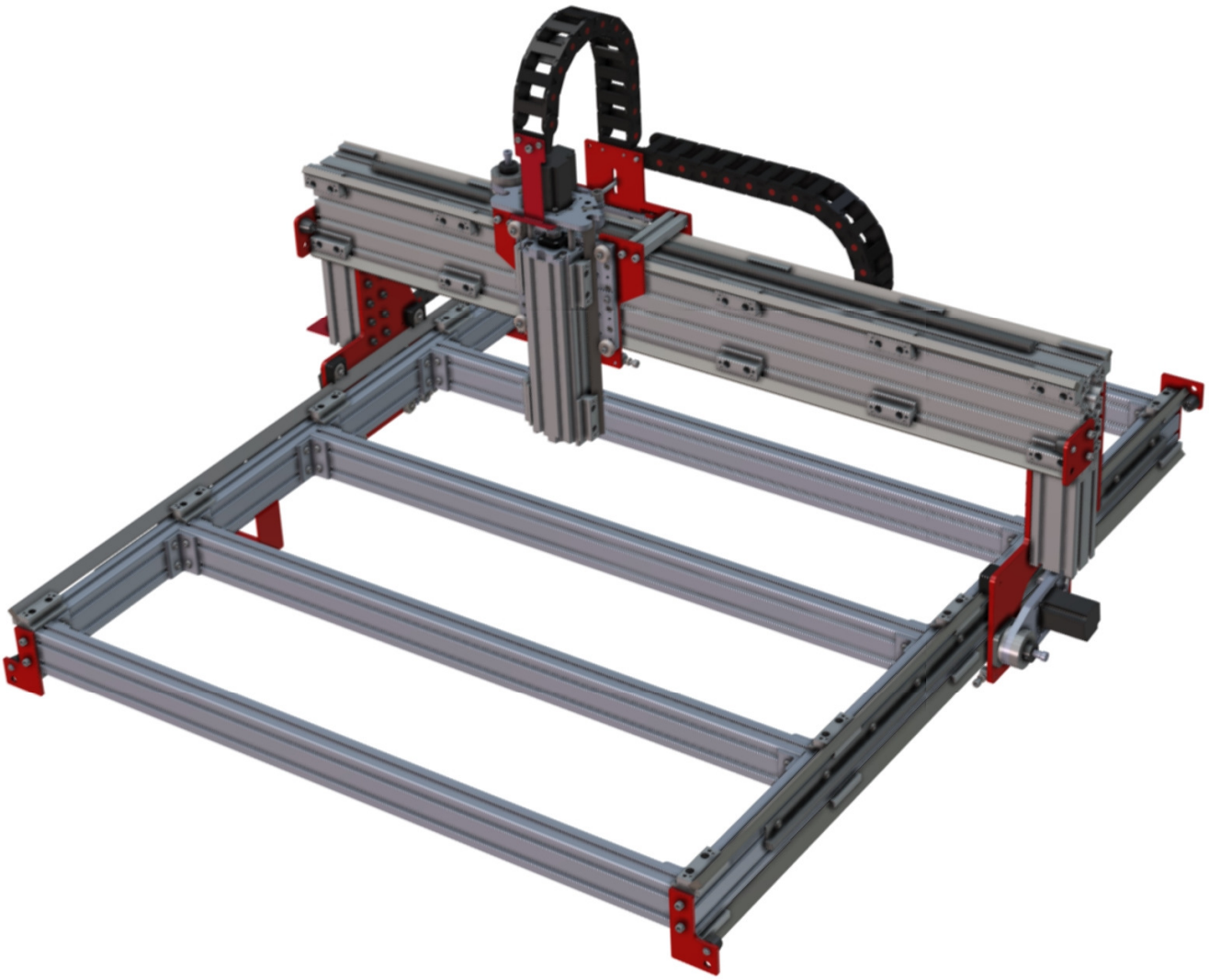
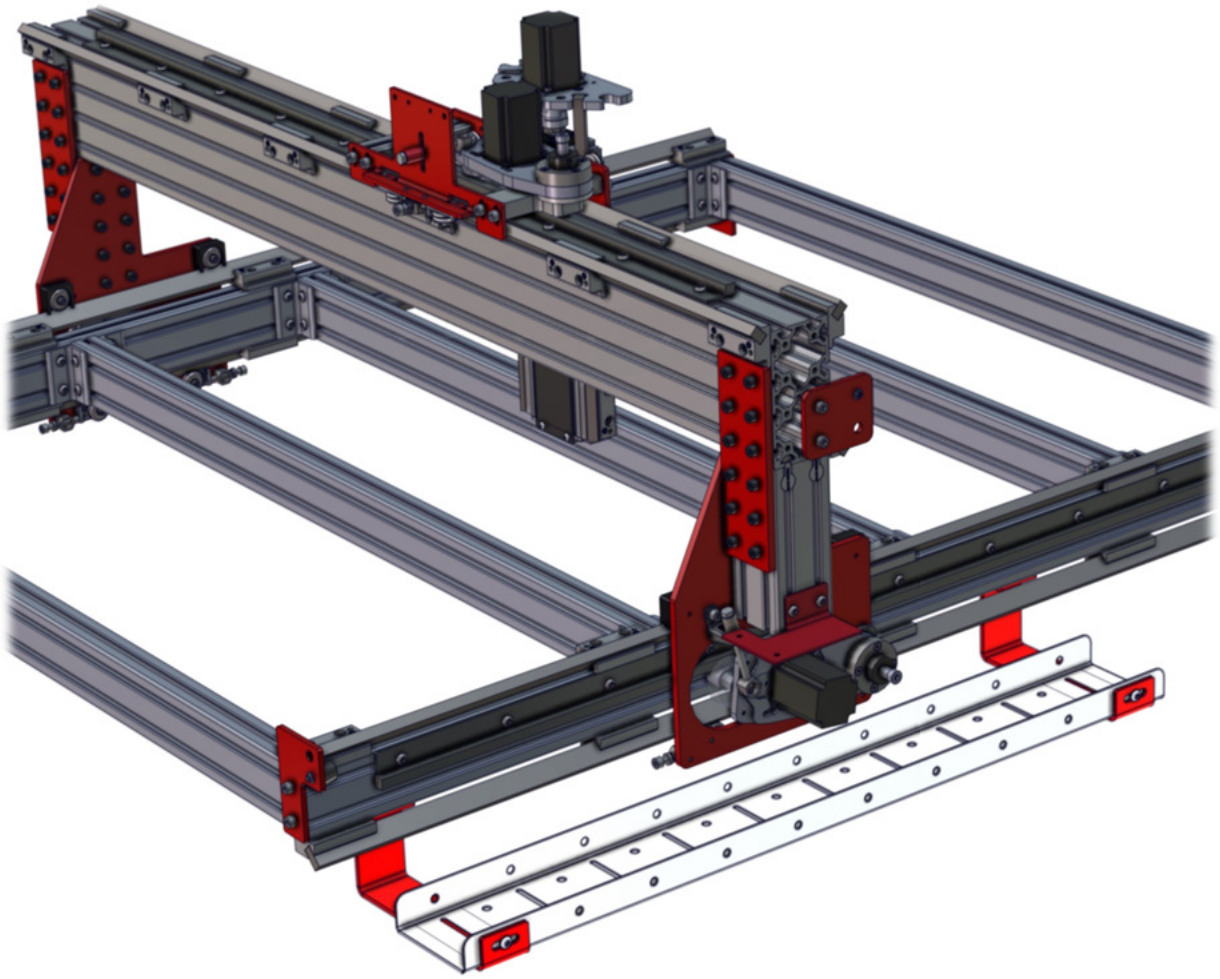
CNC Router Parts
PRO Machine Kit Cable Track Installation Instructions



1 X Cable Track Trays & Brackets



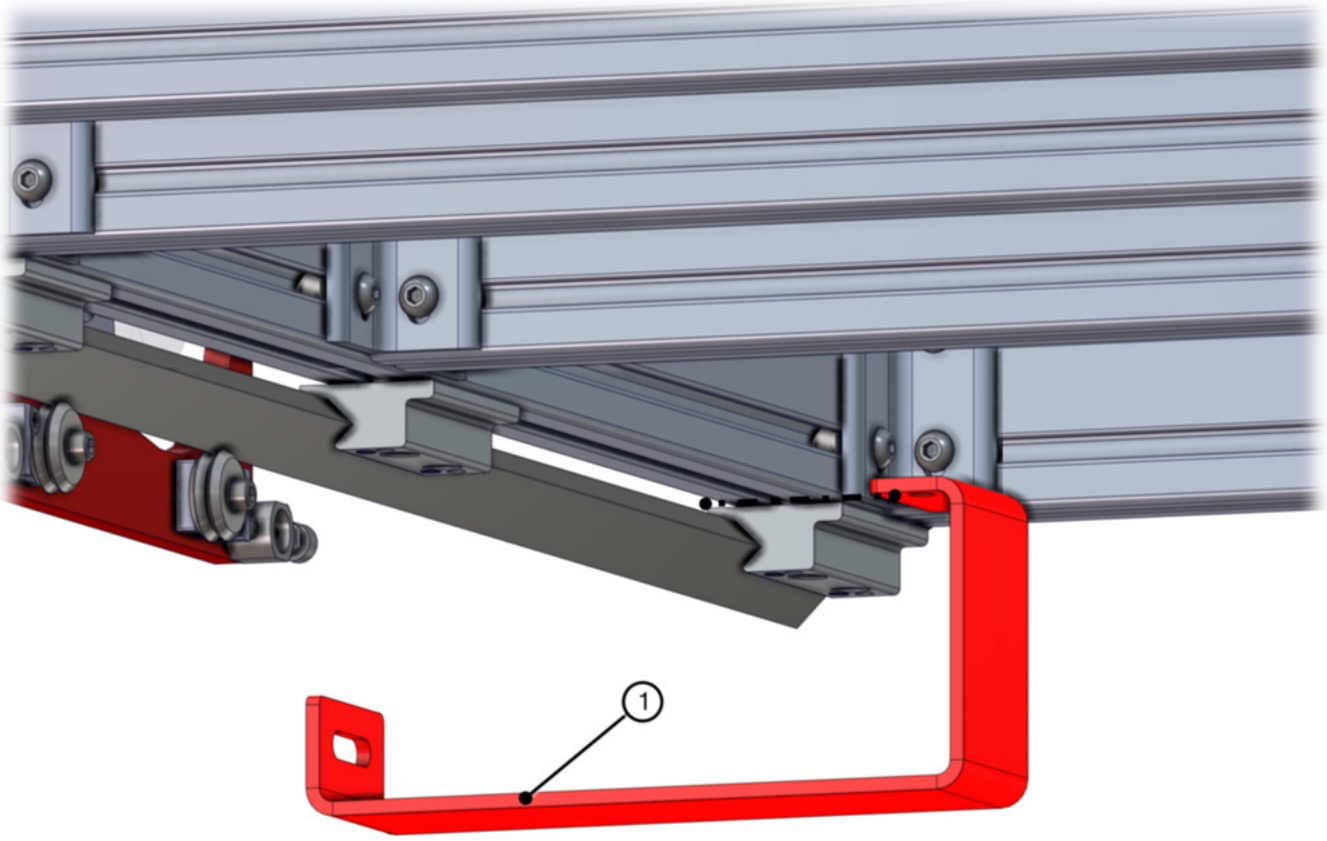
The cable track on the side of the system is supported by a metal tray (or multiple trays for longer systems such as a PRO4896). These trays hang from brackets on the side of the machine. The cable track will attach to these trays and to a custom bracket on the gantry risers. Details on the installation of these trays and brackets are provided in the following steps.

1.1 INSERT T-NUTS INTO EXTRUSION

BOM ID	Part Number	Description	Qty
1	TNR-M8	T-Nut, Roll-in Ball, M8	4

First, install the roll-in t-nuts in the underside of the side rail extrusion. The Cable Tray Brackets will bolt into these t-nuts. Use the actual cable trays as a guide for where these will need to go. Install the brackets such that they support the trays close to the ends of the trays. Precise positioning of the trays is not important. Install the t-nuts such that you can avoid V-Con clamps and leg connections to your machine frame.

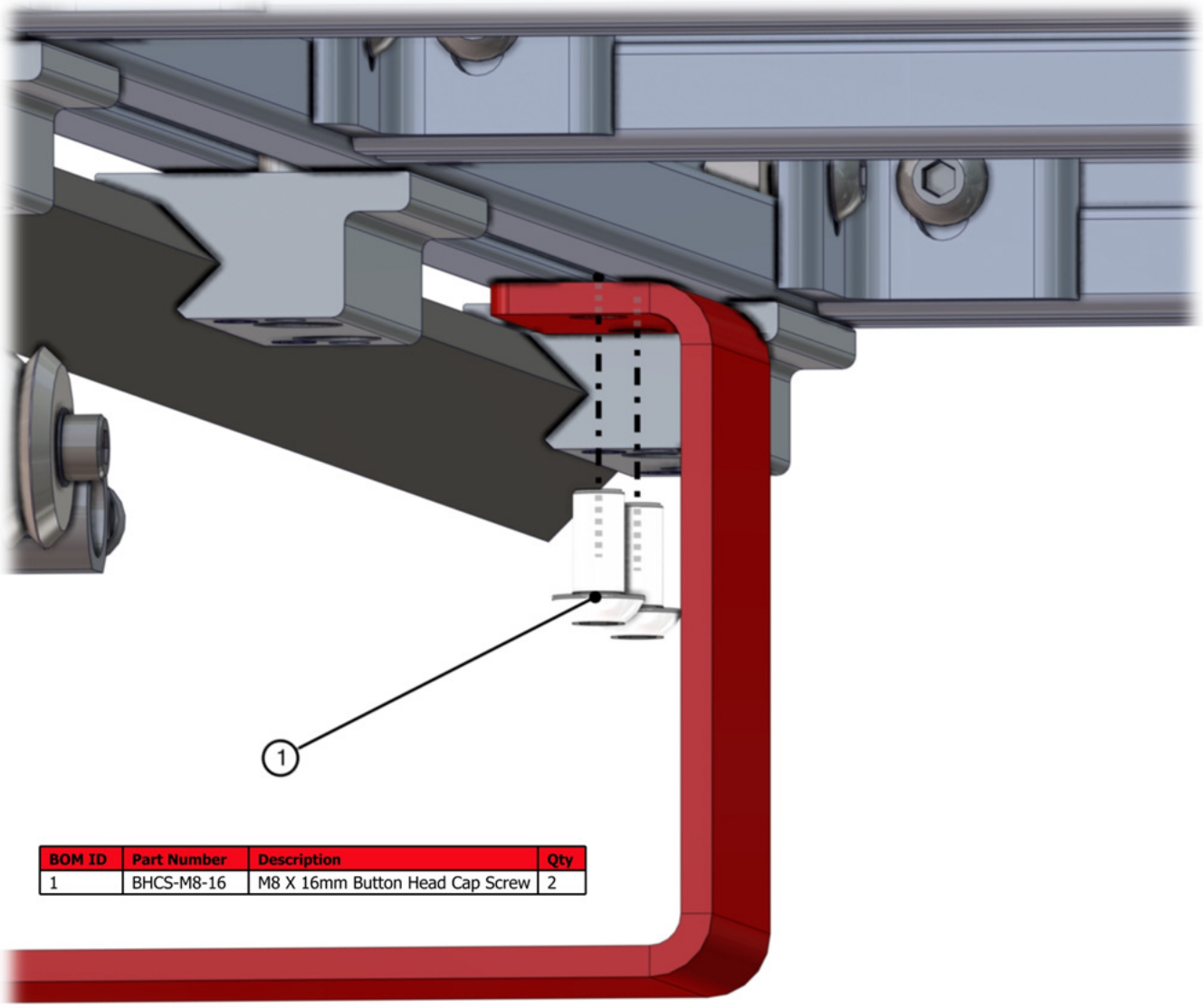
1.2 SLIDE BRACKET UNDER RAIL



BOM ID	Part Number	Description	Qty
1	CRP150-03 PRO	Cable Tray Bracket	1

Slide the Cable Tray Brackets under the steel V-Con rail and position them so the holes align with the t-nuts you just installed.

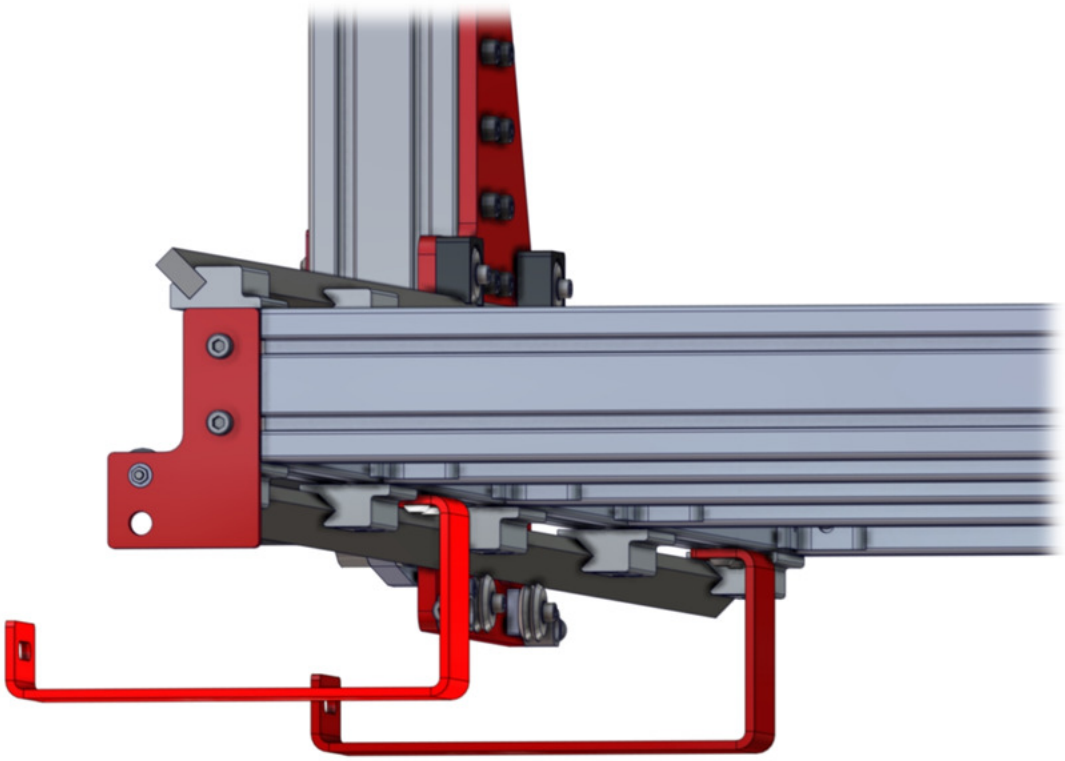
1.3 LOOSELY FASTEN BRACKET TO EXTRUSION



BOM ID	Part Number	Description	Qty
1	BHCS-M8-16	M8 X 16mm Button Head Cap Screw	2

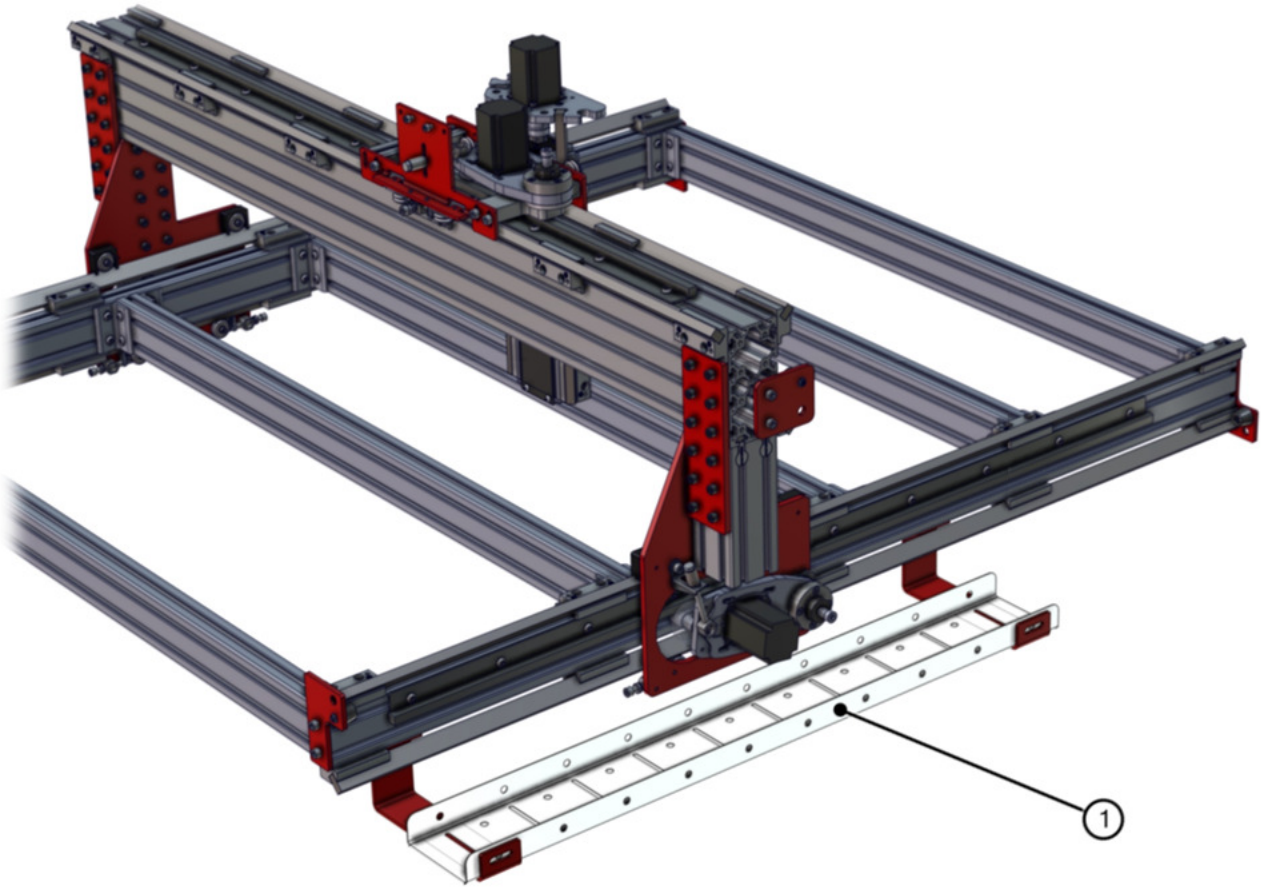
Loosely tighten the screws into the brackets. You will need to shift the brackets a little to get them to align with fastener holes in the Cable Trays, so don't overtighten at this point.

1.4 REPEAT STEPS 2 & 3 FOR REMAINING BRACKETS



Repeat the installation for all of the Cable Tray Brackets in your kit.

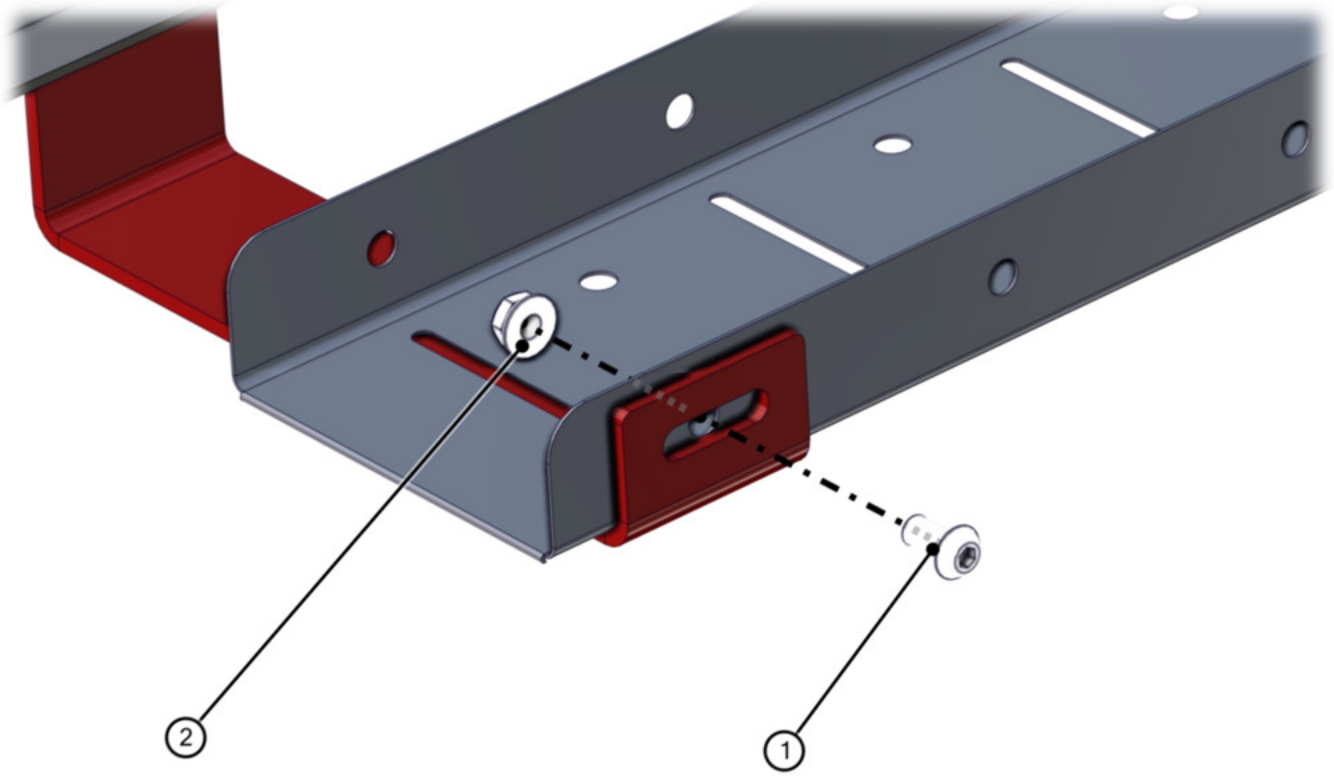
1.5 SET CABLE TRAY ON SUPPORT BRACKETS



BOM ID	Part Number	Description	Qty
1	QT40x125B	Cable Support Tray	1

Set the Cable Trays on the brackets you just installed.

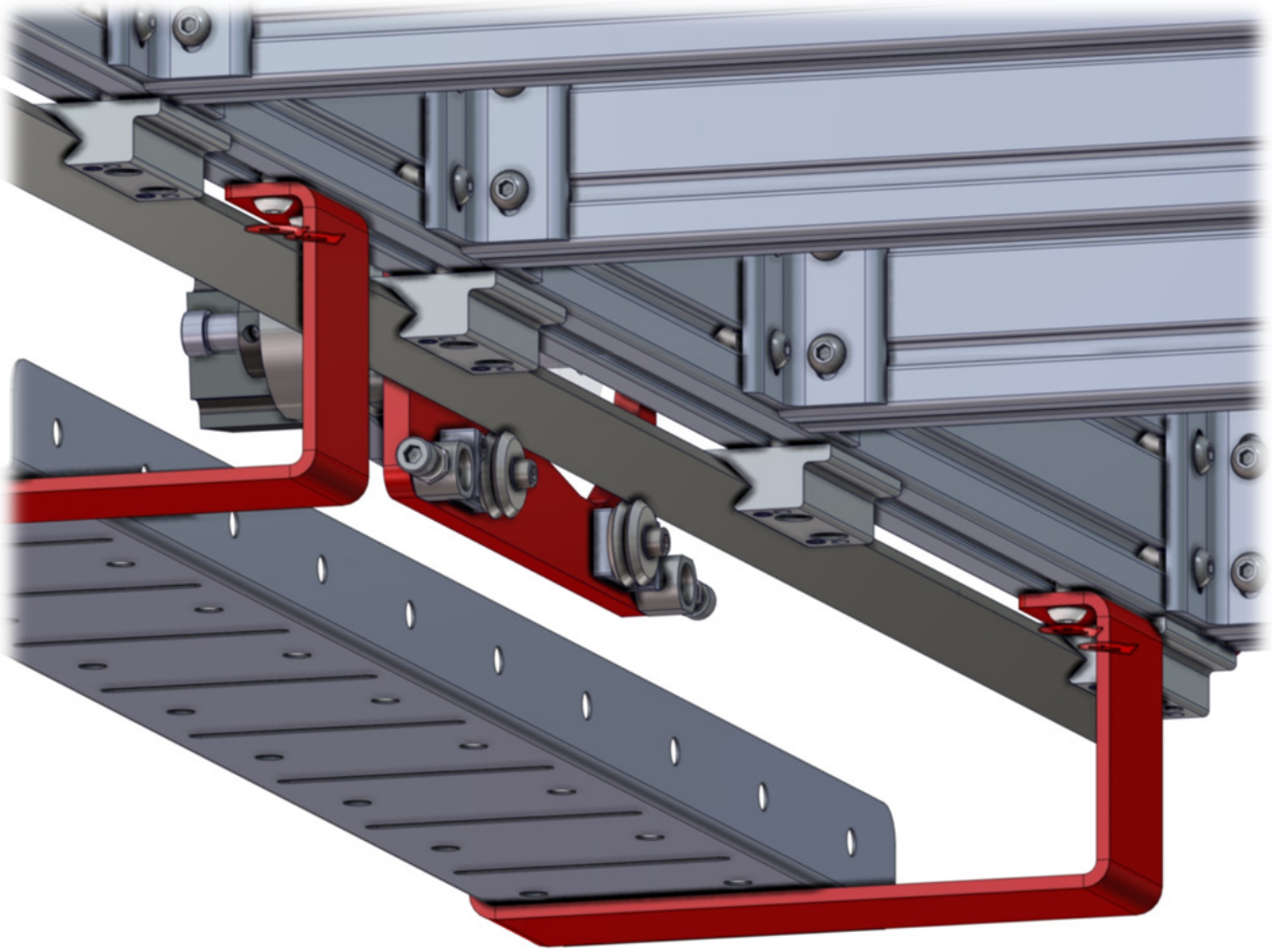
1.6 FASTEN TRAY TO SUPPORT BRACKETS



BOM ID	Part Number	Description	Qty
1	BHCS-M8-16	M8 X 16mm Button Head Cap Screw	2
2	HNF-M8	Hex Nut Flange, M8	2

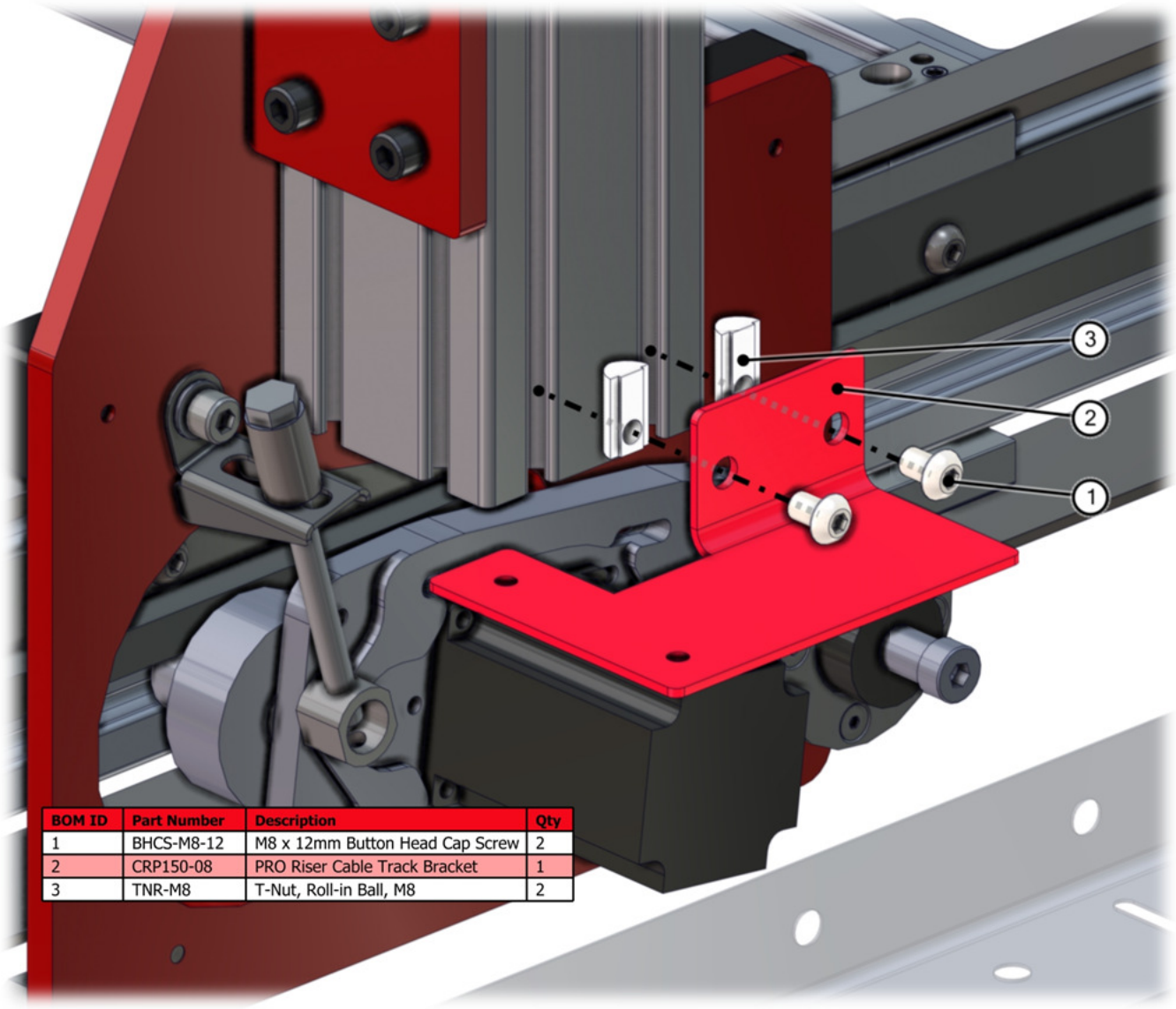
Slide the Cable Tray Brackets so the slots in the side of the bracket align with the side mounting holes in the Cable Trays. If you have a 4x8 or larger machine, install the Cable Trays such that they butt against each other.

1.7 TIGHTEN BRACKET FASTENERS



Tighten the bolts to fasten the Cable Tray Brackets in position.

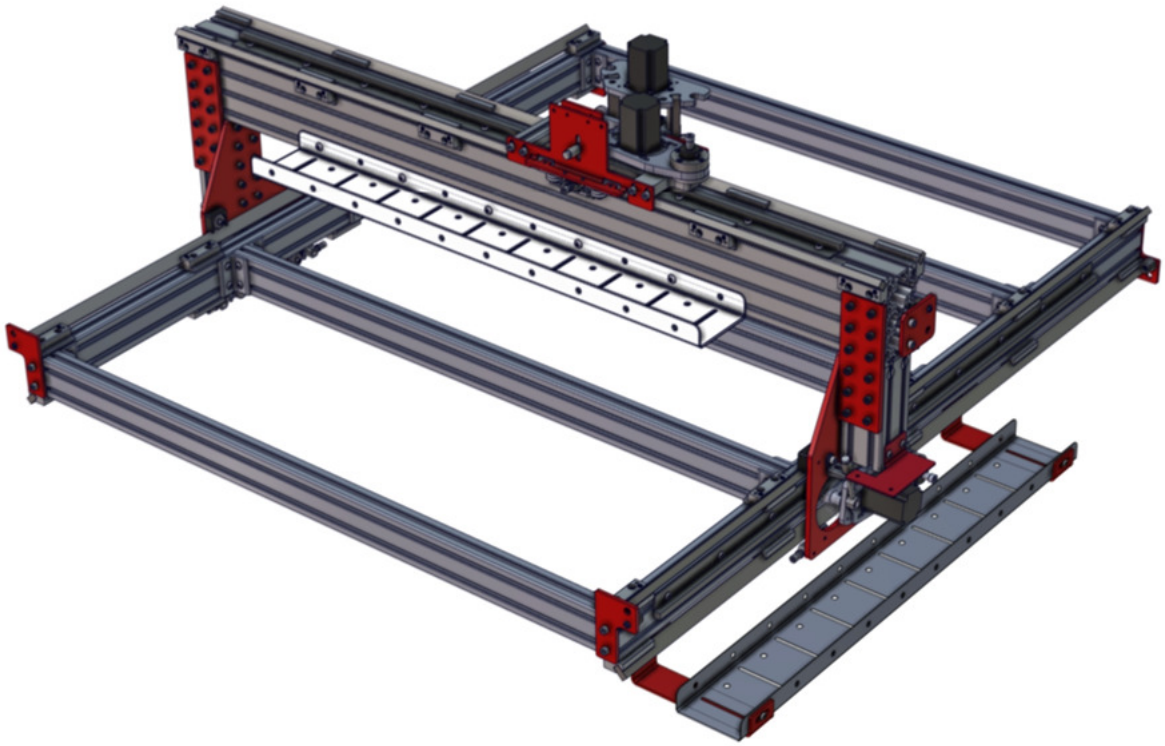
1.8 ATTACH RISER SUPPORT BRACKET TO EXTRUSION



BOM ID	Part Number	Description	Qty
1	BHCS-M8-12	M8 x 12mm Button Head Cap Screw	2
2	CRP150-08	PRO Riser Cable Track Bracket	1
3	TNR-M8	T-Nut, Roll-in Ball, M8	2

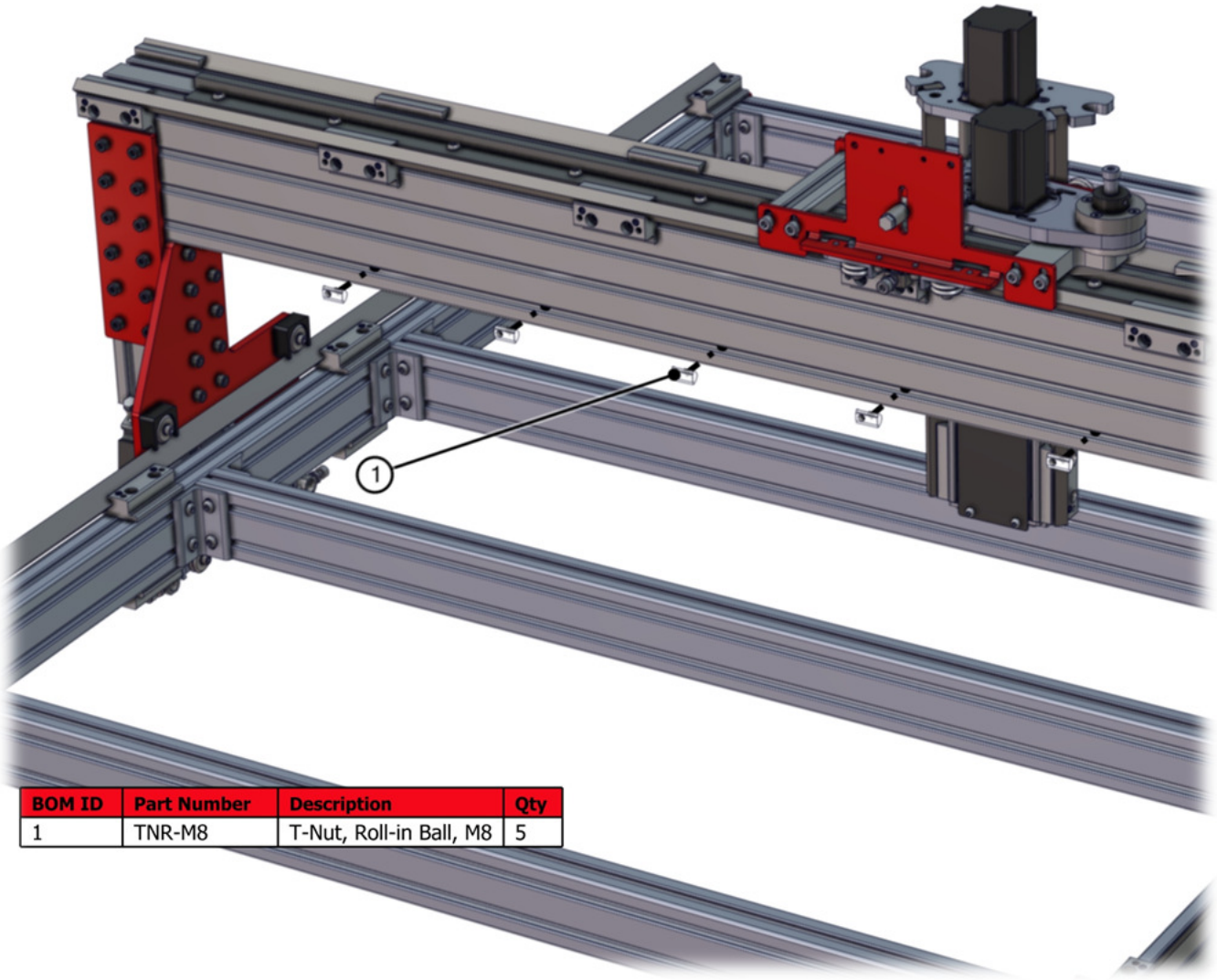
The next step is to attach the PRO Riser Cable Track Bracket. Fasten this to the gantry riser using the provided t-nuts and screws. If you installed the Cable Tray Bracket on the other side of your machine from this diagram, you can flip the PRO Riser Cable Track Bracket over. The bracket does not require precise positioning up and down, and can be adjusted later by sliding it in the t-slots of the gantry riser extrusion.

2 Y Cable Track Tray



The gantry cable track rides in a tray that installs directly to the gantry. The following steps detail the installation of this tray.

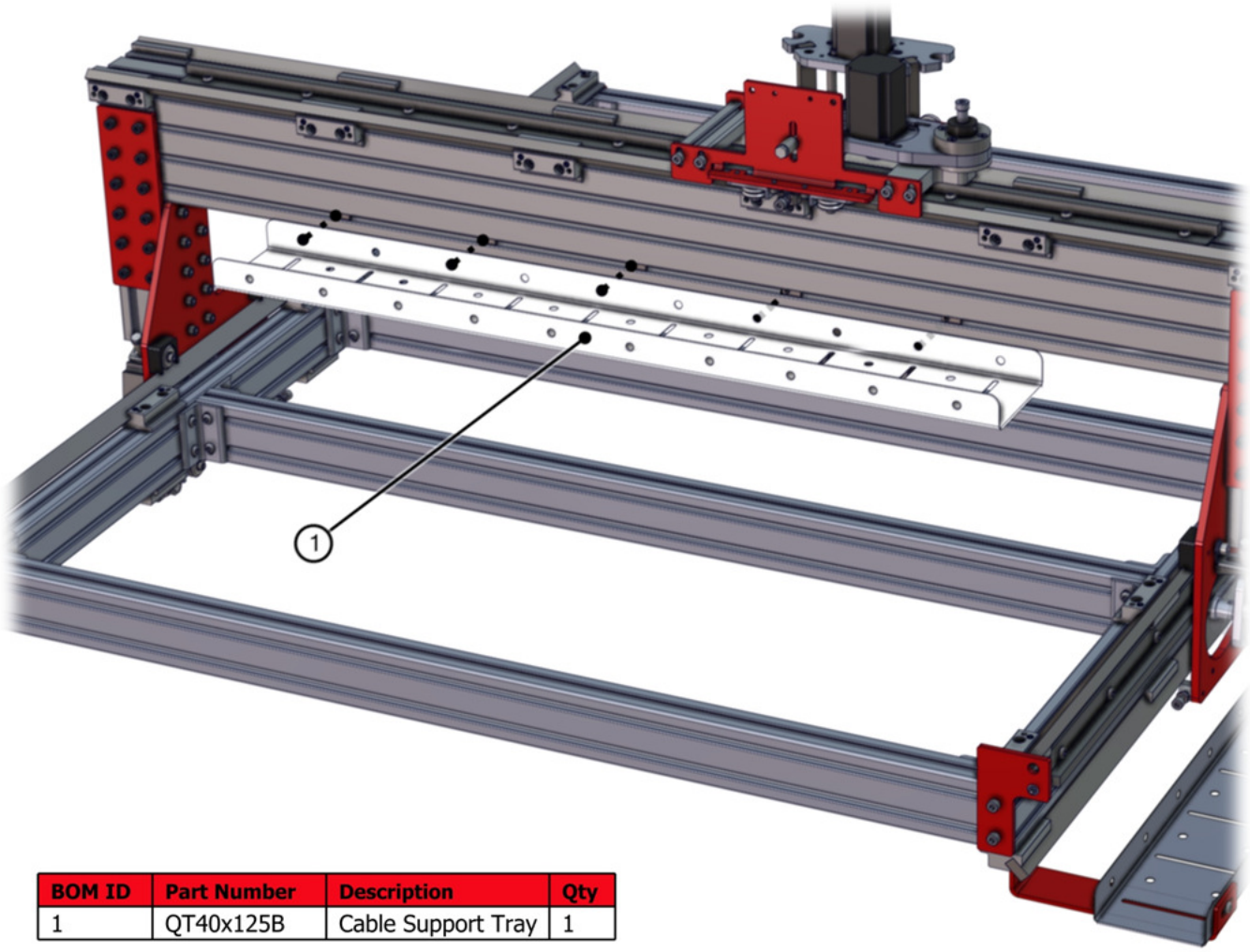
2.1 INSERT T-NUTS INTO EXTRUSION



BOM ID	Part Number	Description	Qty
1	TNR-M8	T-Nut, Roll-in Ball, M8	5

First, install roll in t-nuts in the bottom t-slot on the back side of the gantry.

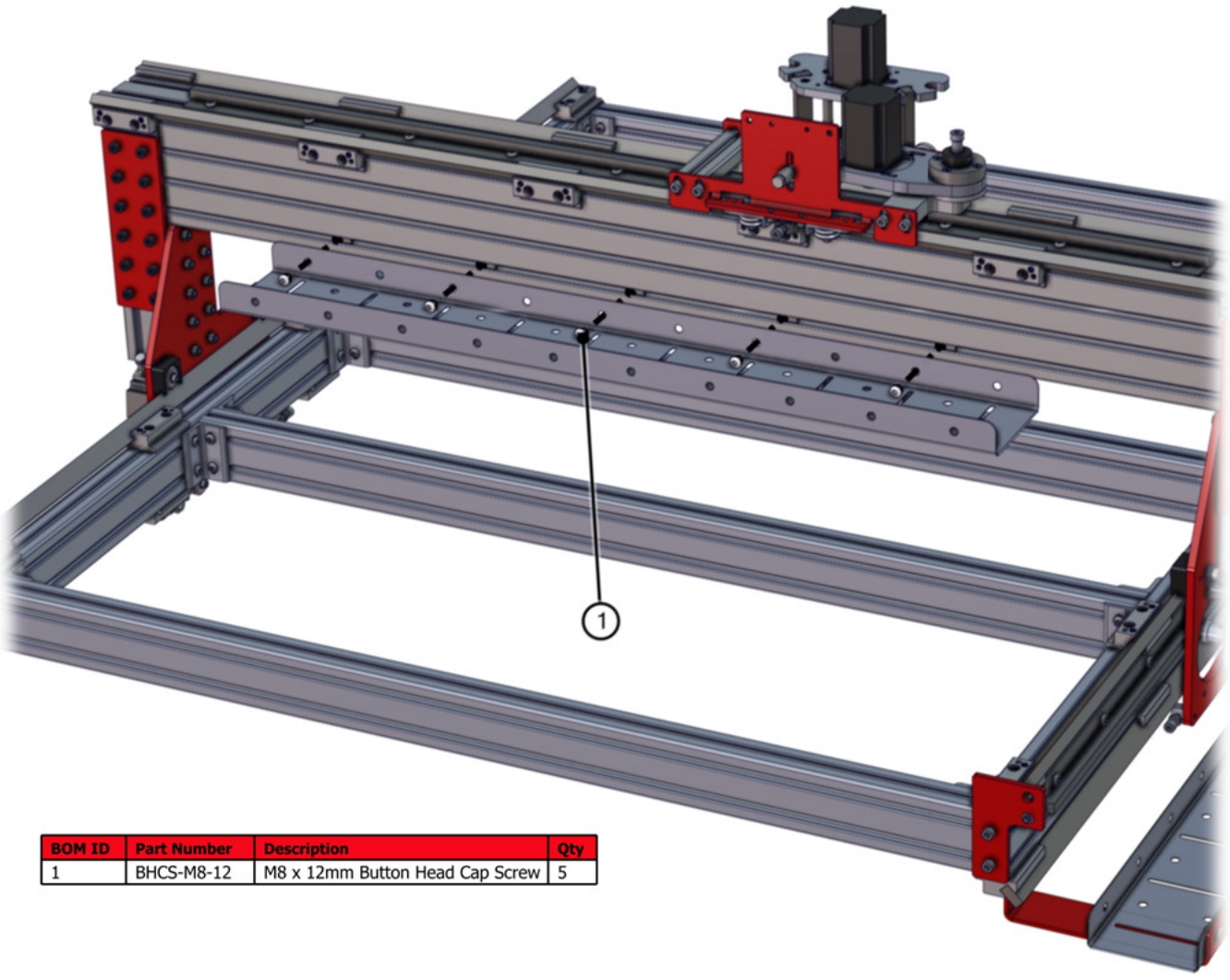
2.2 ALIGN T-NUTS WITH CABLE TRAY



BOM ID	Part Number	Description	Qty
1	QT40x125B	Cable Support Tray	1

Shift the t-nuts with a screwdriver until they align with the mounting holes on the Cable Tray.

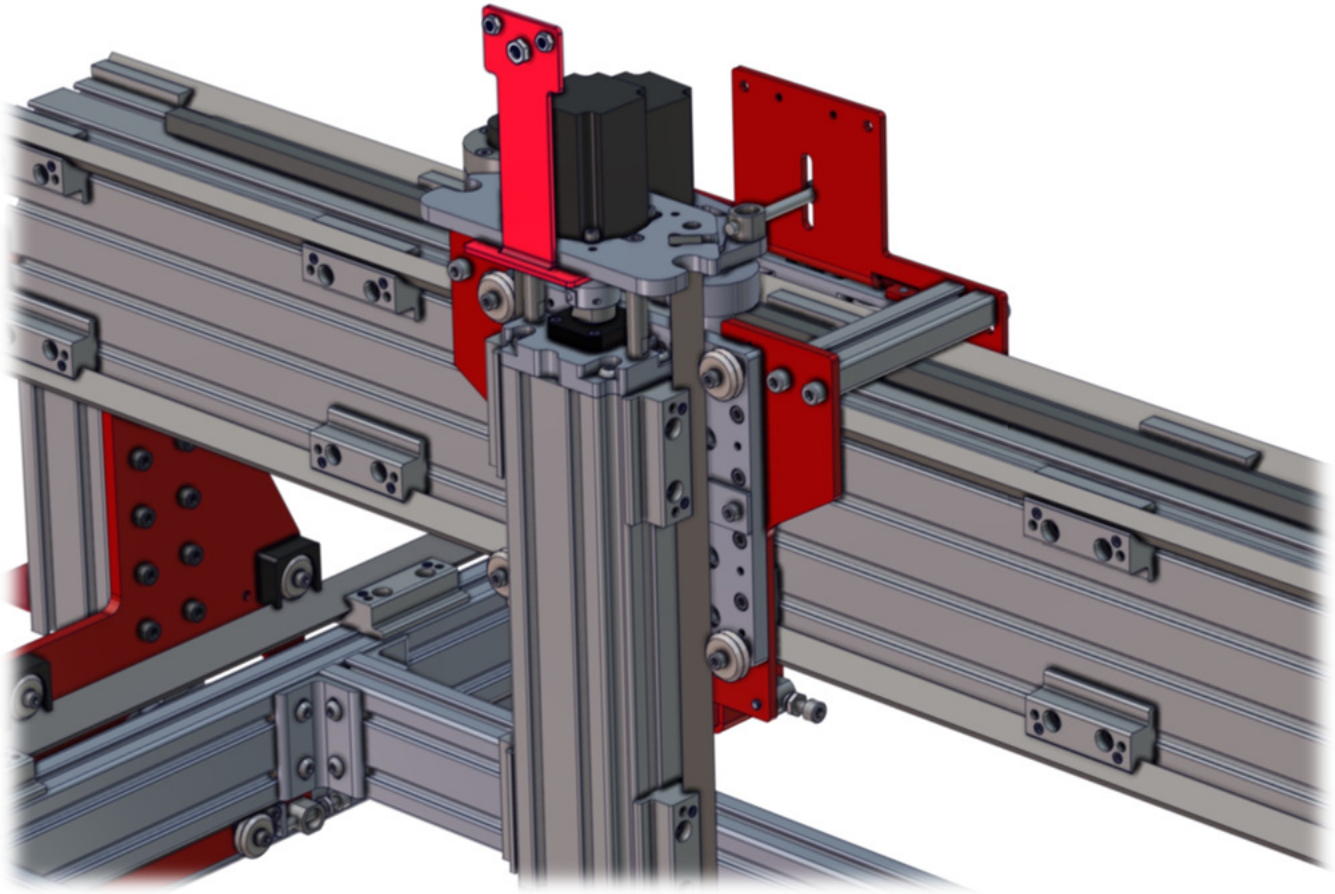
2.3 FASTEN CABLE TRAY TO EXTRUSION



BOM ID	Part Number	Description	Qty
1	BHCS-M8-12	M8 x 12mm Button Head Cap Screw	5

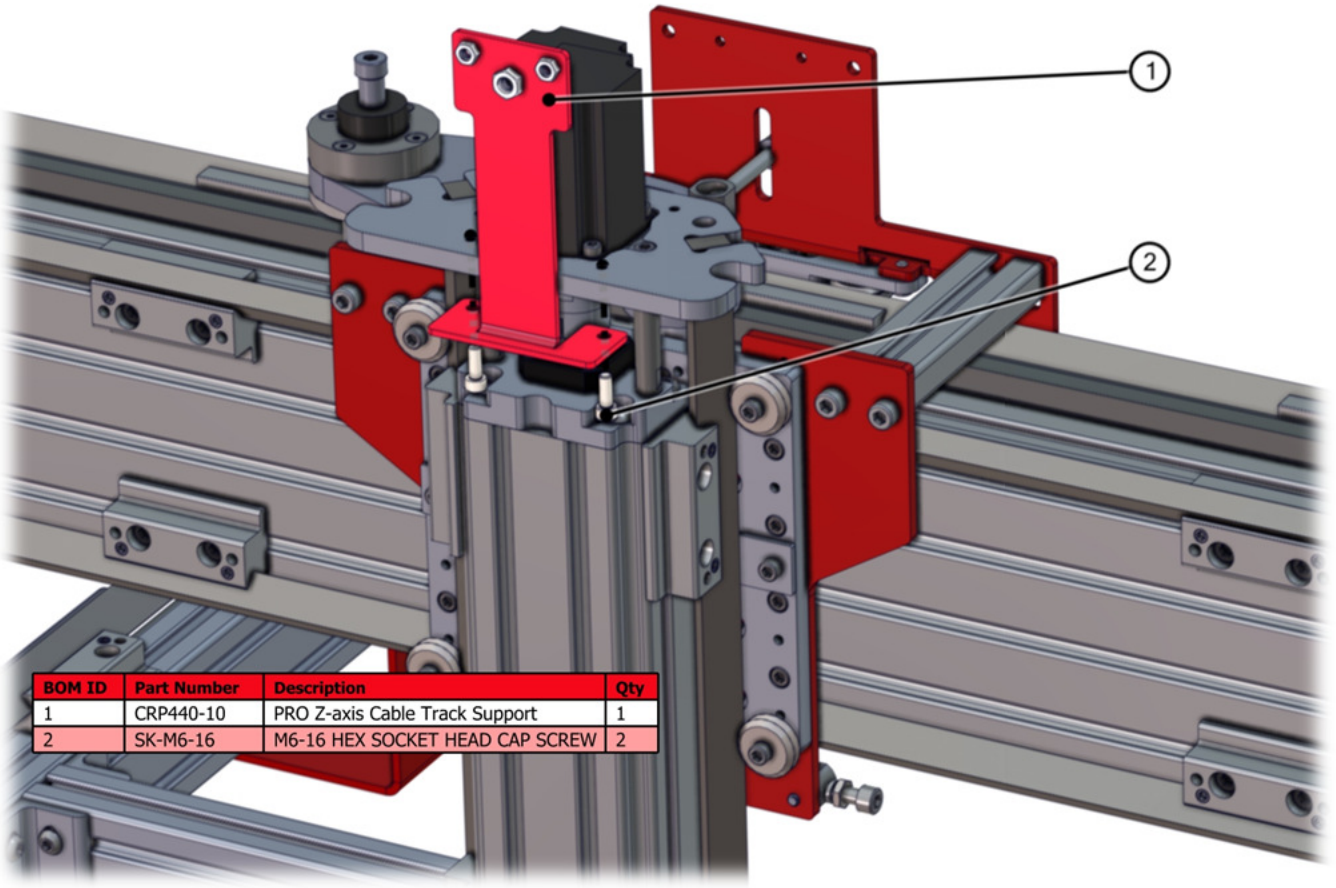
Fasten the Cable Tray to the gantry using the provided screws.

3 Z Cable Track Bracket



The final bracket that needs to be installed is the Z-Axis Cable Track Support. This installation of this bracket depends on the type of motor being used on your Z axis. Instructions for systems with both NEMA 23 and NEMA 34 motors follow.

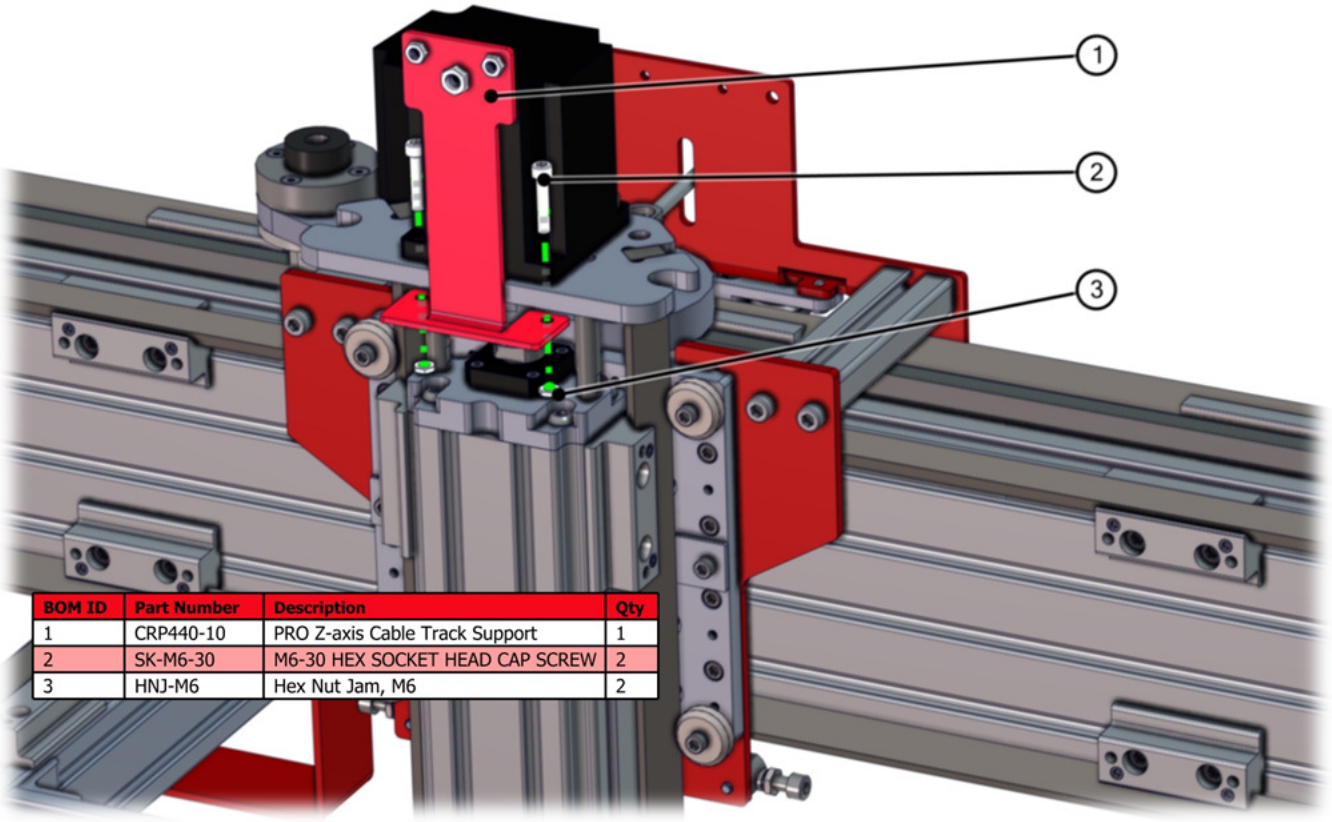
3.1 NEMA 23 Motors



BOM ID	Part Number	Description	Qty
1	CRP440-10	PRO Z-axis Cable Track Support	1
2	SK-M6-16	M6-16 HEX SOCKET HEAD CAP SCREW	2

For NEMA 23 motors, use the provided 16mm screws to fasten through the bracket up into the mounting holes on the z axis motor plate.

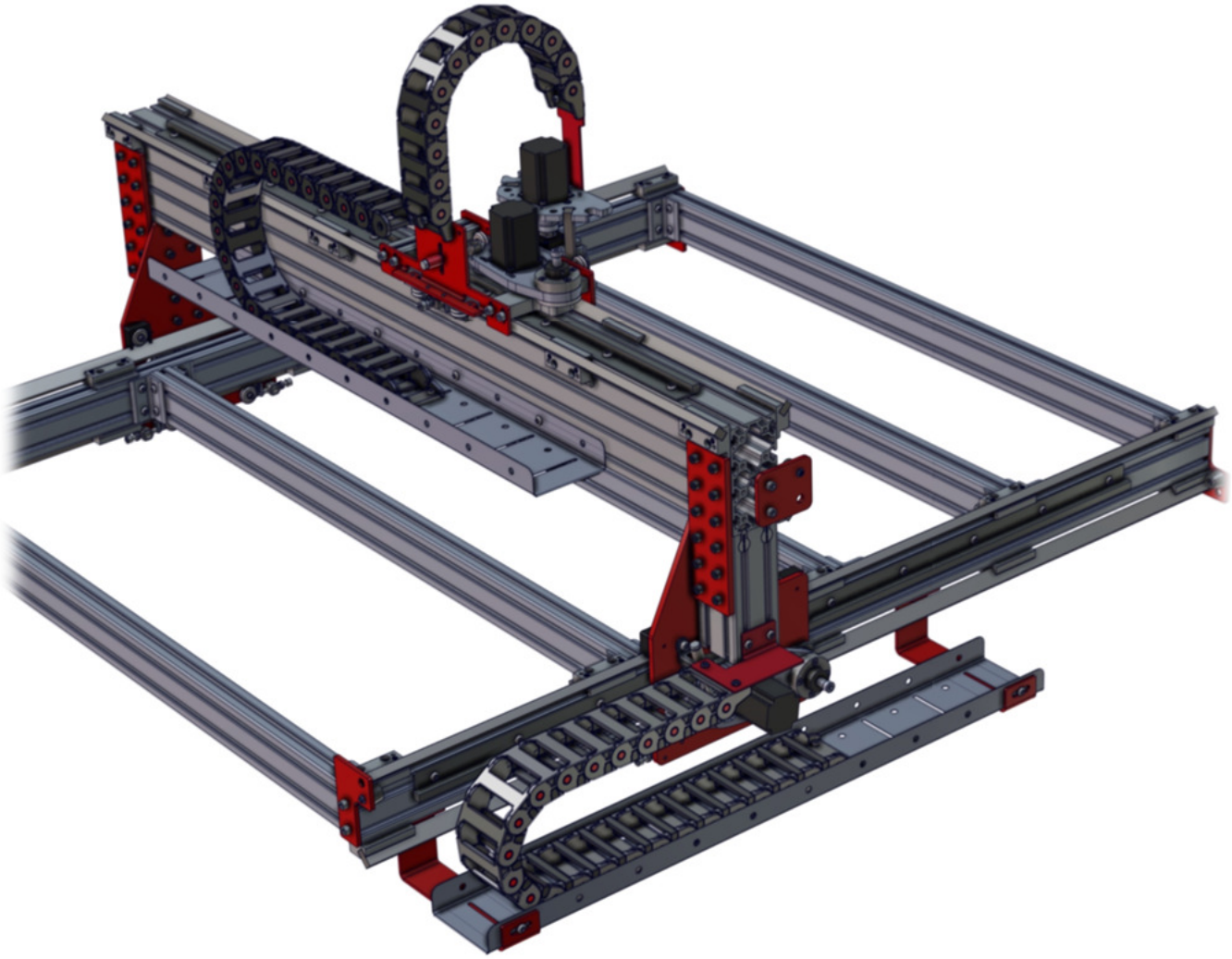
3.2 NEMA 34 Motors



BOM ID	Part Number	Description	Qty
1	CRP440-10	PRO Z-axis Cable Track Support	1
2	SK-M6-30	M6-30 HEX SOCKET HEAD CAP SCREW	2
3	HNJ-M6	Hex Nut Jam, M6	2

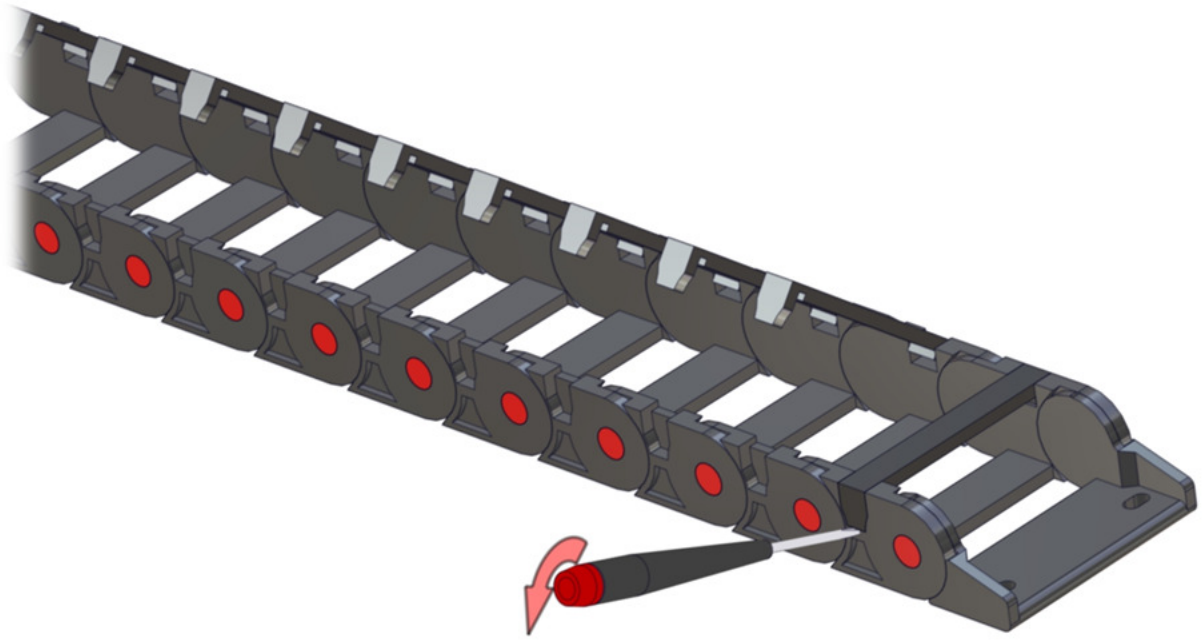
For NEMA 34 motors, replace two of the M6 motor mounting screws with the longer 30mm M6 screws provided in the cable track kit. Slide the bracket over these screws and fasten in place with hex nuts.

4 CABLE TRACK



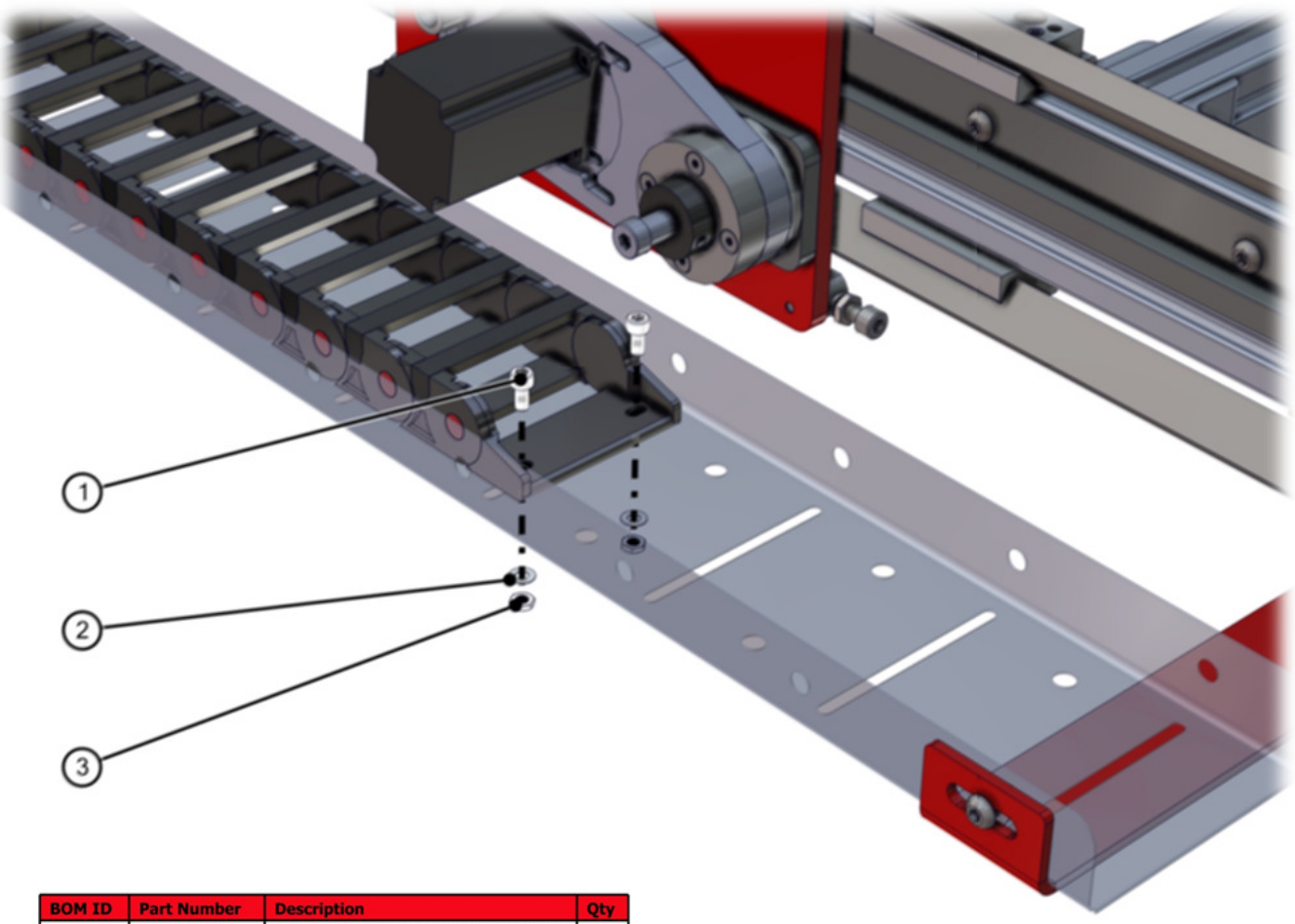
Now that the brackets and trays are all installed, the cable track can be fastened to the machine.

4.1 OPENING CABLE TRACK



Before installing the cable track, it can be helpful to open up the covers on it. This makes it easier to place cables into the track. The covers can be opened while the track is in the tray, but access is easier beforehand.

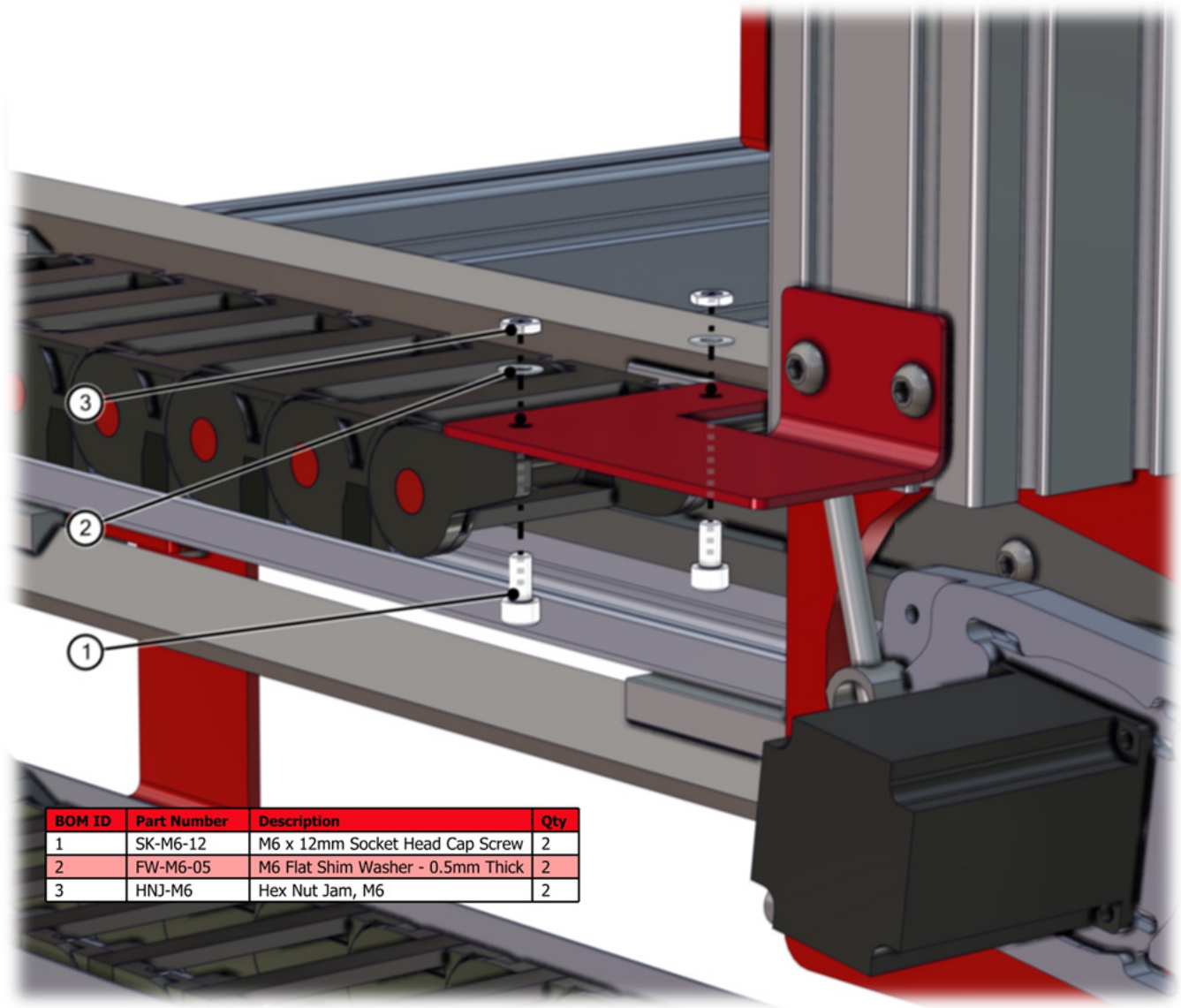
4.2 ATTACH X TRACK TO CABLE TRAY



BOM ID	Part Number	Description	Qty
1	SK-M6-12	M6 x 12mm Socket Head Cap Screw	2
2	FW-M6-05	M6 Flat Shim Washer - 0.5mm Thick	2
3	HNJ-M6	Hex Nut Jam, M6	2

The cable track on the side of the machine should be fastened to the trays using the provided M6 hardware. The exact position in the tray is not critical. The front edge of the cable track should be roughly one third of the way back from the front of the machine.

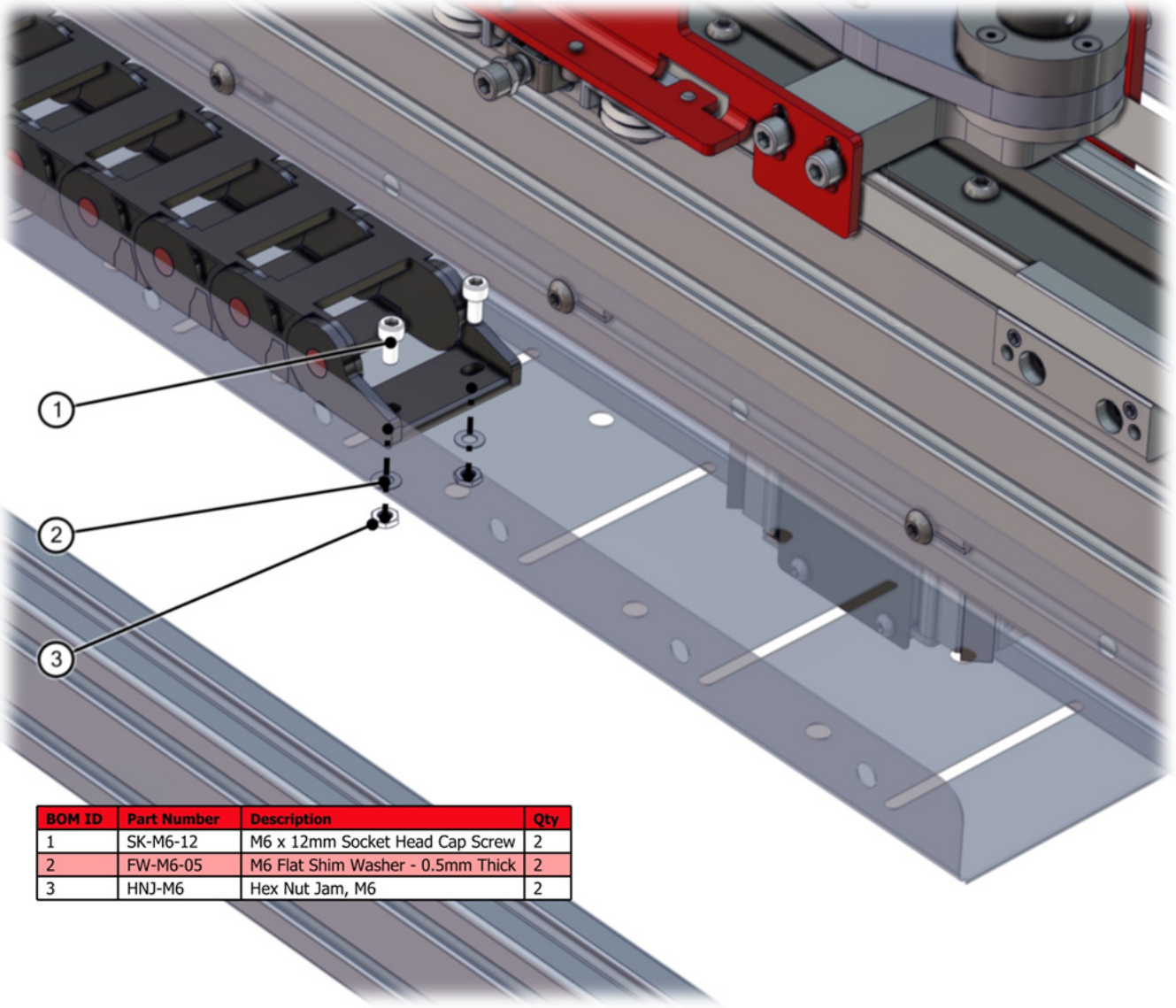
4.3 ATTACH X TRACK TO RISER SUPPORT



BOM ID	Part Number	Description	Qty
1	SK-M6-12	M6 x 12mm Socket Head Cap Screw	2
2	FW-M6-05	M6 Flat Shim Washer - 0.5mm Thick	2
3	HNJ-M6	Hex Nut Jam, M6	2

Once the cable track is attached to the tray, it should be router underneath the rack and pinion drive and attached to the PRO Riser Cable Track Bracket you installed in step 1.8

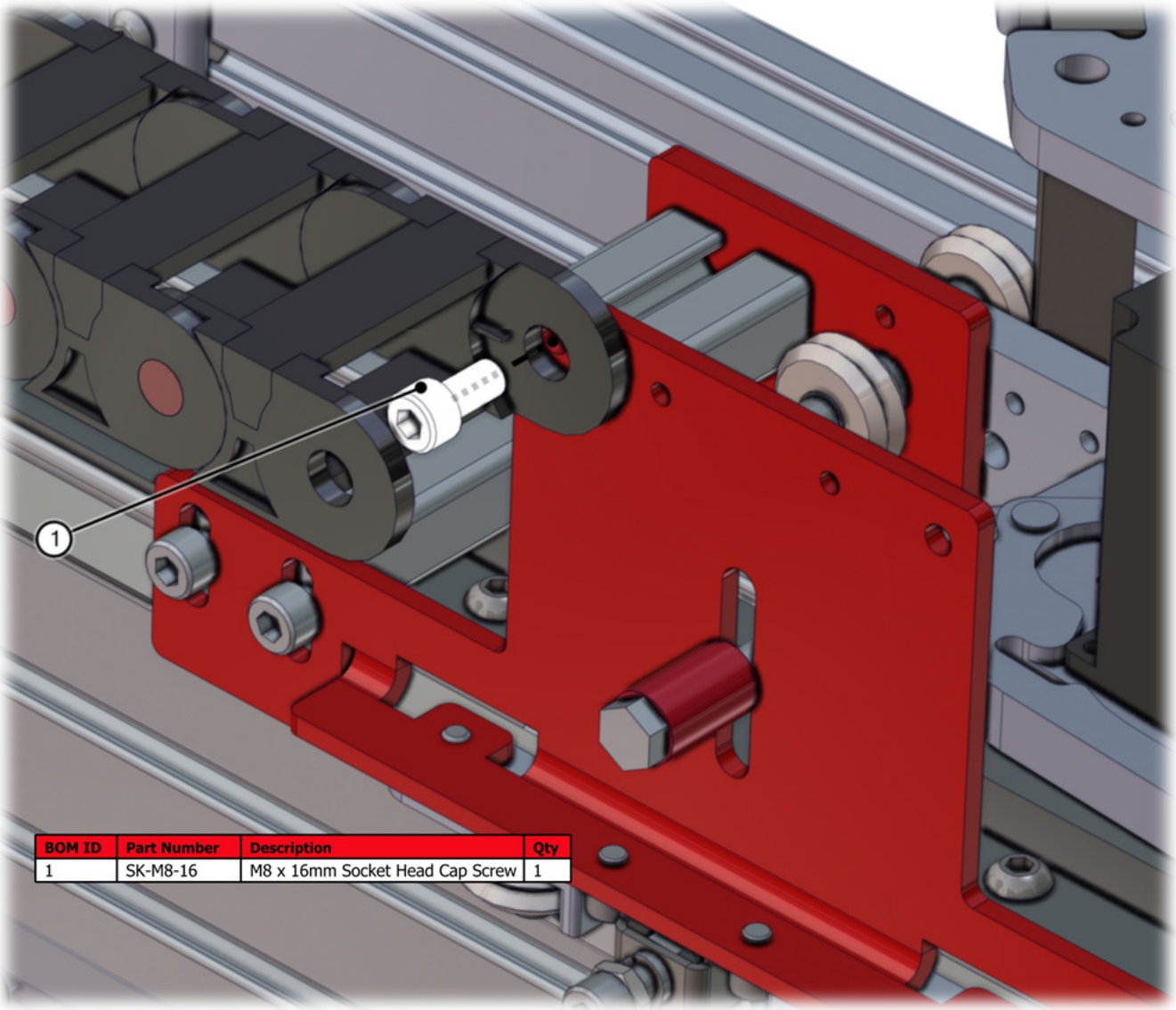
4.4 Attach Y Track to cable tray



BOM ID	Part Number	Description	Qty
1	SK-M6-12	M6 x 12mm Socket Head Cap Screw	2
2	FW-M6-05	M6 Flat Shim Washer - 0.5mm Thick	2
3	HNJ-M6	Hex Nut Jam, M6	2

The next step is to attach the gantry cable track. Like the previous connections, this is accomplished with the provided M6 socket heads, washers, and hex nuts. The end of the track should be positioned roughly one third of the way in from the right side of the gantry.

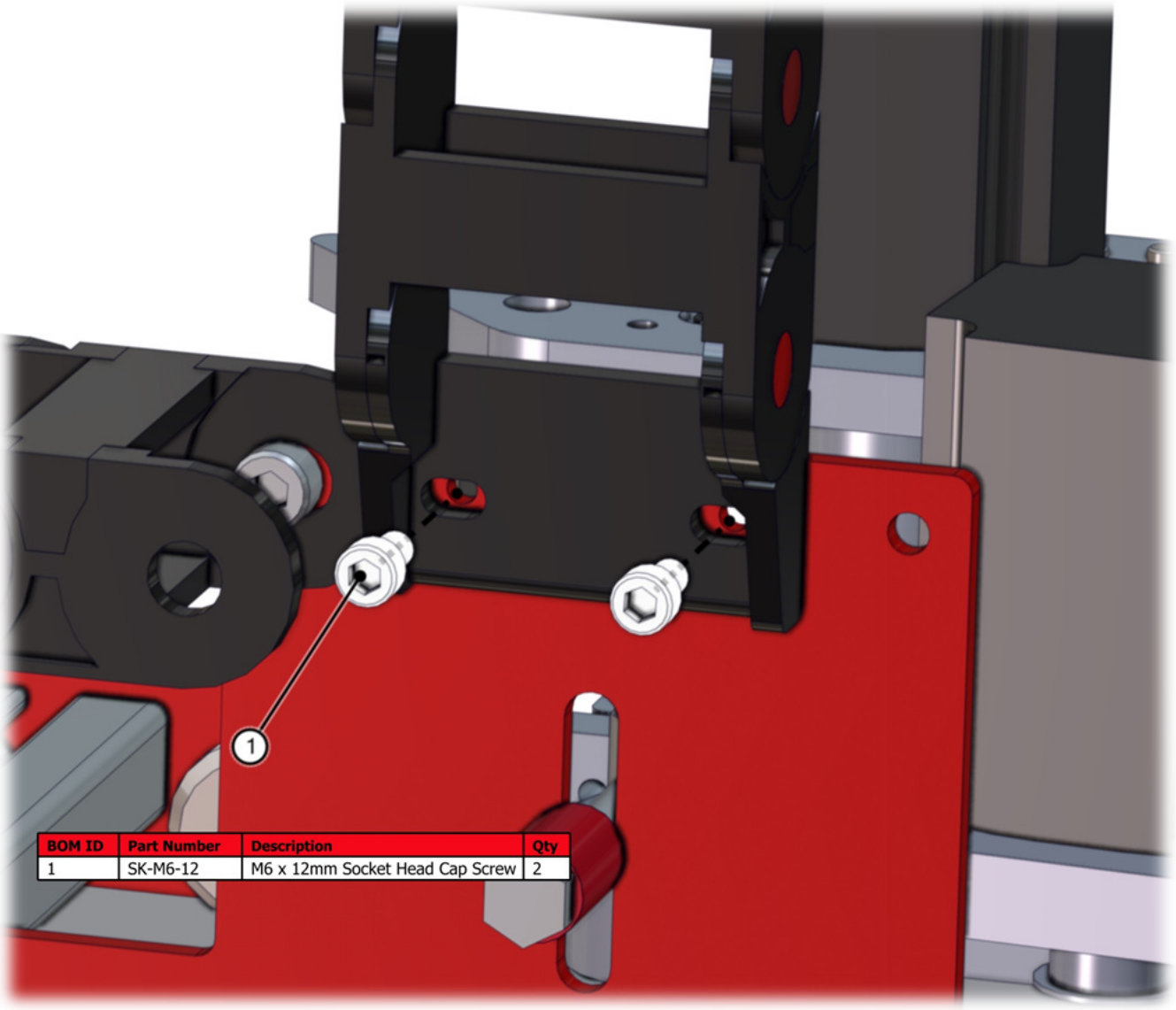
4.5 ATTACH Y TRACK TO GANTRY CARRIAGE



BOM ID	Part Number	Description	Qty
1	SK-M8-16	M8 x 16mm Socket Head Cap Screw	1

The other end of the gantry cable track is attached simply with an M8 socket head screw, which fastens through the hole in the cable track and into the back gantry support.

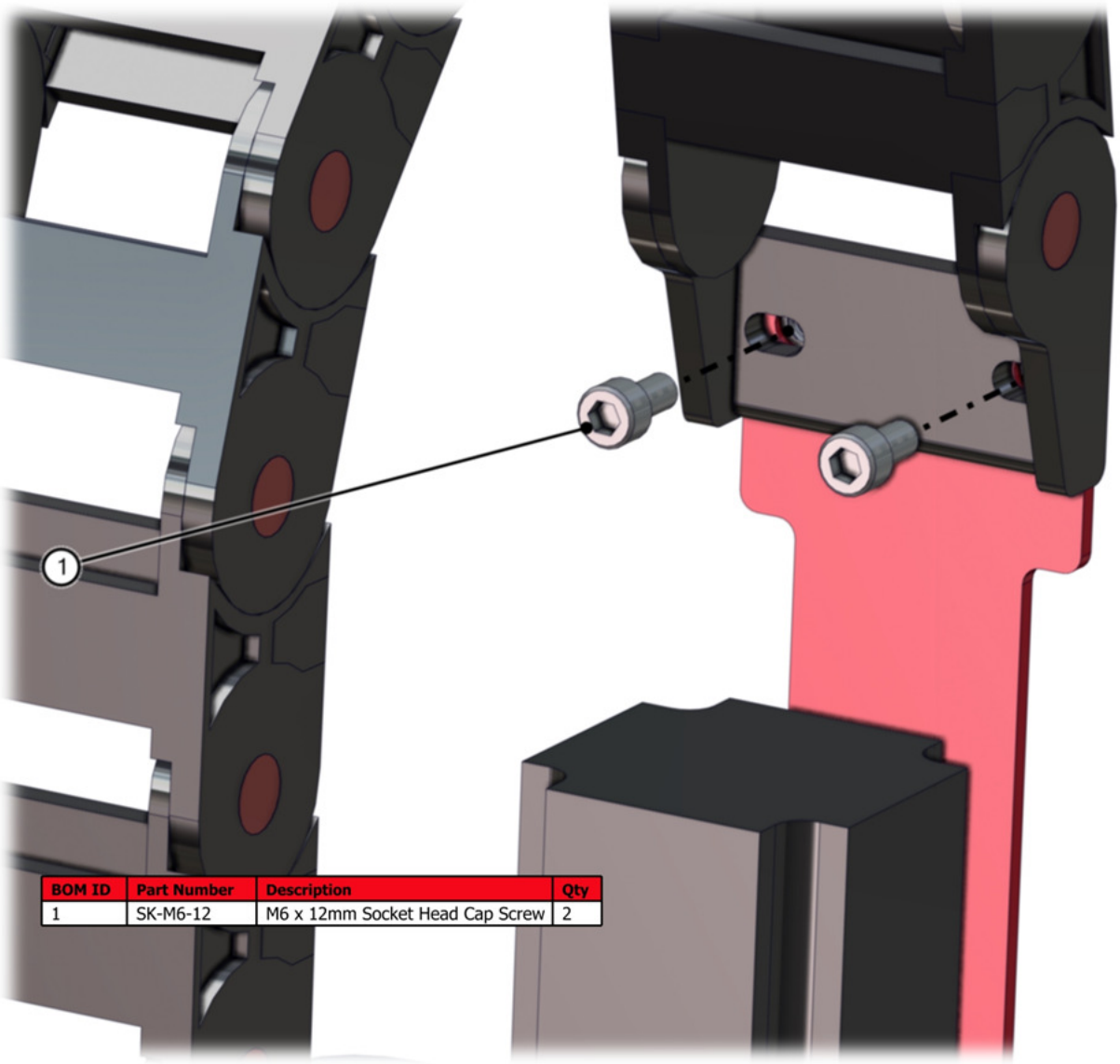
4.6 ATTACH Z TRACK TO GANTRY CARRIAGE



BOM ID	Part Number	Description	Qty
1	SK-M6-12	M6 x 12mm Socket Head Cap Screw	2

Attach the Z axis cable track to the back gantry support bracket with the supplied M6 screws.

4.7 ATTACH Z TRACK TO SUPPORT BRACKET



BOM ID	Part Number	Description	Qty
1	SK-M6-12	M6 x 12mm Socket Head Cap Screw	2

Attach the other side of the z cable track to the Z Axis Cable Track support bracket with the supplied M6 screws. You should now be able to finish routing your cables through the system.