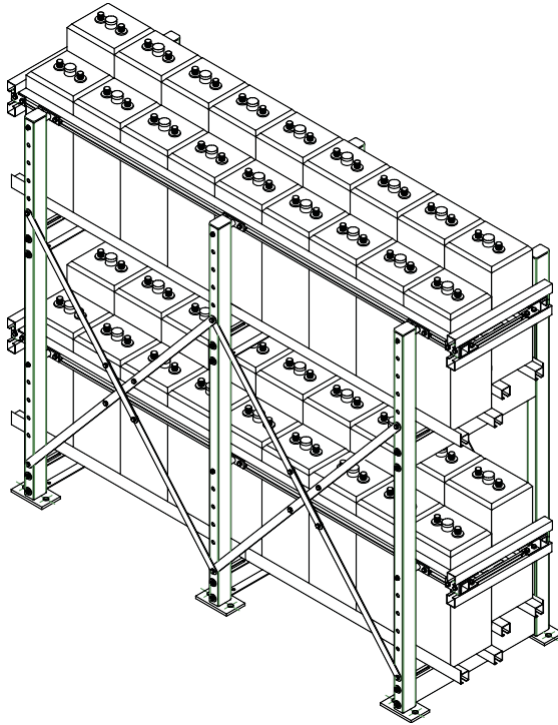


Assembly Instructions

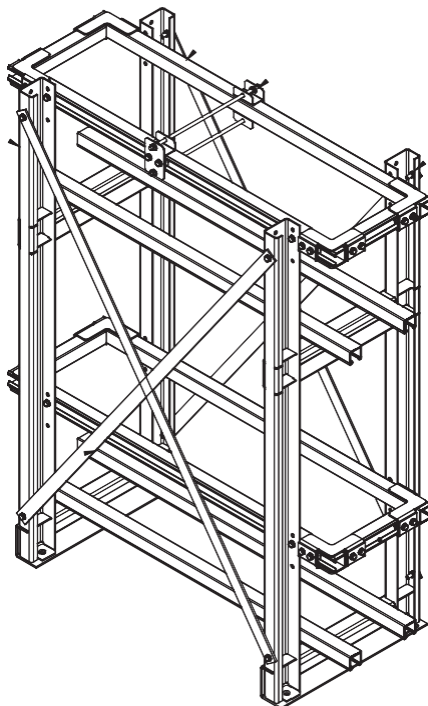
For seismic 2-Tier or 2-Step/2-Tier battery racks with welded uprights



2-Step/2-Tier Seismic Rack

NOTE

- Before you start with the assembly of the rack, check the packages delivered against rack parts list to ensure you have received the correct items and quantity.
- It is not possible to insert missing pieces at a later date.



2-Tier Seismic Rack

NOTE

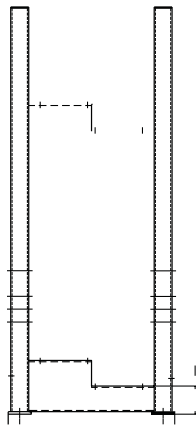
- The rack system and the order of assembly is illustrated in the diagrams.

NOTE

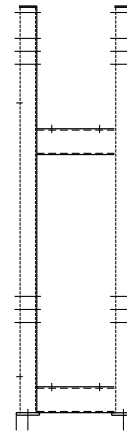
- All screws must be tightened to a torque of 20 Nm [14.7 ft. lb.].
- Do not over tighten.

Parts Description

Rack Frames/Uprights

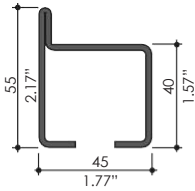


2-Step/2-Tier Frame Part# **EQ-E-SGX2**

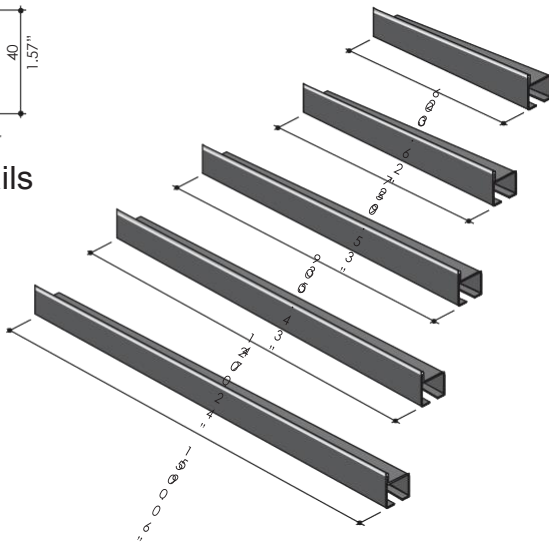


2-Tier Frame Part# **EQ-E-PGX1**

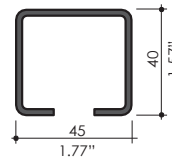
Bottom and Side Rails



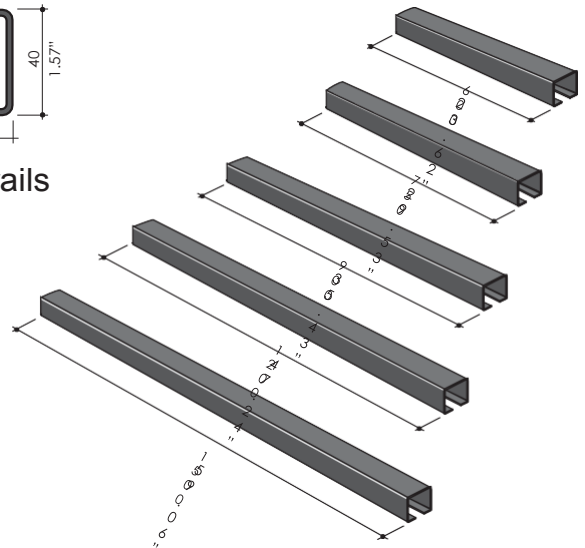
"h" type rails



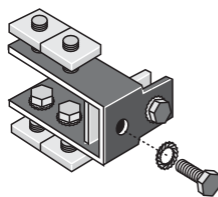
Part# 904=Qty.4 900mm (35.43in.) "h" type rails
0.5 904=Qty.2 900mm (35.43in.) "h" type rails



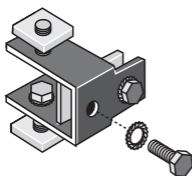
"C" type rails



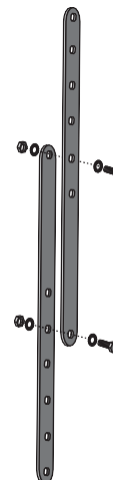
Part# 904C=Qty.4 900mm (35.43in.) "C" type rails
0.5 904C=Qty.2 900mm (35.43in.) "C" type rails



End Holder Part# **EB0064**



End Holder Part# **EB0034**



Cross Brace Part# **EB0974**

Example Detailed Rack Information - Available Online

Rack-Info

Rack type

EQ-SGX2-21

Rack dimensions

Length = 82.68 inch

Width = 26.18 inch

Height = 23.23 inch

B = 22.64 inch

Part list

0.5 x 1204

0.5 x 904

1 x 1204C

1 x 904C

1 x 604C

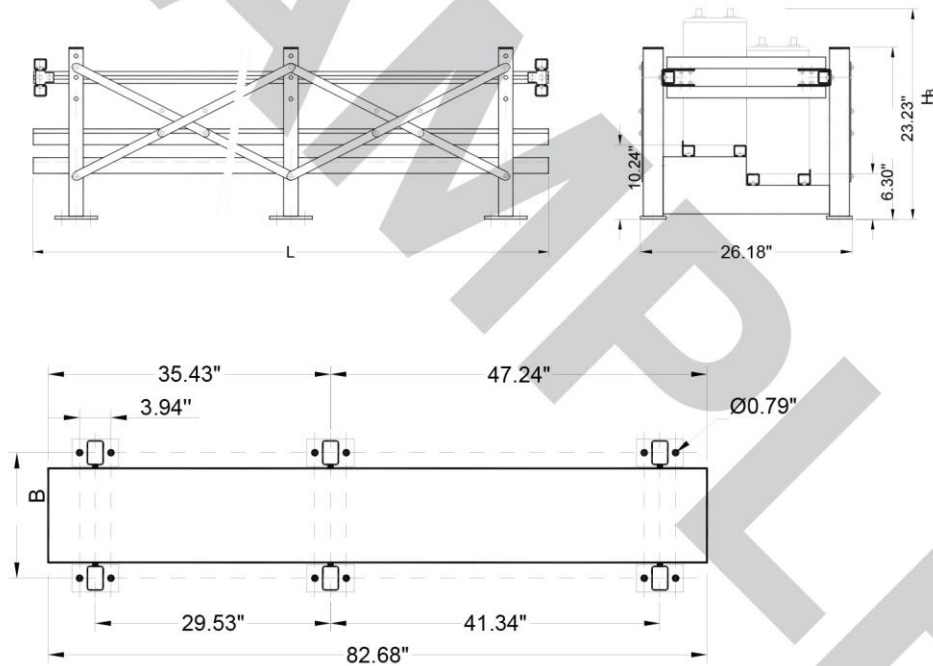
3 x EQ-E-SGX2

1 x EB0064

2 x EB0714

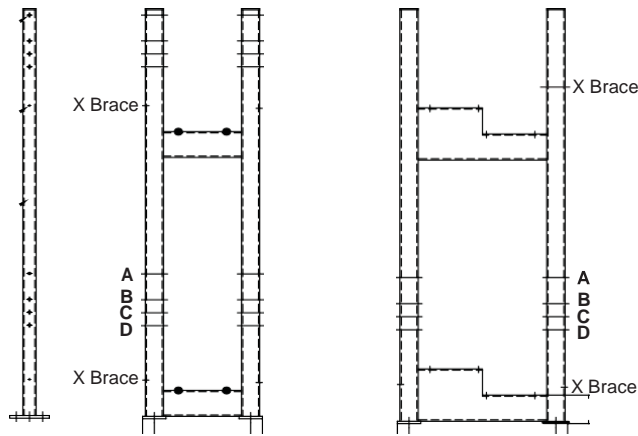
Rack-Weight

202.5 lbs



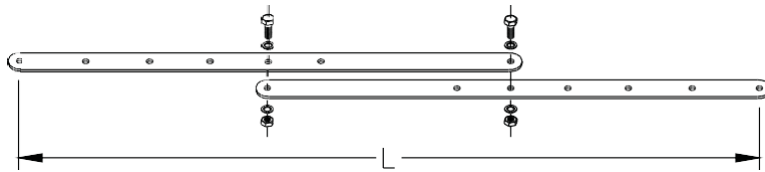
Note: If you need a rack information data sheet, please contact SBS at: stationary@sbsbattery.com, or visit www.sbsbattery.com/seismic-racks. Please have your rack part number ready.

▪ **Step 1 -** Determine side rail location and move side rail connectors to correct location



Hole	Battery Height	STT Battery Type
A	23.1 - 29"	STT2V600
B	17.1 - 23"	STT2V350 - STT2V490
C	10.6 - 17"	STT12V50 - STT2V300
D	8 - 10.5"	

▪ **Step 2 -** Assemble Cross Braces using 2 bolts M8x20, 4 toothed lock washers and 2 nuts M8.



Length L is determined by the distance between the uprights. Measurements are listed in the table. Reference your specific rack footprint drawing.

Center distance A of supports	Length L of brace C/C
600 mm [23.62"]	1218 mm [47.95"]
750 mm [29.52"]	1299 mm [51.14"]
900 mm [35.43"]	1391 mm [54.76"]
1050 mm [41.34"]	1492 mm [58.74"]
1200 mm [47.24"]	1601 mm [63.03"]
1350 mm [53.15"]	1717 mm [67.60"]
1500 mm [59.06"]	1837 mm [72.32"]

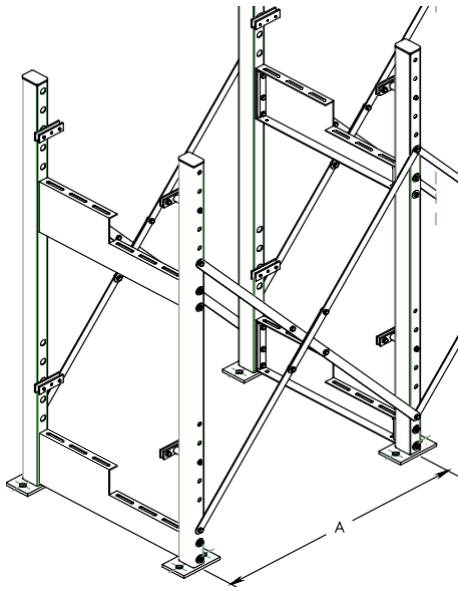
NOTE

- Length L see specific rack drawing

NOTE

- All bolts must be tightened to a torque of 20 Nm [14.7 ft. lb.]
- Do not over tighten.

-Step 3 - Rack Assembly



Place uprights in a vertical position and mount the cross braces according to the distance between uprights, as defined in the specific rack drawing.
Ensure rack is square.

NOTE

- Assemble near final installation location.

NOTE

- Tighten all bolts in upper lengthways and end rails to a torque of 20 Nm [14.7 ft. lb.]
- Do not over tighten

-Optional: SBS Spill Containment System Installation

If an SBS spill containment system is ordered the rack will be installed inside the polypropylene spill pans. Polypropylene is extremely strong and acid resistant and can support up to 15,000 lb. per square inch without degradation of the material.

SBS supplies different size spill pans that are butted together in different combinations to form different spill containment system lengths and widths. Flexible connectors are supplied to 'connect' the pans together.

Arrange the pans so that the spill containment "joints" do not line up with the rack uprights/frames. If the rack and spill containment is to be anchored to the floor you must assemble and place the spill containment system under the rack before marking the anchor holes. After the anchor holes are marked drill through the pans with an appropriate sized standard drill bit and then drill into the concrete floor with a masonry bit. Insert anchor bolts (supplied by others) and tighten.

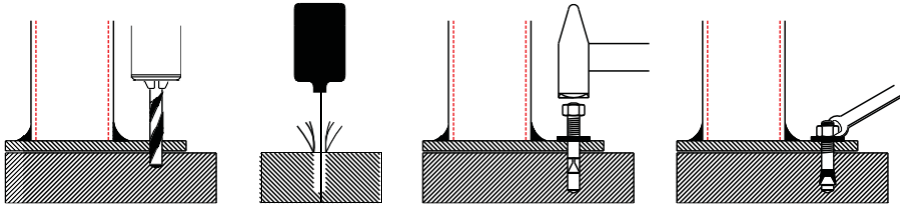
If desired caulk hole/bolt with silicon (supplied by others) to create a 100% leak proof spill containment system.

Optional acid absorbing/neutralizing pillows can be placed in the spill system after the battery installation is complete.



-Step 4 - Mounting Frame to Floor

Place assembled frame in position and align.
Use chalk line if necessary.



We recommend the following procedure:

1. Place the battery rack in the final resting place, paying attention to other equipment and walls. We recommend 4" of spacing from any equipment and walls.
2. Mark the holes and drill. Frames can accept anchor up to 3/4" (supplied by others). Move rack if needed to insert anchors.
3. Drive the anchor into the drilled hole, tapping it lightly with a hammer while keeping the nut flush with end of bolt.
4. Tighten nut, ensuring that the washer rests against the foot profile. Torque according to anchor instructions.

NOTE

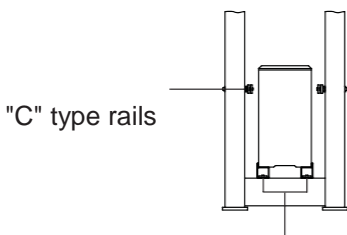
Attention:

- Uprights must be at a right angle to the longitudinal axis of the frame.

NOTE

- Pay attention to torque rating floor anchor bolts.

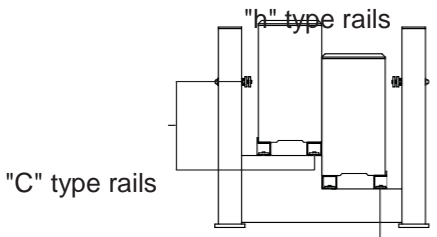
-Step 5 - Assembling Rails



"C" type rails

Assembly with a 1-Tier frame

- h-profiles are mounted in the center of the support, with a gap the width of the battery.



"C" type rails

"h" type rails

Assembly with 2-Step frame

- First arrange two c-profiles close together in the center of the support, then mount an h-profile at a gap the width of the battery respectively.

NOTE

- Pay attention to the battery width.

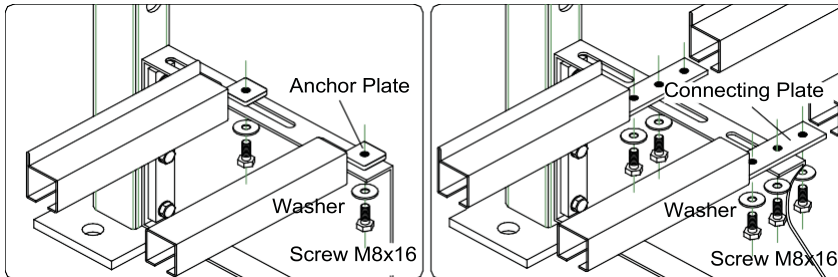
NOTE

- Tighten all bolts to a torque of 8 Nm [5.9 ft. lb.]
- Do not over tighten.

-Mount Bottom Rails

Guide bolt M8x16 with washer from below through the longitudinal hole in upright, and screw it into the anchor plate.

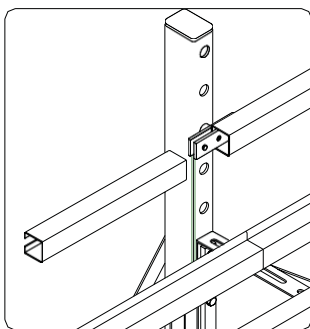
Note: "C" type rails can be tightened however "h" type rails should be installed loosely to allow width adjustment.



NOTE

- *For racks which consist of more than two uprights, a connection plate must be used at the intersection of two rails.*

-Step 6 - Inserting Side Rails



Insert side rails and screw down lightly at intersections.

-Step 7 - Aligning and Tightening Bottom Rails

We recommend using 1 or 2 batteries to help align bottom rails and to ensure proper spacing.

The rails (h-profiles) must support the elements depth on the frame without room to maneuver. If necessary, adjust the position of the h-profiles.

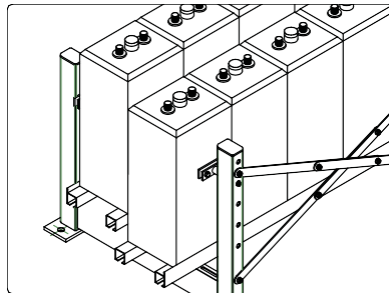
Once aligned, torque bottom "h" type rails to 8Nm (5.9 ft. lb.)

-Step 8 - Inserting Battery in Rack

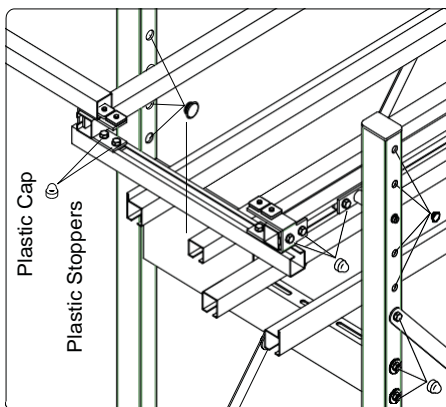
Insert batteries, (cells and/or blocks).

Batteries must be placed closely to one another.

SBS recommends 1/2" spacing between batteries. Using a 1/2" spacer helps while loading batteries.



-Step 9 - Inserting Top End Rails



Pre-assemble holder. To this end use bolt M8x20, toothed lock washer and anchor plate.

Guide pre-assembled holder to the upper lengthways rails, as shown in the diagram.

Insert upper end rails, push them up to the battery and screw everything down. End rails must touch battery with no room to move. If necessary, re-adjust end rails.

NOTE

- Tighten all screws in upper lengthways and end rails to a torque of 20 Nm [14.7 ft. lb.]
- Do not over tighten
- Finally cover all screws with plastic caps and close all openings in the stands with plastic stoppers.