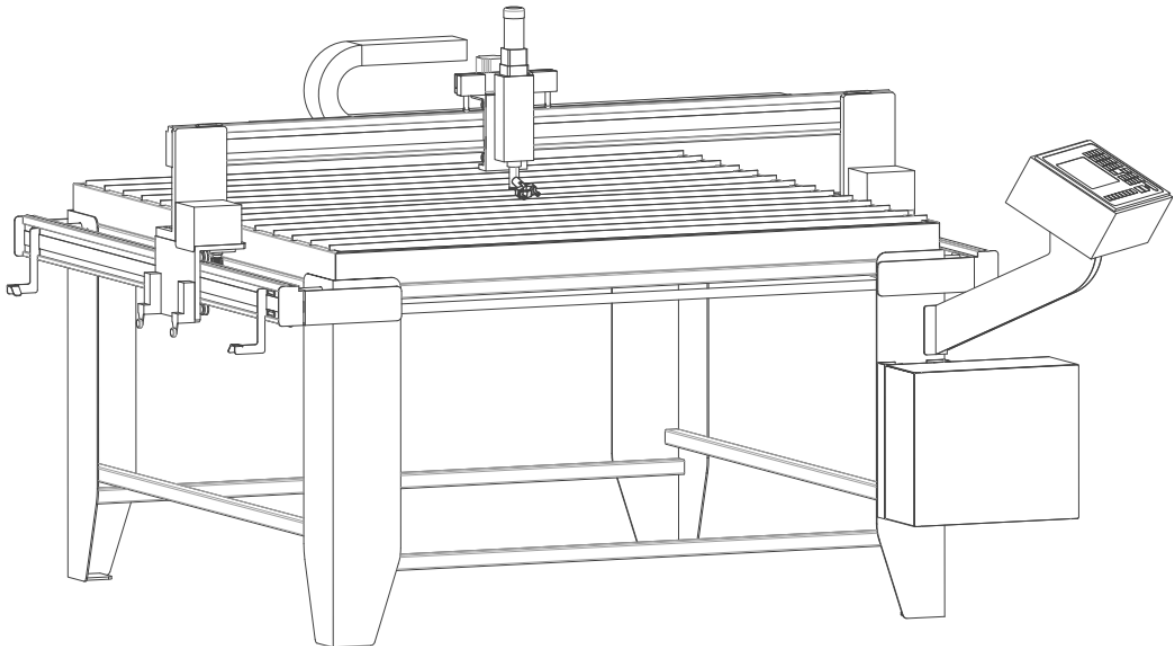




HC-4800

4'x4' CNC Plasma Table

Assembly Instructions



STOP!

The crate will need to be unpacked to locate the parts needed for each step of the assembly.

There are multiple points in the assembly that will require heavy lifting, awkward balancing of long items and holding numerous items in place at once. **It is strongly recommended to have at least two people involved in the assembly for your safety.**

Locate the equipment bag and keep that aside. It contains the necessary Allen keys and wrenches that will be used regularly through the assembly. Most of the bolts, nuts and washers are pre-installed on the parts required for each step.

Take the time to level the table once the casters have been attached.

Be sure to check the alignment of the gantry before operating.

Do not manually move the gantry or truck while the motors are plugged into the controller.

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Specifications



Model: HC-4800 ~ Halo 4'x4' CNC Plasma Table

Plasma Table Power Requirements: 120 \pm 10% VAC, 50/60Hz, 5A
240 \pm 10% VAC, 50/60Hz, 5A

Plate Capacity: 53"(length) x 53" (width) x 0.5" (thickness)

Weight Capacity: 450lbs (204kg) – Includes the workpiece and a filled Water Table.

Water Table Fluid Capacity: 33 gal (125L)

CNC Torch Travel:

- **X-Axis:** 49" (1244mm)
- **Y-Axis:** 39.25" (997mm)
- **Z-Axis:** 3.5" (89mm)

Overall Dimensions once Assembled (Width x Depth x Height):

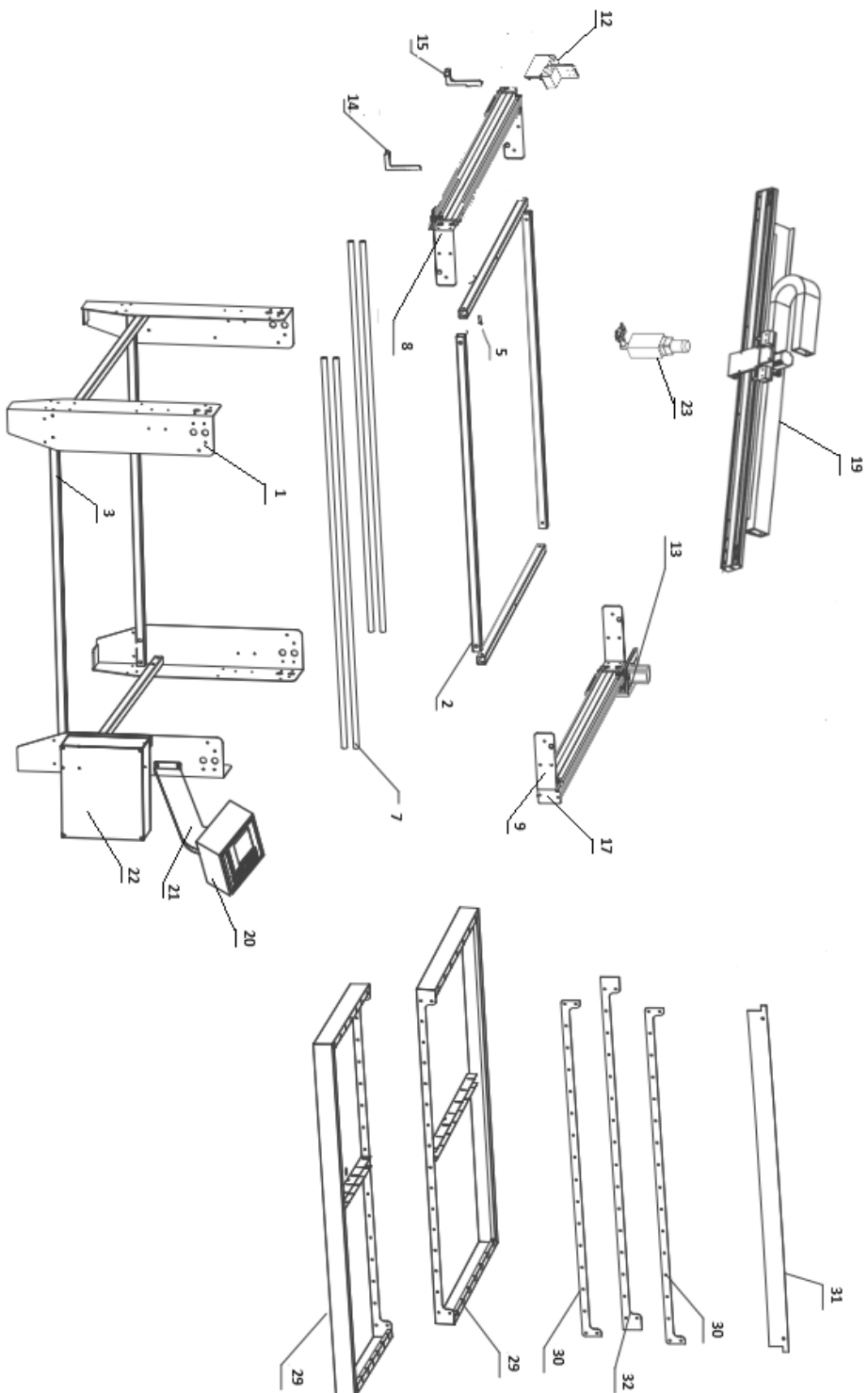
77" (1955mm) x 71" (1803mm) x 60" (1524mm)

Overall Unit Weight once Assembled: 330lbs (150kg)

Movement Accuracy: \pm 0.2mm

Cutting Accuracy: \pm 0.5mm

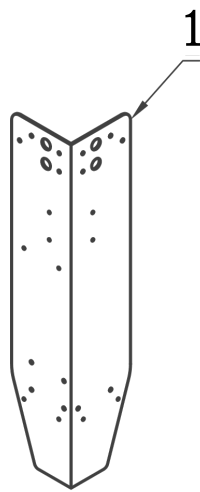
4'x4' Table - Exploded View of CNC Table



Model: 4'x4' CNC Plasma Table			
SN	Part Name	Quantity	Remarks
1	Standing Leg	4	Approx. 29.5" tall. One leg has different (mirror image) screw positions
2	Upper Frame Square Tube	4	Approx. 47.5" long
3	Lower Frame Square Tube	4	Approx. 53" long
4	M6x50 with Nut and Washer	24	Use 5mm Allen key and 10mm wrench Pre-installed on Frame Square Tubes
5	Bolt Sleeve	24	Pre-installed on Frame Square Tubes
6	Caster Wheel with Nut and Washer	4	Use 18mm wrench
7	Connecting Rod	4	Approx. 61" long
8	Left Y-Axis Gantry Rail	1	Approx. 54" long
9	Right Y-Axis Gantry Rail	1	Approx. 54" long
10	M6x16 with Washer	12	Use 5mm Allen key; Pre-installed on Standing Legs
11	M8x45 with Washer	8	Use 6mm Allen key Pre-installed on Connecting Rods
12	Left X-Axis End Assembly	1	Approx. 15.5" tall
13	Right X-Axis End Assembly	1	Approx. 15.5" tall
14	Front Y-Axis Limit Bracket	1	Located in the Equipment Bag
15	Rear Y-Axis Limit Bracket	1	Located in the Equipment Bag
16	M6x51 with Nut and Washers	4	Use 5mm Allen key and 10mm wrench Pre-installed on Y-Axis Gantry Rails
17	Gantry Rail End Cap	4	Pre-installed on Y-Axis Gantry Rails
18	M3x8	12	Use 2.5mm Allen key Pre-installed on Y-Axis Gantry Rails
19	X-Axis Gantry Assembly	1	Approx. 63" long
20	Operator Station	1	Approx. 12"x9"
21	Control Panel Mount Arm	1	
22	Control Box	1	Approx. 14.5"x12.5"
23	THC Motor Assembly	1	Approx. 15" tall
24	M6x55 with Washer	8	Use 5mm Allen key Pre-installed on X-Axis End Assemblies
25	M5x16 with Washer	4	Use 4mm Allen key Pre-installed on Control Box
26	M6x16 with Washer	4	Use 5mm Allen key Pre-installed on the correct Standing Leg
27	M6x12	2	Use 5mm Allen key Pre-installed on X-Axis Gantry Assembly
28	M4x16 with Washer	4	Use 3mm Allen key Pre-installed on Operator Station
29	Water Table	2	Approx. 53"x26.5"
30	Sealing Plate	2	Approx. 50.5" long
31	Slat	14	Approx. 52" long
32	Silicone Seal	1	Approx. 53" long
33	Silicone Sealant	1	Located in the Equipment Bag
34	M6x16 with Nut and Washers	18	Use 10mm wrench Located in the Equipment Bag
35	Control Panel Cable	1	Approximately 20" long
36	Y-Axis Gantry Cable	1	Approximately 63" long
37	THC Cable	1	Approximately 13" long
38	Power Cable	1	Approximately 71¼" long
39	Plasma Cutter Control Cable	1	Approximately 240" long

1-0

Building the Base



4x

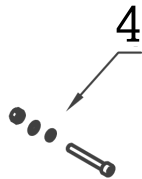


4x



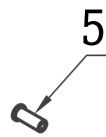
4x

M6x50 with Nut
and Washer

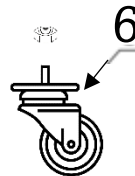


24x

Caster Wheel with
Nut and Washer



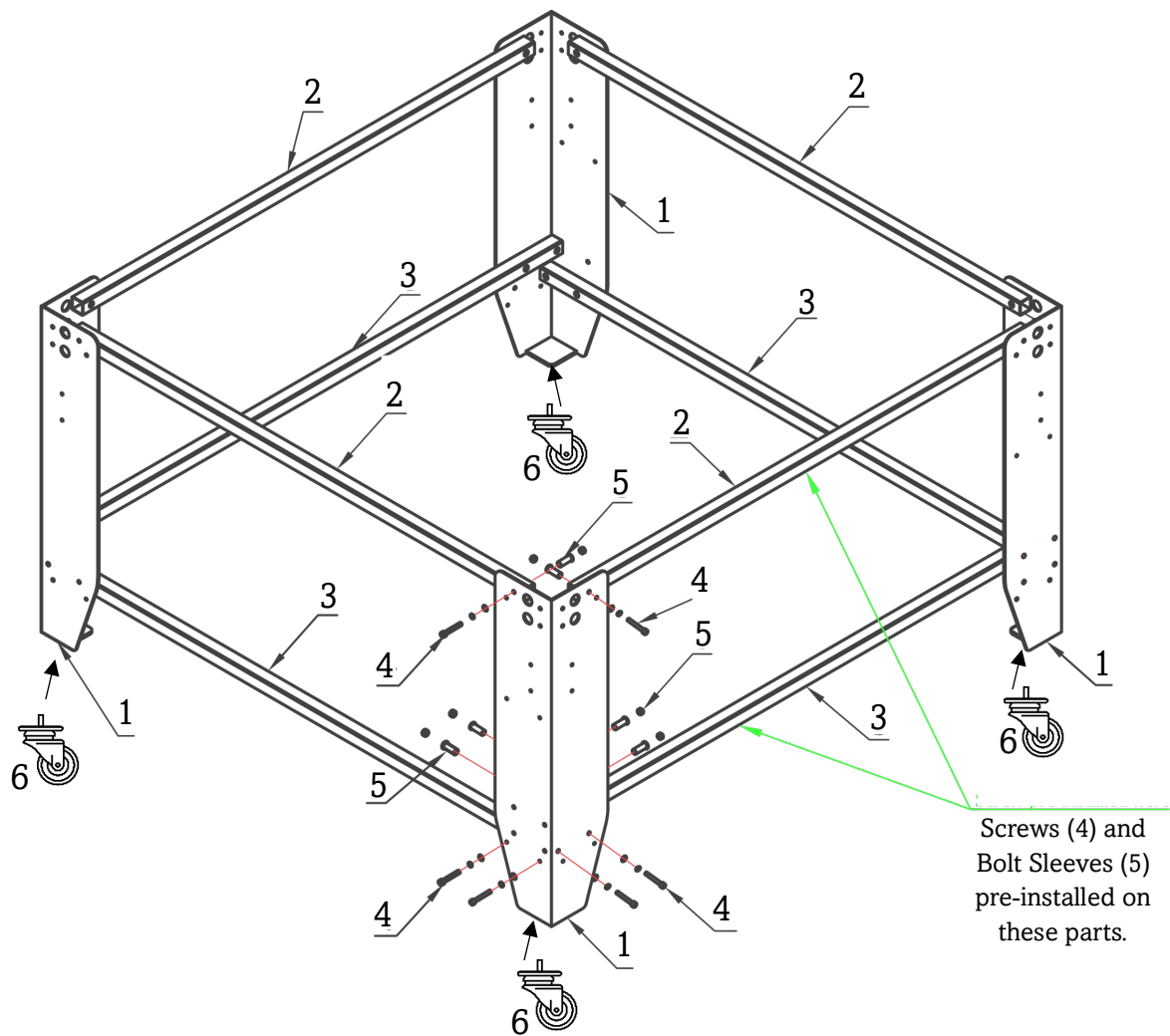
24x



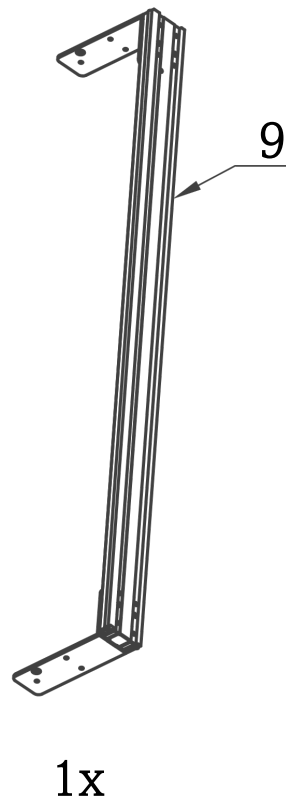
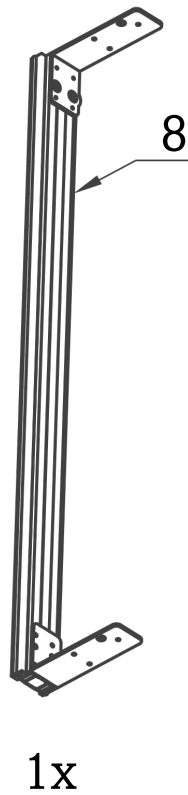
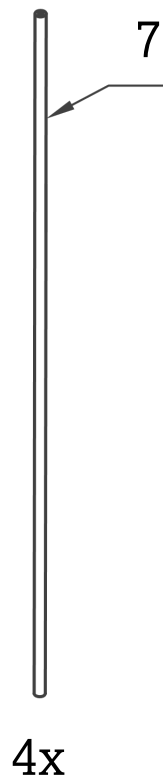
4x

1-1

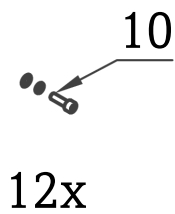
450lb weight restriction
with casters



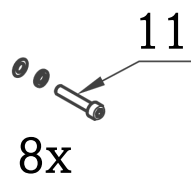
2-0 Adding the Gantry Rails



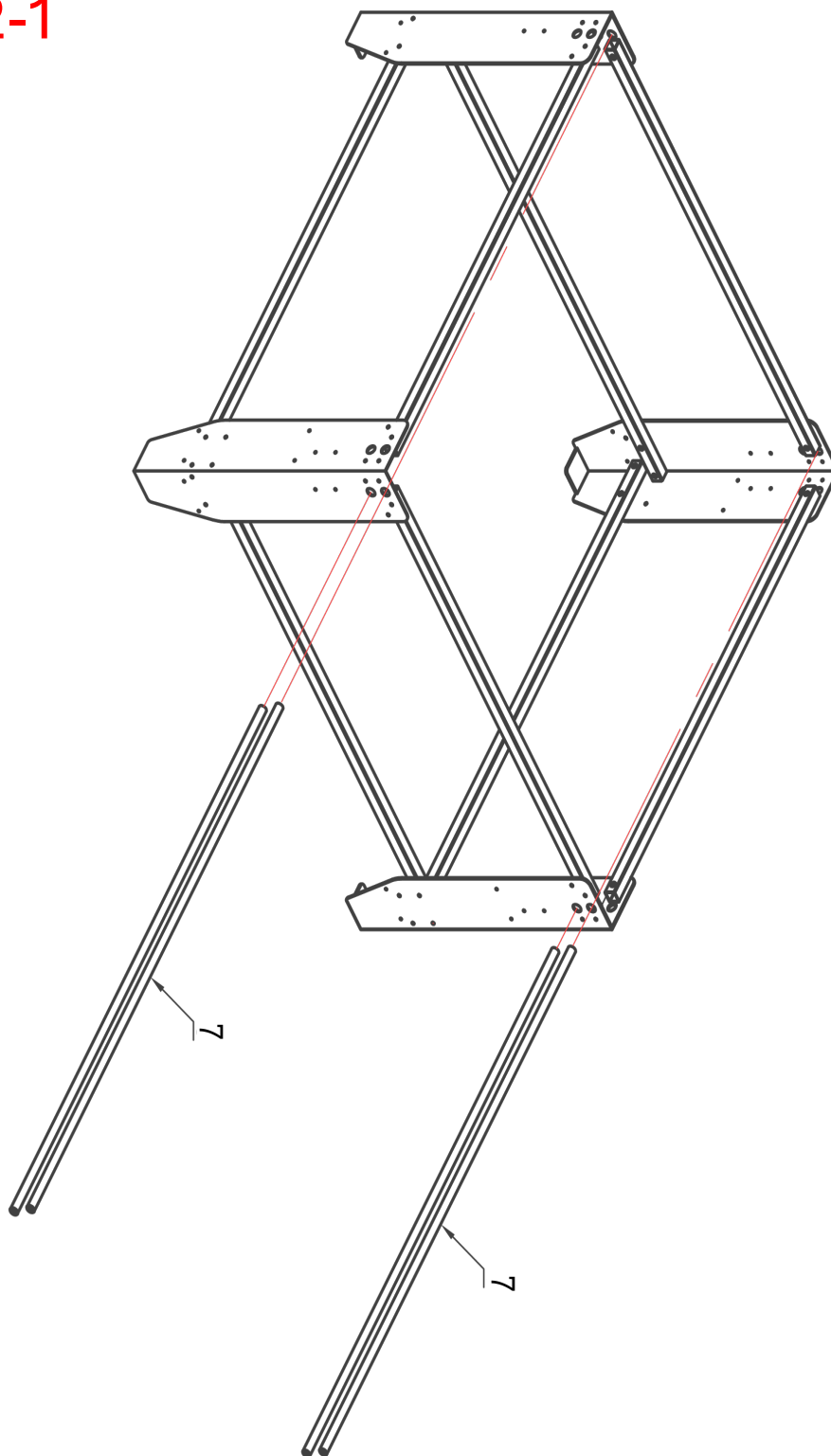
M6x16 with
Washer



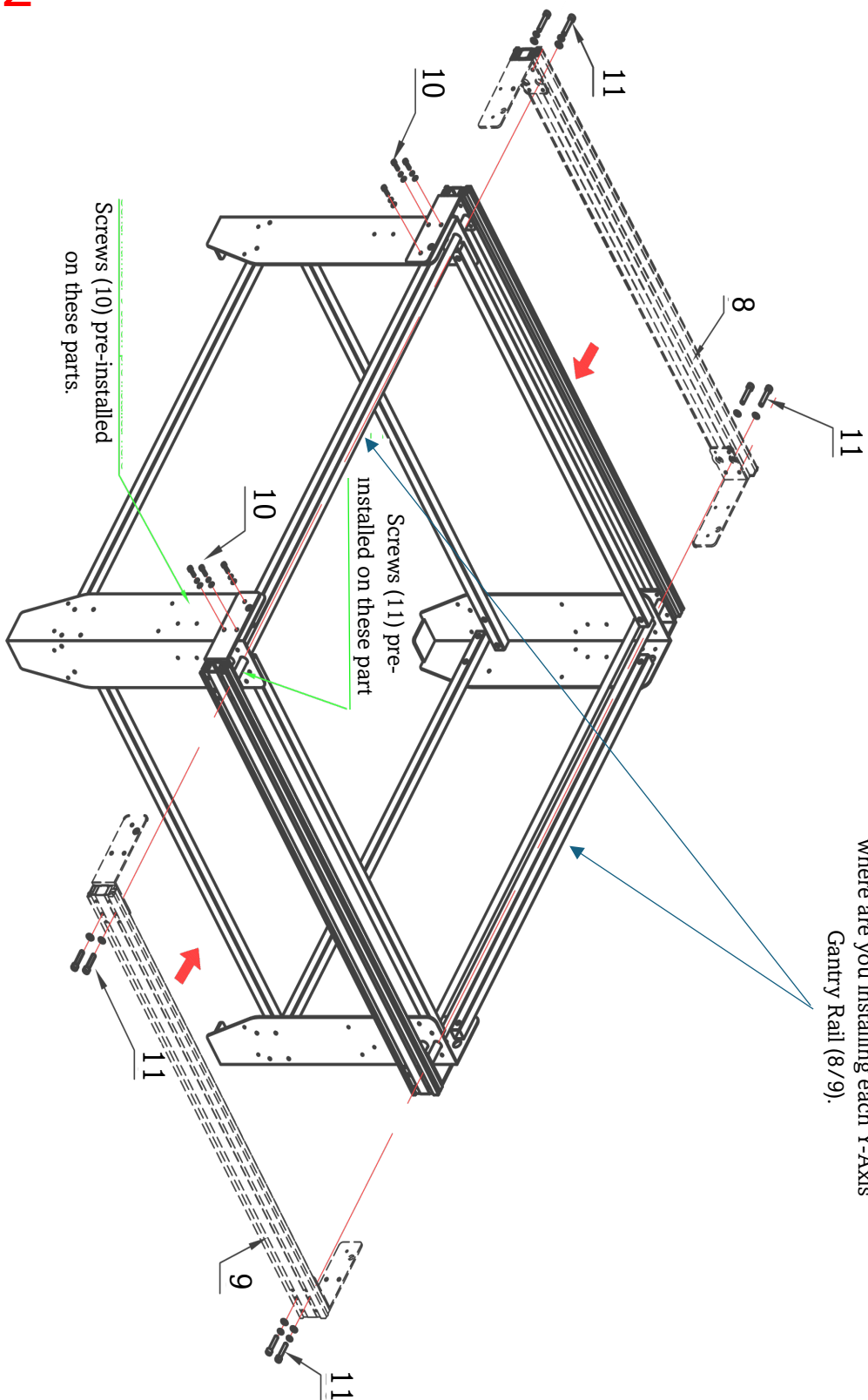
M8x45 with
Washer



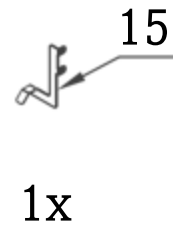
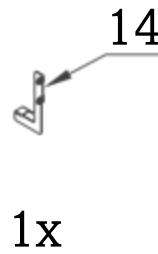
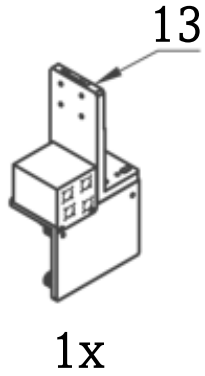
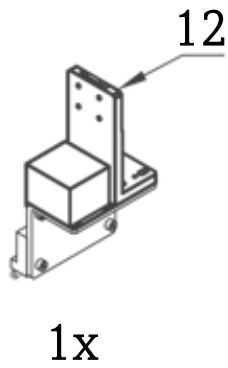
2-1



2-2



3-0 Adding the X-Axis End Assemblies



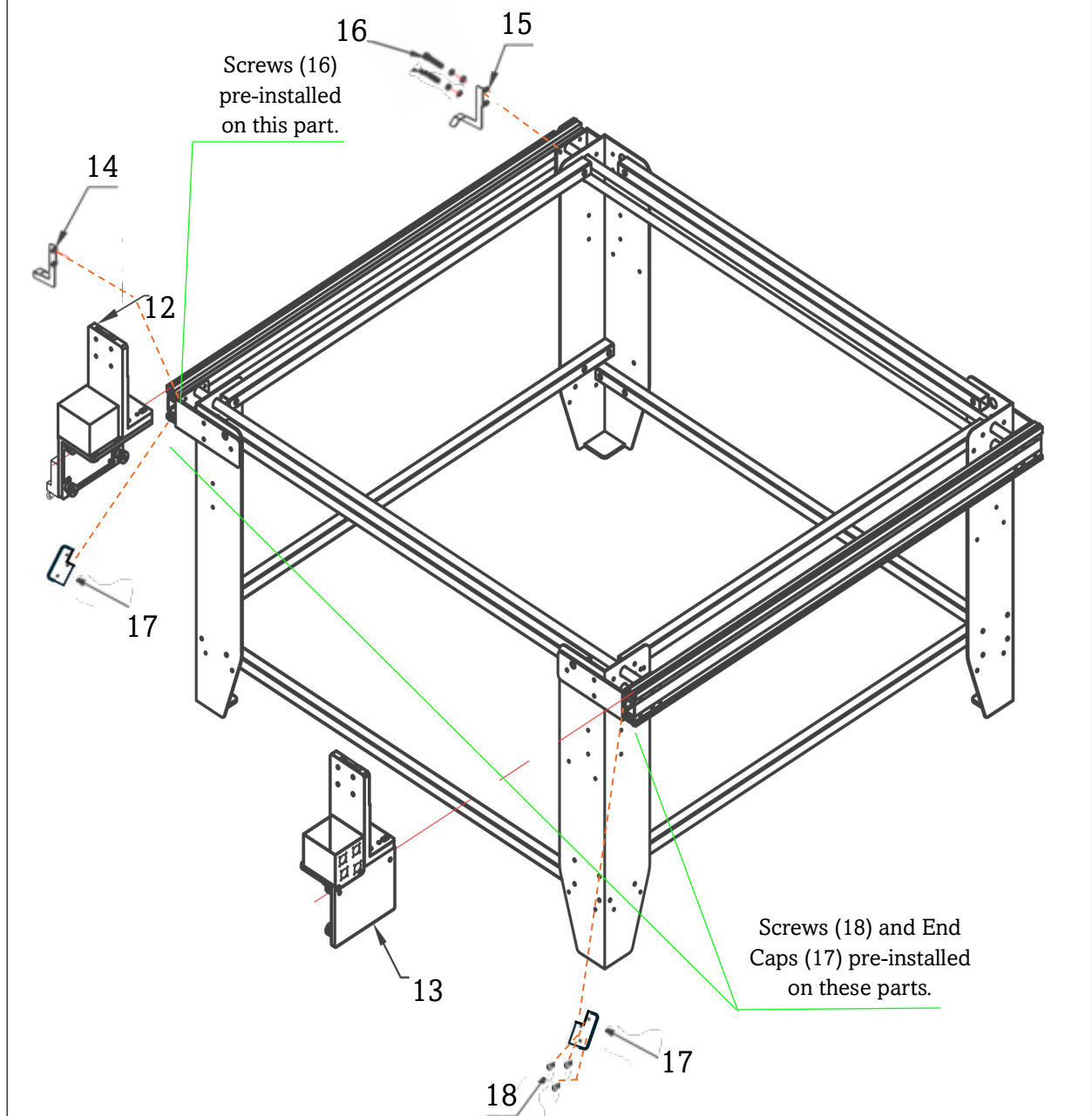
M6x51 with
Nut and Washer



M3x9

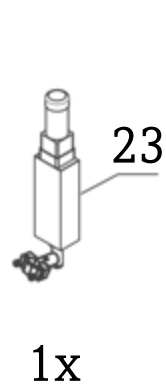
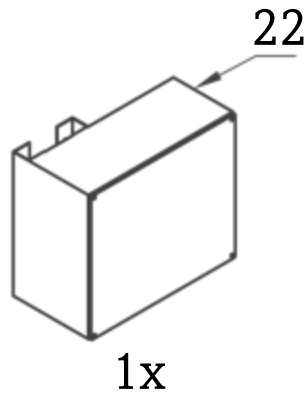
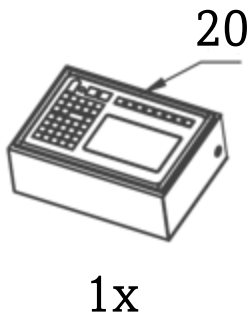
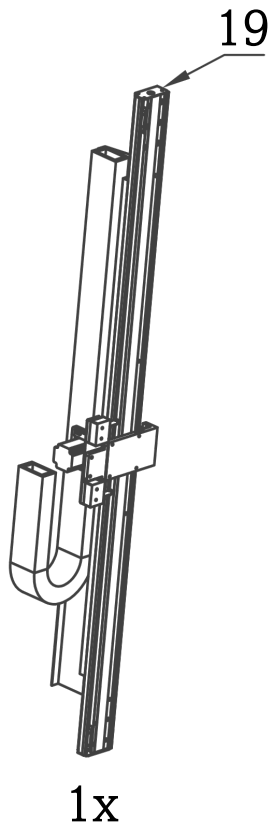


3-1

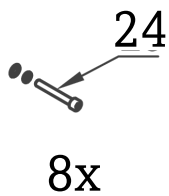


4-0

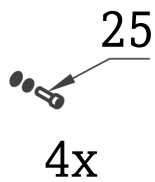
Completing the Table



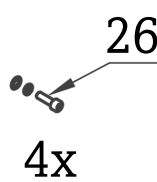
M6x55 with
Washer



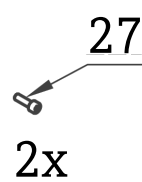
M5x16 with
Washer



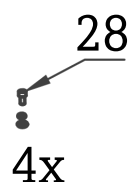
M6x16 with
Washer

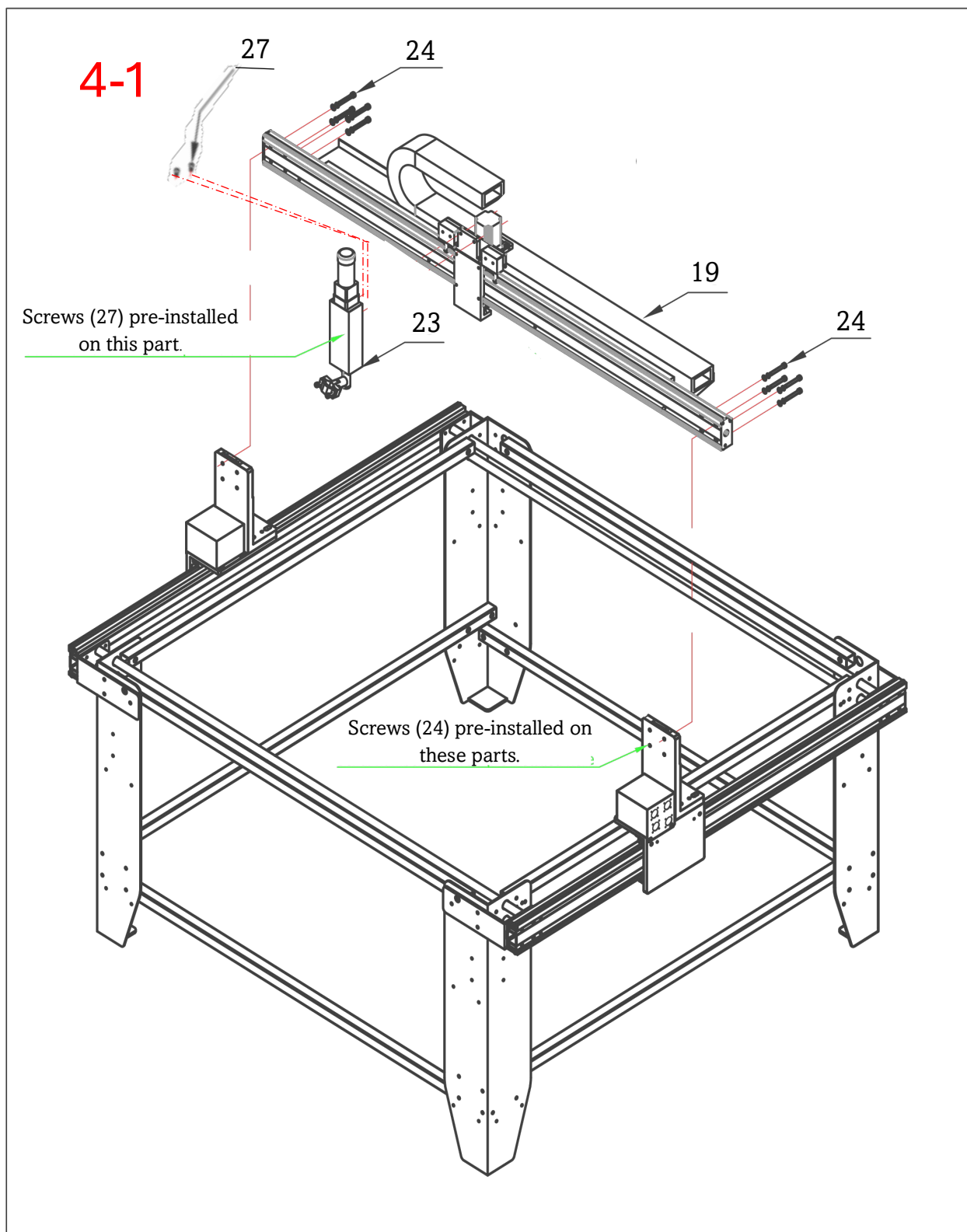


M6x12

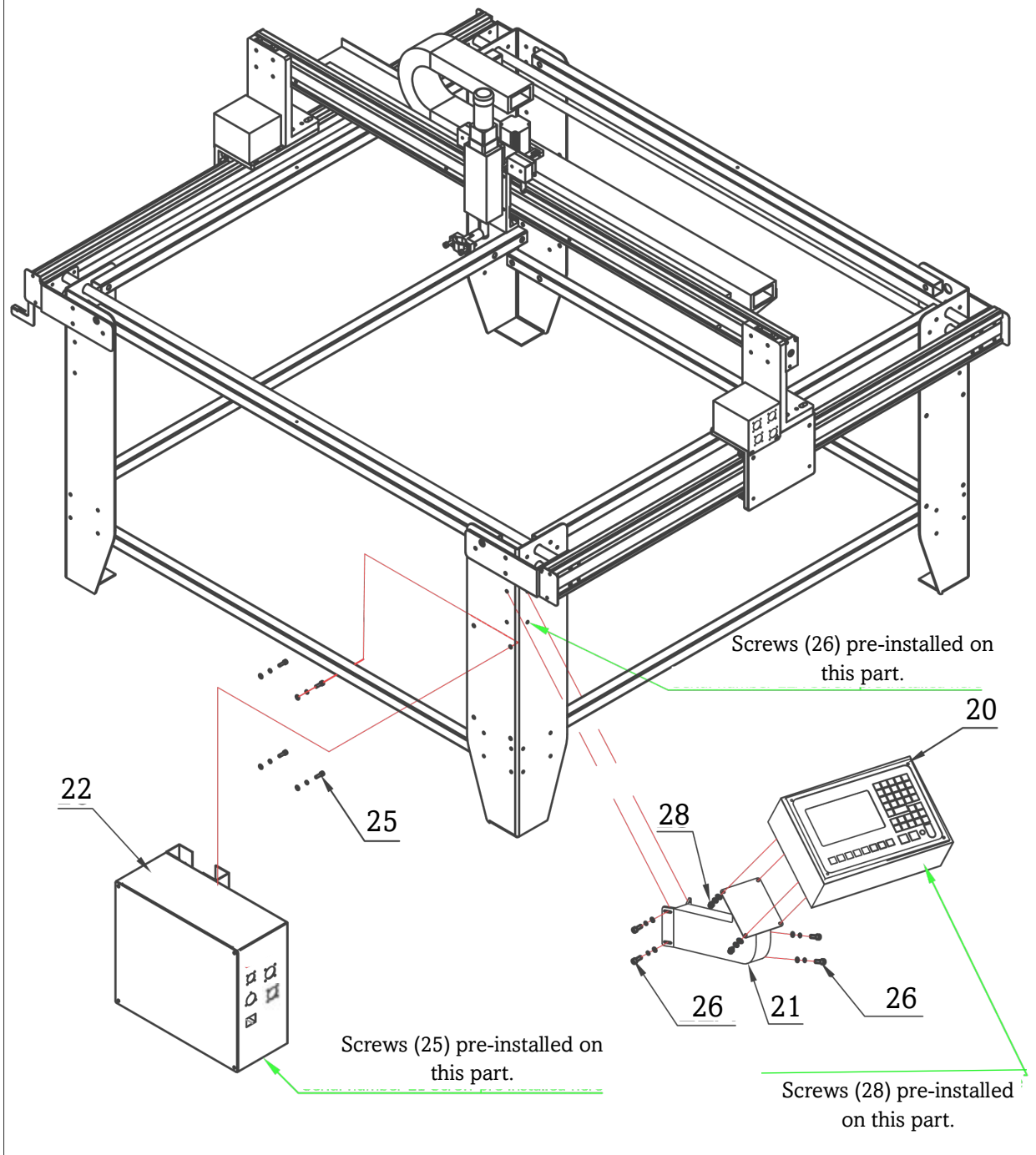


M4x16 with
Washer

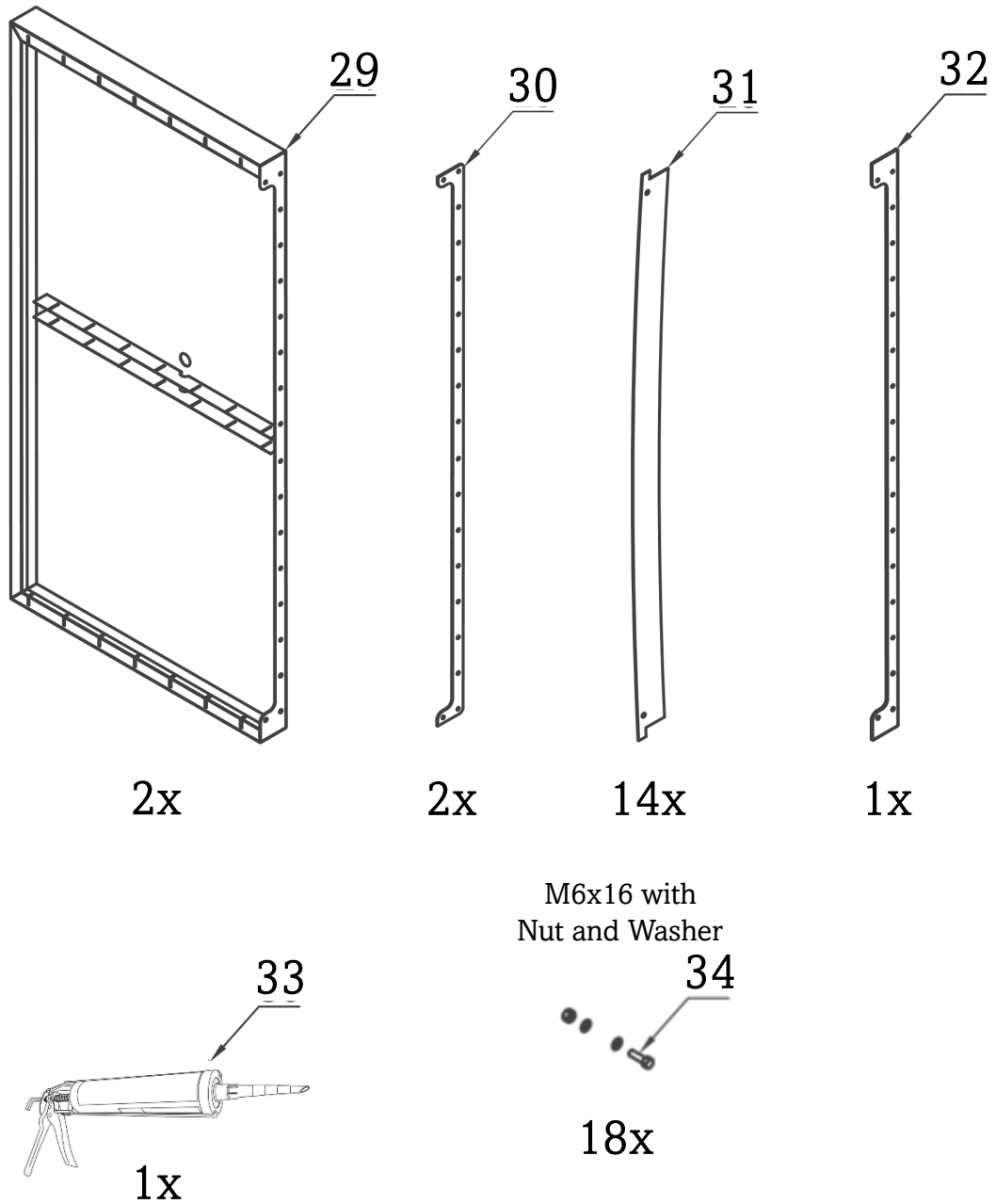




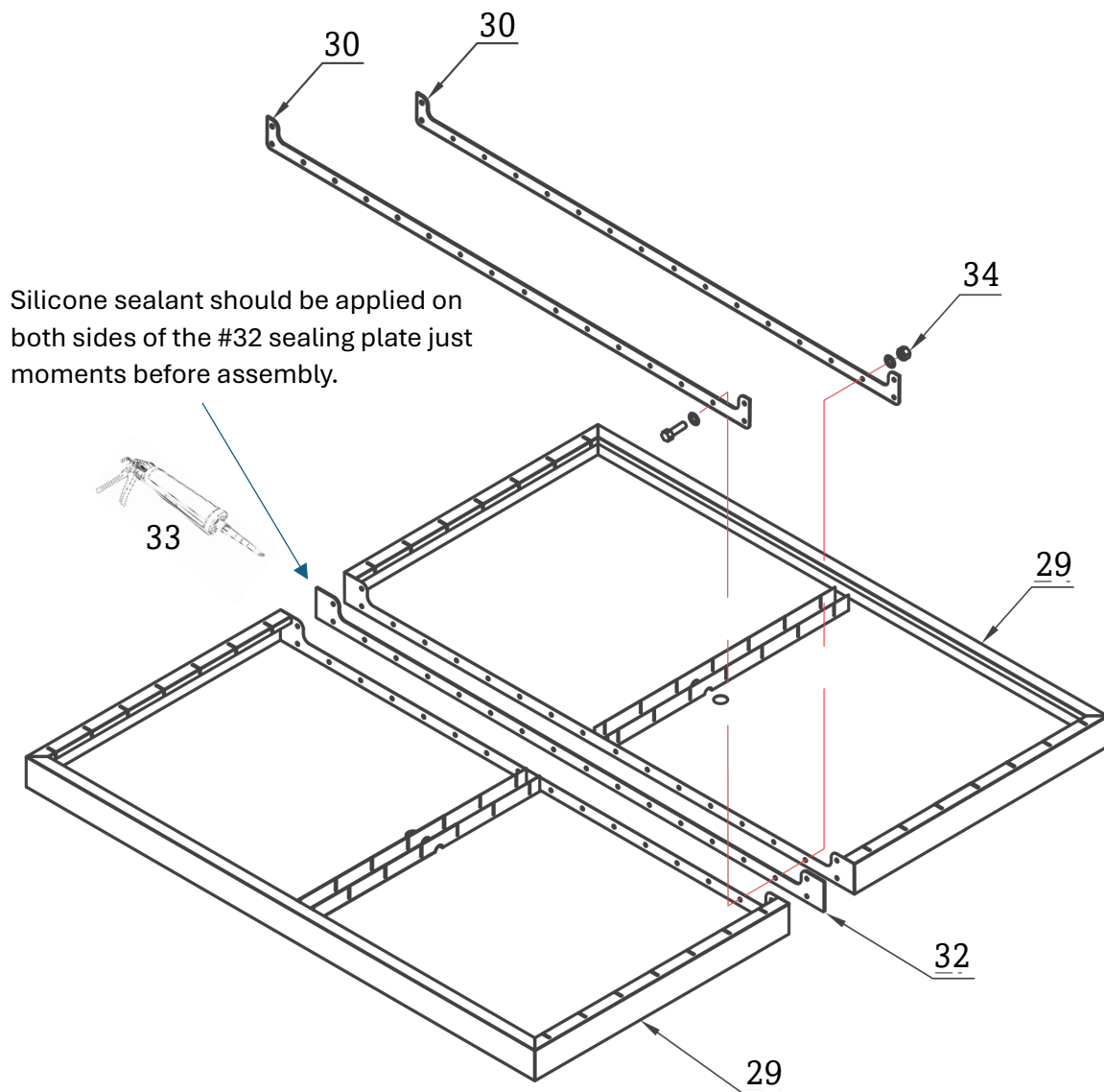
4-2



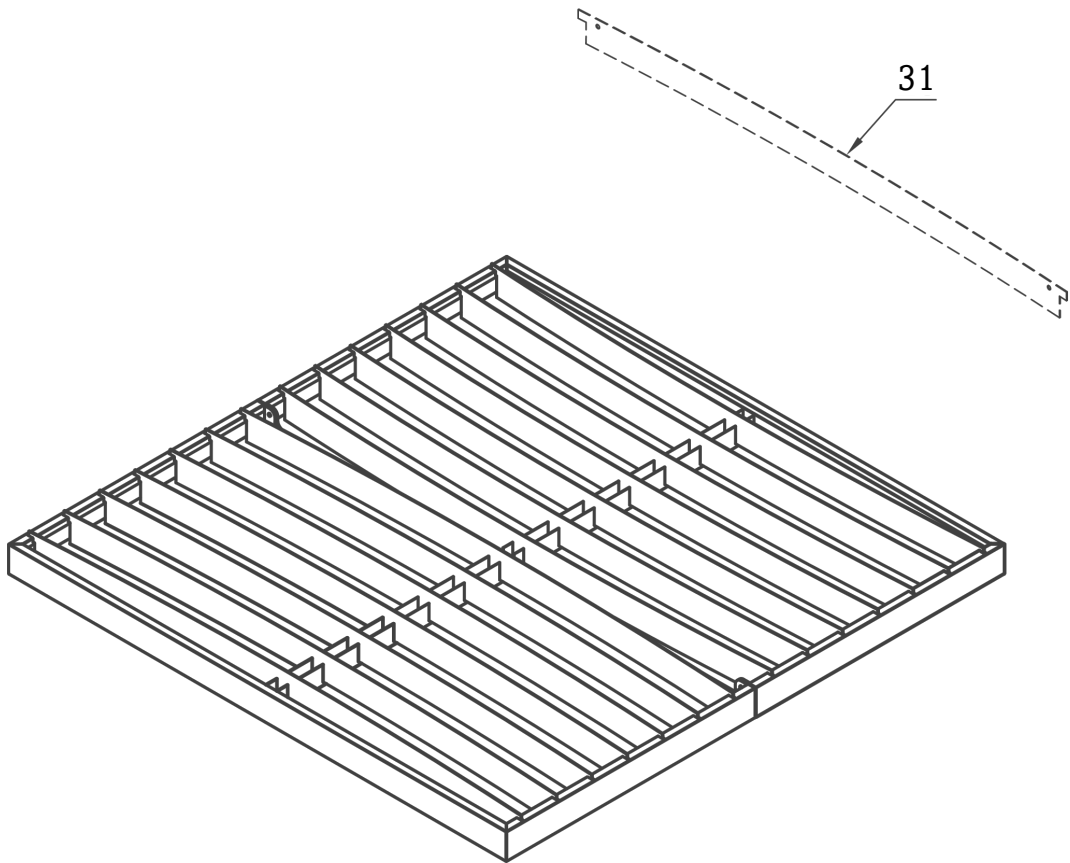
5-0 Constructing the Water Table



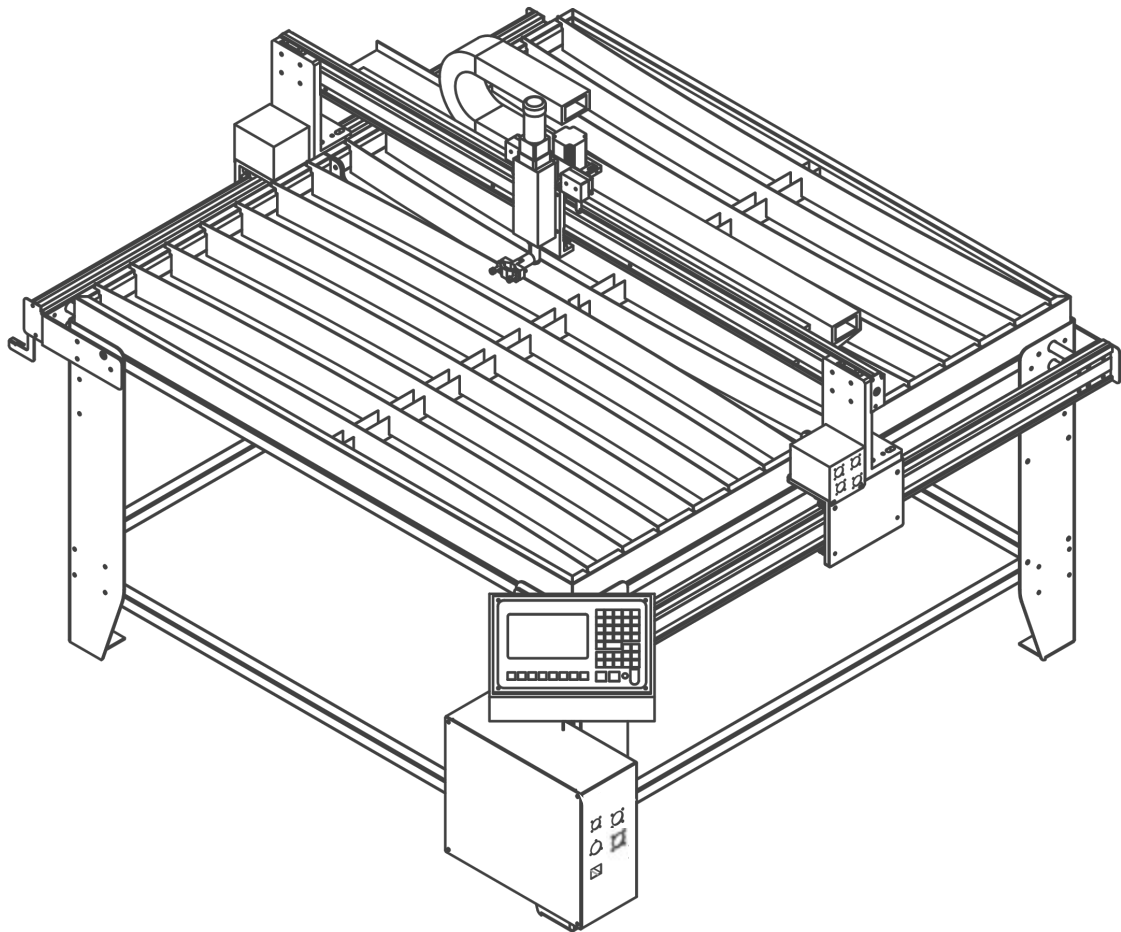
5-1



5-2

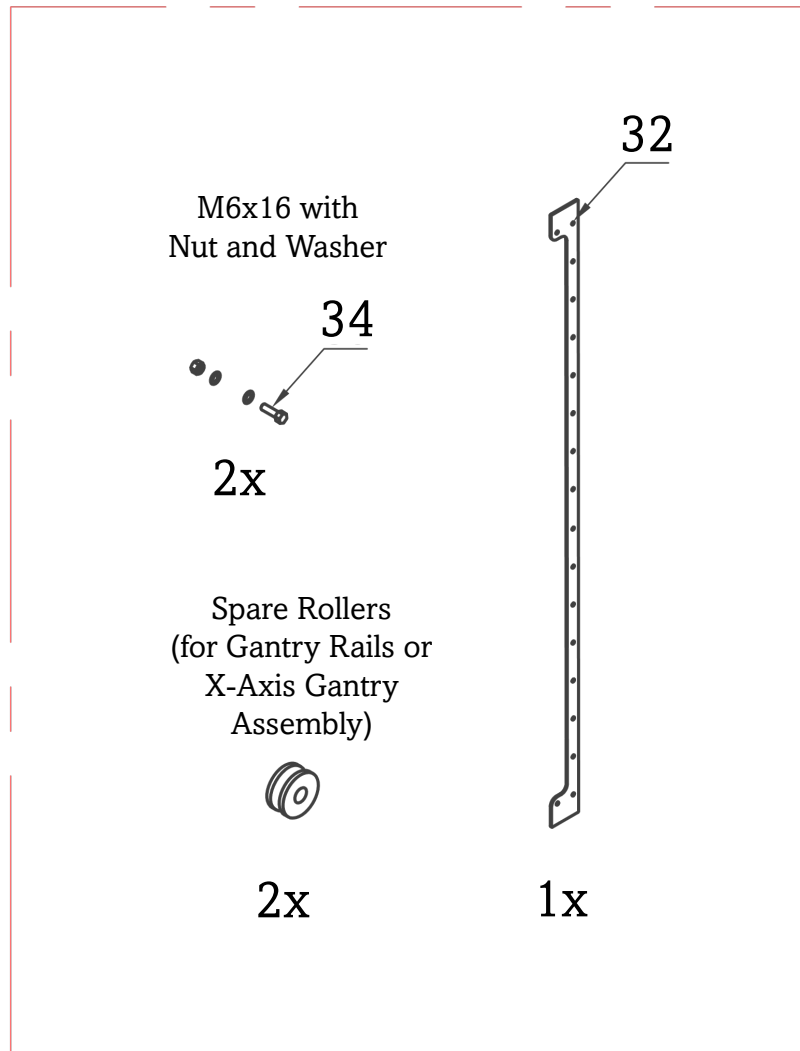


5-3



6-0

Spare parts



7-0

Control Wiring

35

1x



36

1x



37

1x



38

1x

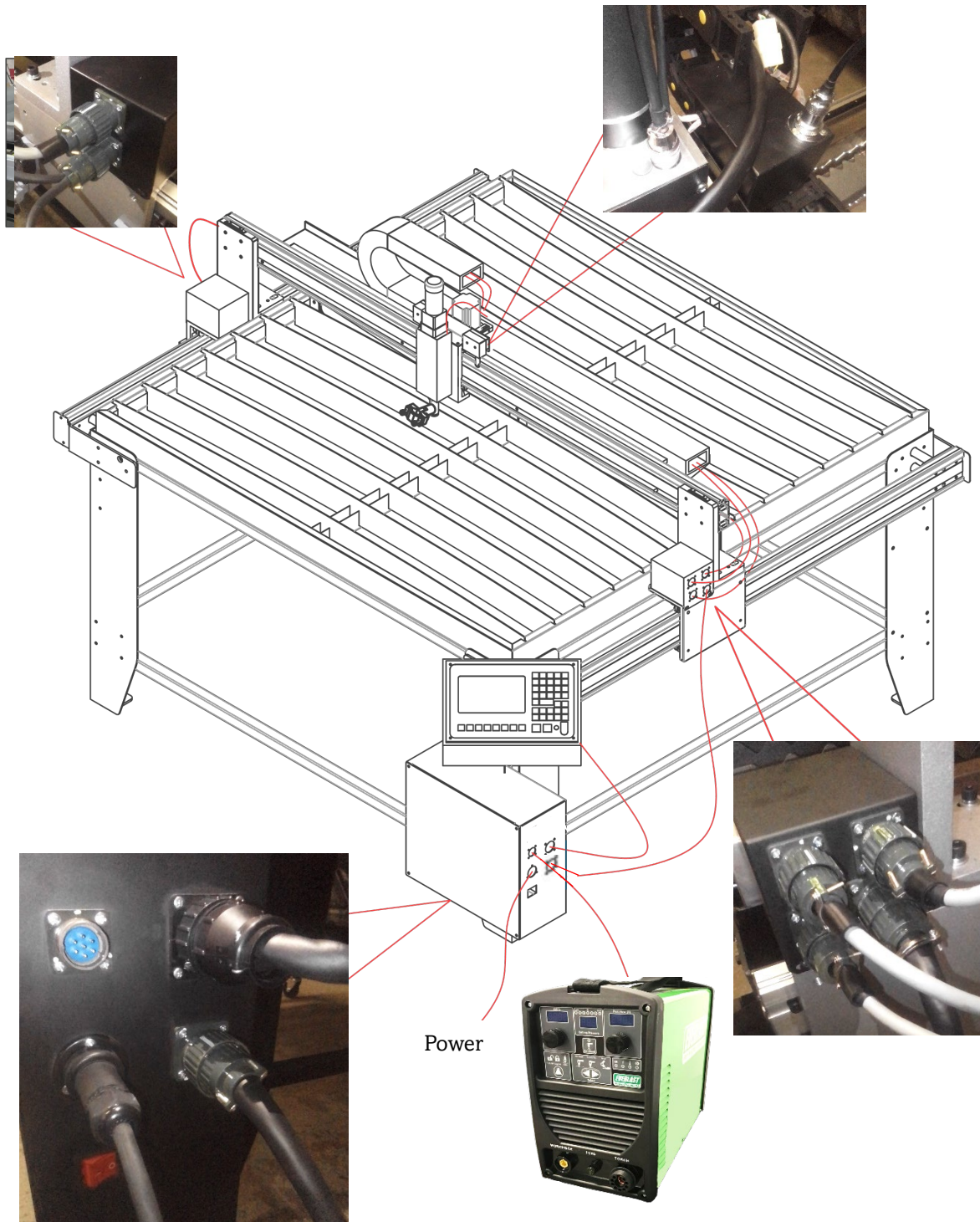


39

1x



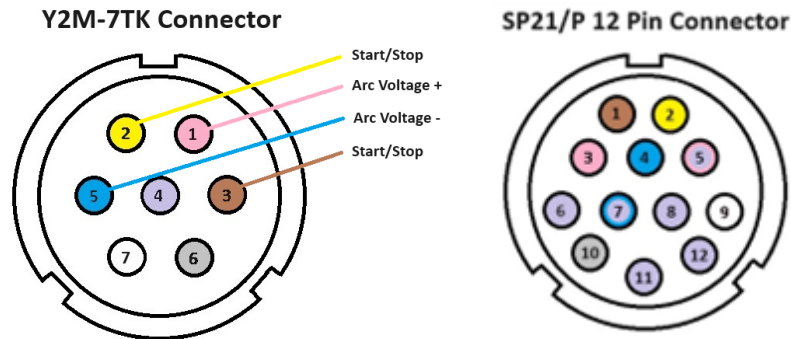
7-1 Electrical connection diagram



Basic Setup of the 4'x4' CNC Plasma Table

8-1: CNC Connector Pin-Out

STOP! If your Plasma Cutter control cable comes with the SP21 Connector pre-installed, you can skip to Step 9. If Stakon connection were provided you will need to connect them to the appropriate location on your plasma cutter.



Y2M-7TK to Stakon

Arc Start/Stop

- Pins 2 (yellow) and 3 (brown) activates the plasma cutter to start an arc

Arc Voltage

- Pins 1 (pink +) and 5 (blue -) receives the arc voltage from the plasma cutter. The unit is setup as a default to receive a 1:50 arc voltage ratio. But can also be configured to receive raw arc voltage.

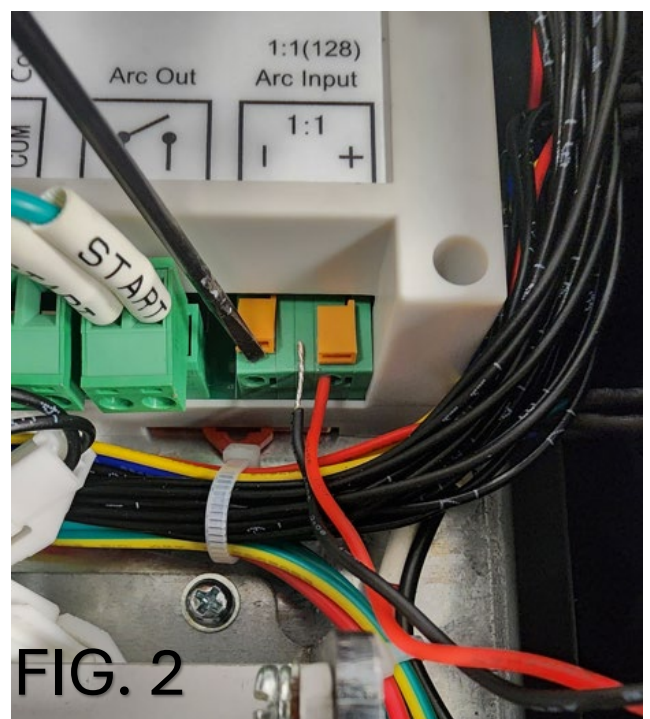
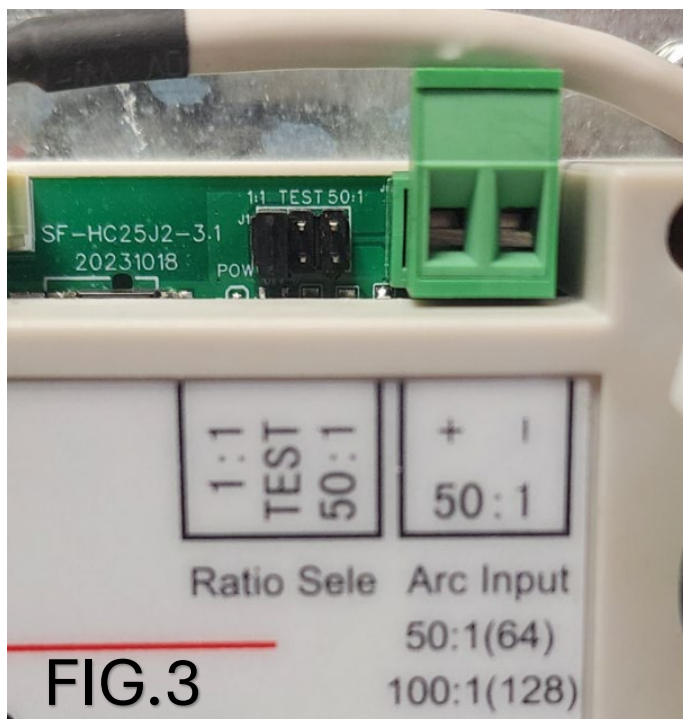
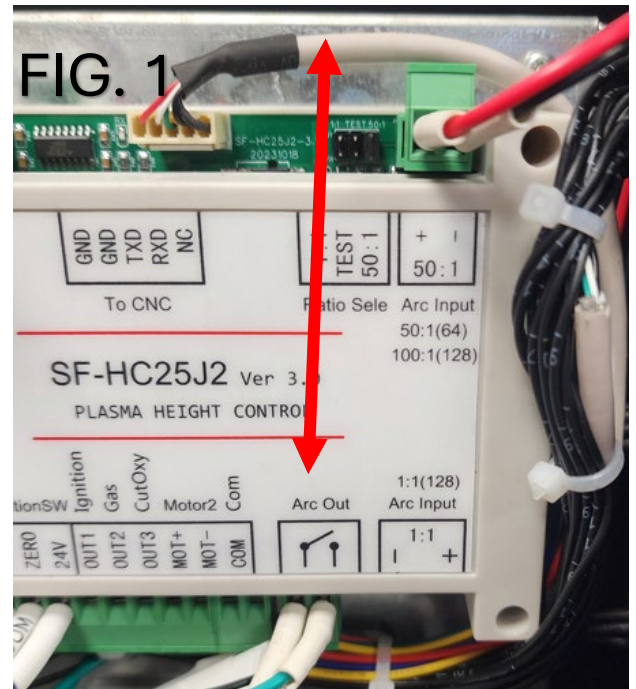
Note: Wires labeled 0V and MOVE are not used on this machine, the wires can be cut off.

- Raw arc voltage cannot be used when using a High Frequency start machine.
- Confirm the polarity of the arc voltage before connecting the CNC
- Your plasma cutters trigger setting will need to be set to 2T, unlock or CNC mode

8-2: Switching the THC to Receive Raw Arc Voltage

STOP! If your Plasma Cutter control cable comes with the SP21 Connector pre-installed, you can skip to Step 9. If your plasma cutter does not have the required Divided Arc Voltage, please proceed with this step.

- Using a 2.5mm Allen key, open the Control Box and locate the plasma height controller.
- Locate and remove the wires from 50:1 Arc Input and install them into the 1:1 Arc Input connection (FIG.1).
- It will help to tin the wire with a soldering iron when inserting the wire into the connector (FIG. 2).
- Locate *Ratio Sele* then move the jumper on the Ratio Selection from 50:1 to 1:1 (FIG. 3).



9-1: Running the Torch through the Drag Chains



Figure A

Step 1:

You will need to lay out the Drag Chain to help run the torch through. First, move the carriage over to the right end. Second, disconnect the two connectors, coming out of the Drag Chain, from the Right X-Axis End Assembly (Figure A).

Then locate your 4mm Allen key and find the bottom end of the Drag

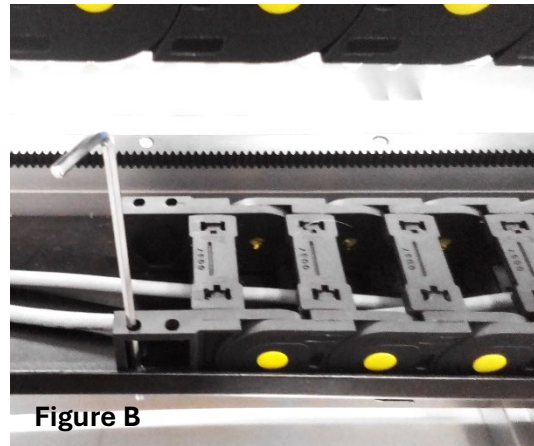


Figure B

Chain. You will find a pair of holes there through which you can access a pair of bolts with your Allen key (Figure B). Remove them and set them aside.



Figure C

Step 2:

Gently slide the bottom of the Drag Chain towards the left side of the CNC Table, straightening out the Drag Chain as you go (Figure C). Be sure to avoid catching the two cables inside the Chain on anything.

Step 3:

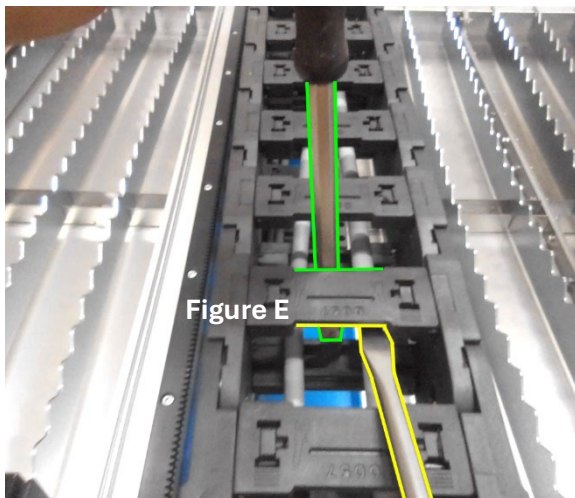
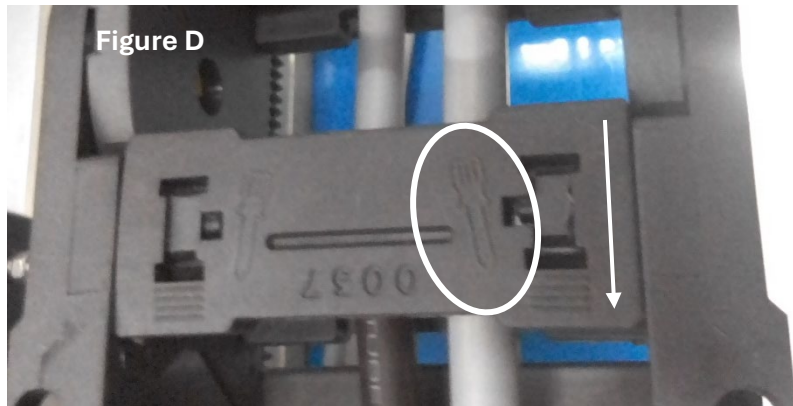
Either run the torch through the track by opening the Drag Chain and laying the torch in the open track (9-2) or by removing the Euro Connection and feeding it through (9-3).



9-2: Running the Torch through the Drag Chain: X-Axis

Remove each of the track clips from the Drag Chain and set them aside.

On the clip you wish to remove, first locate the two flathead screwdriver icons that will indicate the front side of the clip that will need to be lifted. (Figure D).

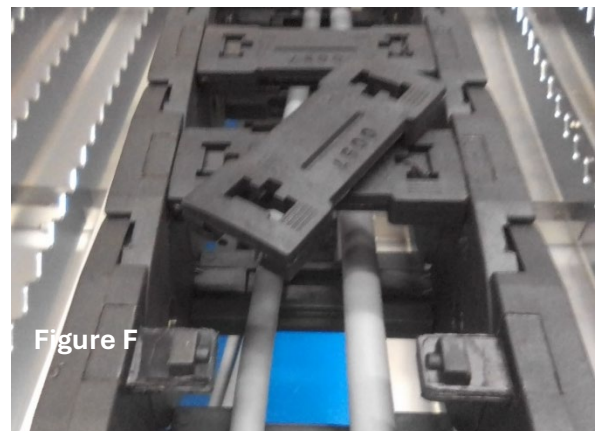


Using one screwdriver at the back of the clip, apply forward pressure, and pry up on the front of the clip with the second screwdriver. (Figure E).

Do not pry up close to the edges of the clip, keep your screw drivers in the center indented portion.

Repeat the process with every track clip on one side of the chain. Lay the torch cables in position. Re-install all of the track clips.

Once the torch cable is seated in the Drag Chain, shift the Drag Chain back into its original position. Bolt it back into place using the bolts you set aside in 9-1.



9-3: Running the Torch through the Drag Chain: Alternate

Consult with Halo's Technicians for how to properly remove the Euro connection from your plasma torch so that you can run it through the Drag Chains without removing the upper links in each Drag Chain.

9-4: Mounting the Plasma Torch



The mount that comes installed on the table designed for a hand torch. When installing a hand torch, be sure to place the torch head as deep into the mount as possible. Depending on the style of torch, you may lose several inches of travel along the X-Axis (left-right).

If using a CNC torch, be sure to install the torch extension arm in order to allow for a better mounting position.



Mounting the Plasma Torch:

1. Loosen the screws on the torch clamp using the 5mm Allen key.
2. If needed, use the arrow keys to move the torch over a slat or workpiece. Adjust the THC Motor all the way up by holding the S↑ key.
3. Install the Plasma Torch so it has a minimum of $\frac{3}{4}$ " (20mm) clearance over the workpiece. The torch tip should be installed at a 90° angle to your workpiece. *Fasten the torch clamp securely, but do not over-tighten.*
4. You may need to make adjustments to the bolts holding the torch clamp in order to have the torch angled correctly. **Bolt A** requires a 6mm Allen key to loosen it and will allow you to rotate the torch clamp. **Bolt B** requires a 5mm Allen key to loosen it, which will allow you to angle the torch downwards or upwards.
5. Adjust **Bolt A** and **B** till the torch tip is square with the workpiece.

