

39"x30"x50" Rack Assembly Instructions



Purpose of manual

This manual describes the assembly of our 39"x30"x50" extruded aluminum rack. The assembly manual serves as a guide, enabling users to efficiently and correctly construct the rack from its individual components. Its primary purpose is to provide clear, step-by-step instructions, often accompanied by diagrams and illustrations, to ensure that the assembly process is straightforward and results in a stable, functional, and durable structure. Failure to meticulously follow the assembly manual's instructions can lead to an unstable and unsafe rack, posing risks of collapse, damage to mounted items, or personal injury.

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Hardware

Part	Quantity	Description
Button head hex bolts (15mm)	50	Used for brackets and crossbars
Button head hex bolts (20mm)	26	Used for frame base bars and angled brackets
Cap screws (16mm)	12	Used to attach casters (3 per wheel)
Flat washers	12	Used to attach casters (3 per wheel)
Split washers	12	Used to attach casters (3 per wheel)
T-bolts	16	For the 90 degree 2-hole corner brackets
13mm nuts	16	Paired with T-bolts
Slide-in threaded nuts	78	Nut with ball detent
Slide-in retainers	10	For connecting horizontal base, top, & vertical bars

Recommended Tools

Allen wrench (5mm)	1	For button head bolts (NOT INCLUDED WITH KIT)
Allen wrench (6mm)	1	For caster bolts (NOT INCLUDED WITH KIT)
Torpedo level	1	For cross bars (NOT INCLUDED WITH KIT)

Aluminum Extrusions

Part	Quantity	Description
35 $\frac{3}{4}$ " threaded bars	4	Used in base and top of frame
35 $\frac{3}{4}$ " non-threaded bars	3	Used as crossbars
30" bars with 4 holes	2	Base and upright supports
50" upright bars	2	Upright bars
Angle-cut bars	4	Diagonal reinforcement bars

Brackets & Other Components

Part	Quantity	Description
5-hole brackets	4	At base where 50" bars meet 30" bars
7-hole brackets	2	Upper corners to support crossbars
4-hole brackets	4	Height-adjustable brackets for crossbars
45° angle brackets	8	Connect angle-cut bars diagonally
90° 2-hole brackets	8	For corners in the base and lower horizontal bars
Black plastic end caps	6	For finishing the ends of extrusions

Casters

Part	Quantity
Casters/Wheels	4

Preparation

1. Open the caster and hardware box.

- Most hardware comes pre-sorted.
- **DO NOT mix the pre-sorted bags**—some bolts look very similar and can be difficult to tell apart if mixed.

2. Unpack the aluminum rack components.

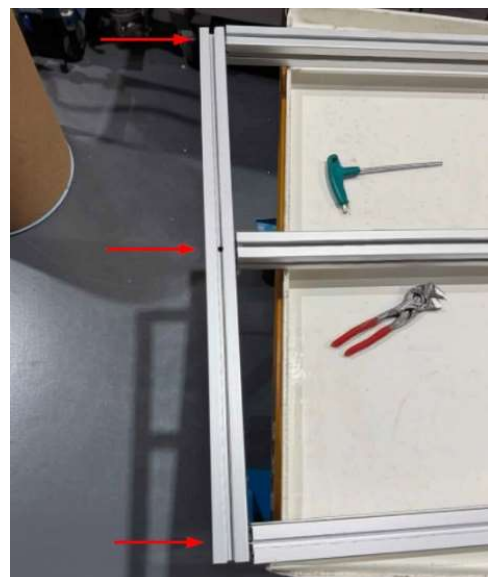
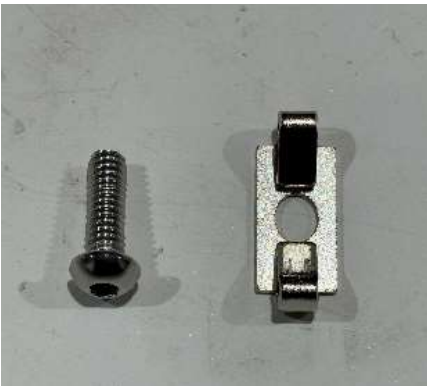
- Separate and identify all parts.
- Note: There are **7x, 35¾” bars**, **four** of which have **threaded ends**.
 - These **must be used in specific places**—using the wrong bar will require disassembly.



Base Frame Assembly

3. Build the base:

- Use
 - 6x, slide-in retainers
 - 6x, 20mm button head hex bolts
 - 3x, threaded 35 $\frac{3}{4}$ " bars
 - 2x, 30" bars with 4 holes
 - 5mm Allen wrench (wrench not included)
- *Using 3x, bolts and 3x, retainers attach one 30" bar with 4 holes to the 3x, threaded bars.*
- *Corners will be uneven—**DO NOT attempt to level them!***
- Refer to picture(s).



4. **Attach the second 30" 4-hole bar (in the same orientation)** to the other end of the 3 threaded 35 $\frac{3}{4}$ " bars.

- Use:
 - 3x, slide-in retainers
 - 3x, 20mm button head hex bolts
 - 1x, 30" 4-hole bar
- Make sure the **larger hole in the center** is facing the **same direction** on both 30" bars. (When finished this large hole should face down.)
- Refer to picture(s).



Upright Installation

5. **Attach 1x, 50" upright bar** to the top center hole of the 30" 4-hole bar:
- Only one end of the 50" bar is threaded.
 - The **other end of the 50" bar has a hole** that must face **sideways (left-to-right) or parallel to the 35¾" bars**.
 - Use:
 - 1x, slide-in retainer
 - 1x, 20mm button head bolt
 - Refer to picture(s).

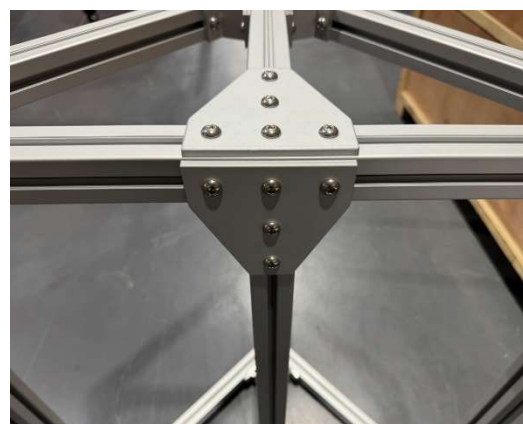
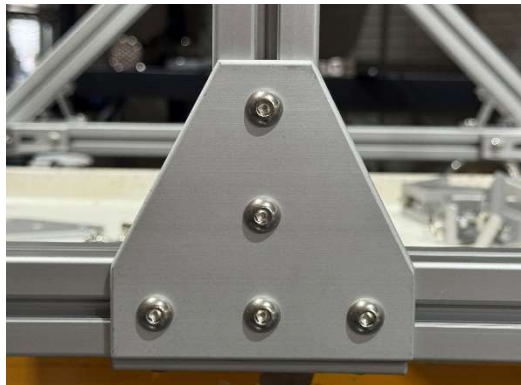
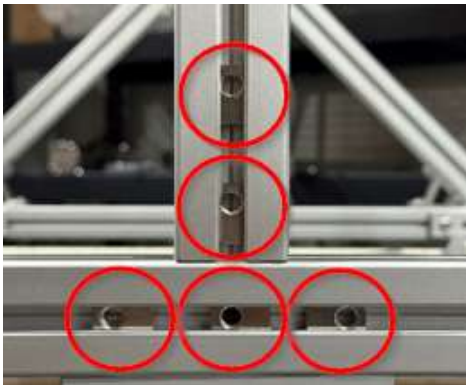
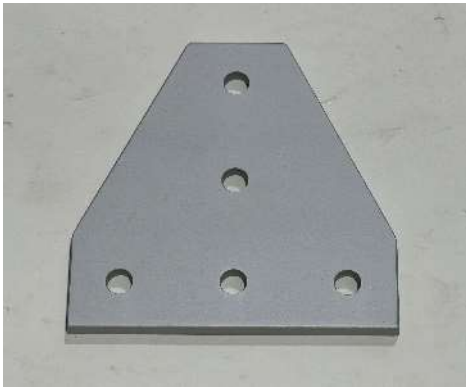


6. **Repeat step 5** for the other 50" bar on the opposite 30" bar.
- Only one end of the 50" bar is threaded.
 - The **other end of the 50" bar has a hole** that must face **sideways (left-to-right) or parallel to the 35¾" bars**.
-

Bracket Installation at Base

7. **Install 4x, 5-hole brackets**, two at the base of each 50" upright bar (one on the side of each upright and one under each upright):

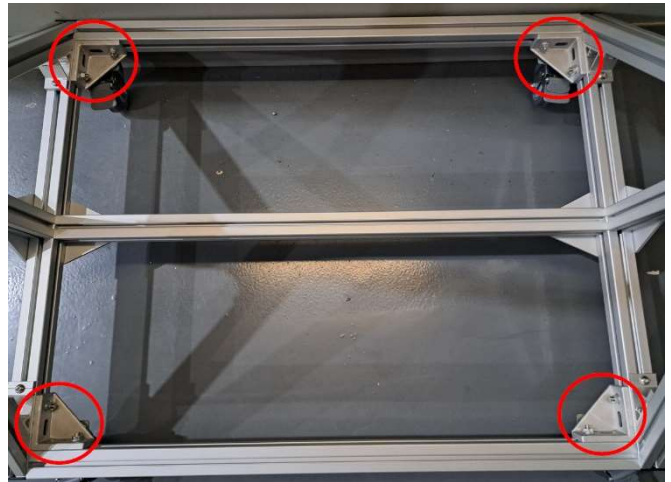
- Use:
 - 20x, slide-in threaded nuts
 - 20x, 15mm button head bolts
 - 4x, 5-hole brackets



Corner Bracket Installation

8. Install 4x, 90° 2-hole brackets on the inside corners of the base:

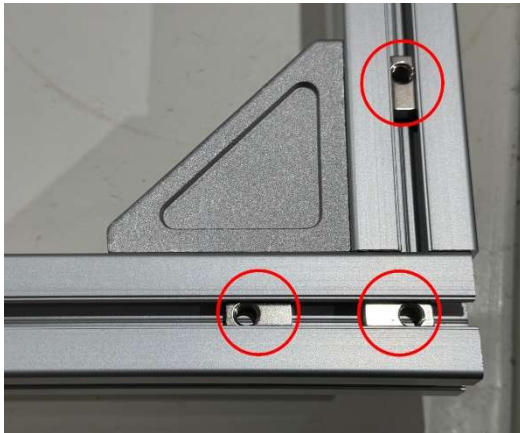
- Use:
 - 8x, T-bolts
 - 8x, 13mm nuts
- Ensure T-bolt notches face **vertically** and are **perpendicular** to aluminum bar channels.
- Refer to picture #s.



Caster Installation

9. Attach wheels/casters:

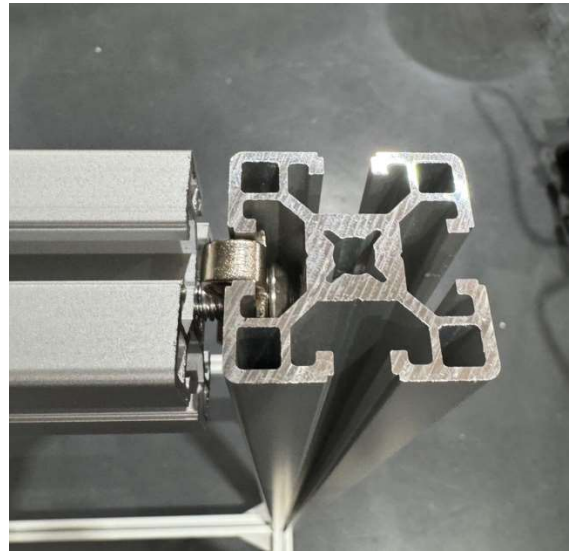
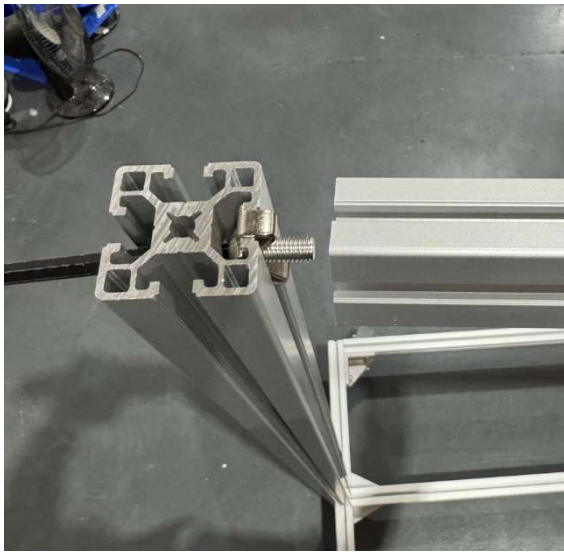
- Use:
 - 12x, 16mm cap screws
 - 12x flat washers
 - 12x split washer
 - 12x, slide in threaded nuts
 - 6mm Allen wrench (not included)
 - (3x, bolts per caster)
- Refer to picture(s).



Top Frame Installation

10. **Attach the final threaded 35¾” bar** between the tops of the 50” bars:

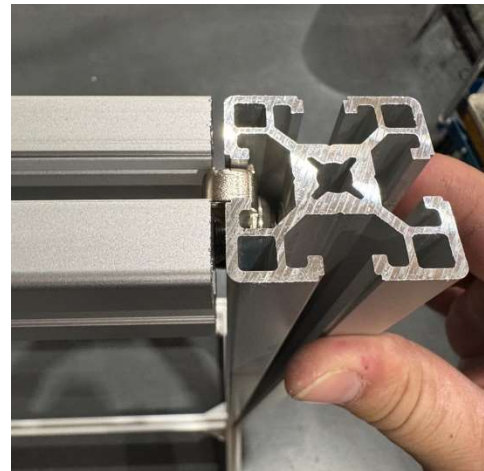
- Use:
 - 1x, slide-in retainer
 - 1x, 20mm button head bolt
 - 1x, **threaded 35¾” bar**



11. **Loosely attach the other side** of the same bar to the other upright:

Note: Leave this 20mm bolt loose to allow for clearance in future steps.

- Use:
 - 1x, slide-in retainer
 - 1x, 20mm button head bolt
 - Refer to picture(s).



Upper Corner Brackets & Cross Bars

12. **Loosely attach the 2x, 7-hole brackets** to the upper corners (connecting top of 50" uprights to threaded 35 $\frac{3}{4}$ " bar):

- Use:
 - 10x, slide-in threaded nuts
 - 10x, 15mm button head bolts
- For this step you only use 10 button head bolts. (There are 2 holes on each bracket that are left open.)
- Brackets should be snug but **not fully tightened**.
- Refer to picture #s.



13. **Loosely attach 4x, 4-hole brackets** to the 50” upright bars at desired height for crossbars.

Brackets should be snug but **not fully tightened**.

- Use:
 - 8x, slide in threaded nuts
 - 8x, 15mm button head bolts



14. **Loosely attach 1x, 35¾” bar** just below the top bar between the 7-hole plates:

- Use:
 - 4x, slide-in threaded nuts
 - 4x, 15mm button head bolts
- Refer to picture(s).



15. **Loosely attach 2nd 35 $\frac{3}{4}$ " bar** to the first set of 4-hole brackets:

- Use:
 - 4x, slide-in threaded nuts
 - 4x, 15mm button head bolts
- Refer to picture(s).



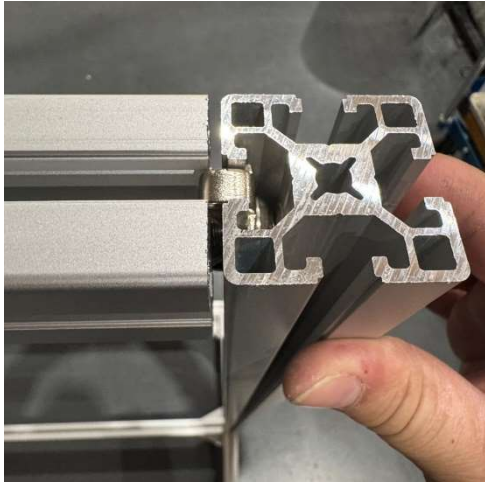
16. **Repeat step 15** using the last bar on the remaining set of 4-hole brackets.



Final Tightening & Alignment

17. **Tighten the 20mm bolt that was left loose in step 11** at the top corner where the upper most 35 $\frac{3}{4}$ " threaded bar and 50" upright bar meet.

- Tighten through the top hole of 50" upright bar.
- Leave other cross bar bolts loose to **ensure alignment and no gaps**.
- Refer to picture(s).



18. **Use a level** to adjust and tighten the 2x, 35 $\frac{3}{4}$ " bars attached to 4-hole brackets.

19. **Tighten the 35 $\frac{3}{4}$ " bar** directly under the top bar (connected to the 7-hole plates).

Reinforcement Brackets

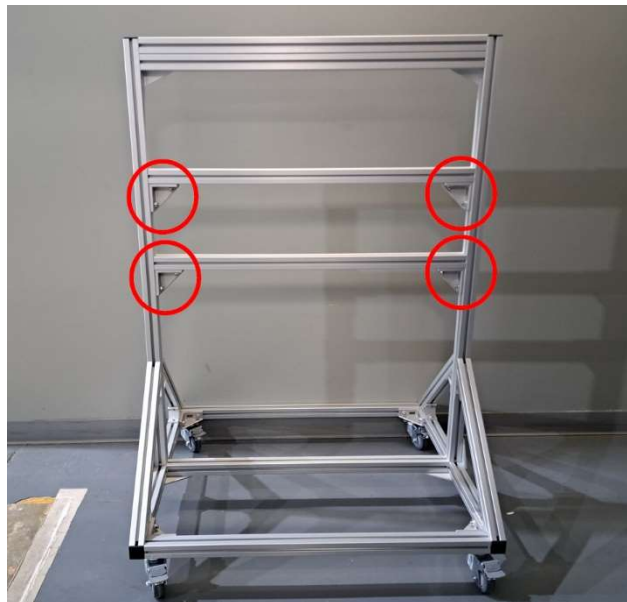
20. **Install 2x, 90° 2-hole brackets** in the bottom corners under the 35 $\frac{3}{4}$ " cross bar connected to 4-hole plates.

Use:

1. 4x, T-bolts
2. 4x, 13mm nuts

Ensure T-bolt notches face **perpendicular** to aluminum bar channels.

Refer to picture(s).



21. Repeat step 21 on the last 35 $\frac{3}{4}$ " cross bar and 4-hole plates.

Use:

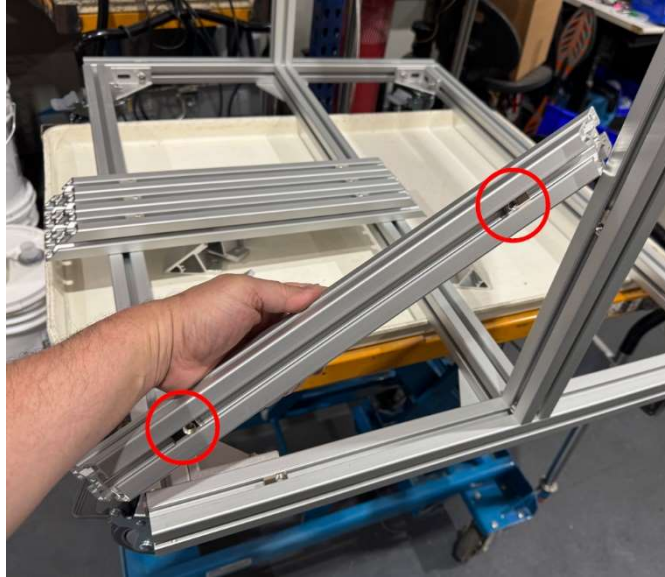
1. 4x, T-bolts
2. 4x, 13mm nuts

22. Ensure all fasteners are tight.

Diagonal Support Brackets

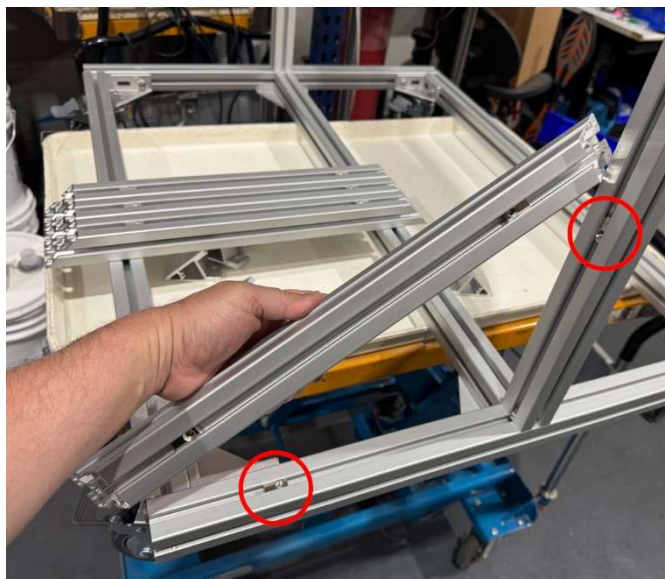
23. Insert 8x, slide-in threaded nuts into the ends of the 4x, angle-cut bars.

- Refer to picture(s).



24. Insert 8 more slide-in threaded nuts:

- 4x, into the channel in the lower portion of the 50" upright bars
- 4x, into top channel of the 30" 4-hole bars
- Refer to picture(s).



25. **Loosely attach eight 45° brackets** using:

- 8x, 20mm button head bolts
- Do not fully tighten yet.
- Refer to picture(s).



26. **Loosely attach the 4 angle-cut bars** to the other side of the 45° brackets:

- Use 8x, 20mm button head bolts
- Refer to picture(s).



27. **Adjust angle-cut bars** so that their tip ends are **flush and level** with the top edge of the 30" 4-hole bottom bar.

- Once aligned, fully tighten all 16 of the 20mm button head bolts.
- Refer to picture(s).



Finishing Touches

28. **Install black plastic end caps:**

- Align center nipple and two outer prongs with the voids on the cut ends of aluminum bars and press into place.



29. **Final check:**

- Ensure **all fasteners are tight**.
- The rack should feel **very sturdy** with **no play**—capable of holding **several hundred pounds**.



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