



Fastening 80/20 T-Slot Extrusions End-to-End

While many people are familiar with several ways to mount two bars at a 90 degree angle using standard fasteners, mounting two bars end-to-end is less common and less well known. So today we are going to look at the choices you have for mounting two bars end-to-end. Remember, mounting two bars end-to-end significantly weakens the overall 80/20 structure unless a lot of bracing is done – so tread carefully with these 5 methods.

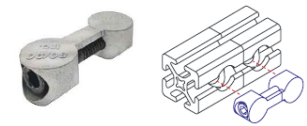
Method #1: Use Butt Fasteners

\$7.65 each

(Example Part No. 3369 – Page 196)

The butt fastener is the most recommended internal method for joining two bars together, offering maximum strength and straight-forward machining. A single or two butt fasteners used on opposite sides of the bar are the recommended configuration.

Two counterbores required per fastener (\$2.25 each).



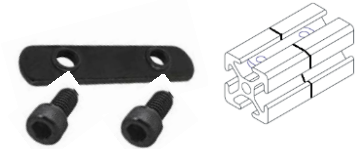
Method #2: Use Double Slide-In Economy T-Nut

\$0.95 each

(Example Part No. 3281 – Page 344)

This is the “down and dirty” method and least expensive, but it won’t be as strong as Butt Fasteners and you can only do one side of the bar. So the resulting joint will not be very strong. That said, this is the cheapest method to join two bars.

Two drill thru and spot face counterbores required (\$2.95 each)



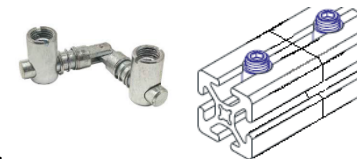
Method #3: Use Miter Connector

\$4.50 each

(Example Part No. 13193 – Page 201)

This method is similar to butt fasteners but not as strong and only available for 15 series bars and larger. Instead of tightening from the slot with a ball end wrench, you will need access to tighten directly from the side – so plan accordingly. We can think of no reasons why you would use this connector instead of a butt fastener except that it is just slightly smaller and less expensive - but it is not nearly as strong.

Two Connector Profile Millings required for this fastener (\$2.50 each)



Method #4: Use 4 Hole Straight Flat Plate

\$4.80 each

(Example Part No. 4117 – Page 215)

This simple method requires no machining, so its easy and inexpensive – but you will have plates hanging off the side or sides of the two bars. If they are hidden, this may be the best way (versus using the 3 internal fastening methods listed above). Two plates on opposite sides would be recommended for most applications.



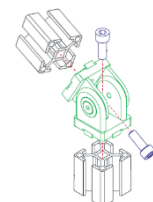
Method #5: Use 2 Hole Pivot Joint

\$11.71 each

(Example Part No. 14011 – Page 317)

If you only need strength in one direction, you could get by with a pivot joint to join two bars– but they are expensive and not very strong. Not sure why you would use this method – but this is another “possible” method of joining two 80/20 t-slot bars with a pivoting fastener.

Two taps required (\$1.95 each)



For more information about building 80/20 T-slot extrusions,
visit F&L Industrial Solutions at:

www.fandl8020.com