

A2L HVAC System Installation Checklist – International Residential Code (IRC-2024)¹

Notes	Description	Comments
Integral Refrigerant Detection System (RDS)		
2	Is integral RDS required to be installed? (see manufacturer's installation instructions) Is the correct part number RDS installed? (RDS may be shipped separately)	
3	Are sensors in the correct location? (may change based on air handler orientation) Is RDS wiring connected per manufacturer's wiring diagram?	
Room Size / Charge Limits		
2	For ducted systems (no zoning system) – Is total room area connected by duct system greater than minimum room size requirement? For ducted systems (with zoning system) – Is either:	
2	<ul style="list-style-type: none"> Smallest zone greater than minimum room size requirement or Zoning system configured to open all zones if RDS detects a leak? 	
4	For non-ducted systems (room units or wall-hung units): Is room size greater than minimum room size requirement?	
5	Refrigerant charge less than 34.5 lbs per independent system?	
Internal Sources of Ignition		
	Field installed auxiliary electric heaters – Is heater kit model identified on nameplate? All electrical components inside enclosure shown on manufacturer's wiring diagram?	
Duct-mounted Sources of Ignition		
6	Identified by equipment manufacturer's instructions? (e.g., electrostatic air cleaners, UV-C devices)	
6	No electric heating elements, open flames or devices switching electrical loads greater than 2.5kVA?	
7	Potential duct mounted ignition sources interlocked with airflow (minimum 200 ft/min. face velocity) or de-energized if RDS detects leak?	
Additional Mitigation Controls		
8	Does the manufacturer specify installation of Safety Shutoff Valves?	
Refrigerant Piping		
9, 10	Installed and protected per manufacturer's instructions?	
9, 10	Pressure and leak tested per manufacturer's instructions? Press-connect fittings certified for use with A2L refrigerants?	
Markings, Instructions, and Signage		
11	Refrigerant type and field adjusted charge recorded on unit label?	
11	Contact information for responsible company that installed system?	
12	Installation instructions, service manuals and product literature available for inspection?	

Notes

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| <p>1. The International Residential Code (IRC-2024) M1411.2 requires HVAC appliances containing A2L refrigerants be certified to UL 60335-2-40 and installed in accordance with the manufacturer's installation instructions. This checklist is based on the most typical instructions required by UL 60335-2-40. Always refer to the instructions provided with the system. The IRC also specifies installation per the locally adopted electrical and fuel gas codes.</p> <p>2. RDS and minimum room sizes are typically required for HVAC appliances with over an approximate 2-pound charge for nonfixed factory-sealed</p> | <p>equipment or an approximate 4-pound charge for other types of equipment.</p> <p>3. A2L refrigerants are heavier than air. Sensors will typically be located near the bottom of the enclosure below the evaporator coil.</p> <p>4. Mounting height typically measured from bottom of wall hung unit. For wall hung units, minimum room size requirement may change based on mounting height. Rooms on the same floor can be considered if there is a connecting passageway that is a permanent opening, extending to floor that is intended for people to walk through.</p> <p>5. IRC M1411.6</p> | <p>6. IRC M1411.4</p> <p>7. Typical values based on UL 60335-2-40 requirements.</p> <p>8. Most typical for units with multiple indoor evaporator coils. Installation may be optional to reduce releasable charge and minimum room size requirements.</p> <p>9. IRC M1411.7, M1411.13, M1411.14</p> <p>10. For best practices, refer to ASHRAE 15.2</p> <p>11. IRC M1411.5</p> <p>12. IRC M1411.3</p> |
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