CONVEYORS DIRECT
Engineered Conveyor Solutions



Case Study:#124

Machining Center Automation

COMPANY

Machine Tool Distributor, Automation Group

OBJECTIVE

To provide a robust, automated conveyor to transfer 5 lb. aluminum blanks through an overhead vision system to a robot servicing an automated machining center.

SITUATION

The customer had previously used "off the shelf" low profile belt conveyors to feed parts to their automated equipment. Those conveyors were deemed underpowered and were not mechanically robust enough for the demanding duty cycle of the automated cell. Configured with traditional end drive pulleys, the previous conveyors would not operate reliably in reverse.

SOLUTION

Conveyors Direct built a system of three conveyors using heavy-duty modular plastic belting on our extruded aluminum T-slot frames. The conveyor beds feature steel supports and a stainless steel sliding surface for the belting. Due to the modular construction, the conveyor length can be easily changed to meet future layout requirements.

Intermediate conveyor drive units allow reliable forward and reverse switching. Although the conveyors normally operate in a single direction, occasionally, an operator will need to reverse the direction of a conveyor to offload blanks or finished parts.

BOTTOM LINE

A solution was engineered with a high percentage of Conveyors Direct's standard modular conveyor components and the right amount of custom configuration to meet the customer's specification for high reliability and mechanical stability to provide service for many years to come...just like their elite machining centers!

As an added bonus, our design process allowed the customer to chose frame and accent colors (drive and bearing covers) to exactly match their machine tool colors!

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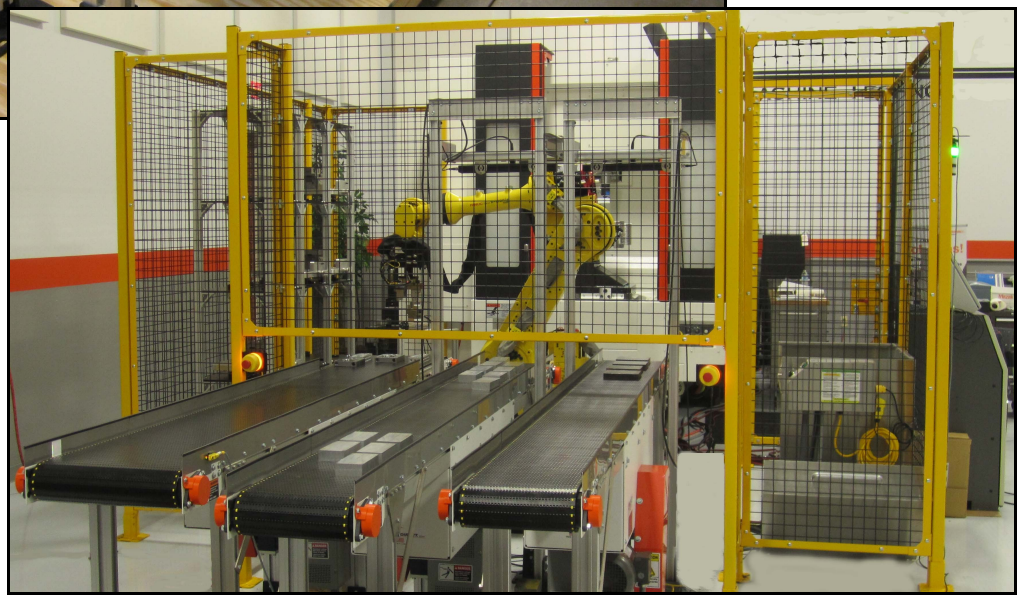


Left: Intermediate conveyor drives allow positive bi-directional operation. 1/2” wall Conveyors Direct extrusions provide stable, height adjustable support.

Below: Installation of conveyors on our customer's showroom for testing of the automated machining cell.



VFD control with 115V 1ph., input and 3 phase output and external I/O onboard.



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