



# TKU 2040

## Fixtured Indexing Chain Conveyor



Industrial  
Customizable  
Precise

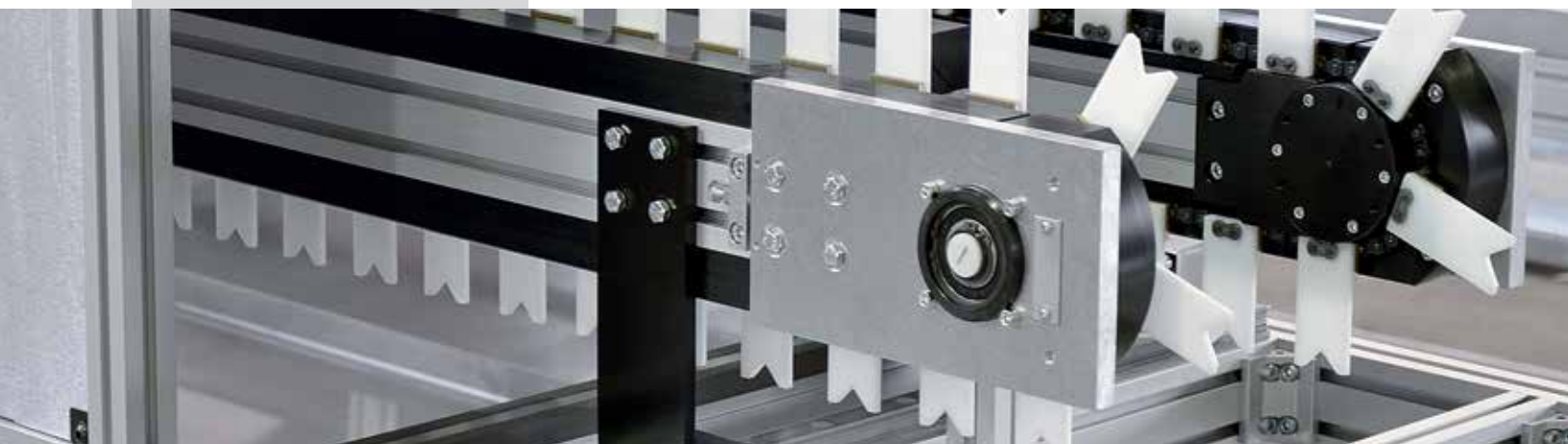


## *Introduction to mk*

mk North America is a member of the mk Technology Group and a leading worldwide manufacturer of pallet-handling systems, aluminum conveyors, stainless steel conveyors, and extruded aluminum framing.

Unsurpassed variety, maximum flexibility, superb quality and easy integration are reasons mk has become the supplier of choice for machine builders, system integrators and manufacturing companies around the globe.

Since 1988 mk North America has been providing diverse industrial know-how, superb quality, constant innovation and application engineering excellence. mk North America offers you a perfect solution for any application.



## *TKU 2040 - Fixtured Indexing Chain Conveyor*

The TKU 2040 indexing chain conveyor expands on our KTF-P 2010 chain conveyor. The TKU 2040 features chain with attachments, as a standard, along with a high load capacity frame and the option for an adjustable width.

This conveyor can be used in a number of industries including the machine tool and plastic industries, and throughout the entire automotive sector.

The TKU 2040 is specially designed for indexing. The TKU 2040 is optimized for fixed-cycle operation and is perfect for use in automated production.

The heart of the system is the roller chains to which fixtures are attached. These fixtures, attachments or pallets are designed to hold specific products. The v-shaped fixtures are especially useful for rounded parts and are made from polyoxymethylene (POM) or brass. Alternatively, a profile pallet can be used. This pallet can be individually equipped with application specific workpiece holders.

As noted above, this conveyor is also available in a version with an adjustable width. The adjustable width makes it possible to use the conveyor with parts of varying lengths.

The TKU 2040 chain conveyor has a modular design, is compact, flexible and sturdy, and permits total loads of up to 1,000 pounds.



## *Features and Advantages of TKU 2040*

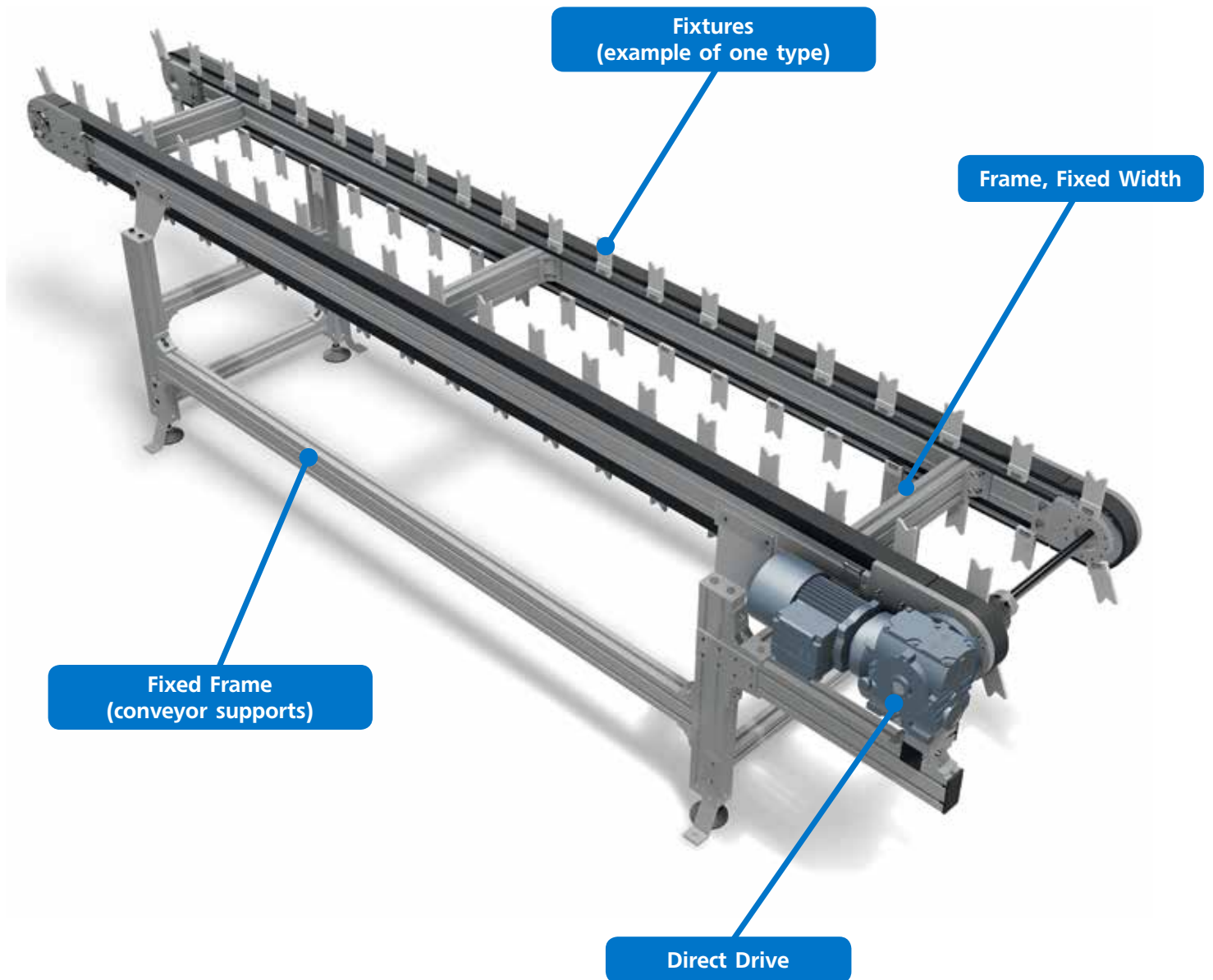
- ✓ Sturdy conveyor has a load capacity of up to 1,000 lbs.
- ✓ Widths between 195 mm and 1,500 mm
- ✓ Conveyor speed up to 60 fpm
- ✓ Repeatability of  $\pm 1$  mm possible
- ✓ Compact construction for fitting into machining stations
- ✓ Flexible, modular design allows for easy change-overs
- ✓ Width adjustable models available as an option
- ✓ Can be used to join or link together multiple processes



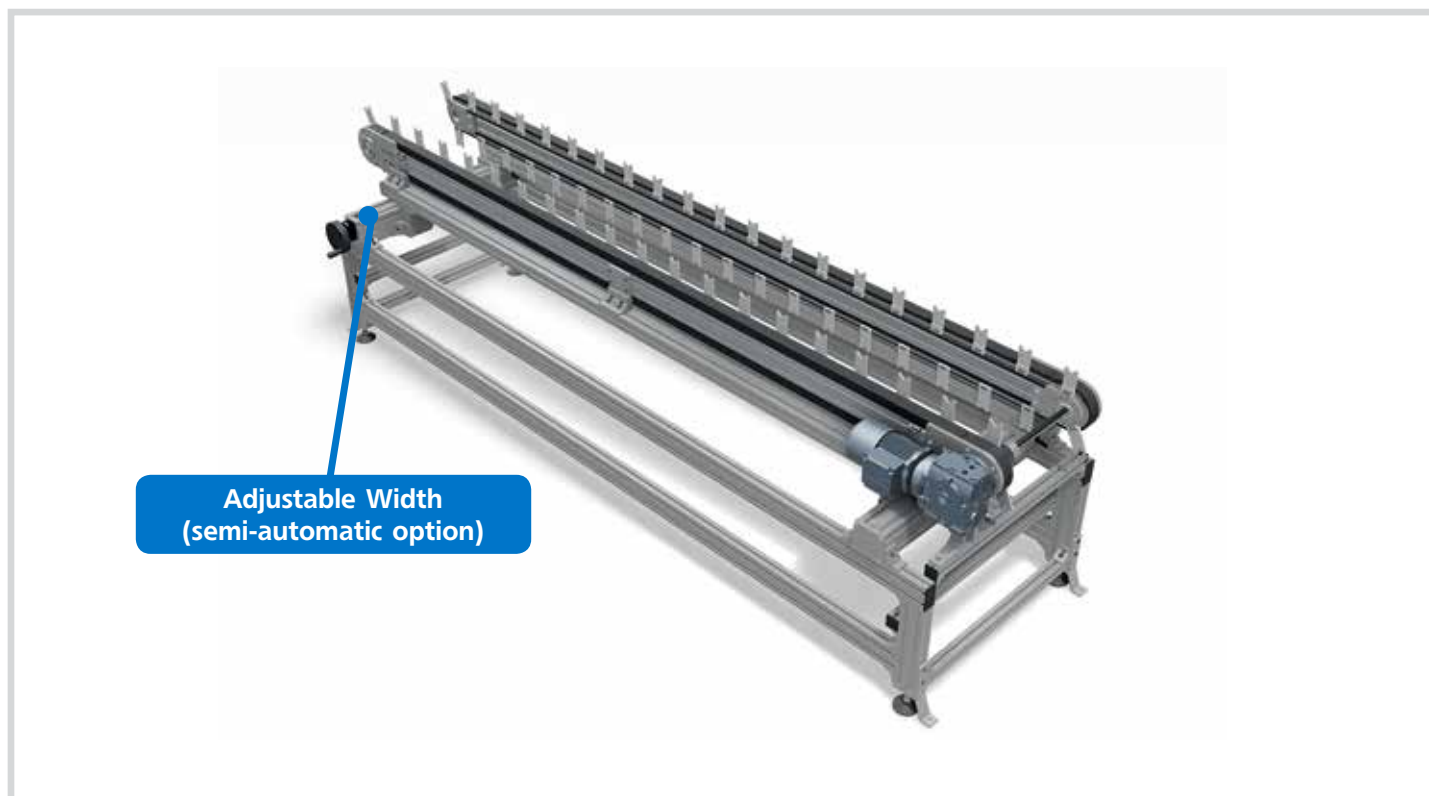
## Configuration Examples & Accessories

mk offers two different configurations for the TKU 2040 — a fixed width and an adjustable width. The adjustable width allows for a variety of similar, yet different, products to run on the same conveyor.

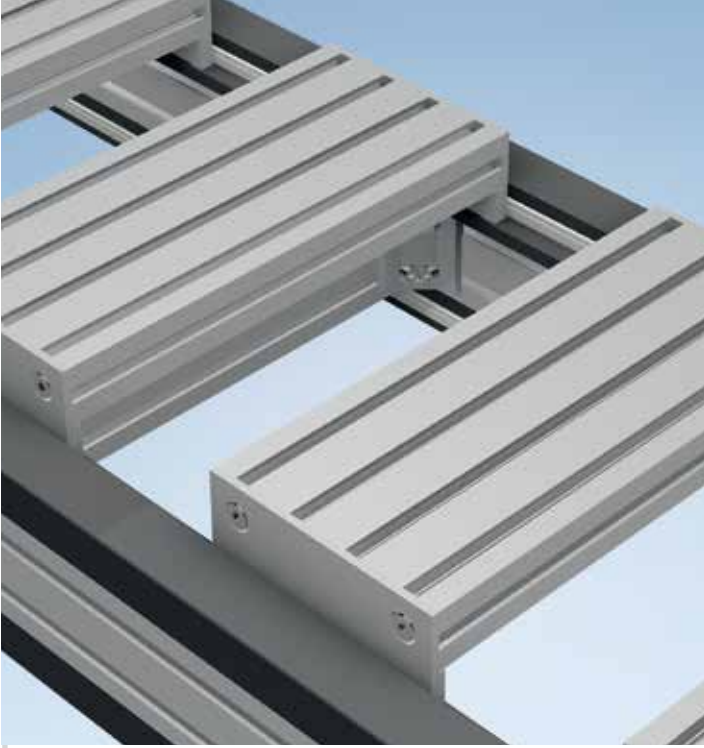
### Fixed Width



## Adjustable Width



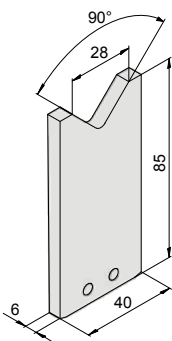
Technical Data (both models)	
Conveyor length (L)	1,000 to 8,000 mm
Conveyor width (B)	195 to 1,500 mm
Height (H)	300 mm minimum
Distance between attachments	2" to 20", in 1" increments
Drive position	Discharge end, left/right
Speed	6 to 60 fpm depending on cycle/load
Load capacity	Max. 100 lbs./workpiece Max. 1,000 lbs./conveyor



## Attachments

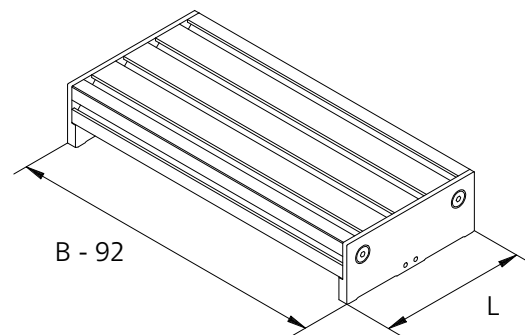
There are two standard types of attachments that can be mounted to the conveyor chain — V-Fixture or Profile Pallet types. The V-Fixture is ideal for carrying shafts, rods, cylinders, and other long circular parts. The Profile Pallet is designed for all other parts. Because of the availability of the t-slots on the Profile Pallet, custom fixtures can easily be added and changed. Custom pallets are available.

### V-Fixture



- Ideal for round workpieces
- POM, Brass, Steel or Aluminum construction
- Can be used in adjustable width applications

### Profile Pallet



- Constructed out of mk 40 system profile
- Features 2 to 4, 10 mm t-slots per pallet
- Can only be used in fixed width applications
- Available in a variety of widths (B)
- Three length options (see table below)

Name	T-Slot Quantity	L (mm)
WT 80	2	80
WT 120	3	120
WT 160	4	160

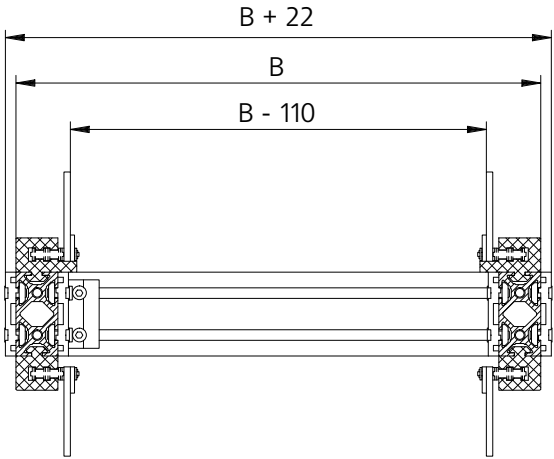




## Conveyor Frame Options

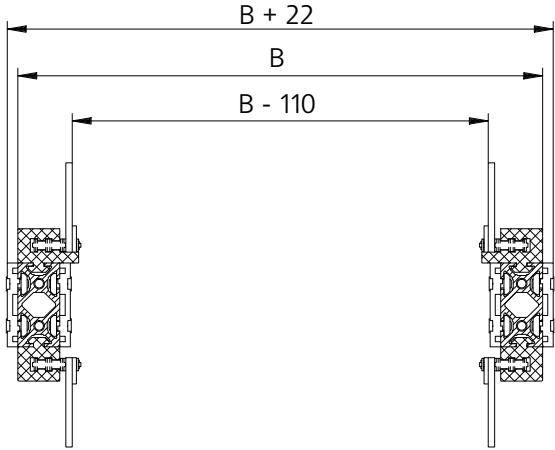
The conveyor body consists of two profile sections with gliding assemblies (wear surfaces) for the attachment chain to ride upon. The fixtures or pallets are attached to the standard roller chain attachment links. The chain is also supported on the return.

### Conveyor Frame – fixed width



This conveyor frame has perpendicular cross members which makes this conveyor extremely durable. This conveyor cannot be width adjusted.

### Conveyor Frame – adjustable width



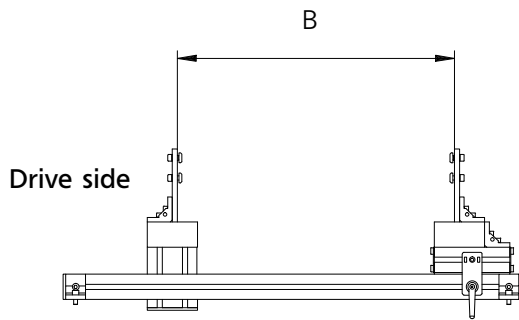
This conveyor body is installed on the width adjustment mechanism, which is designed specifically for the system. The width adjustment mechanism is fixed to the conveyor supports. See the next page for the width adjustment options.



## Adjustment Options

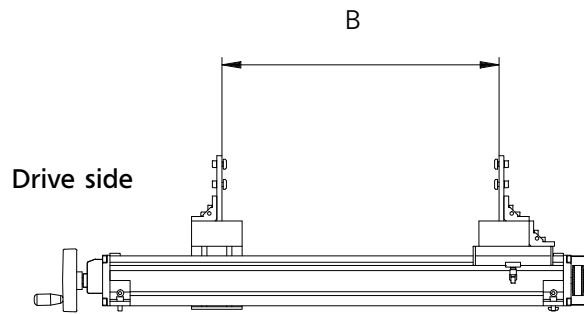
This conveyor features the option for an adjustable width. This allows the conveyor to accept workpieces of different sizes. There are two options for width adjustment — Manual or Semi-Automatic. The width adjustment range depends on a variety of factors. Contact mk North America for options based on application specifications.

### Manual Adjustment



This design utilizes sliding assemblies and clamping mechanisms. The non-driven side can be adjusted by loosening the clamping handles on both slide assemblies and then adjusting the frame. A tape measure is installed to indicate the width and ensure conveyor lanes are kept in parallel.

### Semi-Automatic Adjustment



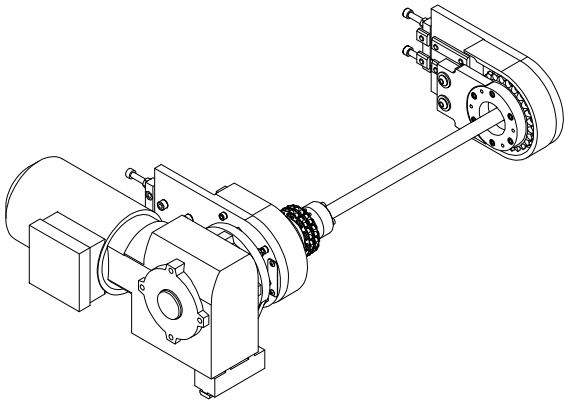
mk linear positioning model VST is used in this design. You can adjust the position of the non-driven side by turning the hand-wheel on the VST, which lets you conveniently vary the distance between the chains. A gauge shows the change in distance.



*Drive*

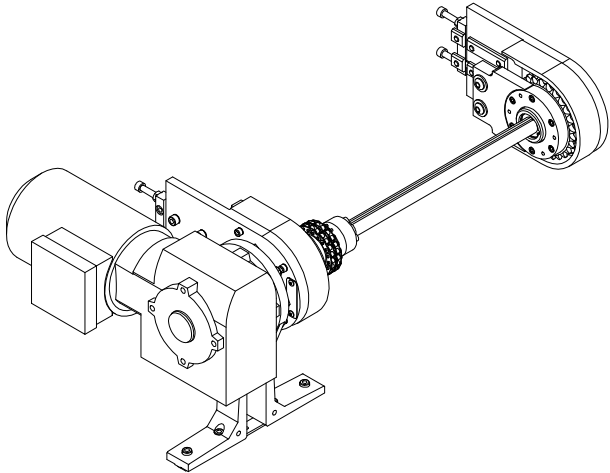
The TKU 2040 conveyor comes equipped with a direct drive. The drive is compact, exhibits low backlash, and requires little maintenance. This drive is optimized for indexing applications because the motor is connected directly to the conveyor drive shaft. The motor is positioned outside the conveyor body to allow for fixtures and pallets to pass freely beyond the end of the conveyor.

**Direct Drive – fixed width**



The drive assembly is sized according to the specified conveyor width.

**Direct Drive – adjustable width**



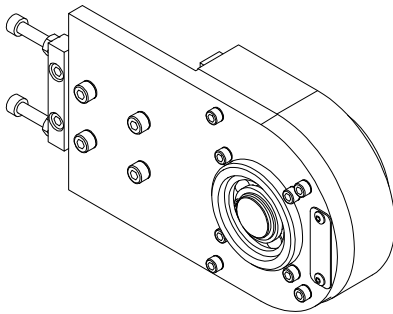
The adjustable drive features a spline shaft with a ball bushing that lets you easily adjust the width. The drive side of the conveyor is fixed in position.



## *Return*

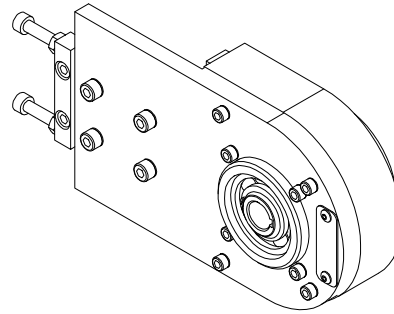
The return (or infeed of the conveyor) includes the chain tensioning device on the outside of the frame.

### **Standard**



This infeed can be used on both fixed and adjustable width conveyors.

### **Hollow Shaft**



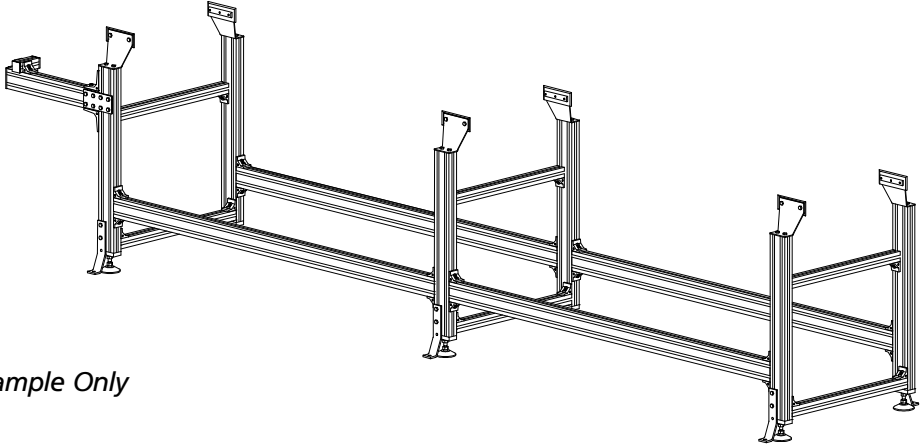
The hollow shaft infeed is the same as the standard infeed however, it includes a  $\varnothing 20H7$  hollow shaft. This allows for after-market products, such as encoders, to be easily mounted to the conveyor.



## Supports

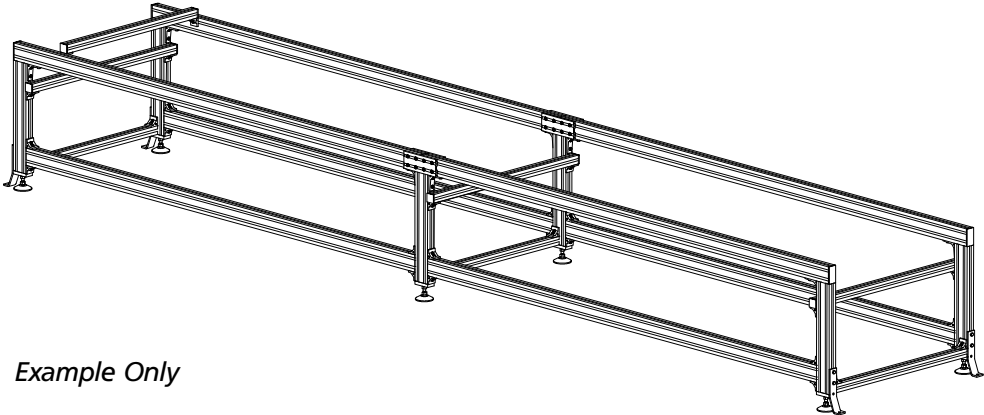
The conveyor supports, or stands, can be ordered at various working heights. These support frames can be constructed with guarding panels or as a mobile version with casters. All supports are designed to meet the needs of each specific application.

### Conveyor Supports - fixed width



*Example Only*

### Conveyor Supports - adjustable width



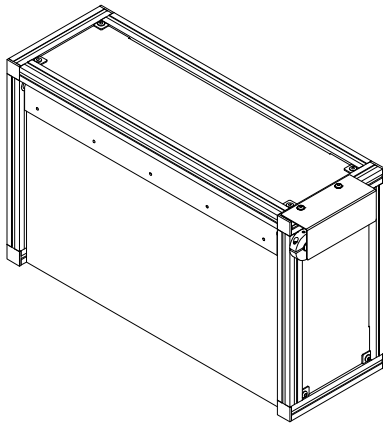
*Example Only*



## *Protective Guards*

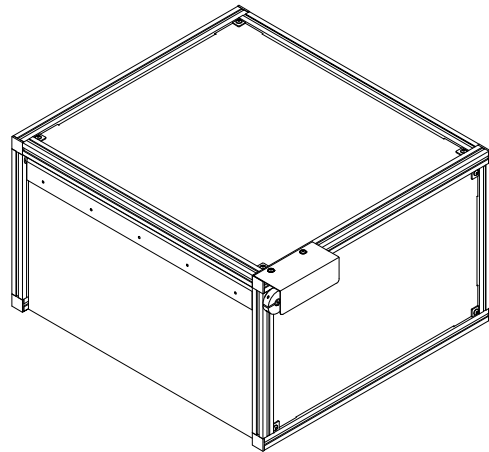
The protective guards aid in preventing operators from reaching into the system, and help reduce the risk of injury\*. There is a rotary lock which is triggered when moved and can be wired to stop the entire system. The guard is adapted to the contours of the particular product so that the product itself does not trigger the lock.

### **Guard for Infeed and Outfeed**



Designed to fit on the infeed and discharge ends of the conveyor, this guard is specifically designed for each conveyor and product.

### **Guard for Conveyor Body**



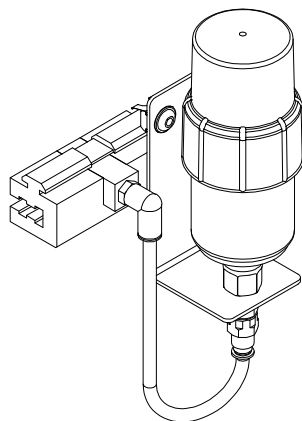
Designed to fit down the length of the conveyor, this guard is specifically designed for each conveyor and product.

**\* The customer is responsible for ensuring that the TKU 2040 is correctly guarded based on their application. Additionally the customer is responsible for ensuring that all local, state and federal safety laws and regulations are adhered to.**



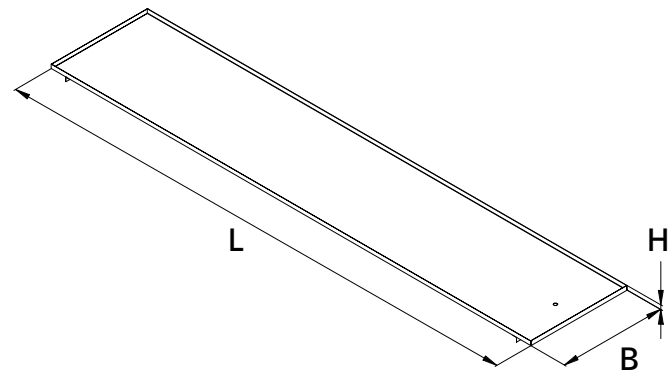
## Accessories

### Lubrication Station



The optional lubrication station is designed to automatically lubricate the conveyor chain. One per conveyor lane is recommended. This is a battery powered unit with an oil cartridge.

### Drip Pan

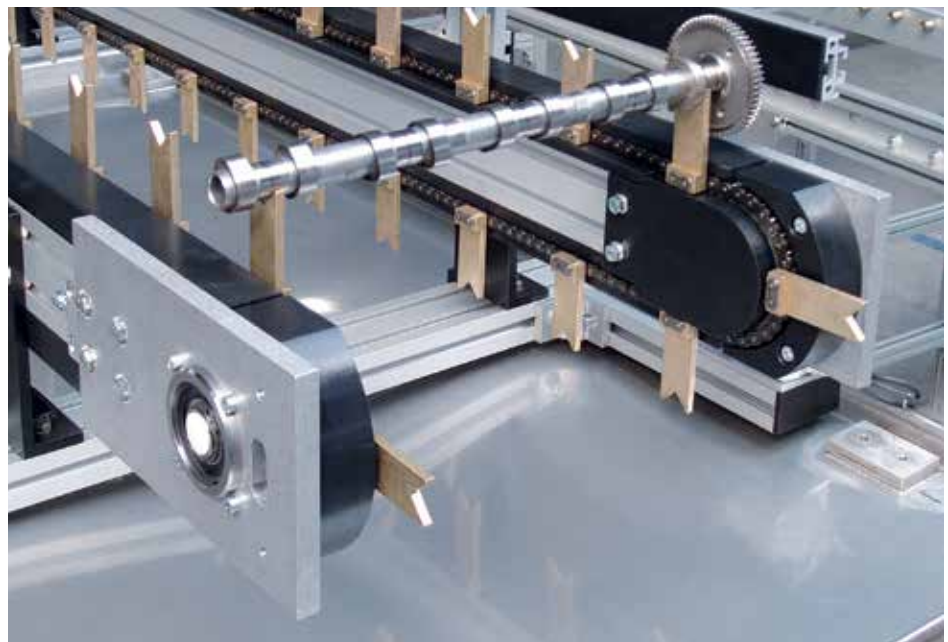


The stainless steel drip pan is equipped with a threaded drain nozzle. Typical applications include conveying products that are lightly coated in oil.

## Application Examples



TKU 2040 adjustable width unit.  
This conveyor also features oversized POM fixtures.



TKU 2040, Tail Option 01, with brass fixtures and additional side rails for transporting shafts between machining processes.





TKU 2040 with manual width adjustment and brass fixtures.



TKU 2040 with oversized custom brass fixtures.



A wide width TKU 2040 with Profile Pallets, complete with locating fixtures for the automotive industry.



A TKU 2040 conveyor integrated into a custom parts cleaning operation.



TKU 2040 fixed width conveyor that is also capable of handling parts of various lengths.



TKU 2040 adjustable width conveyor, with brass fixtures and a guard, and stainless steel paneling on the drive end.



**mk North America, Inc.**  
an mk Technology Group Company

105-125 Highland Park Drive  
Bloomfield, CT 06002, USA

Phone: 860.769.5500

Fax: 860.769.5505

[www.mknorthamerica.com](http://www.mknorthamerica.com)  
[sales@mknorthamerica.com](mailto:sales@mknorthamerica.com)