



# Install an AC (Mini-Split)

## Island Grantee Job Aid

### Aligns With Standard Work Specification 5.0108.3

#### Priority List Optional:

**Path 1:** Replace existing window/room air conditioners larger than 12,000 btu and manufactured before 2014, or with an EER of 9.7 or lower with a new ductless mini-split rated for a minimum SEER of 19 of the same or lesser capacity.

**Path 2:** Replace existing ductless air conditioners (i.e., room air conditioners or mini-splits) manufactured before 2014, or with an EER or 10.1 (11.5 SEER) or lower with a new ductless mini-split rated for a minimum SEER of 19 of the same or lesser capacity.



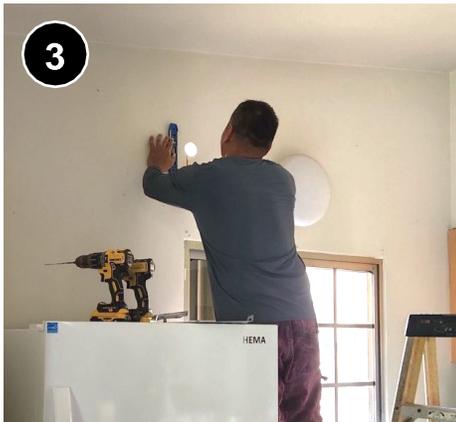
Disconnect the old unit and permanently remove it from the site, disposing of it properly per federal and local regulations.



Double check the specifications of the new unit to be installed. Prior to installation, ensure refrigerant line total length will not exceed manufacturer specifications. Refer to Standard Work Specification [5.0108.3](#).



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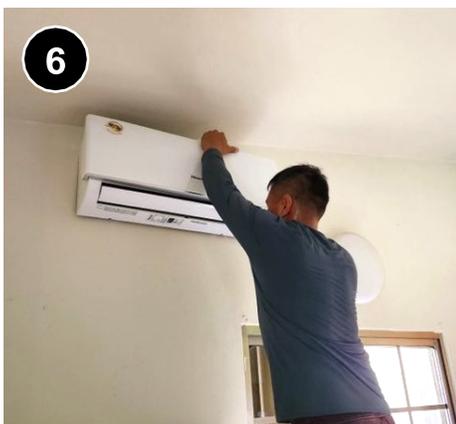
Locate the indoor unit in an area that allows effective airflow to the desired location, maintaining clearances in accordance with manufacturer specifications. A best practice is to locate the unit approximately 6-7' off the ground and with reasonable room from the ceiling, free from obstructions in front of it and on the return side. [5.0108.3f.](#)



Securely fasten the mounting bracket to the wall, level, using appropriate anchors. The bracket must be installed following manufacturer specifications and in accordance with applicable building codes. [5.0108.3g.](#)



Drill hole(s) for control wires and the condensate and refrigerant lines (preferably one, but multiple if necessary).



Securely mount the indoor unit according to manufacturer specifications, pushing lines through the hole you drilled, ensuring the condensate drainage is properly sloped. [5.0108.3h.](#)

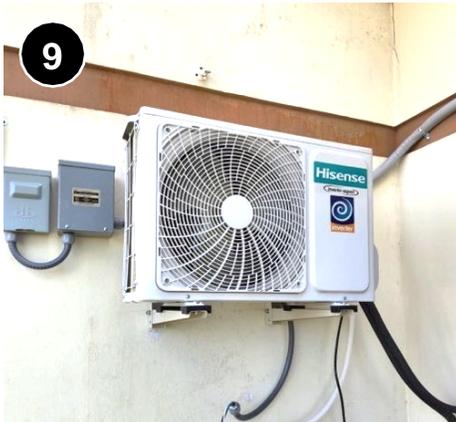


If used, install wall mounted thermostats that are not within the direct airflow of the indoor unit. [5.0108.3n.](#)

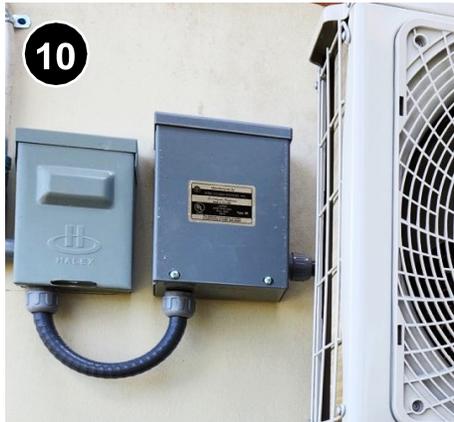


Locate the outdoor unit with manufacturer recommended clearance on all sides and to allow service access according to applicable code. [50108.3c.](#) Also take care to ensure the total length of refrigerant piping will not exceed system manufacturer specifications. [50108.3n.](#)

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Situate the outdoor unit on a non-wicking equipment pad or stand, ensuring it is level, plumb, stable, and elevated above any potential flooding or drainage level. **5.0108.3d.**



Connect wiring on the inside and outside units according to manufacturer specifications. Wires from the system must run to an electrical disconnect within sight of the outdoor unit. Best practice includes installing a surge protection device at the disconnect. All high voltage wiring must be within protective conduit and approved junction boxes. No wiring connections (high or low voltage) will occur outside of an appropriate junction box. **5.0108.3j.**

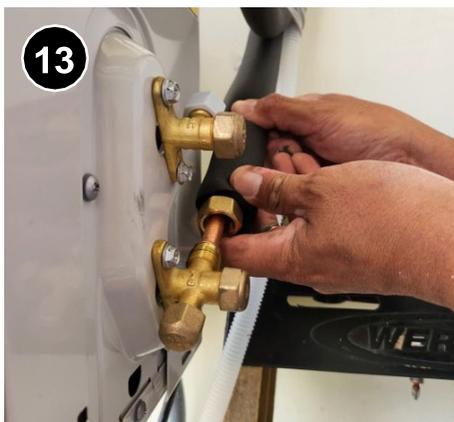


Install refrigerant lines ensuring there are no kinks, crimps, or excessive bends. Join all lines using manufacturer-approved methods. **5.0103.1c.**

*NOTE: Install P-traps on suction line risers that are greater than 10' in height.*



Ensure outdoor unit is installed according to manufacturer specifications and applicable building code **5.0108.3e.**



Insulate all suction lines to a minimum of R-4 with a Class II or better vapor-retarding insulation. Seal all insulation seams and joints with compatible material. All exterior insulation must be rated against UV degradation or protected from UV with another material. **5.0103.1d.**



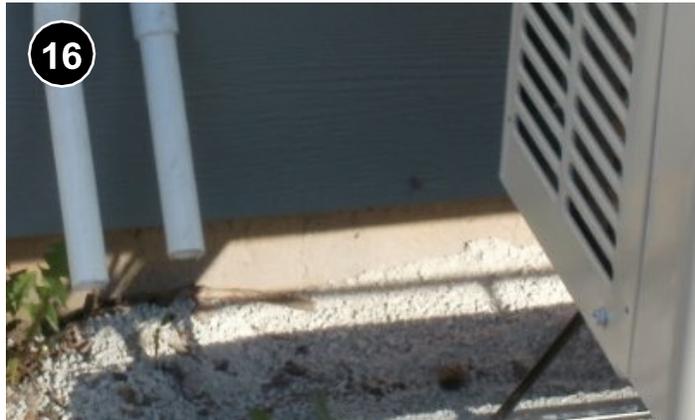
Secure and support refrigerant lines according to applicable code and in a manner that protects the lines from damage by workers or occupants. **5.0103.1e.**

If lines are installed where they may be damaged, install a rigid sleeve or pipe duct over them to provide adequate impact protection. **5.0103.1f.**

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Repair all holes and damage caused by refrigerant and condensate lines passing through the building. Use appropriate materials from Appendix A that are both durable and aesthetically similar to the client's home.



Ensure condensate can flow from the cooling unit to the exterior of the building. [5.0102.1a.](#)

The condensate line termination must be directed downwards and away from the foundation of the building [5.0102.1i.](#)



At this point, an electrician will need to make the final electrical connections and a trained technician will purge the system with nitrogen to check for leaks, remove nitrogen and moisture from the system and open the outdoor valves to release refrigerant into the system.



Install locking caps on all refrigerant access ports. [5.0103.1g.](#)

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Test the system to ensure proper operation.



Provide the occupant/owner with the user's manual for the system, warranty information, installation instructions, and installer contact information. [50108.3q](#).



## Checklist

# Install an AC (Mini-Split)

## DESIRED OUTCOME

Safe, compliant, efficient, and effective system installation in which sequence of operation is correct.

- Verify a SEER of 19 or higher on the name plate.
- Verify indoor unit is securely mounted with appropriate fasteners in an appropriate location, level, and all supply/exhaust vents are unobstructed.
- Verify thermostat (if present) is not within direct airflow of the unit.
- Verify outdoor unit is securely mounted, plumb and stable, elevated above flood potential, and has clearance on all sides for maintenance.
- Verify refrigerant lines have no visible kinks, crimps, or other damage.
- Verify the presence and operability of a dedicated electrical disconnect within sight of the outdoor unit.
- Verify all suction lines are insulated with a minimum of R-4 insulation and joints/seams all sealed with independent means.
- Verify presence of P-traps on suction lines over 10' in height.
- Verify the presence of rigid protection around pipes in any areas where damage from humans or vehicles may occur.
- Verify the presence of locking caps on refrigerant access ports.

### ACKNOWLEDGEMENTS

Developed for the U.S. Department of Energy by Simonson Management Services (SMS) under contract #89243422FEE400259, with input from Weatherization trainers and providers throughout the country and the generous assistance of Catkins Solutions, Guam Energy Office, National Renewable Energy Laboratory, Richard Heath & Associates, and WxTV.

