



Form Number: 201.21-NM1 (LS01)

405

Supersedes: Nothing

LITERATURE SUPPLEMENT

File with: 201.21-NM1 (305)

Subject: Revised dimensions, isolator mounting positions, and glycol fill tube locations.

BACKGROUND:

This literature supplement contains revisions for the YCAV 0157-0267 60 Hz unit dimensions, isolator mounting positions, and glycol fill tube locations.

NOTE:

The pages contained within this supplement may be substituted for pages in 201.21-NM1 (405).



LATITUDE™

**AIR-COOLED SCREW LIQUID CHILLERS
STYLE A**

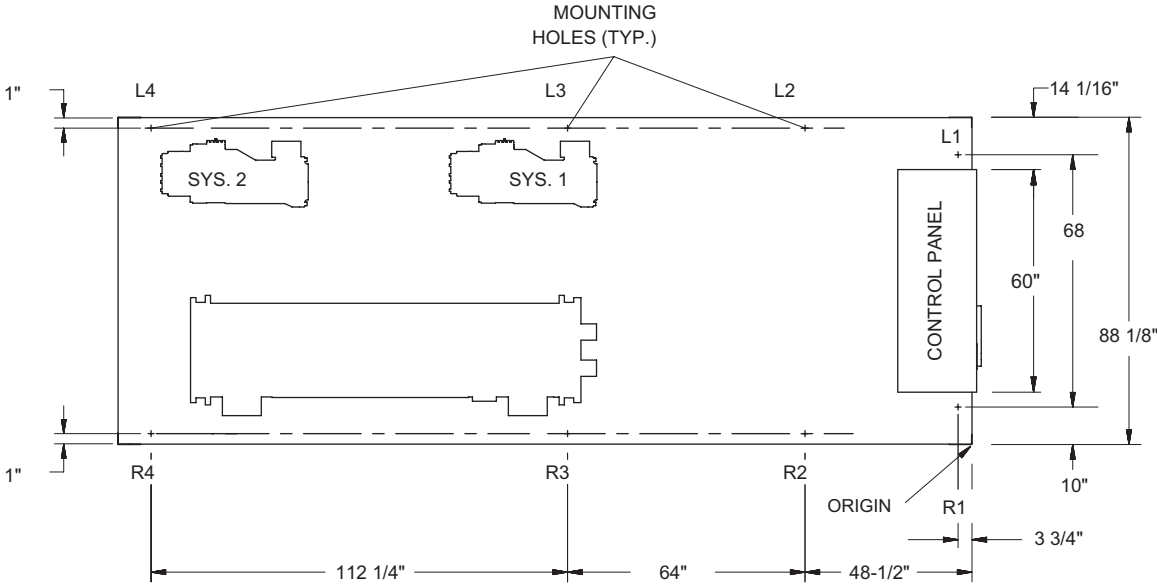


LD10477

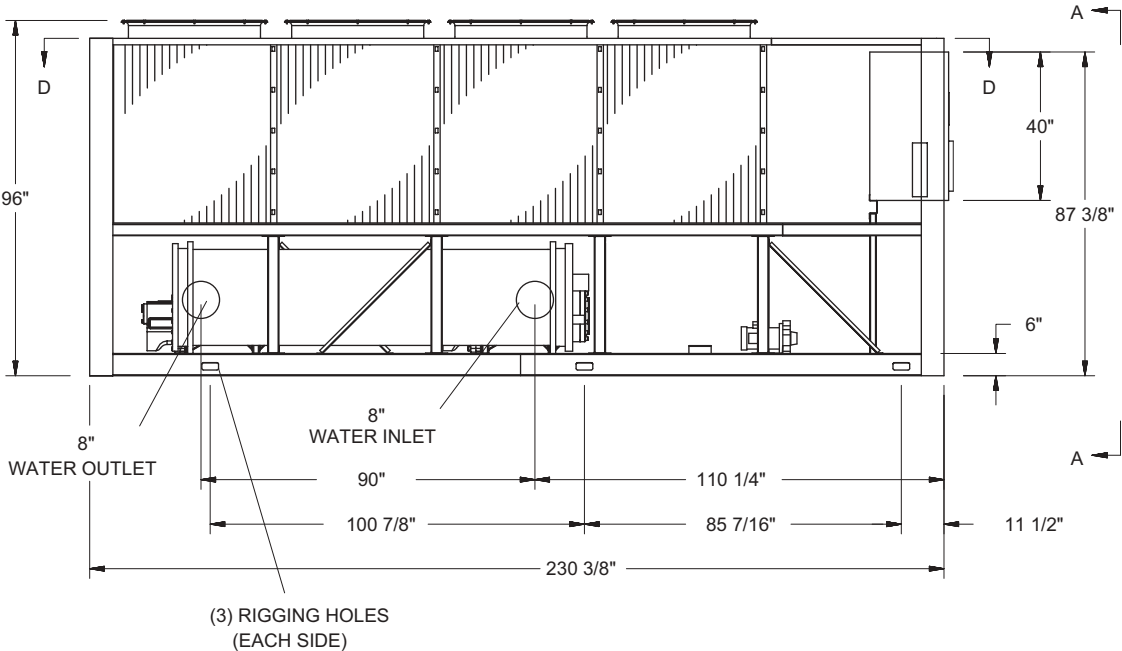
**YCAV0157-0267, 60 HZ (150-260 TONS)
E/V HIGH EFFICIENCY AND S/P STANDARD EFFICIENCY**

R134a

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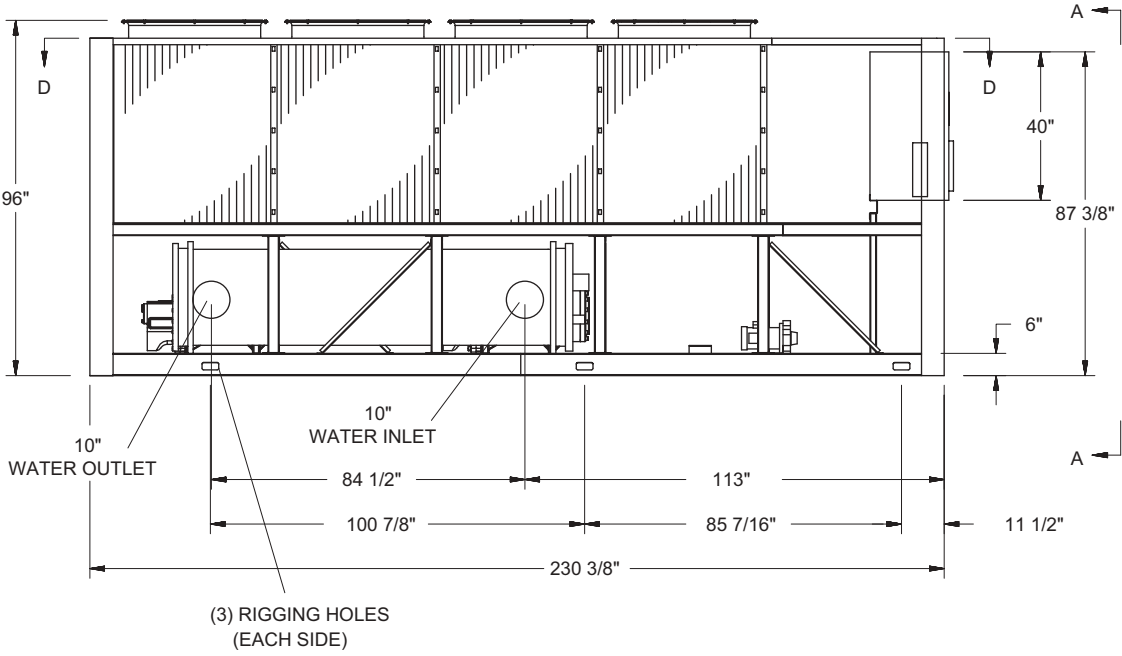
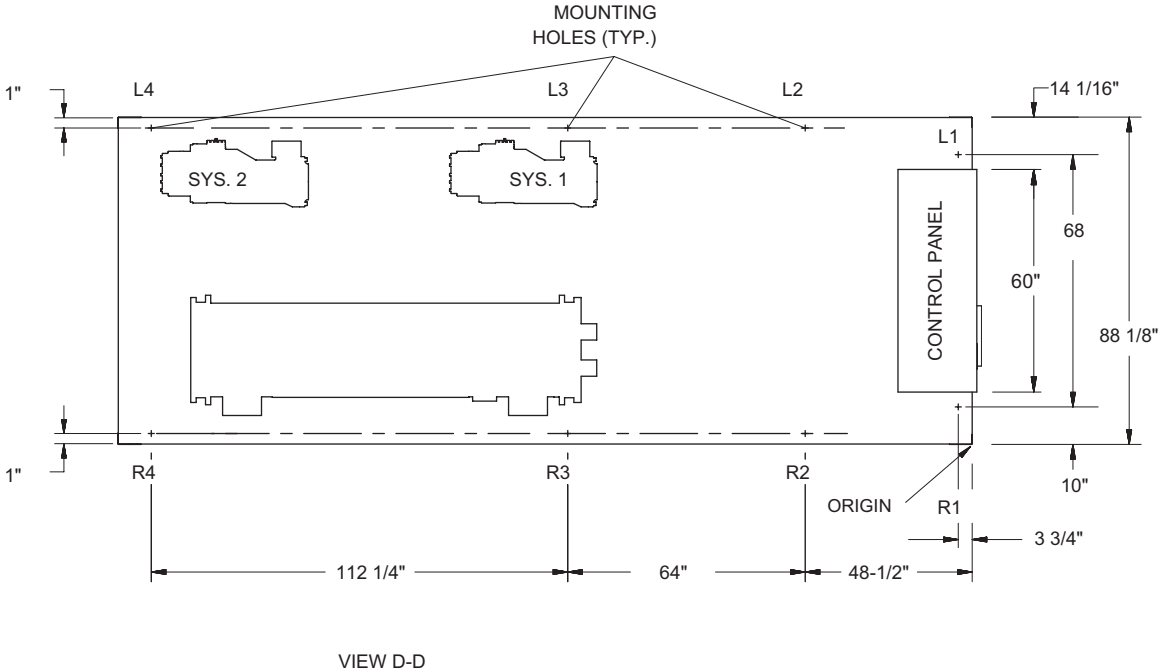


VIEW D-D

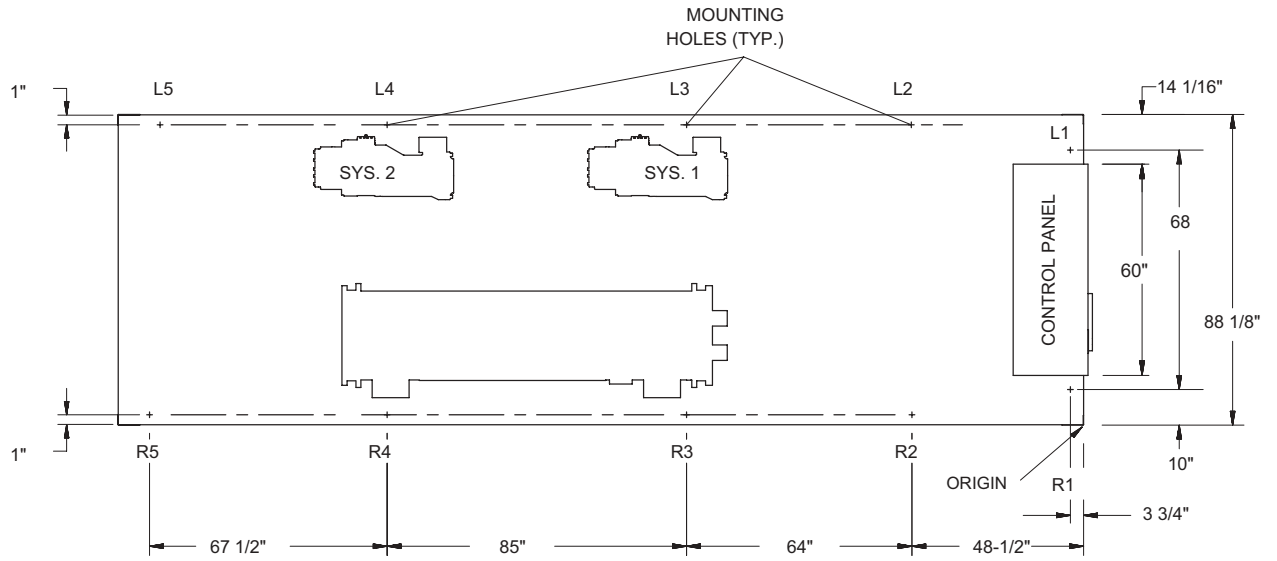


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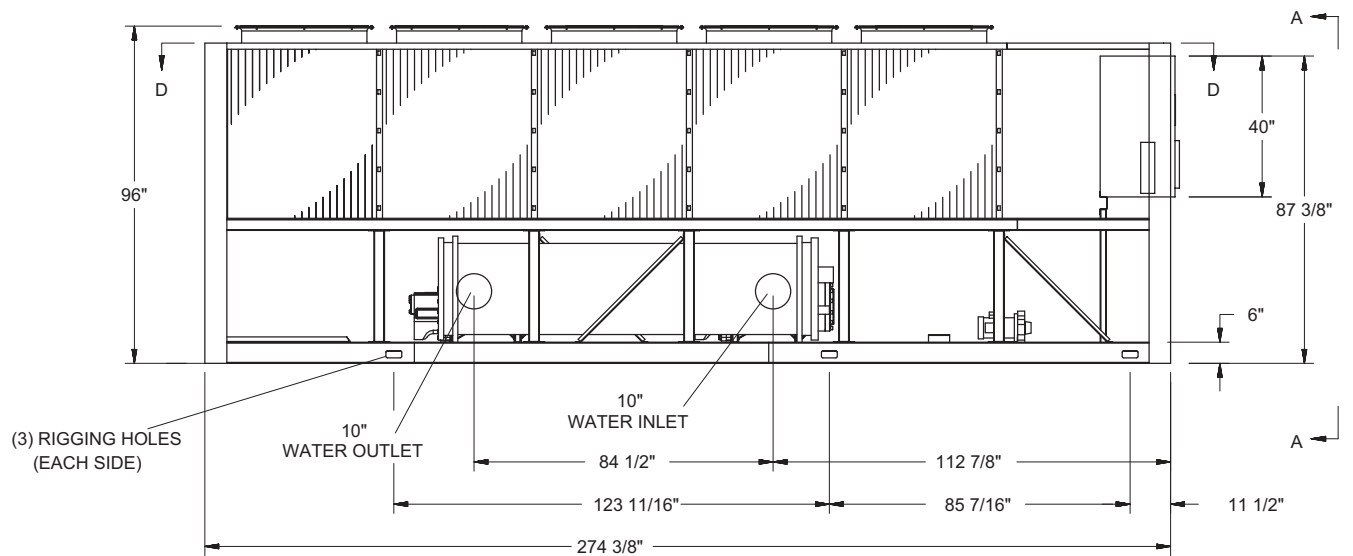
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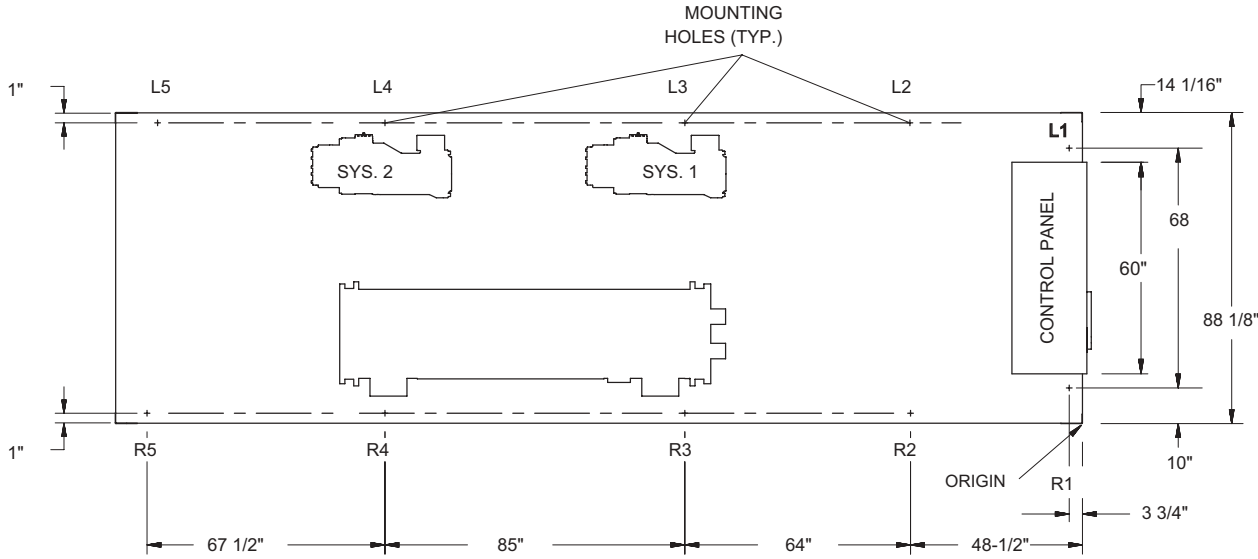


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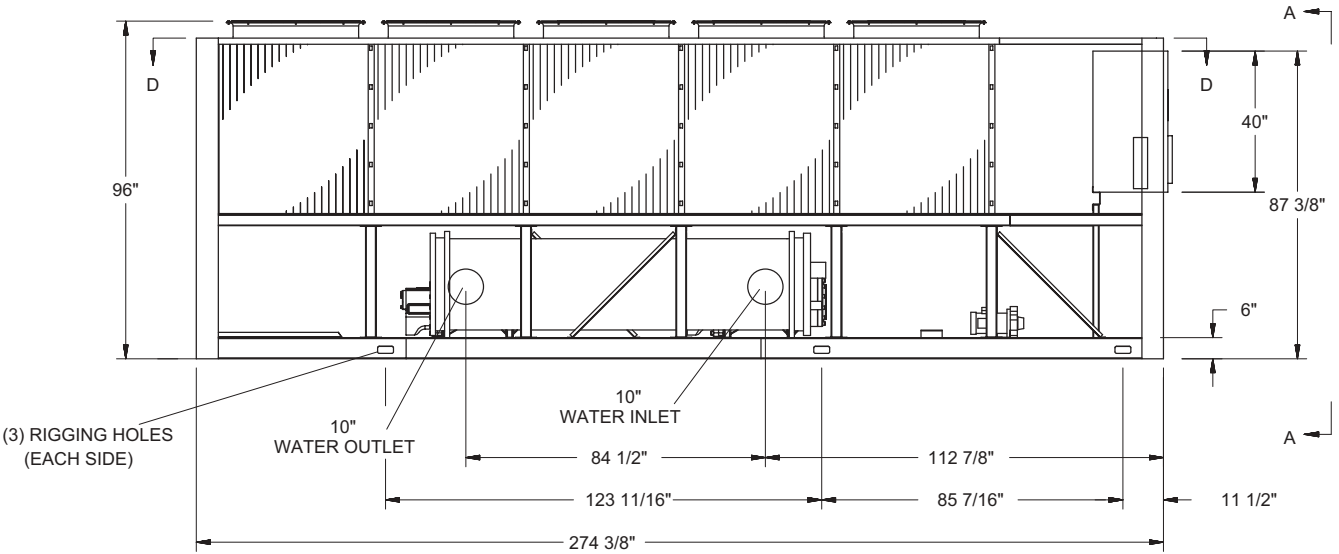


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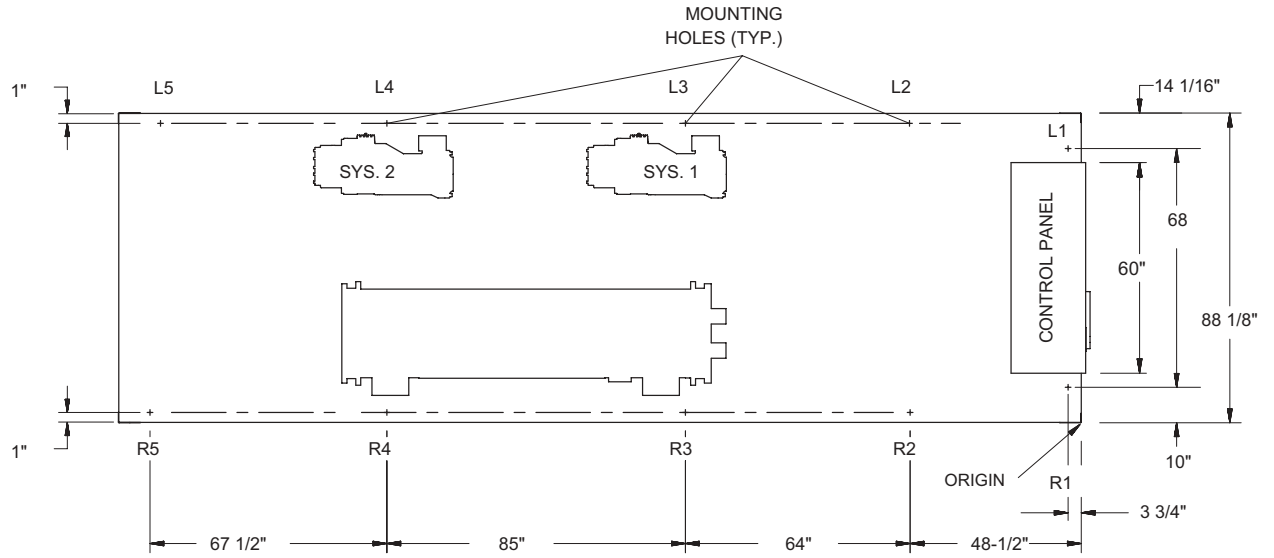


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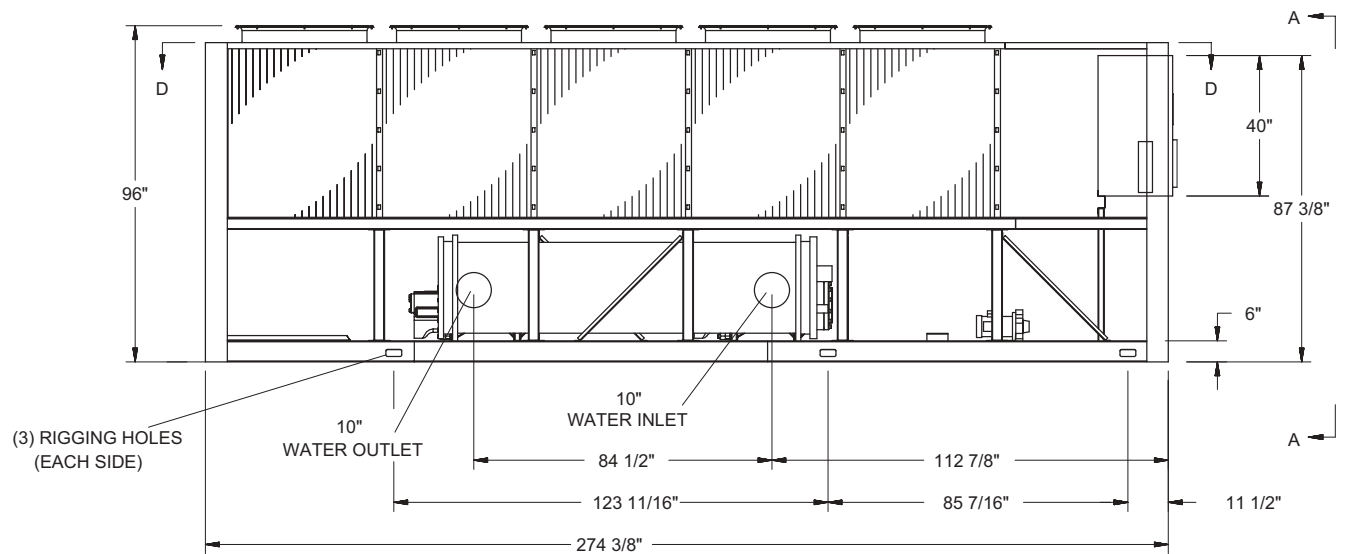


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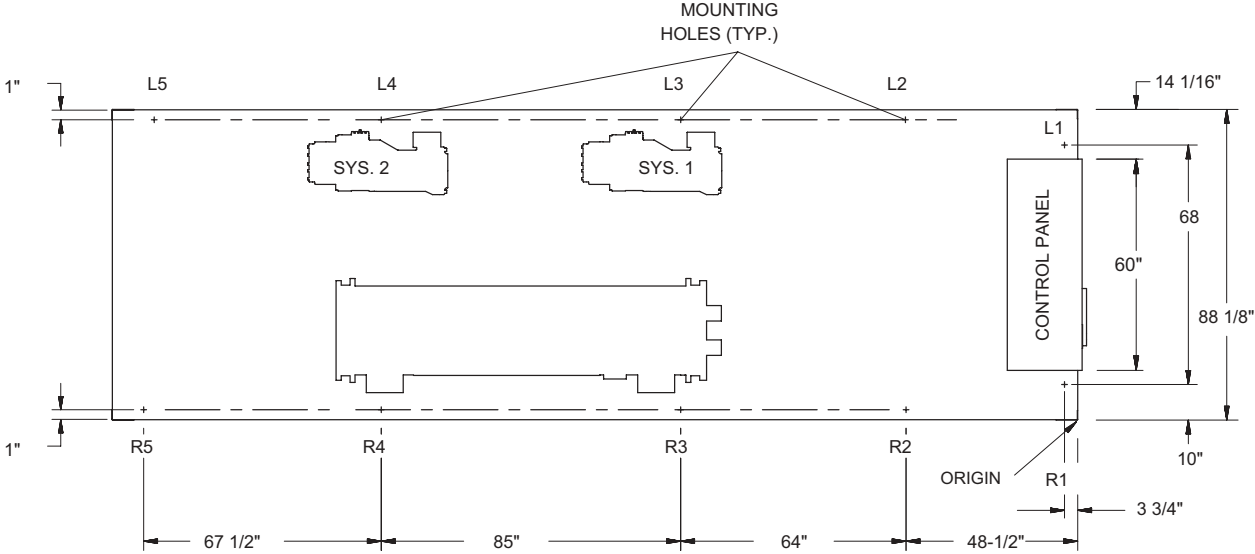


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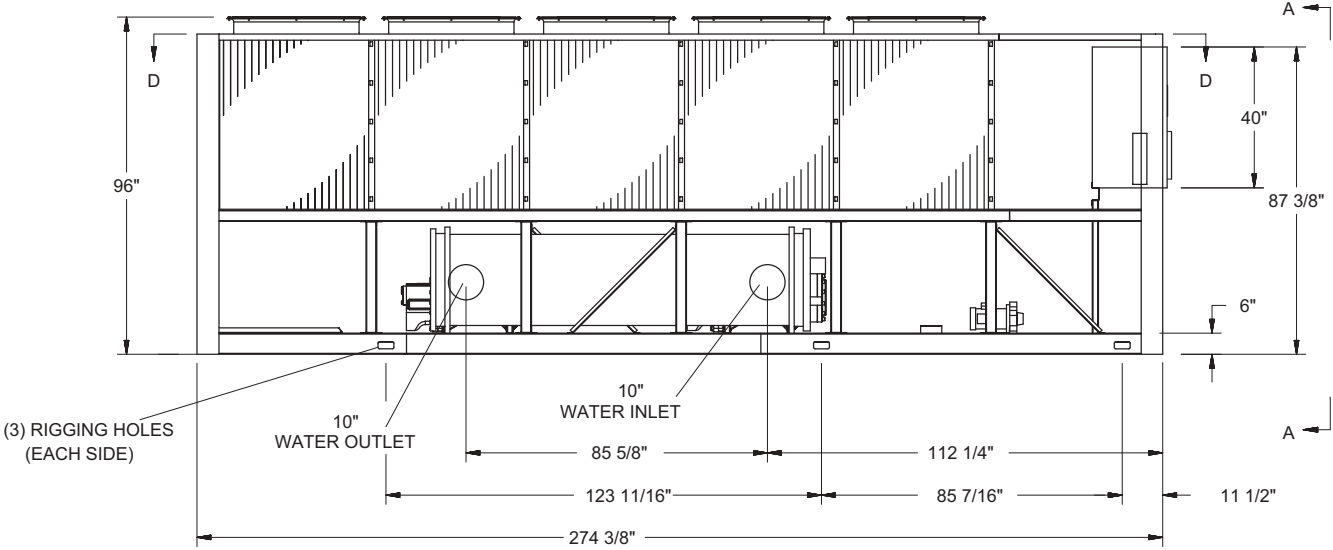


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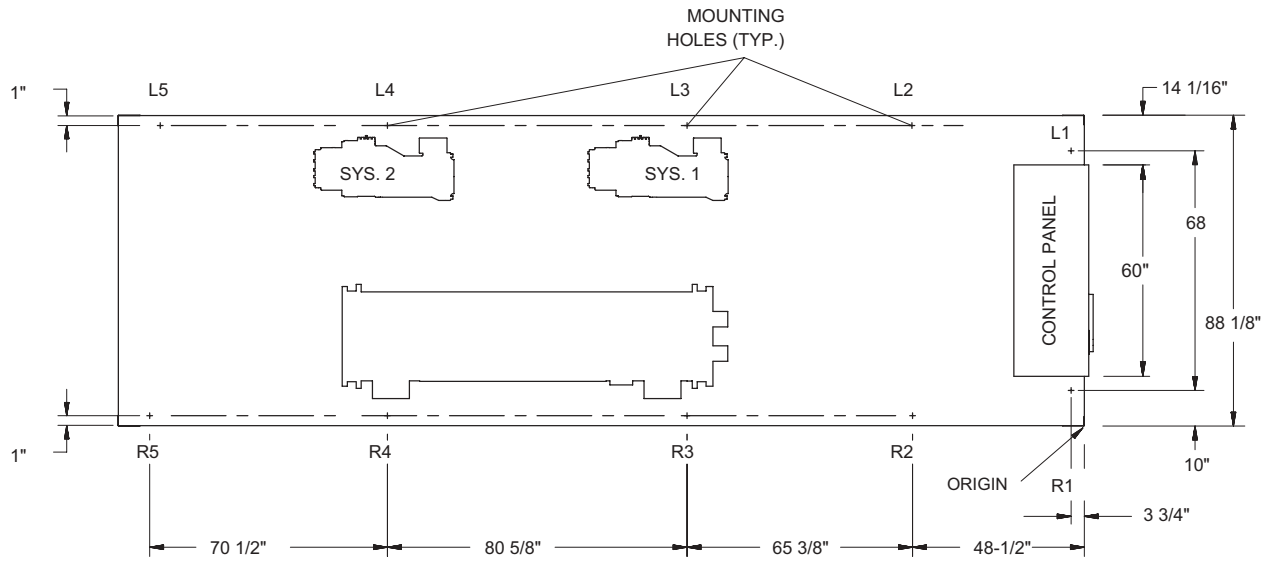


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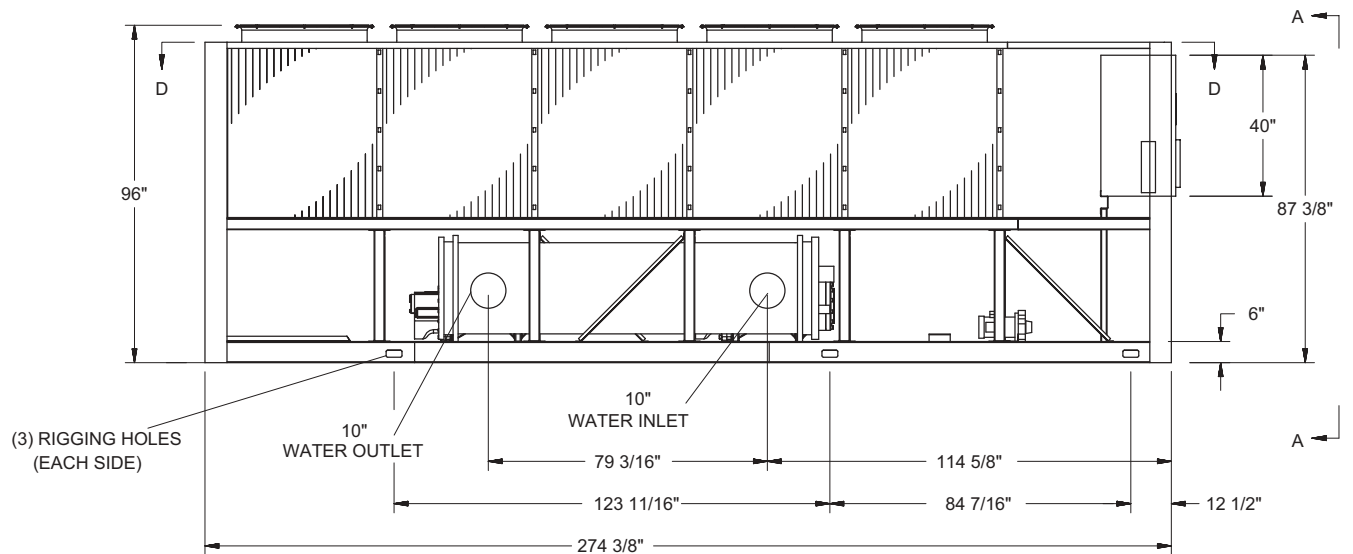


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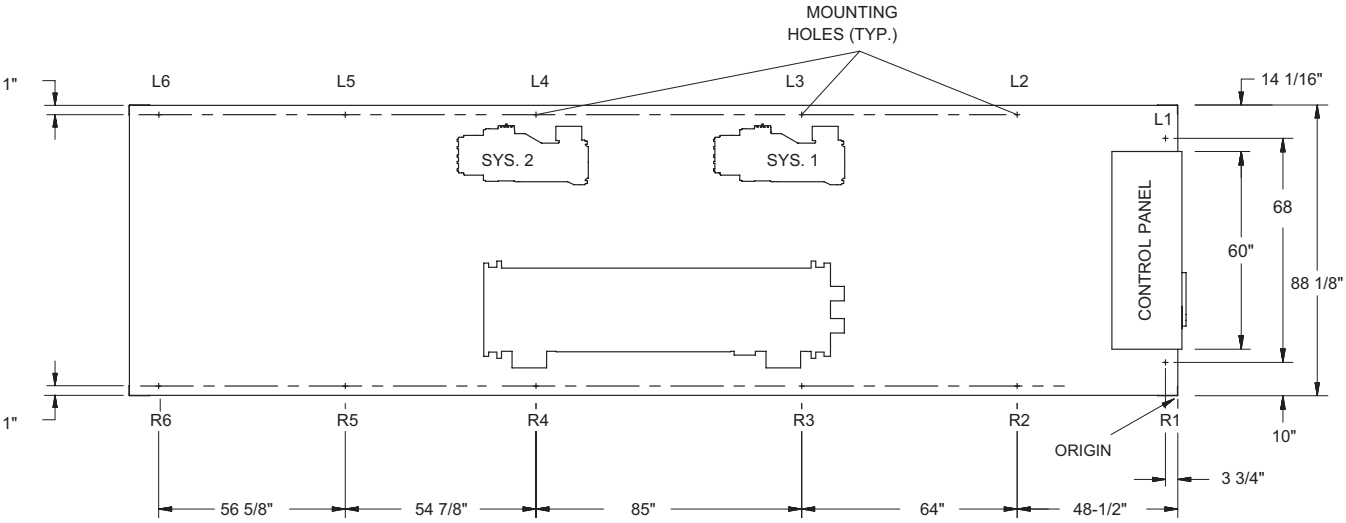


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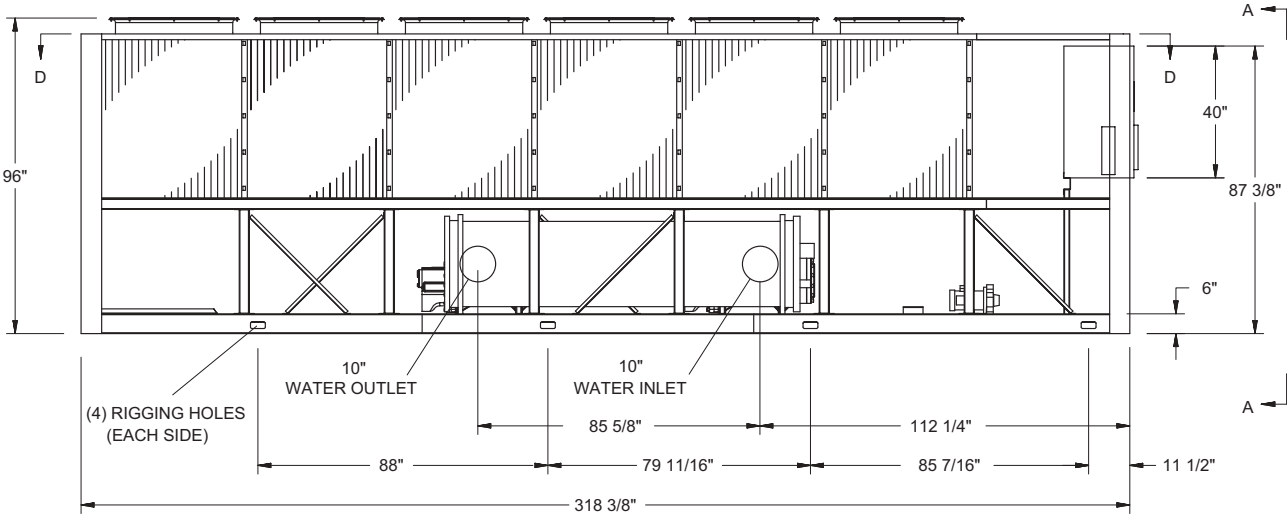


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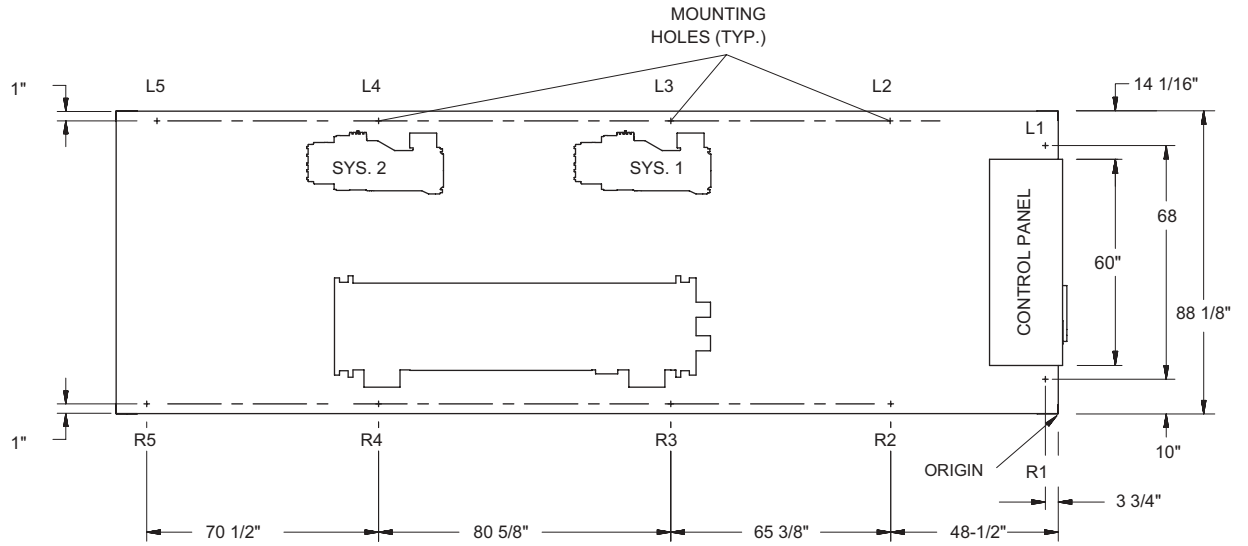


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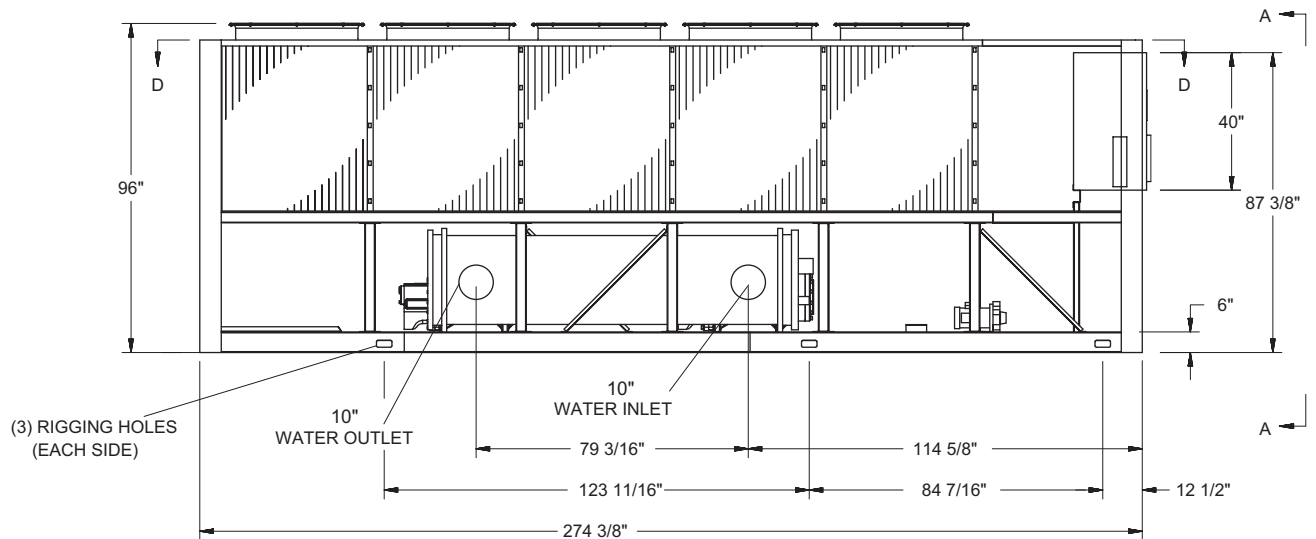


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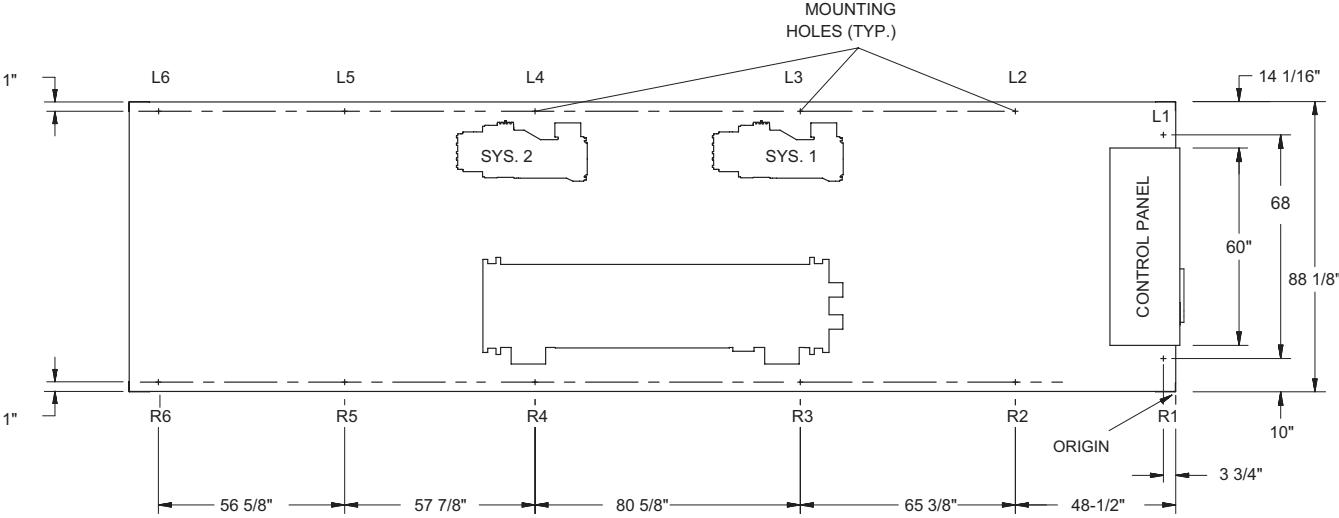


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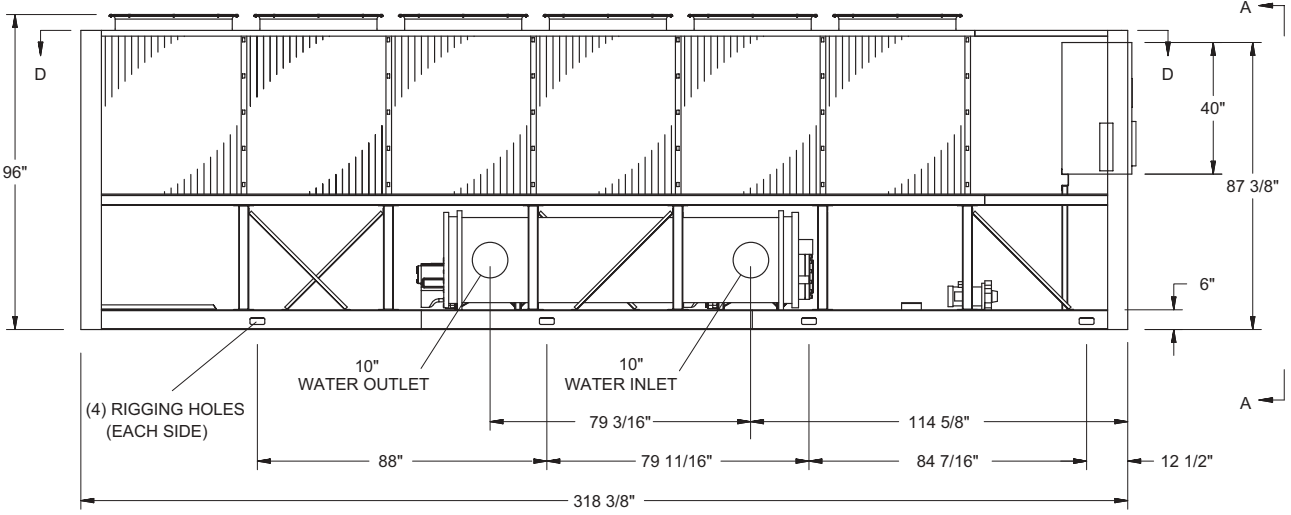


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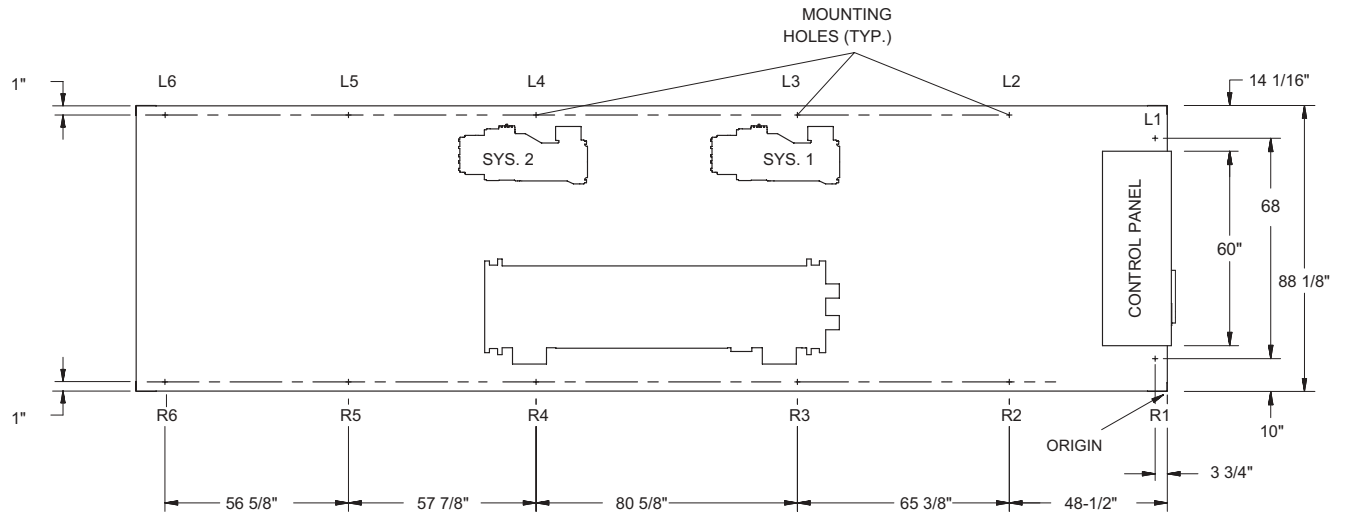


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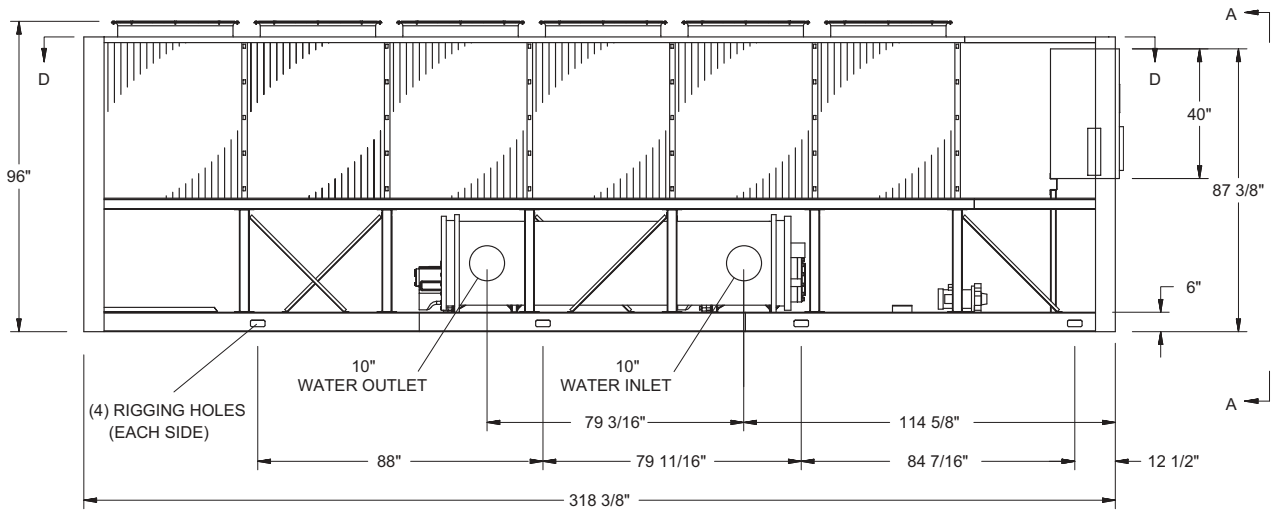


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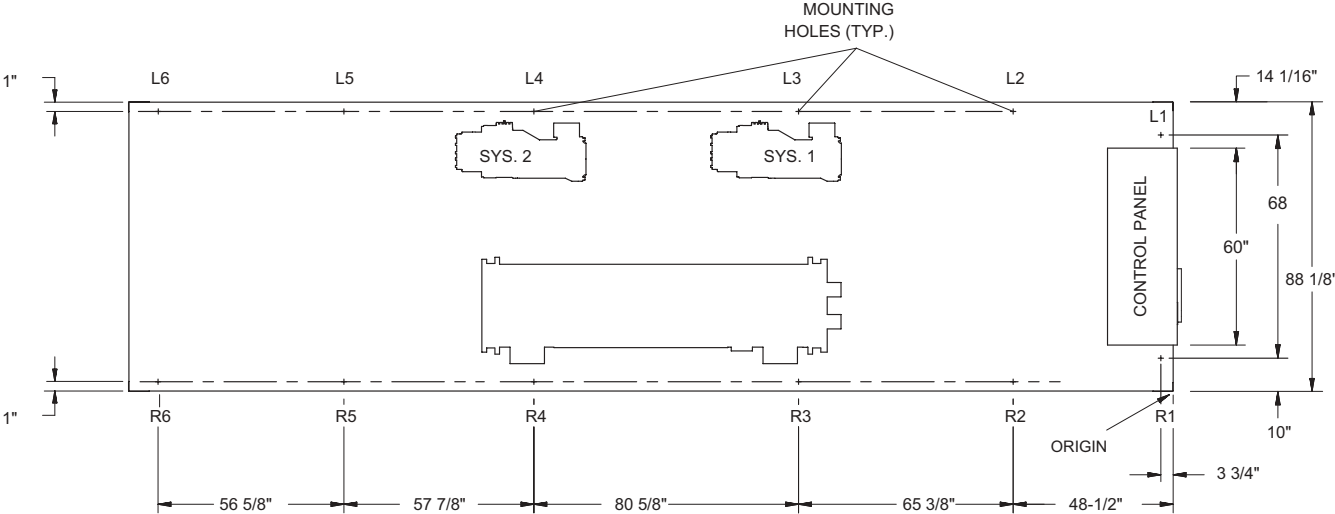


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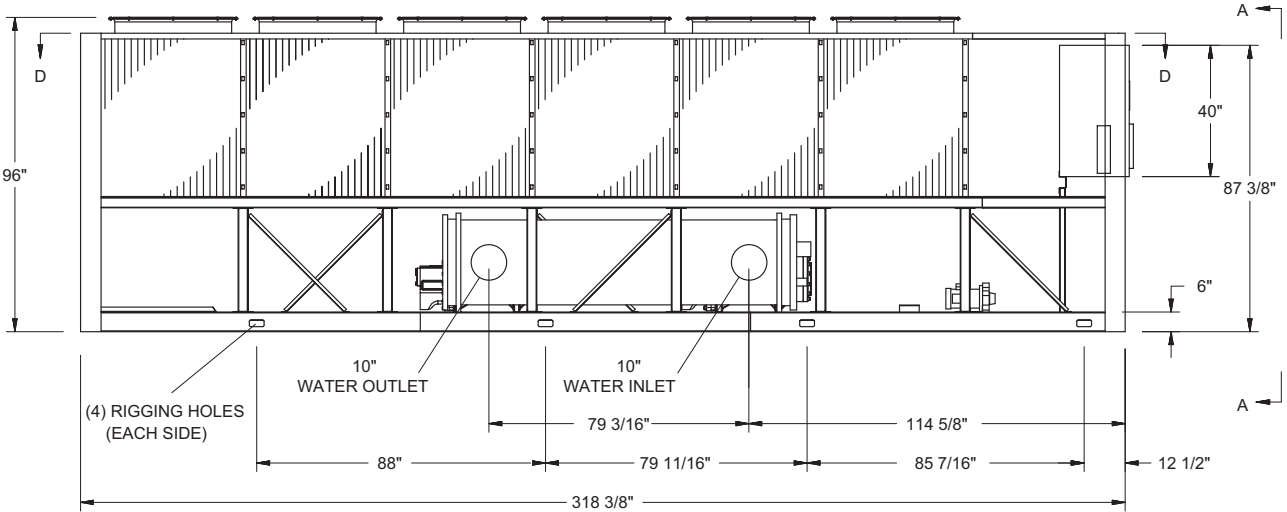


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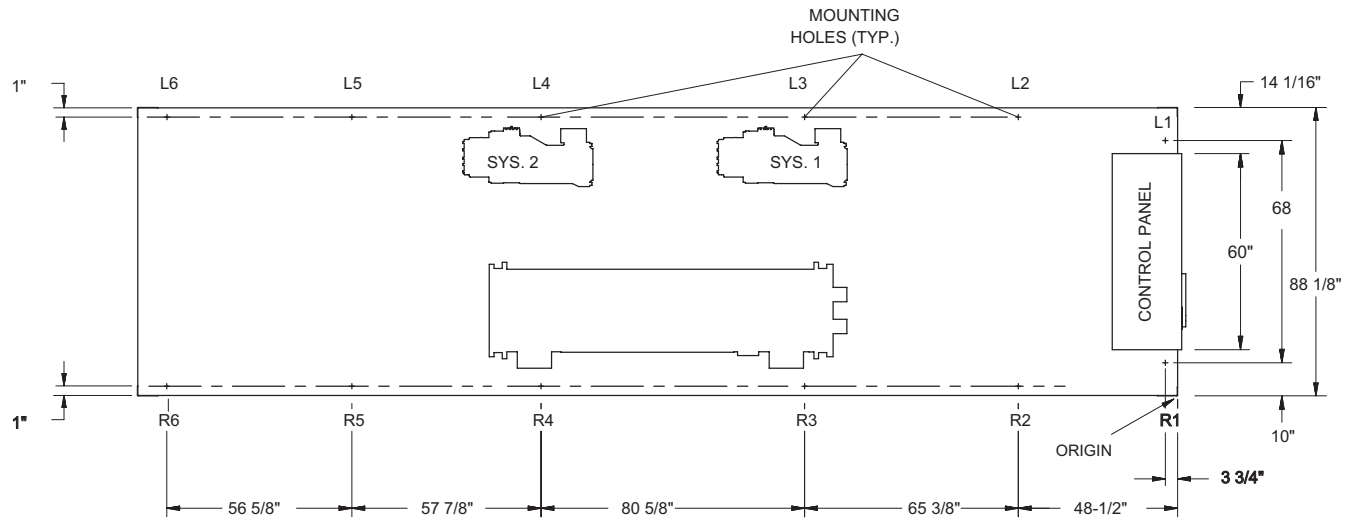


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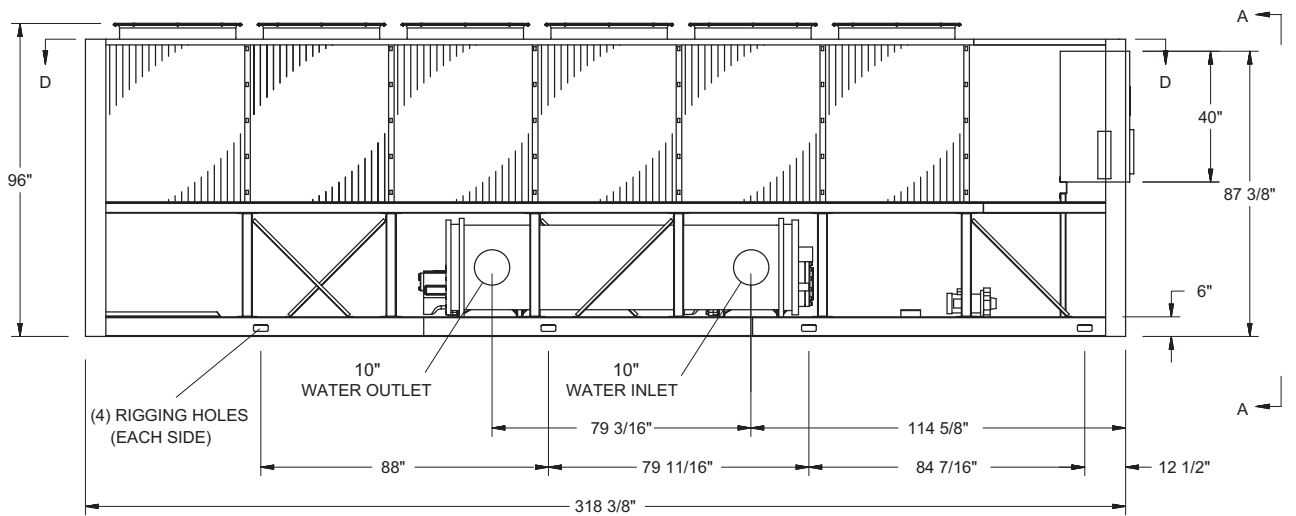


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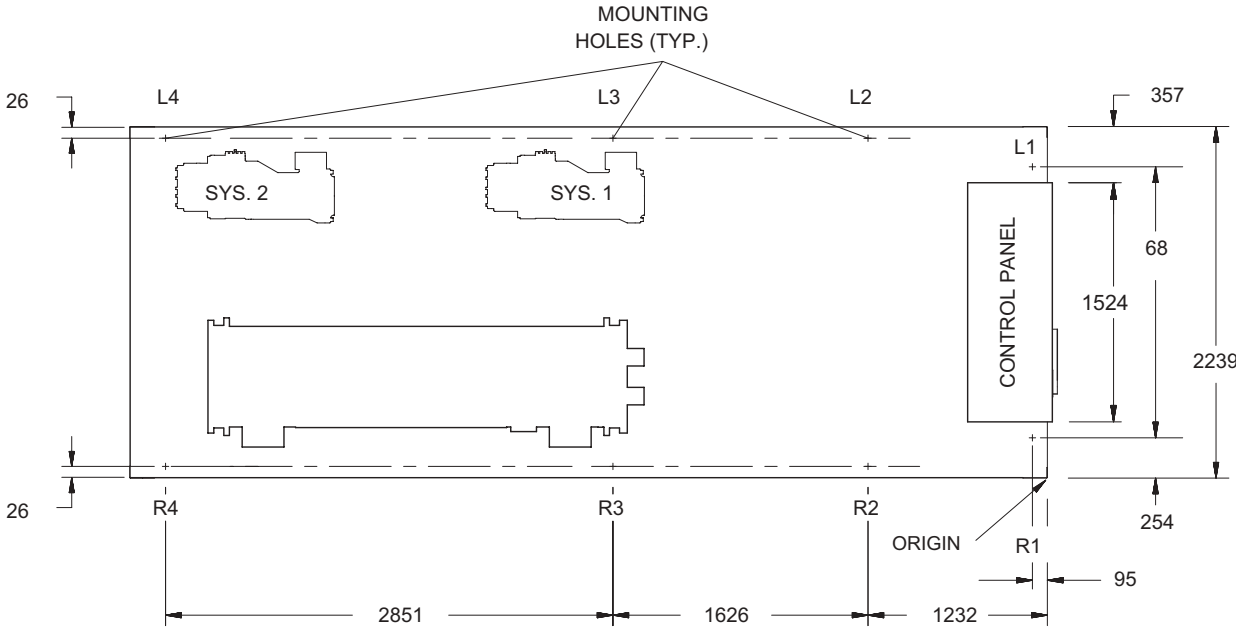


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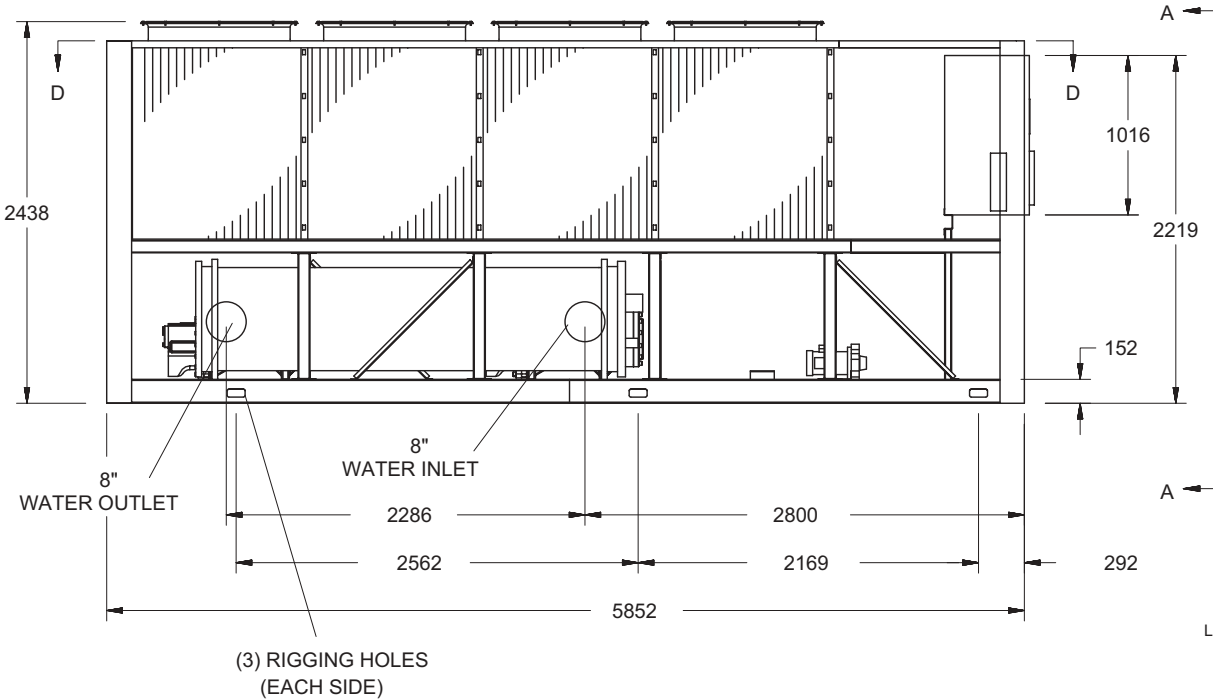


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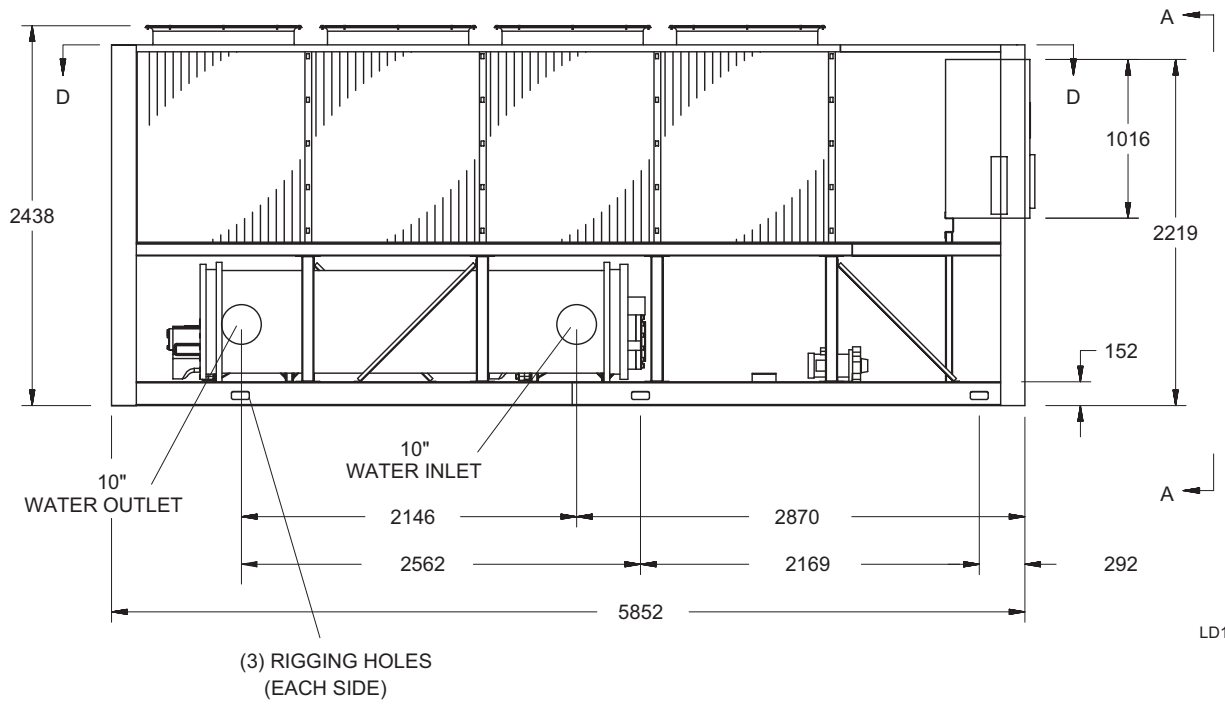
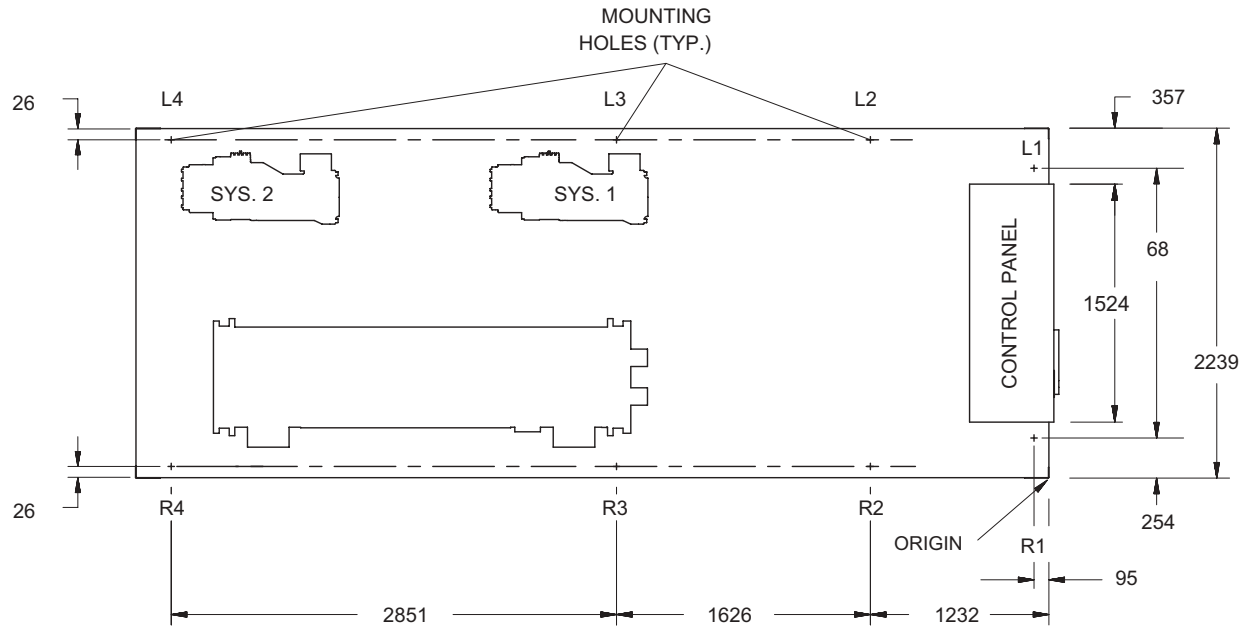


VIEW D-D



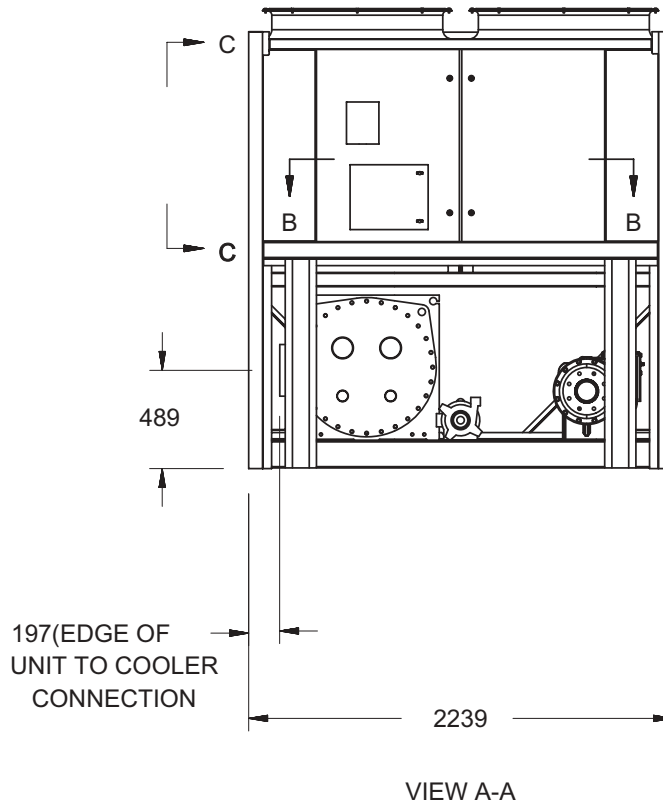
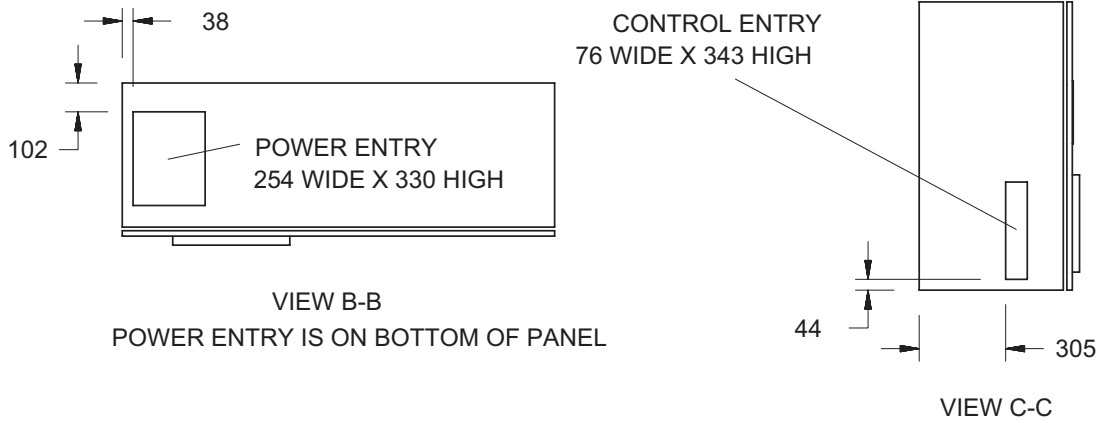
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DIMENSIONS - YCAV0157E/V High Efficiency SI



LD10551

DIMENSIONS - YCAV0177E/V High Efficiency SI

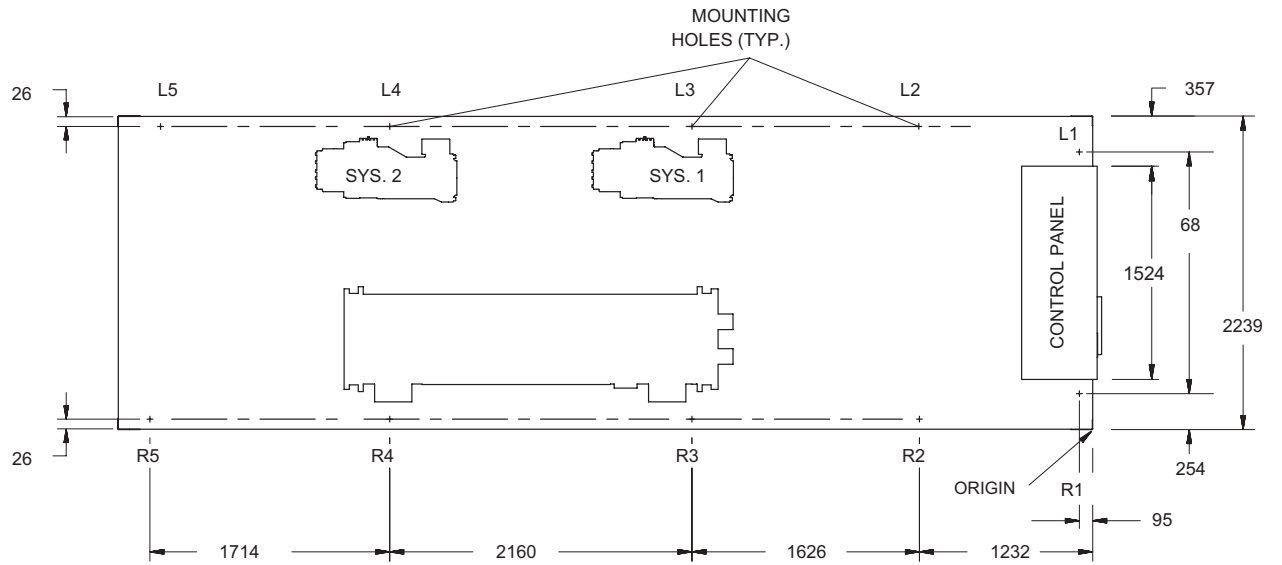


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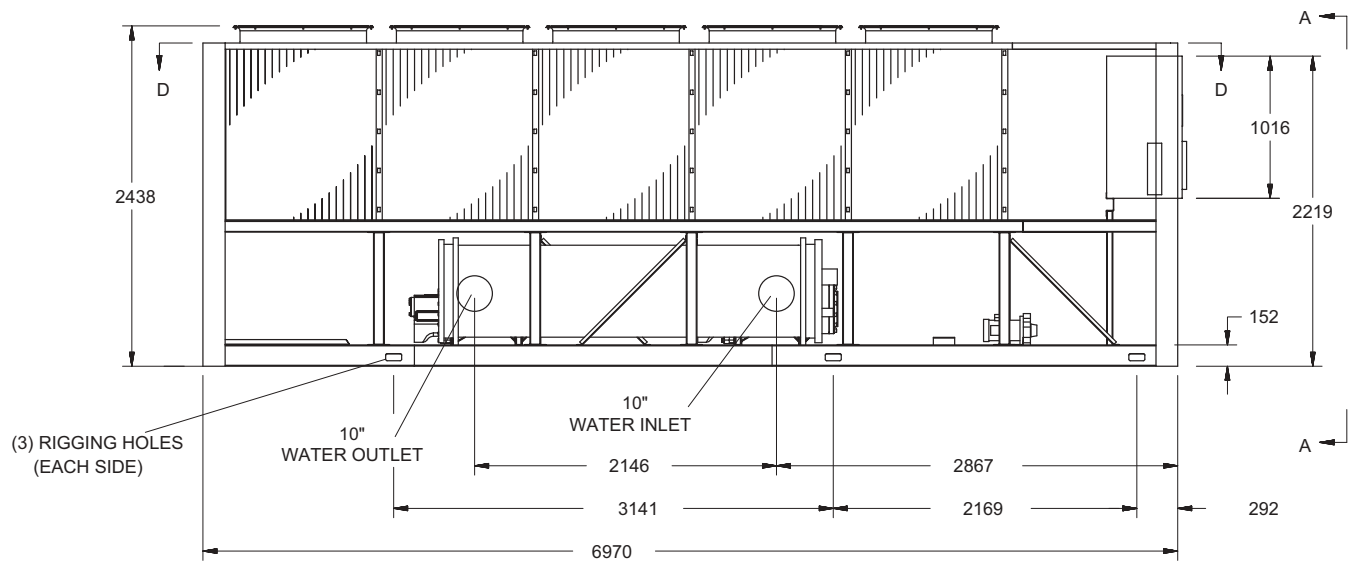
Notes:

1. Placement on a level surface free of obstructions (including snow, for winter operation) or air recirculation ensures rated performance, reliable operation and ease of maintenance. Site restrictions may compromise minimum clearances indicated below, resulting in unpredictable air flow patterns and possible diminished performance. YORK's unit controls will optimize operation without nuisance high pressure safety cutout; however, the system designer must consider potential performance degradation. Access to the unit control center assumes the unit is no higher than on spring isolators. Recommended minimum clearances: side to wall - 2m; rear to wall - 2m; control panel end to wall - 1.2m; top - no obstructions allowed; distance between adjacent units - 3m. No more than one adjacent wall may be higher than the unit.

DIMENSIONS - YCAV0177E/V High Efficiency SI

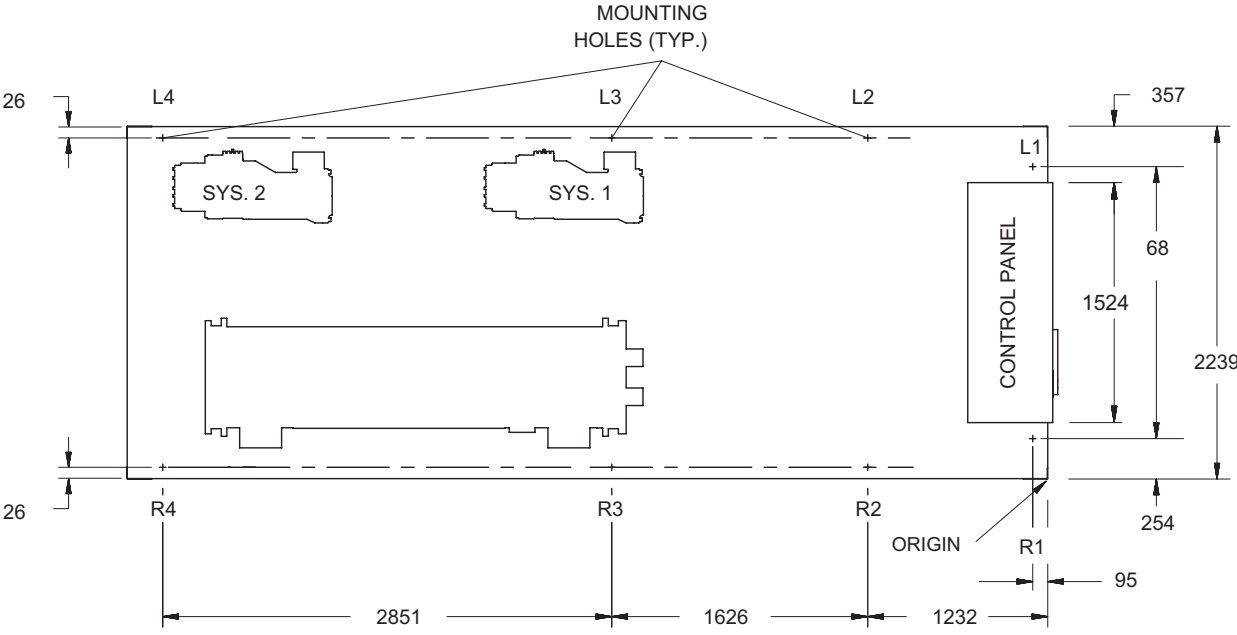


VIEW D-D

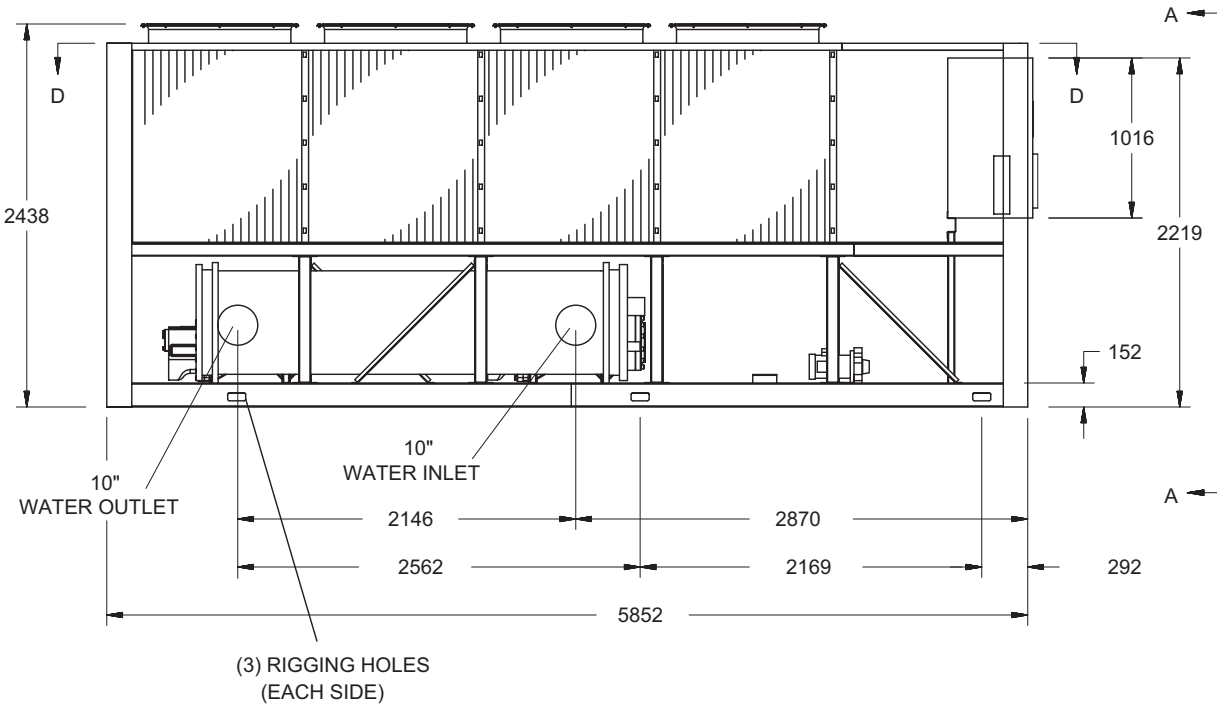


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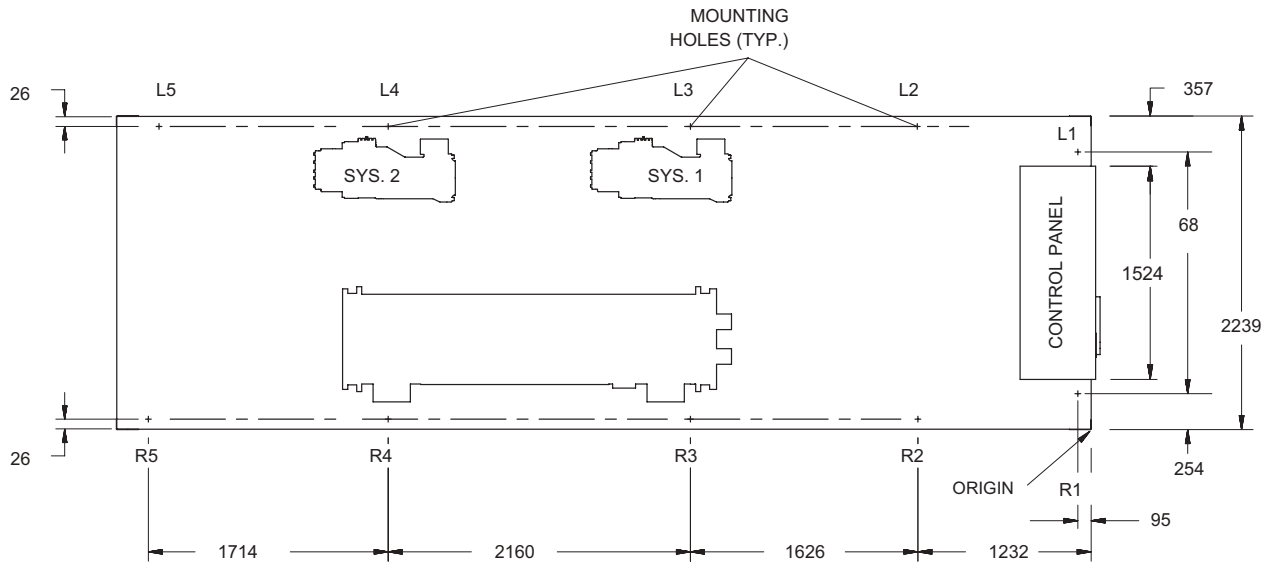
DIMENSIONS - YCAV0177S/P Standard Efficiency SI



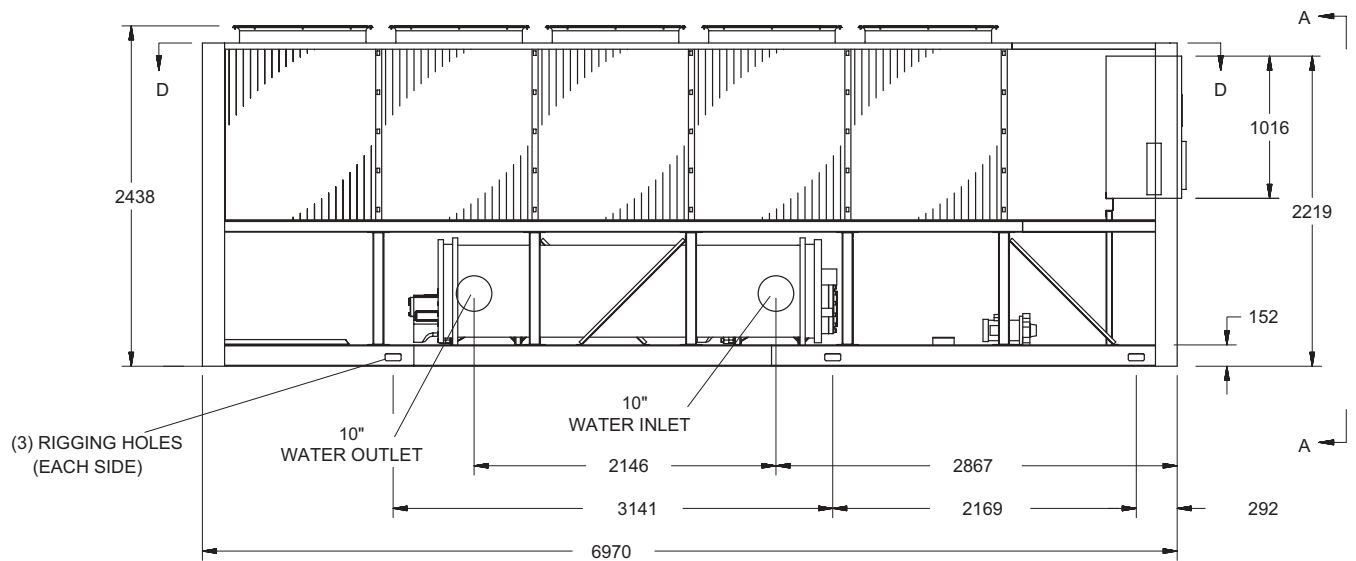
VIEW D-D



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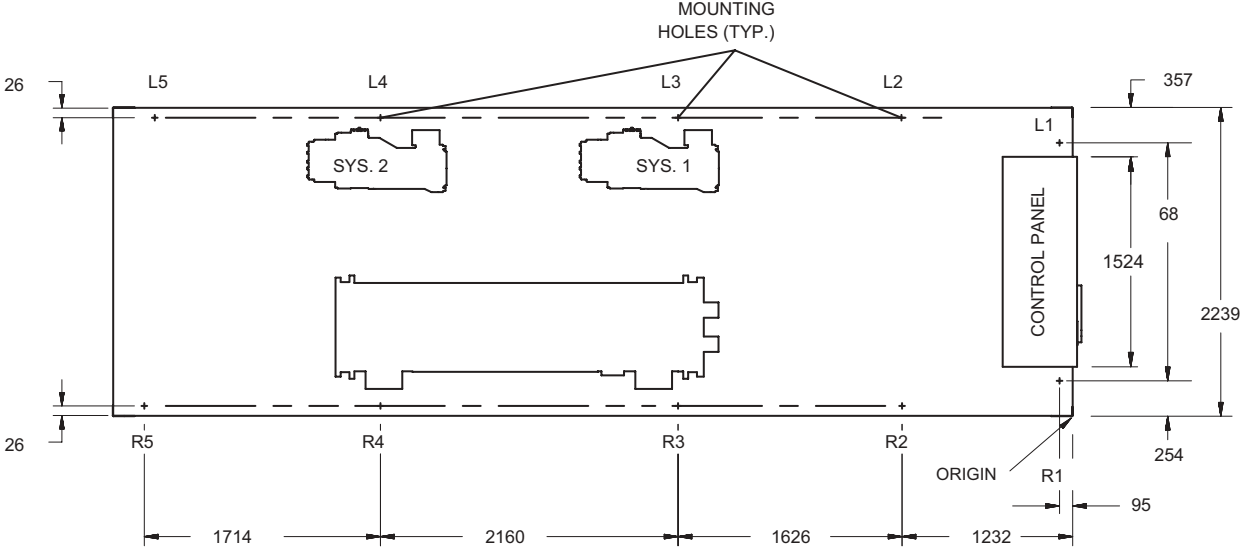


VIEW D-D

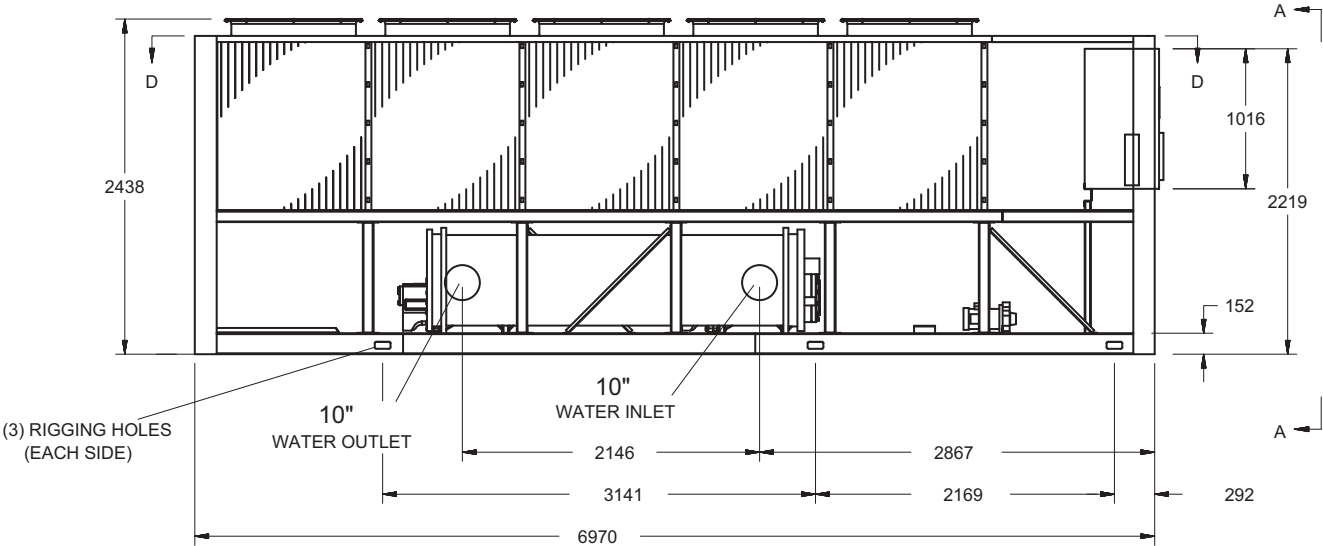


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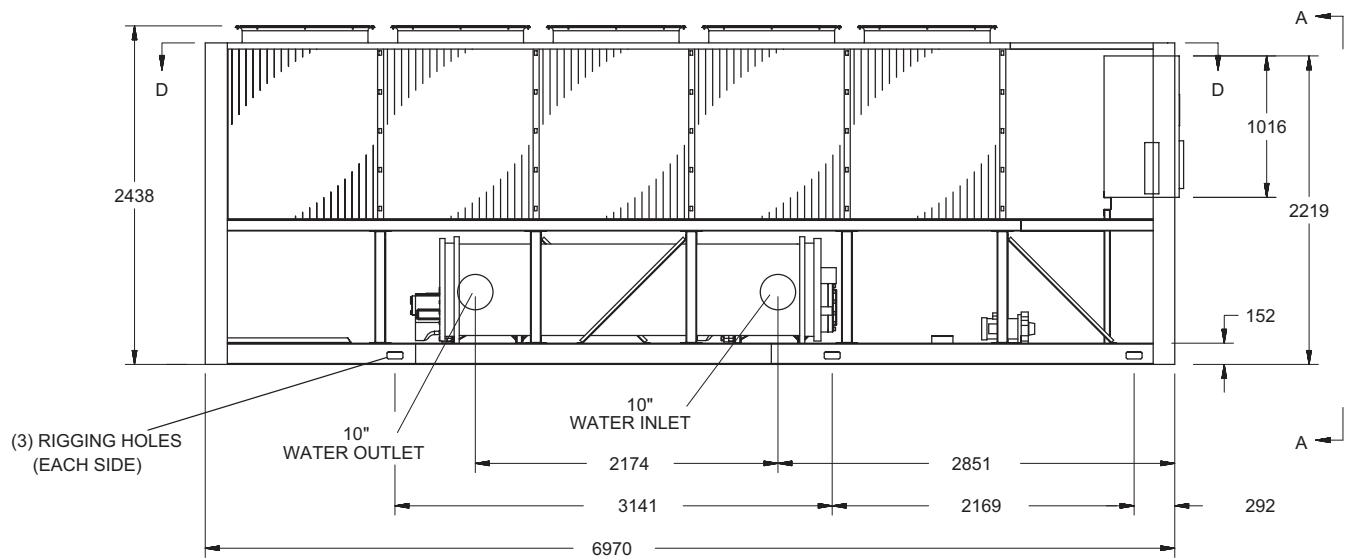
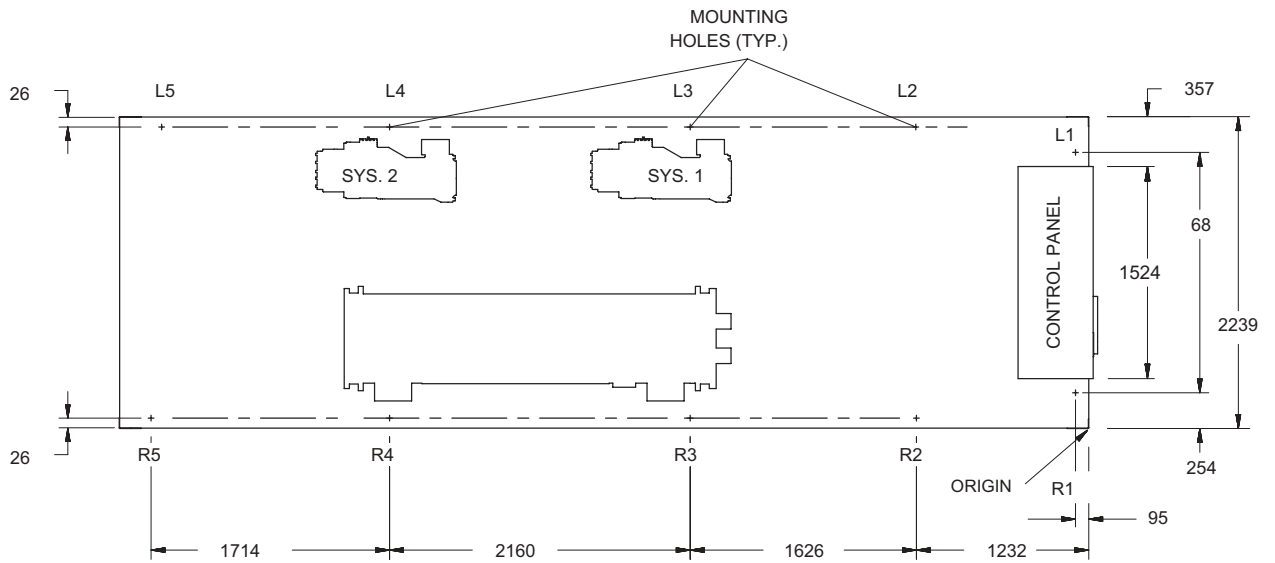


VIEW D-D



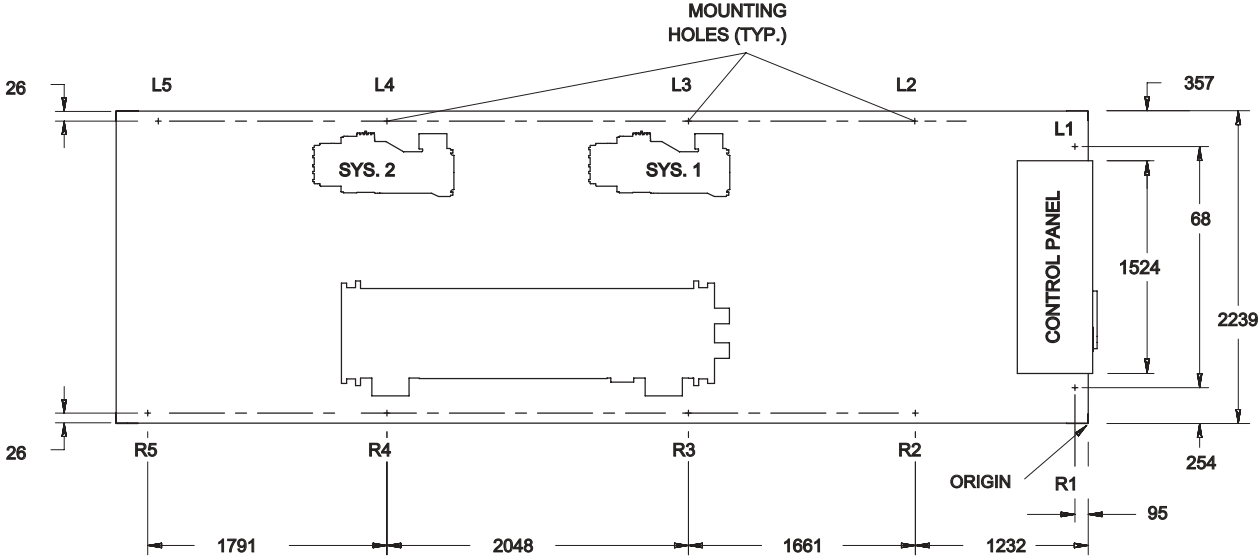
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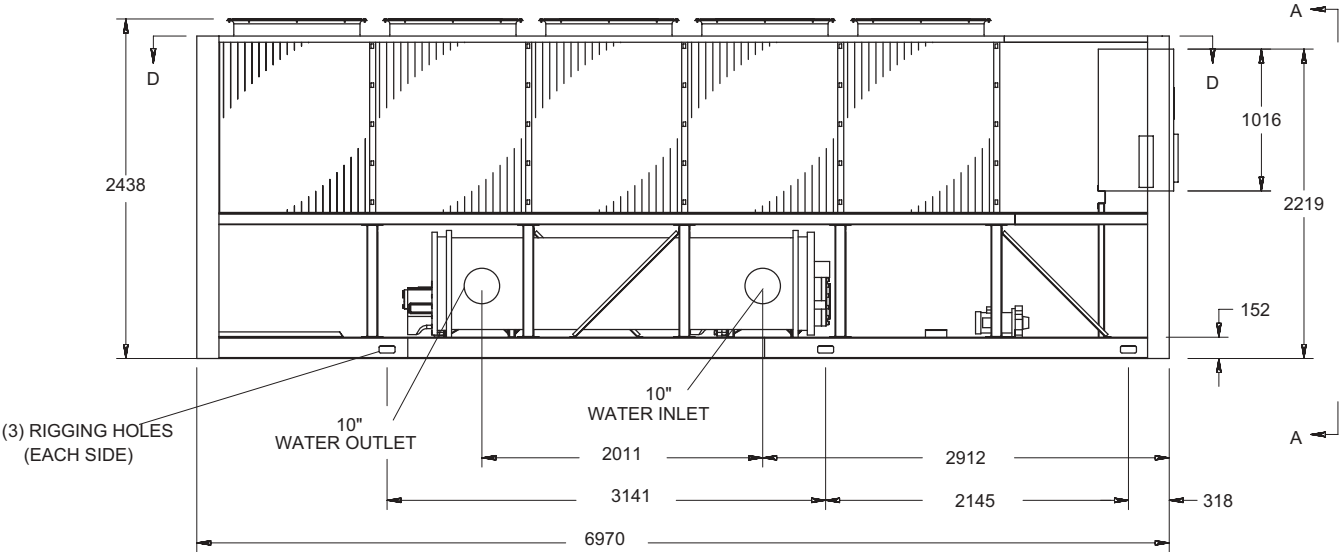


LD10559

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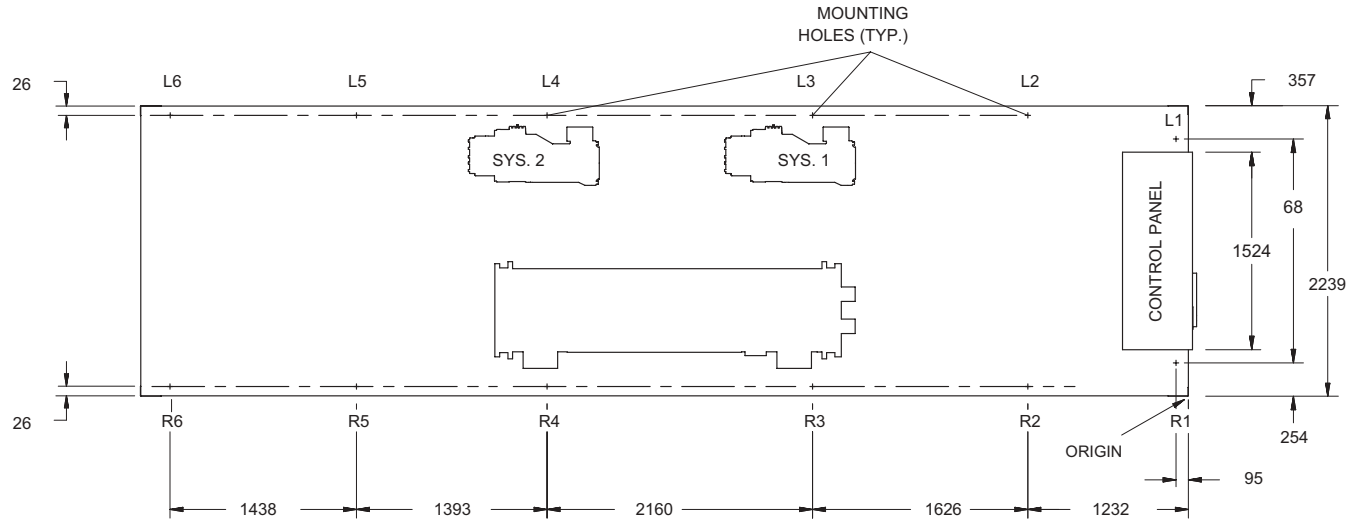


VIEW D-D

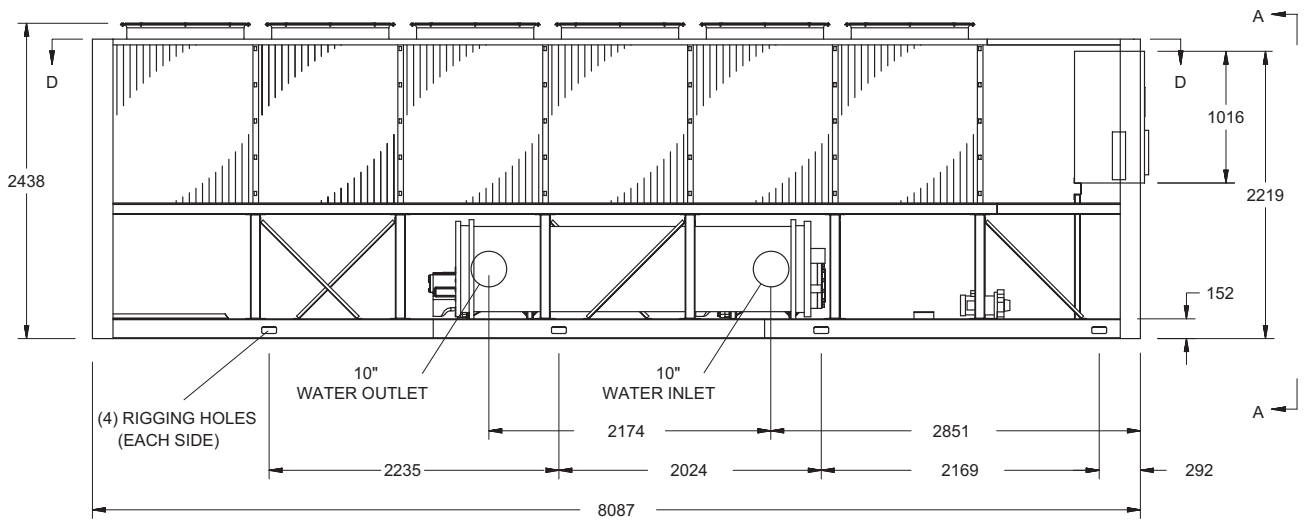


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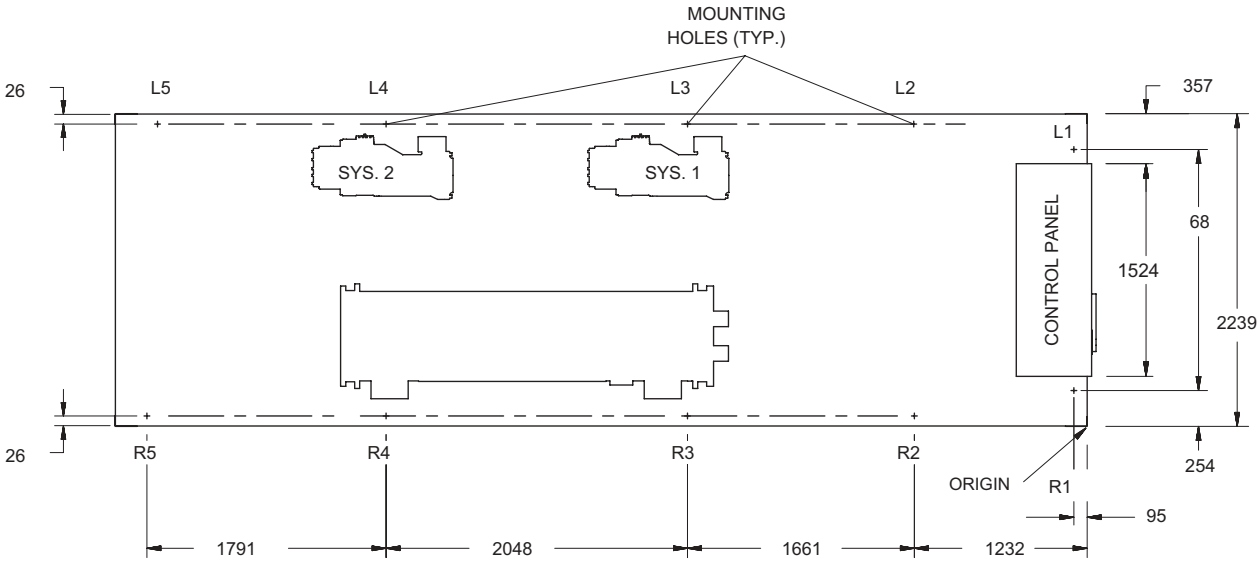


VIEW D-D

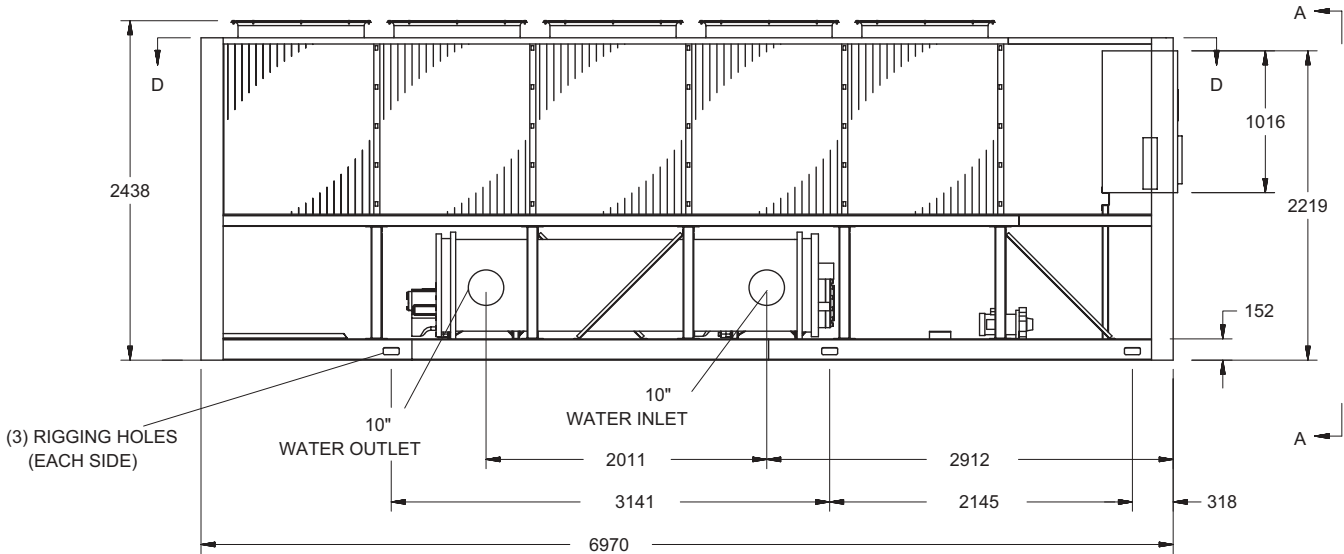


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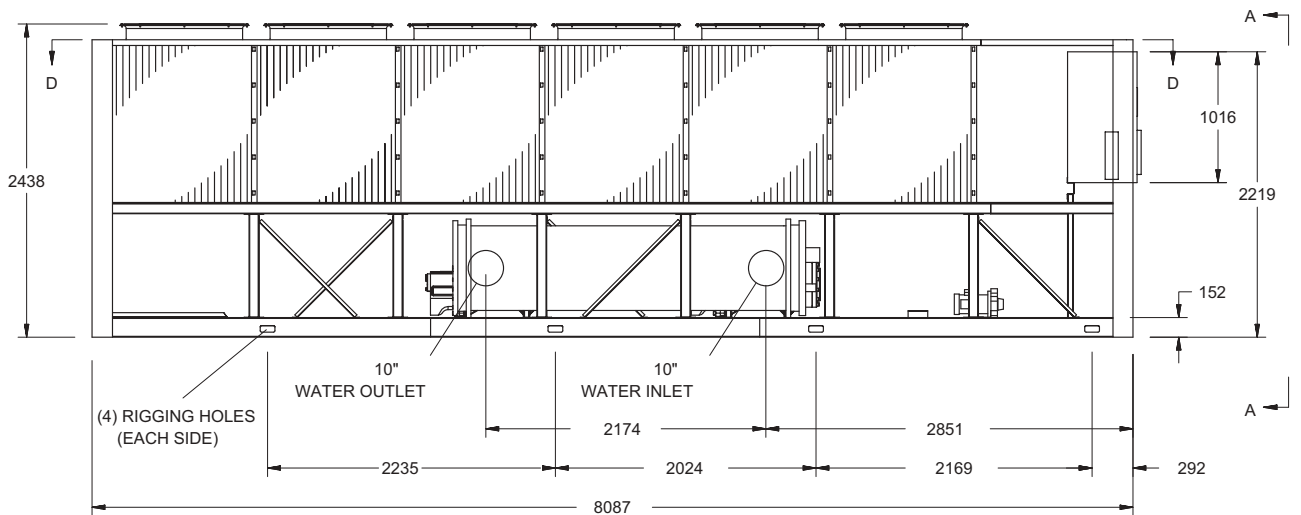
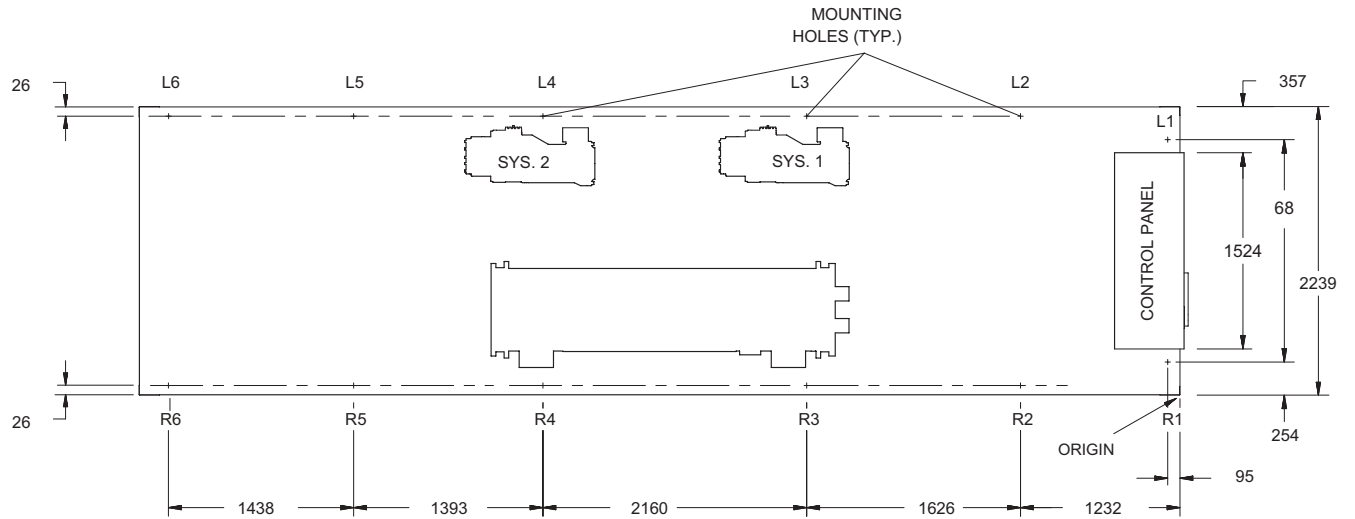


VIEW D-D



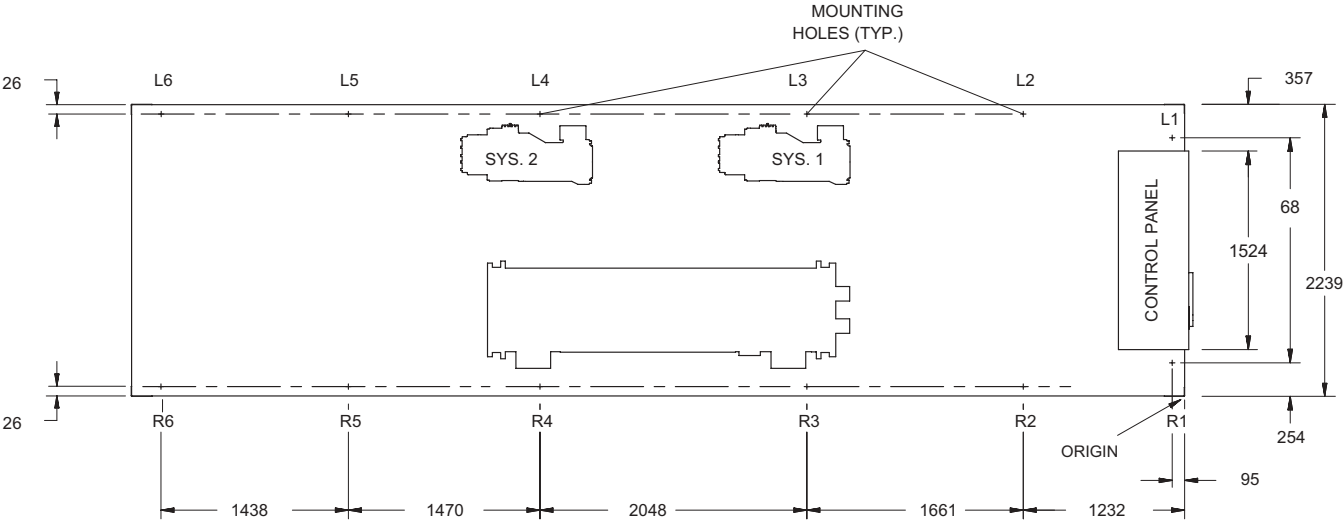
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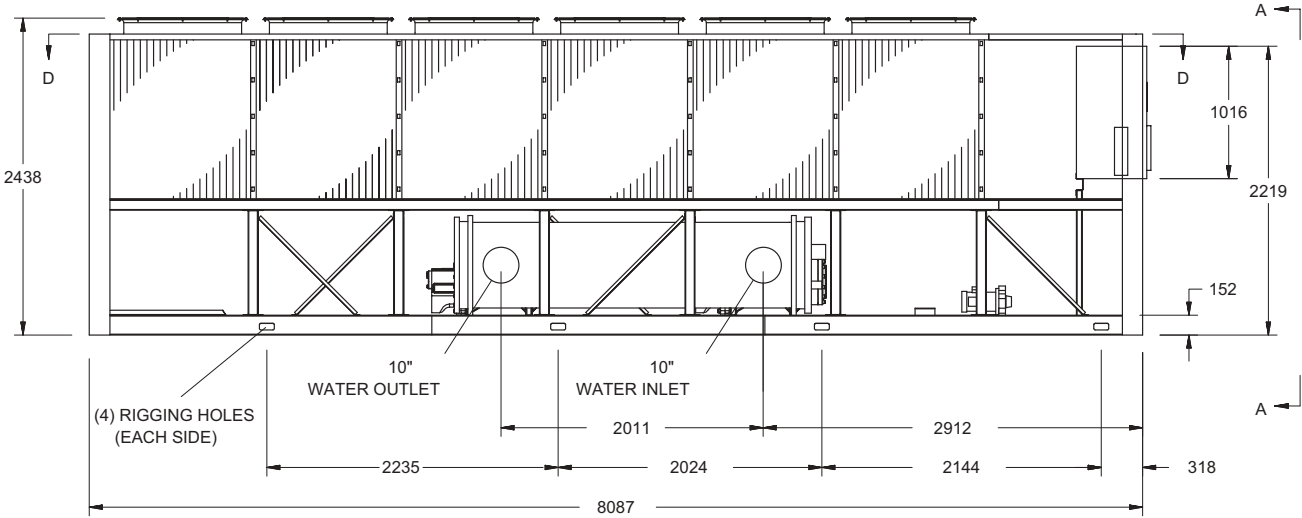


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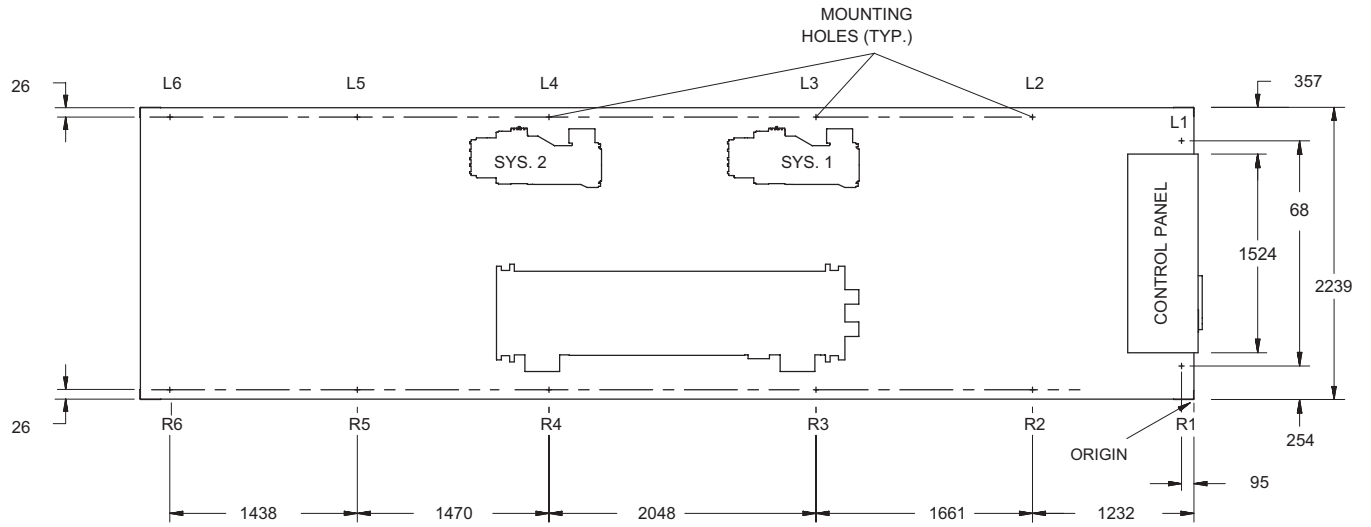


VIEW D-D

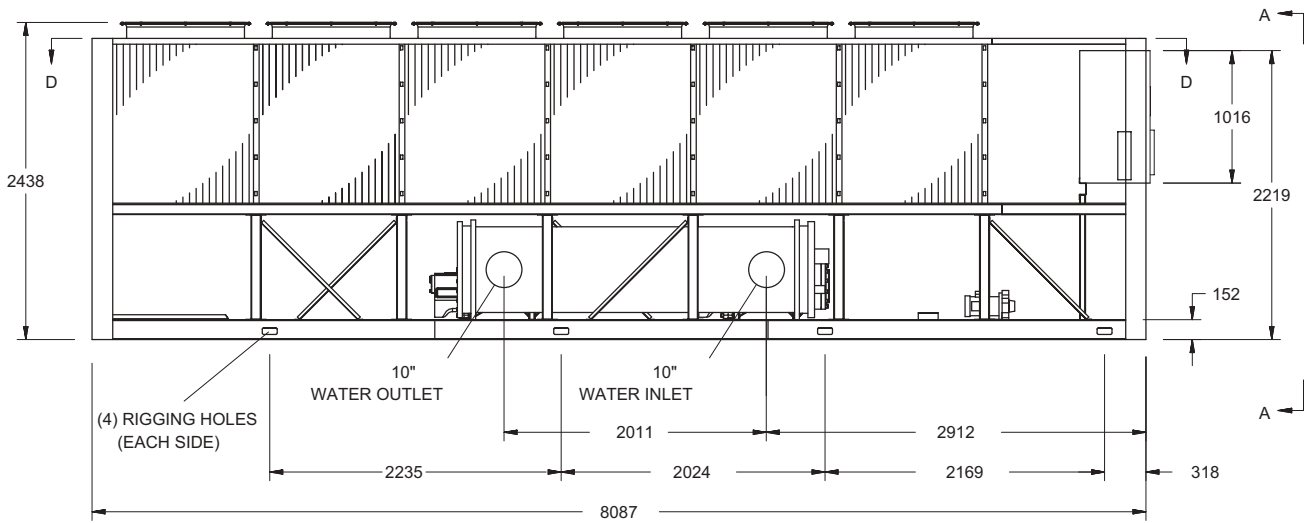


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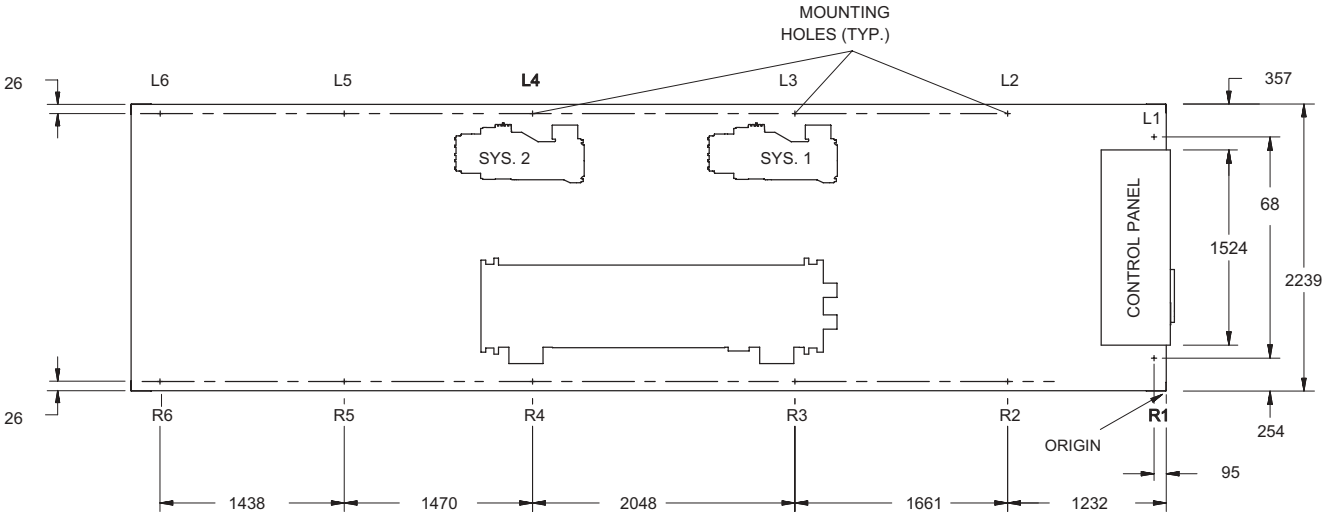


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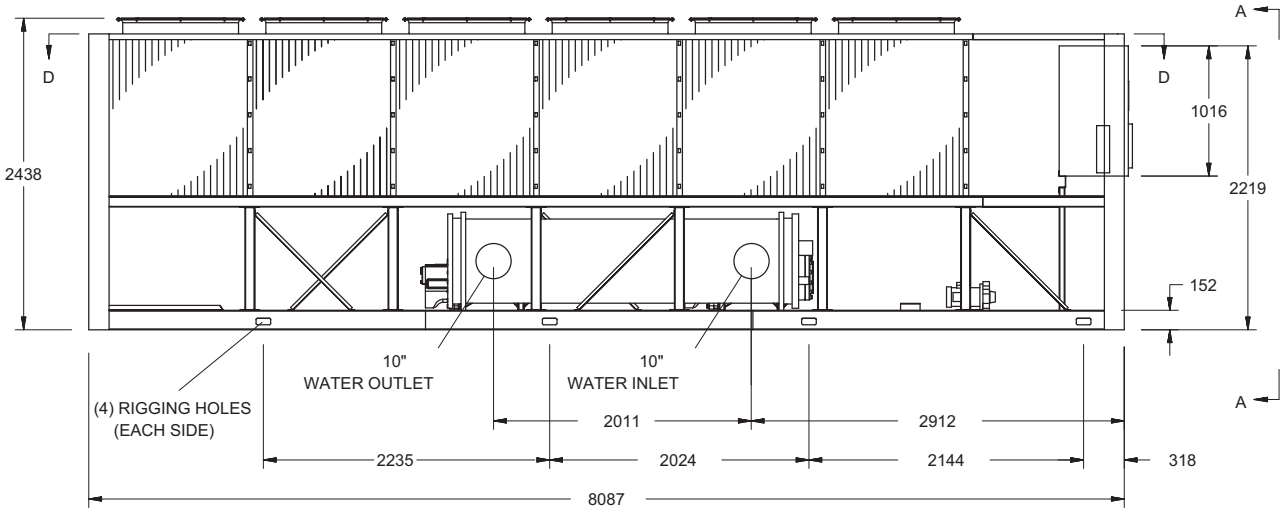


LD10571

DIMENSIONS - YCAV0267S/P Standard Efficiency SI



VIEW D-D



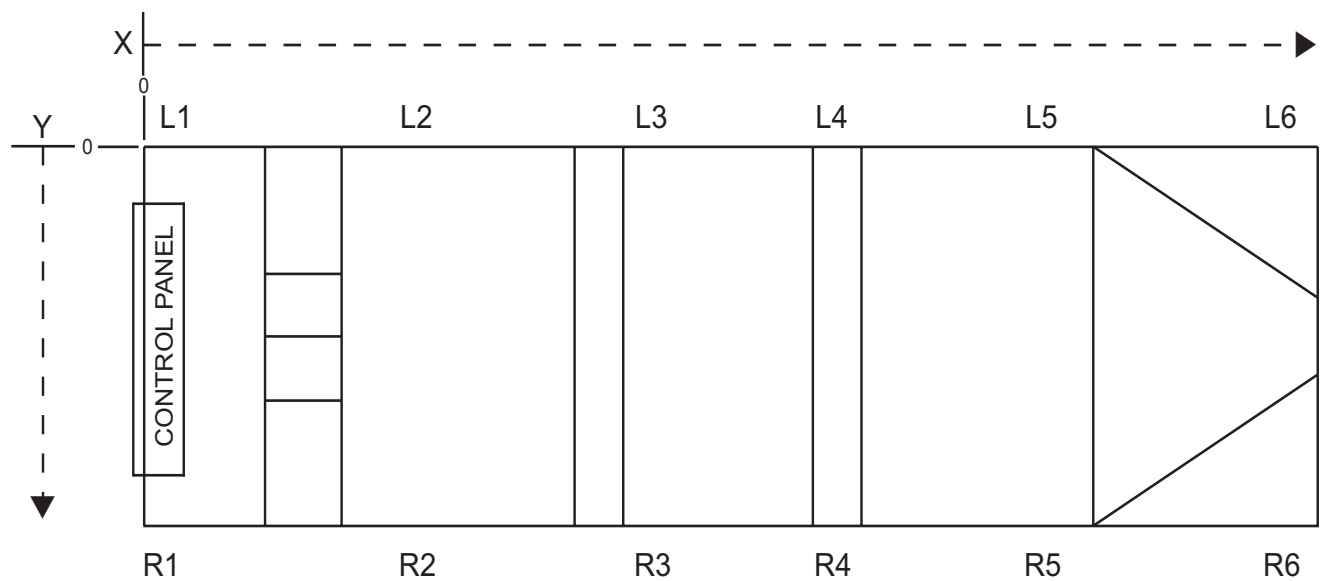
LD10573

WEIGHT DISTRIBUTION AND ISOLATOR MOUNTING POSITIONS

GENERAL

Weights of specific chiller models vary significantly as options are added. As a result, total weights, weights at individual isolator positions, and actual isolator selection at each position cannot be published due to the thousands of possible combinations. This information will be available when the specific chiller/option selection is made from the local YORK sales office. Be aware, weights will change with each option along with possible isolator changes. Weights and isolators may need to be recalculated when option selections are changed.

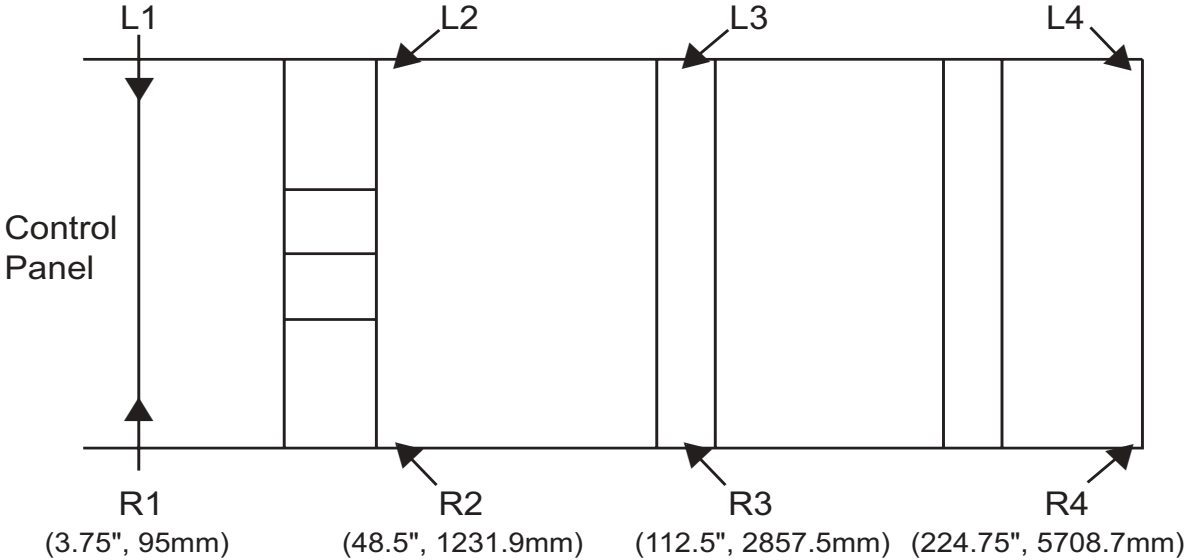
Whenever the isolator option is ordered, the isolators will be shipped loose with the chiller. Packed with the isolators and also in the control panel information packet is a drawing and table specifically for each chiller, based on the option selection. The drawing and table will be similar to the ones shown below. The drawing will show the isolator locations along with weight in pounds and kilograms at the specific location, isolator position, and location measurements for each isolator.



Location	X Distance inches (mm)	Y Distance inches (mm)	Vendor Number	Weight
R1	3.75 (95)	78.0 (1981.2)	CIP-C-1350 / Yellow	895.0 (405.97)
L1	3.75 (95)	10.0 (254.0)	CIP-C-1350 / Yellow	895.0 (405.97)
R2	48.5 (1231.9)	87.125 (2213.0)	CIP-C-1750 / Black	1454.0 (659.52)
L2	48.5 (1231.9)	1.03 (26.2)	CIP-C-1750 / Black	1446.0 (655.89)
R3	113.88 (2892.6)	87.125 (2213.0)	CIP-C-1350 / Yellow	1693.0 (769.93)
L3	113.88 (2892.6)	1.03 (26.2)	CIP-C-1350 / Yellow	1575.0 (714.41)
R4	194.5 (4940.3)	87.125 (2213.0)	CIP-C-1350 / Yellow	1595.0 (723.48)
L4	194.5 (4940.3)	1.03 (26.2)	CIP-C-1000 / Black	1480.0 (671.32)
R5	265.0 (6731.0)	87.125 (2213.0)	CIP-C-1000 / Black	775.0 (353.53)
L5	265.0 (6731.0)	1.03 (26.2)	CIP-C-1000 / Black	769.0 (348.81)
R6	309.0 (7848.6)	87.125 (2213.0)	CIP-C-1000 / Black	671.0 (304.36)
L6	309.0 (7848.6)	1.03 (26.2)	CIP-C-1000 / Black	675.0 (306.18)

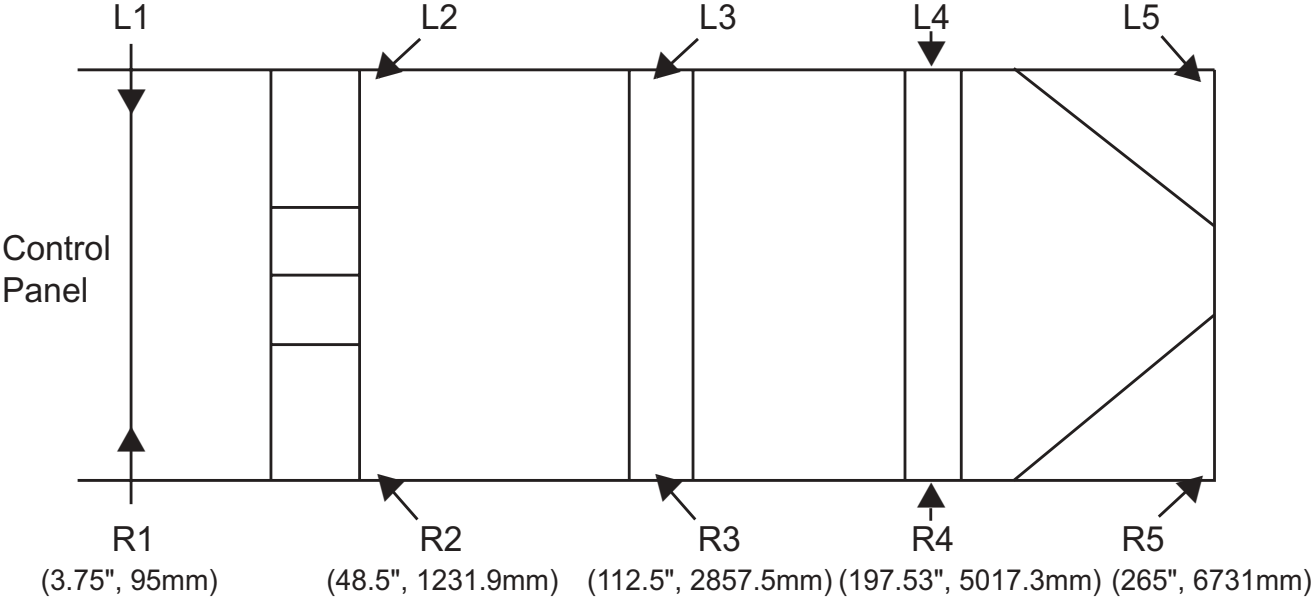
SAMPLE PRINTOUT SUPPLIED IN THE ISOLATOR PACKAGE AND IN THE CHILLER PANEL LITERATURE PACKET

ISOLATOR MOUNTING POSITIONS



YCAV0157S/P, YCAV0157E/V, and YCAV0177S/P

LD10501

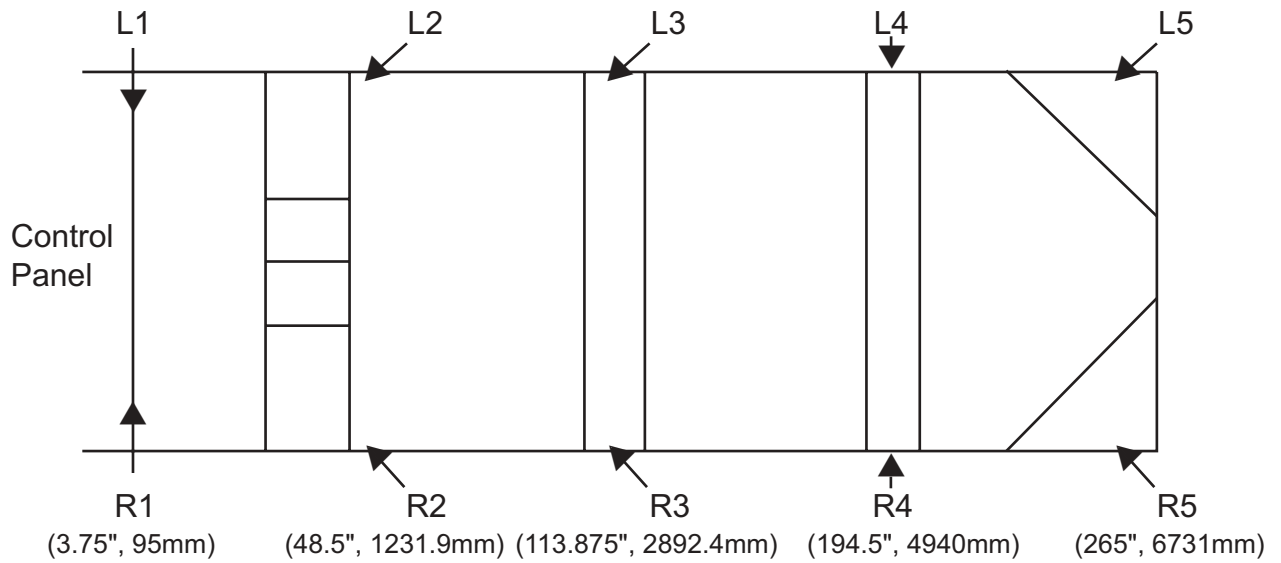


YCAV0177E/V, YCAV0187S/P, YCAV0187E/V, and YCAV0197E/V

LD10502

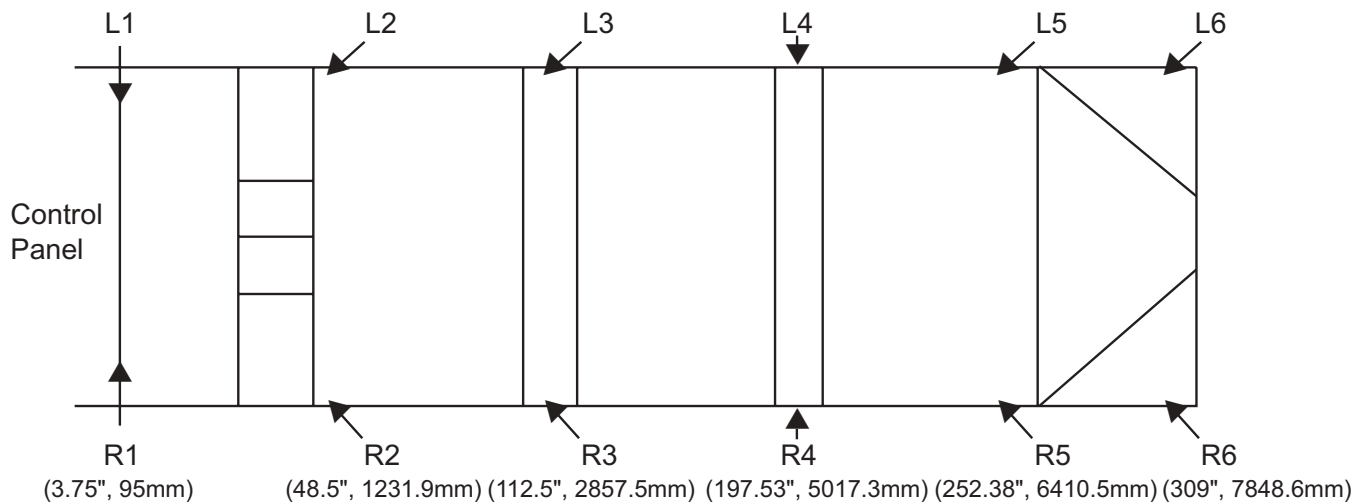
NOTE: Distances indicated are from the end of the chiller designated as X in FIG. 8.

ISOLATOR MOUNTING POSITIONS (CON'T)



YCAV0207S/P and YCAV0227S/P

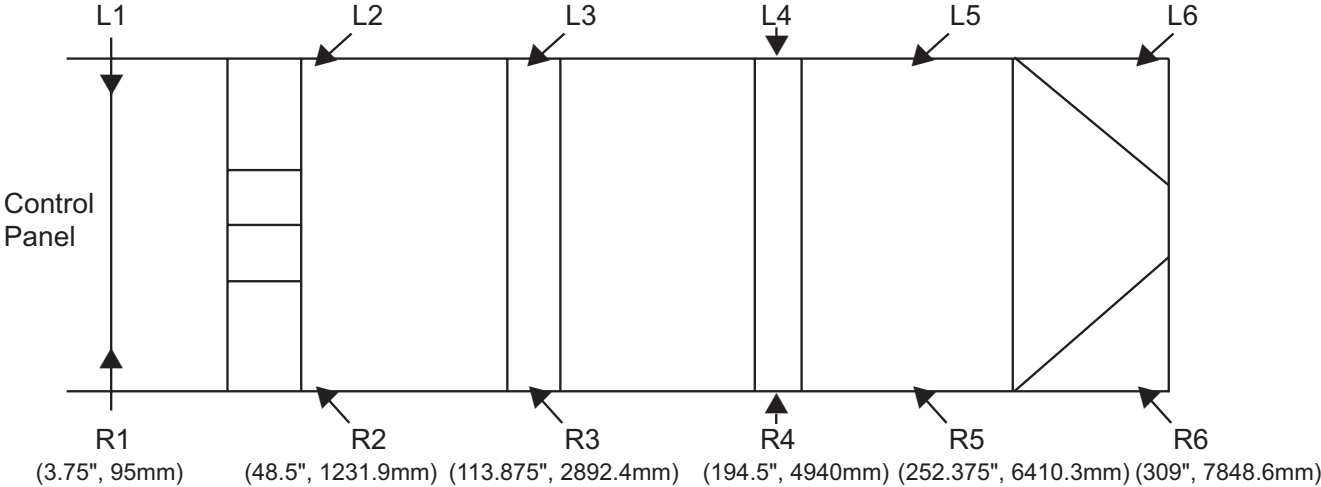
LD10504



YCAV0207E/V and YCAV0227E/V

LD10503

ISOLATOR MOUNTING POSITIONS (CON'T)



YCAV0247S/P, YCAV0247E/V and YCAV0267S/P

LD10508

EQUIPMENT START-UP CHECK SHEET (CON'T)

Oil levels in the oil separators above the top sight glass in either oil separator should be avoided and may cause excessive oil carryover in the system. High oil concentration in the system may cause nuisance trips resulting from incorrect readings on the level sensor and temperature sensors. Temperature sensor errors may result in poor refrigerant control and liquid overfeed to the compressor.

In the unlikely event it is necessary to add oil, connect a YORK oil pump to the charging valve on the oil separator, but do not tighten the flare nut on the delivery tubing. With the bottom (suction end) of the pump submerged in oil to avoid entrance of air, operate the pump until oil drips from the flare nut joint, allowing the air to be expelled, and tighten the flare nut. Open the Compressor oil charging valve and pump in oil until it reaches the proper level as described above.



When oil levels are high, adding oil may not visibly increase the level in the separators during operation. This may be an indication the level is already too high and the oil is being pumped out into the system where it will cause heat transfer and control problems.

6. Ensure water pumps are on. Check and adjust water pump flow rate and pressure drop across the cooler.



Excessive flow may cause catastrophic damage to the evaporator.

7. Check the control panel to ensure it is free of foreign material (wires, metal chips, tools, documents, etc.).

8. Visually inspect wiring (power and control). Wiring MUST meet N.E.C. and local codes (See FIG. 13 and 17 pages 135 and 139).

9. Check tightness of the incoming power wiring inside the power panel and inside the motor terminal boxes.

10. Check for proper size fuses in control circuits.

11. Verify that field wiring matches the 3-phase power requirements of the chiller. (See chiller nameplate Page 20).

12. Be certain all water temperature sensors are inserted completely in their respective wells and are coated with heat conductive compound.

13. Ensure the suction line temperature sensors are strapped onto the suction lines at 4 or 8 O'clock positions.

14. Assure the glycol level in the VSD cooling system is 9-15 inches (23-38 cm) from the top of the fill tube. This check should be performed prior to running the pump.



Never run the glycol pump without coolant! Running the glycol pump without coolant may damage the pump seals.

Always fill the system with approved YORK coolant to avoid damage to the pump seals and the chiller.

PANEL CHECKS

(POWER ON – BOTH SYSTEM SWITCHES “OFF”)

1. Apply 3-phase power and verify its value (See FIG. 13 and 17 pages 135 and 139).

2. Remove the cap on the fill tube and run the glycol pump to verify the level in the fill tube. Assure the glycol level in the VSD cooling system is 9-15 inches (23-38 cm) from the top of the fill tube while running. The pump can be run by placing the chiller in the SERVICE mode (Page 258). Be sure to re-install the cap before stopping the glycol pump to avoid overflowing the fill tube when the glycol pump is turned off. The glycol system holds about 3.5 gallons of coolant on the largest YCAS0267.

3. Ensure the heaters on each compressor are on. Allow the compressor heaters to remain on a minimum of 24 hours before start-up. This is important to ensure no refrigerant is in the compressor oil at start-up! Heater current draw is approx. 3A.

VSD OPERATION AND CONTROLS (CON'T)

VSD COOLING AND COOLING LOOP

The VSD generates heat in the IGBT power modules and the SCR/Diode assemblies, which must be removed. The heat not only heats the modules but also the Micro/VSD cabinet.

The VSD is cooled by a glycol loop and circulating pump. The glycol cooling loop feeds a liquid cooled heatsink called a chillplate that cools the IGBT's and SCR/Diode modules. The coolant is pumped by a circulator pump through the heatsink where it absorbs heat in several passes of tubes on the lower rows of the inside condenser coils where the condenser fans remove the heat picked up from the modules. The coolant is then pumped back to the modules. The glycol loop also provides cooling for the Micro/VSD cabinet. The baseplates of the power components are mounted to the glycol cooled heatsinks in the cooling loop. The cooling loop also circulates the glycol through a cooling coil in the cabinet. A fan blows air from the cabinet across the cooling coil to cool the electronics in the cabinet.



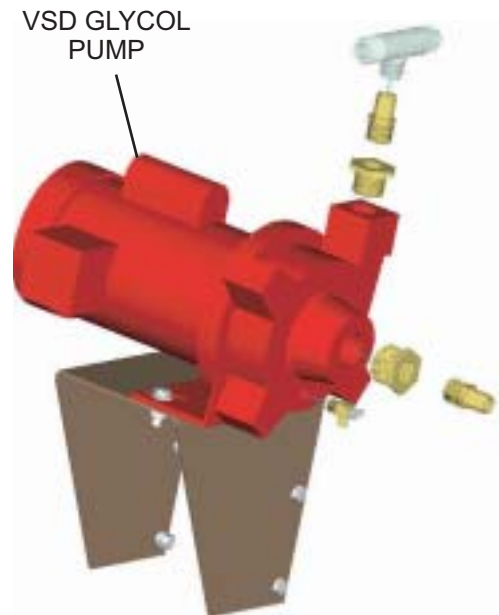
Never run the glycol pump without coolant! Running the glycol pump without coolant may damage the pump seals

Always fill the system with approved coolant to avoid damage to the pump seals and other components.

Heat transfer characteristics of the coolant are very critical. Substituting coolant or adding water will result in cooling loop performance loss and chiller shutdown.

The glycol coolant level in the VSD cooling system should be maintained 9-15 inches (23-38 cm) from the top of the fill tube. This check should be performed prior to running the pump. The pump can be test run by placing the chiller in Service Mode. It is advisable to fill the tube to the required level before starting the glycol pump because it may empty when the pump starts. The level should be topped off as needed while running. Be sure to re-install the cap before stopping the glycol pump to avoid overflowing the fill tube when the glycol pump is turned off.

Glycol coolant has a defined operating life. System coolant should be changed 5 years from date of shipment of the equipment. Mixing other coolants or water with the special glycol will reduce the life of the coolant, and cause VSD overheating and damage.



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