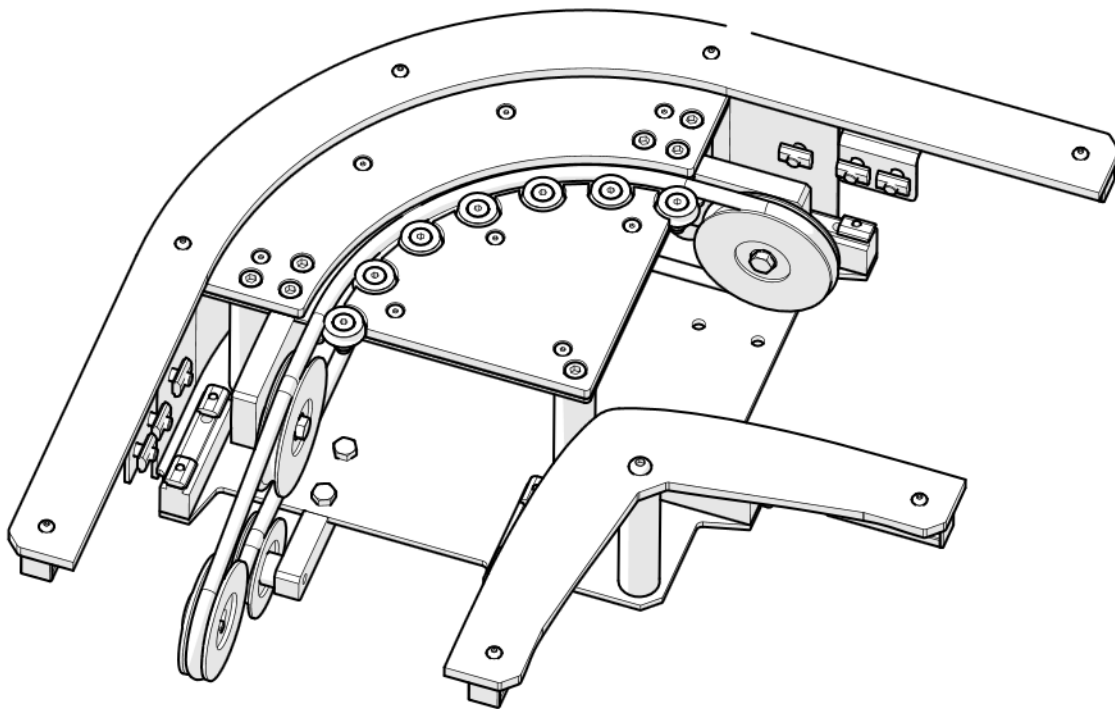


# Glide-Line™ Curve (CRV)






## Installation & Maintenance Manual



*Easy · Flexible · Precise · Fast*

## Manual Information

Throughout this manual are the following information blocks indicated in the appropriate sections by signal words as specified by ANSI Z535.4 Standard (section 4).

	Warning – This information must be followed to prevent harm to individuals or damage to equipment.
	Automatic Equipment – This equipment may start or stop automatically.
	Electrical Shock – This equipment has connection to an electrical circuit with potentially hazardous energy levels.
	Consult Manual – This manual must be completely reviewed prior to performing any service.
	Lock Out Power – All sources of energy must be controlled before servicing equipment



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# 1. Introduction


## 1.1. Description of Device

The Curve Transfer Unit is a great solution for transferring workpiece pallets to an adjacent conveyor line. The Corner operates by utilizing a polychord and guides. Corner units can be specified individually as 90 degrees, or as tandem units to turn trays 180 degrees to a parallel conveyor line. Curves can be used in a slaved configuration with adjacent conveyors, or be self-powered with AC or DC drives. Consult the part number table below to define the configuration as your unit was supplied.

**Part Number:**

**CRV-(A)-(B)-(C)-D(D)-S1(E)-S2(F)**

- A** = Pallet Width range 160mm to 400mm
- B** = Pallet Length range 160mm to 400mm
- C** = Degrees of turn, Standard options currently offered are **30, 45, 60, 90,** and **180**, other custom options available upon request
- D** = Drive Type, **EXT** for Slaved
- E** = Connection option side one, **D187** to slave to conveyor with a minimum drive position 187mm, **R** for standard return
- F** = Connection option side two, **D187** to slave to conveyor with a minimum drive position 187mm, **R** for standard return

	<p>Personnel working on or around this equipment must be properly trained in operation, maintenance, and lock-out/tag-out procedures.</p>
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## 1.2. Operating Conditions and Environment

Equipment should be located in an ambient temperature room. Equipment should not be subject to high humidity or wash-down conditions. Clean-up to be by wipe down / air blow off only.

This unit must be connected to an external control system to operate properly. This equipment was not designed to run in a standalone configuration. Control voltage, programmable controller, or other functionality may have been provided with this equipment. This equipment must be connected to a suitable E-stop circuit for protection. Any reference to an E-stop in this manual requires the Customer or user to provide an external E-stop circuit. Failure to connect this equipment to a proper E-stop circuit will void any and all warranties.

## 1.3. Chemical and Corrosion Resistance

Components used by Glide-Line™ are made from materials that are highly resistant to common household materials including all fruit and vegetable juices, inks, soaps, and most common detergents.

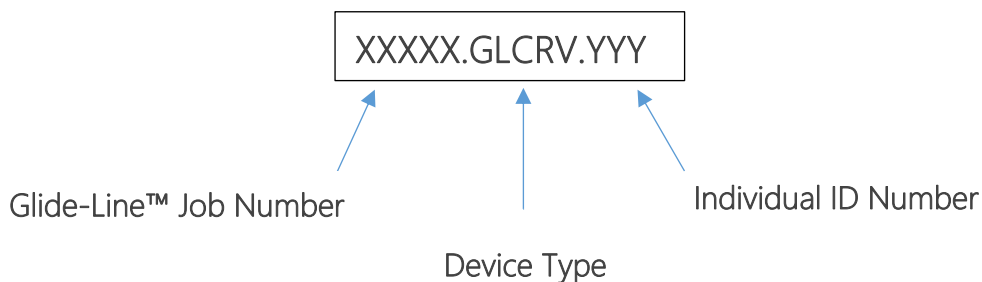
It is recommended that customers contact the factory and obtain samples of applicable modules to be exposed to conditions of the proposed application to determine resistance of material and its durability.

## 1.4. Description of Operation

Power is applied to the system when the machine is connected to the power source and the E-STOP button is reset. The machine operation is designed to be automatic with another machine.

## 1.5. Serial Number Identification

The Serial number for your CRV can be found on the base plate of the unit. Serial number information will be displayed as follows:



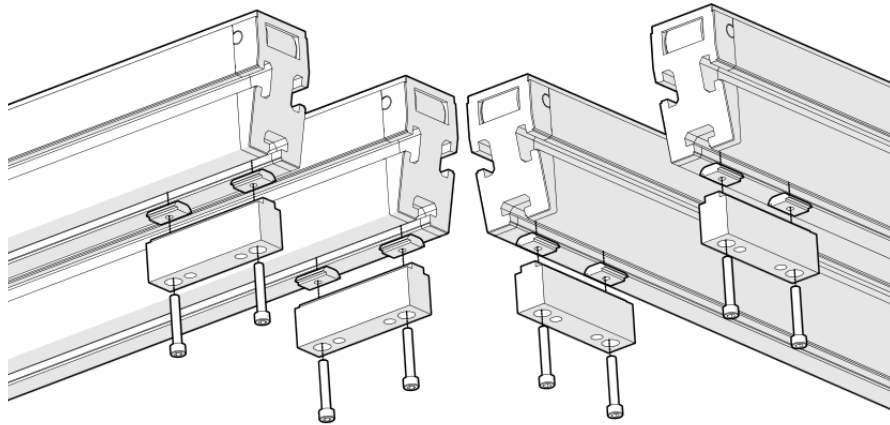
## 2. Installation

### 2.1. Unpacking and Mounting

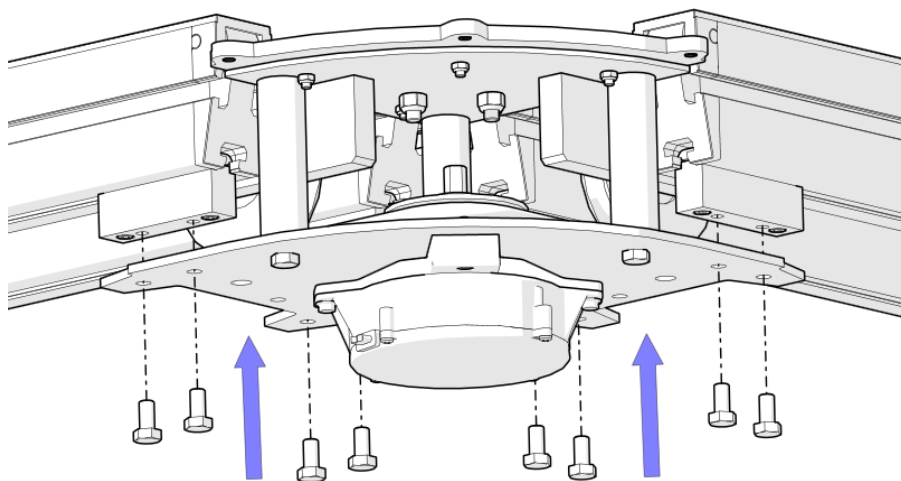
When the unit arrives, care must be taken to unpack the unit. Smaller units will be packaged in individual boxes, bubble wrapped. Take care to cut away bubble wrap. Do not score with a knife as not to risk damage to the unit.

Larger units will ship on a skid. Units will be secured with T-Bolts to a series of support boards and can be loosened with a 13mm ratchet.

Unit is designed to mount to the bottom T-Slots of a conveyor. The unit includes (4) mounting brackets. Conveyors should be placed in their final position, but not lagged. First install mounting brackets with M6 Allen Key.



Next mount the curve to the mounting brackets, (2) bolts per mounting bracket, tighten in place with 13mm ratchet.





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Next step is dependent on what drive-type the unit is:

- 24VDC powered, confirm any electrical connections required for drive cards and wire as required.
- AC powered, install motor if applicable (may already be installed).
- Slaved (EXT), Install drive pulley onto conveyor shaft that will be powering the unit. Shaft can be loosened and tapped out the left or right side of the unit, allowing the drive pulley to be slid into place. Next, loop the belt around the drive pulley temporarily. Tap shaft back into place and retighten. Last, align the drive pulley with the exit/entry pulleys on the curve, and tighten in place.


After drive connection is complete, confirm belt path is correct around each idler pulley and drive pulley. Install guard package after all items are tightened.

It is important to install the device level and straight to achieve the listed performance. A non-level installation could cause pallets to jam into the transfer, preventing proper operation.

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### 3. Safety Instructions

#### 3.1. Operation

	<p>Due to the hazardous moving parts of the device, all personnel in the area of a device should be warned when the device is about to be activated.</p>
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Only properly trained personnel should be permitted to operate Glide-Line™ devices. Training should include emergency procedures.


Machine stopping devices should be clearly marked and easily accessible. Personnel working on or near the equipment should be trained in the location of stopping devices.

The area around machinery should be kept clear.

Devices must only handle loads they were designed to carry.

Safety and warning devices must not be tampered with in any way that could endanger personnel.

Personnel must be made aware of all potential hazards including but not limited to entanglement of items such as long hair, loose clothing or jewelry. Personnel must also be aware of any pinch points present on the device that could result in injury.




	<p>Device should not be operated without safety guards in place. Guards should not be removed by anyone other than authorized personnel.</p>
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All safety devices, including wiring of electrical safety devices, must be designed to work in a failsafe mode to avoid hazardous conditions from occurring during a power failure.

Refer to ANSI Z244.1-1982, American National Standard for Personnel Protection – Lockout/Tagout of Energy Sources – Minimum Safety Requirements and OSHA Standard Number 29 CFR 1910.147 “The Control of Hazardous Energy (Lockout/Tagout).”

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## 4. Maintenance

			<p>Only trained personnel should perform maintenance procedures. Company approved lock-out/tag-out procedures should be strictly adhered to. Please consult this manual before servicing.</p>
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Routine inspections along with preventive and corrective maintenance must be performed to insure proper functioning of equipment.

Maintenance schedules should be established to ensure proper operation and to avoid potential hazards.

Maintenance must not be performed on equipment while in operation. Personnel should be trained in proper maintenance procedures as well as the hazards of not following procedures properly.

When equipment is stopped for maintenance, lockout/tagout procedures should be followed in order to avoid potential hazards to personnel performing the maintenance.

All safety devices and guards must be replaced before starting conveyors for normal operation.

### 4.1. Belt Replacement

Tools Required:

- (1) 3mm Allen Key

To replace a Curve polychord belt, please follow the following steps:

1. Remove all guards (if applicable).
2. Pull belt off all pulleys to remove any tension.
3. Remove curve top plate, loosen all (4) top screws, noting belt path before removing the pulley plate.
4. If slaved to a conveyor, loosen shaft, slide shaft halfway out of the conveyor to remove belt.
5. After belt is removed, replace with new belt starting around conveyor drive shaft. Slide shaft back into place and retighten (if applicable). Ensure proper alignment of drive pulley and return/feed pulleys.
6. Run the belt through the return pulley path on the base plate of the Curve.
7. Reinstall top plate and screw into place.

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8. Pull belt into place around each pulley. Belt will feel very tight, this is normal, and will expand +2% in length after an hour of operation.
9. Ensure all screws are tight. Replace Guard. Unit is ready for operation.

## 4.2.Preventative Maintenance Schedule

### Daily

Prior to Starting Equipment

1. Perform a visual inspection of the equipment for possible maintenance needs.
2. Remove any foreign objects that may be on or leaning against conveyor or equipment.

After Starting - Prior to Production

1. Perform a visual and auditory inspection of the equipment and product transportation for possible maintenance needs. Stop device operation if squeaking sound is present.

### Monthly

1. Check conveyor belting for signs of wear and replace as necessary.
2. Check slider bed for wear and replace as necessary.
3. Check all bolts have remained tightened to designed torque ratings.

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## 5. Troubleshooting

Problem	Cause	Solution
Excessive belt wear.	Belts, slider bed, and pulleys exposed to abrasive material.	Eliminate or reduce the presence of abrasive material which might come in contact with the belt, sprockets or slider bed.
	Belt path incorrect.	Check belt path against installation drawings. Confirm belt is not rubbing on any surface.

Problem	Cause	Solution
AC DRIVE ONLY: Gearbox makes noise.	Gearbox worn, or leaking oil.	Replace gearbox and investigate cause. Look for evidence of oil leakage around input and output shaft seals.

Problem	Cause	Solution
Belts do not run.	Motor not turning or burned up.	Remove motor from unit and run without any load. If motor does not turn, or turns in random intervals, a new motor must be ordered and installed.
	DC ONLY: Drive card may be damaged/defective	Troubleshoot by switching cards/motors to define if motor or card is bad. Replace as necessary
	Incorrect belt tension around drive pulleys	Belt may be jammed, look for any obstruction. Belt may be overstretched or incorrect length.

Problem	Cause	Solution
Pallets getting stuck around the curve.	No side rails on pallet, belt tracking issues	Ensure CRV is level and not operating on an angle. Verify no slack in curve belt. If still having issues, please reach out to GL Application Engineer/Representative for more troubleshooting help/suggestions




## 6. How to Order Spare Parts

Spare parts may be purchased directly from Glide-Line™.

For a full list of spares for your conveyor or device as configured, please reference the serial number located near the base plate of your device, and contact a Glide-Line™ representative at 215-721-1900.

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## 7. Returns

	<p>Under no circumstances will a component be accepted without a Glide-Line™ RMA number.</p>
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When requesting a Return Materials Authorization (RMA), please have the following information available:

- Customer's name and address
- Customer original purchase order number
- Glide-Line's™ project number or serial number
- Description of part(s) being returned
- Reason for return

To preserve the return, all returned parts must be properly packaged to prevent shipping damage. The Glide-Line™ issued RMA number must be clearly marked and visible on the exterior packaging. The Glide-Line™ issued RMA form must also be included inside the package.

Includes:

- Location, type of service and length of time in service
- Complete description of the faulty operation of the component and the circumstances of failure.
- State requested service – warranty or non-warranty
- Complete shipping instructions for return of component
- Name and telephone number of person to be contacted if there are any questions about the returned part.

If a part is damaged or lost during transit, the customer is responsible for directing a claim to the carrier. The customer is responsible for return freight.

Upon receipt of the defective component(s), Glide-Line™ will examine it for warranty defects. A credit will be issued for the replacement when and if the component is found to be defective.

Following the above procedure correctly will expedite handling of the returned component and will prevent unnecessary additional charges for inspection and testing to determine the problem with the component. For all orders and service, a written Purchase Order for repairs must be enclosed.

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