

BUD Industries XR2-45 assembly instructions

V3-2023 (PEM)

Verify Box content

Parts listing and quantity

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	XR2-45-BA-TA	XR2 TOP AND BOTTOM COVER - A	2
2	XR2-45-BB-TB	XR2 TOP AND BOTTOM COVER - B	2
3	XR2-45-STR-A	XR2 TOP AND BOTTOM STARTER SEGMENT A	4
4	XR2-45-STR-B	XR2 TOP AND BOTTOM STARTER SEGMENT B	4
5	XR2-45-EXT-A	XR2 EXTENSION CENTER SEGMENT A	2
6	XR2-45-EXT-B	XR2 EXTENSION CENTER SEGMENT B	2
7	XR2-45--CB1	XR CONNECTING BRACKET	8
8	XR2-45-BSBL	BOTTOM STABILIZING BRACKET - LEFT	2
9	XR2-45-BSBR	BOTTOM STABILIZING BRACKET - RIGHT	2
10	XR2-45-BS	BOTTOM STAND SUPPORT	2
11	XR2-45-CT19	XR4-CROSS TIE 19"	2
12	311	SCREW #10-32 x 1/2 LG.(62)	100
13	309	10-32 CAGE NUT	20

Before you start!

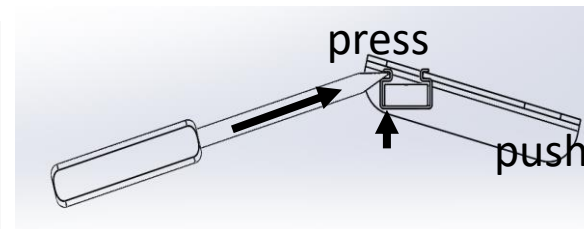
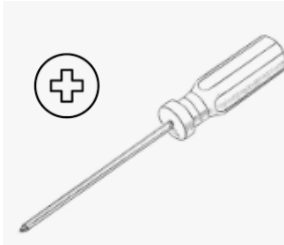
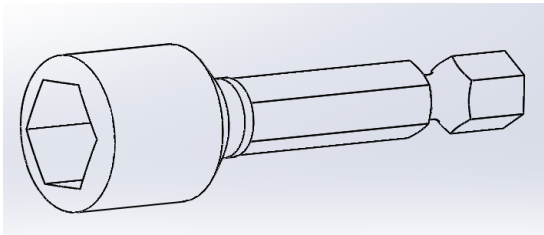
Tools needed

It is strongly suggested that you view the short assembly [instructions video](#) before starting the assembly process



It is strongly recommended to start each screw for a couple of turns, if you notice that the screw got stripped, please replace it with a new one and re align the nut, do not try to force the screws into place as this may cause damage to the nut.

- When assembling XR components together, the use of a torqued **power drill** with the supplied **8 mm (5/16") Socket** is strongly recommended.
- **Initial assembly** should be done with **minimal torque** settings until all screws of the specified part are in place, **final torque** for all screws should be **13 inch-pound minimum** (#7 to 13 on your drill at speed 1, about 1 ft*lb. minimum to 3 ft*lb. max).
- A **medium flat head screwdriver and a small Philips screwdriver** is also recommended for an easy and quick install of the cage nuts in the square cutouts And for the screws, and help in fixing the CB1 nut alignment.



Assembly – animation links



Assembly – drawings links (printing these is recommended)

[STR assembly](#)



• [EXT assembly](#)



• [B-T cover assembly](#)



• [XR2 45 install base](#)



• [XR2-45 top assembly](#)



• [XR2 45 final assembly](#)



• [XR2-45-EXT](#)



• [XR2-45-STR](#)



• [XR2-45-B-T](#)

• [Bottom assembly drawings](#)



• [Top assembly drawings](#)

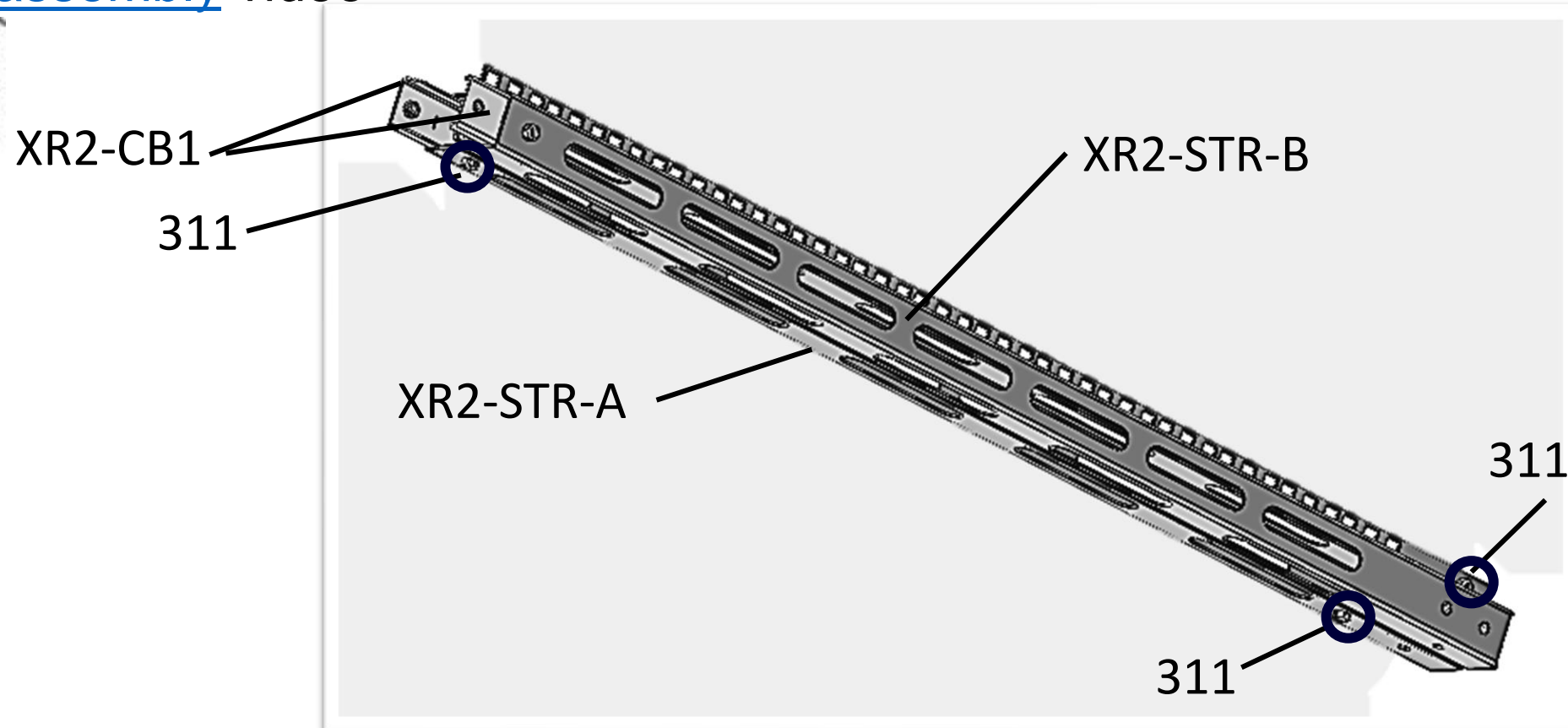


• [Final assembly drawings](#)



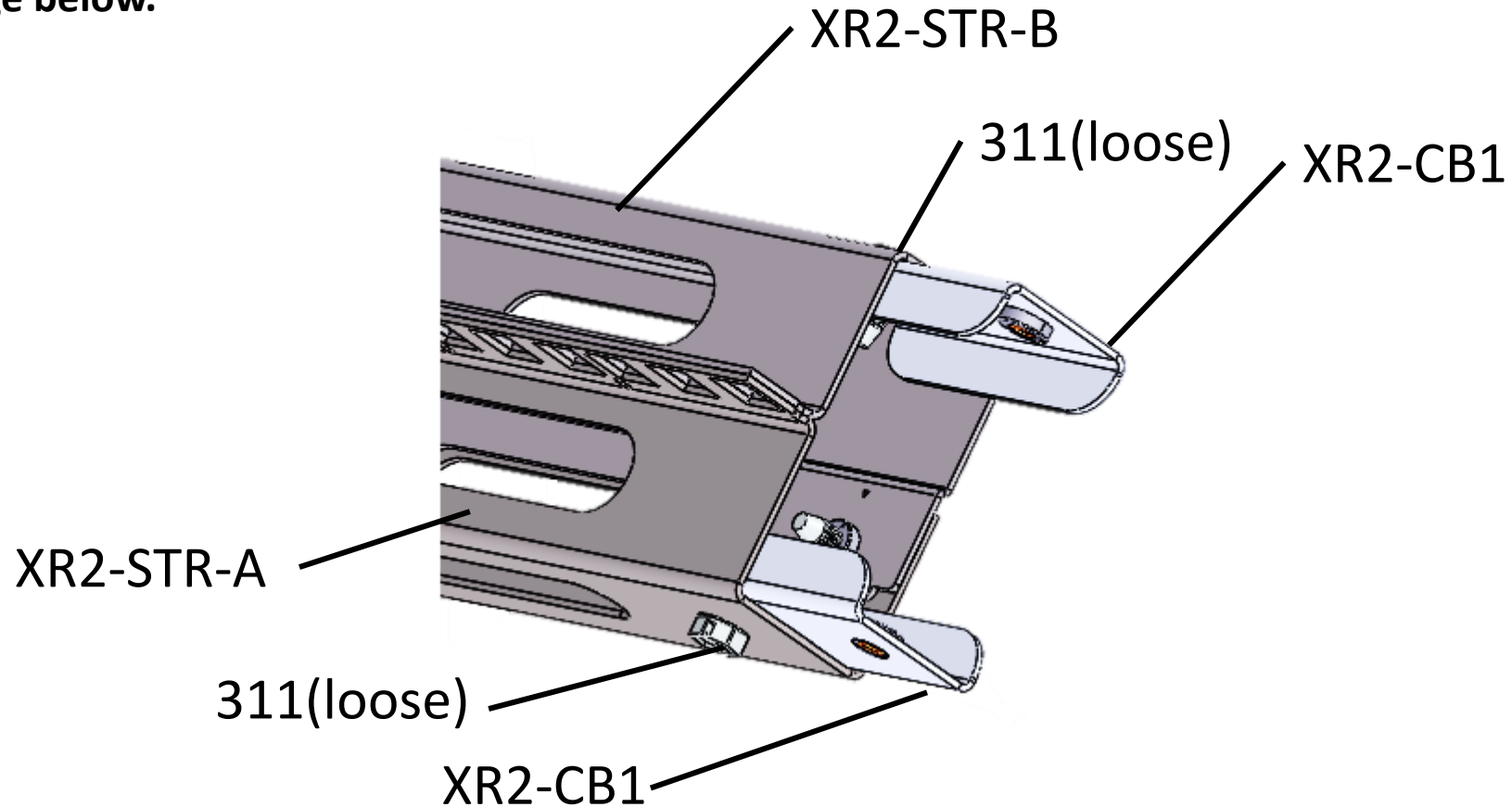
Assembly – Step #1 Build STR segments

- Start by adding CB1 connecting bracket to each STR segment end (with a single oval hole), **loose tighten only (minimum torque)**
- Mate 2 halves of each of the STR segments to create an assembled post segment, making sure that every part “A” overlap on top of a part “B”
- Attach **2 screws** on the outside of each STR segment **and 1 screw** in the mounting rail as in the indicated locations below.
- [STR assembly](#) video




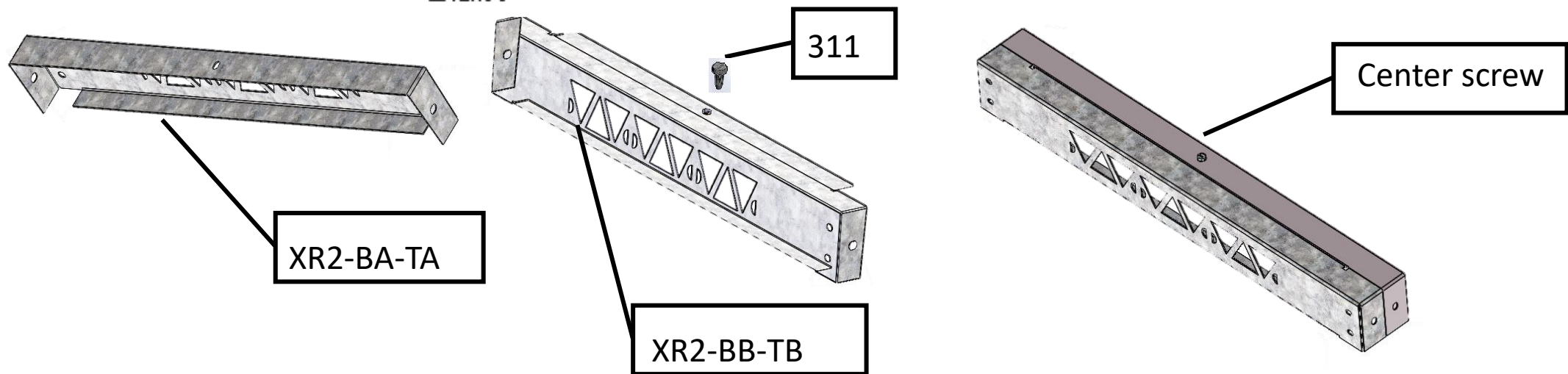
Assembly – Step #1A install connecting brackets

- By the end of this step you should have
2 top + 2 bottom STR assembled segments looking
like the image below.



Assembly – Step #2 Assemble top and bottom covers

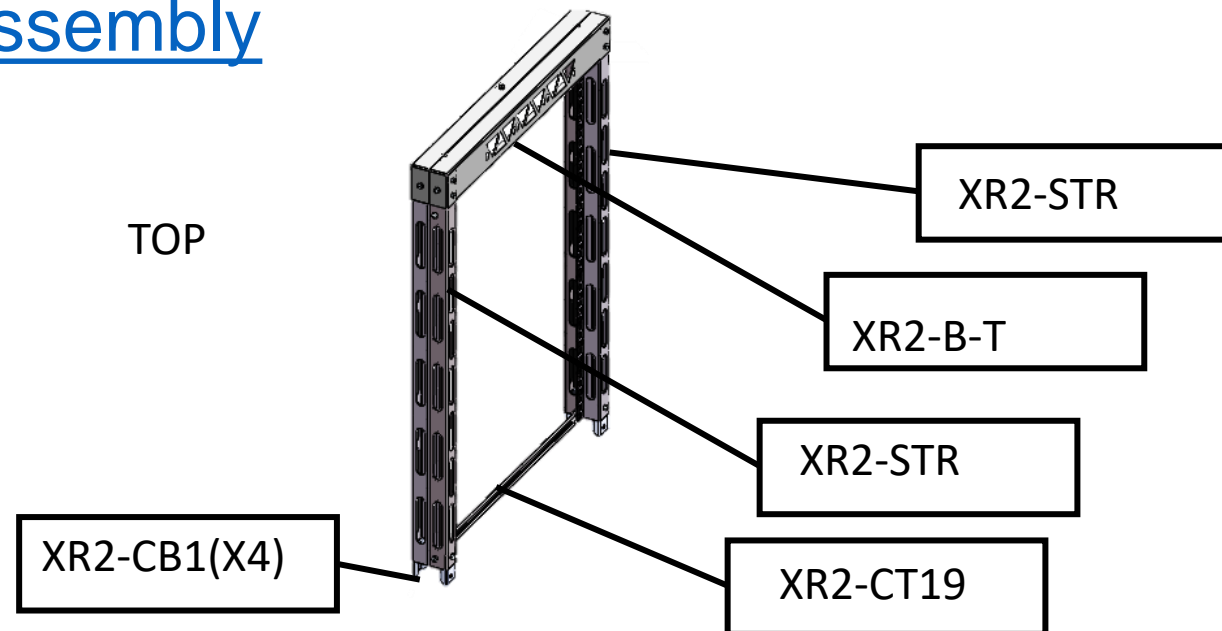
- In this step you will be assembling the 2 cover assemblies .
- For this assembly you will be using the parts (XR2-B-T).
- Attach the two parts using one screw (311) in the center top making sure that part B is under part A **.
- By the end of this step you should have a set with 2 STR post segments installed in the top cover.
- [B-T cover assembly](#) video 



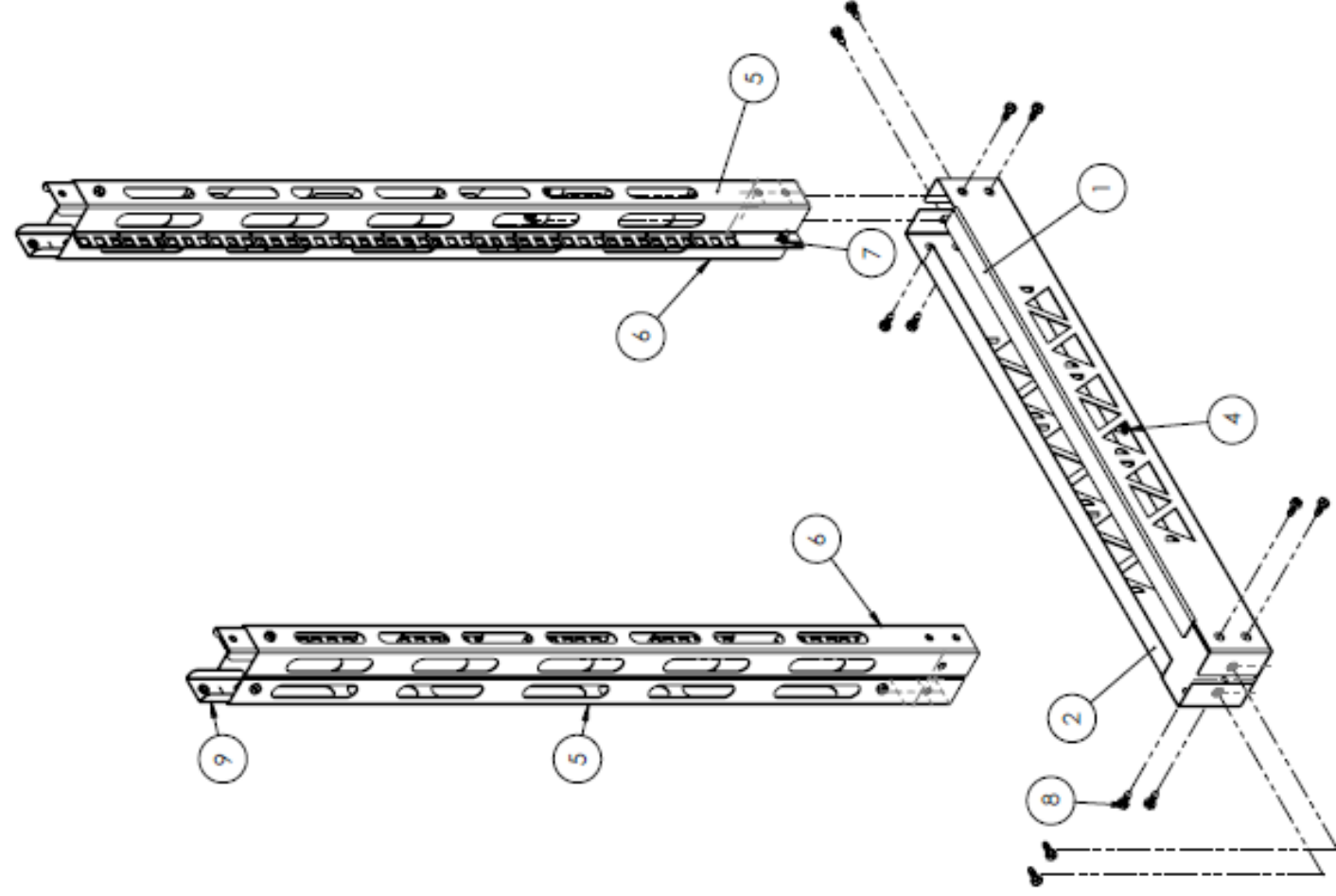
- ** after assembling the rack, the center screw on the bottom needs to be removed.

Assembly – Step #2 create the top assembly

- In this step you will be assembling the 2 STR Top segments to a top cover assembly .
- For this assembly you will be using the parts XR2-STR + 1 cover assembly XR2-B-T.
- Loosely assemble 6 screws in each side and tighten each side after all screws are in.
- Add 1 cross tie with 2 cage nuts to the one before last open square hole in each of the mounting rails.
- By the end of this step you should have a set with 2 STR post segments installed in the top cover.
- [XR2-45 top assembly](#)



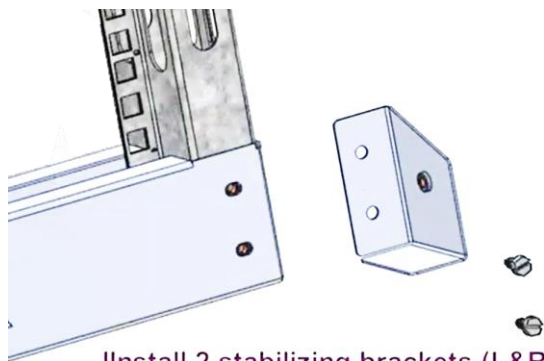
XR2-45-T Top Assembly



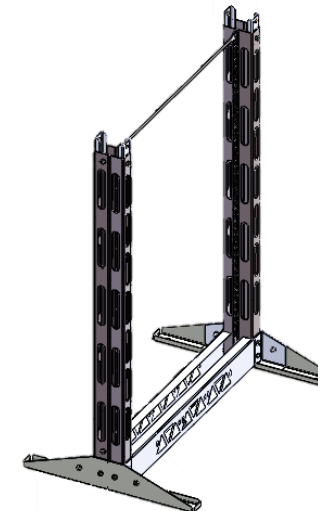
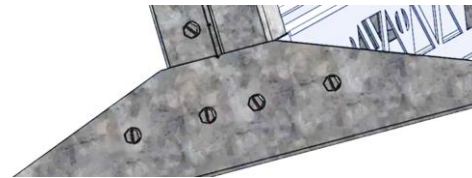
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	S2 PEM-XR2-BA-1A	XR2 TOP AND BOTTOM COVER	1
2	S2 PEM-XR2-BB-TB	XR2 TOP AND BOTTOM COVER	1
3	PEM-SS-032-2Z1	10-32 PEM Nut	1
4	PEM-SLOT-311	SCREW # 10-32 x 1/2 LG.	1
5	V2-PEM-XR2-STR-A	XR2 TOP AND BOTTOM STARTER SEGMENT A	2
6	V2-PEM-XR2-STR-B	XR2 TOP AND BOTTOM STARTER SEGMENT B	2
7	V2-PEM-SS-032-2Z1	10-32 PEM Nut	26
8	V2-PEM-SLOT-311	SCREW # 10-32 x 1/2 LG.	24
9	V2-PEM-XR4-CB1	XR4 CONNECTING BRACKET	4

Assembly – Step #2 Bottom base

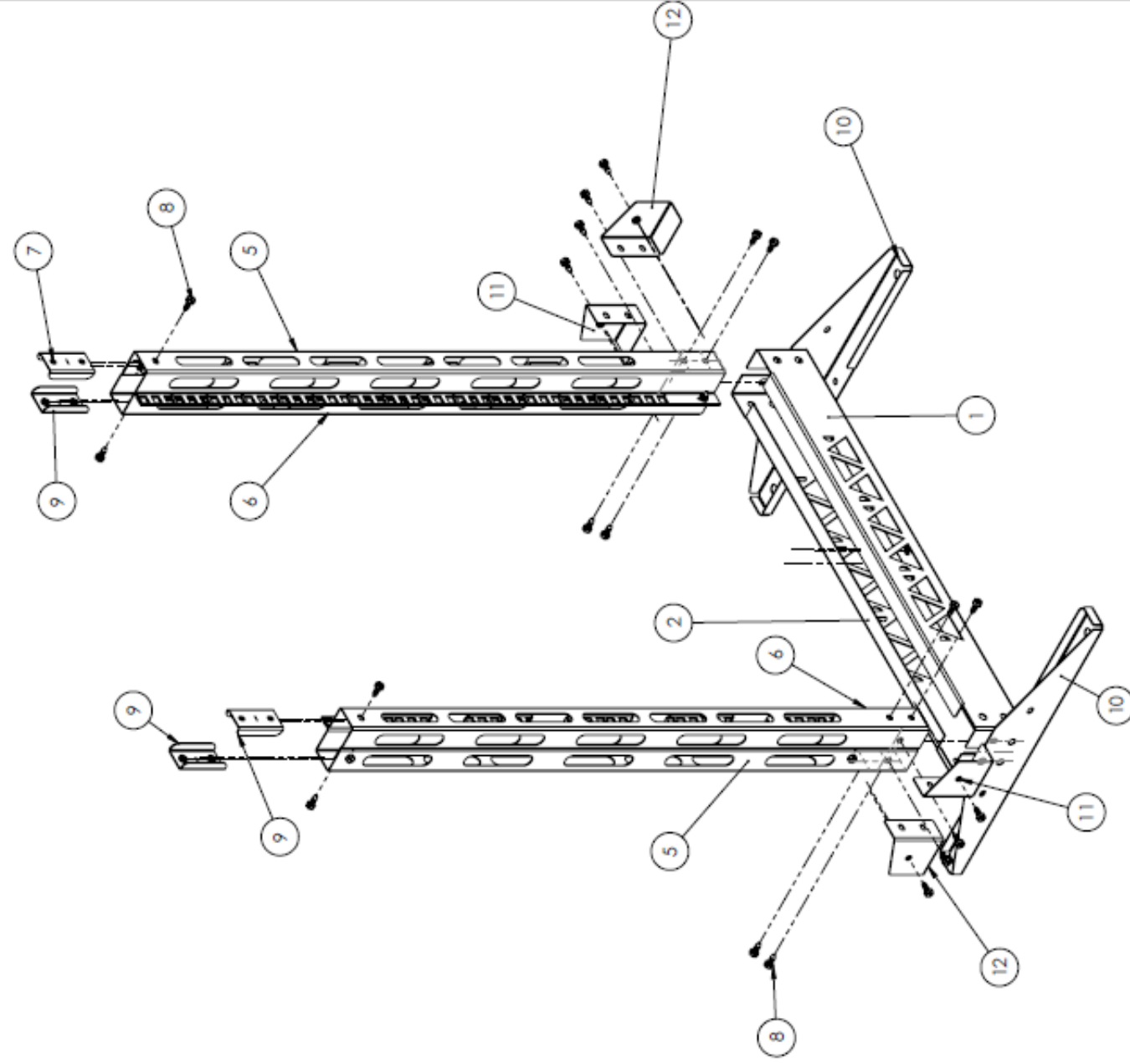
- Place one cover XR2-B-T(top and bottom are the same) on your work surface, resting it on the flat face with the cutouts.
- insert the solid end of the STR assembly into the open end of the bottom cover so the 6 PEM nuts are visible thru the holes in the cover.
- Install the stabilizing brackets (BSBL- left and BSBR -right) through the cover into the STR assembly using 2 screws each **make sure that these screws are loose.**
- Add the XR2- BS Bottom Stand Support and attach with 4 screws and **tighten all screws (13 in*Lb.).**
- Repeat on other side
- Add 1 cross tie XR2-CT19 with 2 cage nuts to the one before last open square hole in each of the mounting rails.
- [XR2 45 install base](#) video



Install 2 stabilizing brackets (L&R)
using 2 screws each



XR2-45 BOM AND ASSEMBLY OF BOTTOM BASE



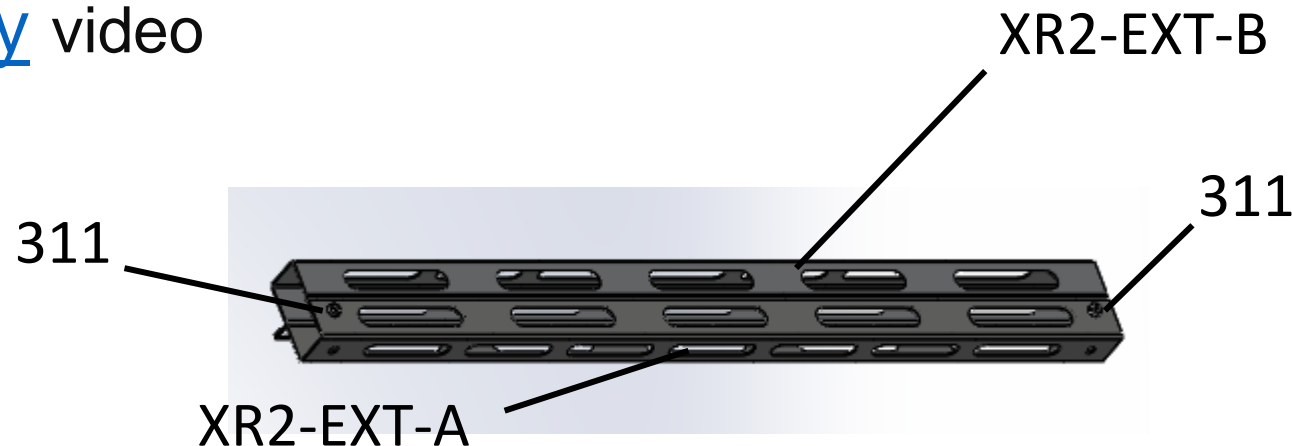
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	S2-PEM-XR2-BA-TA	XR2 TOP AND BOTTOM COVER	1
2	S2-PEM-XR2-BB-TB	XR2 TOP AND BOTTOM COVER	1
3	PEM-SS-032-ZI	10-32 PEM Nut	1
4	PEM-SLOT-311	SCREW #10-32 x 1/2 LG.	1
5	V2-PEM-XR2-STR-A	XR2 TOP AND BOTTOM STARTER SEGMENT A	2
6	V2-PEM-XR2-STR-B	XR2 TOP AND BOTTOM STARTER SEGMENT B	2
7	V2-PEM-SS-032-ZI	10-32 PEM Nut	30
8	V2-PEM-SLOT-311	SCREW #10-32 x 1/2 LG.	26
9	V2-PEM-XR-4-C-B1	XR4 C CONNECTING BRACKET	4
10	V2-PEM-XR2-BS	Bottom Stand Support	2
11	S2-V2-PEM-XR2-BSBL	Bottom Stabilizing Bracket -Left	2
12	S2-V2-PEM-XR2-BSBR	Bottom Stabilizing Bracket -Right	2

Assembly – Assemble center extension segments

The center extension segments are made of two parts each and just like the STR ,are joined by 2 screws.

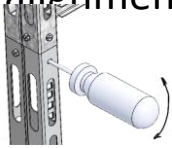
Start by mating 2 halves of each of the EXT segments to create an assembled post segment , making sure that every part “A” overlaps on top of part “B”
Attach **2 screws** on the outside of each EXT segment.

[EXT assembly](#) video

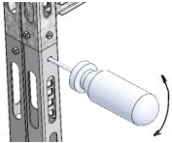


Assembly – Step #3 final assembly

- Before you begin, check that you have the following (4) sub assemblies completed: Bottom + Base(#2), Top(#2), EXT Qty. 2 .
- Stand the bottom on the Base(like the letter U) and install the extension segments on each of the arms using one 311 screw for each connecting bracket, there should not be a gap between STR and EXT parts, tighten all connecting screws to 13 in*lb. torque (you may need to use a small Philips screwdriver to pull the CB1 connecting bracket into alignment).

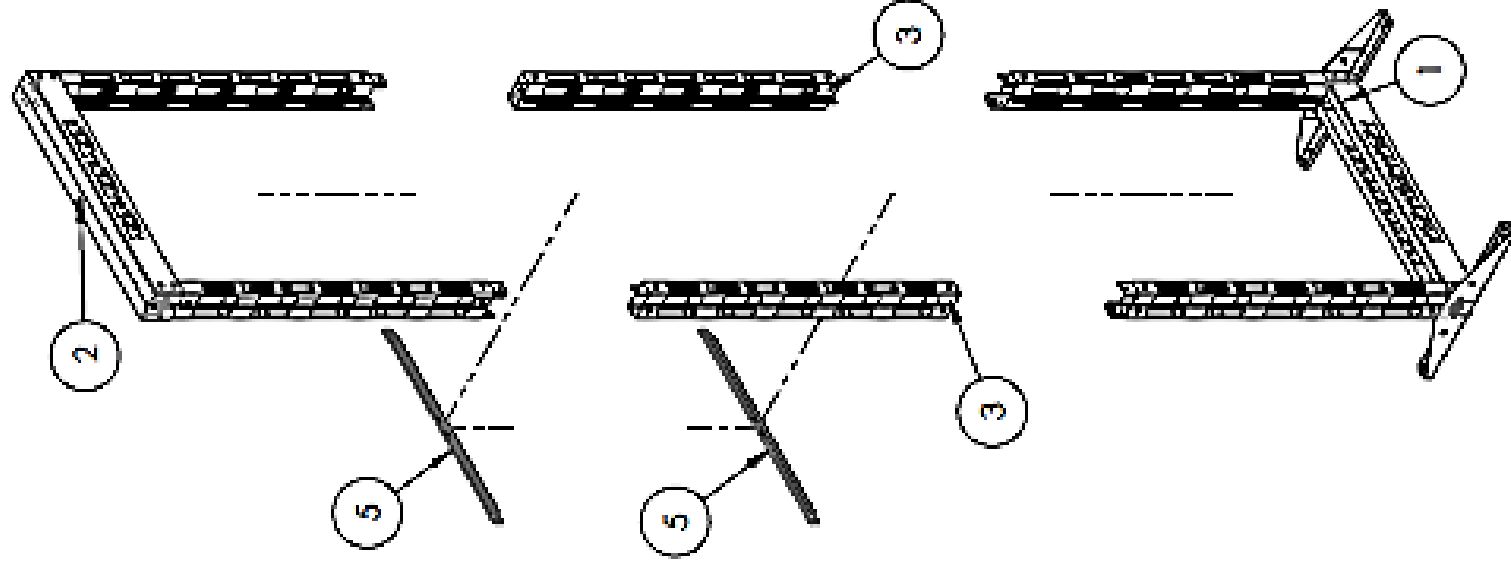


- Stand the bottom sub-assembly (Bottom + EXT) on the floor(if you have not done so yet, remove the center screw from the bottom cover).
- Slide the top connecting brackets in the Top sub assembly onto the top of the EXT segments, using one (311) screw for each connecting bracket, there should not be a gap between STR and EXT parts, tighten all connecting screws to 13 in*lb. torque (you may need to use a small Philips screwdriver to pull the CB1 connecting bracket into alignment).



- .
- It is recommended to keep the cross ties (CT19) in place in areas not being used and while the rack is empty.
- **Tighten all connecting screws on the rack to 13 in*lb. torque.**
- [XR2 45 final assembly](#) video

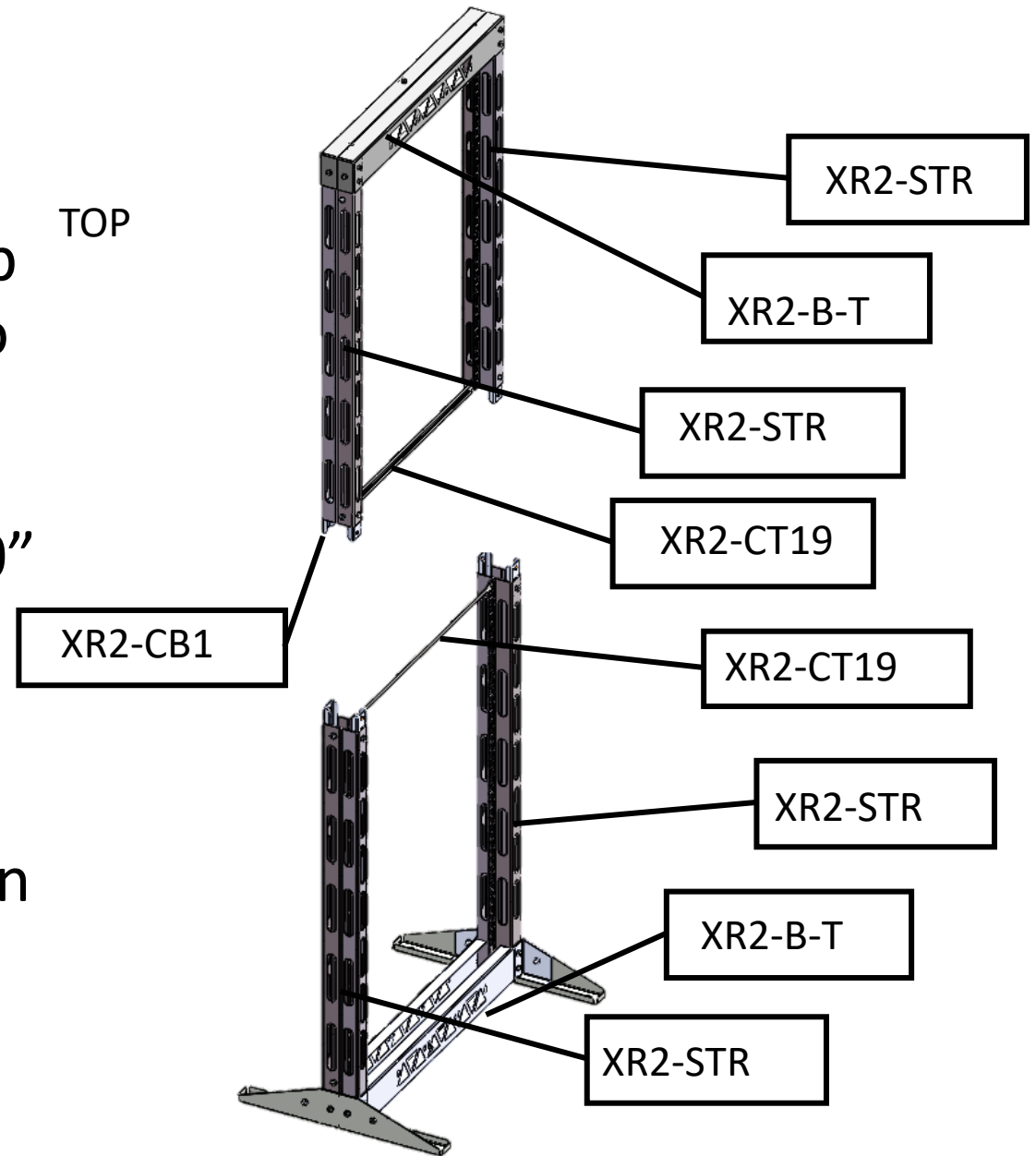




ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	V2-PEM-XR2-B		1
2	V2-PEM-XR2-T		1
3	V2-PEM-XR2-EXT		2
4	V2-PEM-SLOT-311	SCREW #10-32 x 1/2 LG.	8
5	V2-PEM-XR2-CT19	XR4-CROSS TIE 19"	2

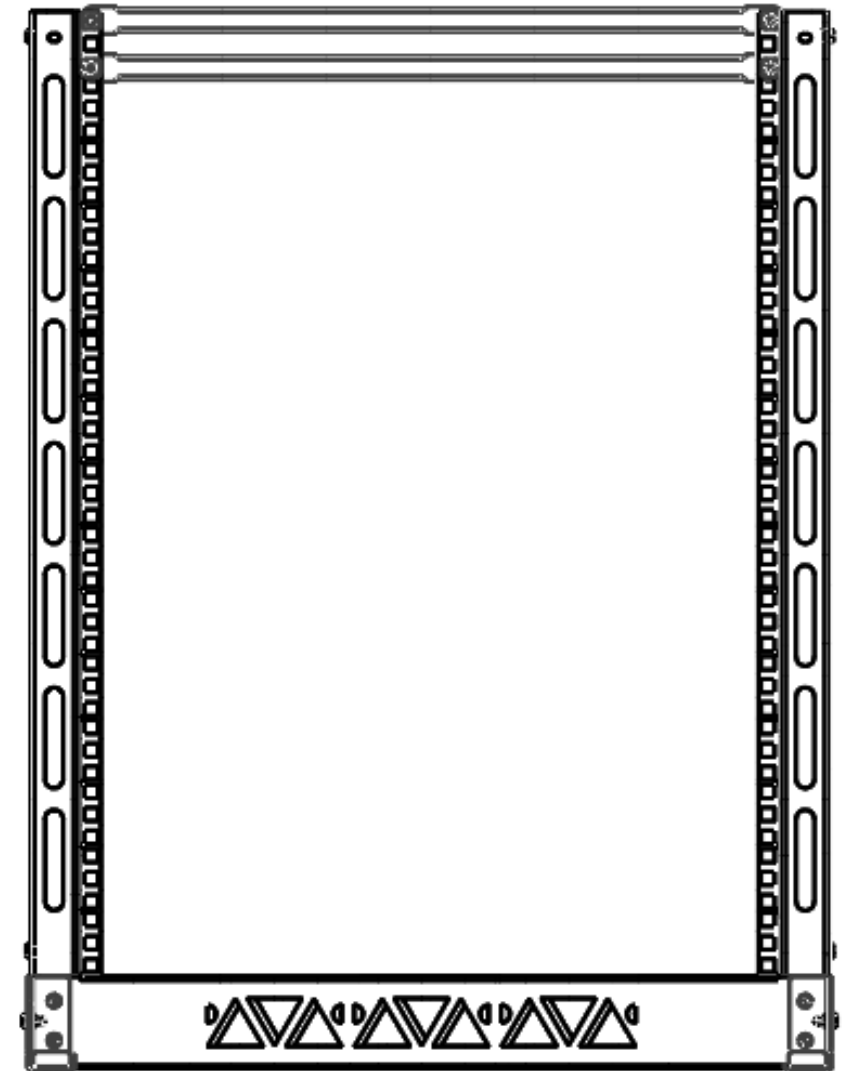
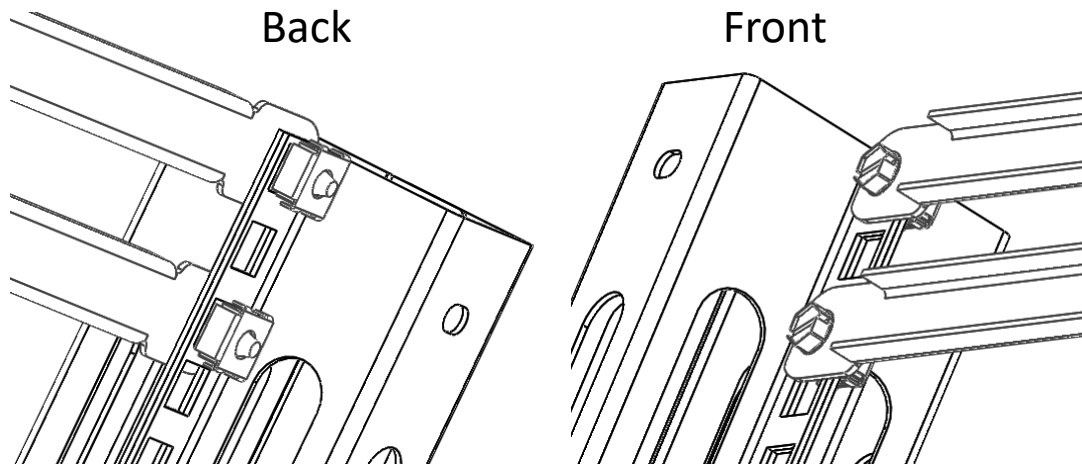
30 U option

- 30 U option is for a mounted (load up to 200 lb, equipment extending up to 15" in one direction), or desktop use (can be free standing with load up to 75 lb.) equipment extending up to 10" in one direction (front or back).
- Follow the bottom assembly steps + the top assembly steps, withholding the 4 top connecting brackets (CB1) in one of the assemblies.



14 U option

- 14 U option is for a desktop use and can be free standing with load up to 75 lb. extending up to 10" in one direction (front or back).
- Follow the bottom assembly steps withholding the 4 top connecting brackets (CB1).
- The top portion use the top U in the square holes mounting rail to install 2 CT19 using 4 cage nuts as shown on the right.



Assembly – finish

- It is recommended to have 2 cross ties while the rack is empty, this will help prevent equipment alignment issues.
- **Congratulations , You have now completed the XR2 rack assembly, please note the following:**
- Max equipment weight limit is 250 LB at 45 U and **MUST be attached to the floor** with 3/8” bolts or to a wall with a rigid bracket (CTW24) at the top (CT19 can be repurposed for this).
- XR2 rack is very light in weight (under 30 LB.) and can be easily moved into position prior to final attachment to the floor.
- The XR2 has built in cable management for easy routing of power and communication wiring
- If needed, the rack can be utilized as a 30 U panel space by removing the extension (EXT) and one set of connecting brackets (either from top or bottom).
- Bud recommends the use of cage nuts suitable for 14 to 12 gage for equipment mounting, but the cage nuts we supply with the rack can be used as well for mounting equipment.