

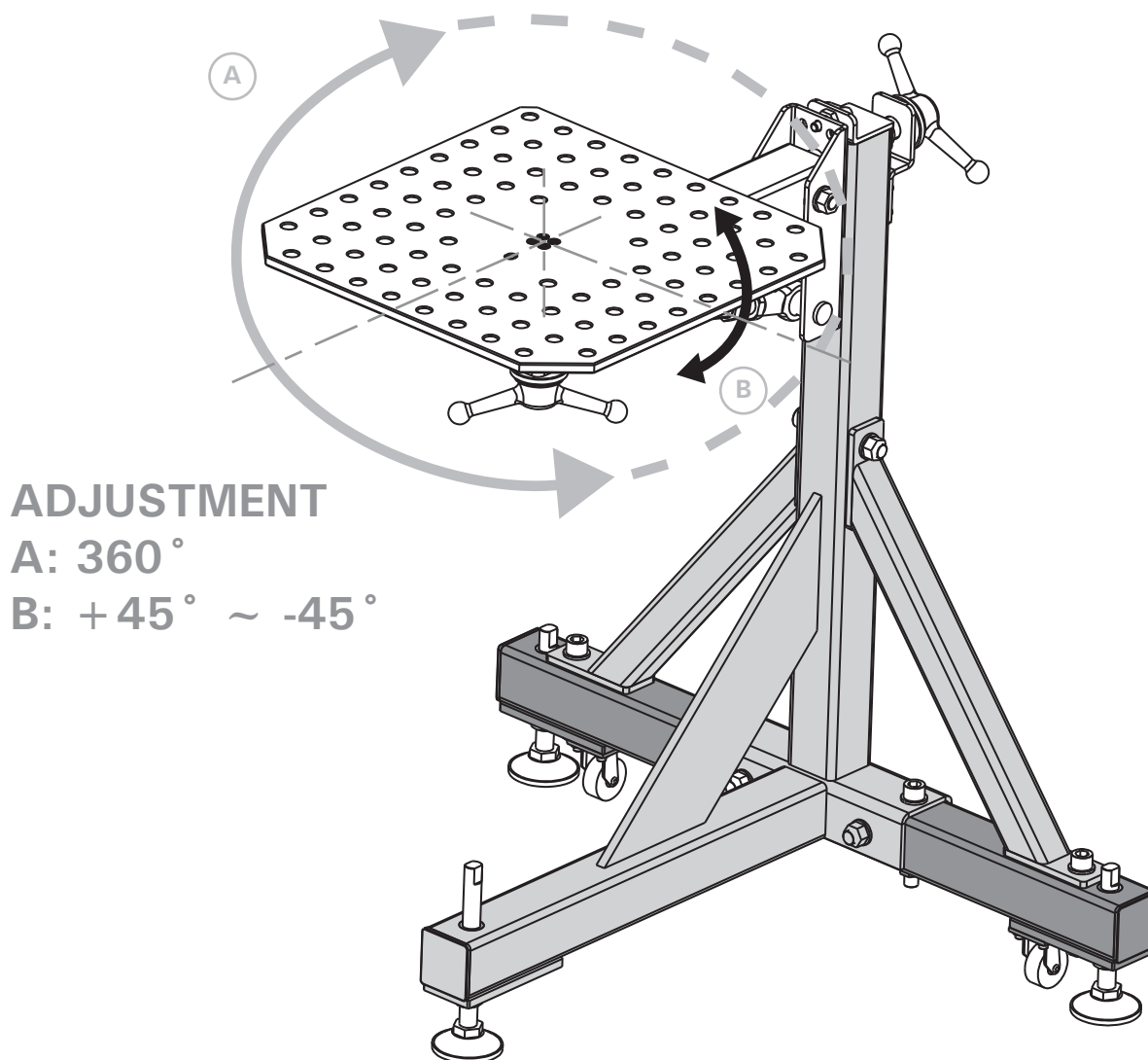
ASSEMBLY INSTRUCTIONS



MANIPULATOR (P/N: TU52020)

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ADJUSTMENT

A: 360°

B: +45° ~ -45°

Specifications:

Part No.	Tabletop Size	Tabletop Thickness	Hole Diameter	Grid Pattern	Load Capacity	Weight
TU52020	20" x 20" (508 x 508 mm)	0.472" (12 mm)	0.625" (15.88 mm)	2" x 2" (50.8 x 50.8 mm)	110 LBS (50 kg)	170 LBS (77 kg)

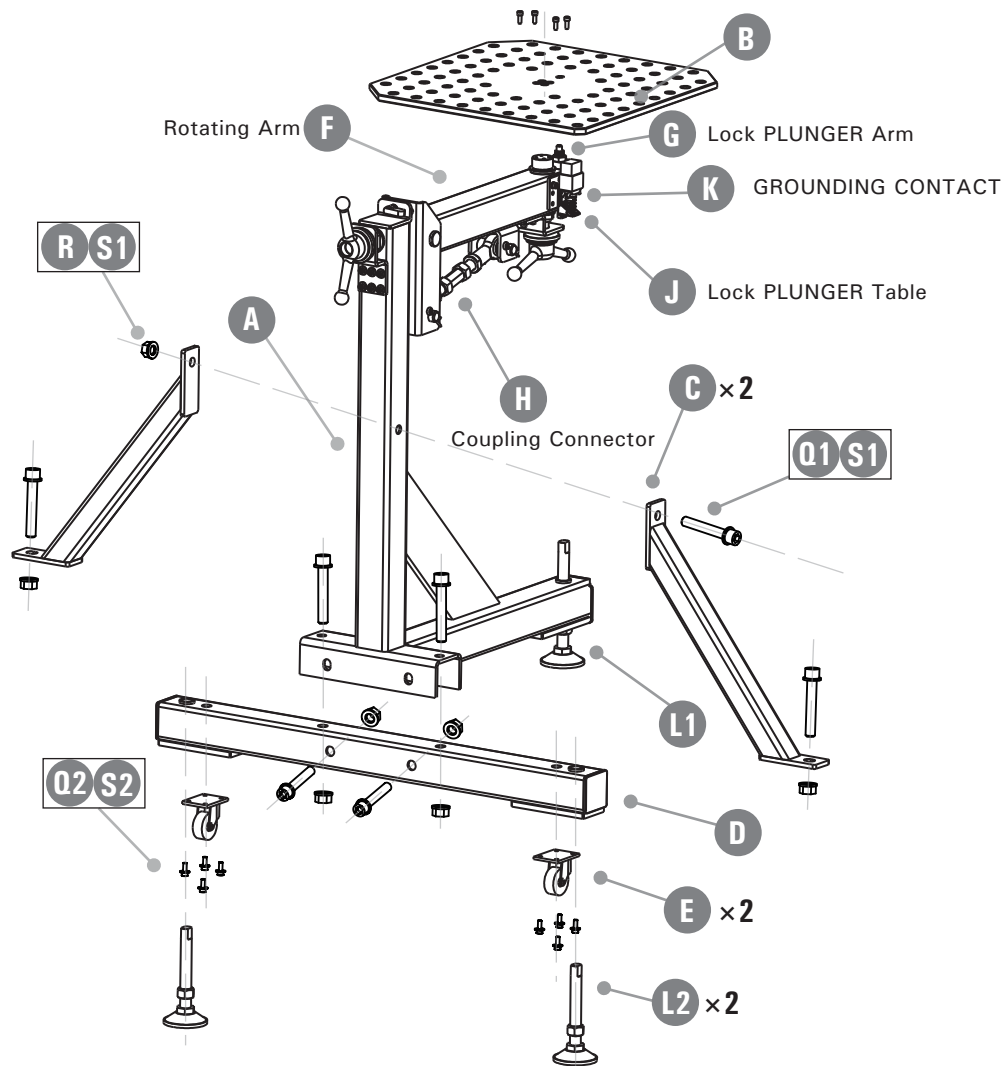
Parts List

MANIPULATOR
P/N: TU52020

- » **Carefully unpack all parts and components and compare to the Parts List inventory below. Read all assembly instructions before beginning to assemble your Manipulator.**

No.	Item	Qty	No.	Item	Qty
A	Main Farm	1	(K)	GROUNDING CONTACT	1
B	Table Top	1	L1	LONGER Leveler	1
C	Support	2	L2	Shorter Levelers	2
D	Cross Beams	1	Q1	Socket Head Cap Screws M16 x 110	9
E	Casters	2	Q2	XSocket Head Cap Screws M6 x 16	14
(F)	Rotating Arm	1	R	Hex Nuts M16	9
(G)	Lock PLUNGER Arm	1	S1	Washers Ø16	16
(H)	Coupling Connector	1	S2	Washers Ø6	10
(J)	Lock PLUNGER Table	1			

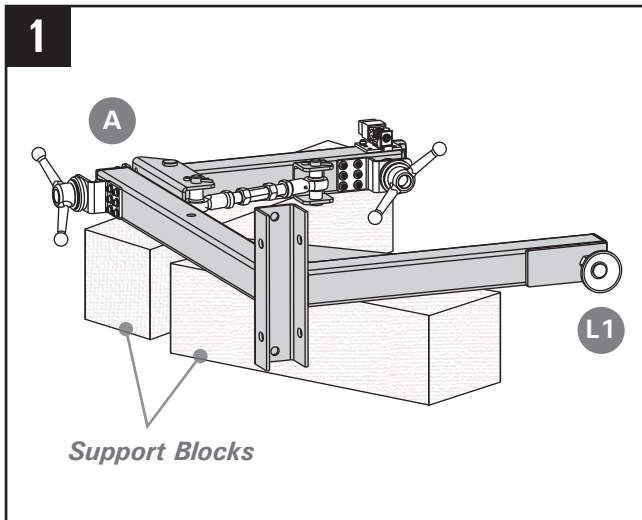
Remark: parts in parenthesis are pre-assembled, need adjustments.



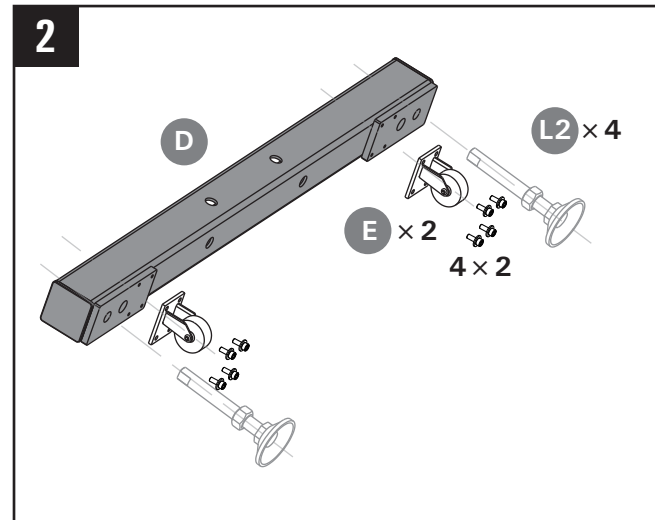
Assembly Instructions

MANIPULATOR
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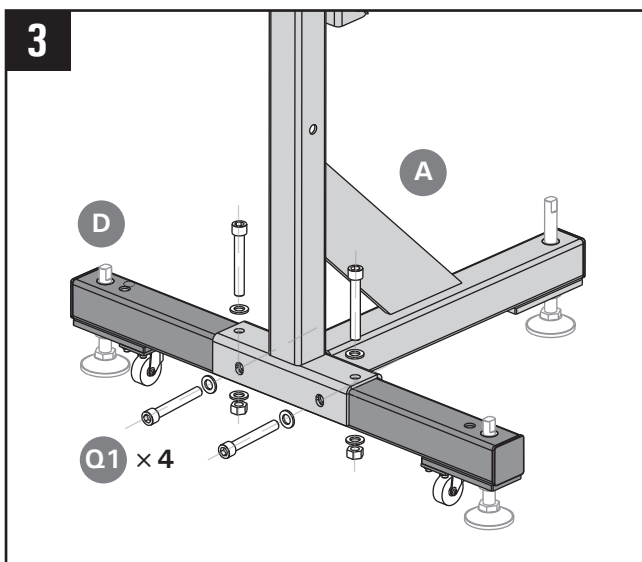
» Tools needed: M6/M16 Allen wrench, hex wrench, pliers and screw driver.



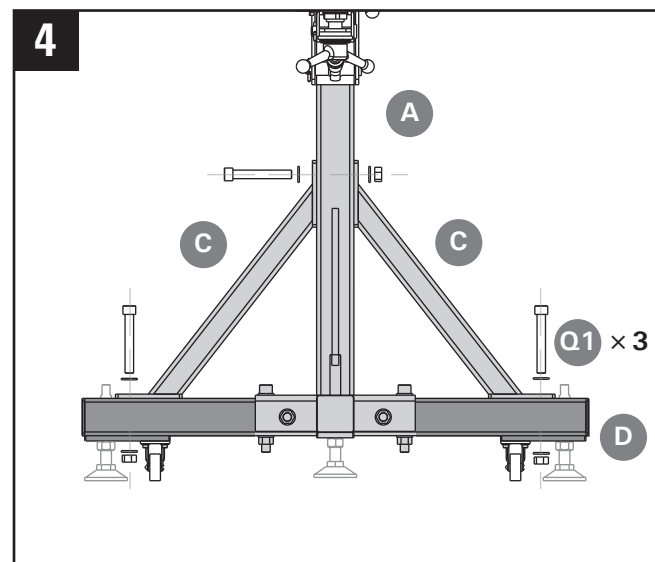
Place the main frame **A** on some support block or table edge. Make sure the parts are stable. Assemble the LONGER leveler **L1**.



Assemble two casters **E** with 8 small fasteners sets onto the cross beam **D**. Screw in the two shorter levelers **L2**.



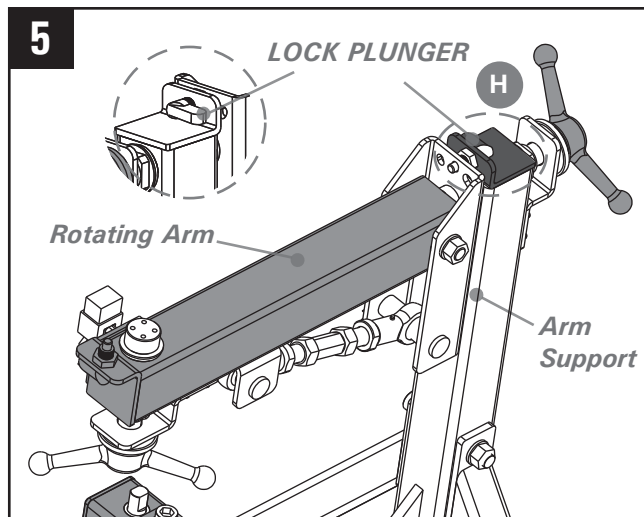
Assemble the Cross beam **D** to the main frame **A** with four larger/longer fastener set. Tighten the fasteners after they are fully aligned. A helper may be needed for safety.



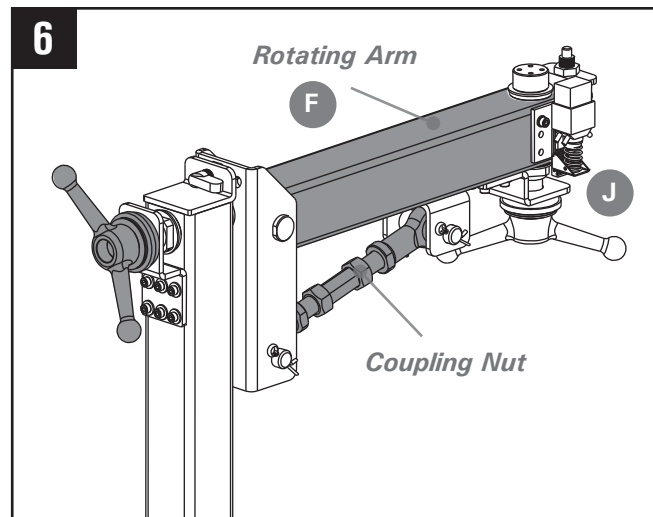
Connect the two side support **C** to the main frame Assembly **A + D** with three larger/longer fasteners. Tighten all fasteners.

Assembly Instructions

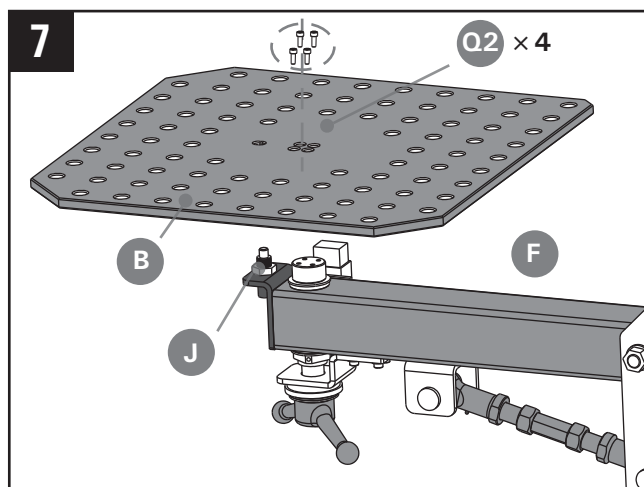
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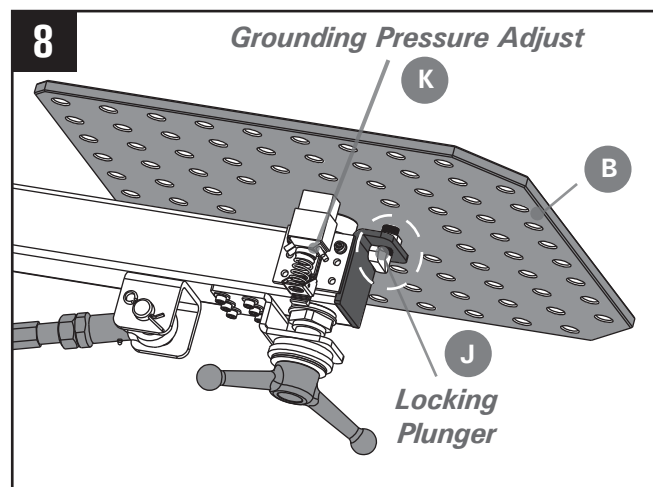
IMPORTANT: To prevent the table top flip, the rotating arm should be LOCKED with the PLUNGER (H) before installing the heavy top plate.



First level the frame base with the three levelers on the ground. Then level the Rotating Arm (F) by turning the coupling connector (J).



Heavy part - may need another person's help. Assemble the steel table top (B) with four small fasteners.



The turn table (B) should be locked with PLUNGER (J) engaged, after the top is installed. Adjust the GROUNDING CONTACT (K) pressure with spring position setting.

Maintenance

Keep the universal manipulator clean for optimal performance. Wipe away dust and debris from the tabletop and legs.

Safety

ALWAYS wear safety goggles, gloves, and other appropriate safety items for protection. Use the universal manipulator only for its intended purpose. NEVER stand on the universal manipulator. Before finishing debugging, the rotating base must be locked.

Limited Warranty

Each STRONG HAND TOOL® product is warranted to be free from defects in material and workmanship. Return to place of purchase for a replacement if warranty applies.