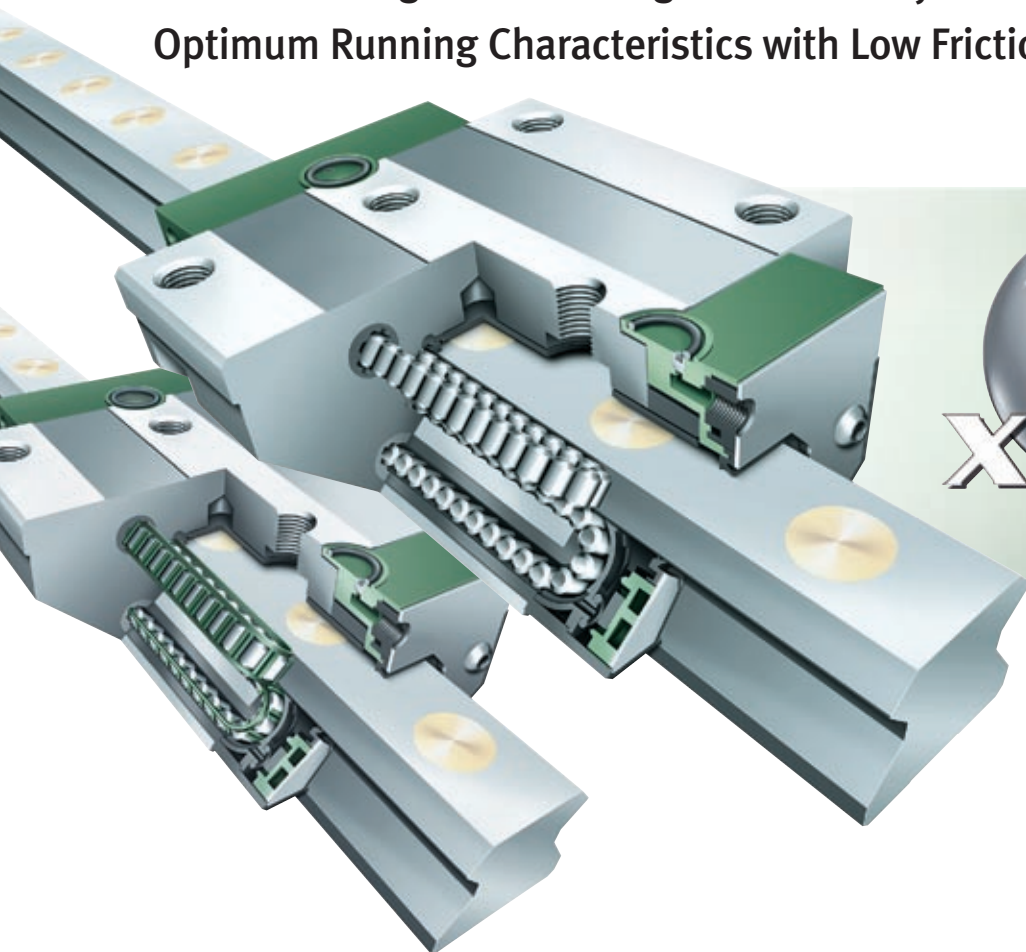




# Linear Recirculating Roller Bearing and Guideway Assemblies

Series RUE-E / RUE-E-KT-L

## Linear Recirculating Roller Bearing and Guideway Assemblies RUE-E / RUE-E-KT-L: Optimum Running Characteristics with Low Friction



High load ratings, robust design, high rigidity and high precision, together with excellent sealing, are the most important conditions that must be fulfilled by linear roller bearing and guideway assemblies in production machinery. Speeds of up to 4 m/s (size 35) and accelerations up to 100 m/s<sup>2</sup> are further performance standards that must be achieved.

If you value products that are easy to fit and maintain as well as a precisely matched range of accessories, the Schaeffler Group and its Linear Technology Division is the ideal partner for you. This is because we offer not just products, but complete system solutions. System solutions that can often be easily

configured on a modular basis and with excellent levels of cost-effectiveness.

The newest generation of linear roller bearing and guideway assemblies RUE-E / RUE-E-KT-L are robust monorail guidance systems with very high load carrying capacity and rigidity. With their smooth, uniform running characteristics, high dynamics and wide range of accessories, they are the ideal linear guidance system for moving heavy loads with precise linear travel.

In conjunction with efficient seals, the units have a long operating life even under extreme operating conditions. Type RUE-E-KT-L offers a low-noise solution with a rolling element chain.

### Improved manufacturing processes

The consistent further development of the patented injection molding technology has led to the unprecedented quality of the linear roller bearing and guideway assembly RUE-E / RUE-E-KT-L.

- Perfect rolling element guidance in the load and return zones, optimized transitions and the best possible running characteristics with very low stroke pulsation
- More robust rolling element guidance due to a reduction in the number of components
- Improved protection against contamination due to labyrinth seals on the rolling element recirculation system
- Uniform lubricant distribution due to the completely closed and sealed lubrication duct.



### Efficient sealing concept

- Standard seals: single lip upper seals, double lip lower sealing strips as well as double lip end wipers
- Various other sealing arrangements are available as an option

The end plates fitted as standard in front of the contact end wipers offer additional protection against coarse contaminants, which means the contact end wipers retain their full performance capability even in environments with fine, often aggressive particles.

### Integrated lubricant reservoir

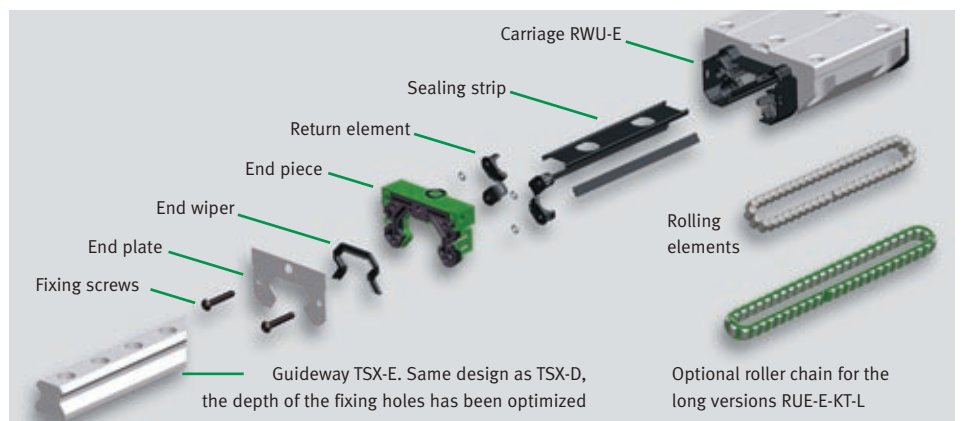
The rolling elements are always supplied with sufficient lubricant thanks to the position of the lubricant reservoir and the patented injection molding technique used in its production.

### Only available from INA Linear Technology

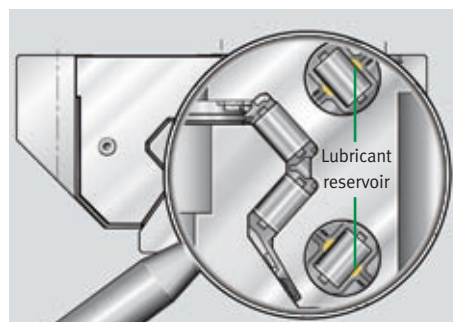
INA linear roller bearing and guideway assemblies RUE-E and RUE-E-KT-L enable

a unique combination of the “full complement” principle and “chain systems” in a single guidance system concept. The low-noise rolling element chain system

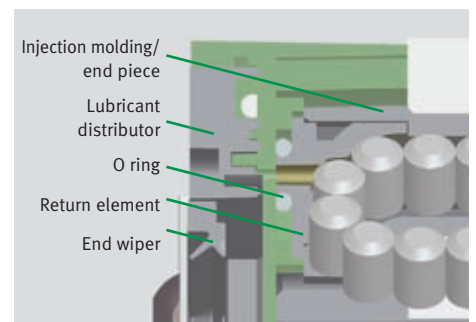
is only available for long carriages, since these offer the best compensation for the reduction in load carrying capacity and rigidity caused by the chain.



Design of the linear roller bearing and guideway assembly RUE-E

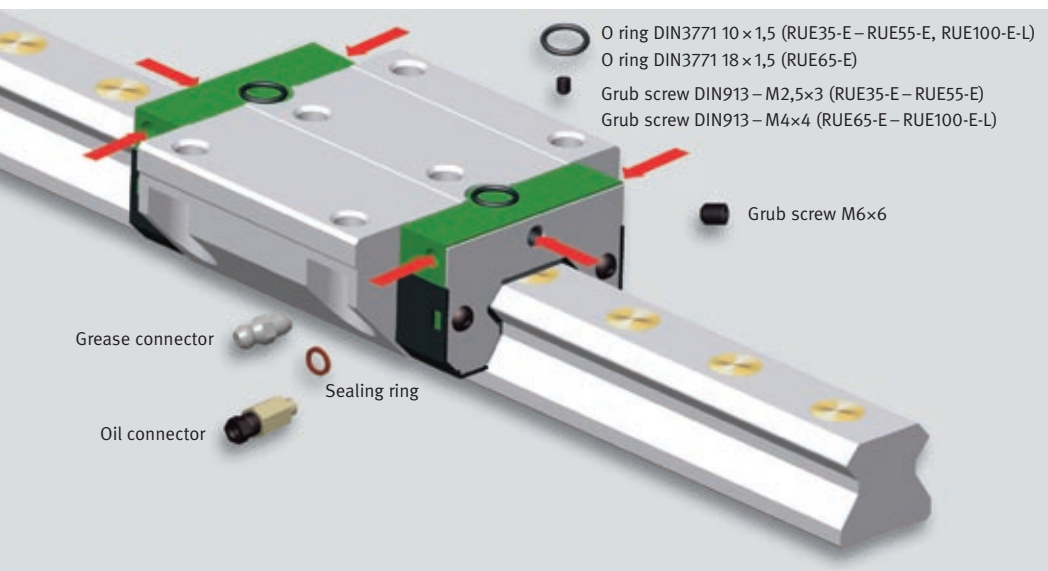


Cross-section of carriage



Longitudinal section of carriage

## Permanent Lubrication



Lubricant supply

### Permanent Lubrication

The design of the lubricant distribution ducts and their position in the end piece make a significant contribution to ensuring that the four rows of rolling elements are constantly supplied with fresh lubricant.

The advantages include:

- Uniform supply irrespective of position
- Defined lubricant access holes in the return element units

### Lubrication set

Every linear roller bearing and guideway assembly RUE-E / RUE-E-KT-L is supplied with a lubrication fitting set. This contains all the relevant components for connection to the lubricant supply.

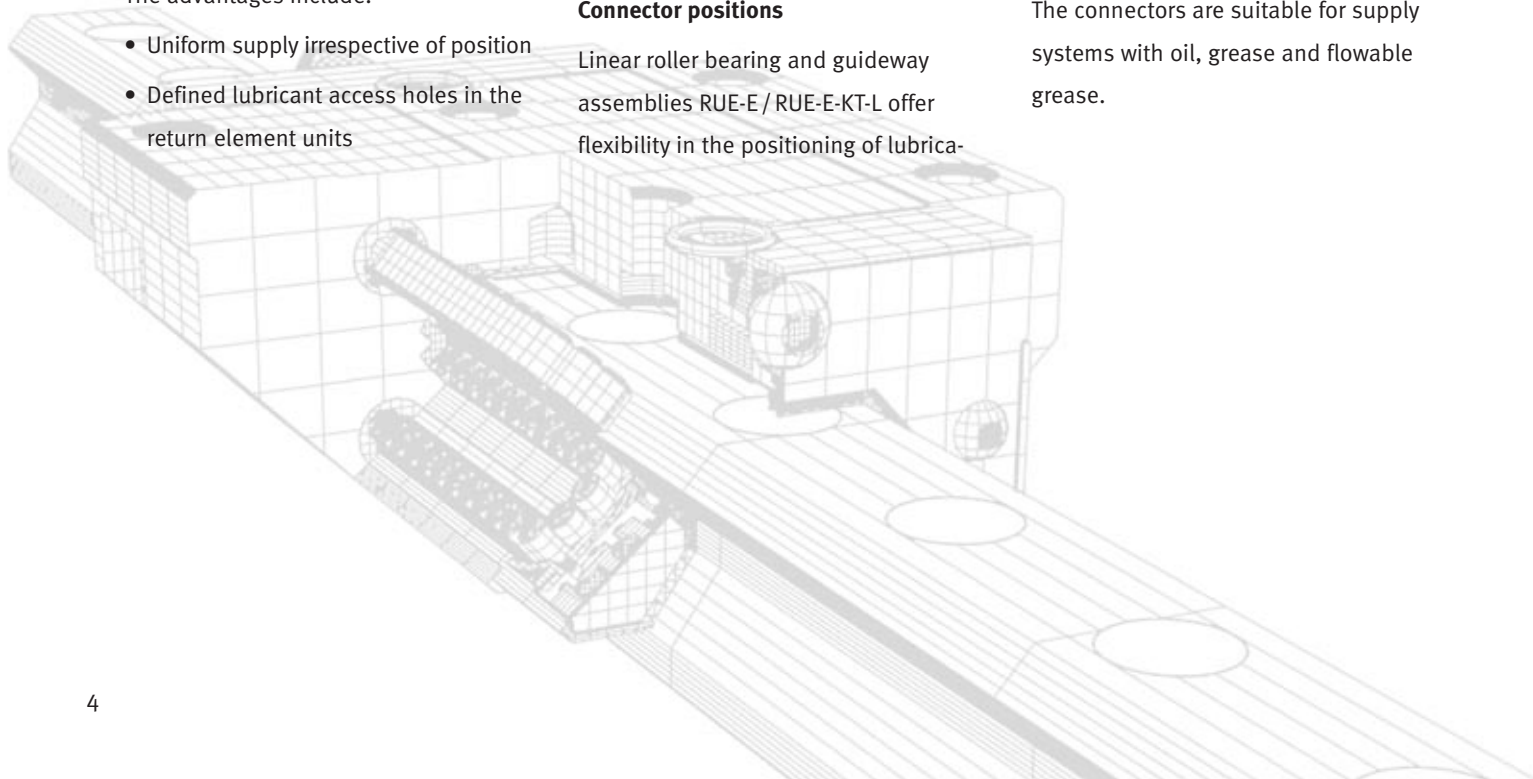
### Connector positions

Linear roller bearing and guideway assemblies RUE-E / RUE-E-KT-L offer flexibility in the positioning of lubrication

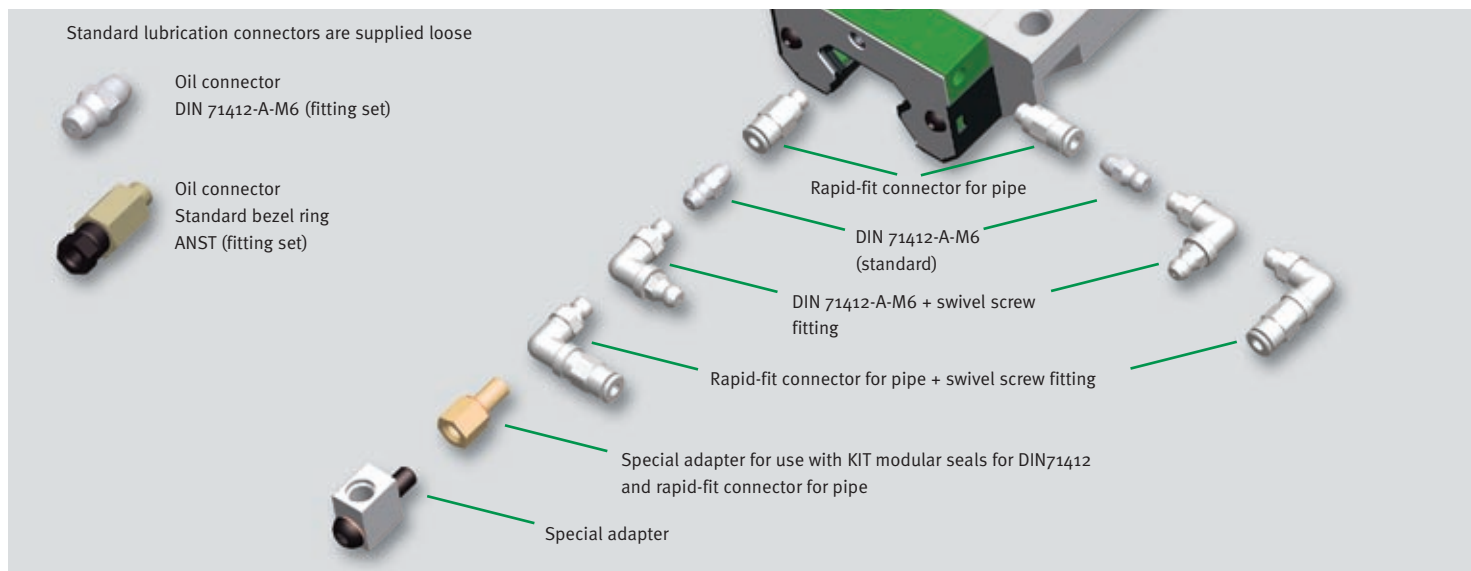
connectors so that they can be easily matched to the adjacent construction:

- From above through the adjacent construction directly into the end piece
- From either side of the end pieces
- From the end.

The connectors are suitable for supply systems with oil, grease and flowable grease.



## Easy To Assemble



Connectors for oil or grease lubrication

### Connector components

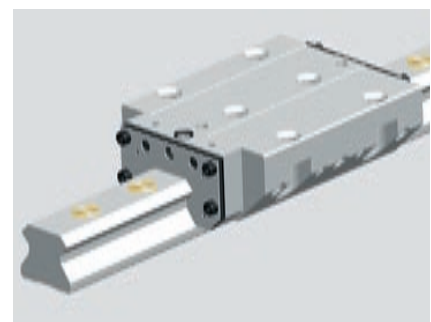
Linear roller bearing and guideway assemblies RUE-E / RUE-E-KT-L can be lubricated via a wide range of standardized connectors. These include standardized oil and grease supply connectors, adapters, etc.

### Clamping element RUKS

The hydraulic clamping element is primarily used for the locking in place of machining axes. The axial clearance in the direction of travel can also be minimized. This can be retrofitted at any time to linear roller bearing and guideway assemblies RUE..-E / RUE..-E-KT-L.

#### The advantages include:

- High clamping force with simple fitting within the design envelope of a linear roller bearing and guideway assembly
- Optimized cutting and machining accuracy of high performance machines
- Prevention of micromovements under oscillating load
- Improvements in the axial rigidity of the clamped axis.



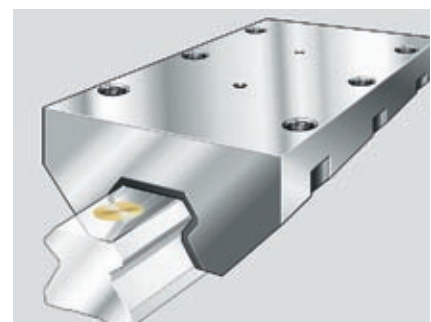
Clamping element RUKS

### Damping carriage RUDS

The damping carriage is highly effective in reducing vibrations on the guideway. It glides on an oil film between the damping carriage and the guideway. During fitting, the ready-to-fit carriage is simply screwed onto the adjacent construction; it is positioned in front of or behind the linear roller bearing and guideway assembly depending on the type of vibration involved.

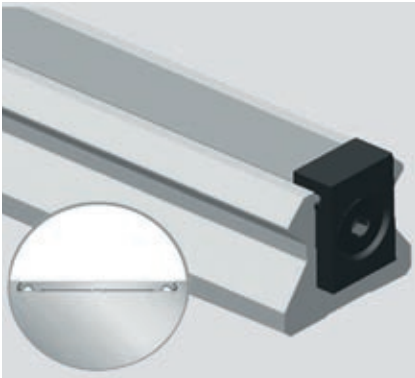
#### The advantages include:

- Effective damping of the linear axes by means of the squeeze film effect
- Impulse lubrication or pressure-free oil feed
- Additional crash safety of the guidance system
- Increases in the surface quality of workpieces due to “chatter-free” machining, even at limiting loads.



Damping carriage RUDS

## Reliable Operation



Guideway covering strip ADB-K

### Guideway covering strip ADB-K

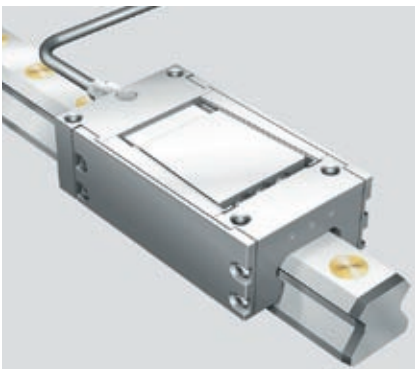
The strip is made of a roll-bonded composite material and is simply clamped in the groove on both sides to close off the guideway surface flush with the sides. This provides an optimum surface for wiping.

A fitting device makes fitting quick and precise, especially in the case of long axes.

The covering strips can be supplied in coils up to 300 meters long and can be customized according to requirements.

#### The advantages include:

- Flush connection with the surface of the guideway
- Secure retention and protection by geometrical locking
- Good sealing action against cooling lubricants.



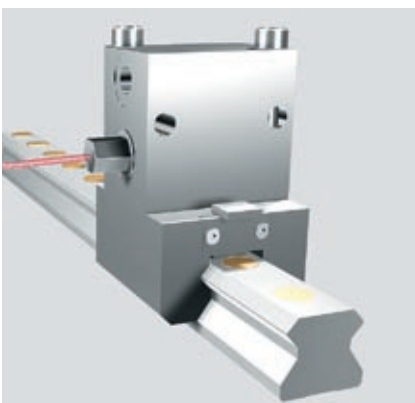
Braking and clamping element BKE.TSX

### Braking and clamping element BKE.TSX

This important safety element slows down the linear axis safely if the power drops or if the control system fails. Driven axes that do not have their own braking or clamping function are stopped instantly and reliably without any input of external energy, giving protection for personnel and machinery.

#### The advantages include:

- Also suitable for use as an emergency stop brake
- Reaction time less than 40 milliseconds
- Secure, powerful braking of linear axes
- Cost-effective, maintenance-free system
- Compact solution within the design envelope of the linear roller bearing and guideway assembly
- Clearance-free brake shoes with automatic wear compensation.



Hydraulic fitting device MVH-D-A

### Hydraulic fitting device MVH-D-A

This portable device has been specially designed for pressing brass closing plugs easily and securely into the guideway fixing holes.

#### The advantages include:

- Simple fitting of the brass plug flush with the surface in a single operation
- Currently the best solution on the market in terms of technology and cost-effectiveness.

## Practical Service Packages

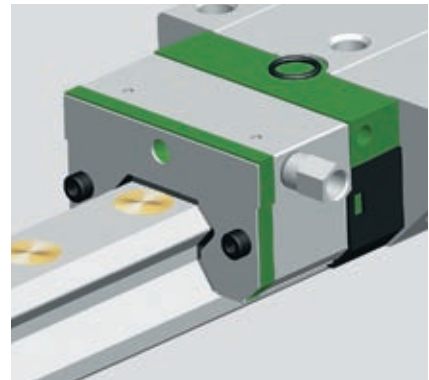
### KIT modular system

#### “minimal lubricant quantity metering unit”

The lubricant metering unit can be connected to all conventional central lubrication systems. The direct lubricant feed into the recirculation system ensures that the linear roller bearing and guideway assemblies RUE-E / RUE-E-KT-L are always supplied with the correct quantity of lubricant.

#### The advantages include:

- Economical use of lubricants due to precise metering of the smallest possible quantity
- Reliable lubrication in all mounting positions
- Easy connection to the lubrication system
- Lubricant supply can be monitored.



KIT modular system  
“minimal lubricant quantity metering unit”

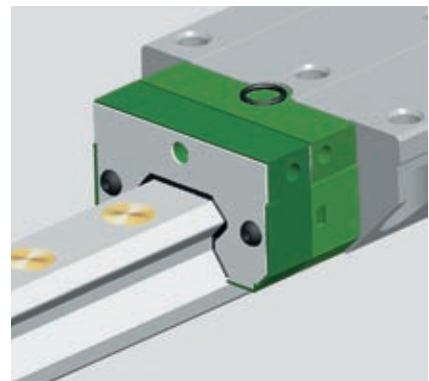
### KIT modular system

#### “long term lubrication unit”

The operating life of linear roller bearing and guideway assemblies RUE-E / RUE-E-KT-L can be significantly extended with the large-volume “long term lubrication unit” from INA Linear Technology. Premounted “long term lubrication units” are ready for immediate use.

#### The advantages include:

- High capacity lubricant reservoir
- Lubricant supply irrespective of position
- Minimized lubricant discharge from the guidance system due to a double lip end wiper
- Lower operating and maintenance costs due to longer maintenance intervals
- Absolutely maintenance-free depending on environmental and operating conditions.



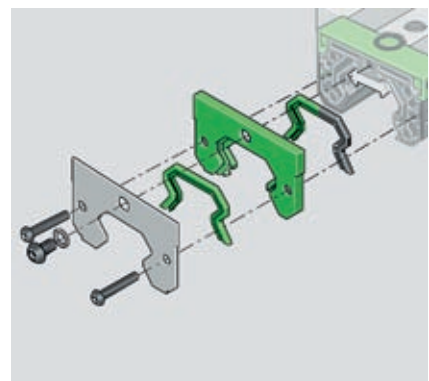
KIT modular system “long term lubrication unit”

### KIT modular system “seals”

The configuration of these matched seal elements is based on practical experience. Single lip or double lip end seals and sealing strips made from proven sealing material are available.

#### The advantages include:

- Versatile use of various seal elements, including cascade arrangements
- Customer-specific configurations are available on request
- Little fitting work required, easy retrofitting, quick and easy to replace
- Simple, easily predictable stockholding
- Positioning freely selectable.



KIT modular system “seals”

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