

# EWELLIX

MAKERS IN MOTION

## Miniature profile rail guides – LLS catalogue



## WHY EWELLIX

# Miniature profile rail guides - LLS

Solid design meets smooth running



Ewellix miniature profile rail guides (LLS) are the ideal solution for applications requiring compact dimensions, high running accuracy, long service life and low noise.

Our miniature profile rail guides can be used in a variety of applications, specifically in laboratory and automation environments where it is important to maintain a low level of noise. Thanks to the unique ball retention plate and ball recirculation system the LLS series are easy to mount and offer a smooth performance and higher position accuracy.

The newly developed Zero Rail Concept (ZRC) offers more flexibility and availability: within the ZRC any carriage can be mounted together with the rail of the same size, simplifying spare parts management and allowing faster deliveries.

## Common applications

- Laboratory analyser
- Minislides in automation
- 3D printing machine
- Laboratory machine tool
- Engraving machine
- Dental equipment
- Electronic industry

## General features



### Interchangeability

Within the Zero Rail Concept range



### Quick and safe mounting

Thanks to the unique ball retention system



### Virtually maintenance free

Thanks to the durable seals and raceway design



### Long Service Life

Up to 20000 km service life due to the innovative lubrication reservoir



### Ready to use

Factory pre-lubricated carriages

## Ewellix broad range overview

Size	7, 9, 12, 15
Rail Type	Standard and wide <sup>1</sup> width range
Carriage Type	Standard and long carriages
Speed	5 m/s
Acceleration	up to 140 m/s <sup>2</sup>
Precision	up to 7 µm / 1 000 mm
Operating temperature	-20°to +80 °C (+100 °C without seal)

<sup>1</sup> Wide sizes 7, 9, 12 available from first quarter 2022



## Zero Rail Concept

The newly developed Zero Rail Concept (ZRC) offers freedom in flexibility and availability. Within the ZR-Concept any carriage can be mounted together with the rail of the same size. Spare parts can be handled much quicker and due to standardization delivery times are shorter in comparison to system configurations.

Zero Rail Concept carriages and rails are delivered separately. The ZRC offer is standardized for precision class P5 (Standard precision) together with preload class T0 (Zero preload) and T1 (Light preload). Any carriage or rail from this range must be ordered with the suffix ZRC in the ordering key.



## Application examples

### 3D Printing machines

A computer-aided manufacturing device that creates three-dimensional objects by laying down thin layers of material in the form of liquid or powdered plastic, metal or cement, and then fusing the layers together.

- Up to 20 000 km of service life without relubrication
- Corrosion resistant material suitable in many different environments
- Low friction seal and smooth running performance for best positioning



### Laboratory analysers

Medical laboratory devices used to calculate the concentration of certain substances within samples of serum, plasma, urine and/or other bodily fluids.

- Low-noise in office environment
- Smooth running for small stepper motors
- Nearly no maintenance
- Up to 20 000 km of service life without maintenance



### Mini slides for Pick and Place

Pick and place robots are commonly used in modern manufacturing environments. Pick and place automation speeds up the process of picking up parts or items and placing them in other locations.

- High rigidity with optimized carriage design
- Low maintenance due to factory pre-lubrication
- Safe and quick mounting with innovative ball retention
- Long seal life due to the highly abrasive resistant material



# Ewellix miniature guides: how are they different?

## Interchangeable within ZRC range

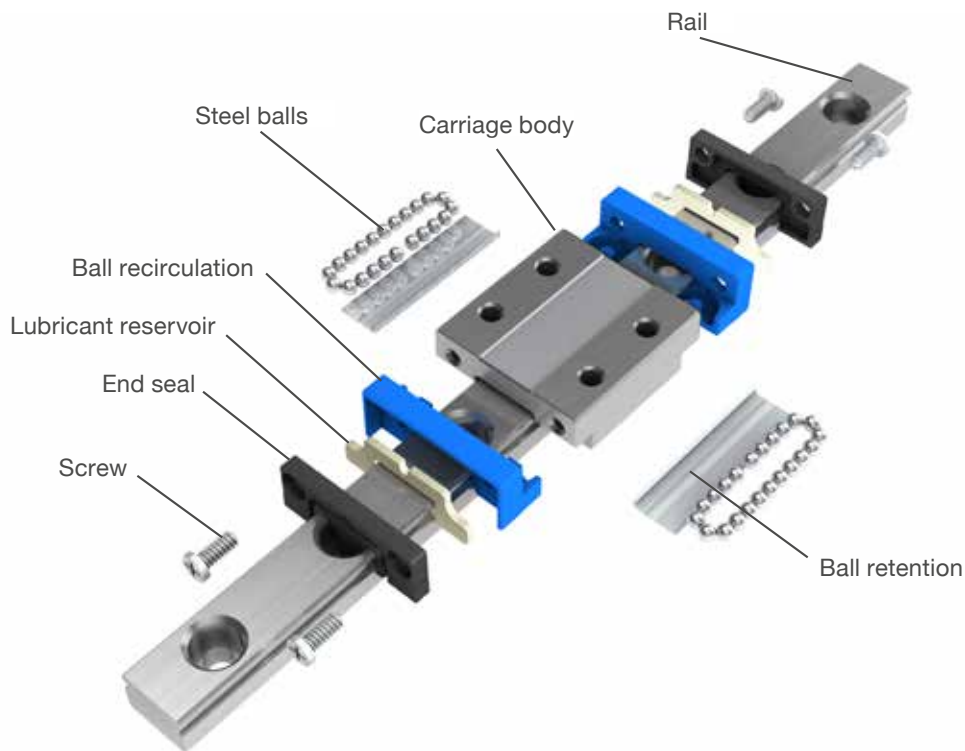
- Any carriage can be mounted together with the rail of the same size
- ZRC carriages and rails are delivered separately
- Rail and carriages can be stocked separately as standard items

## Optimized design and ball recirculation

- Low noise level, suitable for medical and office environment
- Extremely smooth and constant running behaviour
- Higher rigidity due to optimized carriage design

## Robust unique ball retention system

- Quick and safe mounting
- High precision due to anti-drop of steel balls
- Improved smoothness due to innovative design
- Better sealing performance due to raceway design



# Ewellix miniature profile rail guides services

- Rail cutting to custom lengths
- Systems with factory mounted carriages
- Pre-lubrication with H1 graded oil
- Laser marking for mounted systems
- P1 precision class available as mounted system
- Specific tolerances for parallel mounted rails available
- Medium preload (T2) system assembly
- Rails up to 2 m long in one piece available

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