

Build what lean production needs – the simple way.





Factory equipment

This is what lean production looks like! Aluminium profiles and fasteners D30 can be assembled directly on site to build sturdy racks and factory equipment in next to no time. All connections are stable as soon as they are tightened, but can always be modified to accommodate subsequent changes in working processes. Whether racks for material supply or custom-designed work benches – there's no simpler solution.

Intralogistics

This is how to keep goods moving! Intralogistics solutions benefit from heavy-duty castors and a combination of aluminium tubes and die-cast aluminium fasteners. This approach ensures transport trolleys can withstand the constant stresses and strains of day-to-day work. The end result is high availability and minimum maintenance costs. Special components for shooter solutions minimise the need for manual interventions to keep materials flowing smoothly.

Material flow

This is how to keep fresh supplies coming in! A simple approach to building flow racks and a huge selection of roller conveyors support straight-forward handling practices for standardised containers and workpiece carriers. Even sensitive goods, soft protective packaging and bulky parts can be safely transported and stored using specialised solutions.

Low-cost automation – the mechanical solution

This is how to do more! Mechanical automation that doesn't require drives, electricity or compressed air takes the strain off workers and makes processes more efficient. Moving components can create rockers, container storage facilities and mechanisms for lifting containers and changing the direction of travel and can be integrated into small spaces.



Low-cost automation – the mechanical solution.

Low-cost automation (LCA) relieves strain on workers and boosts productivity without requiring complex control systems or drives. For example, by connecting together processes with a little skill, you can combine loading and unloading procedures. Karakuri applications speed up workflows and minimise tiring manual labour by lifting crates for workers.

Let gravity do the work for you! Low-cost automation uses lever principles and integrates moving profiles into frames. Profile Tube System D30 makes applications like these particularly easy to achieve.

Low-cost automation with the Lean Production Building Kit System uses a small number of components to deliver a

clear improvement in manual activities. Several processes in assembly and intralogistics operations benefit from this approach. When combined with item roller conveyors, complete shooter solutions can be built that release and accept containers as soon as the transport trolley arrives in the correct position.

Karakuri applications from Profile Tube System D30 can also be combined easily with the ergonomic item Work Bench System. This means, for example, that work benches can be kitted out with picking procedures that involve the user actuating a lever to lift a transport container to an optimum ergonomic reaching height.

Low-cost automation – the mechanical solution: Products in this section.



Plain Bearing D40/D30-50 ESD

- Preassembled Plain Bearing
- Enables rotational and translational motions

170



Plain Bearing Sleeve D40/D30 ESD

- For making plain bearings in custom lengths
- For Profile Tube D40/D30

170



Locking Ring D30

- Secures the position of a Plain Bearing D40/D30
- Secure hold, even for horizontal rotation

170



Release Unit D30

- Releases / blocks conveyor sections
- Purely mechanical solution

172



Roller D39.5

- Guides moving components
- Robust, ball-bearing roller

175



Plain Bearing D40/D30-50 ESD

- Enables rotation and movements along a profile
- Extremely space-saving solution
- For building sophisticated mechanisms



Turning on a pin. Plain Bearings D40/D30 are the basis for low-cost automation (LCA). Plain Bearings support a rotating motion because Profile Tube D40/D30 encompasses the load-bearing D30 profile and can be rotated around its longitudinal axis without generating friction. The Plain Bearing Sleeve is made of maintenance-free plastic that exhibits a low coefficient of friction and excellent rigidity.

This low-cost solution opens up huge potential because item Plain Bearings can be integrated into a frame very easily and require very little installation space. Profiles and accessories can be connected to Profile Tube D40/30 as usual. All standard fasteners and D30 components fit to it, which minimises stockkeeping requirements.

The set comprises two Plain Bearing Sleeves D40/D30 and a 40 mm cut-off of Profile Tube D40/D30. Additional profiles and accessories can be fastened to the Plain Bearing. The tabs on the Plain Bearing Sleeve interlock so that they cannot slip out of the profile.

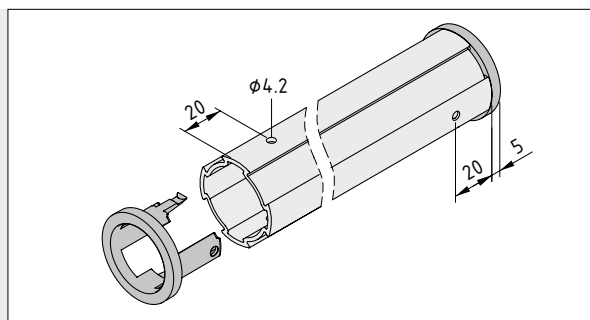
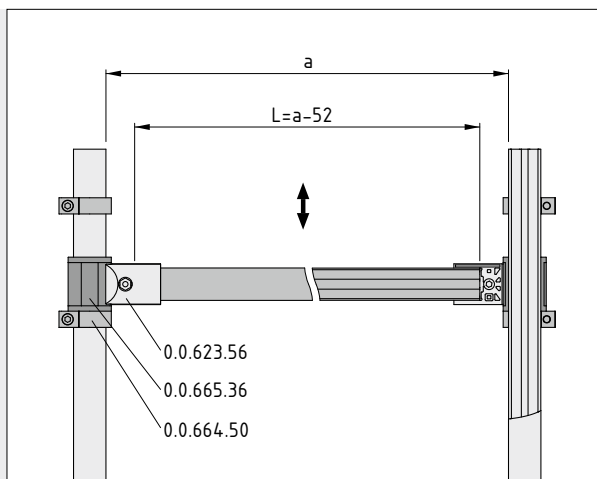
Plain Bearing D40/D30-50 is supplied preassembled, is ESD-safe and measures 50 mm in length.

The Plain Bearing Sleeves are also available separately and can be combined with Profile Tube D40/D30 in the desired length to build custom plain bearings. Simply press a Plain Bearing Sleeve onto each end of a Profile Tube D40/D30, slot the Profile Tube over the load-bearing profile and that's all it takes to bring some movement to your frame.

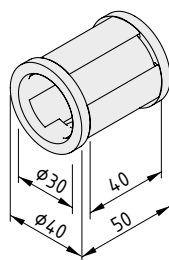
In the case of profile lengths over 50 mm, two holes need to be drilled at each end so that the tabs on the Plain Bearing Sleeves can clip into place.

Locking Ring D30 secures the position of the Plain Bearing D40/30 along its axis. This design measure has to be used to secure the position of the bearing because of the minimal friction on the support profile.





If the Profile Tube D40/D30 (0.0.666.63) is longer than 50 mm, 4 holes need to be drilled into the aluminium profile. This means that plain bearings can be built in custom lengths.



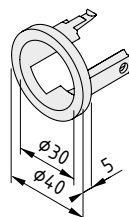
Plain Bearing D40/D30-50 ESD



2 Plain Bearing Sleeves D40/D30 ESD
Profile Tube D40/D30, 40 mm, Al, anodized
 $m = 38.0 \text{ g}$

1 set

0.0.665.36



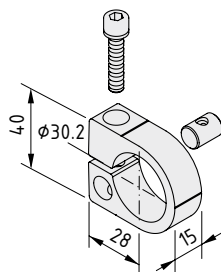
Plain Bearing Sleeve D40/D30 ESD



POM
 $m = 6.0 \text{ g}$

black, 1 pce.

0.0.665.63



Locking Ring D30

Locking Ring D30 Profile, Al
Threaded cross dowel M6, St, bright zinc-plated
Hexagon Socket Head Cap Screw M6x29.4, St, bright zinc-plated
 $m = 50.0 \text{ g}$

1 set

0.0.664.50



Release Units D30

- For efficient shooter solutions
- Selective actuation of individual filling levels
- Separation of containers during material supply and removal operations

Using tugger trains to load and unload roller conveyor racks as part of an automated system is efficient and reduces costs. And compact Release Unit D30 now makes it extremely easy to design customised shooter solutions that get transport containers (small load carriers, SLCs) moving from station to station.

Release Unit D30 comprises:

- A robust Bar that keeps even heavy workpieces in place on a roller conveyor during transport.
- An Actuator Roller and Actuator Ramp that, when they come into side-on contact, automatically open the system's locking mechanism, so that transport boxes are only released when shooter and workstation are correctly aligned.
- A Spring-Loaded Reset Device that ensures the Bar travels back to its original position as soon as the contact between Ramp and Roller is broken.

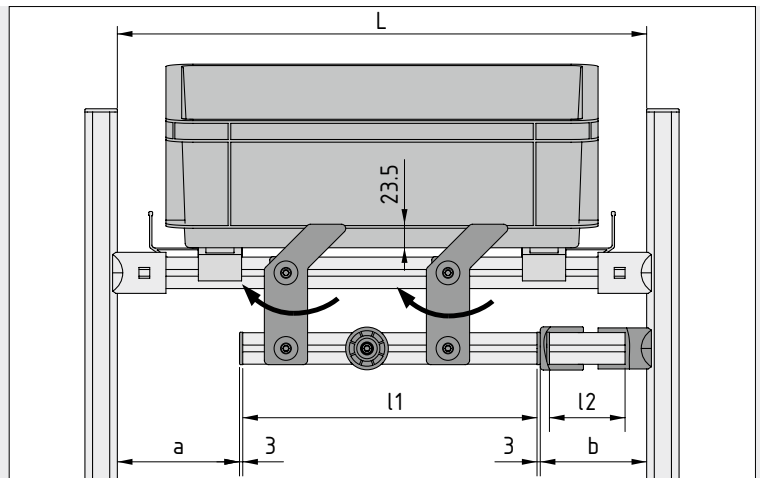
This type of shooter solution supports the selective release of individual conveyor lines, whereby each carriage in a tugger train is triggered at a different unloading point. By customising the installation height of the actuation elements, users can tailor the release action to their needs so that various supply lines can be correctly loaded or unloaded in a single pass.



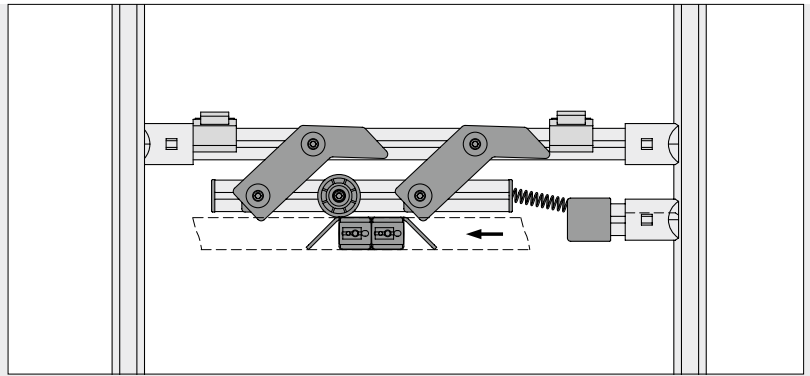
Actuator Ramps are available in two installation depths to suit different roller conveyors (38 and 61 mm). This ensures that even conveyor lines that protrude can be reliably actuated.



How Release Unit D30 works: Stable Bars hold the load in place (e.g. transport boxes). When the shooter pulls alongside, its Actuator Roller rolls up and over the Ramp on the workstation. The Actuator Roller is fixed to a spring-mounted strut - the roller strut - that follows the contour of the Ramp and is thus pushed up and to the side. This causes the Bars that are fastened to both the roller strut and the upper profile to pivot to the side, thereby ensuring that the load is only released when the roller conveyor is correctly aligned.



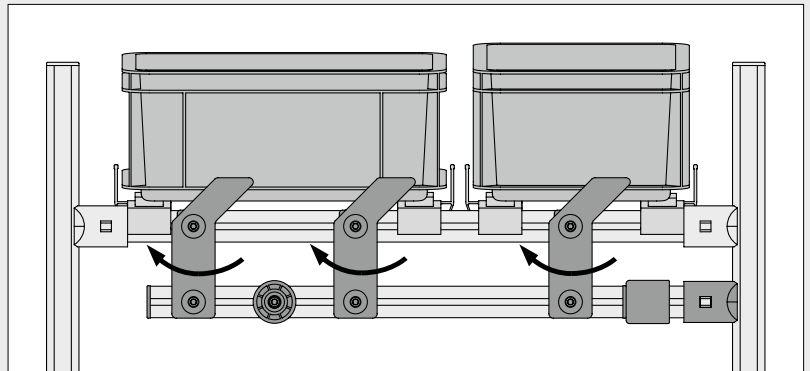
- L: Total clearance
a: Recommended minimum clearance = 113 mm
b: min. 91 mm
l1 = L - a - b - 6 mm (Profile 6 D30 for the Roller strut)
l2 = b - 28.5 mm (Profile 6 D30 for the stop)



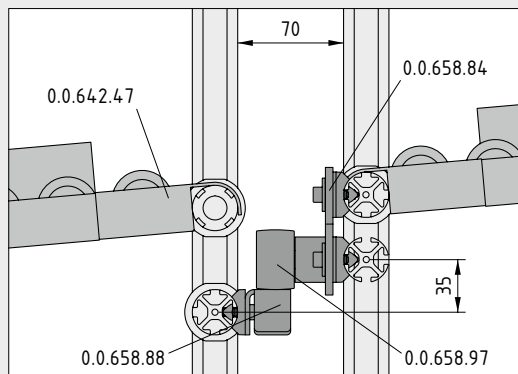
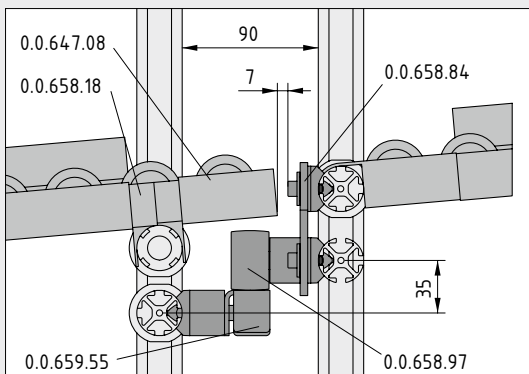
When the shooter approaches, the Roller strut moves closer to the roller conveyor as the Ramp pushes it up and to the side. This movement forces the Bars to pivot to the side. When the shooter is moved away, the pressure on the ball-bearing mounted Actuator Roller drops and the Spring-loaded Reset Device pulls the roller strut back down to the starting position.

The Bars can be installed so that they open to the right or left as appropriate to the transport rack's direction of travel.

The shooter is released when the Actuator Roller runs over the Actuator Ramp.



A Release Unit D30 Actuator Roller operates at least two Bars at once and can operate more, if necessary. Depending on the width of the load, a second roller conveyor can be secured simply by adding an additional Bar.



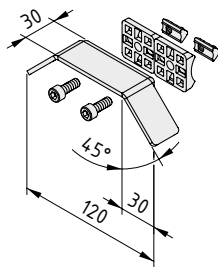
The Release Unit can perform the same function even on protruding roller conveyors.

0.0.616.46



Note:

Profile 6 D30 (0.0.616.46) must be used to fasten the Bar and the Actuator Ramp.

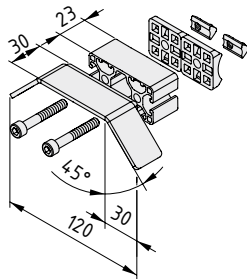


Release Unit D30 Actuator Ramp 120-38

Actuator Ramp, St, bright zinc-plated
2 Adapters 6 30x30/D30, die-cast Al
2 Hexagon Socket Head Cap Screws DIN 912-M6x16, St, bright zinc-plated
2 T-Slot Nuts 6 St M6, St, bright zinc-plated
m = 165.0 g

1 set

0.0.658.88

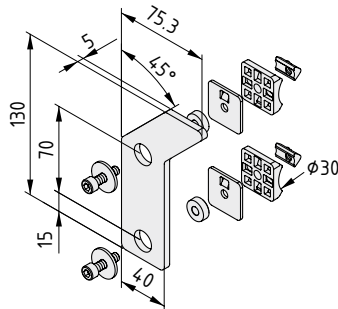


Release Unit D30 Actuator Ramp 120-61

Actuator Ramp, St, bright zinc-plated
Profile 6 60x30 2N light 23 mm, Al anodized
2 Adapters 6 30x30/D30, die-cast Al, natural
2 Hexagon Socket Head Cap Screws DIN 912-M6x40, St, bright zinc-plated
2 T-Slot Nuts 6 St M6, St, bright zinc-plated
m = 212.0 g

1 set

0.0.659.55

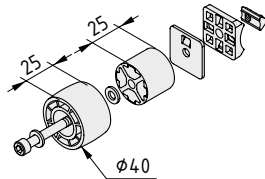


Release Unit D30 Bar T1

Bar T1 St, bright zinc-plated
2 bush liners, St, bright zinc-plated
2 spacer plates, St, bright zinc-plated
2 Adapters 6 30x30/D30, die-cast Al, natural
2 T-Slot Nuts 6 St M6, St, bright zinc-plated
2 washers DIN 440-M6, St, bright zinc-plated
2 Hexagon Socket Head Cap Screws DIN 912-M6x22, St, bright zinc-plated
m = 282.0 g

1 set

0.0.658.84

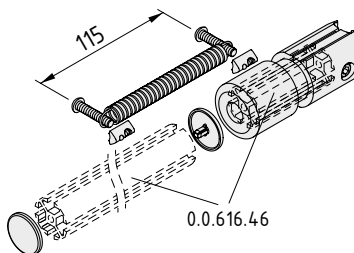


Release Unit D30 Actuator Roller D40-60 side contact

Roller D40, ball-bearing mounted
Profile 6 D30 4N, Al, anodized
Spacer plate, St, bright zinc-plated
Adapter 6 30x30/D30, die-cast Al, natural
T-Slot Nut 6 St M6, St, bright zinc-plated
Washer DIN 125-6.4, St, bright zinc-plated
Hexagon Socket Head Cap Screw DIN 912-M6x60, St, bright zinc-plated
m = 113.0 g

1 set

0.0.658.97



Release Unit D30 Spring-loaded Reset Device

Fastener D30, die-cast Al, natural
Tube End Cap D30, NBR Sh 60A
Extension spring 1.25x12.7x121, St, stainless
2 Caps 6 D30, PA-GF, black
2 Button-Head Screws ISO 7380 M6x30, St, bright zinc-plated
2 T-Slot Nuts 6 St M6, St, bright zinc-plated
m = 208.0 g

1 set

0.0.660.46

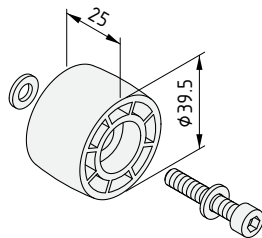


Roller D39.5-25

- Reliable guidance for moving assemblies
- Robust and durable thanks to ball bearings

It keeps everything on track! Robust Roller D39.5-25 turns on ball bearings and runs over aluminium profiles to provide reliable guidance for components. It is ideal for building Karakuri/LCA applications.

Using the accessories in the scope of supply, Roller D39.5-25 can be fitted to a Profile 6 D30, either to the end face (M6 thread) or to the groove using a T-Slot Nut. Alternatively, it can be secured in place using an item Multiblock D30.



Roller D39.5-25

Roller D39.5-25
2 deep groove ball bearings, sealed
Hexagon Socket Head Cap Screw DIN 912-M6x33, St, bright zinc-plated
2 washers DIN 125-6.4, St, bright zinc-plated
m = 49.0 g

1 set

0.0.673.55