

Contents

Symbols, safety	2	Installing the Timing Belt	9
General safety information	2	Fastening options	10
Correct use	3	Securing and tensioning Timing Belt R50 T10	10
Improper use	3	Tightening the Timing Belt	11
Operating parameters	4	Connecting Drive Set 8 80 D80/D34 – 0.0.668.04	12
Preparation	5	Connecting Drive Set ZU 8 80 D80/D34 AP/WP 80 – 0.0.672.76	13
Installation	6	Synchronising LRE 8 D25 ZU 80 R50	14
Guide carriage/Bearing Units	6	Lubrication	15
Potential applications	8	Maintenance	15
Timing-Belt Reverse Units 8 80 R50 II	8		
Potential applications	9		

Symbols, safety



Meaning:
Important, safety information, recommendation



Maintenance

General safety information

The details and information in the installation guide are provided solely for the purposes of describing the product and the assembly and disassembly of variants of Linear Unit LRE 8 D25 ZU 80 R50. The text below usually refers to these as the Linear Unit or LRE. This information does not discharge the user from the obligation to carry out his own assessments and checks. It is important to bear in mind that our products are subject to a natural process of wear and ageing. These notes contain important information that will enable you to use the product safely and appropriately. When sold, rented out or otherwise passed on to another party, this product must be handed over with the installation guide.

When installing, disassembling, operating and maintaining the Linear Unit, it is important to ensure that all moving elements are secured so that they cannot be switched on and moved unintentionally. Rotating and moving parts can cause serious injury! You must therefore read and follow the safety instructions set out below.

- All work on and with the Linear Unit must be performed with “safety first” in mind.
- Always switch off the drive unit before you start working on the Linear Unit.
- Ensure the drive unit is not switched on unintentionally, e.g. by affixing warning notices at the activation point or by removing the fuse from the power supply.
- Do not place your hand within the operating range of the Linear Unit’s moving parts when the unit is still switched on.
- Fit guards and covers to the moving parts of the Linear Unit to ensure they are not touched unintentionally.

- Observe the regulations pertaining to accident prevention and environmental protection that apply in the country and place of work where the product is being used.
- Use only products that are in perfect working order.
- Failure to use original spare parts will invalidate the product warranty!
- Check the product for obvious defects.
- Use the product only within the performance range described in the technical data.
- Ensure that all the safety equipment associated with the product is present, properly installed and in full working order.
- Do not alter or circumvent safety equipment, or render it ineffective.

The Linear Unit described here corresponds to the state of the art and takes into account the general principles of safety applicable at the time this installation guide was published. Nevertheless, failure to observe the safety instructions and warning notices in this installation guide may result in personal injury and damage to property.

We will assume no liability for any resulting damage or injury. We reserve the right to make technical changes that represent technical advances. Keep these installation notes in a place where they can be easily accessed by all users. Observe the directions contained in the main user guide for the completed machine.

The general safety information applies to the entire lifecycle of the partly completed machine.

1. During transportation

Observe the handling instructions on the packaging. Until it is installed, the product must be stored in its original packaging, protected from moisture and damage. Ensure that moving parts are secured when in transit and cannot cause any damage.

2. During installation

Always deactivate the power to the relevant system part and ensure it is not live before installing the product and/or plugging it in or unplugging it. Ensure the system cannot be switched back on. Lay cables and lines in such a way that they cannot be damaged and do not represent a trip hazard. Avoid areas that pose slip, trip and fall hazards.

3. During commissioning

Allow the product to acclimatise for a few hours before starting to use it. Ensure that the partly completed machine is securely and safely integrated into the completed machine. Only start up a product that has been installed in full.

4. During operation

Ensure that only persons who have been authorised by the operator have access to the immediate operating area of the system. This also applies when the system is not in operation. It must not be possible to actuate moving parts unintentionally. In the event of an emergency, malfunction or other irregularity, deactivate the system and ensure it cannot be switched back on. Prevent the possibility of persons becoming trapped in the system's accessible hazard zone.

5. During cleaning

Close all openings with suitable protective equipment to ensure that cleaning agents cannot penetrate the system. Do not use aggressive cleaning substances. Do not use a high-pressure cleaner when cleaning the system.

6. During maintenance and servicing work

Carry out the prescribed maintenance work at the intervals stipulated in the user guide. Ensure that no line links, connections or components are removed while the system is live and under pressure. Ensure the system cannot be switched back on.

7. During disposal

Dispose of the product in accordance with the national and international regulations that apply in your country.

Correct use

Linear Unit LRE 8 D25 ZU 80 R50 with Controller and Motor is a partly completed machine as defined in the Machinery Directive (2006/42/EC). It must only be used in accordance with the technical data and safety requirements set out in this document. Internal company requirements and the regulations that apply in the country where the product is being used must be observed. You must not make any design modifications to the aforementioned Linear Unit yourself. We will assume no liability for any resulting damage or injury. You may only install, operate and maintain the Linear Unit if:

- The Linear Unit has been integrated properly and safely into the completed machine,
- You have carefully read and understood the installation guide,

- You are appropriately qualified,
- You are authorised to do so by your company,
- You are using only original equipment from the manufacturer.

Unsafe or inappropriate use of the Linear Unit runs a risk of serious injury through crushing and cuts.

Improper use

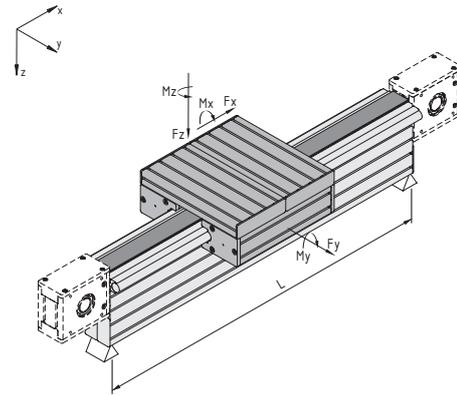
Improper use is defined as any use of the product for purposes other than those authorised in the installation guide and under the definition of correct use. We will assume no liability for any resulting damage or injury.

Operating parameters

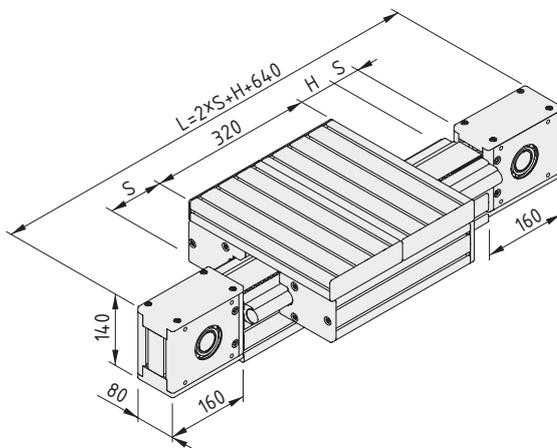
Linear Unit LRE 8 D25 ZU 80 R50 is generally constructed from Line 8 profiles that have been cut to size and various assemblies. Before starting installation work, it is important to check that all parts are present.

The maximum possible drive torque is: $T_D = 92 \text{ Nm}$

The frictional torque or starting torque without load for the Linear Unit, depending on the Timing-Belt Reverse Units and Timing Belt tension, is: $T_F = 3.4 \text{ Nm}$



	Support width Lmax when Fz max [mm]	Support width Lmax when Fy max [mm]	Fy max [N]	Fz max [N]	Mx max [Nm]	My max [Nm]	Mz max [Nm]	Operating load Fx max [N]
Linear Unit LRE 8 D25 120x80 ZU 80 R50	1900	1000	7600	5200	301	520	760	2100
Linear Unit LRE 8 D25 200x80 ZU 80 R50	3600	1300	7600	5200	301	520	760	2100



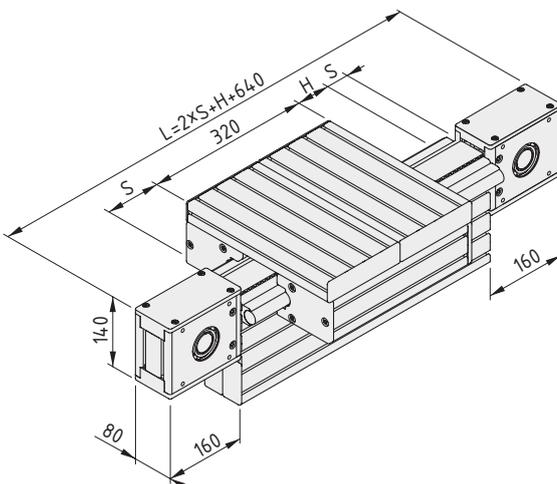
Linear Unit LRE 8 D25 120x80 ZU 80 R50



Maximum stroke H_{max}	5620	mm
Safety clearance S	30	mm
Basic mass (when stroke length = 0 mm) m_1	32.6	kg
Mass per mm of stroke m_2	20.9	g/mm
Total mass $m =$	$m_1 + H * m_2$	
Repeatability	0.15	mm
Maximum acceleration	10	m/s^2
Maximum travelling speed	10	m/s
Feed constant	280	mm/r

1 pce.

0.0.666.65



Linear Unit LRE 8 D25 200x80 ZU 80 R50



Maximum stroke H_{max}	5620	mm
Safety clearance S	30	mm
Basic mass (when stroke length = 0 mm) m_1	34.4	kg
Mass per mm of stroke m_2	25.3	g/mm
Total mass $m =$	$m_1 + H * m_2$	
Repeatability	0.15	mm
Maximum acceleration	10	m/s^2
Maximum travelling speed	10	m/s
Feed constant	280	mm/r

1 pce.

0.0.666.66

! The safety distance S is a reserve distance to accommodate tolerances and carriage overtravel under high loads and accelerations at the reversal point. It must be factored into the equation depending on the capabilities of the drive and Controller, but in any event should not be smaller than shown!

Environmental considerations:

Storage temperature: -20°C to $+70^{\circ}\text{C}$

Relative humidity: 5% to 85%

Linear Unit LRE is intended as a permanent fixture to be used in an area that is protected from the weather.

The area should be free from mould and fungus and show no traces of rodents or other pests.

Do not install or use in close proximity to industrial plants that produce chemical emissions.

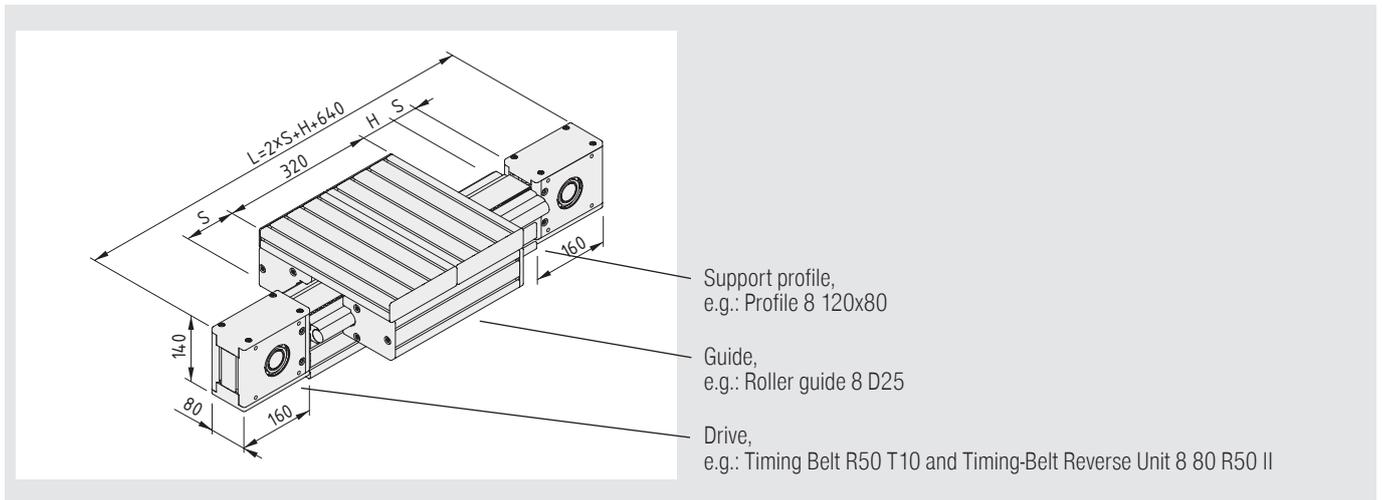
Do not install or use near sources of sand or dust.

Do not install or use in an area that is regularly exposed to high-energy surges such as those caused by presses or heavy machinery, for example.

In case of doubt regarding resistance to certain chemicals such as test oil, alloyed oils, aggressive cleaning substances, solvents or brake fluid, we advise that you consult your specialist representative.

Consult the manufacturer if using in very salty air. Deflection in the linear axis of the LRE should not exceed 1 mm over an axis of 1000 mm. In scenarios where high demands are placed on the system dynamics, supports should be added every 300 mm to 600 mm. These supports must not affect the Reverse Units.

Preparation



Fundamentally, a Linear Unit converts a rotary motion into a translational motion.

A Linear Unit is made up of:

- Guide
- Drive
- Support profile

These components are picked for assembly and assembled in part or in full, depending on customer wishes.

Installation

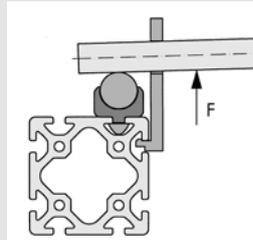
Shaft-Clamp Profile and Shaft:

There are various methods for assembling support profile, Shaft-Clamp Profile and Shaft.

To make installation easier, apply a film of oil or grease to the outer surfaces of the Shaft-Clamp Profile that come into contact with the support profile before pressing it into the groove. Do the same to the contact points between the Shaft and Shaft-Clamp Profile and to the guiding Shaft itself. When working with short support profiles that have not yet been connected to a fixture, it is advantageous to undertake installation in the following steps:

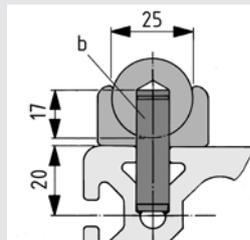
- Press the Shaft-Clamp Profile into the relevant groove of the support profile
- Use a vice (fitted with protective jaw plates) to press in the Shaft
- Follow the same sequence for the other side

On longer stretches, when the support profiles have already been installed or are being held in a vice and the Shaft-Clamp Profile has been pressed into place, you can press the shaft into the Shaft-Clamp Profile section by section using the Mounting Aid (0.0.265.38) and a lever in the form of a suitable round steel bar.



When higher loads are involved, it is advisable to secure the Shaft. Ideally, a Combination Drilling Jig (c) should be used to machine the Shaft, Shaft-Clamp Profile and Support Profile as detailed in the following steps:

- Using a carbide drill, cut a blind hole in the Shaft, 40 mm from the end face (as shown in the drawing)
- At the same distance from the end face, cut a through hole (d) through the Shaft-Clamp Profile and Support Profile together, up to the centre bore of the Support Profile
- Press dowel pin (b) DIN 6325 into the Shaft
- Install the Shaft into the Shaft-Clamp Profile as described above



b = DIN 6325-10x40 dowel pin

c = Art. No. 0.0.373.15 for Shaft D25

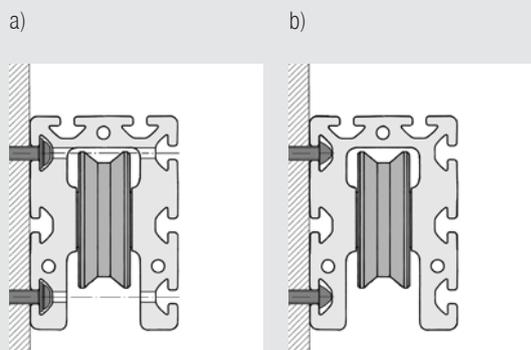
d = \varnothing 10 mm

Guide carriage/Bearing Units

Bearing Units can be mounted onto any MB system profile element. There are two different methods that can be used to secure Bearing Units to the standard Line 8 groove:

a) The heads of the Button-Head Screws and Washers are located within one of the grooves on the Bearing Unit, which means through holes need to be provided so that an Allen key can reach the screws. Holes for the most common fixing arrangement have been pre-drilled into the Bearing Units. For other fixing arrangements, such as turned through 90° and using the second groove, holes will need to be drilled.

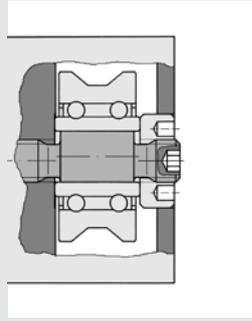
b) The T-Slot Nuts are located within one of the grooves on the Bearing Unit and the fastening screws are inserted into the guide carriage.



You must prepare the eccentric orientation of the eccentric Bearing Units before using the guide carriage.

Use an Allen key to turn the eccentric bolt of the rollers:

- Drive the bolt as far as it will go
- Turn back ½ a turn
- Continue turning back until the rearmost eccentric position is reached

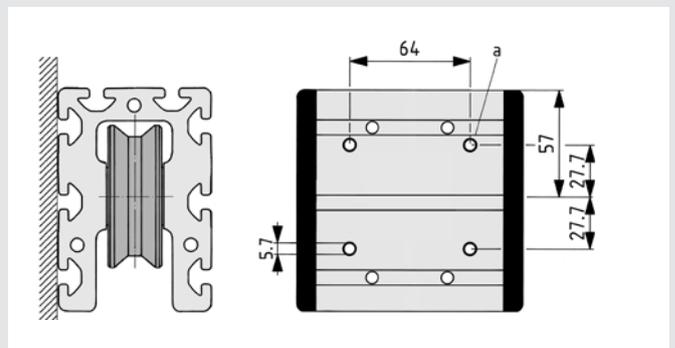


When Bearing Units have been prepared and installed in this way, the maximum play between the rollers and Shafts can be used to adjust preload.

Once the support profile has been machined, prepared and connected with the Shafts and Shaft-Clamp Profiles, the guide carriage can be slotted into place on it. Slot the carriage on before fitting the End Cap and Lubricating System (or remove the latter first).

Slot the guide carriage in its preassembled state onto the support profile that you fitted the guiding Shafts to earlier.

If there are undefined loads on the guide unit such as impact loads that could cause movement in the Bearing Units, the Bearing Units will need to be reinforced. You can do this by drilling and pinning (a) the Units in the positions indicated or the areas shown in dark grey.

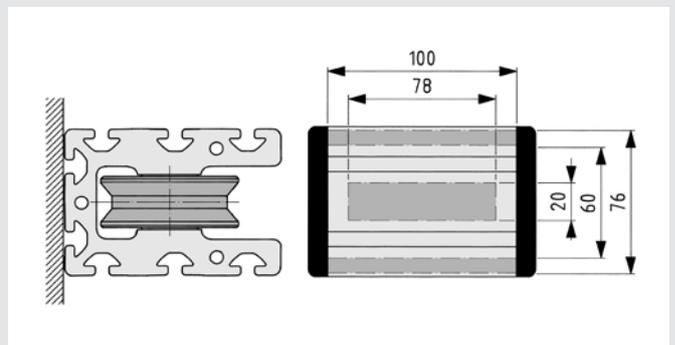


When adjusting the Bearing Units to eliminate play, ensure that no excess strain is generated!

After making this adjustment, fix the position of the eccentric bolt by securing the lock nut with a Pin Spanner (T). While doing so, use an Allen key to hold the bolt in its selected position.

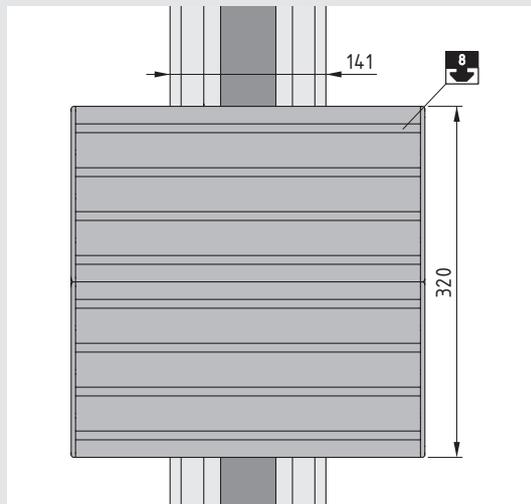
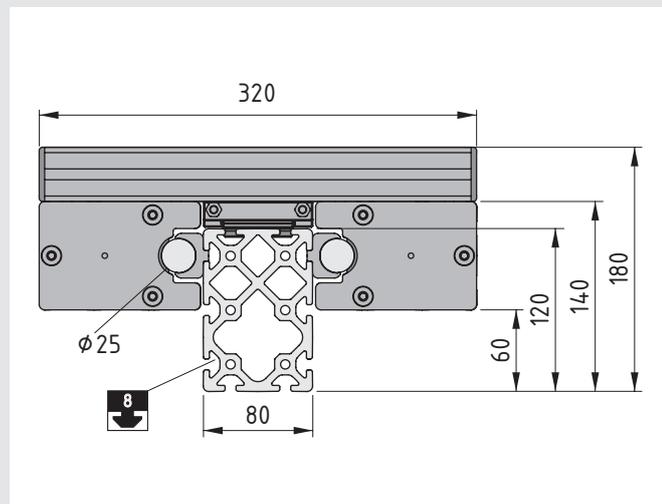
$T = 100 \text{ Nm}$

Finally, install the End Cap and Lubricating Systems and Caps.

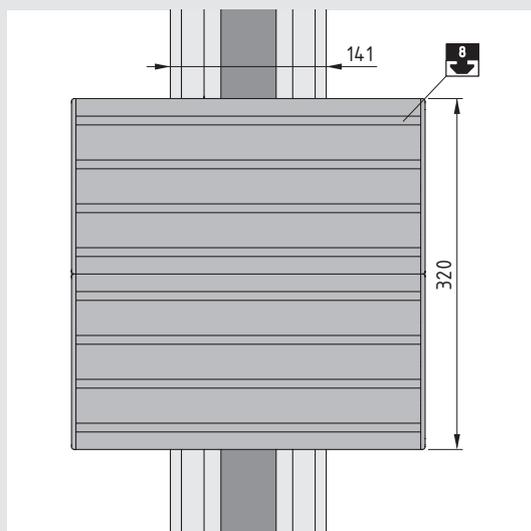
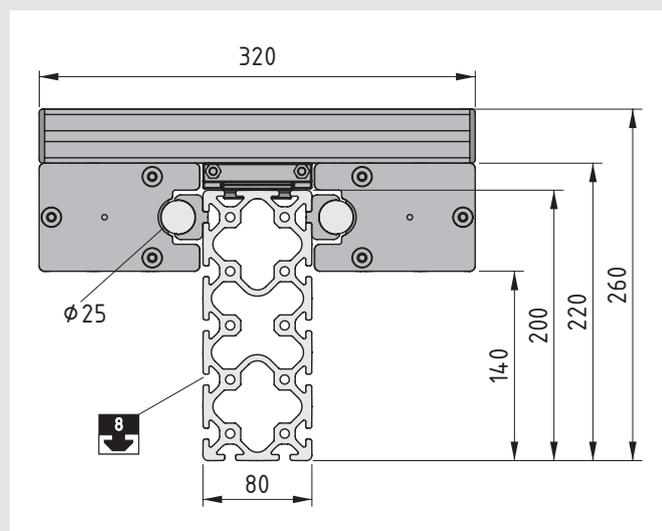


Application options

In combination with Profile 8 120x80 as a support profile, guide carriages from Line 8 and Double-Bearing Unit 8 D25:



In combination with Profile 8 200x80 as a support profile, guide carriages from Line 8 and Double-Bearing Unit 8 D25:



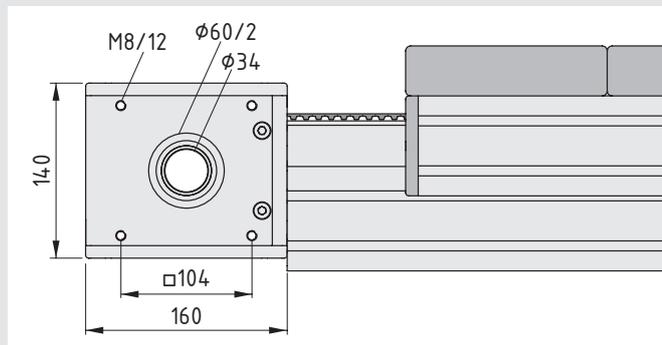
Timing-Belt Reverse Units 8 80 R50 II

Once the carriage has been fitted to the support profile and adjusted to eliminate play, the Timing-Belt Reverse Units can be prepared.

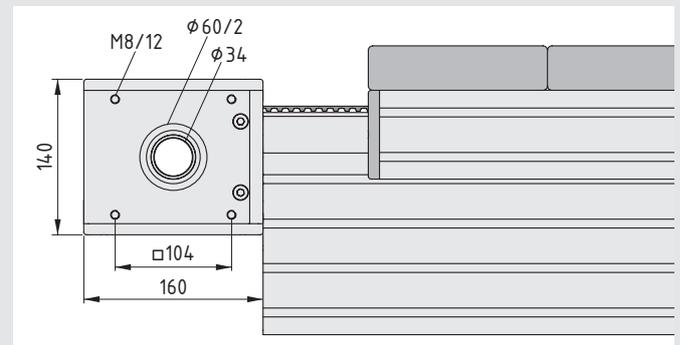
Timing-Belt Reverse Units 8 80 R50 II with Bore for an expanding hub coupling are used to drive or reverse Timing Belt R50 T10 to build Linear Units combined with guides, gearboxes and drive units.

Application options

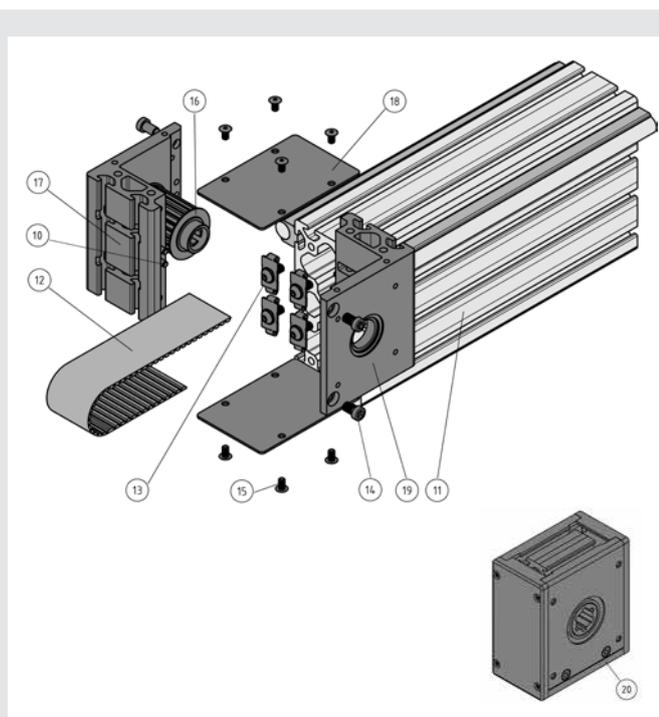
In combination with Profile 8 120x80 as a support profile:



In combination with Profile 8 200x80 as a support profile:

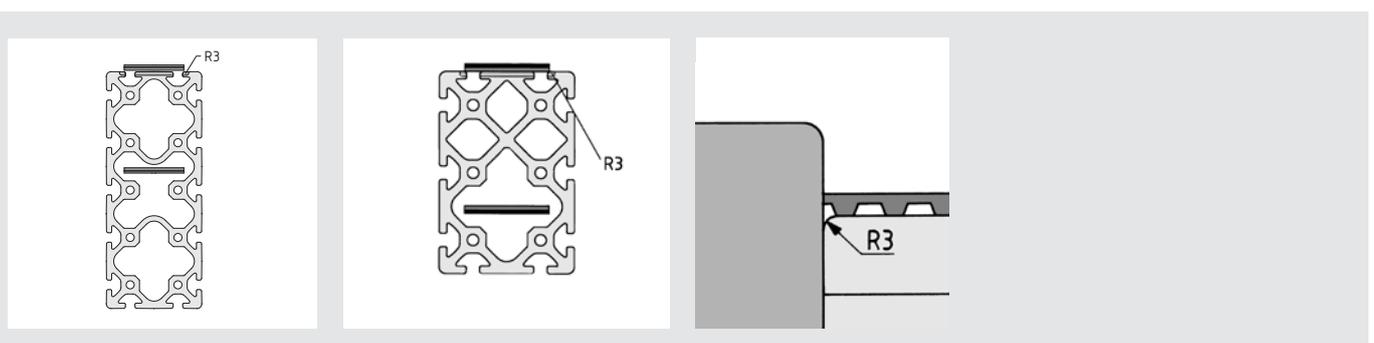


Installing the Timing Belt



To insert the Timing Belt (Art. No. 0.0.426.03) in the Timing-Belt Reverse Unit 8 80 R50 II VK32 (20), the Unit has to be opened. To do so, unscrew and remove all the screws in the Timing-Belt Reverse Unit 8 80 R50 II VK32 (20). The two halves of the Timing-Belt Reverse Unit 8 80 R50 II VK32 (17) (19) housing are separated by gently tapping the hub of the Pulley Wheel (use plastic rods). Under no circumstances must the two halves of the housing be separated by inserting a hard object such as a screwdriver or similar tool between the two halves. The floating bearing end of the Timing-Belt Reverse Units 8 80 R50 II VK32 (19) is screwed in place in the core holes of the Support Profiles. Place the Timing Belt around the Pulley Wheels in the required direction. The two halves of the housing of the Timing-Belt Reverse Unit 8 80 R50 II VK32 (17) (19) are then screwed together again. The end of the Timing Belt now has to be cut to the exact length and the end placed in the loose half of the Timing Belt Tensioning Set 8 R50.

- ⑩ Dowel ISO 8734-6m 6x28
- ⑪ Profile 8 200x80
- ⑫ Timing belt R50 T 10
- ⑬ Standard-Fastening 8
- ⑭ Hex. Socket Head Cap Screw DIN 912-M8x20
- ⑮ Button-Head Screw M5x16
- ⑯ Ball-bearing timing pulley with multi-spline hub
- ⑰ Fixed Bearing
- ⑱ Timing-Belt Reverse Unit 8 80 R50 II VK32 Cap
- ⑲ Floating Bearing
- ⑳ Timing-Belt Reverse Unit 8 80 R50 II VK32

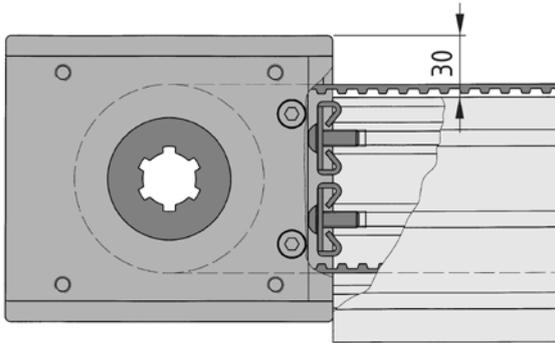


All the cut edges of the profile that face the Timing Belt must be chamfered to prevent irregular running caused by the belt getting snagged or damaged.

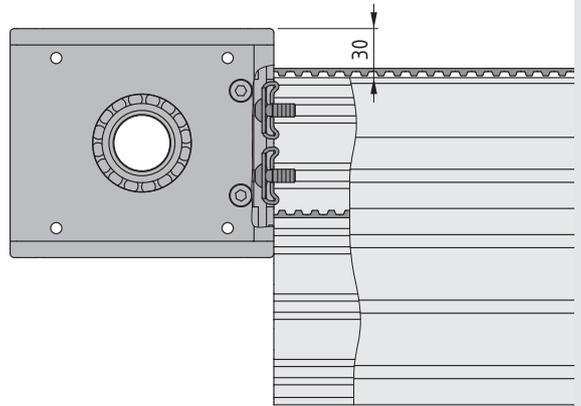
When feeding the Timing Belt back through the inside of profiles, ensure that the profile edges facing the back of the belt have been rounded.

Attachment options

Next, fasten the Timing-Belt Reverse Units to the support profile and align the Timing Belt with the profile.



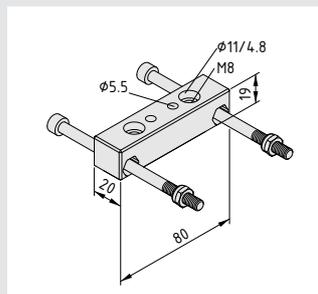
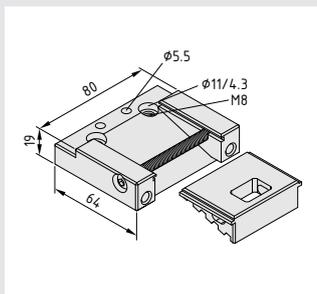
Fastening arrangement of Timing Belt Reverse Unit 8 80 R50 on different profiles depending on the position of the Timing Belt when fed back through.



Securing and tensioning Timing Belt R50 T10

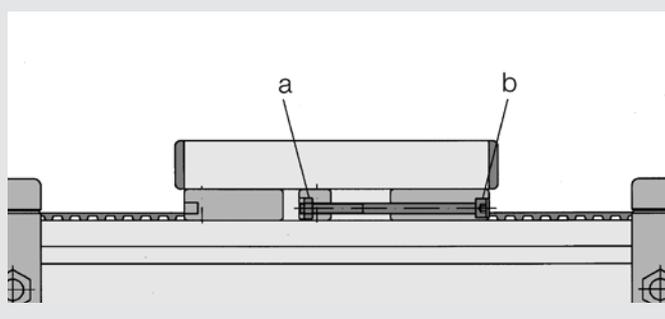
To secure and tension the Timing Belt on a guide carriage, you will need to fit a Timing-Belt Tensioner Block in the correct width at each end of the Timing Belt.

For fastening and tensioning the Timing Belt on a sliding carriage or support profile (using Counter-Reverse Unit 8 80 R50). A Tensioning Block (Art. No. 0.0.426.04) is required for each end of the Timing Belt. The number of Fixing Blocks (Art. No. 0.0.426.05) is determined by the application.



8 R50

a = Hexagon nut DIN 985	M6
b = Hexagon Socket Head Cap Screw DIN 912	M6x100

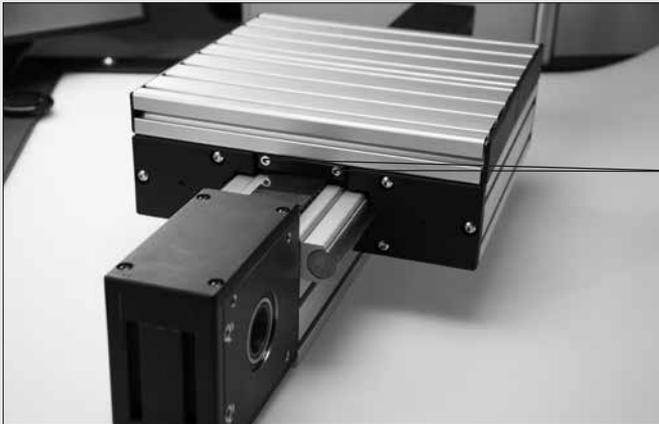


Fastening and tensioning the Timing Belt on a sliding carriage using Tensioning Blocks and Fixing Block and the appropriate bolts.

Where high loads are involved, Tensioning Block 8 and Fixing Block 8 will need to be pinned (dowel ISO 2338- \varnothing 6 mm). The position of the dowels is indicated by the prepared bores \varnothing 5.5 mm.

The necessary Timing-Belt tension must be determined and set in line with the anticipated loads.

Tightening the Timing Belt:



Tensioning screws

Slide the loose Timing-Belt Tensioner under the carriage, use the clamping screws to connect it and tighten it.

⚠ The pre-tensioning on the Timing Belt should be larger than or equal to the expected operating load. The pre-tensioning and operating load together must not exceed the maximum permissible load.

To set the calculated pre-tensioning ΔL , it is advisable to measure elongation during the tensioning process.

⚠ If the LRE 8 D25 ZU 80 R50 is being supplied fully preassembled, you will need to check the pre-tensioning against the order specifications. After a running-in time of 24 hrs, check the operating tension of the Timing Belt again and adjust it if necessary.



Similar to the picture

When tensioning the Timing Belt, first identify the zero point at which the untightened Belt has no sag at all and pre-tensioning begins. To do that, draw the moving part of the Tensioning Block towards its fixed counterpart by alternately tightening the tensioning screws. Calculate the necessary tensioning adjustment or elongation of the Timing Belt according to the operating load of the Linear Unit.

Conventional calculation:

Following applies: $F_p + F_x < F_{Bperm}$

and: $F_p > F_x$

Where: $F_x = m \times a + m \times g + F_B$

Where: $\Delta L =$ Tensioning adjustment [mm]

$L =$ Total Timing Belt length [mm]

$F_p =$ Pre-tensioning force for Timing Belt [N]

$F_{Bperm} =$ Permissible force for Timing Belt [N] = 4200 N

$F_x =$ Operating load [N] (see operating parameters)

$T_f =$ Frictional torque, loss of friction when running light [Nm] = 3.4 Nm

$r_E =$ Effective radius [mm] = 44.56 mm

$C =$ Constant of expansion [N] = 1000 N

$$\Delta L = \frac{L \cdot F_v}{1000 \cdot K}$$

The calculated tensioning adjustment can be checked by various means. Typical tools include frequency analysis tools, strain gauges and simple length measuring devices.

Tip:

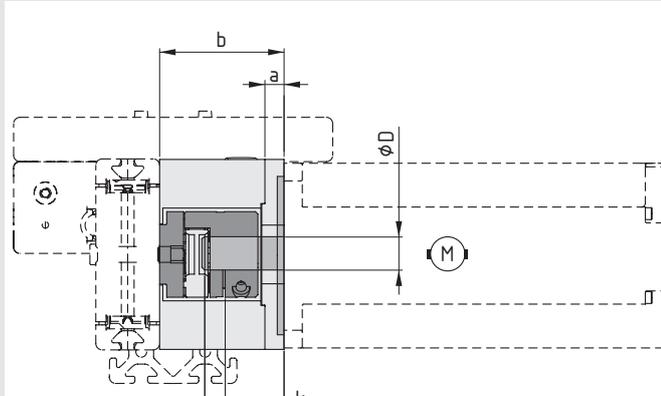
The necessary elongation calculated for the Timing Belt is constant along its full length.

The actual elongation of the Timing Belt as calculated for this segment can be checked and thus adjusted by marking a specific length on the Timing Belt (e.g. 1 m) and using a steel ruler.

Connecting Drive Set 8 80 D80/D34 – 0.0.668.04

Drive Set 8 80 D80/D34 is used to connect any drive to Linear Unit LRE 8 D25 ZU 80 R50.

The prepared Coupling fits the drive shaft and transmits drive torque without backlash.



Similar to the picture

Hexagon Socket Head Cap Screws DIN 912 M8x100 are supplied with the Drive Set for this purpose and are screwed through the housing of the Drive Unit and into the Coupling Housing of the Drive Set.

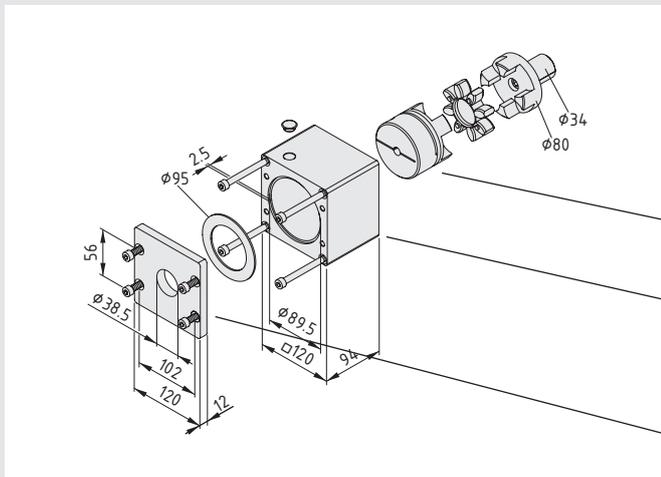
Tightening torque: $T = 25 \text{ Nm}$

Machine the drive casing or Adapter Plate according to the requirements of the motor or gearbox you are using and then screw it to the motor or gearbox. Take the coupling half that is to be connected to the drive shaft and drill a hole in it to match the drive shaft then connect the coupling half and the shaft.

[mm]	Drive Set 8 80 D80/D34
$\varnothing D$	12-45
a	12
b	106
k_{\min}	48.5
k_{\max}	63.7

The torques transferred by the clamp connection factor in the maximum mating play for the shaft fits: Shaft k6 / hole H7.

Force is transferred from the coupling to the drive shaft by means of frictional resistance. The Shaft and the hole in the coupling hub must be degreased and cleaned to ensure the frictional resistance is effective. Hexagon Socket Head Cap Screws must be secured against working loose.

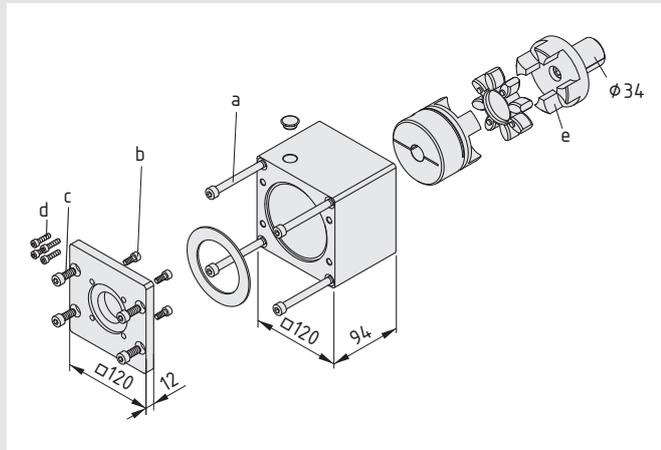


Coupling half that accommodates the drive shaft

Coupling Housing with hole (that can be sealed) to allow an Allen key through to generate the necessary clamping force on the drive shaft.

Adapter plate

Connecting Drive Set ZU 8 80 D80/D34 AP/WP 80 – 0.0.672.76



- a: Hexagon Socket Head Cap Screw DIN 912 M8x100 for connecting a Timing-Belt Reverse Unit
- b: Hexagon Socket Head Cap Screw DIN 912 M6x15
- c: Hexagon Socket Head Cap Screw DIN 912 M8x20
- d: Hexagon Socket Head Cap Screw DIN 912 M5x20
- e: Expanding hub coupling D80/D34

Drive Set ZU 8 80 D80/D34 AP/WP 80 (0.0.672.76) is used solely to connect item drives. The Drive Set is fully prepared for installation on the corresponding Linear Unit. The drive shaft transfers drive torque without backlash.

The torques transferred by the clamp connection factor in the maximum mating play for the shaft fits: Shaft k6 / hole H7. Force is transferred from the coupling to the drive shaft by means of frictional resistance. The shaft and the hole in the hub must be degreased and cleaned to ensure a frictional connection for the drive.

Fasten the first coupling half to the Reverse Unit, ensuring that the Hexagon Socket Head Cap Screws used are secured against working loose. Clamping screw: $T = 49 \text{ Nm}$.



Similar to the picture

Use Hexagon Socket Head Cap Screws DIN 912 M8x100 (included with the Drive Set, $T = 25 \text{ Nm}$) to screw the Coupling Housing of the Drive Set over the entire Coupling through the casing of the Drive Unit.

Next, use the prepared Centring Piece to fasten the Gearbox flush on the Adapter Plate of the Drive Set. Use Hexagon Socket Head Cap Screw DIN 912 M6x15 ($T = 13 \text{ Nm}$) for this purpose.

Hexagon Socket Head Cap Screws DIN 912 M5x20 ($T = 10 \text{ Nm}$) are included in the Drive Set for the purpose of fastening the Motor to the Gearbox.

Working through the Coupling Housing, create a friction-based connection between the Hexagon Socket Head Cap Screw DIN 912 M8x30 ($T = 23 \text{ Nm}$) of the clamp coupling half and the drive shaft.

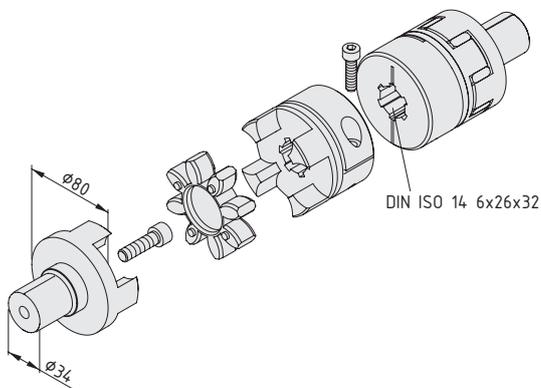
Synchronising LRE 8 D25 ZU 80 R50

Synchronising Sets are used when two Linear Units are to be run in parallel. item Synchronising Sets comprise couplings that are fitted between two Linear Units and are connected by a Synchroniser Shaft that has been manufactured in the appropriate length. This ensures that the end result is a highly customised and flexible design.

Synchronising Sets from item can be used to operate two Linear Units in parallel with just one motor. They comprise shaft Couplings that are tailored to the relevant Linear Unit and designed to compensate for slight misalignments and withstand the stated torque over long-term use. The Couplings are pre-prepared

to accommodate a Synchroniser Shaft. Besides featuring a compact design, expanding hub couplings are also easy to use. The friction-based connection is created by tightening the central screw with the specified tightening torque. An integrated pull-off thread makes them easy to dismantle. First, the central screw is removed, then a longer screw is driven into the same position to effortlessly relieve tension in the Coupling. How long a Synchroniser Shaft can be depends on its operating speed. To determine the maximum length for a given speed or the maximum speed for a given length, please consult the information contained in the diagrams.

Linear Unit	Art. No.	Synchronising Set	Art. No.
Linear Unit LRE 8 D25 120x80 ZU 80 R50	0.0.666.65	Synchronising Set D80/D34	0.0.666.61
Linear Unit LRE 8 D25 200x80 ZU 80 R50	0.0.666.66		

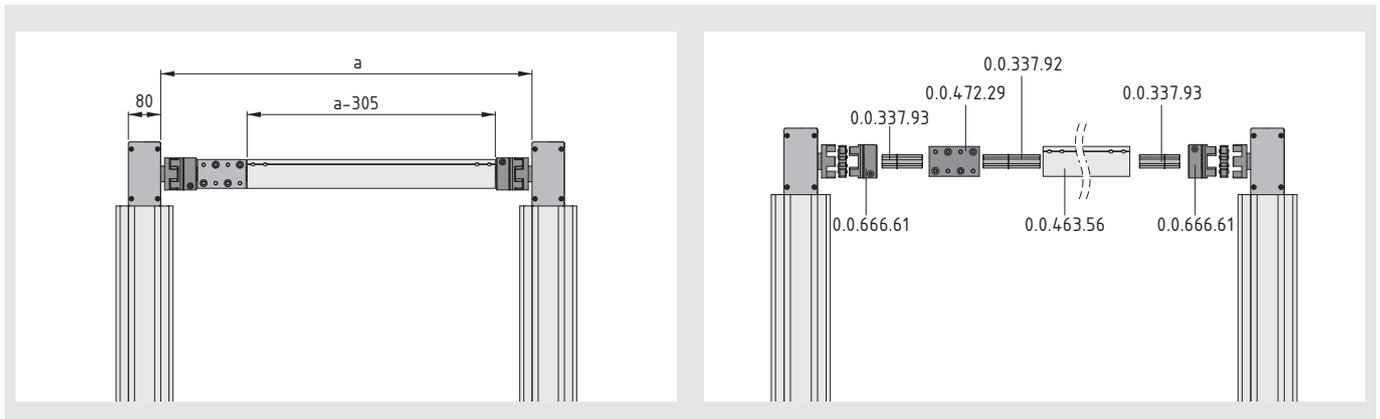


Synchronising Set D80/D34

- 2 Coupling Halves D80/VK32, Al
- 2 expanding hub coupling halves D80/D34, St and Al
- 2 Coupling Inserts D80, PU, red
- Tightening torque, expanding hub screw: 49 Nm
- Tightening torque, clamping hub screw: 23 Nm
- $m = 2.1 \text{ kg}$

1 set

0.0.666.61



Lubrication

End Cap and Lubricating Systems are essential in order to protect and lubricate the Bearing Units. These should be fitted back in place only when the guide carriage has been mounted on the Shafts. Otherwise, it is important to ensure the movable wipers are pressed back when sliding the guide carriage onto the Shaft, to ensure they are not bent.

Wipers located in the internal recesses of the end-face End Cap and Lubricating Systems are also designed to take up the lubricant. They are pressed against the guiding Shaft by a spring. These wipers are supplied pre-charged with lubricant and can be topped up with lubricant as required via the hole in the cap.

In the event of considerable soiling, you may need to replace the wipers.

Maintenance

Suitable for use in dry conditions and over the temperature range -20°C to +70°C.

If operating conditions are unusual - e.g. special type of installation, dust, short stroke, influence of solvents etc. the lubrication intervals must be adapted accordingly.

This information does not discharge the user from the obligation to carry out his own assessments and checks.

It is important to bear in mind that our products are subject to a natural process of wear and ageing.

The rollers of the guide are maintenance-free. The spring-loaded end cap and lubricating felts can be topped up with lubricant as required via a hole.

Recommended re-oiling period: Every 6 months or every 2500 km. The felt pieces are supplied in ready-oiled condition.

Synthetic lubrication oil ISO VG 460, e.g. item Track Oil for Linear Guides (0.0.612.75).

Add the following quantity to each maintenance hole at the end of each maintenance interval: 1 ml

Greases containing solid particles (e.g. graphite and MoS₂ additives) must not be used!

Oil Can for Linear Guides (one actuation delivers approx. 1 ml of oil).

To ensure adequate lubrication, the carriage must cover a minimum travel distance. Minimum stroke length [mm]: 160 mm

The Timing Belt is a maintenance-free drive element.

Check the tension on the Timing Belt after a running-in phase.

We recommend regular checks for damage and wear. These checks should be carried out weekly at first and then adjusted to account for environmental and operational conditions.

The Timing Belt may need to be replaced.

Ideal operating conditions:

Ambient temperature: 10°C ... 40°C

Load: < 5%

item

item Industrietechnik GmbH
Friedenstrasse 107-109
42699 Solingen
Germany

Phone +49 212 6580 0
Fax +49 212 6580 310

info@item24.com
item24.com



You can find the Notes on Use and Installation online, in the download section for this product.