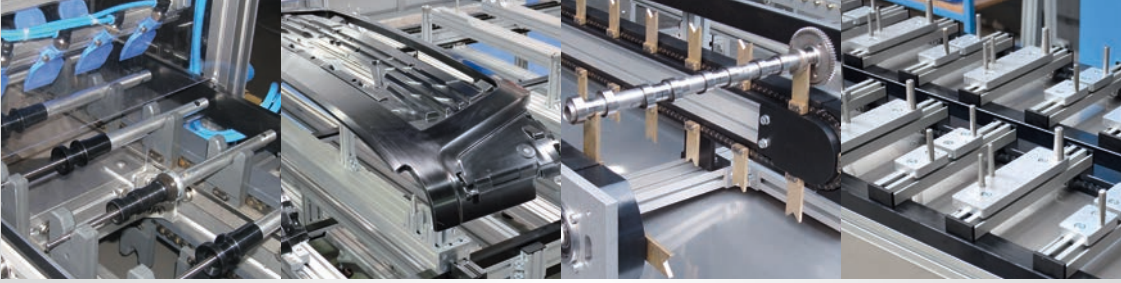


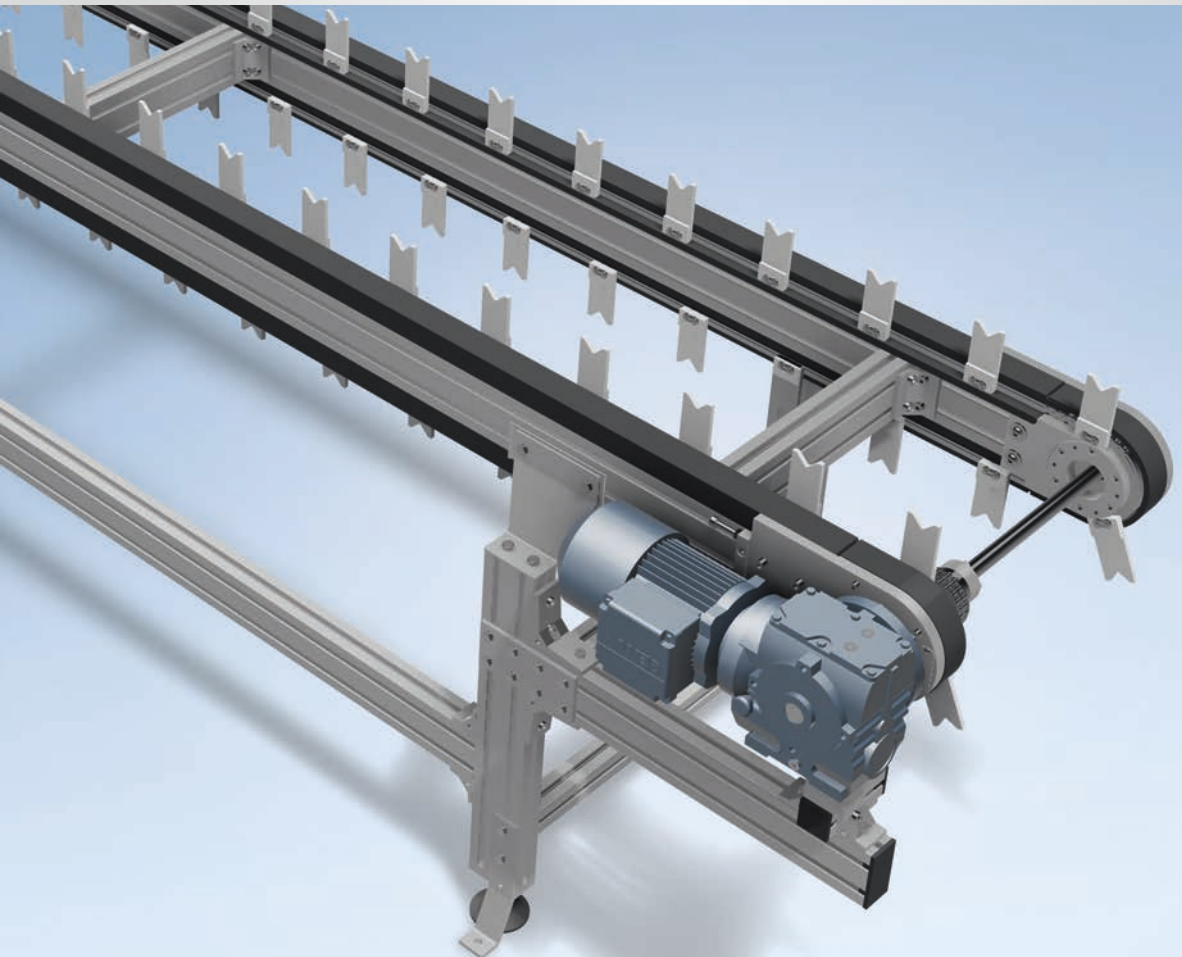


TKU 2040

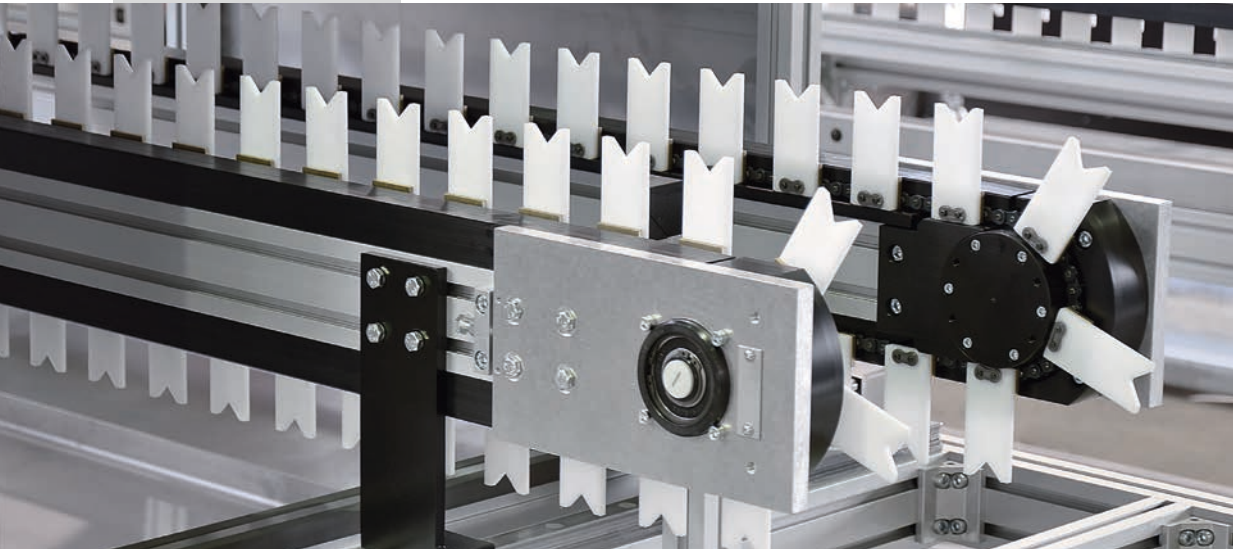
Indexing Chain Conveyor System



Supply. Interlinking. Fixed-cycle operation.



TKU 2040 Indexing Chain Conveyor System



Supply. Interlinking. Fixed-cycle operation.

mk – we are one of the leading suppliers of mechanical components, modules and complete solutions for factory automation. The TKU 2040 indexing chain conveyor system expands our portfolio of pallet systems. The system can be used in the machine tool and plastic industries, throughout the entire automotive sector and in many other industries.

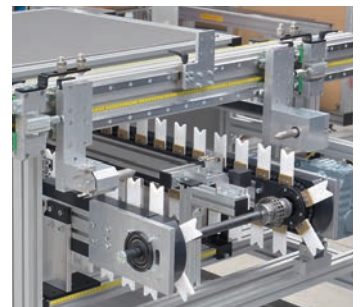
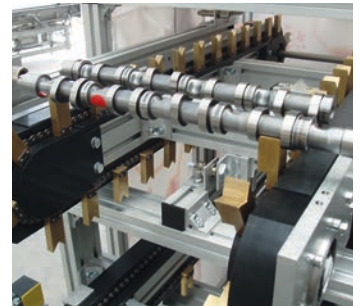
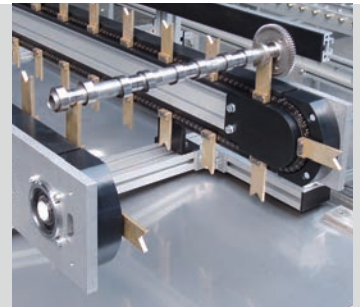
The TKU 2040 is specially designed for defined, position-based transport of workpieces. The TKU 2040 is also optimised for fixed-cycle operation and is perfect for use in automated production.

The heart of the system is the newly developed timing chain conveyor that uses two roller chains to transport workpieces.

Prisms or pallets are attached to the transport chain to hold the workpieces. The prisms are made from polyoxymethylene (POM) or brass, which are optimal for holding round work pieces. Alternatively, you can select profile pallets that can be individually equipped with customer-supplied workpiece fixtures.

The timing chain conveyor is also available in a version with an adjustable width. The adjustable width makes it possible to use with workpieces of different sizes.

The timing chain conveyor has a modular design, is compact, flexible and sturdy, and permits total loads of up to 700 kg.

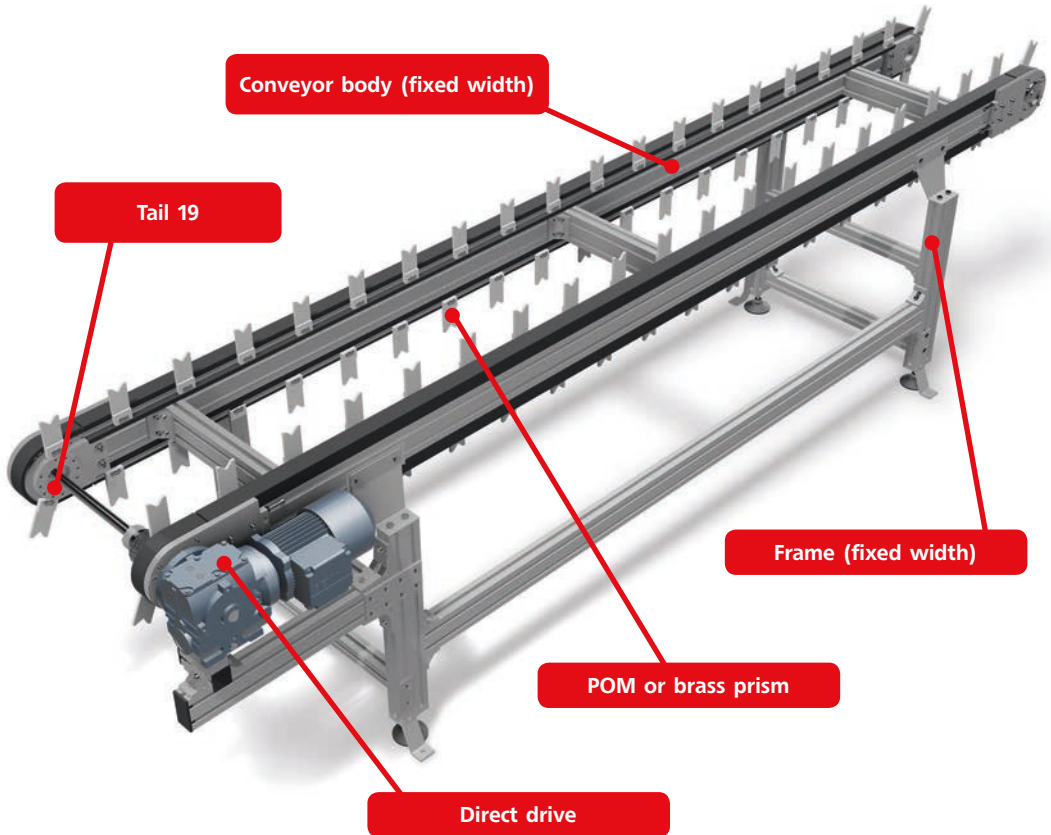


Benefits of the TKU 2040

- Cost-effectively interlink two machining stations
- Sturdy conveyor has a load capacity of up to 700 kg
- Loads of up to 6/10 kg (prism) and up to 20 kg (profile pallet) per workpiece
- Compact construction
- Flexible modular design
- Widths between 195 mm and 1500 mm on adjustable models
- Sturdy construction means low maintenance and wear
- Conveyor speed up to 18 m/min
- Repeatability of +/-1 mm possible

Versions

B20.40.401 – fixed width



B20.40.400 – adjustable width



Technical data

Conveyor length L Tail end to end	1000 to 8000 mm
Conveyor width W Outside edge of conveyor body	195 to 1500 mm
Height H Top edge of conveyor body	variable, by request
Distance between prisms	2" to 20" (50.8 to 508 mm) in 1" steps
Drive position	discharge end, left/right
Drive and speed	2 to 18 m/min depending on cycle
Load capacity	max. 20 kg/workpiece max. 700 kg/conveyor

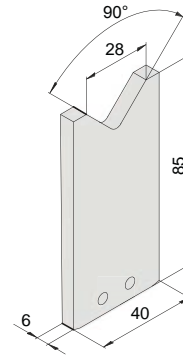


Prisms/pallets

POM prism

42.06.0001

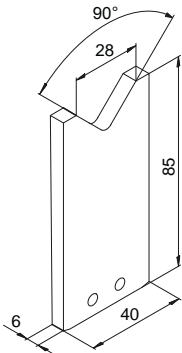
- Ideal for round workpieces
- POM construction
- Transports workpieces without damaging them
- Permits loads up to 6 kg/workpiece



Brass prism

42.06.0002

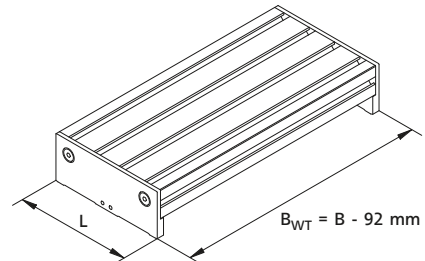
- Ideal for round workpieces
- Brass construction
- High strength and heat resistance
- Permits loads up to 10 kg/workpiece



Profile pallet (WT)

B46.12.000

The profile pallet, which is constructed from profiles from the 40 series with 10 mm grooves, is available in variable widths (within the limits of the system) and supports loads of up to 20 kg. The profile pallet can be used only with fixed-width conveyors.



Name	Grooves	Length L (mm)
WT 80	2	80
WT 120	3	120
WT 160	4	160

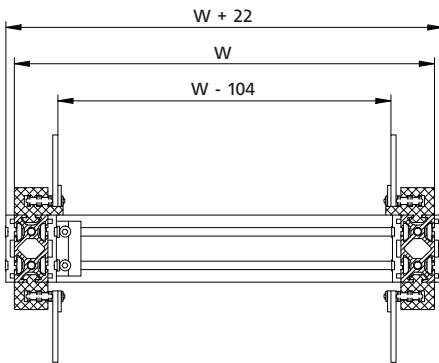
Assemblies

Conveyor body

The conveyor body consists of two profile sections with gliding assemblies for the chain with the attached workpiece fixtures.

Conveyor body – fixed width

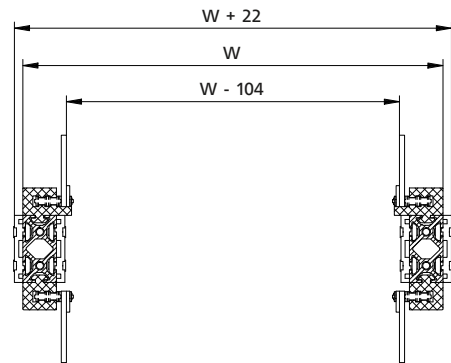
B08.07.401



This conveyor body has perpendicular traverses that give the conveyor body high intrinsic stability. It can therefore be integrated into a lighter stand system.

Conveyor body – adjustable width

B08.07.400



This conveyor body is installed in a width adjustment mechanism designed specially for the system, which is fixed in place on a support frame.

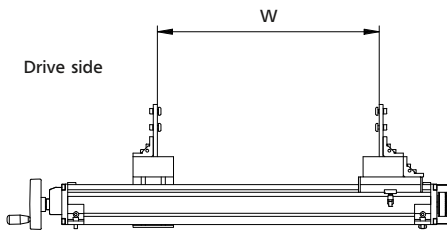


Adjustment units

On adjustable models, adjustment units are used to change the conveyor width. This allows the conveyor to accept workpieces of different sizes. The width adjustment range depends on the limits of the system.

Semi-automatic adjustment unit

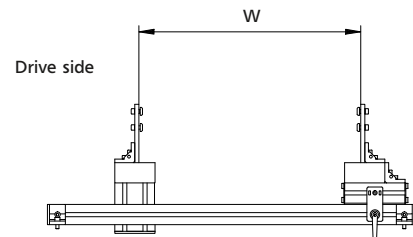
B85.00.040



You can adjust the position of the non-driven chain by turning the handwheel, which lets you conveniently vary the distance between the chains. A digital gauge shows the displacement.

Manual adjustment unit

B24.01.032



You can manually adjust the non-driven chain by loosening the clamping handles on both gliding assemblies, which lets you conveniently vary the distance between the chains. A dial indicator shows the displacement.

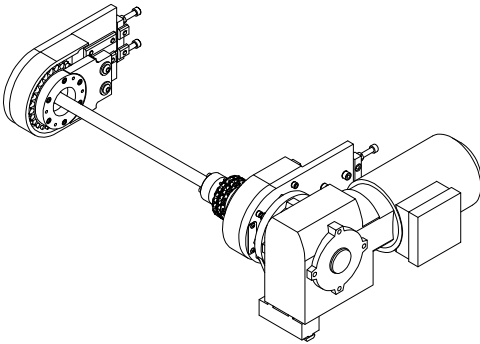
Assemblies

Drive

A direct drive is used as the drive. It is particularly compact, exhibits low backlash and requires little maintenance. This drive is particularly well suited for fixed-cycle operation because the motor is connected directly to the application. The motor is positioned outside the conveyor body so that there are no obstructing edges that would block travelling prisms or profile pallets.

AF direct drive – fixed width

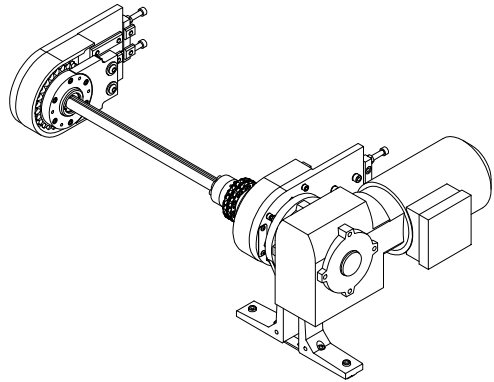
B01.07.401



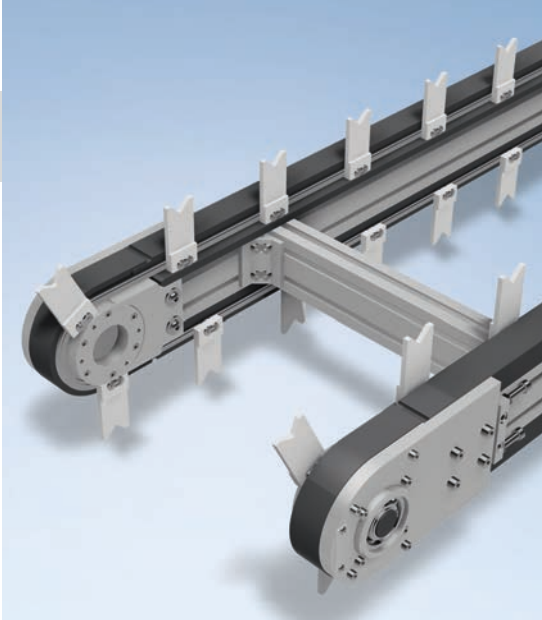
The drive is dimensioned according to the specified conveyor width. The torque arm has a bracket for attachment to a lighter stand system.

AF direct drive – adjustable width

B01.07.400



The adjustable drive has a special shaft with a ball bushing that lets you easily adjust the width. The motor's torque arm has a bracket for attachment to a sturdy base frame.

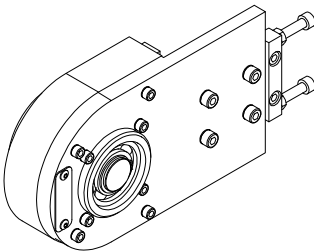


Tails

The tail contains sprockets that reliably move the transport chain. Tensioning units in the tails let you adjust the chain tension as necessary.

Tail 01

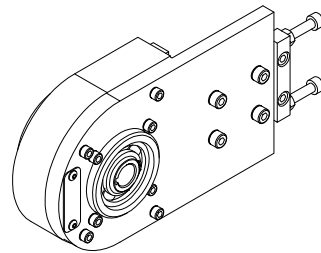
B80.07.400



Tail 01 is the standard tail in the TKU 2040 system. It can be used in conveyors with both fixed and adjustable widths.

Tail 19

B80.07.401



Tail 19 has the same design as tail 01. However, it is equipped with a $\varnothing 20H7$ hollow shaft that can be attached to an insert shaft with a feather key for coupling drives or for connecting a rotary encoder. It can be used in conveyors with both fixed and adjustable widths.

Assemblies

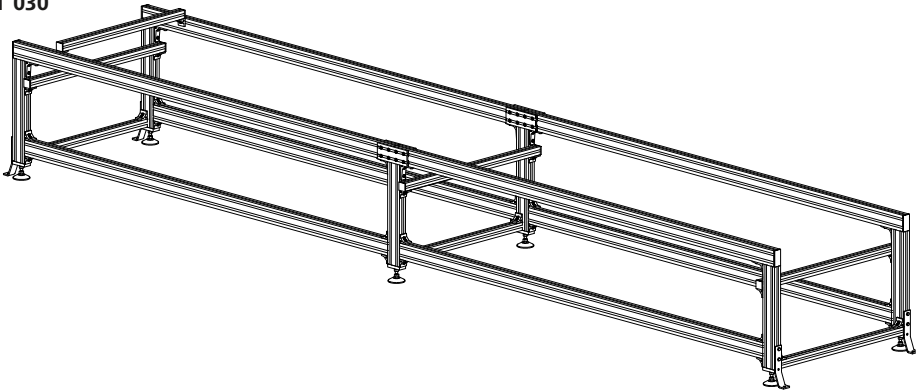
Frame

The base frame ensures that the system is stable and secure, and it can be ordered in various working heights. The frame is also available with optional panelling (sheet metal or Makrolon) or as a mobile version with castors.



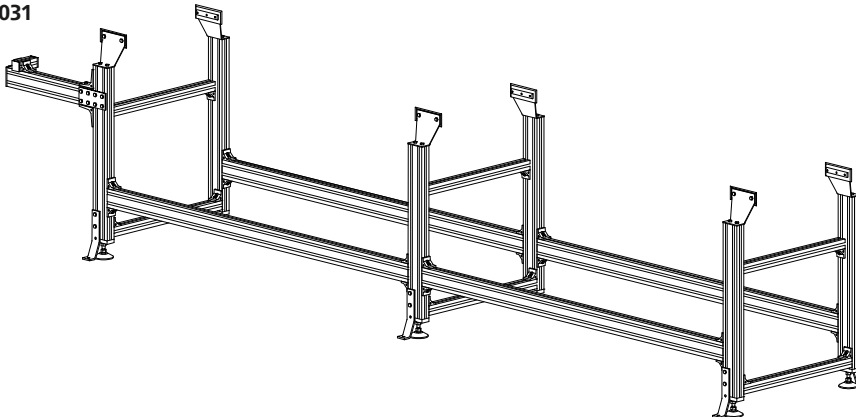
Frame – adjustable width

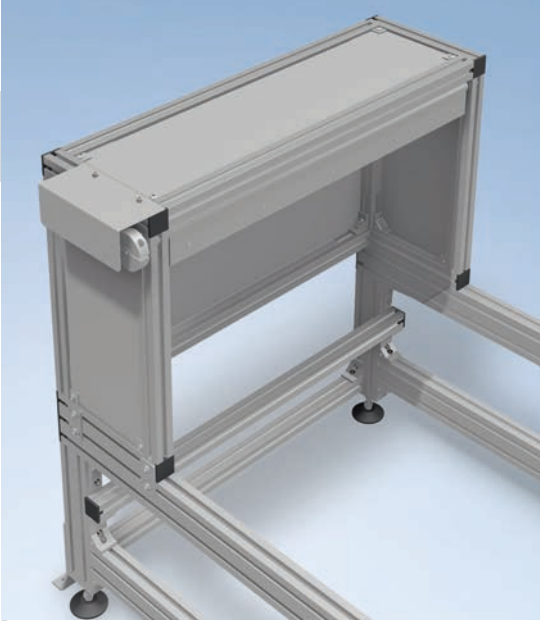
B24.01 030



Frame – fixed width

B24.01 031

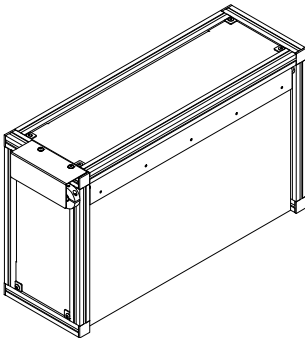




Protective device guard

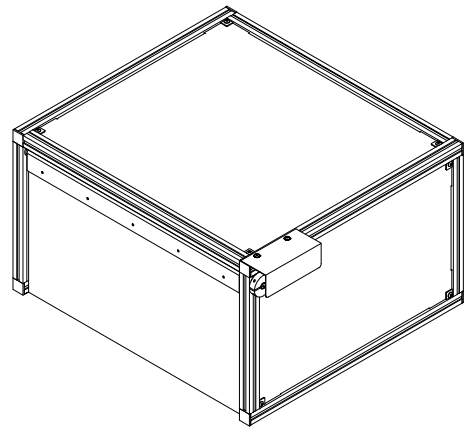
The protective device guard prevents anyone from reaching into the system during operation and reduces the risk of injury. The rotary lock is triggered when moved and stops the entire system. It is adapted to the contours of the particular product so that the product itself does not trigger the lock.

Protective device guard for drive/tail

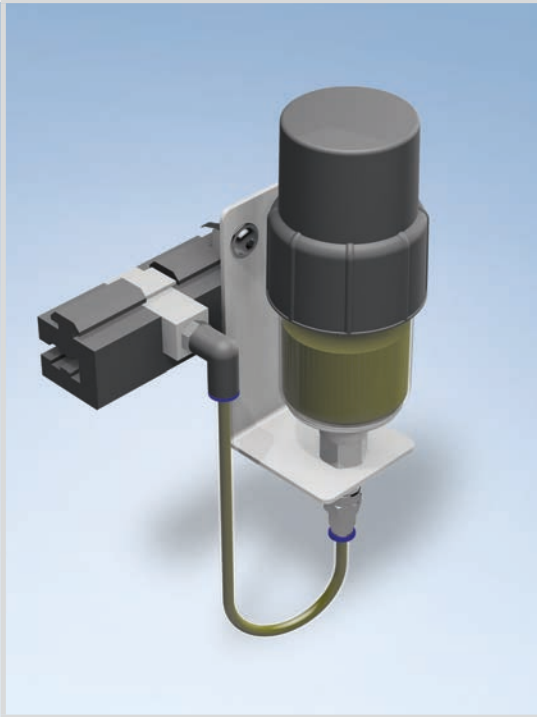


Individually designed protective device guard for the infeed and/or discharge end, adapted to the particular conveyor system, the local environmental conditions and the contours of the product to be transported.

Protective device guard for track



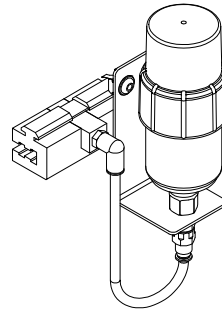
Individually designed protective device guard for the track area, adapted to the particular conveyor system, the local environmental conditions and the contours of the product to be transported.



Lubrication station

Installing the optional lubrication station means that you do not have to manually oil the chain.

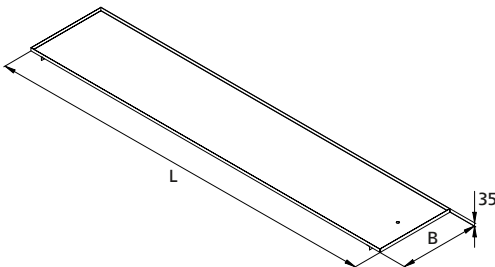
It can be retrofitted into existing systems. A decentralised design with cartridges and a battery-powered drive is also available, as is a central lubrication station that is controlled by pulses from a PLC.



Lubrication station
B03.01.002

Drip pan

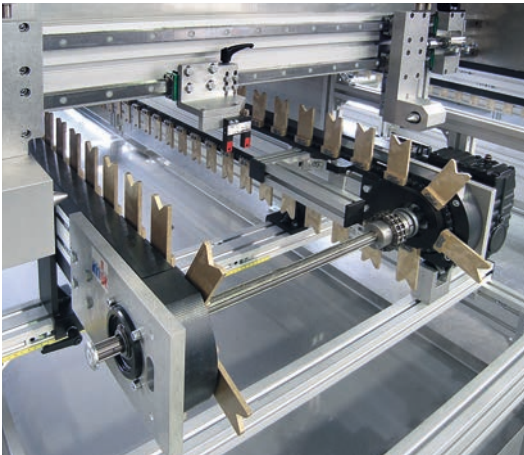
The drip pan is made of stainless steel. It is individually designed according to the particular conveyor system, the local environmental conditions and the contours of the product to be transported. It is equipped with a drain nozzle with an R 3/4 thread that can be connected to the drain lines. Typical applications include conveying products that are lightly coated in oil.



Sample applications



TKU 2040 with special adjustment unit for adjusting the distance between the chains



TKU 2040 with a manually adjustable chain and a lifting/turning unit



TKU 2040 with protective device guard on the drive side

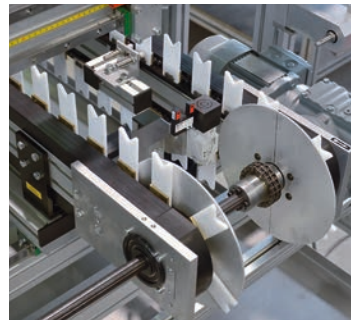
Sample applications



Double-conveyor system with order-specific profile pallets and fixtures



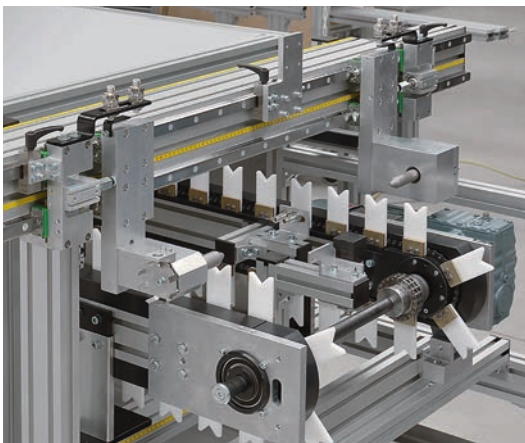
TKU 2040 with extractor unit and conveyor for rejected pieces



TKU 2040 with protective guard around the drive



TKU 2040 with custom workpiece fixtures and centering elements for the automotive industry



TKU 2040 for transporting camshafts using position sensors



Customer-specific TKU 2040 with 20° inclination and transport of workpieces through a cleansing bath



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