



S4 Series Belt Sanders Instruction Manual

Covers S4, S4S, and S4SV – 4" x 36" Belt Sanders

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GENERAL POWER TOOL SAFETY WARNINGS



WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN, LIQUID, OR MOISTURE.

READ AND SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

PRECAUTIONS

- Always wear safety glasses when operating power tools.
- Keep work area clean and well lit.
- Do not operate power tools in explosive atmospheres, such as the presence of flammable liquids, gases or dust.
- Keep children and bystanders away while operating a power tool.
- Keep long hair tied back or covered and never wear loose fitting clothing near a running machine.
- Additional precautions may be necessary when grinding materials that are flammable or have other hazardous properties. Consult manufacturer of materials for safe grinding and handling.

OPERATING INSTRUCTIONS

- Disconnect power before making any adjustments
 - Abrasive belt rotation is counterclockwise. If the abrasive belt is lap spliced, be sure of correct rotation. Butt spliced belts are bi-directional.
 - Belt tension is pre-set with tension spring (7) No belt tension adjustment is needed.
 - Belt Changing – Disconnect power. Open box guard (20). Squeeze the sanding belt to compress the spring and lower the tension shaft. While still squeezing the belt, flip cam (12) parallel. Remove and replace the belt.
 - Belt tracking - With power disconnected, rotate the belt by hand to center it. Loosen hex nut (9) and adjust tracking bolt (8) in or out to track the belt. Re-tighten hex nut (9) to lock the setting. Close box guard (20) and reconnect power.
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- Examine the abrasive belt carefully before use. Never use an abrasive belt with a nicked or cut edge, crease, or handling damage.
 - If using a dust collector, be sure to empty the dust collector and clean or replace the filter frequently to maintain efficiency and reduce the risk of combustible material buildup.

S4S Belt Sander — Belt Tracking Checklist

Tools & PPE

- Two 1/4" wrenches (for the tracking bolt and jam nut)
- Brush and clean rags
- Replacement sanding belts (from a different box/lot)
- Replacement tension spring (on hand, if needed)
- Basic hand tools as required
- PPE: safety glasses, gloves

Before You Start (Quick Checks)

- Power off/lockout machine before adjustments.
- Verify belt is the correct size/spec.
- Inspect for obvious belt damage or splice issues.

Pulley Geometry Reference:

- Top pulley: flat
- Bottom pulley: slight center crown with tapered sides

If the lower pulley is flat, it must be replaced.

Rule out a bad belt

- Swap to a new sanding belt from a different box.
- Note: poor splice/glue can cause persistent mis-tracking.

Inspect the tracking bolt and jam nut

- Check if the tracking bolt and nut are secure.
- If loose: back the bolt in or out to re-track the belt.
- Hold the hex bolt steady with one 1/4" wrench and tighten the nut with the other so the bolt position doesn't move.

Clean the tension system thoroughly

- Clean the tension shaft and surrounding area thoroughly (remove dust/grit).
- After cleaning, re-track the belt and test.

Verify full extension of yoke & tension shaft

- With the belt removed, check that the yoke and tension shaft fully extend.
- If they don't extend fully: clean the tension shaft again and recheck.
- If still not extending: replace the tension spring.

Check motion of the tension shaft & yoke

- Confirm they move only up and down.
- If motion in any other direction: replace the frame.

Inspect pulley condition and profile

- **Top pulley:** verify it is flat (no crown).
- **Bottom pulley:** verify a slight center crown with tapered sides.
- **Note:** *If the lower pulley is flat or its crown/taper is worn: replace the lower pulley.*

S4S Belt Sander — Belt Tracking Checklist Continued

Final tracking & test

- Refit belt and apply proper tension.
- Make small tracking adjustments using the tracking bolt.
- Run to speed and observe: belt stays centered, no drift during light load.

Troubleshooting At-A-Glance

- Belt won't stay centered even after adjustment:
- Try a belt from a different box; inspect pulley crown; clean tension shaft; verify full extension; consider tension spring replacement.

Tracking changes when tightening nut:

- Use two 1/4" wrenches so the bolt doesn't turn while securing.

Erratic belt movement:

- Ensure yoke/shaft move only vertically; other motion indicates frame replacement is needed.

Replace-If Conditions

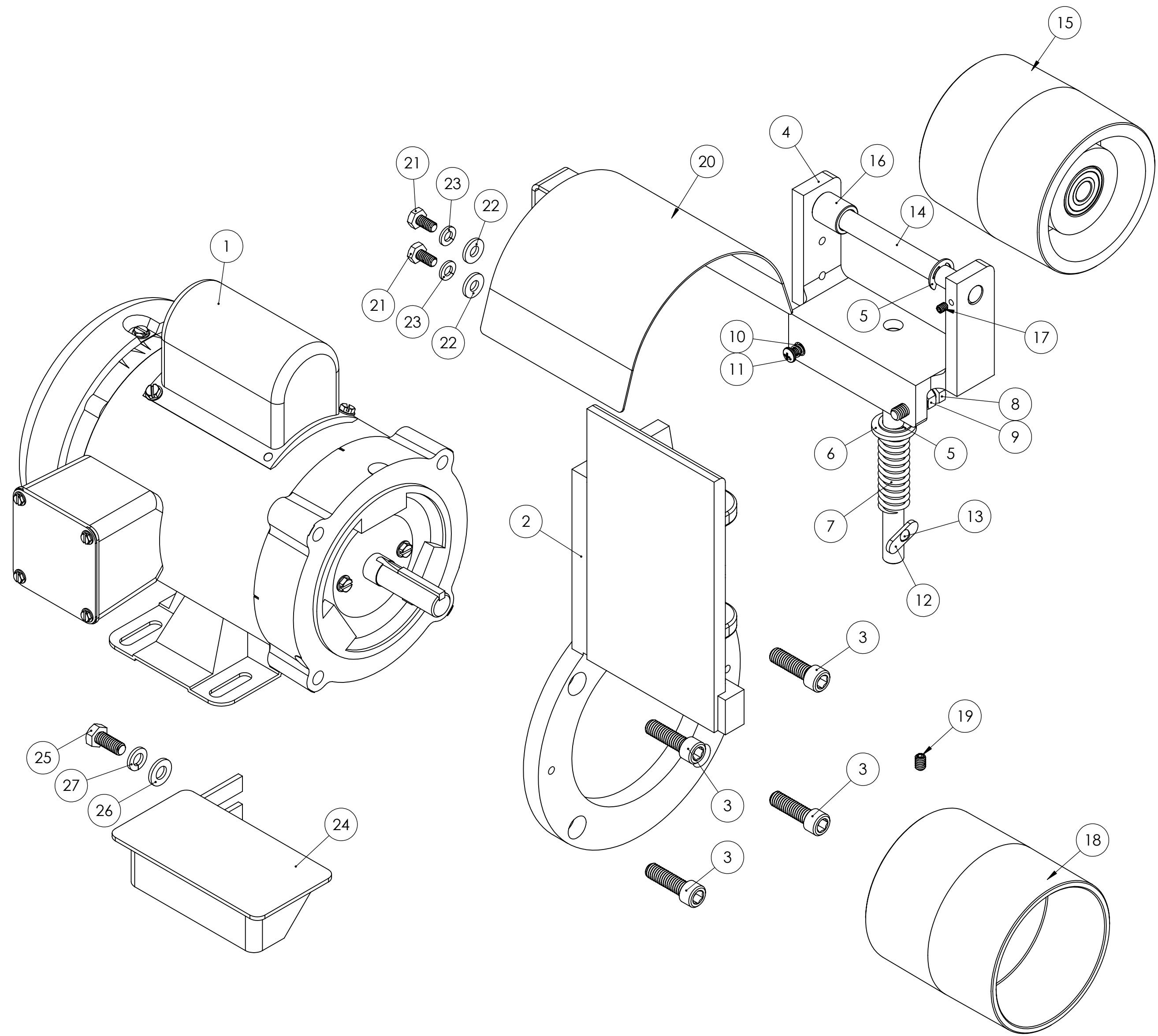
- Lower pulley flat or crown worn — Replace pulley
- Tension spring won't maintain extension after cleaning — Replace spring
- Frame allows non-vertical motion of yoke/shaft — Replace frame

WARRANTY: All products are guaranteed for a period of one year to the original purchaser, against defects in material workmanship under normal use. Exclusions may apply.

RETURN POLICY: Authorization must be obtained BEFORE returning merchandise. Contact our customer service department at 269-382-2050 for a return authorization number. Include with your return a copy of your invoice or packing slip. Materials must be sent back prepaid unless otherwise indicated. All returns will be subject to a 10% restocking charge. No returns will be accepted after one year of the invoice date.

BELT SANDER SAFETY:

- 1) Read the operating instructions before running machine.
- 2) Always wear safety glasses or a full-face shield for protection.
- 3) Keep hands clear of the sanding area.
- 4) Never wear gloves or loose-fitting clothing when operating this machine.
- 5) Always keep hair tied back or covered.
- 6) Let machine rotation come to a full stop before changing belt.
- 7) Keep Safety guards in place. Do not alter guards or machine in any way. Any alterations to guards or machine could cause serious injury.
- 8) All belt sanders should be operated in a well-ventilated area. The dust created when some materials are sanded can be harmful. Dust masks are recommended as practical means of minimizing dust inhalation. Fumes from other sources can also cause fires when in contact with sanding sparks.
- 9) Sparks created by sanding should be directed downward and away from the face and body. Do not grind near flammable material.
- 10) Electric sanding machines are not intended for use in or near water. This includes an operator standing on a wet floor or working around containers of water or other conductive liquids.



ITEM NO.	PART NUMBER	DESCRIPTION	
1	486-022	1/2HP MOTOR FOR 2FSM, S4S AND S612V VAC MOTOR	1
2	291-002	CAST IRON FRAME WITH PLATEN FOR S4, S4S, DS10-4	1
3	SHCA037020	3/8-16 X 1-1/4 SHCS	4
4	960-002YA	S4, S4S, S4SWB YOKE AND TENSION SHAFT ASSEMBLY	1
5	EERR0.5	EERR1/2 1/2" E RETAINING RING	2
6	SFWZ050	1/2 SAE F/W Z	1
7	697-010	SPRING, TENSION FOR S4 SANDERS	1
8	HHC5031020	5/16-18 X 1-1/4 HHCS GR 5 Z	1
9	FHN5031	5/16-18 FHN GR5 ZINC	1
10	697-011	TRACKING SPRING FOR S4	1
11	CRMZ010024	10-24 X 1-1/2 COMBO ROUND M/S Z	1
12	129-008	CAM FOR S4 TENSION SHAFT	1
13	RUDZ007008	#7 X 1/2 RD U-DRIVE SCREW Z	1
14	701-008	SPINDLE, IDLER FOR S4, S460 SANDERS	1
15	560-006	IDLER PULLEY S4 W BEARINGS FOR S4S AND S460	1
16	123-003	COLLAR FOR S4- SPACER FOR K20 BELT GUARD	1
17	SSKA010004	10-24 X 1/4 SOC SET KNURL PT	1
18	560-005	PULLEY, DRIVE (ALUMINUM) FOR S4, S4S, S460D	1
19	SSKA025006	1/4-20 X 3/8 SOC SET KNURL PT.	1
20	342-005	GUARD, UMBRELLA FOR S4 SANDERS	1
21	HHC5025008	1/4-20 X 1/2 HHCS GR5 Z	2
22	UFWZ025	1/4 USS F/W Z	2
23	SLWZ025	1/4 SPLIT L/W Z	2
24	829-004-REV1	WORK TABLE FOR 2", 4", DS10-4 SANDERS/ REV1	1
25	HHC5031012	5/16-18 X 3/4 HHCS GR5 Z	1
26	UFWZ031	5/16 USS F/W Z	1
27	SLWZ031	5/16 SPLIT L/W Z	1

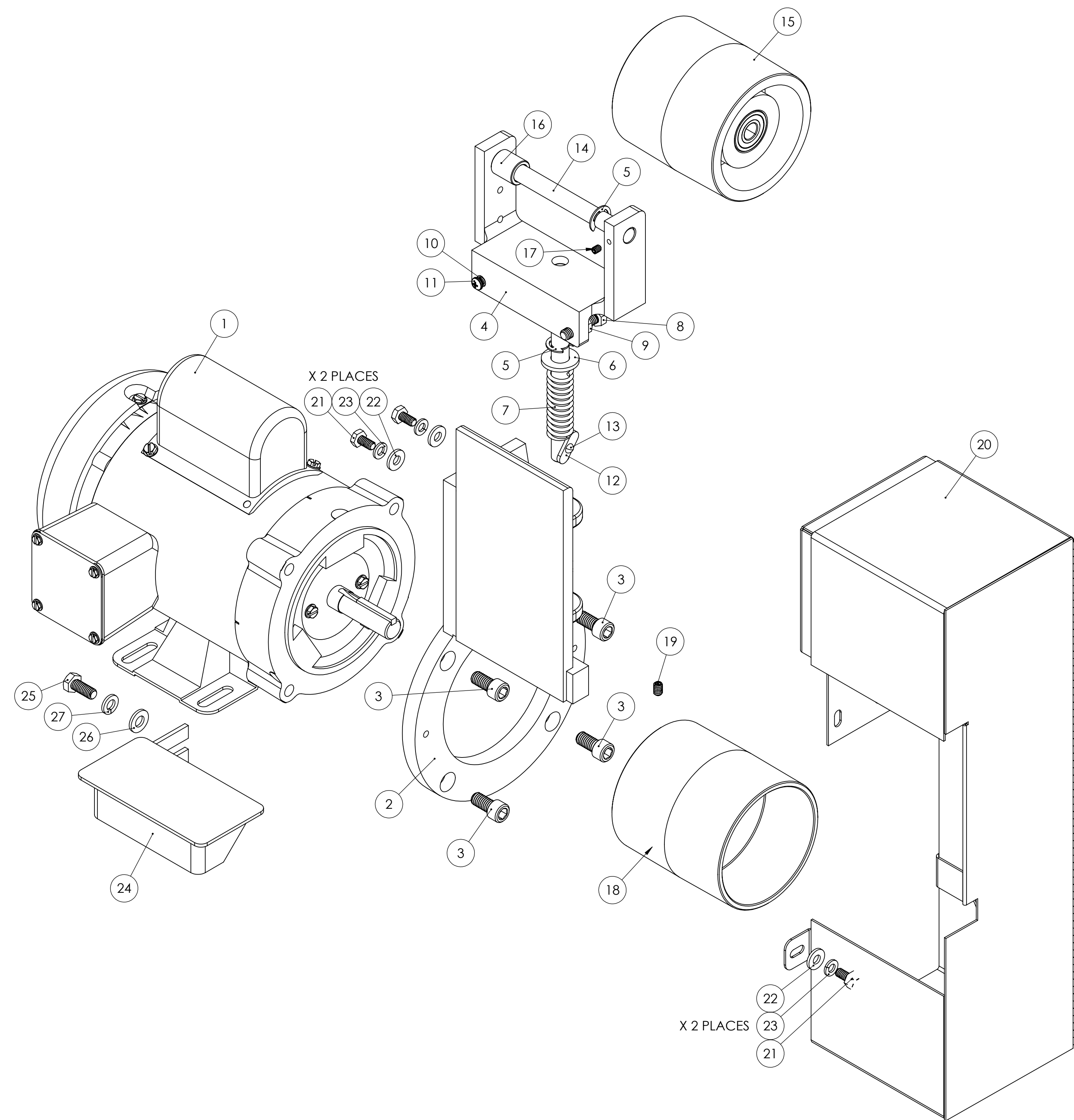
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ANGULAR: MAACH ± BEND ±	MFG APPR.		
TWO PLACE DECIMAL ±			
THREE PLACE DECIMAL ±			
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
MATERIAL	COMMENTS:		
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APPLICATION	DO NOT SCALE DRAWING		

TITLE:
S4 BELT SANDER ASSEMBLY

SIZE DWG. NO. REV
D S4-EXPLODED

SCALE: 1:5 WEIGHT: SHEET 2 OF 2



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
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10	697-011	TRACKING SPRING FOR S4	1
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12	129-008	CAM FOR S4 TENSION SHAFT	1
13	RUDZ007008	#7 X 1/2 RD U-DRIVE SCREW Z	1
14	701-008	SPINDLE, IDLER FOR S4, S460 SANDERS	1
15	560-006	IDLER PULLEY S4 W BEARINGS FOR S4S AND S460	1
16	123-003	COLLAR FOR S4- SPACER FOR K20 BELT GUARD	1
17	SSKA010004	10-24 X 1/4 SOC SET KNURL PT	1
18	560-005	PULLEY, DRIVE (ALUMINUM) FOR S4, S4S, S460D	1
19	SSKA025006	1/4-20 X 3/8 SOC SET KNURL PT.	1
20	342-022	GUARD, OSHA FOR S4S, DS10-4S SANDER	1
21	HHC5025008	1/4-20 X 1/2 HHCS GR5 Z	4
22	UFWZ025	1/4 USS F/W Z	4
23	SLWZ025	1/4 SPLIT L/W Z	4
24	829-004-REV1	WORK TABLE FOR 2", 4", DS10-4 SANDERS/ REV1	1
25	HHC5031012	5/16-18 X 3/4 HHCS GR5 Z	1
26	UFWZ031	5/16 USS F/W Z	1
27	SLWZ031	5/16 SPLIT L/W Z	1

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MATERIAL			
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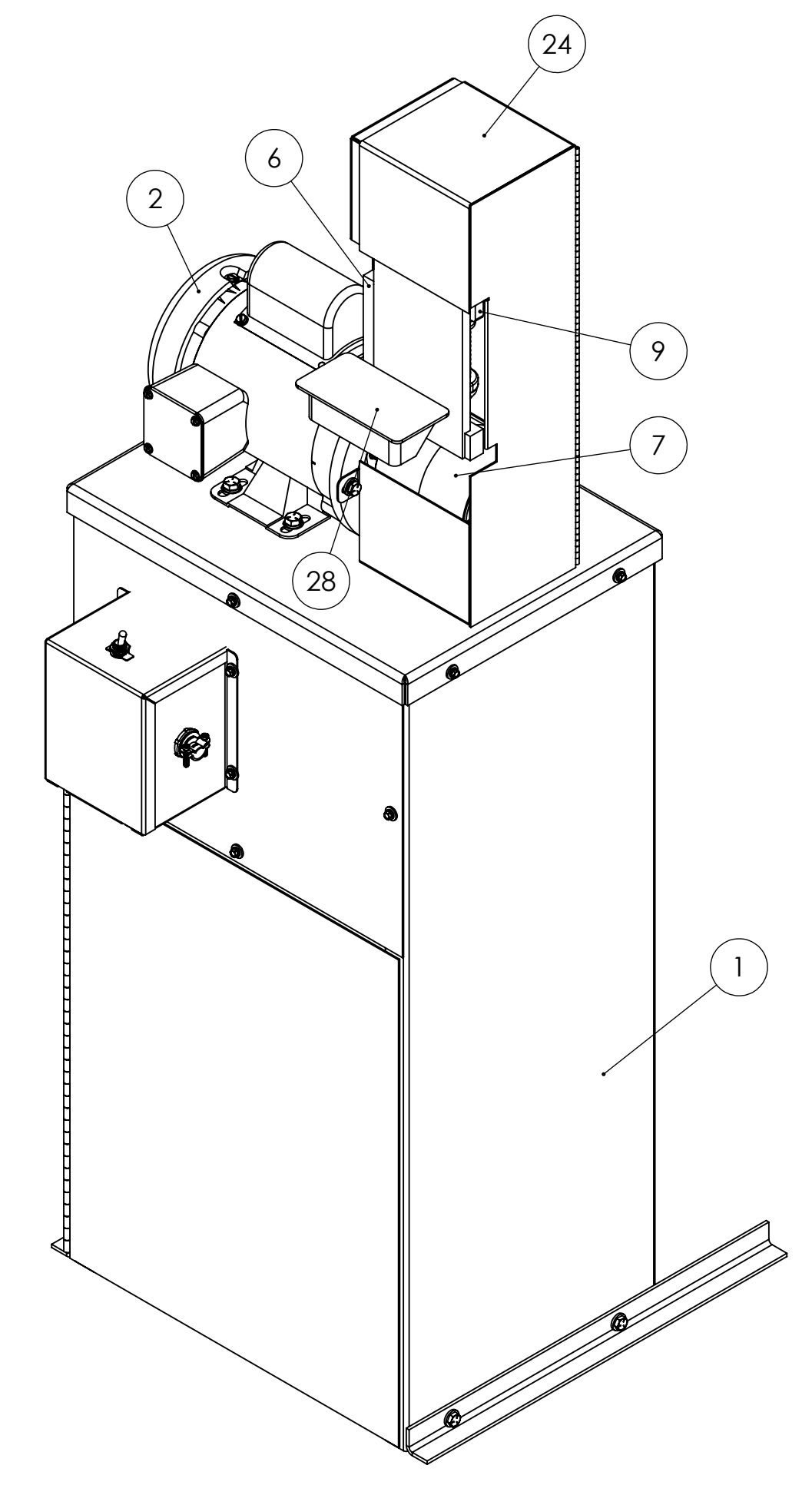
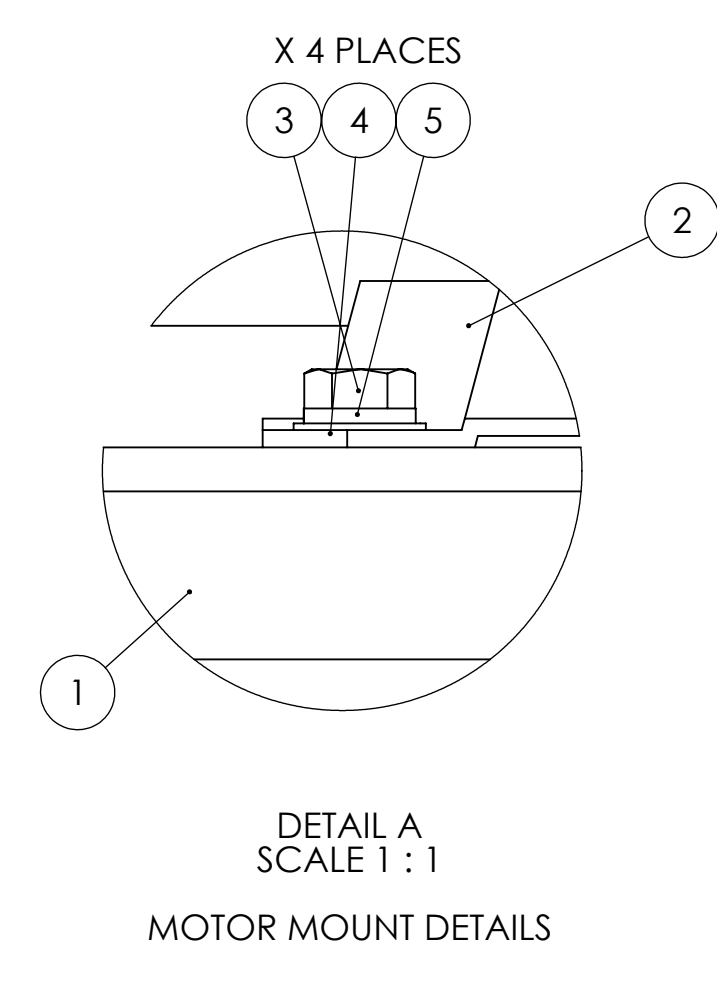
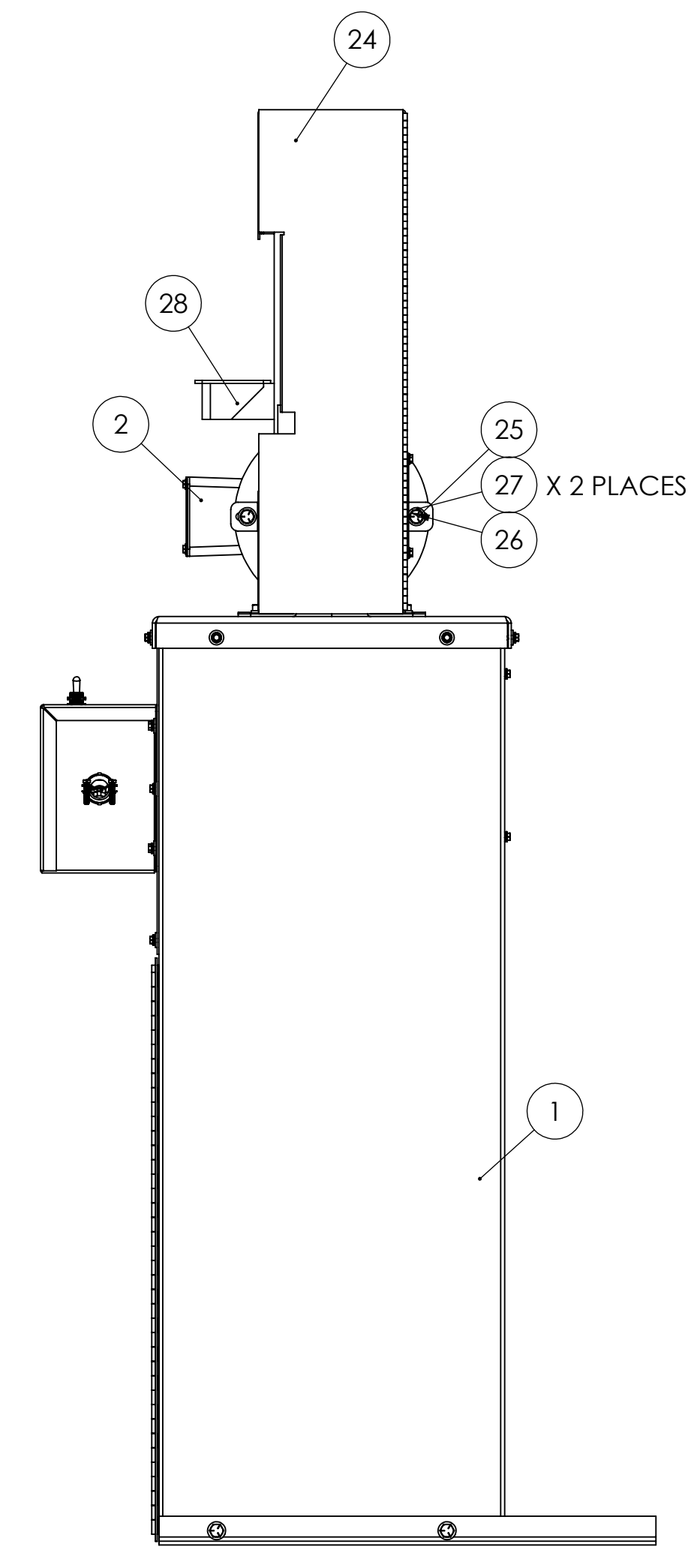
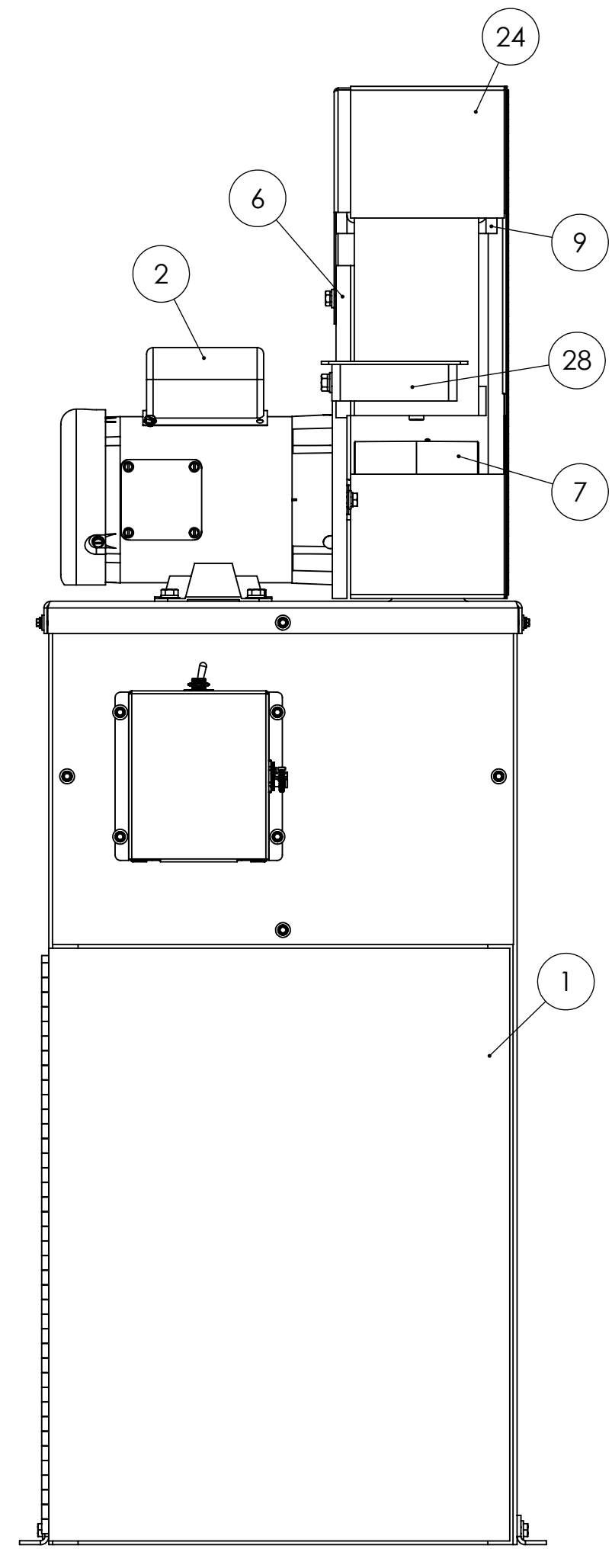
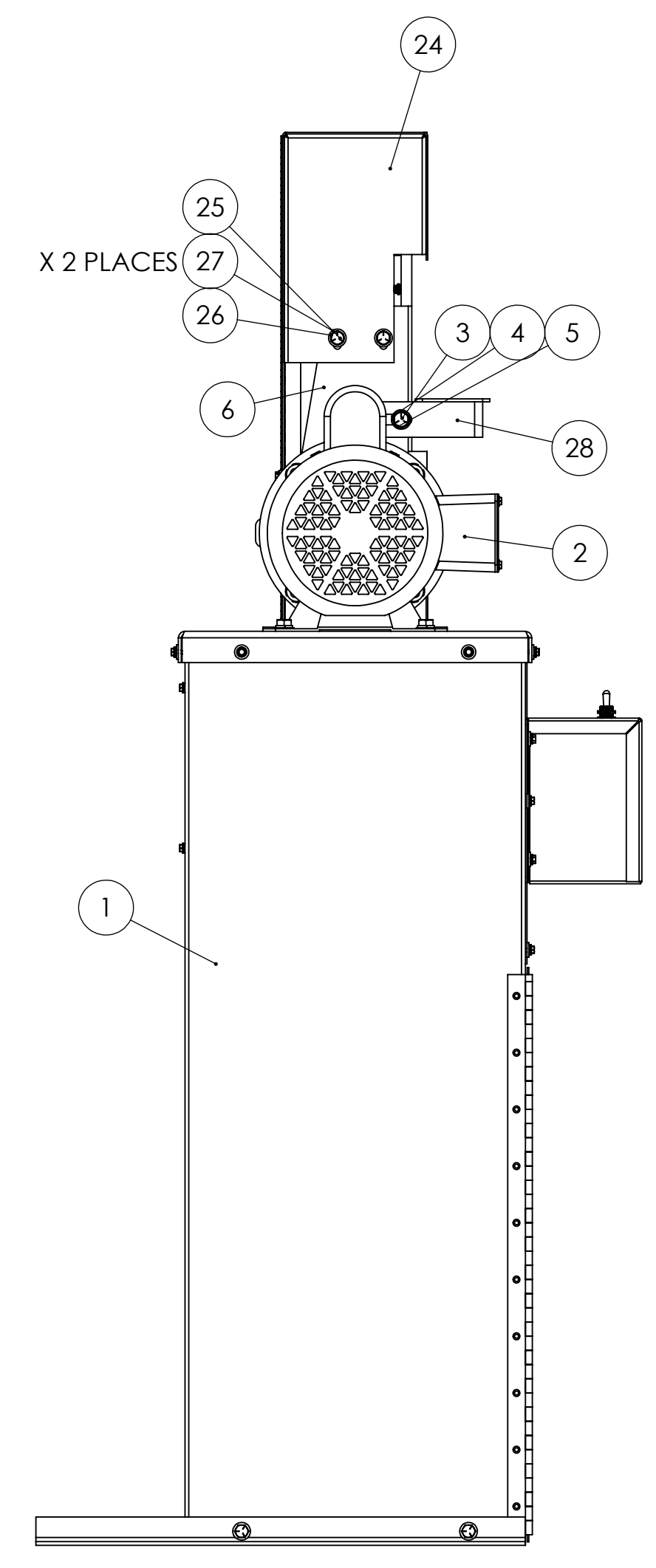
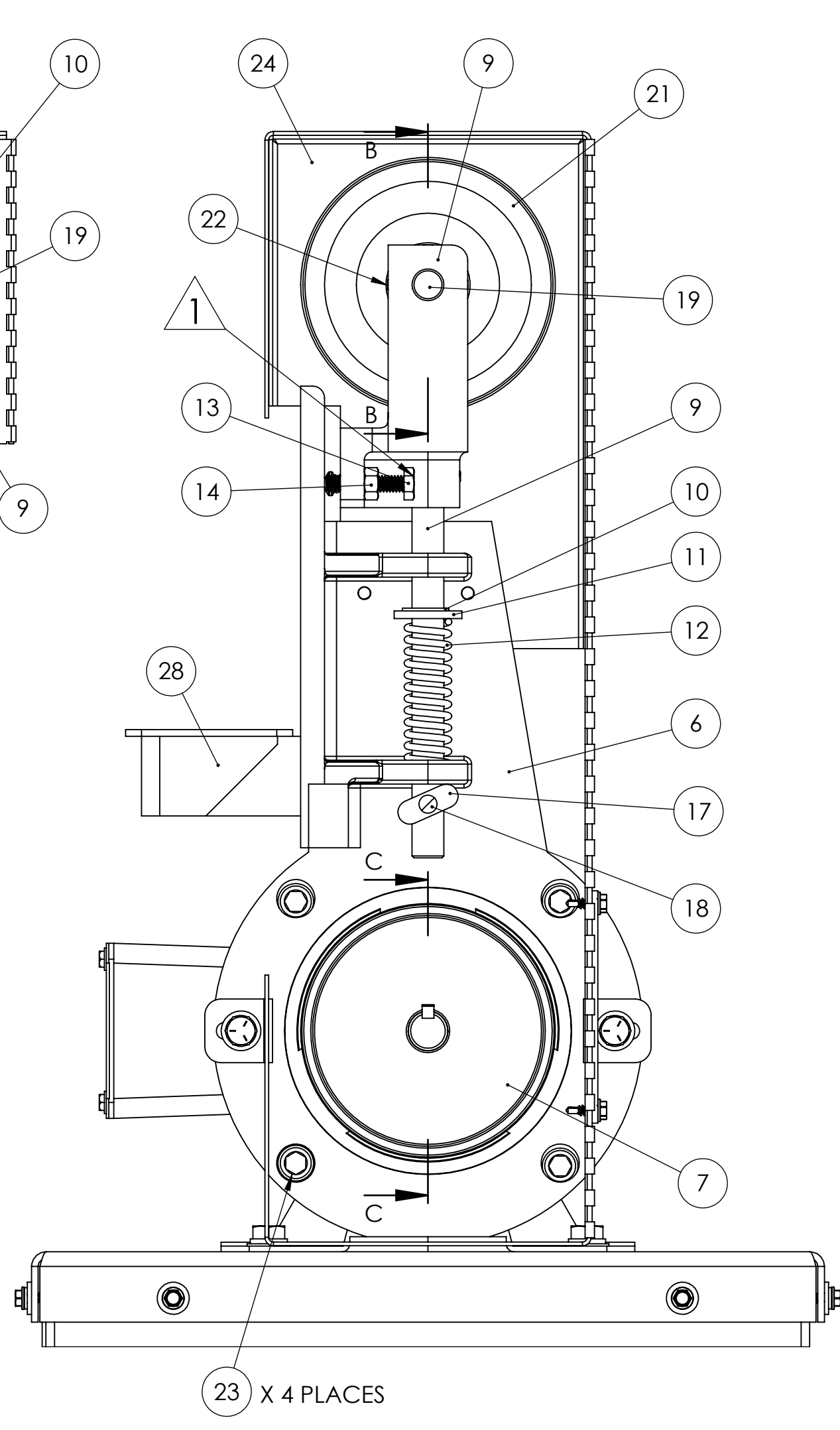
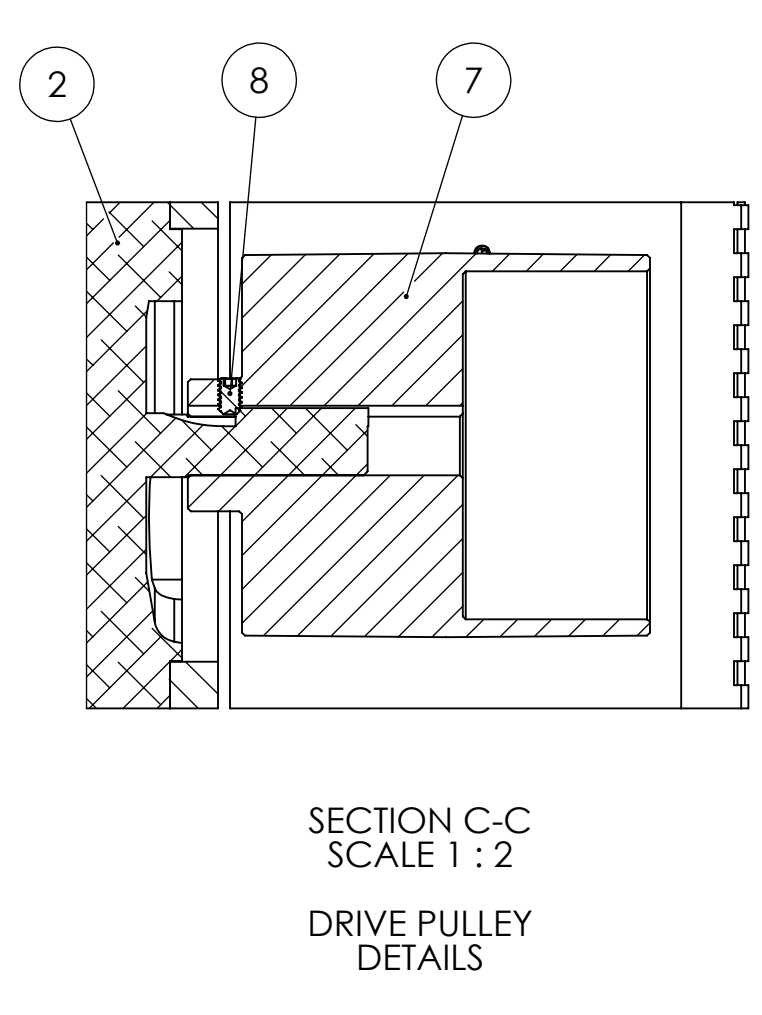
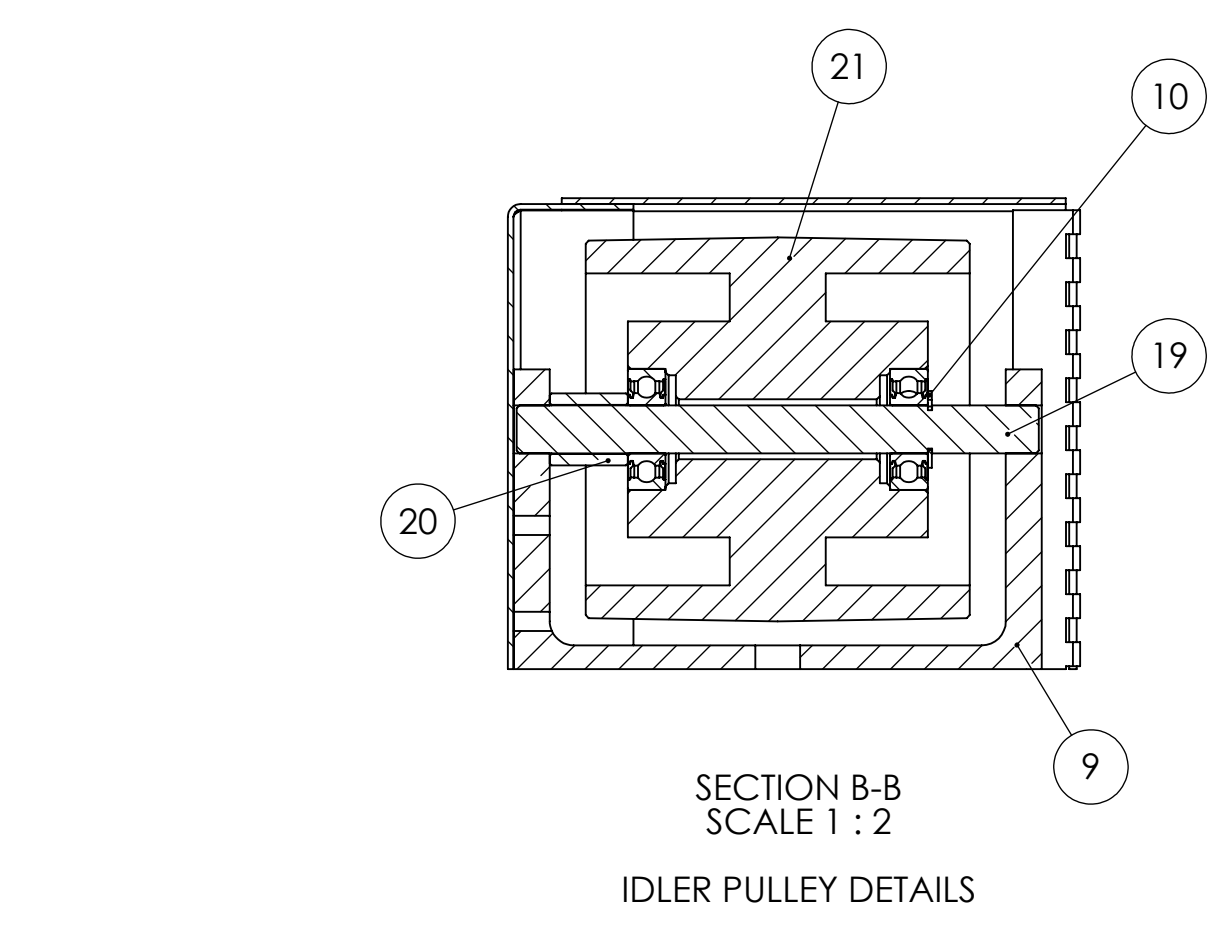
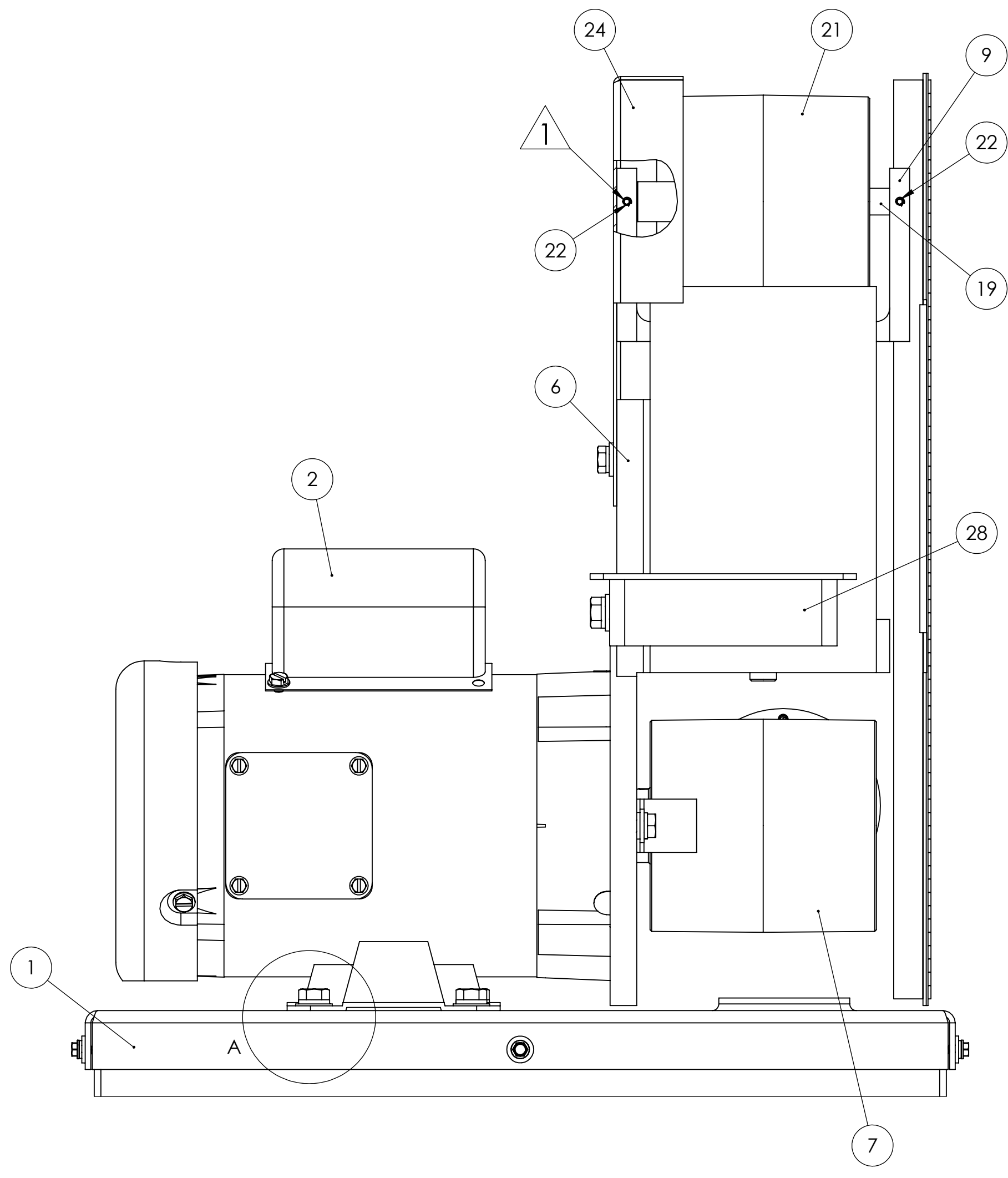
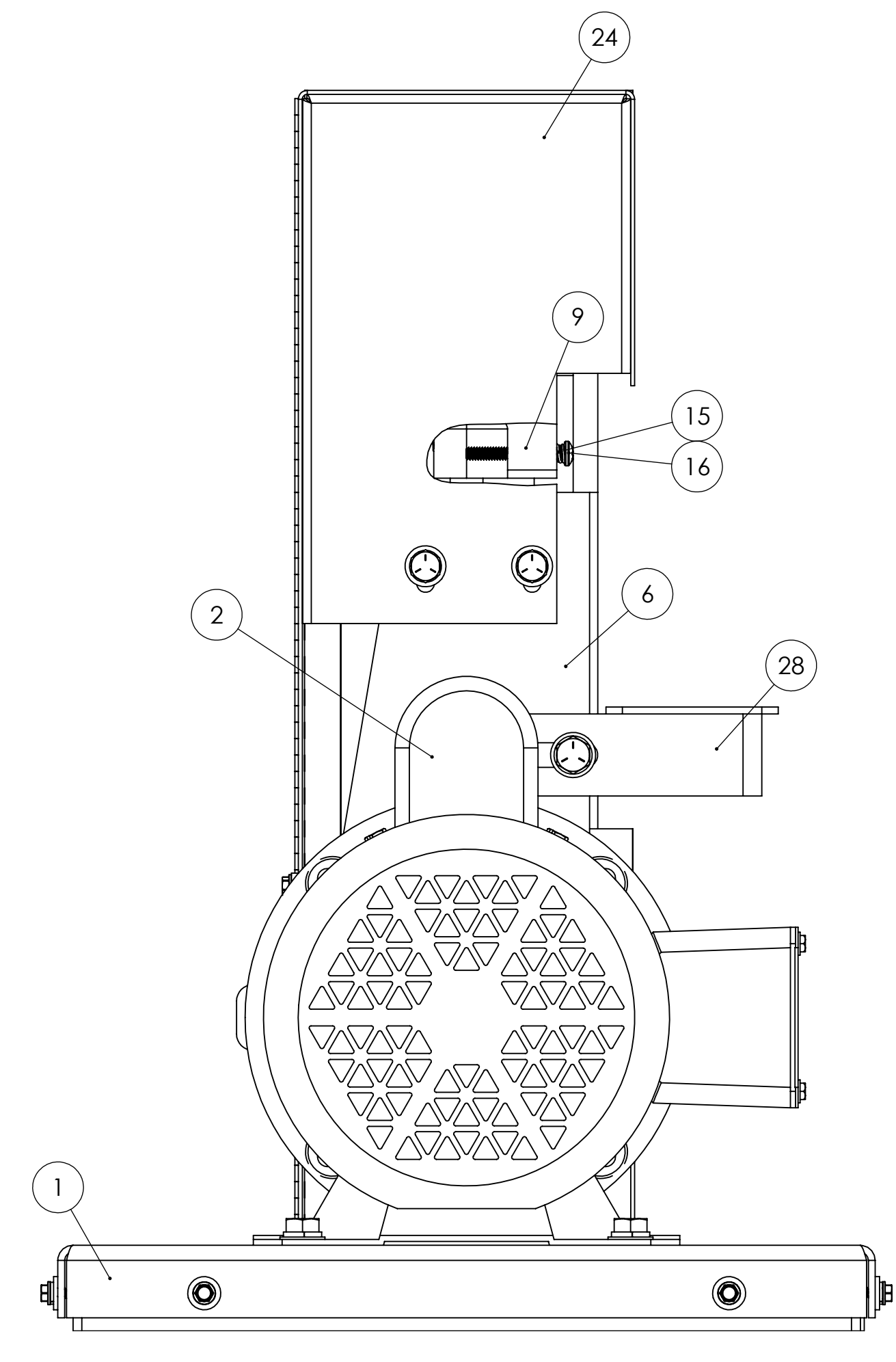
TITLE: **S4S BELT SANDER ASSEMBLY**

SIZE DWG. NO. REV
D S4S-EXPLODED

SCALE: 1:5 WEIGHT: SHEET 2 OF 2

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
G3, G5	1	TAPPED HOLE IN YOKE CHANGED FROM 5/16-18 TO 1/4-20. FASTENERS UPDATED. 10-24 TAPPED HOLE ADDED	3/21/2025	

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	DCV-4(S4SV)	DCV-4 DUST COLLECTOR FOR S4SV APPLICATION	1
2	486-022	1/2HP MOTOR FOR 2FSM, S4S AND S612V VAC. MOTOR	1
3	HHC5031012	5/16-18 X 3/4 HHC5 GR5 Z	5
4	UFWZ031	5/16 USS F/W Z	5
5	SLWZ031	5/16 SPLIT L/W Z	5
6	291-002	CAST IRON FRAME WITH PLATEN FOR S4, S4S, DS10-4	1
7	560-005	PULLEY, DRIVE (ALUMINUM) FOR S4, S4S, S460D	1
8	SSKA025006	1/4-20 X 3/8 SOC SET KNURL PT.	1
9	960-002YA-REV1	S4, S4S, S4SWB YOKE AND TENSION SHAFT ASSEMBLY/ REVISION 1	1
10	EERR0.5	EERR1/2 1/2" E RETAINING RING	2
11	SFWZ050	1/2 SAE F/W Z	1
12	697-010	SPRING, TENSION FOR S4 SANDERS	1
13	HHC5025020	1/4-20 X 1-1/4 HHC5 GR5 Z	1
14	FHN5025	1/4-20 FHN GR5 Z	1
15	697-011	TRACKING SPRING FOR S4	1
16	CRMZ010024	10-24 X 1-1/2 COMBO ROUND M/S Z	1
17	455-011	CAM FOR S4 TENSION SHAFT	1
18	RUDZ007008	#7 X 1/2 RD U-DRIVE SCREW Z	1
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26	SLWZ025	1/4 SPLIT L/W Z	4
27	UFWZ025	1/4 USS F/W Z	4
28	829-004-REV1	WORK TABLE FOR 2", 4", DS10-4 SANDERS/ REV1	1



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ANGULAR 30/45/60/90	ENG APPR	
PROFILES DECIMAL 1	WFG APPR	
THREE PLACE DECIMAL 1		
INTERFERENCE GEOMETRIC TOLERANCES PER		
ASME Y14.5		
COMMENTS:		

TITLE: 4" X 36" BELT SANDER W DCV-4 DUST COLLECTOR
 SIZE: DWG. NO. S4SV REV 1
 SCALE: 1:5 WEIGHT: SHEET 1 OF 1