 1100 SINGLE DISCHARGE EVAPORATOR

SYSTEM 7
- COMP 1 - ONE MJS 1100 SINGLE DISCHARGE EVAPORATOR
- COMP 2 - ONE MJS 1100 SINGLE DISCHARGE EVAPORATOR
- COMP 3 - ONE MJS 1100 SINGLE DISCHARGE EVAPORATOR

CHOOSE "MJS1100" FOR C2 EVAP CONFIG
CHOOSE "MJD1100" FOR C3 EVAP CONFIG

3 COMPARTMENT SYSTEMS WITH TWO 1100 SIZE REMOTE EVAPORATORS

Schematic for information only. Exact piping to be determined by remote evaporator style, application, and location.

All connecting components are as needed.
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SYM

Revision Record

Date

By

Engr.

M.E.

NPCA No.

Rev

Drawing No.

Title

Carrier Corporation

Syracuse, New York 13221

P.O. Box 4805

Carrier Transicold Division

A

Sheet

13

Vector 8600 MT (2 & 3 compartment) remote evaporators

Imperial Inch Format:

 Unless otherwise specified dimensions are in inches with metric conversions in millimeters

98-03339

Installation Instructions

Supercedes:

Part Classification: US

See chart

Drawing Classification: US

EAR99

A

Initial Release.

21 OCT 2014

LT-SS

JC

72N0330P14

System 13 System 14

3 compartment systems with one 1100 size remote evaporator and one 2200 remote evaporator

System 15 System 16

Comp 2 - one MJS 2200 single discharge evaporator

Comp 3 - one MJD 1100 dual discharge evaporator

Choose "MJS2200" for C2 EVAP config

Choose "MJD1100" for C3 EVAP config

Comp 2 - one MJD 2200 dual discharge evaporator

Comp 3 - one MJS 1100 single discharge evaporator

Choose "MJD2200" for C2 EVAP config

Choose "MJS1100" for C3 EVAP config

Piping schematic

Scheme for information only

Exact piping to be determined by remote evaporator style, application and location

All connecting components are as needed
RETURN AIR
SUPPLY AIR

MJD-2200               239LBS
[108KG]

EVAPORATOR WEIGHT

MJD-2200-4

DRAIN CONNECTION

DRAIN CONNECTION

NO HARDWARE ALLOWED THROUGH REMOTE EVAPORATOR
FRAME SURFACE. HV & LV ELECTRICAL HARNESS IS PRESENT.

SUCTION LINE

1-1/8 OD TUBE LIQUID LINE

3/8 OD TUBE

HARNESS ACCESS

CONVERSION CHART

DECIMAL

INCHES

FRACTIONAL

INCHES

0.91 29/32

1.36 1-3/8

1.61 1-5/8

1.65 1-21/32

1.97 1-31/32

2.44 2-7/16

2.95 2-15/16

4.33 4-11/32

4.72 4-11/32

7.03 7-1/32

10.85 10-27/32

26.22 10-27/32

26.30 26-5/16

31.42 31-13/32

34.65 34-21/32

84.65 84-21/32

RETURN AIR
SUPPLY AIR

MJD-2200               239LBS
[108KG]

EVAPORATOR WEIGHT

MJD-2200-4

DRAIN CONNECTION

DRAIN CONNECTION

NO HARDWARE ALLOWED THROUGH REMOTE EVAPORATOR
FRAME SURFACE. HV & LV ELECTRICAL HARNESS IS PRESENT.

SUCTION LINE

1-1/8 OD TUBE LIQUID LINE

3/8 OD TUBE

HARNESS ACCESS

CONVERSION CHART

DECIMAL

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FRACTIONAL

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2.95 2-15/16

4.33 4-11/32

4.72 4-11/32

7.03 7-1/32

10.85 10-27/32

26.22 10-27/32

26.30 26-5/16

31.42 31-13/32

34.65 34-21/32

84.65 84-21/32