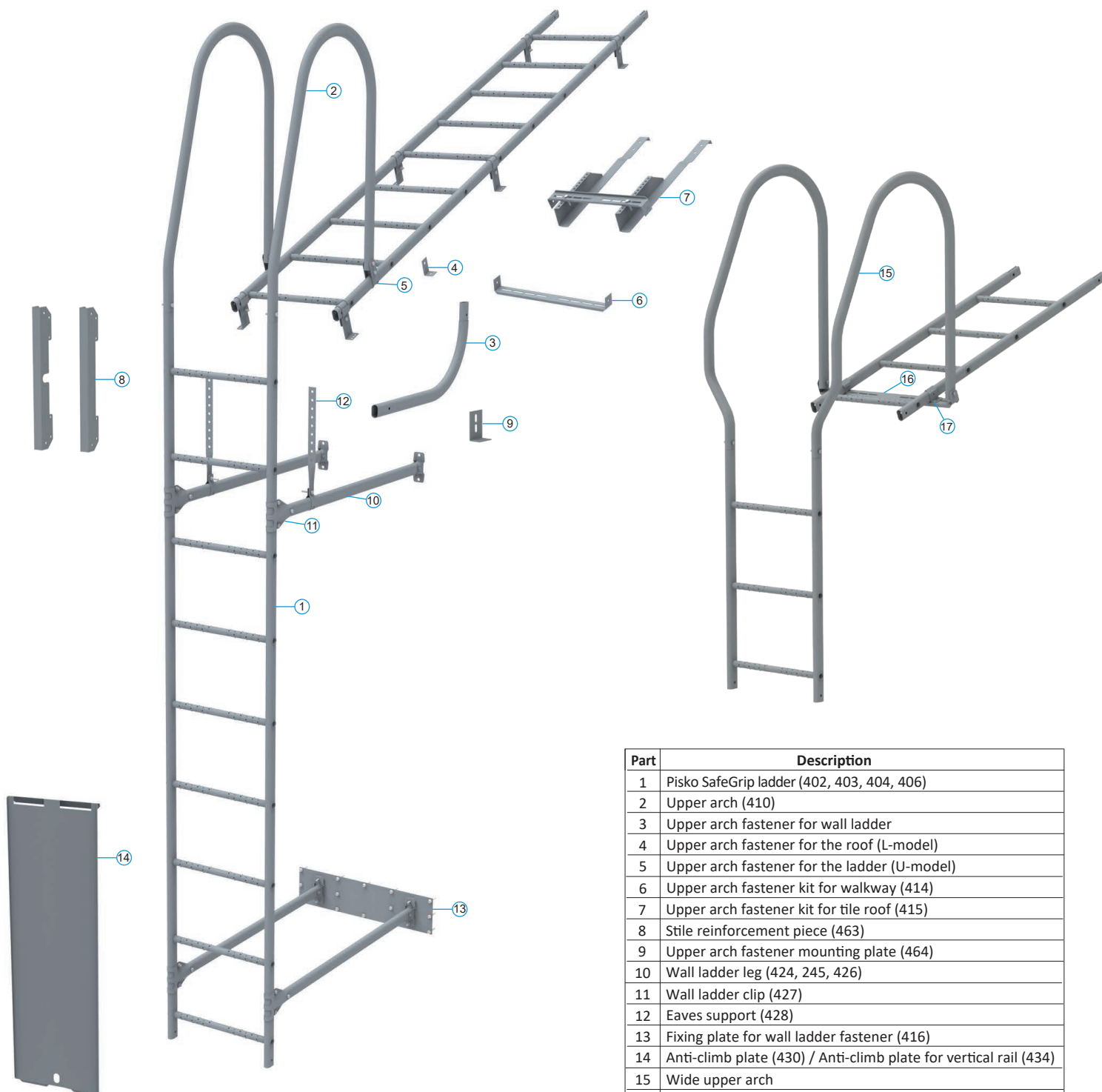


## INSTRUCTIONS FOR THE INSTALLATION, USE AND MAINTENANCE OF PISKO SAFEGRIP WALL LADDER

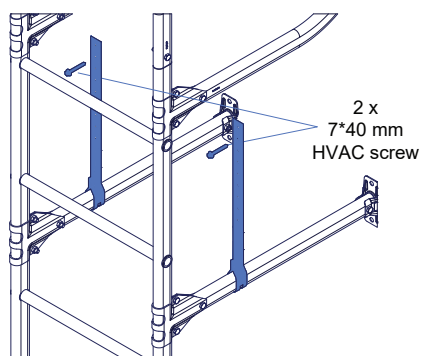
The Pisko SafeGrip wall ladder can be used to provide safe access to building roofs in accordance with building regulations and product requirements. The implementation must be designed taking into account the specific characteristics of the building, so that the solution is safe for the user and the changing loads on the installed accessories and the building structures are kept to a minimum. If it is not possible to install the ladder at the end of the building, the products must be protected with snow guards and it must be ensured that the snow load does not cause damage to the wall structures.



Part	Description
1	Pisko SafeGrip ladder (402, 403, 404, 406)
2	Upper arch (410)
3	Upper arch fastener for wall ladder
4	Upper arch fastener for the roof (L-model)
5	Upper arch fastener for the ladder (U-model)
6	Upper arch fastener kit for walkway (414)
7	Upper arch fastener kit for tile roof (415)
8	Stile reinforcement piece (463)
9	Upper arch fastener mounting plate (464)
10	Wall ladder leg (424, 245, 426)
11	Wall ladder clip (427)
12	Eaves support (428)
13	Fixing plate for wall ladder fastener (416)
14	Anti-climb plate (430) / Anti-climb plate for vertical rail (434)
15	Wide upper arch
16	Fixing bracket for wide upper arch 600 mm
17	Wide upper arch fasteners for roof ladder

## INSTALLATION

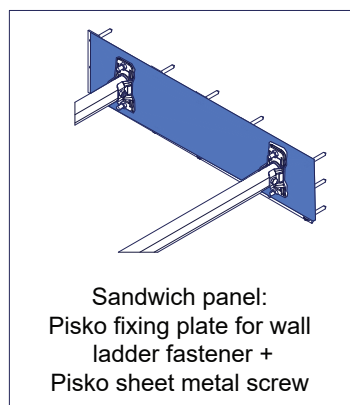
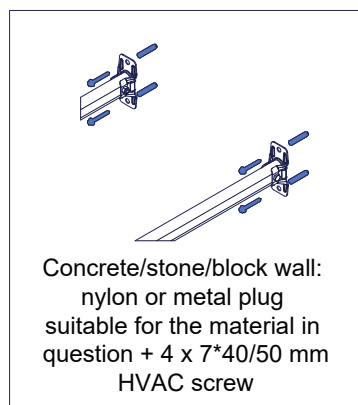
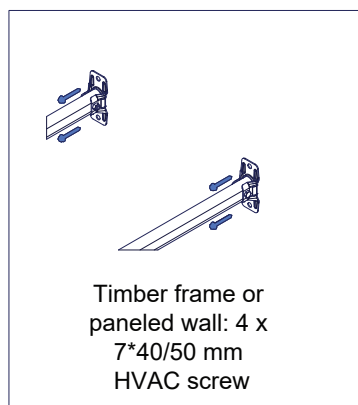
- The ladder must be dimensioned so that the topmost rung is located  $\pm 100$  mm from the height the eaves or other access platform. The bottom rung must be located 1,000–1,200 mm above the ground or other departure surface.
- The wall ladder legs must be dimensioned so that the distance between the center line of the ladder's rungs and the eaves or other protrusion is at least 200 mm. The legs are to be shortened to a suitable length, if necessary. The wall ladder legs must be fastened to the wall material with the aid of a suitable fastening method. While fastening the ladder, measures must be taken to prevent water trickling down the wall from entering the wall structures by, e.g., sealing the seams between the cladding and brackets.
- The wall ladder legs are fastened to the ladder with wall ladder clips and M8 screws and nuts so that the topmost pair of legs is located as close to the eaves as possible and the bottom pair of legs is located between the first and second rung. Always try to fasten the wall ladder legs to the load-bearing structures of the wall. In the case of brick-cladded houses, it is advisable to install the wall ladder legs in the framework before bricklaying. If this is not possible, the ladder can be fixed to the brickwork in the same way as for stone structures. This method is not recommended if the ladder has to be installed on the lower eaves of the roof. The maximum distance between the pairs of wall ladder legs is 3,000 mm.
- The ladder frame is fastener to the wall ladder legs with wall ladder clips using **two M8x16 and one M8x40 hexagon screws** and **three M8 hexagon nut per clip**. In case there is no hole left for the M8x40 fixing screw after shortening the leg, one must be drilled to be able to fix the screw on the ladder leg!
- **Inadequate attachment of the ladder frame and/or wall ladder legs can cause a risk to life!**



- The wall ladder legs are fastened to the eaves structure with the aid of eaves supports. Whenever possible, it is recommendable to use them. Eaves supports are to be used when the length of the wall ladder legs exceeds 400 mm. The purpose of the eaves supports is to support the ladder under vertical loading. The eaves support is fastened to the wall ladder leg with an M8x30 hexagon screw and M8 hexagon nut and to the eaves with e.g. 7x40 mm HVAC screw (2 per eaves support).

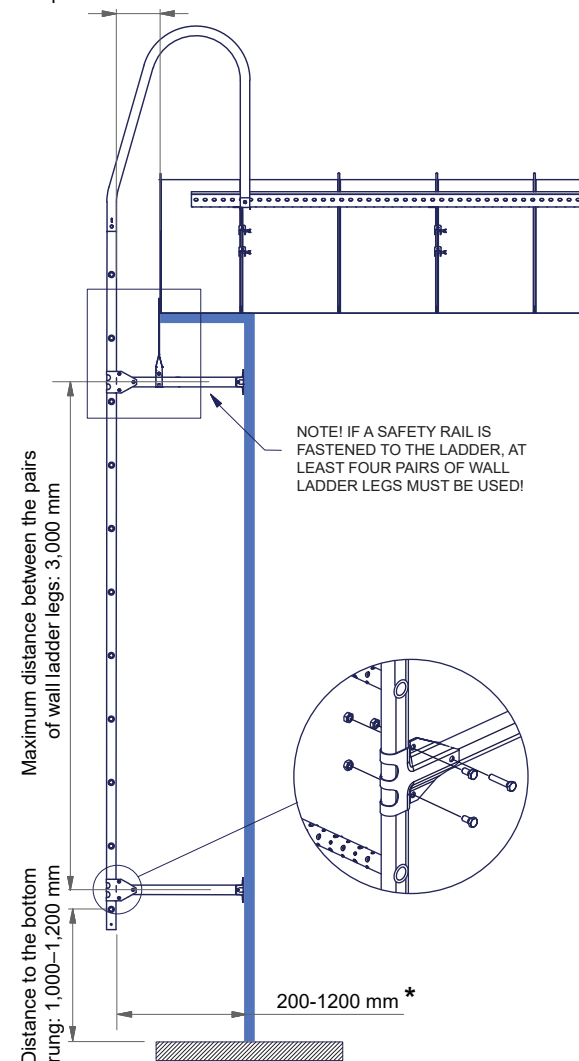
\*) the ladder has been tested with wall ladder legs up to 1200 mm length. Wall ladder legs longer than this may not fully comply with the requirements of the verification certificate.

Methods for fastening wall ladder legs to different materials:



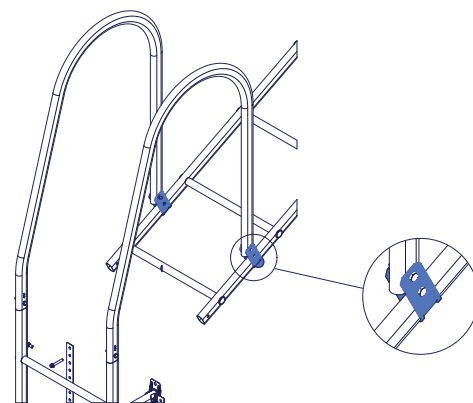
\*\*\*) The mounting platform is installed according to the Mounting platform for anchor point, Pisko Uniseam installation instructions. The wall ladder leg is fixed to the mounting platform with two 8x16 mm hexagon bolts and M8 nuts.

Minimum distance between the rung and the nearest protrusion: 200 mm



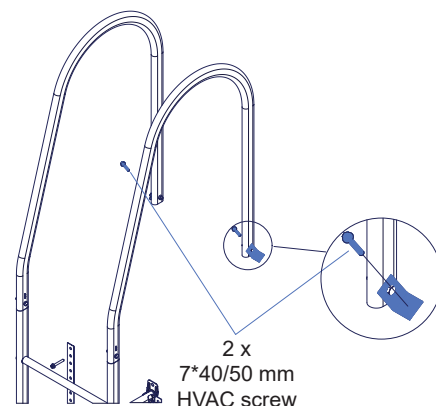
### Fastening the wall ladder to the roof ladder

- The upper arches are fastened to the roof ladder with a U-shaped upper arch fastener.
- The U-shaped fastener is placed around the ladder's stile and secured with two M8x40 hexagon screws and M8 hexagon nuts.



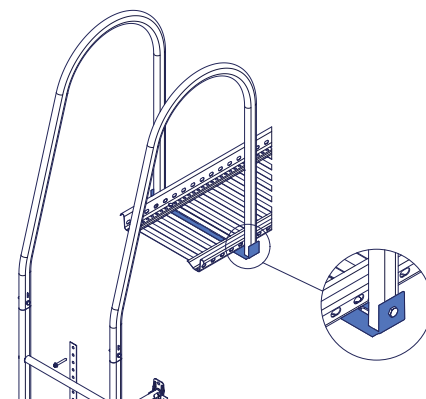
### Fastening the wall ladder to the roofing

- The upper arches are fastened to the roofing battens/auxiliary battens with an L-shaped upper arch fastener.
- The L-shaped fastener is fastened to the upper arch with an M8x40 hexagon screw and M8 hexagon nut and to the roofing with a 7x40/50 HVAC screw. An EPDM rubber seal must be installed between the roofing and the L-shaped fastener.



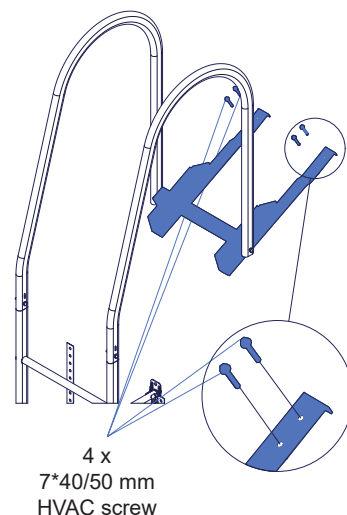
### Fastening the wall ladder to the roof walkway

- When installing the roof ladder, it must be ensured that it is aligned with the roof walkway.
- The upper arches are fastened to the roof walkway with a separate fastener kit or with an L-shaped fastener.
- The upper arches are installed at the top of the ladder and secured with an M8x40 hexagon screw and an M8 hexagon nut.
- The wall ladder must be installed so that the lowest part of the upper arches is at the same level as the bottom of the roof walkway.
- The connector is to be installed in its place at the bottom of the roof walkway so that it is aligned with the upper arch.
- The connector is fastened to the roof walkway with two M8x16 hexagon screws and M8 hexagon nuts.
- The connector is fastened to the upper arches with two M8x40 hexagon screws and M8 hexagon nuts.



### Fastening the wall ladder to a tiled roof

- The upper arches are installed to a tiled roof with the aid of an upper arch fastener kit for tile roof.
- The auxiliary batten fasteners (2 pcs) included in the upper arch fastener kit for tile roof are fastened to the auxiliary batten with two 7x40/50 HVAC screws. The timber strength class of the auxiliary battens must be at least C24. The auxiliary battens are to be fastened to at least three roof trusses using at least two 6x120 screws for each roof truss.
- The fastener interval is approximately 300 mm.
- With the aid of the adjustment openings, the fastener can be aligned with the upper arches in the direction of both the pitched roof area and the ridge.
- The connector is fastened to the auxiliary batten fasteners with two M8x16 hexagon screws and M8 hexagon nuts. The upper arches are fastened to the connector with two M8x40 hexagon screws and M8 hexagon nuts.



## Other ways to attach wall ladders

It is always recommended that wall ladders be mounted to a roof access route (ladder or roof walkway) in order to provide users with a safe and usable route to the roof. Alternatively, the top of the ladder can be attached to structures, e.g., a continuous wall (parapet) above the roof structure. If these options are not possible, it is recommended that the connection between the rung and the upper arch be reinforced using a stile reinforcement piece. Ending the upper arch at the ladder frame should be avoided as the only solution.

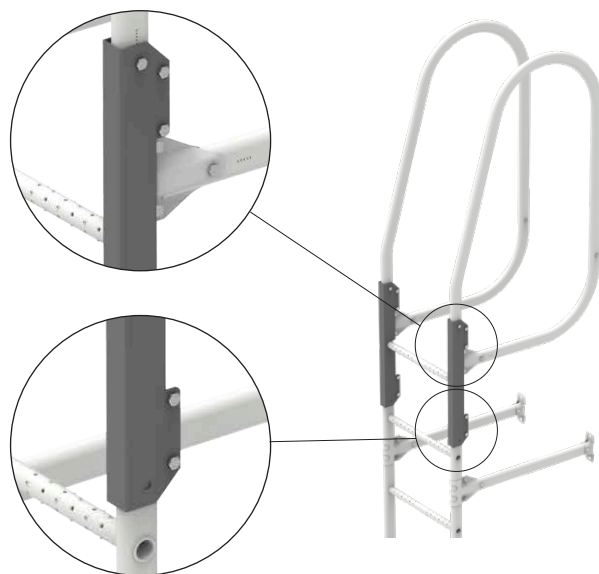
### Fastening the upper arches to the ladder frame

- The upper arches are fastened to the ladder frame with upper arch fasteners for wall ladder.
- The contracted end of the upper arch fastener is pushed inside the upper arch's roof-side end. The coupling is secured with an M8x40 hexagon screw and an M8 hexagon nut.
- The other end of the upper arch fastener is fastened to the ladder frame with the wall ladder clip and secured with two M8x16 screws and one M8x40 hexagon screw and one M8 hexagon nut.



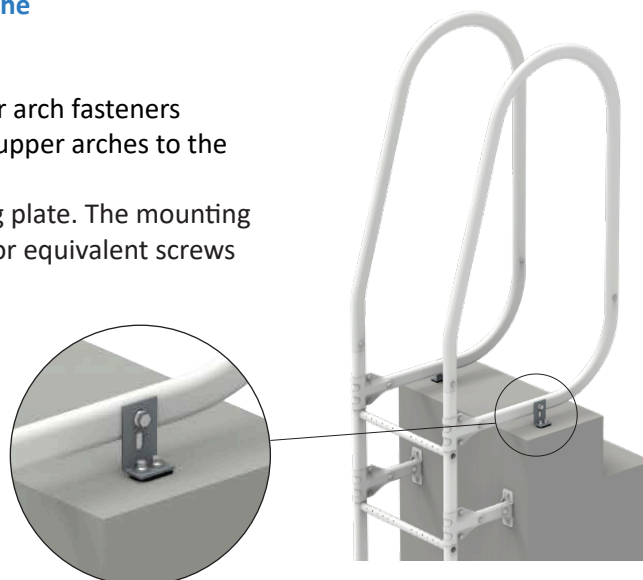
### Fastening the stile reinforcement piece

- Remove the M8x40 hexagon bolt and M8 hexagon nut connecting the upper arch to the ladder.
- Place the stile reinforcement piece on top of the stile with the hole avoiding the rung on the inside of the ladder.
- Reattach the M8x40 hexagon bolt and M8 hexagon nut you removed into the hole through the stile and upper arch.
- Attach 4 pcs M8x40 hexagon bolts and M8 hexagon nuts to the stile reinforcement piece to press the reinforcement piece against the stile



### Attaching the upper arches to the ladder frame and attaching the upper arch fastener mounting plate to the structures (parapet)

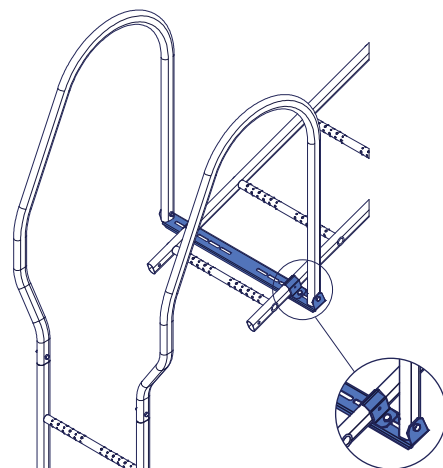
- The upper arches are attached to the ladder frame with upper arch fasteners for wall ladder in accordance with the section "Fastening the upper arches to the ladder frame."
- Attach the 2+1 seal to the bottom of the upper arch mounting plate. The mounting plate is attached to the roof structure with two HVAC screws or equivalent screws suitable for the roof structure.
- The upper arch fastener for wall ladder is attached to the upper arch mounting plate with an M8x40 hexagon screw and an M8 hexagon nut. Drill a hole in the upper arch fastener for wall ladder for screw fastening.



## FASTENING THE WALL LADDER WITH WIDE BOWS

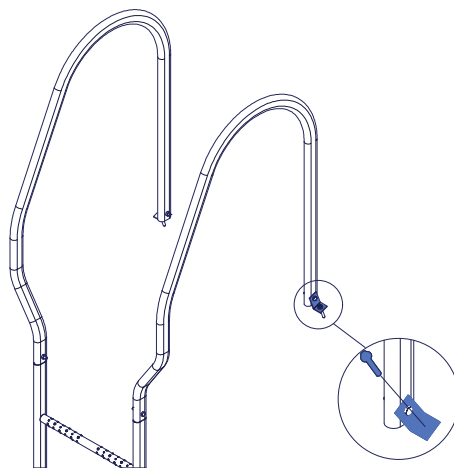
### Fastening the wall ladder to the roof ladder

- The upper arches are fastened to the roof ladder with 600 mm fixing bracket for wide upper arch and wide upper arch fasteners for roof ladder.
- The fixing bracket is installed below the roof ladder with the end bends facing upwards and fixed with the wide upper arch fasteners for roof ladder on top of the side stile of ladder with two M8x16 hexagon bolts and nuts. The upper arches are attached to the fixing bracket with two M8x40 hexagon bolts and nuts.



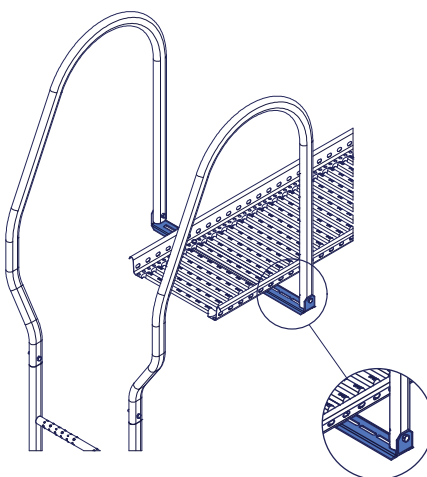
### Fastening the wall ladder to the roofing

- The upper arches are fastened to the roofing battens/auxiliary battens with an L-shaped upper arch fastener.
- The L-shaped fastener is fastened to the upper arch with an M8x40 hexagon screw and M8 hexagon nut and to the roofing with a 7x40/50 HVAC screw. An EPDM rubber seal must be installed between the roofing and the L-shaped fastener.



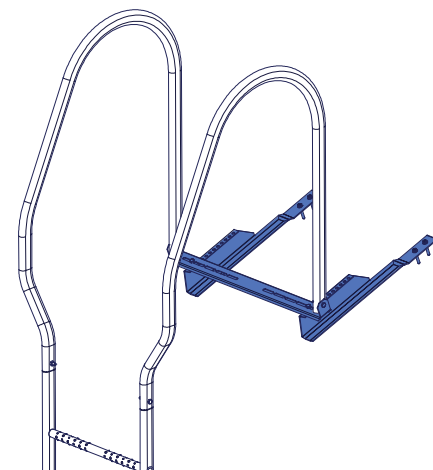
### Fastening the wall ladder to the roof walkway

- When installing the roof ladder, it must be ensured that it is aligned with the roof walkway.
- The upper arches are fastened to the roof walkway with 600 mm fixing bracket for wide upper arch.
- The upper arches are installed at the top of the ladder and secured with an M8x40 hexagon screw and an M8 hexagon nut.
- The wall ladder must be installed so that the lowest part of the upper arch is at the same level as the bottom of the roof walkway.
- The fixing bracket is to be installed in its place at the bottom of the roof walkway so that it is aligned with the upper arch.
- The fixing bracket is fastened to the roof walkway with two M8x16 hexagon screws and M8 hexagon nuts.
- The fixing bracket is fastened to the upper arches with two M8x40 hexagon screws and M8 hexagon nuts.



### Fastening the wall ladder to a tiled roof

- The upper arches are installed to a tiled roof with the aid of an upper arch fastener kit for tile roof.
- The auxiliary batten fasteners (2 pcs) included in the upper arch fastener kit for tile roof are fastened to the auxiliary batten with two 7x40/50 HVAC screws. The timber strength class of the auxiliary battens must be at least C24. The auxiliary battens are to be fastened to at least three roof trusses using at least two 6x120 screws for each roof truss.
- The fastener interval is approximately 500 mm.
- With the aid of the adjustment openings, the fastener can be aligned with the upper arch in the direction of both the pitched roof area and the ridge.
- The connector is fastened to the auxiliary batten fasteners with two M8x16 hexagon screws and M8 hexagon nuts. The upper arches are fastened to the connector with two M8x40 hexagon screws and M8 hexagon nuts.



### Installing the anti-climb plate

- The anti-climb plate is used when it is desirable to, e.g., prevent small children from climbing the ladder.
- The anti-climb plate is placed on the ladder frame so that it covers the lowest rungs. The anti-climb plate is to be pressed lightly downwards until it is securely in its place.
- The anti-climb plate can be locked to the rung with an Abloy padlock (no. 340, tall), if necessary.



### USE

All buildings must be provided with a safe access to the roof and safe passages to the ridge, chimney, hatches, and other structures requiring maintenance. A safe descent from balconies and upstairs rooms must also be ensured.

Buildings that are more than 9 meters high must be equipped with fastening structures for safety ropes (Finnish Ministry of the Environment Decree on the safe use of buildings, 1 January 2018). With Pisko SafeGrip ladder, fall protection can be carried out with the aid of the Pisko vertical safety rail or Pisko SafeLine wire system. **The ladder upper arch cannot be used as anchoring point for safety rope!**

Before each use, check that the ladder attachment platform and the ladder are intact and that the ladder attachments are made and maintained in accordance with these installation instructions. Do not use the product if you are in a deteriorated state of health or if your physical condition does not allow you to climb on the dangerous areas of the building.

Pisko SafeGrip ladders meet the requirements of the verification certificate when correctly installed. Requirements are based on criteria published by the Ministry of the Environment. **Damaged or inadequately fixed ladders must not be used.** If any defects are found in the condition or attachment of the ladder, one should primarily contact the installer of the ladder or other Pisko product retailer.

## MAINTENANCE

When installed in accordance with the instructions, the Pisko ladder and roof safety products are durable and safe to use due to the continuous quality control and research work conducted by Piristeel Oy.

In order to ensure the safe use and durability of the products, the property owner must perform the annual inspection and maintenance procedures and ensure that the snow load stipulated in the regulations is not exceeded. **Ladders are not intended to be used as snow guards.**

If a vertical profile has been installed in the ladder, the owner of the property must have it checked annually by a person authorized by the manufacturer.

### The annual inspection and maintenance of the Pisko ladder and roof safety products include


- Inspecting the tightness of the joints and fastening points
- Checking the wall and roof fastenings and the condition of attachment platform
- Checking the watertightness of the lead-ins in the roof
- Taking care of the removal of excess snow in order to minimize the load on the structures and fastening points (several times during the winter, if necessary)
- If necessary, cleaning the ladder from snow and ice without damaging the product
- Checking the condition of the paint or zinc coating of the products, as well as repairing and touch-up painting local damages
- Replacing or repairing damaged or defective parts as soon as possible. Damaged or inadequately fixed ladders must not be used
- Inspections can be carried out with the help of inspection reports or Pisko Pro application

### INSTALLED BY

Company

Installer

Date

	<p>Piristeel Oy Metallitie 4 FI-62200 Kauhava</p>
<p>Product</p>	<p>Pisko wall ladder</p>
<p>Intended purpose</p>	<p>Roof safety product – a ladder for climbing on the roof of a building or other platform.</p>
<p>Performance levels</p>	<p>Value</p>
<p>1. Dimensions</p>	<p>a) Rung width 400 mm b) Rung interval 300 mm c) Rung diameter 25 mm d) Distance between the rungs and the wall =&gt; 200 mm</p>
<p>2. Coating thickness</p>	<p>Zinc 275 g/m<sup>2</sup> + powder-coating</p>
<p>3. Load-bearing capacity and torque resistance</p>	<p>a) Static load-bearing capacity of the rung - With a 1.5-kN load, the maximum deflection is 5 mm. Withstands a load of 2.6 kN. a) Static load-bearing capacity of the side rail - With a 1.5-kN load, the maximum deflection is 10 mm and 1/100 of the length of the bracket interval. Withstands a load of 2.6 kN. c) Static load-bearing capacity of the ladder's fastening and the wall ladder legs - Withstand a load of 2.6 kN. d) Torque-resistance capacity of the rung's fastening - Withstands a torque of 50 Nm. e) Dynamic load-bearing capacity of the ladder - Withstands the load due to a 100-kg mass falling from a height of 2,500 mm. f) Dynamic load-bearing capacity of the vertical safety rail - Withstands the load due to a 100-kg mass falling from a height of 2,500 mm.</p>
<p>4. Corrosion</p>	<p>Corrosion resistance class C3 medium</p>