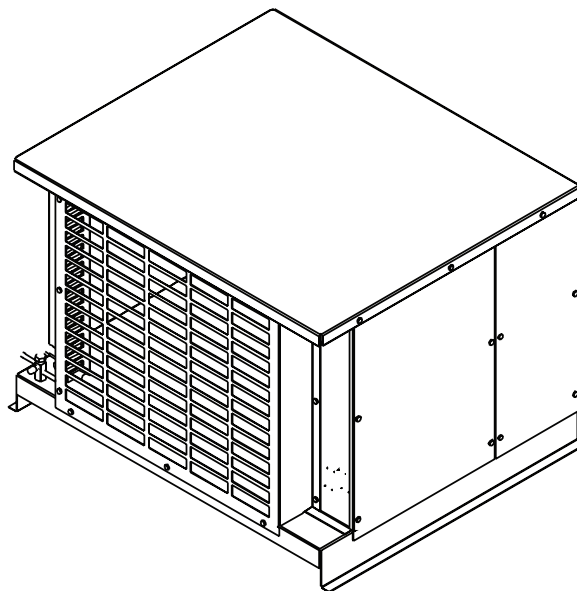
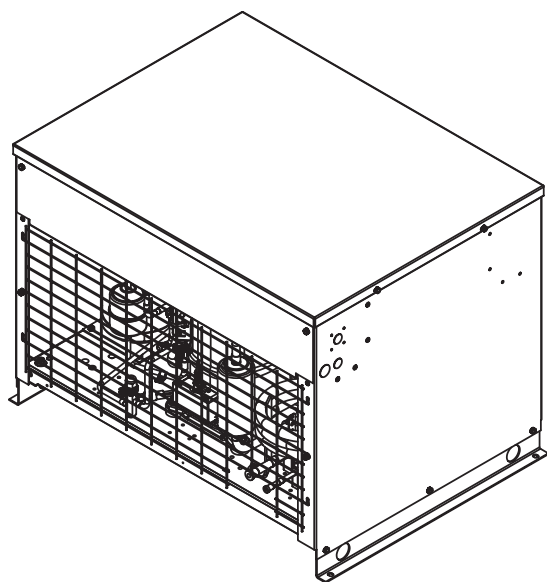
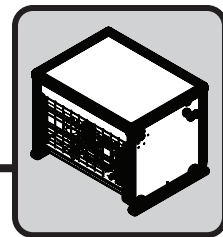


Horizon Elite™ Ice Machine Installation Instructions for Remote Condensing Unit

HCD/HMD/HCF/HMF1010R __
HCD/HMD/HCF/HMF1410R __



	Horizon Elite 1010 series	Horizon Elite 1410 series
W1 Width	36.25" (91.4 cm) – AJA7490ZXDPN and AWA9490ZXTN 38.10" (96.8 cm) – all others	36.25" (90.1 cm) – single phase (Tecumseh) 37.75" (95.9 cm) – three phase (Larkin)
D1 Depth	25.50" (64.8 cm) – AJA7490ZXDPN and AWA9490ZXTN 21.50" (54.6 cm) – all others	25.50" (64.8 cm) – single phase (Tecumseh) 28.25" (71.6 cm) – three phase (Larkin)
H1 Height	26.10" (66.3 cm) – AJA7490ZXDPN and AWA9490ZXTN 28.50" (72.9 cm) – all others	26.10" (66.3 cm) – single phase 19.75" (50.2 cm) – three phase (Larkin)
Electrical	single phase – 208-230/60/1 three phase – 208-230/60/3	single phase – 208-230/60/1 (Tecumseh) three phase – 208-230/60/3 (Larkin)
Minimum circuit ampacity	single phase – 10.7A three phase – 9.9A	single phase – 19.3A (Tecumseh AWA9513ZXDPN) single phase – 16.4A (Tecumseh ASFS9516ZNAMC1) three phase – 14.2A (Tecumseh AWA9517ZXDPN) three phase – 15A (Larkin)
Maximum overcurrent protection	single phase – 15A three phase – 15A	single phase – 30A (Tecumseh AWA9513ZXDPN) single phase – 25A (Tecumseh ASFS9516ZNAMC1) three phase – 25A (Tecumseh AWA9517ZXDPN) three phase – 15A (Larkin LZT015M6CFIM) three phase – 20A (Larkin LCH0015MCACZ)
Outdoor condensing unit operating limits (air temperature)	min –20 F (–29 C) max 120 F (49 C)	min –20 F (–29 C) max 120 F (49 C)
Maximum refrigerant line run length	100' (30.5 m)	100' (30.5 m)
Maximum line rise above evaporator	35' (10.7 m)	35' (10.7 m)
Evaporator mounting above condenser	15' (4.6 m)	15' (4.6 m)
Maximum refrigeration line drop without oil trap	15' (4.6 m)	15' (4.6 m)
Refrigerant charge	12.5 lb required at installation	12.5 lb – single phase (Tecumseh) 10 lb – three phase (Larkin) required at installation
Approximate ship weight	260 lb (118 kg) – All others 212 lb (96 kg) – Tecumseh ASFS9516ZNAMC1 232 lb (105 kg) – Tecumseh AJA7490ZXDPN	270 lb (122 kg) – Tecumseh AJA7490ZXDPN 234 lb (106 kg) – Tecumseh ASFS9516ZNAMC1 230 lb (104 kg) – three phase (Larkin)
Approximate net weight	250 lb (114 kg) – All others 180 lb (82 kg) – Tecumseh AJA7490ZXDPN 200 lb (91 kg) – Tecumseh ASFS9516ZNAMC1	260 lb (118 kg) – Tecumseh AWA9513ZXDPN 202 lb (92 kg) – Tecumseh ASFS9516ZNAMC1 210 lb (95 kg) – three phase (Larkin)

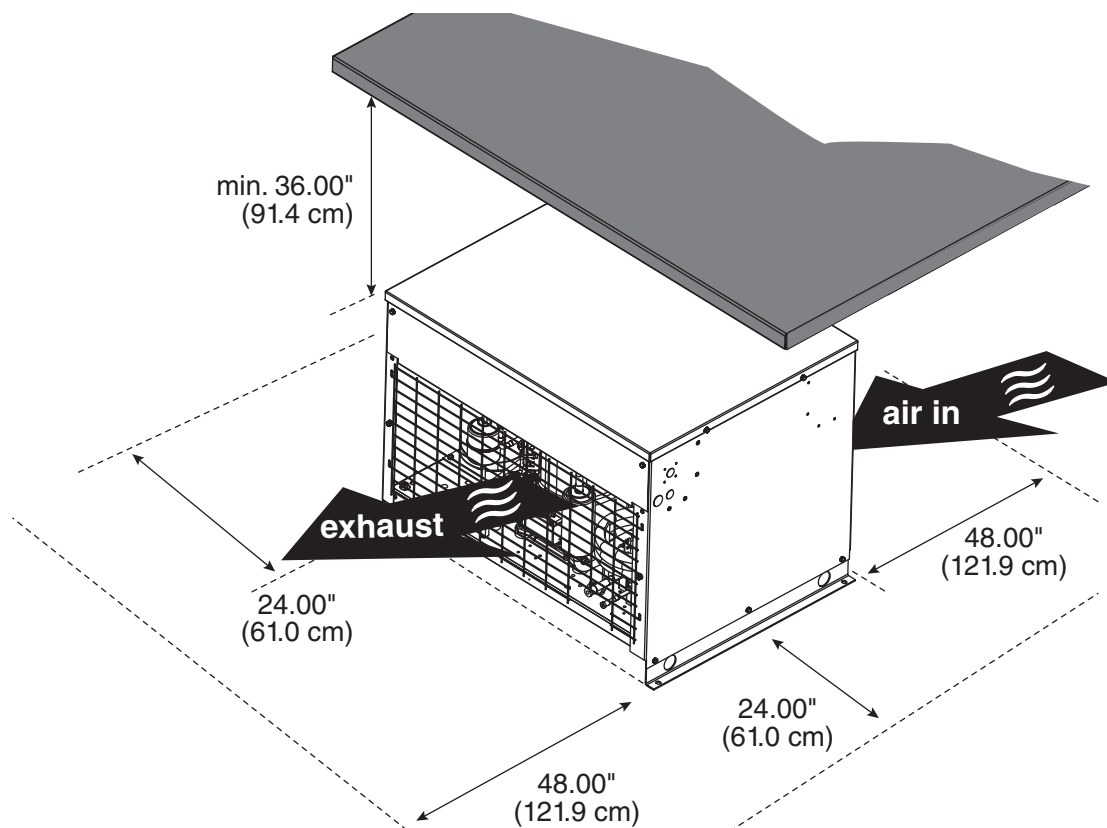
Prior to installation, carefully unpack and inspect the contents of your condensing unit!

Site preparation

To ensure proper performance, ease of service and warranty coverage, it is critical that you follow the requirements detailed in this manual. If you cannot meet these requirements or have questions, call our technical service group at 877.612.5086 for installation support.

1

1.1 Condenser Unit Clearances



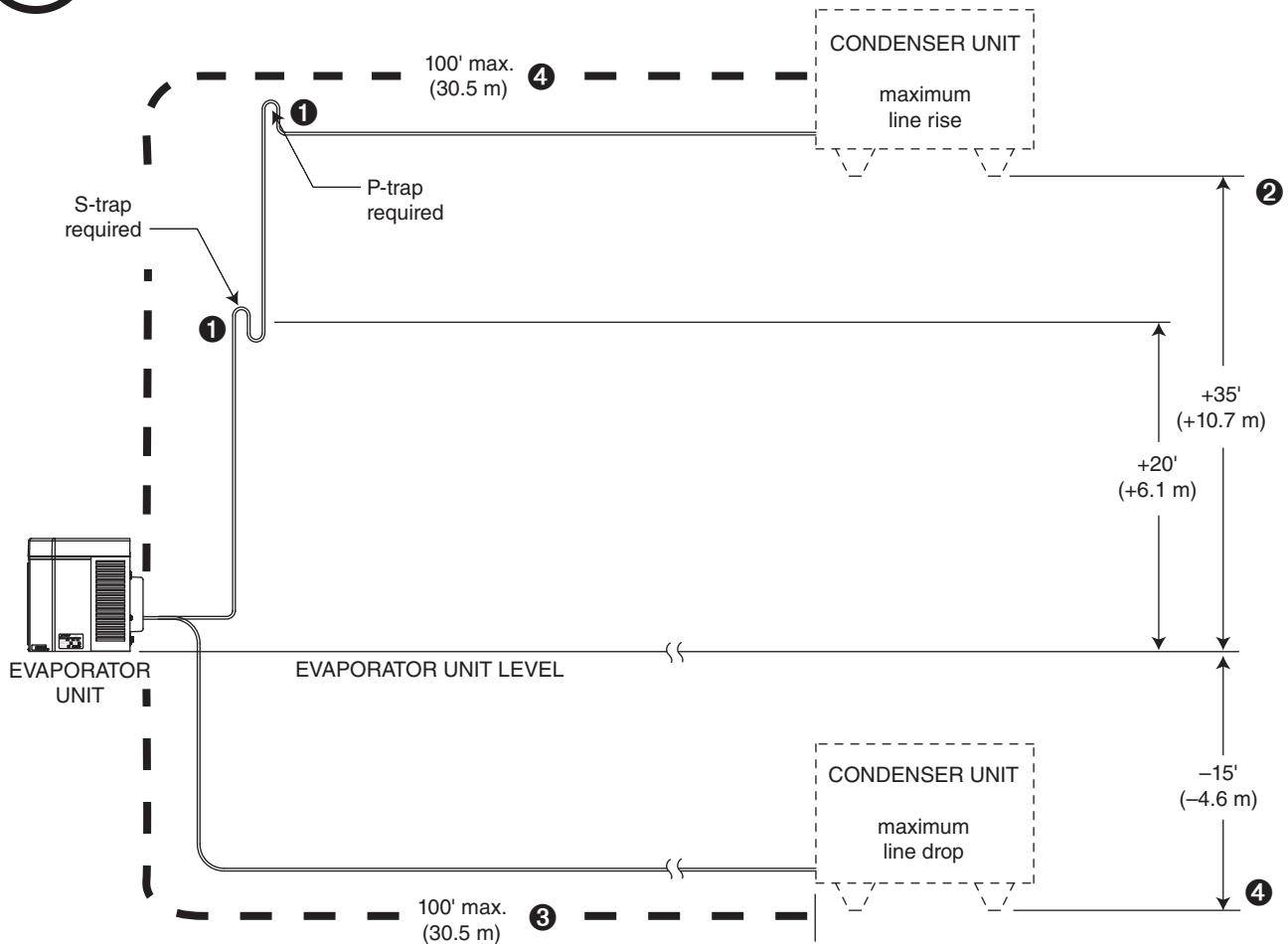
- Position condenser unit as shown.

Required clearances:

- Minimum 48" (121.9 cm) front and back
- Minimum 24" (61.0 cm) left and right
- Minimum 36" (91.4 cm) above

1.2

Condenser installation specifications



Site layout:

- Outdoor ambient temperature range: -20°F to 120°F (-29°C to 49°C)
- Installation with condenser unit elevations above 20' (6.1 m) require an S-trap at the midpoint of the rise and a P-trap at the top of the rise ①
- Maximum line rise must not exceed 35' (10.7 m) ②
- Maximum line set length must not exceed 100' (30.5 m) ③
- Maximum line drop must not exceed 15' (4.6 m) ④

2.1 Install condensing unit

- Level unit
- Securely attach base of unit using holes found in base plate
- Required rack system capacity at 0 F (-18 C) evaporator (EPR supplied by installer).
1010N: 7,700 Btu/hr (1940 kcal/hr)
1410N: 10,000 Btu/hr (2519 kcal/hr)

2.2 Electrical requirements



CAUTION

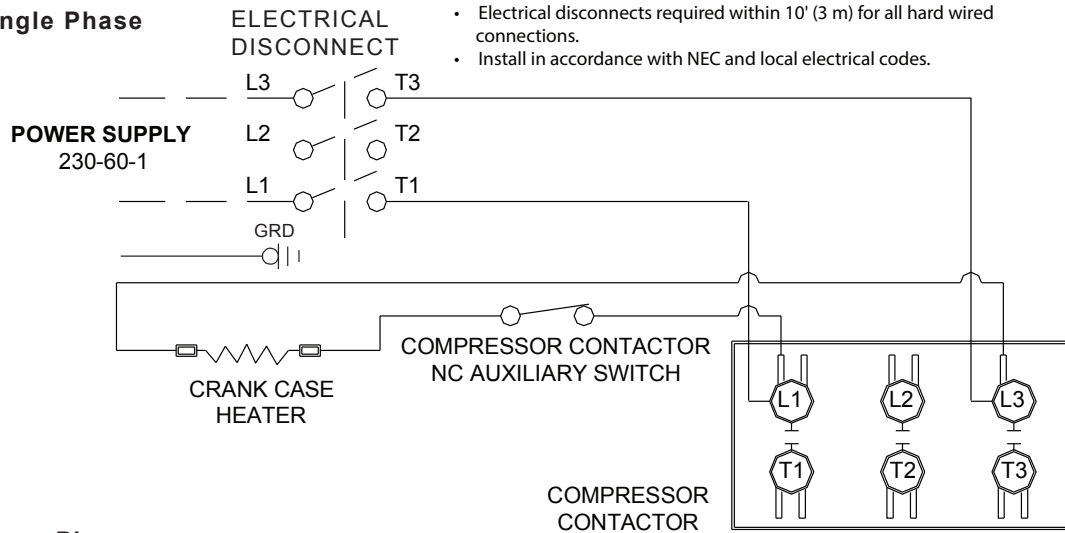
- Electrical disconnects required within 10' (3 m) for all hard wired connections
- Install in accordance with NEC and local electrical codes

	Horizon Elite 1010 series	Horizon Elite 1410 series
Minimum circuit ampacity	single phase – 10.7A three phase – 9.9A	single phase – 19.3A (Tecumseh AWA9513ZXDPN) single phase – 16.4A (Tecumseh ASFS9516ZNAMC1) three phase – 15A (Larkin)
Maximum overcurrent protection	single phase – 15A three phase – 15A	single phase – 30A (Tecumseh AWA9513ZXDPN) single phase – 25A (Tecumseh ASFS9516ZNAMC1) three phase – 15A (Larkin LZT015M6CFIM) three phase – 20A (Larkin LCH0015MCACZ)
Outdoor condensing unit operating limits (air temperature)	min –20 F (–29 C) max 120 F (49 C)	min –20 F (–29 C) max 120 F (49 C)

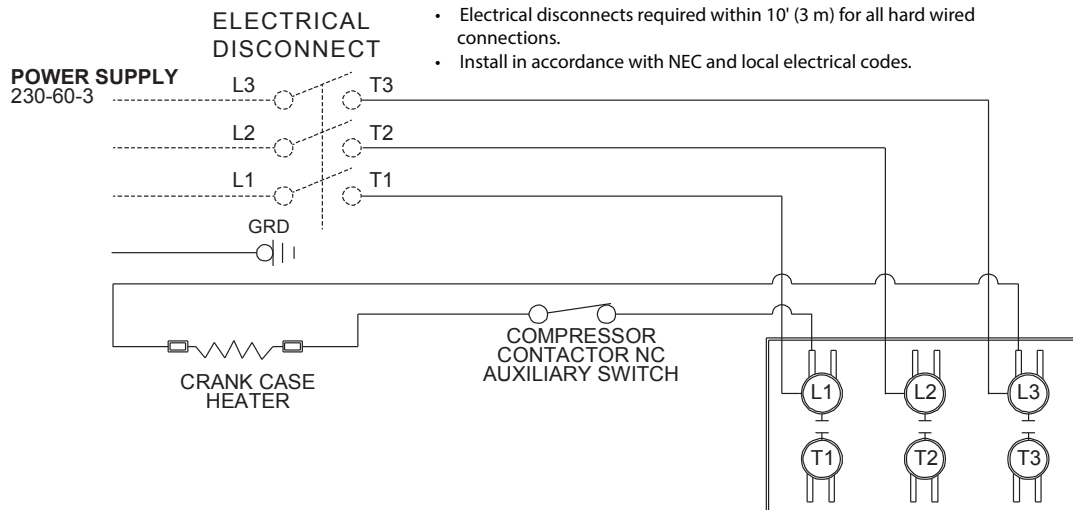
2.3

Electrical connections at contactor

Single Phase



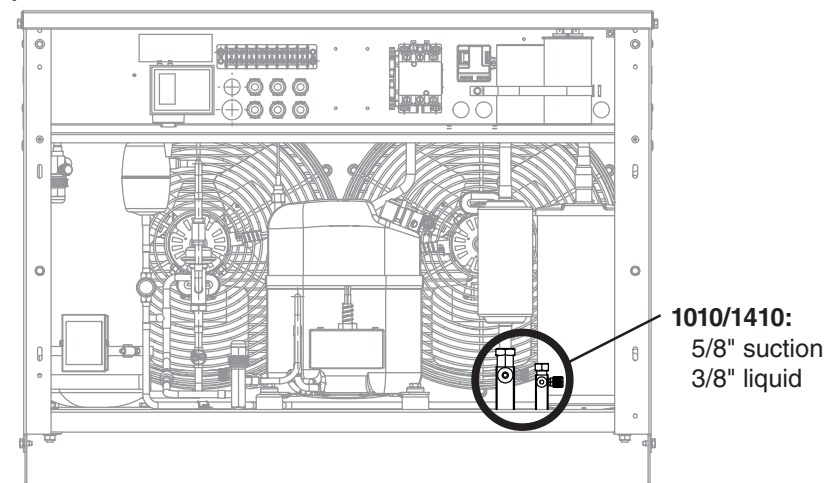
Three Phase

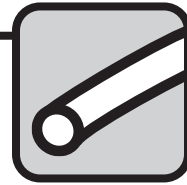


2.4

Condensing unit refrigeration line-set connection point

Note that different units have different line-set connection locations, the graphic below is not representative of all the units.





3.1 Refrigeration line installation: 5/8" suction / 3/8" liquid line (1010, 1410)



CAUTION

- The installer of the refrigeration line set must be USA Government Environmental Protection Agency (EPA) certified in proper refrigeration handling and service procedures
- A qualified person must perform all roof or wall penetration
- Do not form unwanted traps in refrigeration lines. A service loop is not considered an oil trap.
- Never coil excess refrigeration tubing
- The compressor oil rapidly absorbs moisture. Minimize the exposure of the refrigeration system by not releasing the condenser unit or evaporator unit holding charge until all line connections are finished and the system is ready for evacuation.



WARNING

- This unit contains an R404A holding charge

1. Make and connect line set run from the condensing unit to the evaporator unit with all specifications found in the installation specifications section. Do not overheat shut off valves on the condenser unit or evaporator unit.

Note: Insulate entire suction line (not the liquid line) including shut off valves to prevent condensation.

2. Leak check field joints via the evaporator unit service valves.
3. Evacuate line set via the evaporator unit service valves.

R404A Ice Machine Charge Specifications

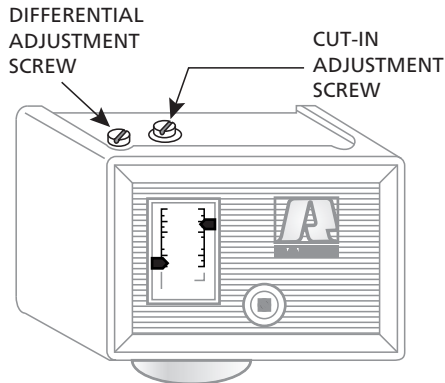
Line Run	Total Charge 1010/1410 single phase, 1010 three phase (Tecumseh)	Total Charge 1410R three phase (Larkin)
0 - 100' (0 - 30.5 m)	12.5 lb (5.7 kg)	10 lb (4.54 kg)
100' + (30.5 m+)	not recommended – consult factory	

Note: Condensing unit shipped with 0.5 lb R404A charge.

5. Open the liquid line service valve and suction line service valve on the evaporator unit and condenser unit.
6. Open the liquid line valve on the receiver, then the suction line valve on the compressor unit.
7. Liquid charge unit through liquid line shut off valve on the evaporator unit or receiver valve on the condensing unit.
8. Isolate the refrigerant tank from high pressure side on the system.
9. Turn on power to condensing unit and evaporator unit.
10. Complete system charge through low pressure side.



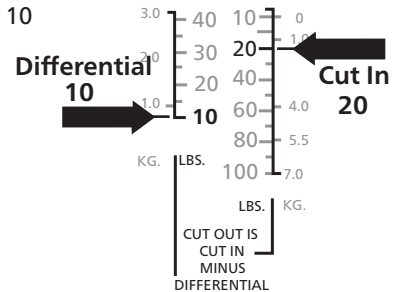
4.1 Set low-pressure switch - if applicable



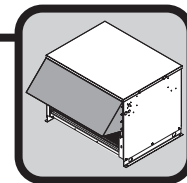
- 1) Adjust the top LEFT screw until the pointer is set to 10 (the differential).
- 2) Adjust the top RIGHT screw until the pointer is set to 20 (the cut-in).

EXAMPLE

Cut In Differential Cut Out
20 - 10 = 10



Hail hood

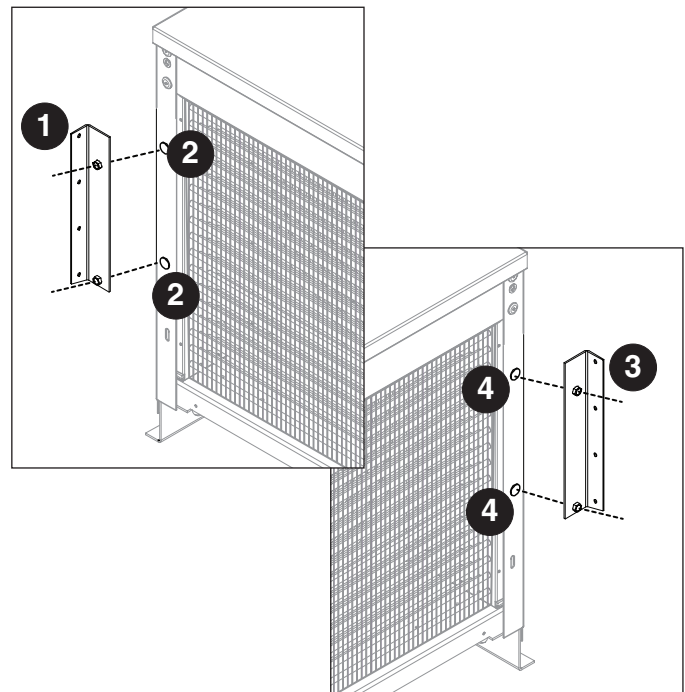


5.1 Install hail hood (Tecumseh units only)

Please remove the condenser enclosure top to access the following parts:

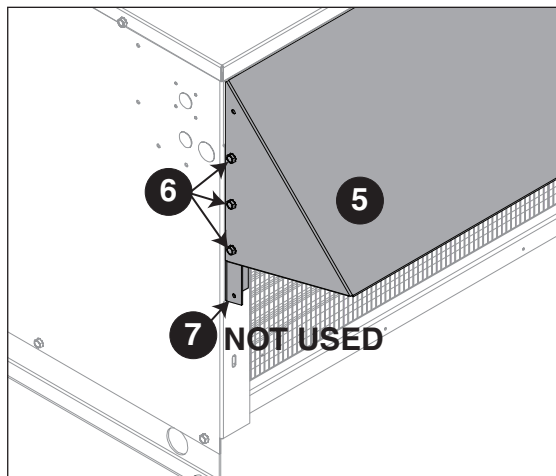
- Left and right brackets (not interchangeable)
- Hail hood
- 1/4 x 20 x 1/2 hex head screw (10)

1. Locate the left bracket (1) and install using two supplied screws (2).
2. Locate the right bracket (3) and install using two supplied screws (4).



3. Install hail hood (5) to brackets using the remaining six screws (6).

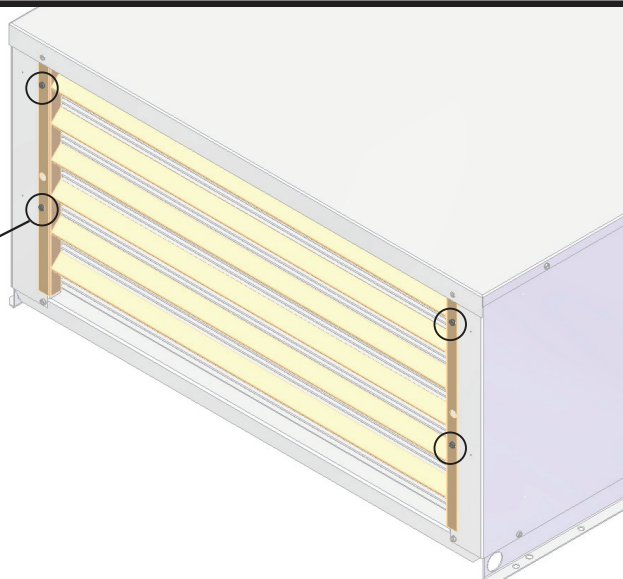
Note: The bottom hole in the bracket is *not* used when mounting the hail hood (7).



5.1 Install hail hood (Larkin units only)

1. Hail hood comes factory mounted. To remove hood for condenser cleaning, please remove the four (4) hex head screws. Reinstall after cleaning using the same four screws.

Hex Head
Screws



NOTICE**Ice machine MUST be cleaned and sanitized prior to operation!**

Consult Operation and Service Manual provided with ice machine for cleaning and sanitizing instructions.

**6.1 Verify operation**

- Turn dispenser power ON if applicable
- Check current draw of compressor to verify correct electrical operation
- Put a piece of ice on bin thermostat or hold a cup under the shuttle actuator on the bin/dispenser to verify that the evaporator unit shuts OFF; condensing unit pumps down and shuts off.
- After shut off, restart the ice machine

Horizon Condenser Unit Compressor Amperage**Single Phase**

Ice Machine Model Number	Condensing Unit Model Number	Running amps (+/- 10%)
1010R 01075365	AJA7490ZXDPN (Tecumseh)	7.4
1010R 01354059	ASFR9510ZNAMEC1 (Tecumseh)	7.4
1410R 01075373	AWA9513ZXDPN (Tecumseh)	13.7
1410R 01354042	ASFS9516ZNAMEC1 (Tecumseh)	13.7

Three Phase

Model Number	Condensing Unit	Running amps (+/- 10%)
1010R 01113125	AWA9490ZXTPN (Tecumseh)	6.7
1010R 01354067	ASFR9511ZFAMEC1 (Tecumseh)	6.7
1410R 01113133	AWA9517ZXTPN (Tecumseh)	9.9
1410R 01278373	LZT015M6CFIM (Larkin) LCH0015MCACZ (Larkin)	10.7

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