

McGinty Conveyors, Inc.



Zig-Zag
Overhead Power Chain Conveyors

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The erection of Zig-Zag Continuous Power Conveyors is a very simple procedure, due to the standardization of parts and ease with which the component parts are assembled. This is a guide to the various steps involved in the installation of conveyors, and suggestions and recommendations for operation after installation.

TRACK

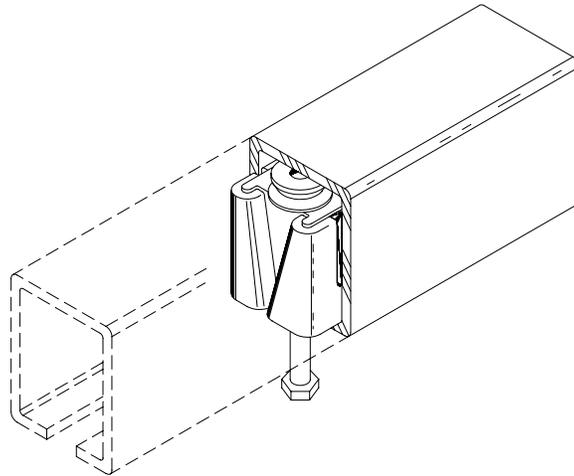
1. Layout material consisting of straight track, curves, hanger rods, drive units, and other materials on floor in the area in which the conveyor is to be installed.
2. If a clear floor space is available outline the path of the conveyor on the floor.
3. Start from a fixed point, such as a drive unit, take-up, or some other definite point in the system and locate the units to be used from this starting point. Instructions for installing take-up units are on pages 5 and 6.
4. Locate and place brackets and supporting members at tangent points to support curves. Place supports on straight track on 10 foot, or less, centers.
5. When system is assembled by welding, several lengths of track may be welded together on floor and then raised into position, or individual lengths of track can be placed in supports and then joined by welding.
6. Where vertical curves occur, cut straight track to proper lengths between vertical top and bottom curves. If convenient the vertical curves may be laid out on the floor to required dimensions. The straight track can then be welded into place and the complete assembly raised into position.
7. If a lubricator calls for specific installation instructions see the instructions packed with the unit.
8. Be certain to position the inspection section in the most convenient and accessible location, and adjacent to a support.
9. After installation, level the system and tighten nuts on hanger rods and brackets.
10. After system is installed and leveled, brace sufficiently to keep system from swaying and vibrating. In some cases it may be necessary to add bracing after system is placed in operation.

NOTE: Joining of track by means of welding is recommended. One or more welding jigs on the job will save considerable time.

Use of Welding Jig

The jig is placed in the ends of the two pieces of track to be welded so that half of the jig is in the end of one piece of the track and the other half is in the end of the other piece of track. By tightening the bolt that projects through the slot in the track, the wedge is drawn downward so that the sides of the welding jig force the edges of the track into alignment horizontally and vertically. The joint is then welded across the top and down the sides of the track. Now loosen the jig, and slide along to the next point. The under side of the track joint may now be welded if desired.

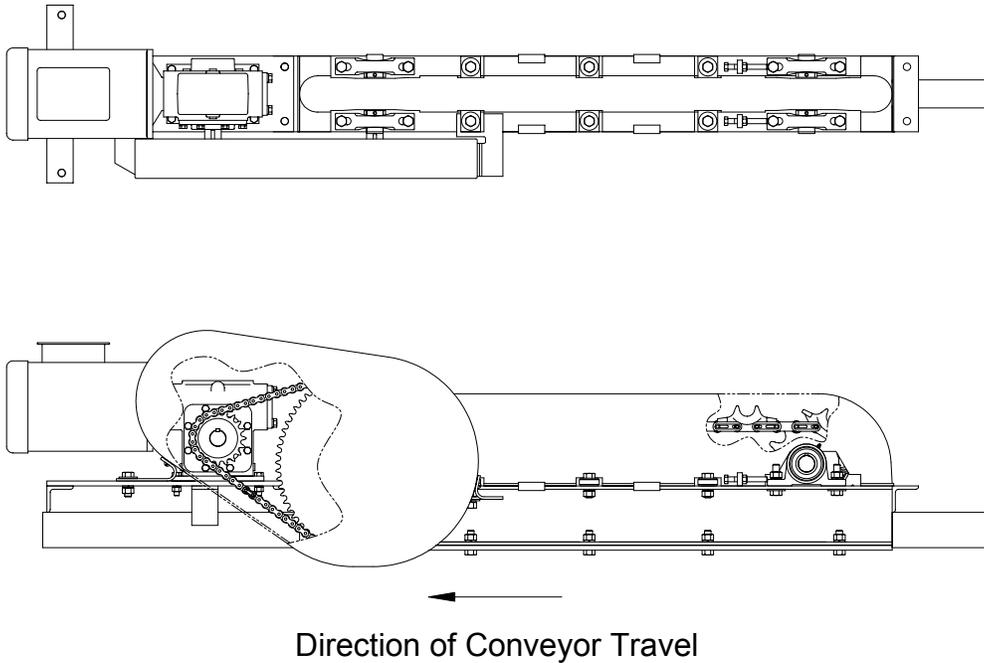
CAUTION: Check all joints after installation to see that they are perfectly smooth inside of track. If they are not smooth the chain is likely to catch when traveling through the track. Pass a short piece of chain through the track as a test before installing chain. Remove any obstructions.



TR-155 Welding Jig in Track

The welding jig is a specially developed unit made of material that will not fuse during welding.

Drive Unit



1. The Drive Unit should be installed in proper location and leveled before straight track is installed. Install drive unit so that the conveyor chain can be fed into a drop or dip in the track so slack chain will be taken away from the head of the drive unit. Where a dip is not convenient the drive unit can be raised above general level of conveyor to provide a dip ahead of the drive unit. Where conveyor must be kept level throughout, continual care must be taken so that the chain does not pile up in the drive unit.
 2. Weld track to drive using welding jig as shown on page 3.
 3. Brace drive unit in both directions using angle or hanger rods..
 4. Make electrical connections to power line and start the drive in motion. Check direction of travel of pusher dogs. The pusher dogs that will contact chain should travel in direction conveyor must run. Change electrical connections to reverse direction of motor if necessary.
 5. To prepare the system for installation of chain, unbolt and remove one or both of the split track rails attached to bottom of drive plate.
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Take-Up Units

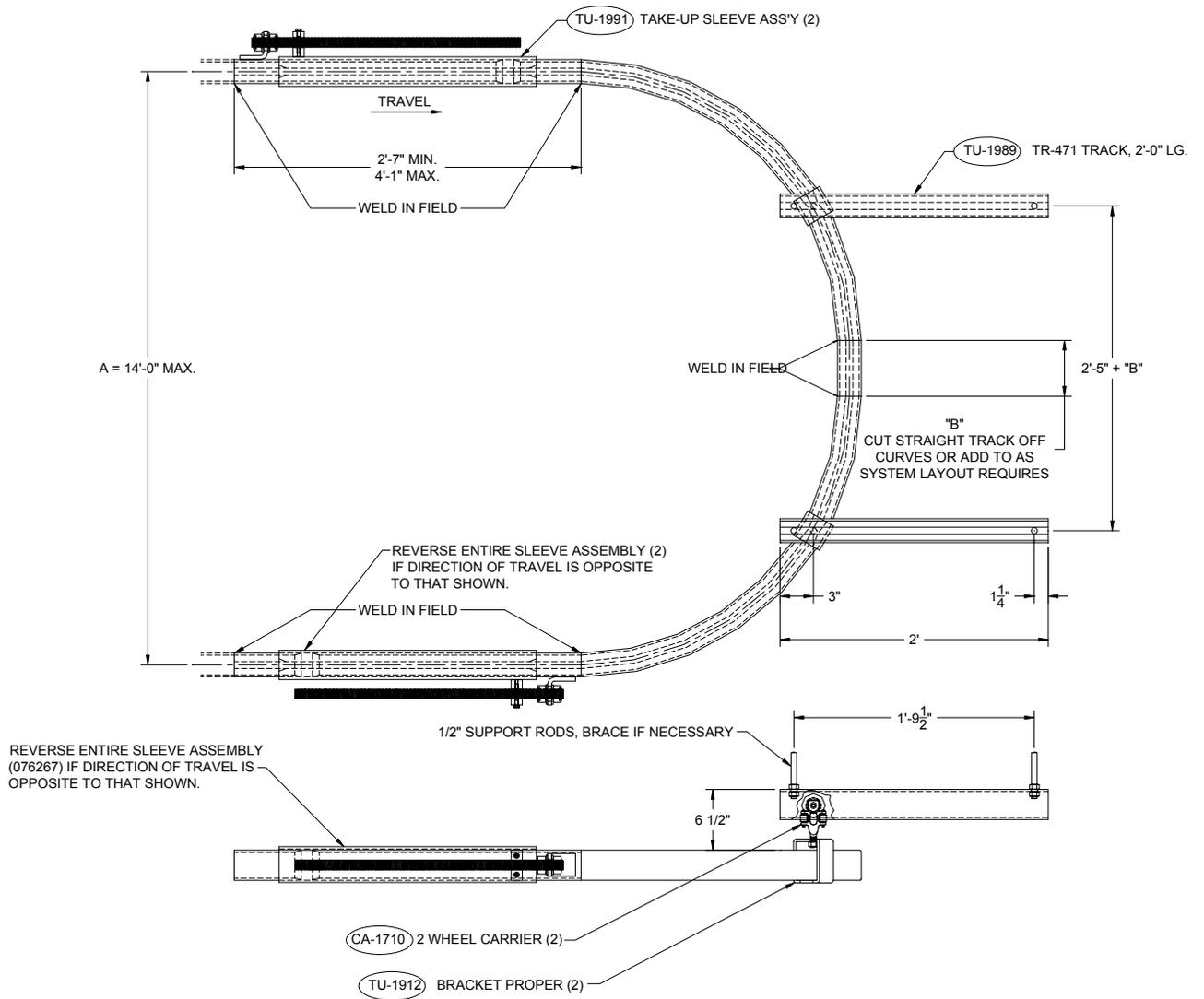
Take-Up Units are required to control variation in the length of the conveyor chain resulting from elongation and wear. In addition, removal of excess chain at the maintenance/inspection section is simplified by retracting the take-up.

A pre-engineered system will have the quantity and location of the take-ups indicated on the conveyor layout drawing. Position them accordingly. On systems having no layout, position the take-up as close to the output side of the drive unit as possible, preferably at a low 180° turn in the conveyor. This allows the take-up to control chain movements with the least amount of tension.

Installation Instructions for TU-583 Screw Take-Up Assembly

1. Select two 90° track curves and weld together forming a 180° curved section. Track curves having 2'-0" radius are desirable: although, curves of other radii may be used. Dimension "A" (See page 6) should be kept as small as possible and should never exceed 14'-0" unless additional supports are used.
2. Assemble CA-1710 carriers to TU-1912 hanger brackets and slide over the open ends of the welded curved track section as illustrated on page 6.
3. Butt the two TU-1991 take-up assemblies against open ends of 180° curved section as illustrated and weld. Straight track may be cut off curves if system layout requires. Before welding, check direction of conveyor chain travel. If opposite from that shown reverse both take-up sleeve assemblies. Threaded rods will then be inside of system.
4. Allowing for the take-up sleeves to be in the fully retracted position, locate the TU-1989 2' long stationary track sections so the CA-1710's will be in the position illustrated. Mount the track sections to the overhead structure in a manner suitable to prevent twisting of the movable curved track section.
5. Elevate the take-up sleeves and 180° curved track assembly into position and insert the hanger rods into the ends of the 2' long stationary track sections. Butt the ends of the outer fixed portion of the take-up sleeve assemblies to the approaching conveyor track and weld using a welding jig.
6. Level the entire take-up assembly so the 180° curved section slides freely in the take-up sleeves through the full 18" of travel. Sleeves must be level and parallel with each other.
7. Install conveyor chain.
8. Extend the take-up by rotating the 11/16" square end of the take-up screws counterclockwise until the slack chain is eliminated. Both sides of the take-up should be extended the same amount. Never excessively extend only one side as this will bind the movable track section in the take-up sleeves. Both sides should be alternately extended at approximately 1" increments.
9. Support and/or brace the stationary track section as necessary.
10. Readjustments should be made periodically to remove excessive chain slack.
11. After all assemblies and adjustments have been accomplished, weld the BR-1912 brackets to the curved track.

Caution: Do not tighten chain excessively as this will cause chain to wear rapidly and set up additional strain on drive unit. The chain should be adjusted so that the conveyor works smoothly and chain does not pile up at the head of the drive unit.



List of Materials for TU-583 Screw Take-Up

| Part # | Quantity | Description |
|---------|----------|-------------------------|
| TU-1991 | 2 | Take-Up Sleeve Assembly |
| TU-1989 | 2 | Track Section, 2' Long |
| CA-1710 | 2 | 2 Wheel Carrier |
| TU-1912 | 2 | Hanger Brackets |

Family of Framed Take-Up Assemblies
Screw ▪ Spring ▪ Air Cylinder



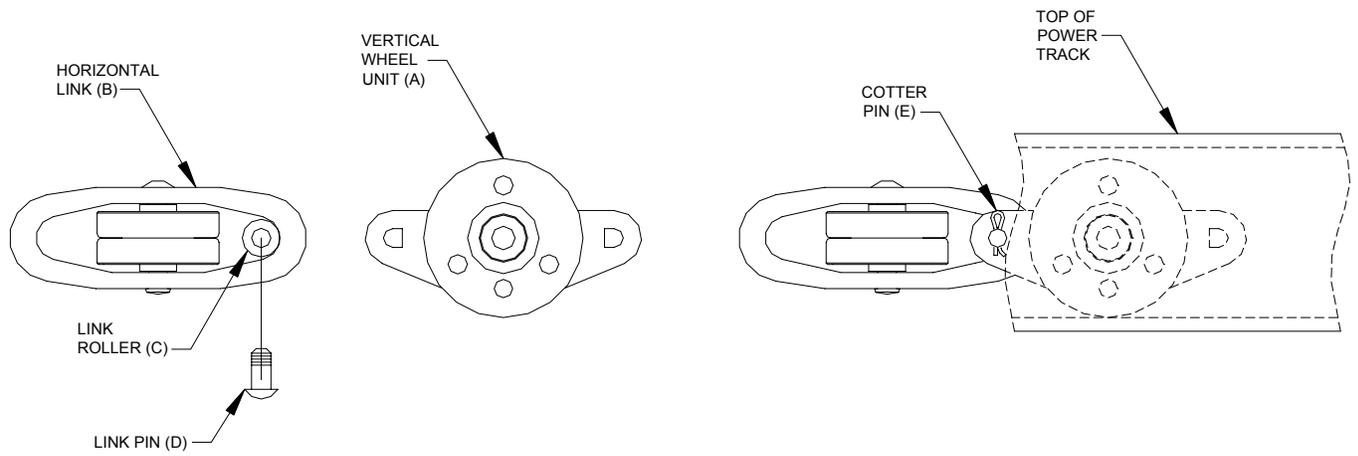
Factory assembled, ready to be hoisted and hung, this frame provides a rigid base and helps make alignment positive. The frame is permanently mounted; only the actuator and conveyor track move. Tensioning is accomplished with your choice of hardware for screw, spring, or air cylinder operation. Available for 2'-0" radius curves (4" maximum track spread).

Some type of tensioning is necessary to take up slack chain created by wear or temperature changes.

Framed Take-Up Assemblies Materials List

| Part # | Quantity | Description |
|---------|----------|---------------------------------|
| TU-1687 | 1 | Framed Take-Up "Basic" Assembly |
| TU-2685 | 1 | Screw Take-Up Package |
| TU-2686 | 1 | Spring Take-Up Package |
| TU-1700 | 1 | Air Take-Up Package |

Connection of CH-1974 Chain



Unpack two lengths of chain and connect as follows:

Refer to above illustrations. Place Link Roller (C) inside of Horizontal Link (B) and move into position between sides of Vertical Wheel Unit (A). Without forcing, insert Link Pin (D) through the assembly and rotate until head of pin is against side of unit (A). Insert Cotter Pin (E) through Link Pin and spread.