

Precision

The Self-Tracking Belt Systems

Installation Information

CONVEYOR ALIGNMENT

Proper conveyor preparation before installation will ensure the Precision System will provide trouble free operation in a wide range of applications. If further assistance is needed, please call Maryland Wire Belts.

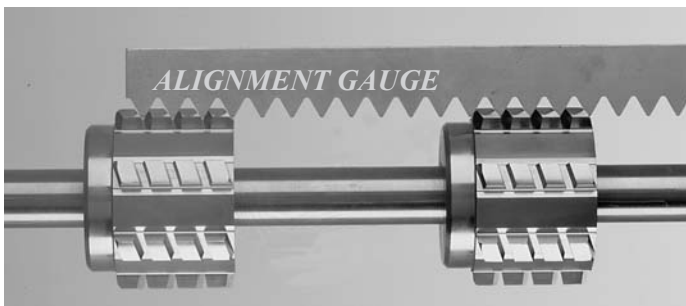
- Check the conveyor unit to be sure that all rolls, shafts, and supports are square, parallel, and level with the unit and in relation to each other.
- Repair or replace all worn or damaged system components as required.

Specific detailed instructions for aligning systems are available in Maryland Wire Belts' brochure "Preparing for Your Metal Belt". Please take the time to read and review all the Installation Literature included with each Belt, MTS™ Sprocket, and MTRplus™ Roll order.

MTS SPROCKET INSTALLATION

Locate the sprockets on the shaft with all the sprocket hubs oriented in the same direction. Space the sprockets evenly across the width. This spacing will vary according to the individual application. To determine the proper spacing of the sprockets, divide the overall belt width by the number of sprockets. The outermost drive sprockets on each side of the belt should be located so the outermost tooth is located in the second opening in from the edge of the mesh.

With the correct spacing of the sprockets across the width of the belt, place the Alignment Gauge on the front face of the sprockets so the teeth of the gauge are located in the openings between the teeth of each of the sprockets. Adjust the location of the sprockets as necessary to allow the gauge teeth to properly seat.



Once all the sprockets have been aligned, the set screws should be tightened. The use of a thread locking compound is recommended to prevent the setscrews from working out as the unit runs. Recheck the position of the sprockets after tightening the set screws to ensure the sprockets have not shifted during the process. If the belt is wider than 48", repeat the process across the width of the belt. It is imperative that the gauge overlap at least two of the already aligned and tightened sprockets to ensure consistency of alignment across the width.

MTRplus INSTALLATION

The MTRplus Roll is one complete unit, and installation is quite simple. The MTRplus Roll should be installed in the proper location within the system, making sure it is square, parallel and level with all other aspects of the system.

BELT INSTALLATION

Belt installation requires care to prevent spirals from rotating and not laying flat on the connector rod. If this occurs, do not apply any tension, instead, gently turn the spiral or shake the belt until the spiral rotates into the proper position.

Feed the belt through the unit noting the proper direction of travel, which is indicated by the tag affixed to the belt.

Bring a right hand and left hand spiral together and connect using one of the crimped connector rods supplied with the belt. (The right hand spirals are wound clockwise, and the left hand spirals are wound counter-clockwise.)

Trim the connector rod back to the edge of the belt. Weld or silver solder the rod end to the end of the spiral using the others throughout the belt as a guide.

Caution: Do not bend the connector rods into the belt unless the belt pitch can be maintained. Spirals are required to bottom out on the crimp connector rods in order to properly match the sprocket.

Conveyor design must provide for the wrap of the belt around the MTS Sprockets or the MTRplus Roll of between 120 to 180 degrees. This provides the maximum drive to the belt while at the same time allowing smooth engagement and release characteristics.

Precision belting is designed to be a low tension system, therefore counter tension is not normally required. Apply just enough tension to the belt to take the slack out of the system.

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Technical Guidelines For the Precision Belt Series

SUPPORT STRUCTURE

Precision Systems provide the best service when the belt is uniformly supported across both the width and along the length of the system. Examples of typical belt support configurations are show below (see fig 2).

TEMPERATURE

Precision Systems can be incorporated in a variety of applications over a great range of temperatures, from cooling and freezing to oven and fryer applications. The amount of heating (expansion) or cooling (contraction) the belt undergoes in the application determines whether MTS sprockets or an MTR roll is required for use in the system.

SPEED

Precision Systems can be utilized over a wide range of speeds. The exact minimum or maximum is a function of the configuration of the specific system. Please call for assistance.

MTS™ SPROCKETS

Precision MTS sprockets are machined from solid stainless steel or steel to exact specifications by computer-controlled milling machinery. This manufacturing process guarantees that precise tolerances are held, ensuring an exact match between the belt and sprockets.

MTRplus™ ROLLS

Precision MTRplus rolls are machined from solid stainless steel or steel to exact specifications by computer-controlled milling machinery. This manufacturing process guarantees that precise tolerances are held to ensure an exact match between the belt and MTRplus Roll. The individual teeth of the roll are machined to allow for expansion or contraction of the belt during the application thus ensuring the proper engagement of the teeth into the mesh of the belt. Starting in the centerline of the roll, the individual tooth width is progressively reduced by an amount necessary to accommodate the expansion or contraction of the belt.

APPLICATIONS DATA

A complete analysis of each individual system is conducted for each application to ensure that all system information has been considered when selecting the proper belt specification.

Basic information, such as system configuration, process, belt support, product and application parameters is necessary to select the proper belt for each individual application. Your Precision Representative will assist you through this process.

Typical System Configurations

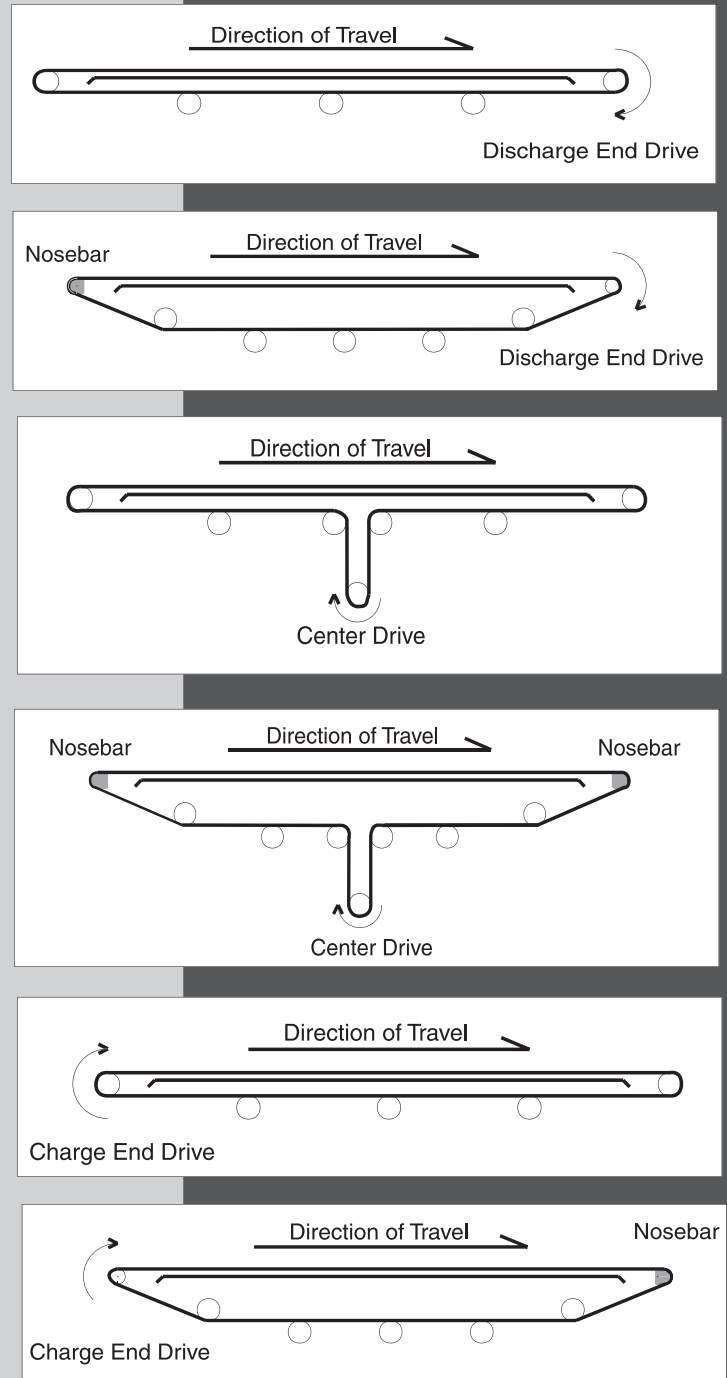
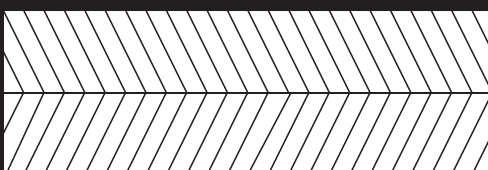
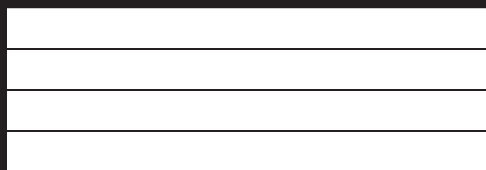


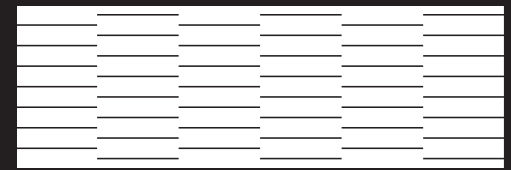
fig.1



Herringbone
fig. 2



Longitudinal Rails



Segmented Rails