Application Note:
L3 HV Seismic Stabilization Hardware

This application note describes the Sol-Ark HV battery rack's seismic stability solution: a top-mount bracing and foot-anchoring kit.

Disclaimer

It's important to carefully read and follow all local code, manufacturer's instructions, and safety guidelines. Sol-Ark LLC disclaims all liability for any personal injury, property damage, or other damage that may result from mis-applying the information in this document.

Overview

Sol-Ark's L3 indoor series HV models (40 and 60 kWh) battery racks are for use with the Sol-Ark 30K-3P-208V and 60K-3P-480V hybrid inverters. These indoor HV ESSs and inverter pairings have UL 9540 certification, and the batteries are UL 1973 certified. The HV free-standing battery racks do NOT come with the Sol-Ark seismic bracing kit, and an AHJ may require seismically engineered bracing and/or anchoring. Sol-Ark offers this seismic accessory kit for direct purchase.

L3 HV-40 and HV-60 (Indoor) Batteries

When installed with a 600mm (23.6") setback from a back wall, the bracing will anchor the top of the rack to the wall. The accessory also includes foot-anchoring attachments.

This application note outlines the seismic system components and installation steps.

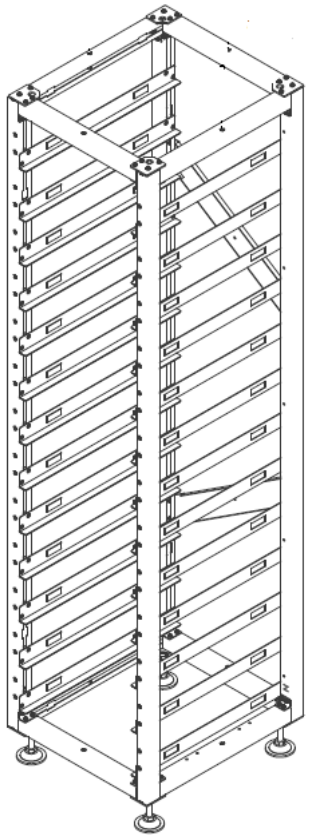
Seismic Safety Requirements

Seismically active areas are likely to require engineered rack stability. California, Oregon, and other states with seismic concerns may require seismic stabilization methodologies that include stamped engineering documentation. Consult state adopted building codes and national standards like ASEC 7-16 to determine the appropriate construction and restraint requirements.

Components Included with the Sol-Ark L3 HV-40 and HV-60 Batteries

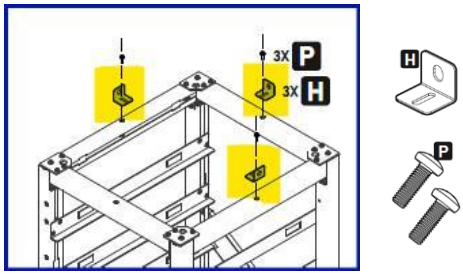
The L3 HV battery racks are shipped unassembled. The shipment includes batteries, HV Box (also called a BMU), structural racking elements, DC power and communications cables, and bolts. See section 2.1 of the *L3 HV Installation Manual* for component details, and section 2.2 for assembly instructions.

The graphic shows the assembled rack for the HV-60K (13 module bays); the HV-40 is ~23 inches shorter (9 module bays):



Note: there are 3 angle brackets included, but generally not installed.

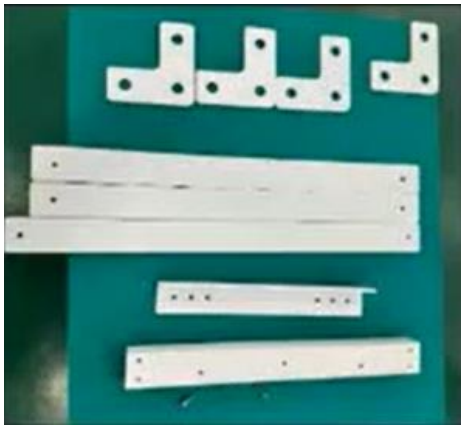
These are used only if the battery rack is permitted to be installed next to a wall or other stable vertical structure, or a non-Sol-Ark bracing solution of horizontal struts:



Since the standard bracing hardware is not adequate for typical seismic load requirements, you can order Sol-Ark engineering-stamped seismic hardware kit for projects with a Seismic Design Category of E or less.

Seismic Accessory Hardware

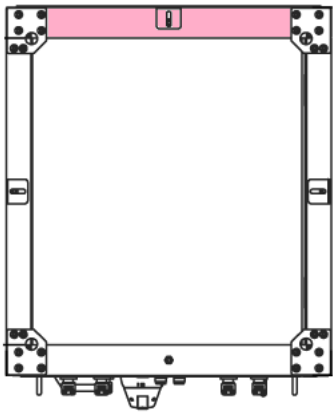
Seismic Components



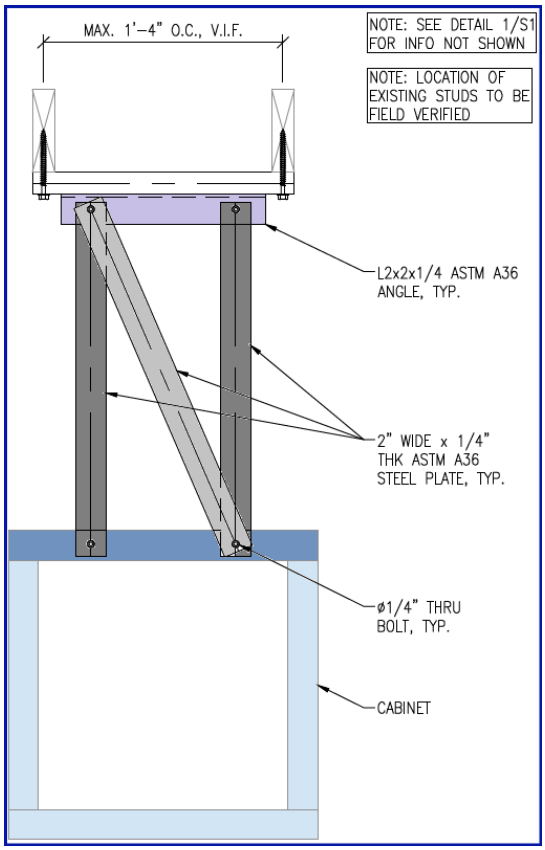
- 3 bracing struts (gray)
- 1 wall angle iron bracket (violet)
- 1 replacement rear rack top strut (blue)
- 4 right-foot anchor adaptors
- Fasteners not included

Installing Stabilization Hardware

Wall Bracket to Rack Top Bracing



1. Replace the rear upper-bracket (pink) of the HV rack with same size piece from the HV Seismic Accessory Kit (blue).
2. Assemble the brace portion (gray) with hand-tightening only.
3. Line up bracing to intersect with the wall bracket and mark the bracket attachment holes. Install the wall bracket.
4. Attach seismic bracing to wall bracket; tighten all bracing bolts.

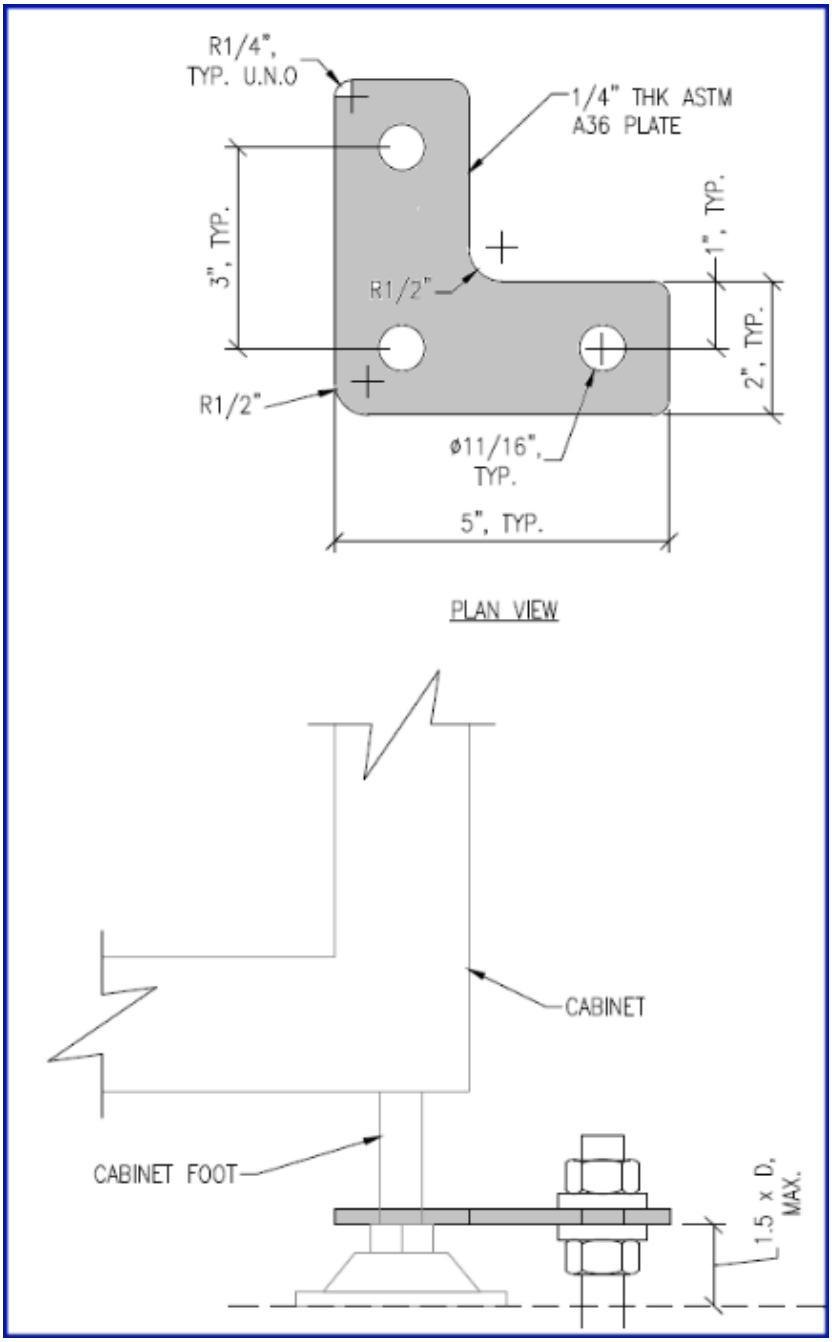


The photo shows an upper bracket installed in the rack with bracing plates (all gray)

When connecting to a wall with drywall, paneling, lathe and plaster, or bare studs, install a ledger board for bracing attachment using ¼" lag screws.

Foot to Foundation Anchoring

- 4 foot-to-fastener brackets
- Fasteners are not included; recommended 5/8” ASTM F1554 threaded steel rod of strength grade 55



To Order the Seismic Stabilization Hardware Kit

This kit is typically included on the Purchase Order for the HV Battery (one per battery stack). If not, you can order a seismic package by contacting Sol-Ark Sales at (972) 575-8875 ext. 1.

Item number**: 430-00012**
Item Code: **HV Rack Seismic Bracket**)

Document Revision History

Revision	Date	Author	Description of Changes
01	April 27, 2026	Jock Patterson	First Edition