



GRAVITY CONVEYOR MAINTENANCE MANUAL



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Section 1: Safety Considerations

****Users are responsible for the safe operation of equipment. Adhere to local health and safety regulations before using any equipment. The responsibility of safety and safe operation lies with the user, not Rolmaster. Consult a professional engineer or safety engineer to review local regulations. Recognize all warning stickers and do not remove labels. All personnel involved with the operation of conveyor equipment should remain aware of hazards and risks while conveyor is in use. Use with caution and adhere to safety standards to avoid injury or death ****

WARNING: DO NOT PREFORM MAINTENANCE ON ANY CONVEYOR UNLESS LOCKED OUT

General Safety



To reduce the risk of injury, strict adherence to local health and safety regulations is required. Do not remove safety labels from equipment.



Only trained and experienced personnel should perform inspections and maintenance on the conveyor.



Never conduct maintenance tasks while the conveyor is operating.



Always be vigilant for potential hazards, such as sharp edges or protruding parts.



Use the conveyor solely for its intended purpose.



Do not operate the conveyor unless it is properly anchored, stable, and level.



Under no circumstances should personnel ride the conveyor



Conduct regular, scheduled perimeter checks to assess its condition. Promptly report abnormal behaviors, sounds or observations detected during observation.

- Refer to Section 2: Preventative Maintenance and Inspection Schedule

Warnings and Labels

Safety labels remind all personnel about the potential hazards and risks in the workplace. It is important to inspect equipment for proper safety labels, and positioning to ensure that all personnel are aware of and obey these warnings. The following section contains various safety labels that may be found on your equipment.



Section 2: Maintenance

Tools Required

Tools required to perform maintenance on gravity conveyors include:

1. **Wrenches or socket sets**
2. **Pliers**
3. **Cleaning products**
4. **Personal Protective Equipment (PPE)**

Maintenance Inspections

Gravity conveyors are relatively maintenance free. Regular inspections for performance, damage, lubrication, hardware and debris are suggested. Routine inspections for preventative or restorative maintenance should be conducted to ensure all parts function properly. Replace damaged rollers, bearings, or frames immediately to avoid further wear.

Preventative Maintenance and Inspection Schedule

ITEM	INTERVAL	REQUIRED MAINTENANCE
Hardware	Monthly and During Installation	<ul style="list-style-type: none"> • Check all fasteners are in place. • Ensure hardware is properly tightened and not missing.
Rollers	Weekly	<ul style="list-style-type: none"> • Check for unusual sounds. • Ensure all rollers are intact and rolling freely. • Look for signs of visual wear. i.e., dents, nicks, and cuts, lodged or stuck components. • Clean roller surface to remove built up debris.
	Monthly	<ul style="list-style-type: none"> • Examine rollers while in operation. • Check for unusual noises or malformities. • Inspect conveyor and rollers for loose components.
Supports	Monthly	<ul style="list-style-type: none"> • Check hardware, tighten as necessary. • Check for damage.

Rolmaster recommended torque

Nominal Size (in) or Basic Screw Dia.	Threads per inch	Recommended Tightening Torque
#8	32	45-50 in-lbs
#10	24	65-70 in-lbs
1/4	20	7.5-8.4 ft-lbs
5/16	18	16.5-17.5 ft-lbs
3/8	16	28-31 ft-lbs
7/16	14	45-49 ft-lbs
1/2	13	70-75 ft-lbs
9/16	12	105-110 ft-lbs
5/8	11	145-150 ft-lbs

* Rolmaster Standard hardware is Grade 5 zinc plated

Maintenance Procedures

Rollers

For extended life, inspect rollers for wear and damage as per the maintenance and inspection schedule. Replace worn or damaged rollers immediately to ensure the longevity of your conveyor. Damaged rollers may cause excessive load on other rollers in the unit resulting in premature failure.

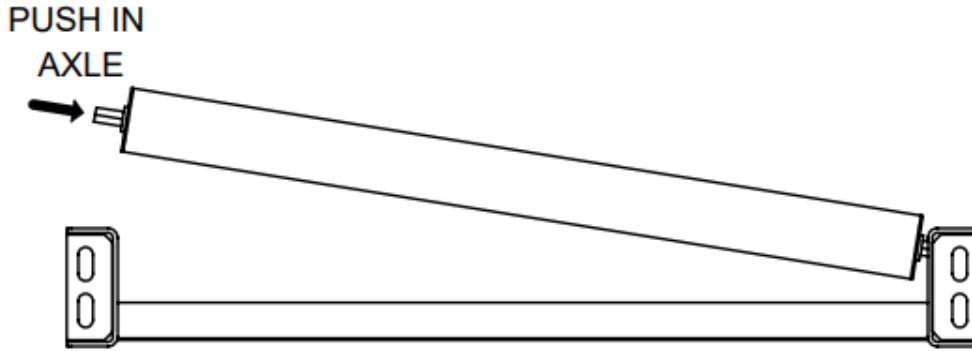
Spring Loaded Roller

1. Removing a Spring Loaded Roller

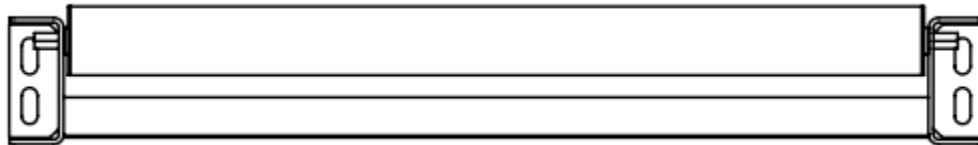
- Begin by identifying the spring-loaded end of the axle by applying pressure to each end of the axle. The end that compresses is the spring-loaded end.
- Remove the damaged roller. Either manually or using a tool, push the spring-loaded end of the axle through its hex hole.
- With the axle through the hex hole, lift the roller out of the frame.

2. Installing a Spring Loaded roller

- Start by placing the fixed end into its designated hex hole (see next page)
 - It is recommended to install rollers with the same spring load orientation as the others.



- After positioning the fixed end, apply pressure to the spring-loaded end and lower it into the corresponding hex holes (if axle does not compress, flip roller).
- When contacting the frame, release tension.
 - If you encounter difficulty, a flat object can assist in lowering this end. Minor adjustments may be necessary to guide the axle into its hex hole.



- Ensure the roller is properly situated in the frame, and free to move from side to side.

Cotter Pin Roller

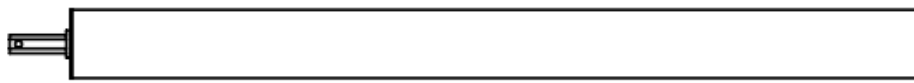
1. Removing a Cotter Pin Roller

- Take out the cotter pins located at each end of the axle.
- While supporting the bottom of the roller, slide the axle out of the roller's center.
- Remove the roller from between the frame.

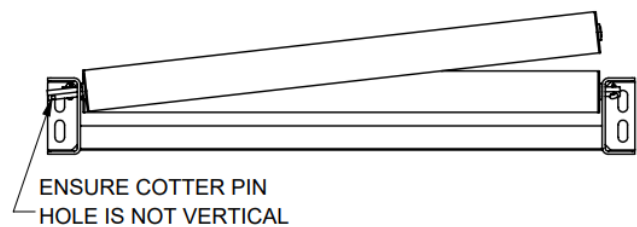
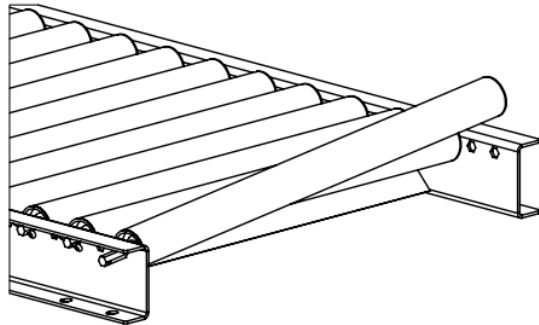
2. Installing a Cotter Pin Roller

- Insert the axle into the roller so that one end of the axle is flush with the bearing tip. (NOTE: positioning the roller vertically for axle installation may be easier in some cases)

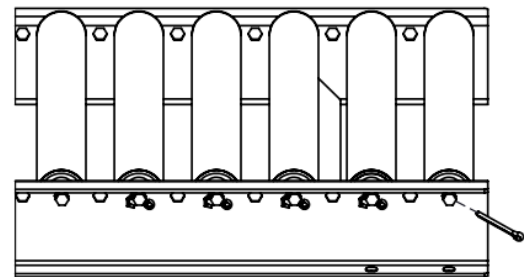
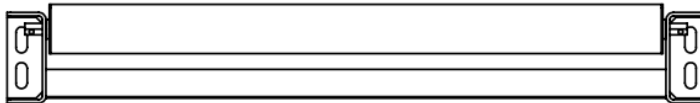
AXLE FLUSH TO BEARING TIP



- Lower one end of the axle into its designated hex hole in the frame.



- Lower the opposite end, and adjust the axle as needed to ensure it is properly seated through both hex holes in the frame.
- With the axle in place, insert cotter pins through the holes at each end of the axle.



- Bend the ends of the cotter pins to secure them in place.

Fixed Bolted Roller

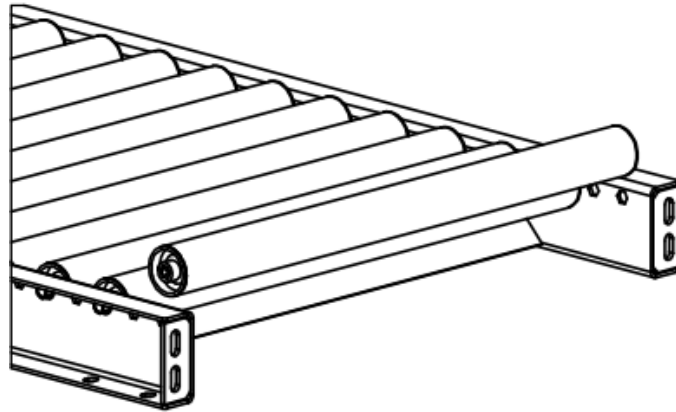
****Fixed bolted roller axles cannot be removed****

1. Removing a Fixed Bolted Roller

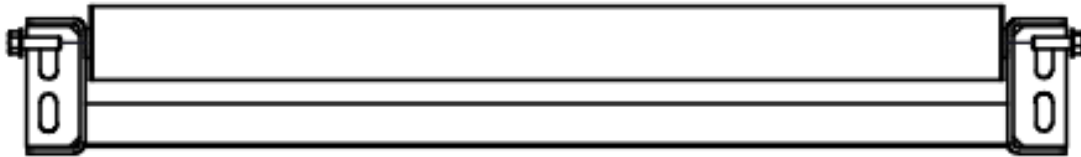
- Support the bottom of the roller and loosen bolts on each end of the roller.
- With the bolts removed, lift the roller from the frame.

2. Installing a Fixed Bolted Roller

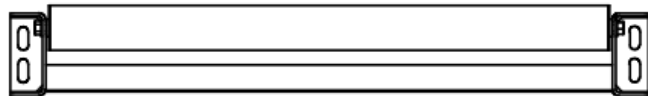
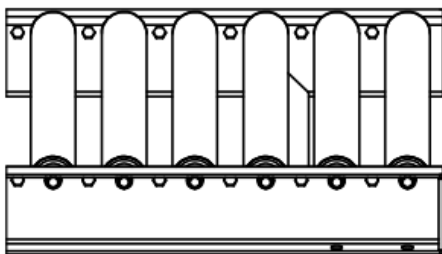
- Position the roller in the center of the frame
- Align the roller with its corresponding hex holes, ensuring it is aligned with the top of the adjacent rollers.



- Secure the roller by fastening bolts through the mounting holes on the frame. (Refer to Section 2: Rolmaster Recommended Torque for correct tightness)



- Ensure the roller is properly seated in the frame and make any necessary adjustments.



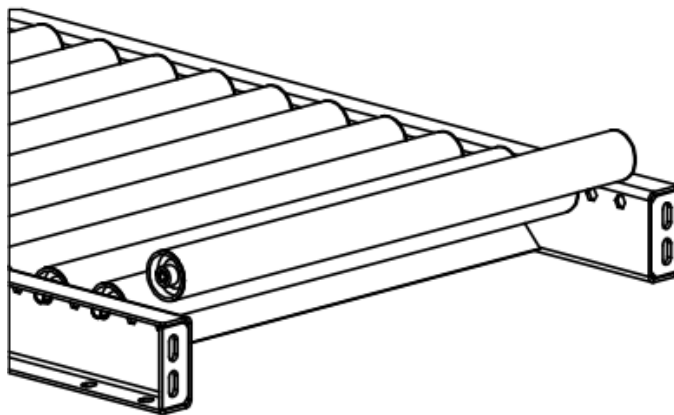
Loose Bolted Roller

1. Removing a Loose Bolted Roller

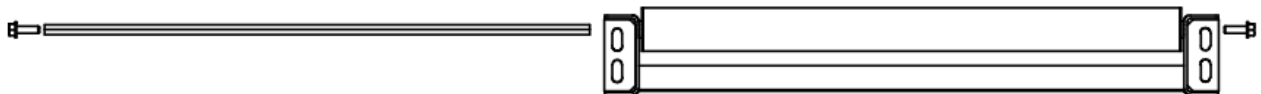
- Support the bottom of the roller and loosen bolts on each end of the roller.
- With the bolts removed, lift the roller from the frame.

2. Installing a Loose Bolted Roller

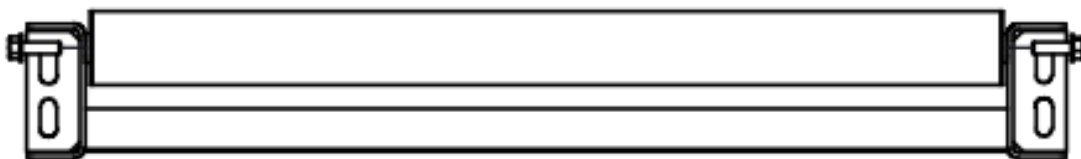
- Position the roller in the center of the frame.
- Align the roller with its corresponding hex holes, ensuring it is aligned with the top of the adjacent rollers.



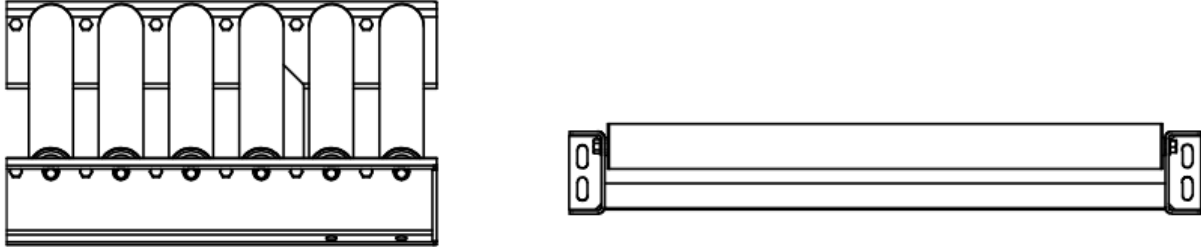
- Once properly aligned, slide the axle through the hex holes and the center of the roller.



- Secure the roller by fastening bolts through the mounting holes on the frame. (Refer to Section 2: Rolmaster Recommended Torque for correct tightness)



- Ensure the roller is properly seated in the frame and make any necessary adjustments.



****Contact our sales department for replacement rollers****

Section 3: Troubleshooting

PROBLEM	POSSIBLE CAUSE	RECOMMENDED ACTION
Product does not progress on conveyor	Roller(s) is jammed and cannot rotate freely.	<ul style="list-style-type: none"> Remove/ clean material causing the jam or blockage. Replace damaged roller(s)
	Insufficient gravity angle	<ul style="list-style-type: none"> Adjust gravity angle
	Poor bottom of product	<ul style="list-style-type: none"> Improve product structure or convey ability. Review riding surface, use slip sheet
	Roller(s) may be warped or seized	<ul style="list-style-type: none"> Replace damaged roller(s)
Product skews traveling down the conveyor	Roller(s) not square in frame / frame is not squared	<ul style="list-style-type: none"> Square units. Loosen and adjust bolts.
Product does not contact enough rollers / bouncing	Roller(s) is warped or dented	<ul style="list-style-type: none"> Replace damaged roller(s)
	Roller C-C is too large. (center to center)	<ul style="list-style-type: none"> Add rollers if possible. Replace with a new conveyor at appropriate C-C
Product falls/slides off conveyor	Conveyor is not level	<ul style="list-style-type: none"> Level the top of the roller surface using supports

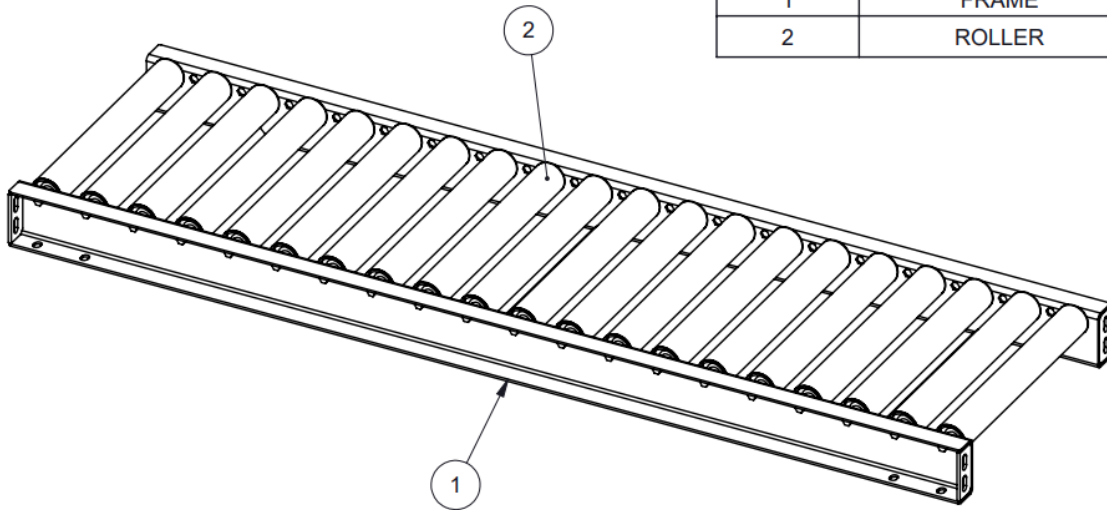
*Some issues may not have a listed solution. For unresolved problems, please consult a maintenance professional or contact a Rolmaster sales representative.

Section 4: Replacement Parts

Replacement Parts

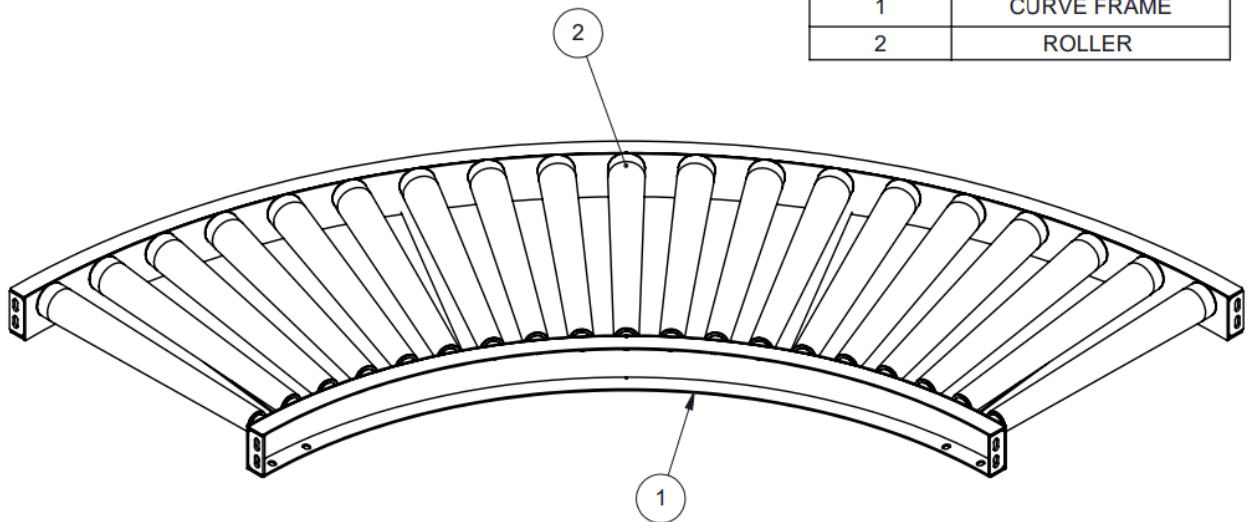
Straight Section

ITEM	DESCRIPTION
1	FRAME
2	ROLLER

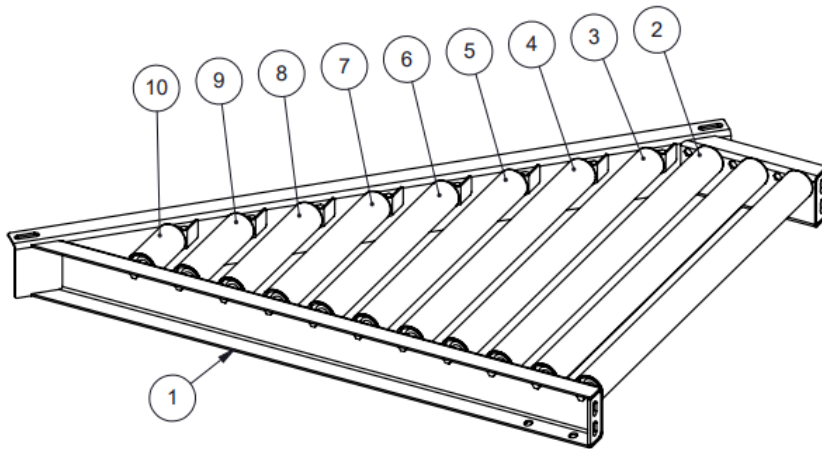


Curve Section

ITEM	DESCRIPTION
1	CURVE FRAME
2	ROLLER



Merge section



ITEM	DESCRIPTION
1	MERGE FRAME
2	ROLLER 1
3	ROLLER 2
4	ROLLER 3
5	ROLLER 4
6	ROLLER 5
7	ROLLER 6
8	ROLLER 7
9	ROLLER 8
10	ROLLER 9

Ordering Replacement Parts

When ordering replacement parts please reach out to our sales team directly. To streamline the ordering process, ensure you have/know the project number. This will allow our sales team to quickly locate and identify the required parts.