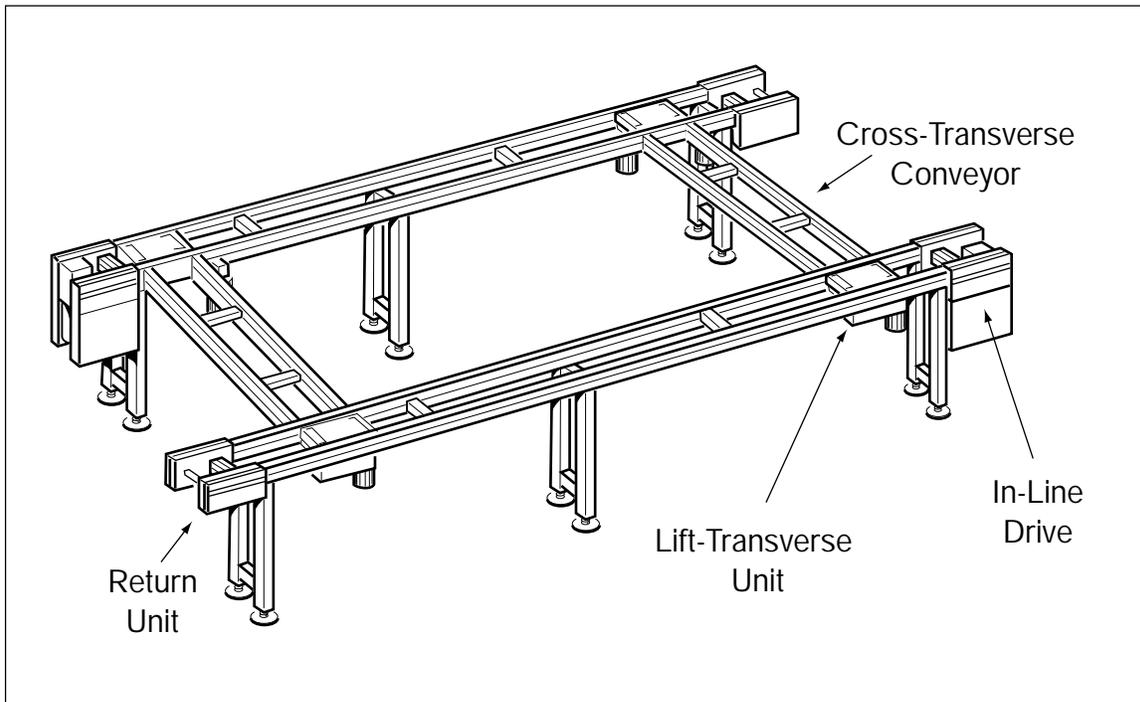


## Aligning Lift-Transverse Units and Cross-Transverse-Conveyors on Parallel Conveyor Lines



### Introduction

One of the biggest advantages of the Bosch Flexible Assembly Conveyor concept is the modular design. The use of lift-transverse units (LTUs) and cross-transverse-conveyors (CTCs) allows for a wide range of conveyor layout options, including rectangular loops (like the system shown above), inspection spurs, and spur lines for cycle-independent manual workstations.

To guarantee proper operation of the LTUs and the CTC connecting them, they must be correctly aligned. Failure to do so may cause pallets to transfer poorly or not at all, and may result in increased wear to the modules.

This manual is intended to supplement the instruction and maintenance manuals included with the LTU and CTC modules. The procedures described cover a broad range of conveyor modules and sizes, including TS 1, *TSplus*, and *TS4plus*. If the manual was not included with the module, please contact Bosch Automation Products at (616) 695-0151. For detailed technical information and complete installation and set-up procedures for the individual modules, please refer to the manuals included with those modules.



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### Lift Transverse Unit (LTU) and Cross-Transverse-Conveyor (CTC) Alignment (Fig. 1)

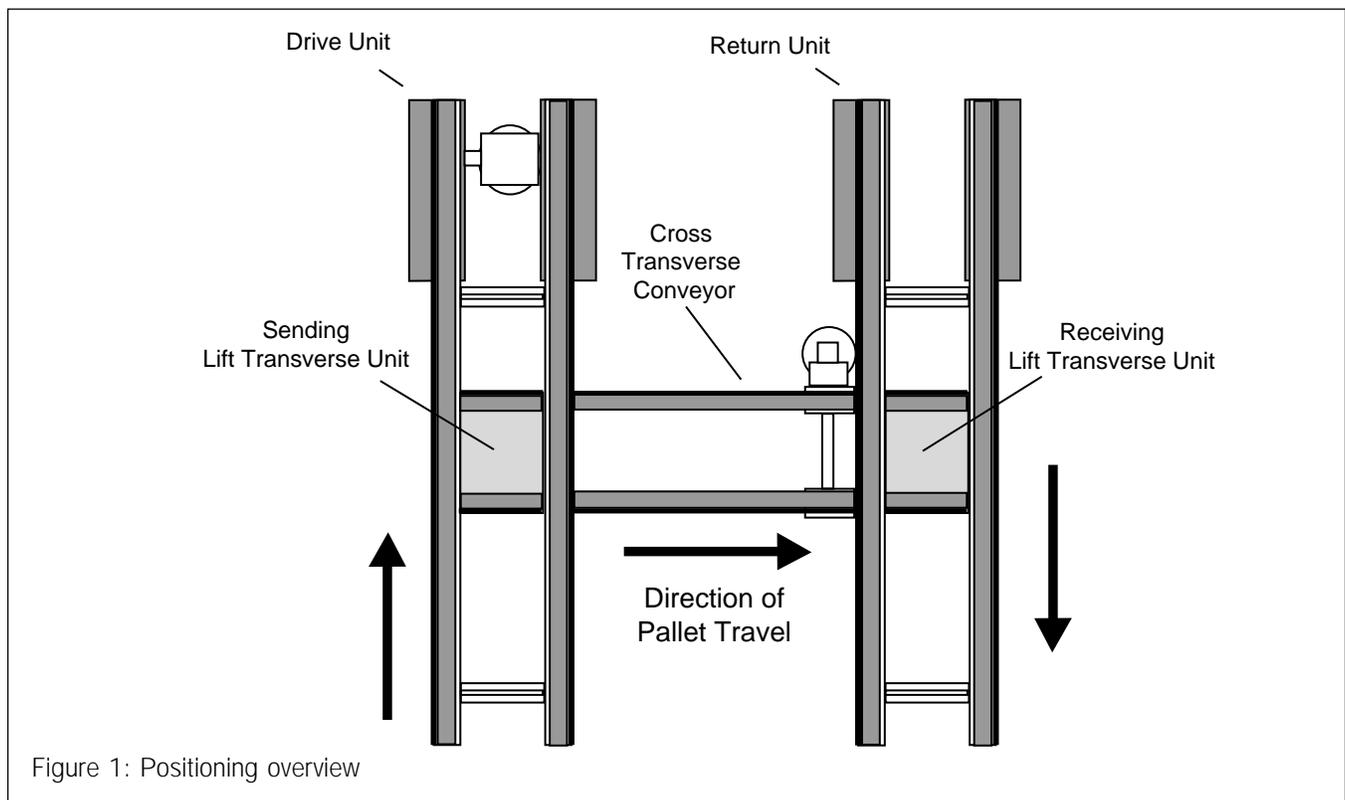
When creating a conveyor system with two parallel lines connected with lift transverse units (LTUs) and a cross-transverse conveyor (CTC), the LTUs and CTC must be properly aligned. Failure to do so can result in poor pallet movement and premature belt wear.

It is critical to maintain proper spacing when installing the main conveyor lines. They should be perfectly parallel, and at the same transport surface height. If any adjustment is needed, it should be completed before installing the LTUs, following the alignment and levelling procedures in the Basic Equipment Manual for the conveyor system.

### Installing the first (receiving) LTU

To simplify alignment, install the receiving LTU first, as shown in Figure 1 below. Refer to the instructions included with the LTU for basic installation procedures, and mount the LTU on the line at the desired location.

- 1 Mount the receiving LTU in the desired location and tighten all mounting hardware as described in the LTU manual.
- 2 Position the second LTU (the sending LTU) in its approximate final position on the parallel line. It may be helpful to use a chalkline or a straight edge to determine the proper position by making a straight line from the pallet guide of first LTU, perpendicular to the main conveyor lines.
- 3 Mount the sending LTU loosely, but do not fully tighten all hardware at this time.



### Installing the Cross-Transverse-Conveyor

- 1 Attach any leg sets needed, and adjust the CTC to the proper height (as indicated in the CTC manual) and level it. Position the CTC between the two LTUs and attach it loosely to the two main conveyor rails as instructed in the manual included with the CTC. Do **not** install foundation brackets at this time!
- 2 Connect air to the lift cylinders of the receiving LTU and raise them.
- 3 Using a straight edge and a 90° square, align the drive end of the CTC with the receiving LTU as shown in Figure 2 below. The inner edge of the pallet guides on both the LTU and the CTC should be perfectly even with each other. The CTC should also be at exactly 90° from the main conveyor line.
- 4 Once the drive end of the CTC is properly aligned, tighten the mounting fasteners securely according to the instructions in the CTC manual.
- 5 Make sure the lift cylinders on the LTU are raised, and test alignment by sliding a pallet from the CTC onto the receiving LTU. It should slide freely, without catching or hanging up on the guide profiles.
- 6 Use a square to verify that the return end of the CTC is perpendicular from the main conveyor line and tighten the mounting fasteners securely as instructed in the CTC manual.

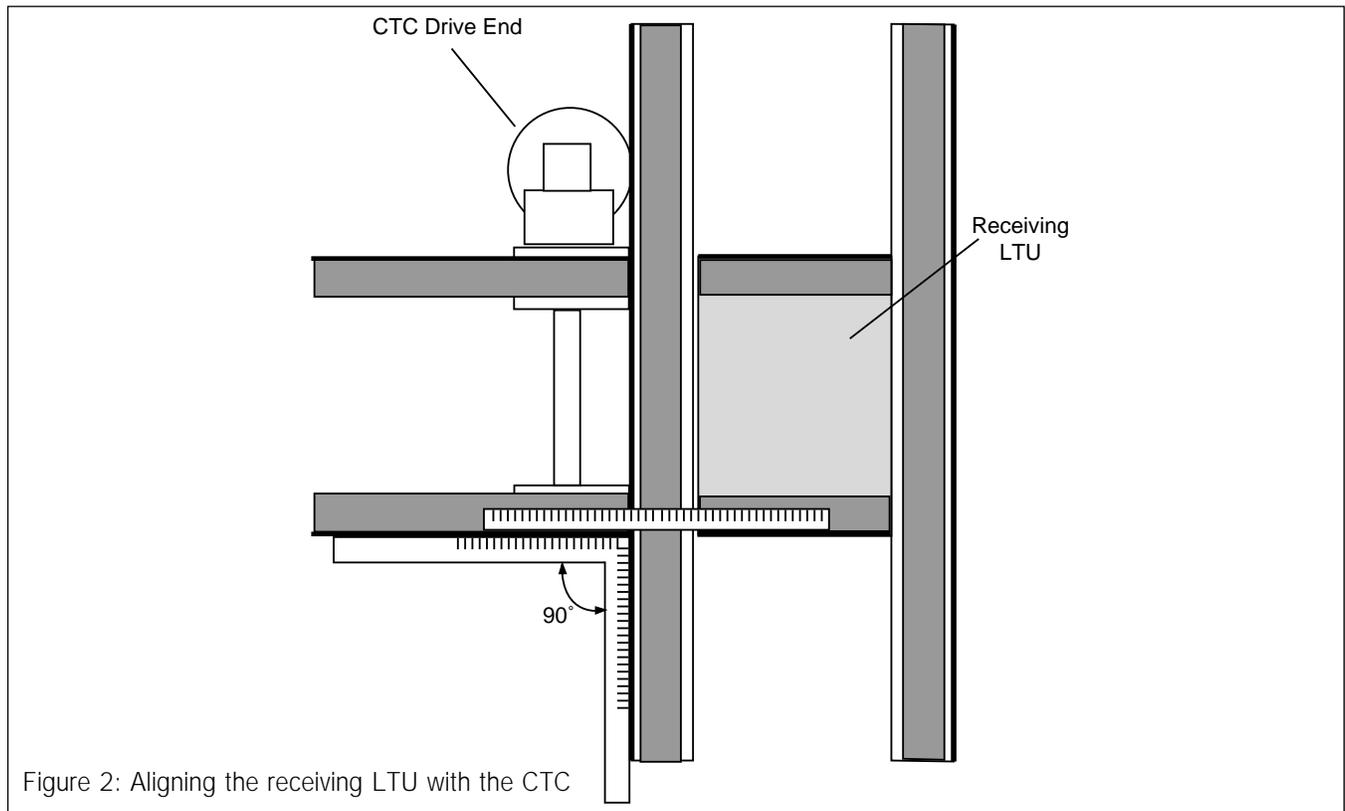
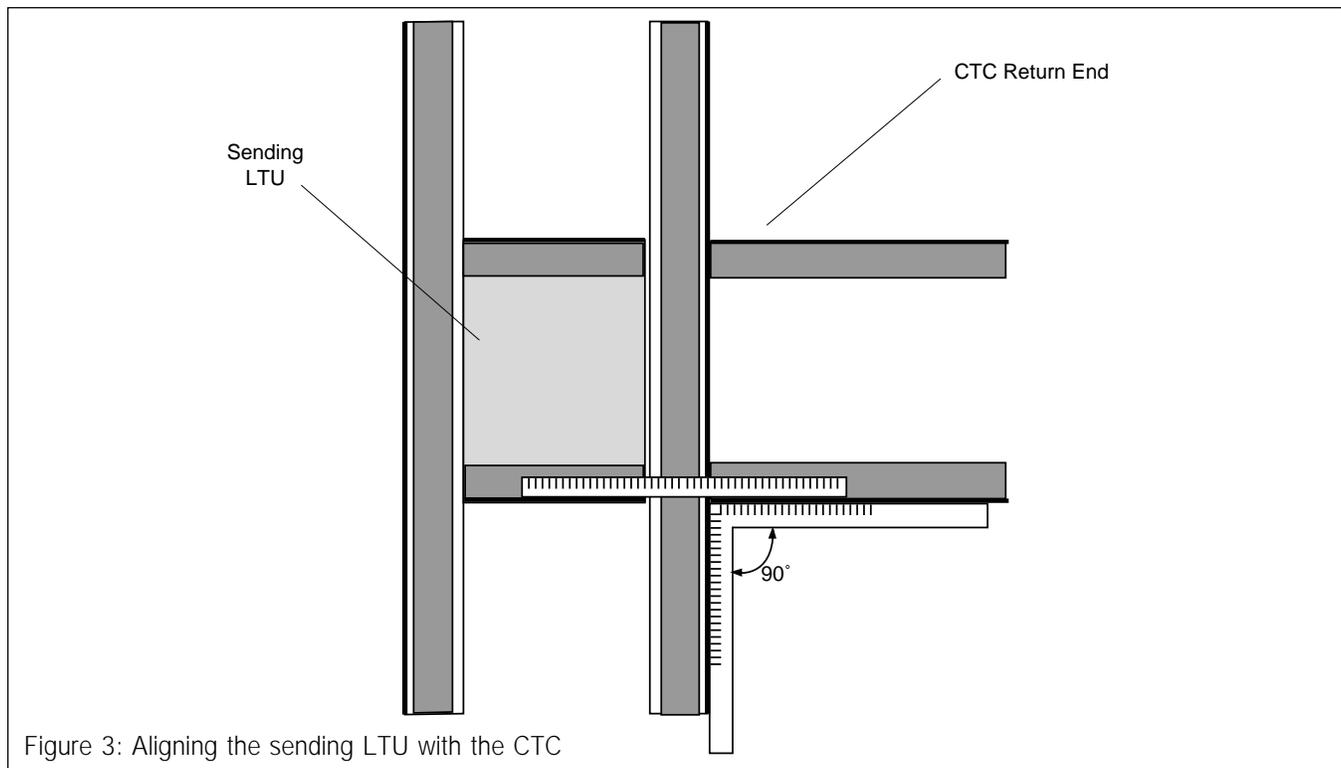


Figure 2: Aligning the receiving LTU with the CTC

### Installing the second (sending) LTU

- 1 Align the sending LTU as closely as possible with the CTC.
- 2 Connect pressurized air to the lift cylinders and raise them.
- 3 Use a straight edge to align the inner edge of the pallet guides on both the CTC and the sending LTU. Test the alignment by sliding a pallet from the sending LTU onto the CTC and back. It should move freely without catching or hanging up on the guide profiles.
- 4 Securely tighten the mounting fasteners on the sending LTU by following the instructions in the LTU manual and recheck the alignment with the pallet.
- 5 Once a pallet can move freely from one LTU to the other, complete the LTU and CTC installation process according to the respective manuals, including installation of foundation brackets where appropriate.



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