

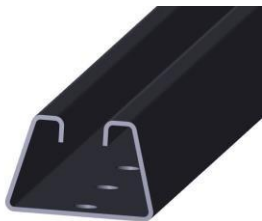
## HORIZONTAL RAIL SYSTEM AND HORIZONTAL CARRIAGE

### 1. General

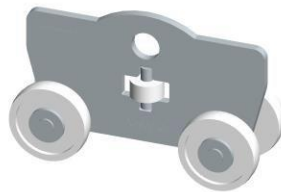
In buildings with more than two storeys, the roof access route is equipped with a safety rail or an open rail 1100 mm high when the roof slope is 1:1.5 or higher. If there is an obvious, higher-than-normal risk of falling on a roof with a gentler slope than this, the construction of an open rail or safety rail may be required for the risk area.

The length of the horizontal rail is 2988 mm, the width of the base is 66 mm, and the height of the profile is 41 mm. The horizontal rail can be shortened/extended as necessary.

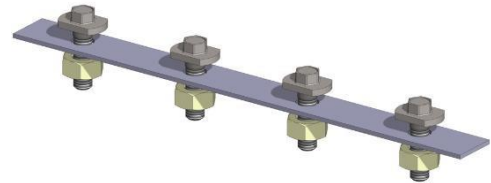
### 2. Product images and parts



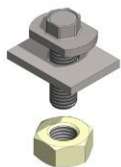
1. Horizontal rail walkway



2. Horizontal carriage



3. Horizontal rail extension to a roof



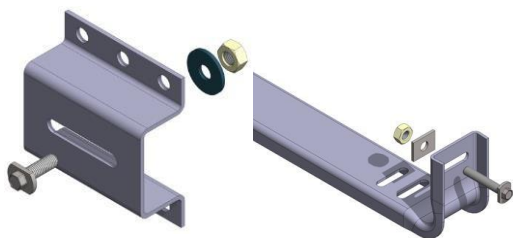
4. Roof walkway mounting kit



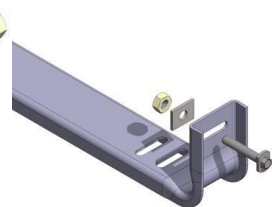
5. Fixed carriage barrier



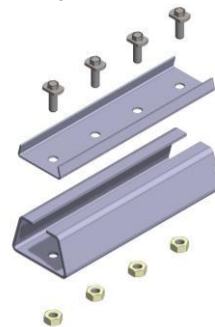
6. Opening carriage barrier



7. Horizontal rail wall mount



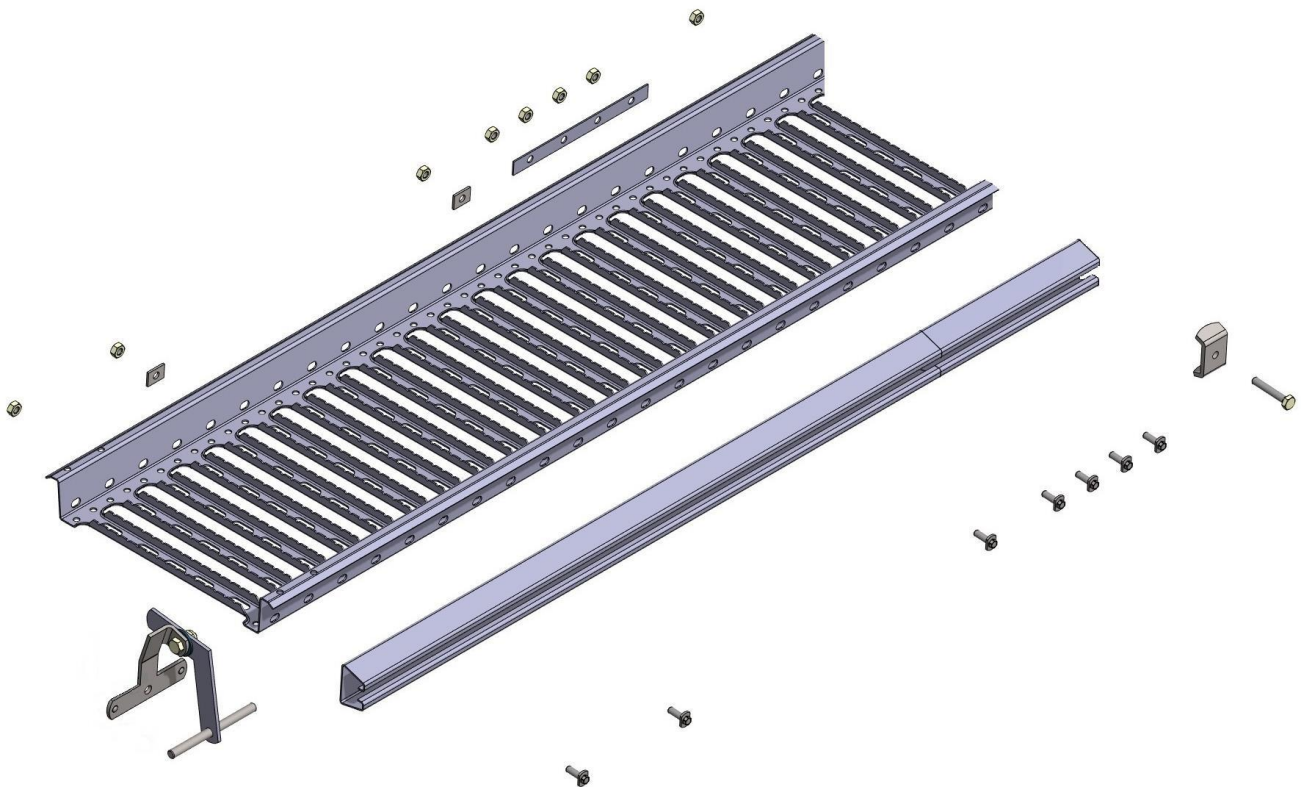
8. Intermediate bracket one-sided



9. External horizontal rail extension

### 3. Installation

#### A. Horizontal rail to roof walkway



#### 10. Mounting of horizontal rail to roof walkway

There must be a carriage barrier at both ends of the horizontal rail. It should also be noted that if access to the rail is in the middle of the rail line, the rail is cut in the middle for a distance of 0.5 m. Carriage barriers are placed at the ends.

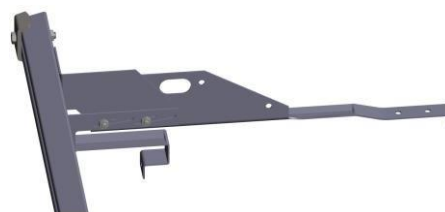
An additional set of horizontal rail fixing screws is fixed to the ends near the outermost roof walkway bracket (max. 0.4 m from the end of the roof walkway). Otherwise, fixing screws are installed max. 1.5 m apart, the extension is counted as a fixing screw.

#### B. Horizontal rail directly to roof

When the horizontal rail is fixed directly to the roof, roof mounts are fixed max. 1.5 m apart. The first two are fixed to the ends approx. 1 m apart. The horizontal rail is mounted to the roof mounts with the horizontal rail roof walkway mounting kit. A 2-piece external horizontal rail extension is used to extend the horizontal rail. See section D.



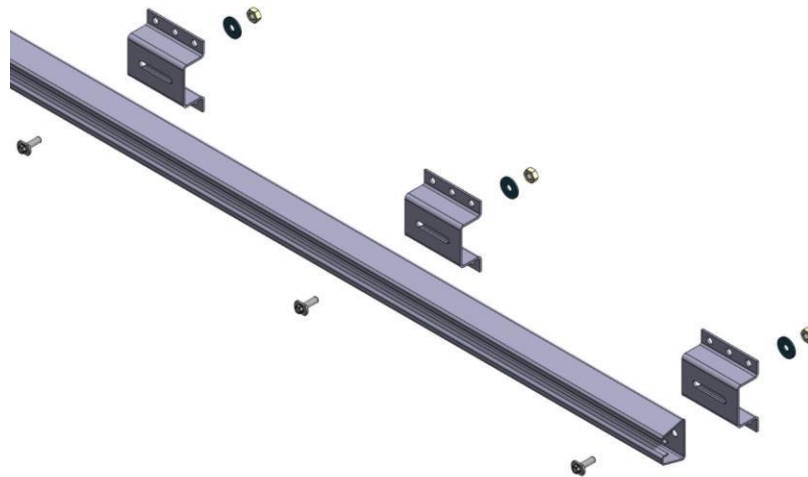
11. Horizontal rail on a machine-locked roof.



12. Horizontal rail on a brick roof.

### C. Horizontal rail to wall

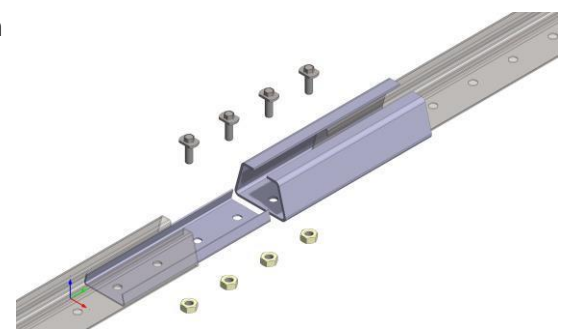
When the horizontal rail is fixed to a wall, wall mounts are used and they are fixed max. 1.5 m apart. The first two are fixed to the ends approx. 1 m apart. The horizontal rail is mounted to the wall mounts with the horizontal rail roof walkway mounting kit. Each wall mount is fixed to a wooden wall with 4 HVAC screws and to a concrete wall with an 8 mm stainless steel wedge anchor. Washers are always placed between the wall mount and the fixing screws. The outermost two are fixed to the wall with two M8\* mm through bolts. Bolt strength class 8.8. Washers with a minimum diameter of 30 mm are used as washers. See section D for rail extension.



### D. Extension

A 2-piece horizontal rail external extension is used for extension in direct roof mounting, wall mounting and mounting to a roof walkway with an intermediate mount. The smaller part is placed inside the rails to be extended and the larger part outside the rails. Mounting uses four safety rail screws M10 x 25 and M10 nuts.

When mounted to the side of the roof walkway, the rail is extended with four safety rail screws M10x25, an extension batten mounted inside the roof walkway and four M10 nuts.



13. External extension

## 4. Use

Before using the rail system, the user must read the operating instructions. The user must master the use of fall protection equipment.

The horizontal rail system is designed as fall protection equipment to be used in and tested as it is described in these installation instructions. Using the rail system for other fall protection applications according to the manufacturer's instructions.

It is strictly forbidden to make changes to the rail system without the permission of the manufacturer. Replacing parts of the rail system with parts not approved by the system manufacturer is strictly prohibited.

The maximum weight of the user, including equipment, is 120 kg. The system may be used by one user at a time per four metres.

The person attaches to the horizontal rail through a safety harness, safety rope and horizontal carriage. This ensures safe climbing on the roof in all situations. The horizontal carriage may only be used on the horizontal rail manufactured by Vesivek Tuotteet Oy in combination with a CE-approved (EN-361) full harness and official safety rope (EN 353-2) with a fall arrester and a length adjuster.

When moving or working on the roof, the safety rope is attached to the attachment loop behind the safety harness. It is also possible to attach to the chest loops on the front of the harness. The length of the rope is always adjusted so that falling from the roof is prevented.

The harness used in connection with the rail system must fit the user and the harness adjustments must be checked before using the system. Loose harnesses must not be used.

In the event of a fall, the rail system, safety harness and safety rope prevent the fall. After any fall, the rail system must not be used before inspection by the manufacturer or the manufacturer's representative. If the horizontal carriage or rail system is damaged, it must be replaced with a new one, or repaired by/as instructed by the manufacturer or the manufacturer's representative. A defective rail system must not be used.

NOTE! The vertical rail system rail grabber and the horizontal rail system trolley are not mutually compatible. The horizontal carriage must not be used in the vertical rail system, and the rail grabber must not be used with the horizontal rail.

## 5. Inspections

An inspection may only be carried out by the manufacturer, a representative of the manufacturer's authorised entity or the party responsible for the safety of the property. The inspection shall be recorded on the inspection card. The card is marked with the date of the inspection, who carried out the inspection, any actions/comments and the planned next inspection date. The inspection card must be carefully stored to allow for subsequent follow-up. If the condition of the horizontal rail system is in doubt, it is strictly prohibited to use them until further investigation. If necessary, the system shall be subject to a prohibition of use.

### **Installation and commissioning inspection**

Before commissioning the horizontal rail, a commissioning inspection must be carried out. Here, it is checked that the installation has been carried out according to the instructions and that the fastenings have been made reliably.

In addition, the functioning of the system must be checked. The horizontal carriage must run unobstructed all the way, including the extensions.

### **Periodic inspections**

After commissioning, the general condition and functionality of the horizontal rail system must be checked every 12 months. The inspection is carried out by the owner of the property or the person responsible for the safety of the property.

The inspection is recorded on the inspection card provided with the rail system. The inspection pays attention to the following matters:

#### **Horizontal carriage:**

- Wheels rotate unobstructed
- Wheel shaft and mounting loop integrity
- No corrosion damage to the carriage

#### **Horizontal rail:**

- Screws on fasteners and extensions must be tight.
- Carriage barriers must be in place.
- No mechanical or corrosion damage is observed on the carriage.
- The horizontal carriage must run unobstructed all the way, including the extensions.

**Defective and damaged parts must be repaired or replaced before use.**

**NOTE! REGULAR INSPECTIONS ENSURE THE SAFETY AND COMFORT OF THE RAIL SYSTEM USER**

## **6. Service and maintenance**

The rail system and its parts do not require special maintenance. Any damage is checked and repair measures are decided in connection with the periodic inspection. The expected service life of the products is 15 years for the galvanised parts of the rail system and 30 years for the powder painted parts. The service life depends on maintenance and the location of the building (urban climate vs. rural). The service life of the horizontal carriage is 15 years, depending on maintenance. The following factors can reduce the service life of the product: poor storage, poor use, fall arrest, mechanical failure, contact with chemical substances (such as acids and bases), exposure to strong heat sources (> 60°C).

## **7. Markings**

Horizontal rail: Manufacturer and manufacturing batch (e.g. VESIVEK 001)

Horizontal carriage: Manufacturer, year of manufacture and manufacturing batch (e.g. VESIVEK 2022 3)

## 8. Approvals

The horizontal rail system has been tested and approved according to the “Kattoturvatotteet – Kattopollarit, talotikkaat, lumiesteet ja katon vaakaturvakiskot” (Roof safety products – Roof bollards, service ladders, snow guards and horizontal roof safety rails) evaluation criteria published by the Ministry of the Environment of Finland. Assessment and Verification of Constancy of Performance 2+. The horizontal rail system has been granted the verification certificate no. EUFI29-22003249-VA by Eurofins Expert Services Oy, and the product is under their supervision.



## CARRIAGE AND RAIL SYSTEM INSPECTION CARD

Manufacturer: **Vesivek tuotteet Oy, Teollisuustie 8, FI-16300 Orimattila, Finland**

Retailer:

Serial numbers: Horizontal carriage:

Horizontal rail:

Year of manufacture:

The horizontal carriage may only be used on the horizontal rail manufactured by Vesivek Tuotteet Oy in combination with a CE-approved (EN-361) full harness and official safety rope (EN 353-2). The protective equipment and rail system must be periodically inspected once a year in accordance with the manufacturer's instructions.

Purchase date: / 20

Date of commissioning: / 20

User:

### COMMISSIONING INSPECTION AND PERIODIC INSPECTIONS

Inspection date	Inspected by	Measures	Next inspection