PROFESSIONAL

Guided type fall arrester including rigid anchor line - H-50 System

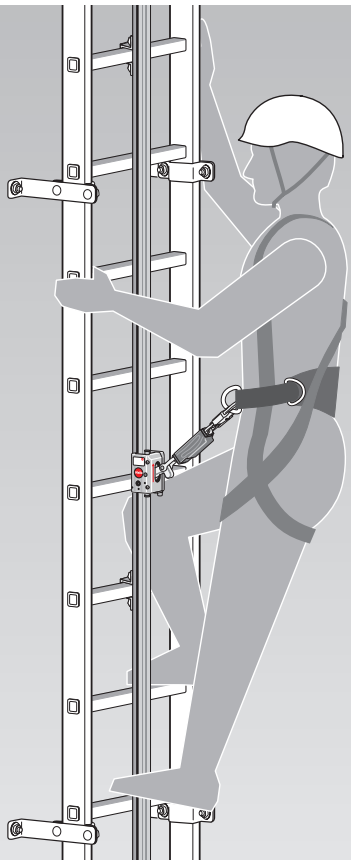
(EU) 2016/425
DIN EN 353-1:2018

Fall Protection Rail H-50
System Components

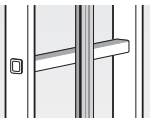
BG

Information brochure for

- Installation
- Use
- Inspection



Professional access technology for
mining machinery, building construction, wind turbines



1. General information, explanation of symbols

Manufacturer:

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35708 Haiger, Germany

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Fax +49 (0) 2773 82-1561

E-mail: info@hailo-professional.de
www.hailo-professional.de

This information brochure describes the installation, use and inspection of the H-50 fall protection system.

For your safety, please read this information brochure carefully before use.

Certifying and supervising body:

TÜV Austria Service GmbH

Deutschstraße 10
1230 Wien, Austria

Identification no. 0408

For ease of understanding, this brochure has replaced the term used in DIN EN 353-1:2018, “Guided type fall arrester including rigid anchor line”, with “fall arrest system”.

EU Declaration of Conformity and EU-Type Test Certificate:

Only the SPL-50-PRO fall arrester may be used on the H-50 fall protection system.

The SPL-50-PRO fall arrester may only be used, maintained and inspected in accordance with the specifications in the Hailo SPL-50-PRO fall arrester information brochure and integrated shock absorber BFD-50-136.

The warranty will become null and void in the event of damage caused by non-observance of this booklet. No liability shall be assumed for any consequential damage arising from this.

If the equipment is resold to another country, it is necessary for the safety of the user that the retailer provides the buyer with the information in this brochure in the respective national language.

Symbols used in this information booklet:

General warning advice

Risk of fatal injury in the event of a fall

See documentation

Use Personal Protective Equipment (PPE) against falls from a height

General instructions

Additional advice

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2. System data

Information about the site of installation *(to be completed by the operator)*

Name (operator): . . . . . Telephone: . . . . .

Street: . . . . . Telefax: . . . . .

Postcode, location: . . . . . E-mail: . . . . .

Date of commissioning: . . . . .

Date *Operator's signature*

Information about the system *(to be completed by the installation supervisor)*

Ladder system . . . . .

- ☐ Ladder system (Hailo)
- ☐ Ladder system (on-site)
- ☐ Step irons (on-site)

Ladder material . . . . .

- ☐ AL (aluminium)
- ☐ VA (stainless steel)
- ☐ ST (galvanised steel)
- ☐ Other

Type of mounting . . . . .

- ☐ laterally on ladder rail
- ☐ centrally on ladder rung
- ☐ on the on-site ladder system
- ☐ on the structure
  (e.g. between or next to the step irons)

Rail system type . . . . .

- ☐ AL 50 (aluminium)
- ☐ VA 50 (stainless steel)
- ☐ ST 50 (galvanised steel)

Date *Installation supervisor's signature*

3. Intended use

- The H-50 fall arrest system is designed as a fall safety when using rung ladders and pole climbers, both above ground and below ground.
  It is designed for a safe ascent and descent of service personnel to workstations at higher or lower levels.
- When using the H-50 fall protection system, the Hailo fall arrester SPL-50-PRO is mandatory as personal protective equipment (PPE).
- The fall protection system may only be used within the operating conditions described in this information booklet.
  Any other use (e.g. as workplace positioning or as an anchor point) is prohibited and can lead to failure of the safety system in the event of a fall. No liability is assumed for personal injury or property damage resulting from violations of the provisions outlined in this booklet or from failure to comply with the safety instructions.

4. Safety instructions

WARNING

Falling hazard!

When performing assembly work at height there is a risk of injury from falling.
A fall can lead to serious injuries or even death.
It is essential to observe the safety instructions.

- Only persons who have been instructed in the use of vertical ladder and fall protection systems may use the H-50 fall protection system and the SPL-50-PRO fall arrester. The user of the fall arrest system must be physically and mentally capable of movement using the respective equipment. Safety in normal or emergency conditions must not be compromised.
- The contractor or operator of a plant must put in place a plan which covers all possible emergencies that might arise when using the fall arrest system and outlines the measures required for rescuing personnel.
- The accident prevention regulations
  DGUV regulation 1 and
  DGUV rules 112-198/199 (Germany)
  must be respected.
  Testing must adhere to the respective national operating and testing regulations.
- Only Hailo system components may be used on the H-50 fall protection system. A combination with components from other manufacturers is not permitted. Written approval must be obtained from Hailo if the use of components from other manufacturers is unavoidable.
- No more than 5 persons may use the fall arrest system at the same time. The distance between individual users must be at least 6 m.

4. Safety instructions

- The fall protection system is intended for operation in a temperature range of -40°C to +50°C.
- Extreme temperature and weather conditions (e.g. heavy rain, snow and ice, temperatures < -40 °C or > +50 °C) may prevent the correct function of the fall protection system.
  In this case the fall protection system may not be used.
- If a Hailo fall protection system H-50 is retrofitted to an existing ladder system that complies with the EN ISO 14122-4, DIN 18799-1 or EN 14396 standard, if any doubt concerning suitability exists, e.g. in the case of a smaller cross-section, in the case of a non-load-bearing bar/rung connection, in the case of corrosion or in the case of poor anchoring to the structure, safe use must be ensured taking into account the rules of technology or by planning and assessment by an engineering office.

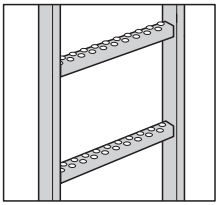
  It must be ensured that a dynamic load of 6 kN and a static load of 15 kN occurring in the event of a fall can be absorbed by the entire system.
- If the required confirmation (for safe force absorption on the on-site structure) is not provided, the manufacturer may be exempted from product liability in the event of damage. Liability is then transferred to the operator.
- Before each use objects must be cleared from the workplace below the user to prevent impacting an object in the event of a fall.
  A safety clearance (3 m) must also be observed (see 10. Markings and instructions).
- Transport and storage:
  All components of the system must be secured in such a way that their function is not impaired and all components are in a safe condition.
- Before assembling the fall protection system, all the parts must first be inspected to ensure they are in sound condition.
  The system components must show no signs of transport damage such as bending of the fall protection rail.
- The system or component parts of the system are to be replaced immediately if there is any doubt as to their safe condition. This task must be carried out by the manufacturer or by other trained personnel.
- A system or component of the system that has been stressed by a fall shall be inspected by a competent person before further use and repaired or replaced if necessary.
- When carrying out installation, maintenance or repair work, make sure that no scaffolding, platforms or other objects can protrude into the fall zone constituting a further hazard in the event of a fall.
- The fall protection system must not be used if it is dirty or damaged.
  The fall protection rail in particular must be in a clean, undamaged condition. Contact with oils, acids or other corrosive liquids must be avoided.
- When a fall protection system is retrofitted by the operator, the relevant standards must be complied with (see 5. Standards and regulations).

5. Standards and regulations

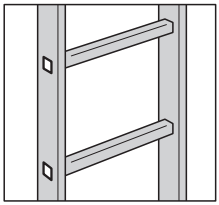
(EU) 2016/425	*Regulation on personal protective equipment*
BetrSichV	*Ordinance on Safety and Health Protection in the Use of Work Equipment (Ordinance on Industrial Safety and Health, BetrSichV)*
DGUV Regulation 1	*Accident prevention regulations "Principles of prevention"*
DGUV Information 208-016	*Guidelines for the use of ladders and steps*
DGUV Rule 112-198	*Ruling on the use of personal protective equipment to prevent falls*
DGUV Rule 112-199	*Ruling on the use of personal protective equipment for rescue at height or underground*
DIN EN 353-1:2018	*Personal protective equipment to prevent falls from height: Guided type fall arrester including fixed guide line*
EN 361	*Personal protective equipment to prevent falls from height: Safety harness*
EN 13101	*Step irons in shafts*
EN ISO 14122-1	*Safety of machinery - Permanent means of access to machinery Part 1: Choice of fixed access between two levels*
EN ISO 14122-4	*Safety of machinery - Permanent means of access to machinery Part 4: Fixed ladders*
EN 14396	*Fixed ladders for shafts*
DIN 18799-1	*Fixed ladder systems for construction works Part 1: Fixed ladders with uprights Safety requirements and tests*
EN 795	*Personal fall protection - Anchor devices*
DIN CEN/TS 16415	*Anchor devices: Recommendations for the use of anchor devices for use by several persons at the same time*
EN 50308/B-1	*Wind turbines - Work safety*

6. Overview of the system components

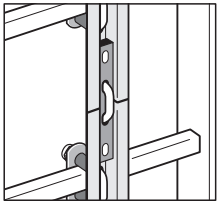
All illustrations are examples and may differ from the version shown, depending on the design.



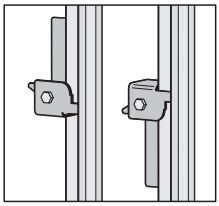
Vertical ladder
Mat.: Steel/stainless steel



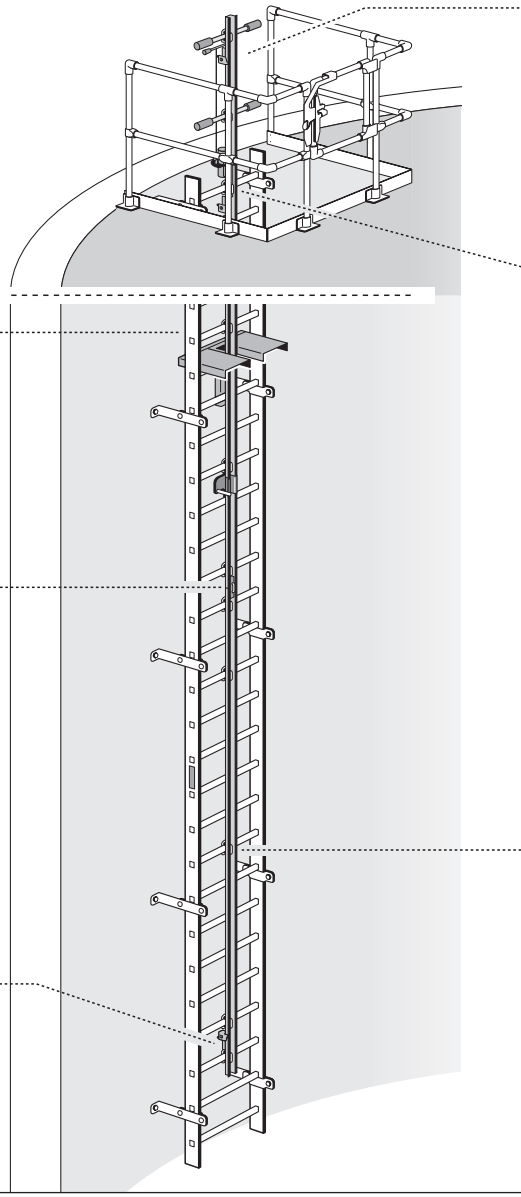
Vertical ladder
Mat.: Aluminium

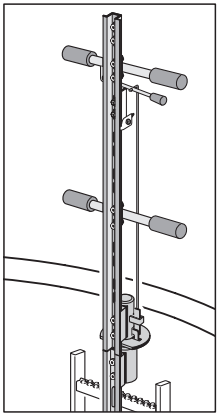


Rail connector

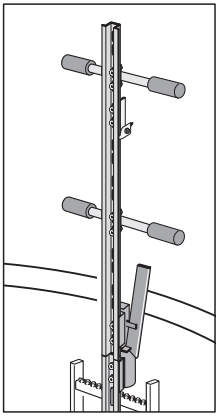


End stop
Top + Bottom

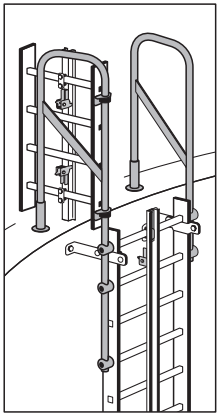




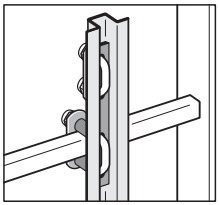
Detachable
climbing aid
H-50 Komfort



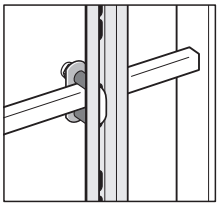
Detachable
climbing aid
H-50 Standard



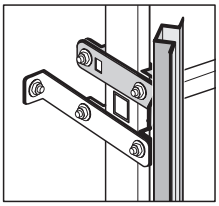
Pivoting
transfer device



Rail reinforcement



Assembly kit
(central rail mounting)



Assembly kit
(side rail mounting)

Please visit: www.hailo-professional.de for further information on the design and items numbers of the individual products

7. Installation instructions

Preliminary information

- It must be ensured that the requisite loads can be absorbed by the structure before starting the installation.
- If the relevant information (documents) is not available, a static expert opinion that takes the required load absorption into account is absolutely necessary and must also be verified.
- If the required confirmation (for safe force absorption on the on-site structure) is not provided, the manufacturer may be exempted from product liability in the event of damage. Liability is then transferred to the operator.
- Please observe the instructions for the installation of the fixed guide including the maximum installation angle of inclination of +20°/-3° to the vertical.
- Unless special control measures are taken, fall protection systems made of stainless steel should not be installed in a highly corrosive atmosphere due to the risk of invisible stress corrosion resulting in cracking.

Before installing the vertical ladder, make sure that the force transmission to the load-bearing structure is guaranteed with sufficient safety (consult the structural engineer)!

Comply with the installation instructions of the anchor manufacturer.

Installation personnel

- A minimum of two persons are required to install the fall protection system.
- The installation personnel must not be fixed to the system to be installed.
- An approved anchor point in accordance with EN 795 must be used on the building or other structure.

Information for installation on concrete structures:

- Only anchors approved by the building authorities may be used for concrete structures.
- For non-defined substrates, the fixing system must be designed in consultation with the structural engineer.
- Requirement on the concrete:
  A minimum concrete quality of C 30/37 is required.

Information for mounting on masonry:

- Only anchors approved by the building authorities may be used for masonry.
- For non-defined substrates, the fixing system must be designed in consultation with the structural engineer.
- It is also possible to anchor the system through the masonry using a counter plate. This should be discussed and verified with the structural engineer.

Screw tightening torques

- Joints using
  steel screws:

  max. tightening torque M_A (Nm) at a total coefficient of friction of $\mu = 0.08$
  ($\mu = 0.08$ corresponds to a galvanised dry surface free of oil)

Strength class 8.8:	Strength class 10.9:
M 8 = 17.9 Nm	M 8 = 26.2 Nm
M 10 = 36.0 Nm	M 10 = 53.0 Nm
M 12 = 61.0 Nm	M 12 = 90.0 Nm
M 16 = 147.0 Nm	M 16 = 216.0 Nm
M 20 = 297.0 Nm	M 20 = 423.0 Nm

- Joints using
  stainless steel screws A2 + A4:

  max. tightening torque M_A (Nm) at a total coefficient of friction of $\mu = 0.10$
  ($\mu = 0.10$ corresponds to a dry surface free of oil)

  Strength class 70:

  M 8 = 14.5 Nm
  M 10 = 30.0 Nm
  M 12 = 50.0 Nm
  M 16 = 121.0 Nm
  M 20 = 244.0 Nm

  Strength class 70 corresponds to a cold press fabrication up to nominal lengths of 8 x d and a yield strength utilisation of Rp 0.2 = 90%.

Execution of the installation work

- Only use absolutely clean and undamaged system components. Pay particular attention to ensure that the running surfaces of the rails are free of damage.
- Damaged parts must be replaced with new parts.
- An inspection plan and documentation for the H-50 fall protection system can be found on pages 32-35.
- An installation report for the fall protection system H-50 can be found on page 30/31.

Installation report

- The installation of the fall protection system H-50 must be completely documented in indelible and clear writing in the installation report by the installation supervisor of the installation company.

WARNING

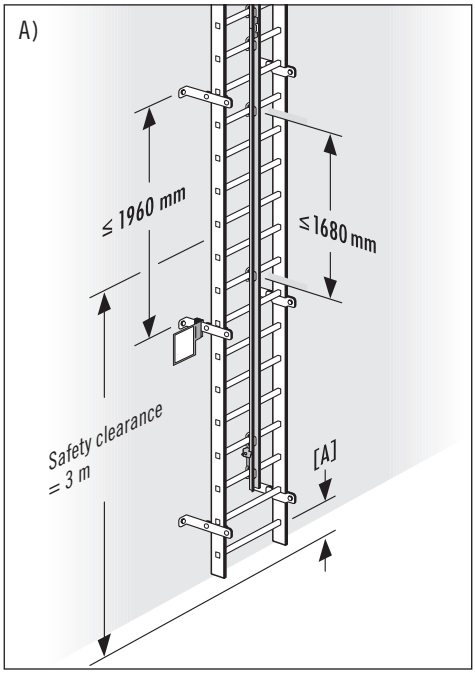
Falling hazard!

During assembly, use a fall arrest system complying with the specifications of DIN EN 363.

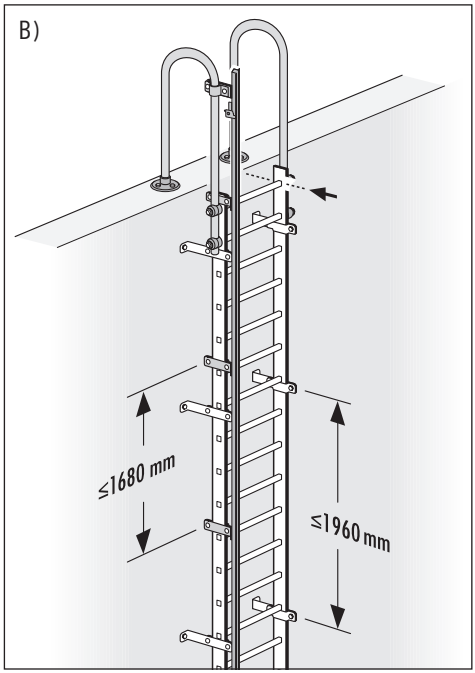
7. Installation instructions

Installation of the vertical ladder (dimensional specifications)

Example: Vertical ladder with centre-mounted fall protection rail



Example: Vertical ladder with side-mounted fall protection rail



The H-50 fall protection system is designed for installation on Hailo vertical ladders. However, it can also be mounted on other climbing equipment (equivalent ladders from other manufacturers, step irons) that comply with the respective standards and regulations.

When mounting H-50 fall protection rails on ladders of other manufacturers, it is essential to observe the information on the mounting distance (page 16).

Figure A) The following specifications apply to dimension [A]:

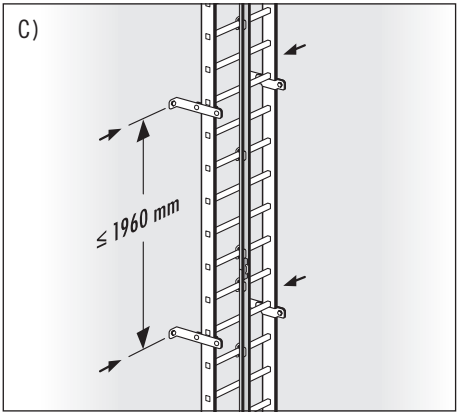
EN ISO 14122-4 and DIN 18799-1:	[A] = max. 300 mm, min. 225 mm
EN 14396:	[A] = max. 300 mm, min. 250 mm

Figure B) The top rung must be at the height of the exit point (EN ISO 14122-4, DIN 18799-1).

Information on attachment to the structure:

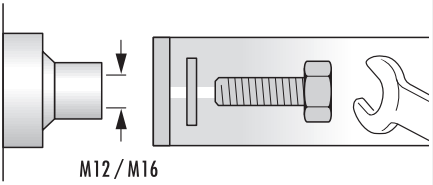
- The anchor points and their joints (brackets, fasteners) must be capable of bearing the loads.
- When dimensioning the ladder brackets and the anchorage points It must be ensured that a dynamic load of 6 kN and a static load of 15 kN can be absorbed by the entire system.
- The anchor points must not exceed a vertical spacing of max. 2000 mm.
  A meaningful spacing is = 1960 mm, with a rung spacing of 280 mm, (see figure C)
- The anchor points must always be arranged in pairs, each on the right and left of the ladder, in one plane.
- The substrate on the structure for the anchorage points must be sufficiently dimensioned and suitable for the aforementioned loads.
- Suitable substrates are:
  Steel structures with threaded bushes (min. M12) or through-bolted joints, anchor bolt fastening to concrete structures with a concrete quality of min. C 30/37, whereby only anchor bolts approved by the building authorities may be used (see Fig. D).
- Masonry is not suitable as a substrate for anchor bolt fastening. It is also possible to anchor the system through the masonry using a counter plate in these cases. However, this must be planned with a civil engineering office and verified accordingly.

C)

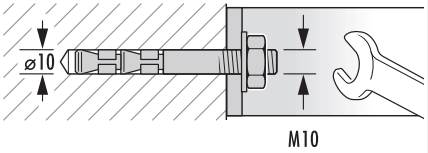


D)

Vertical ladder mounting on threaded bush M12/M16



Anchor bolt fastening in concrete (min. C 30/37)



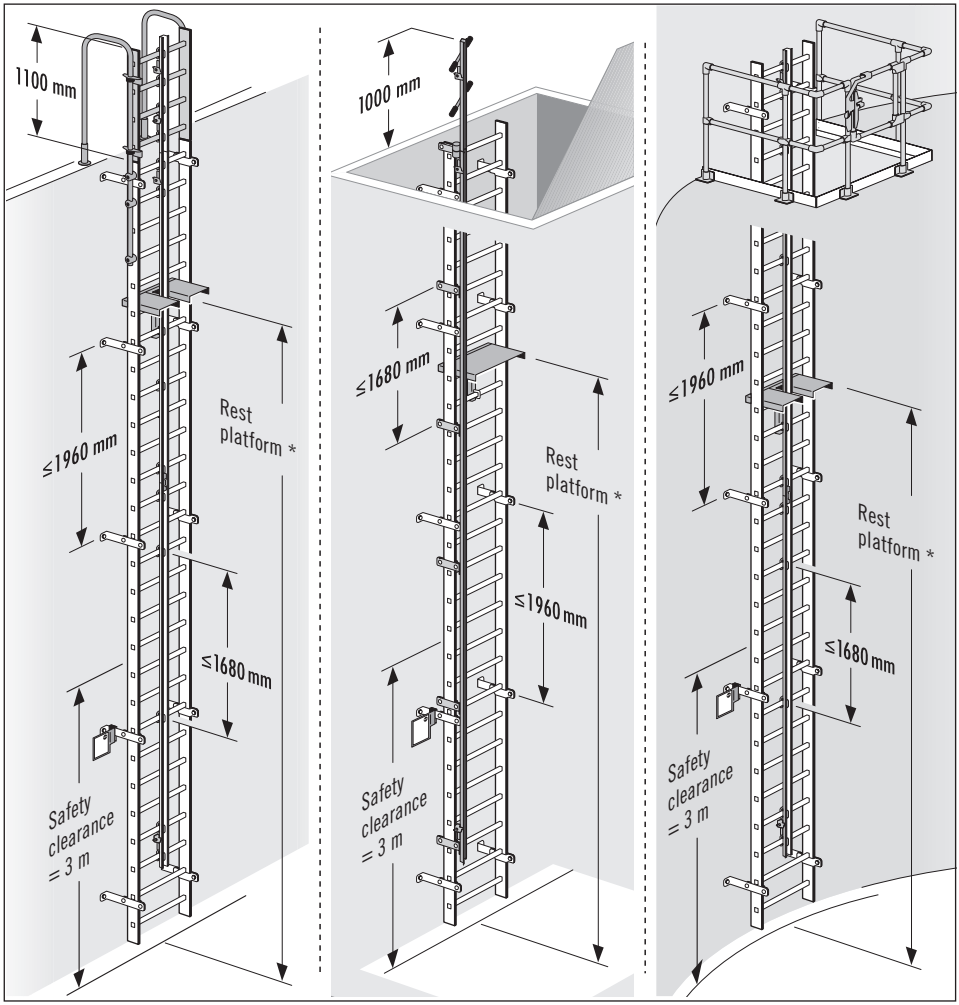
8. Installation of the fall protection rail

8.1 Installation on a vertical ladder (examples)

Installation on
ladder rung (central-mounting)
Example: Building structure

Installation on
ladder rail (side-mounting)
Example: Shaft

Installation on
ladder rung (central-mounting)
Example: Wind turbines

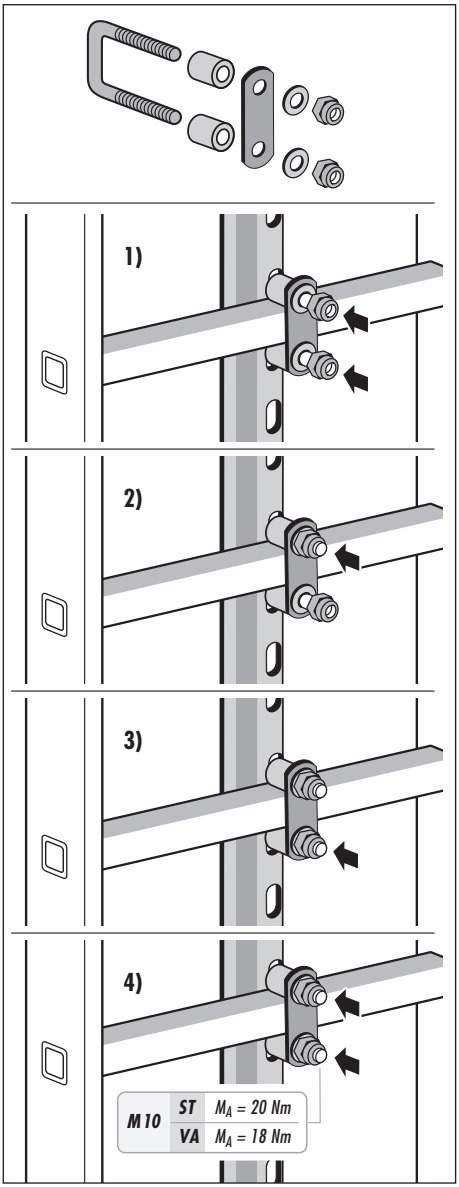


* Distance between rest platforms: EN ISO 14122-4 = 6 m
EN 14396 = 10 m
DIN 18799-1 = 10 m
EN 50308 = 9 m (wind turbines)

8.2 Installation instructions

Observe the following procedure when mounting the rail using the Hailo M10 U-bolt set:

1) Insert the Hailo M10 U-bolt set and first run **both** lock nuts up to the clamping zone.
2) Continue tightening the **first** lock nut until it rests against the lug (torque approx. 3-5 Nm).
3) Tighten the **second** lock nut against the lug (torque = 12 Nm).
4) Tighten both lock nuts. The lock nut tightening torque for initial assembly is as follows for ST screws = minimum 20 Nm, for VA screws = minimum 18 Nm.



Check the tightness of the screw during the annual inspection of the fall protection rail. This is ensured if the counter plate cannot be moved by hand.

If the counter plate can be moved by hand, the lock nuts must be retightened to a tightening torque of
at least 20 Nm for ST screws and
at least 18 Nm for VA screws.

The fall protection rail must be mounted with a tolerance to the vertical of max. -3° to +20°.

8. Installation of the fall protection rail

8.3 Fastening to ladder rail/rung (examples)

A mounting distance of ≤ 1680 mm is generally permissible for the installation of the fall protection rail on a Hailo vertical ladder (with a rung spacing of 280 mm = installation on every 6th rung).

A maximum fastening distance of 1120 mm is permitted for the installation of the fall protection rail on ladders of other manufacturers or on ladder systems or step irons in accordance with EN ISO 14122-4, DIN 18799-1, EN 14396, EN 13101, which are subsequently equipped with the fall protection system H-50, (with a rung spacing of 280 mm = mounting on every 4th rung).

All ladders must comply with the applicable standards and regulations (see page 7).
The permissible inside width of the ladder when mounted on the centre of the rung is min. 350 mm.

A) Mounting on a ladder rung
(aluminium vertical ladder)

Attachment of the fall protection rail with U-bolt kit (M10) to the centre of a ladder
(see installation instructions on page 15).

B) Mounting laterally on a ladder side
(aluminium vertical ladder)

Attachment of the fall protection rail on the ladder side rails with bracket and bar clamp.

C) Mounting on the ladder rung
(steel / stainless steel ladder)

Attachment of the fall protection rail with U-bolt kit (M10) to the centre of a ladder rung
(see installation instructions on page 15).

D) Mounting laterally on a ladder side
(steel / stainless steel ladder)

Attachment of the fall protection rail on the ladder side rails with bracket.

E) Mounting laterally on a ladder side
(plastic ladder)

Attachment of the fall protection rail on the ladder side rails with bracket.

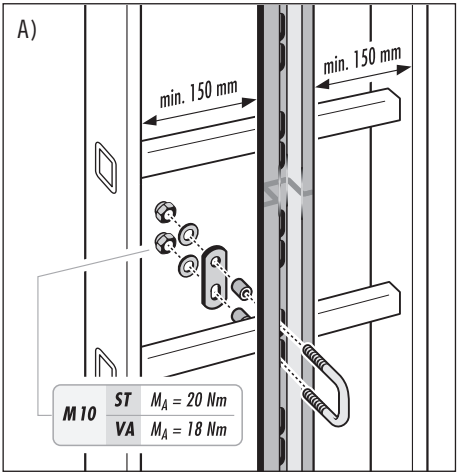
The fall protection rail must be attached to the ladder both at the top and bottom on the first rung after the top end and bottom end of the fall protection rail.

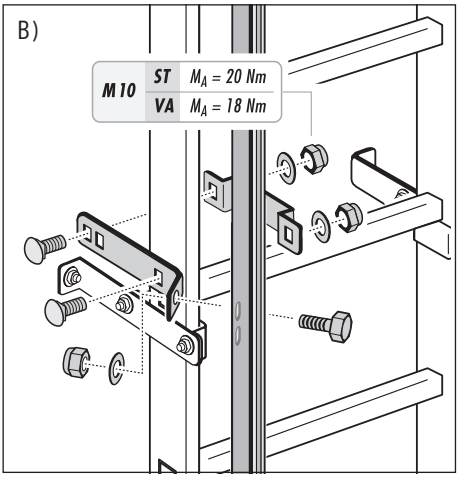
The intermediate fastening distances must be observed, even if they are smaller than the maximum permissible specifications (see above).

A changeable rail section that is part of an access route must be mounted on the ladder on at least two fastening points.

An access route must always have at least 5 attachment points. This must also be ensured if the access route consists of only one fall protection rail.

Properly installed fall protection rail sections can be regarded as a continuous fall protection rail.


A)
min. 150 mm
min. 150 mm
M 10
ST
VA
M_A = 20 Nm
M_A = 18 Nm


B)
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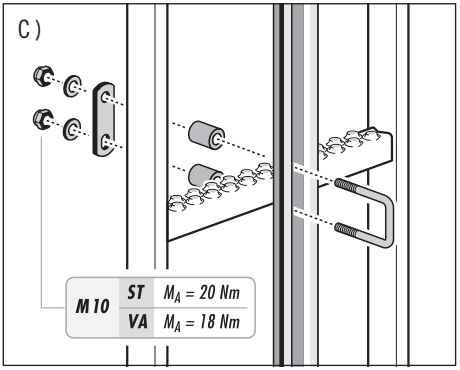
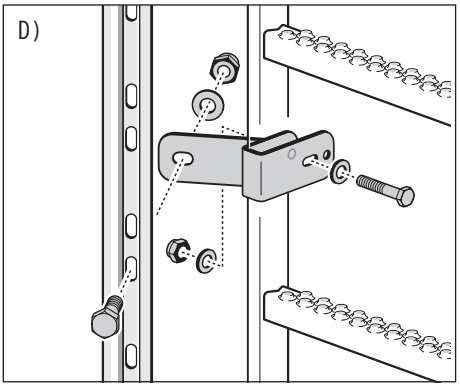
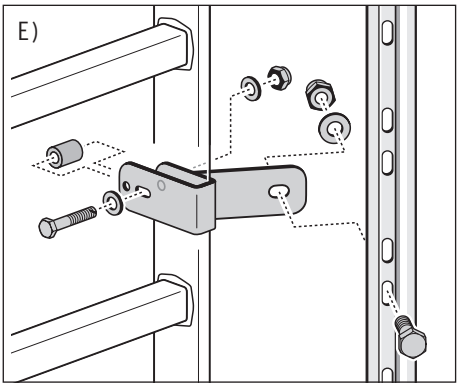

C)
M 10
ST
VA
M_A = 20 Nm
M_A = 18 Nm


D)


E)

8. Installation of the fall protection rail

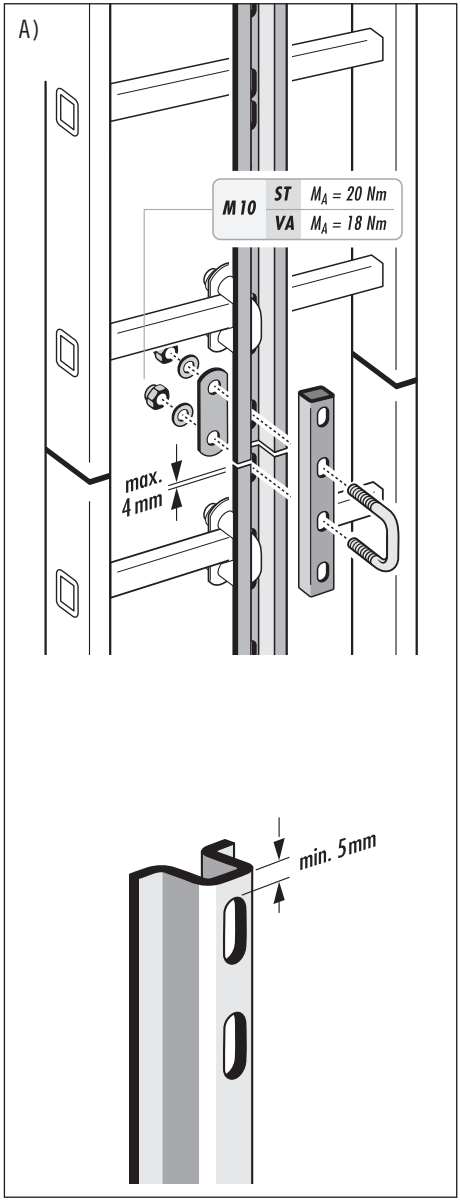
8.4 Assembly of the system components

A) Fitting the rail connector/ assembly at rail joint

Mounting two sections of fall protection rails using a rail connector.

Clearance between the fall protection rails (rail joint) = 0 mm to max. 4 mm.

The rail joint may have an air gap of max. 4 mm at to allow for changes in length due to temperature fluctuations.



Each joint in the fall protection rail must be linked with a rail connector.

If the ladder joint and the rail joint are at the same height, the fall protection rails must be fastened to the ladder rungs with a U-bolt set at the lower end of the upper fall protection rail and the upper end of the lower fall protection rail.

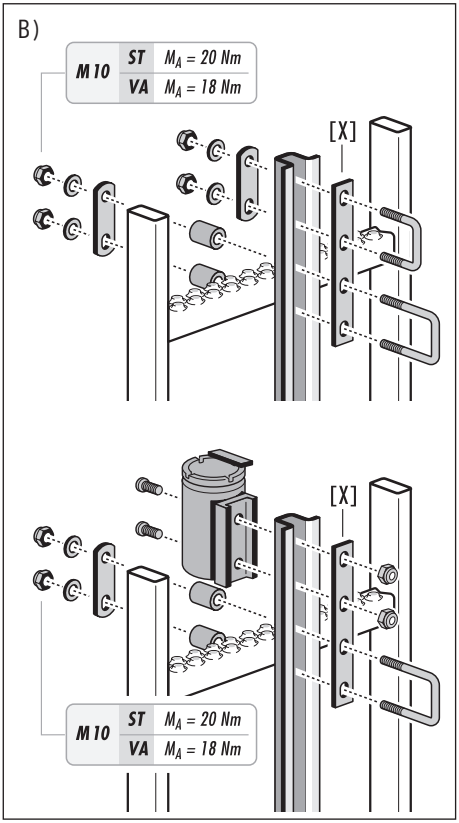
At a rail joint it is permitted to shorten the fall protection rail for alignment.
There must be a minimum distance of 5 mm between the slotted hole and the end of the rail.

B) Mounting the reinforcement rail

A reinforcement rail [X] must always be fitted at the top of an access route.

Installation position of the reinforcement rail:

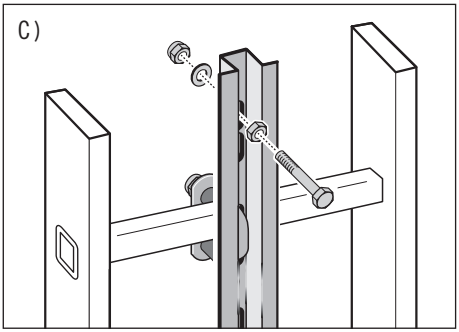
1. Positioning of the reinforcement rail on the fall protection rail AT THE TOP
2. Position of the reinforcement rail on the fall protection rail together with the climbing aid coupling.



C) Installing a safety stop

Information for the installation of an H-50 fall protection system in a wind turbine:

A safety stop to prevent the unintentional leaving of the fall protection system must be mounted at the top rail end of each rail section.
This safety stop is removed after completion of the installation work.

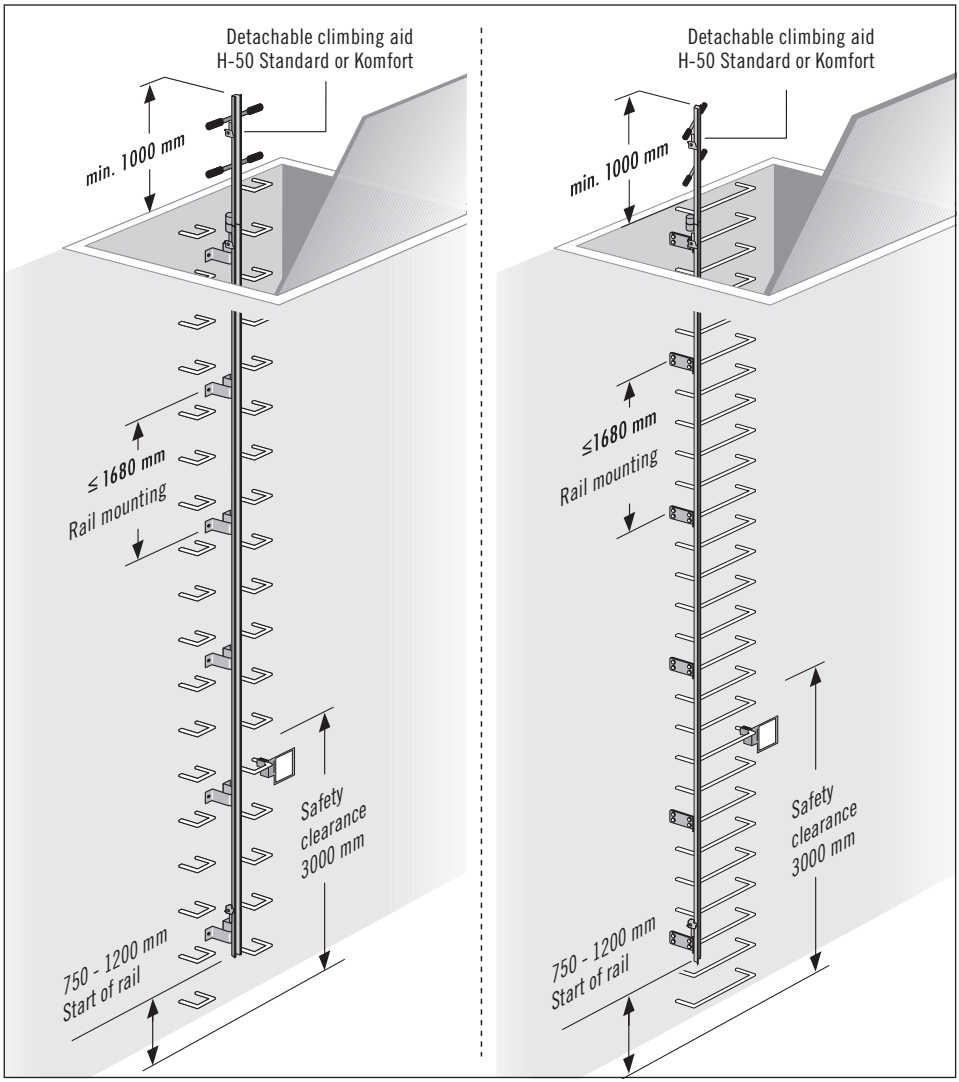


8. Installation of the fall protection rail

8.5 Installation on step irons (examples)

Installation centrally between double-flight step irons Example: Shaft

Installation on the side of single-flight step irons Example: Shaft



Information for assembling fall protection rail directly to concrete structures (min. category C30/37 concrete):

Only anchors approved by the building authorities may be used for concrete structures. For non-defined substrates, the fixing system must be designed in consultation with the structural engineer.

We recommend a fastening distance on the rail of 1400 mm, the maximum permitted distance is 1680 mm. See information for assembly on concrete structures (7. Installation instructions).

Before installing the fall protection rail, make sure that the force transmission to the load-bearing structure is guaranteed with sufficient safety.

A) Double-flight step irons

Rail mounting in the middle between a double-flight step irons directly on concrete structure.

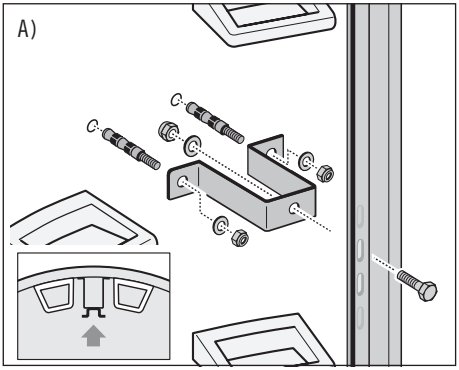
B) Single-flight step irons

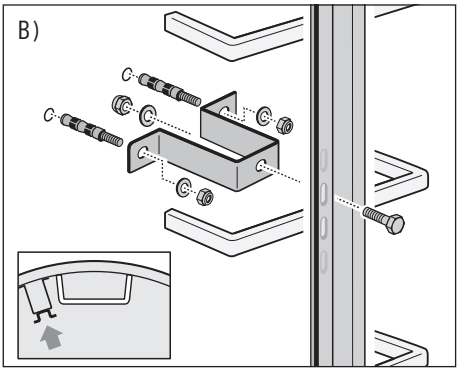
Rail mounting to the side adjacent to the hoop directly on the round concrete structure.

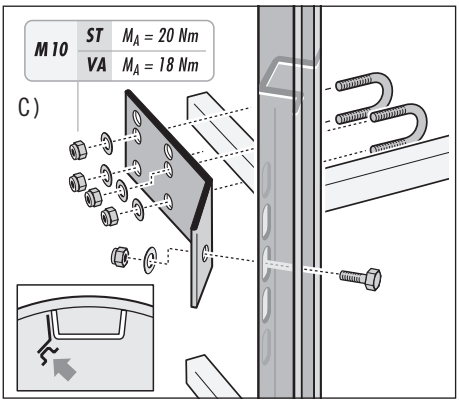
C) Single-flight step irons

Rail mounting to the side on the hoop of a single-flight step iron.

DGUV Information 201-014 must be observed when retrofitting fall protection equipment for step irons and step ladders on chimneys.







9. Assembly of the system components

9.1 End-stop

A) Assembly of the end-stop

An end-stop is always fitted at the start resp at the end of a fall protection rail. The end-stop is mounted directly on the fall protection rail at the top and bottom. It is attached at a distance of > 80 mm from the start of the rail.

The position for installation is as follows:

1. Positioning of the end-stop on the fall protection rail AT THE TOP
2. Positioning of the end-stop on the fall protection rail AT THE BOTTOM

The end-stop can only be brought into the continuous running position when it is installed in the correct position.

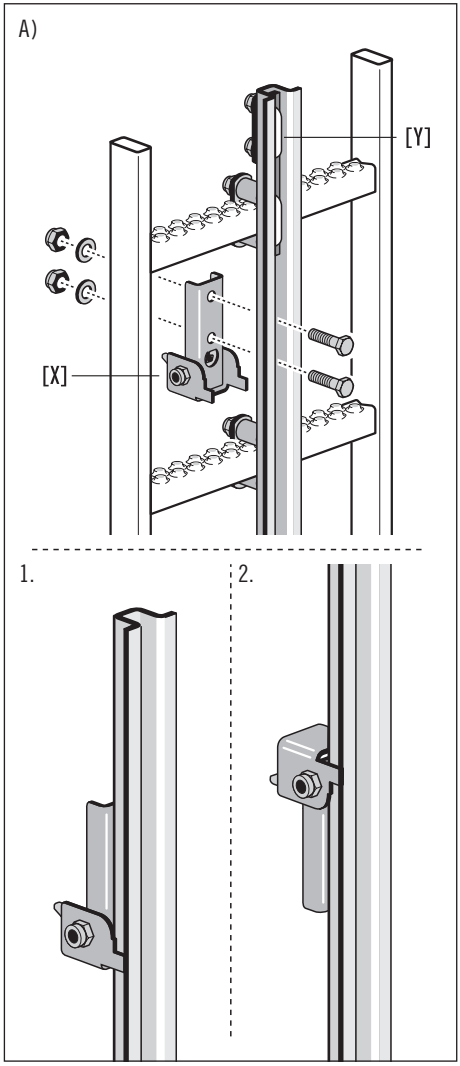
B) Positioning of the end-stop on a fall protection system with a vertical ladder:

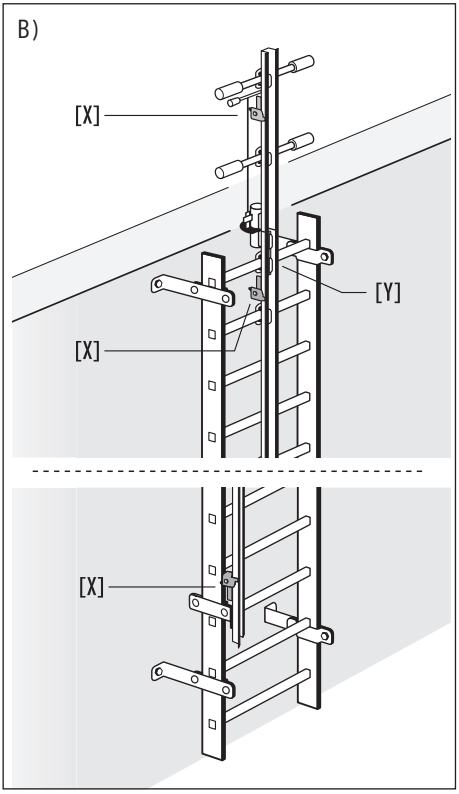
The end-stop [X] is positioned in such a way that it is located – both above and below - between the first two rungs of the vertical ladder after the start of the rail.

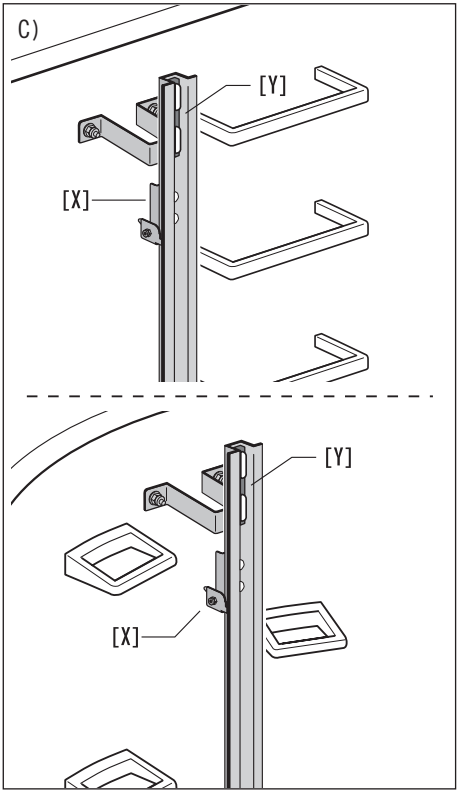
C) Positioning of the end-stop on a fall protection system with step irons:

The end-stop [X] is positioned in such a way that it is located – both above and below - between the first two step irons after the start of the rail.

The reinforcement rail [Y] must always be fitted at the top of fall protection rail.







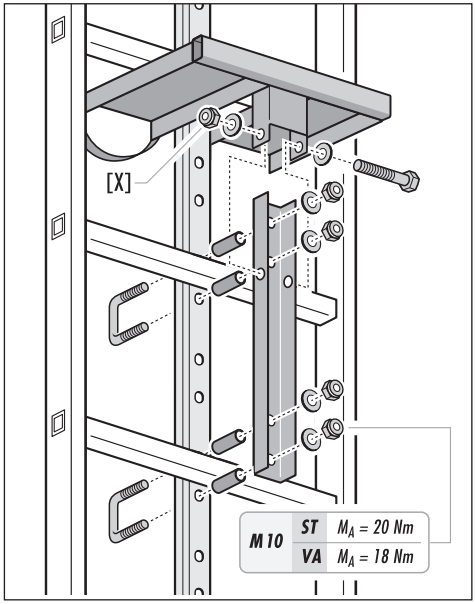
At the start and at the end of an access route as well as at each withdrawal point or break in the fall protection rail, an end stop must be fitted to stop the fall arrester from accidentally slipping out.

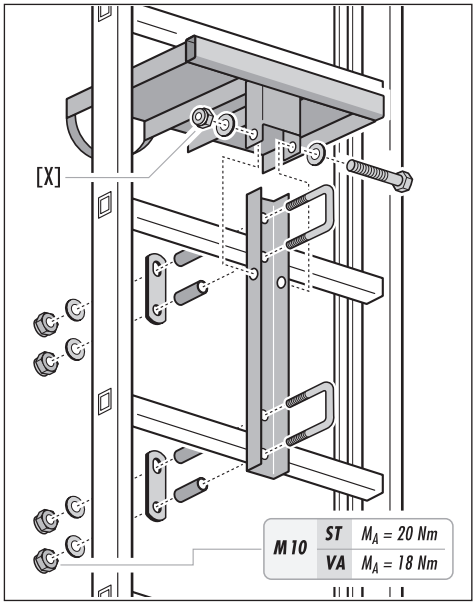
9. Assembly of the system components

9.2 Folding rest platform (examples of installation)

- According to DIN 18799-1, a folding rest platform is to be installed at a height of max. 10 m above the access level when the height of a system is ≥ 10 m. A folding rest platform must then be installed on the vertical ladder every 10 m thereafter.
- In wind turbines, a maximum distance of ≤ 9 m is permitted between 2 folding rest platforms in accordance with DIN 50308.
- According to EN 14122-4, a maximum distance of ≤ 12 m is permitted between 2 folding rest platforms.

Note: Ensure that the folding rest platform still easily pivots after the hexagon nut [X] is tightened.





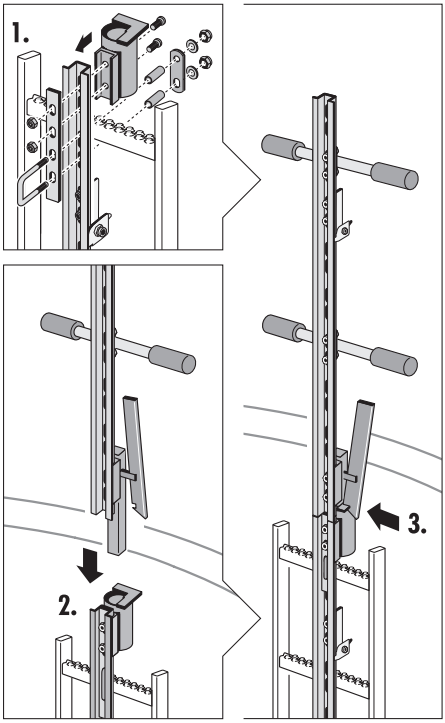
9.3 Climbing aid

Information on the detachable climbing aid:

- Where a fall protection rail is fitted according to DIN 18799/1 and EN 14396, the system must be entered from a safe standing position. Hailo supplies a detachable climbing aid for this purpose.
- Coupling as adapter (1x per shaft required)
- Detachable climbing aid (only 1x required)
- According to EN 14396, the fall protection rail must project at least 1000 mm above the entrance/exit level of the shaft.

1. Mount the coupling together with the reinforcement on the fall protection rail.
2. Insert the climbing aid.
3. Lock the climbing aid in place.

Detachable climbing aid H-50 Standard



It is not permitted to install a climbing entrance aid which complies with DIN 19572 as a substitute.

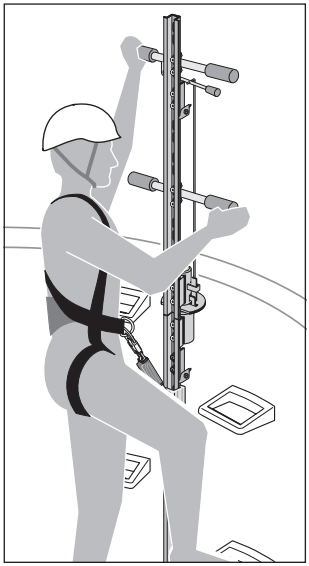
Note regarding the installation of a climbing aid with an existing aluminium fall protection rail:

The end piece of the fall protection rail, on which the coupling of the climbing aid is also mounted, must be equipped with a fall protection rail made of stainless steel over a length of approx. 1.40 m.

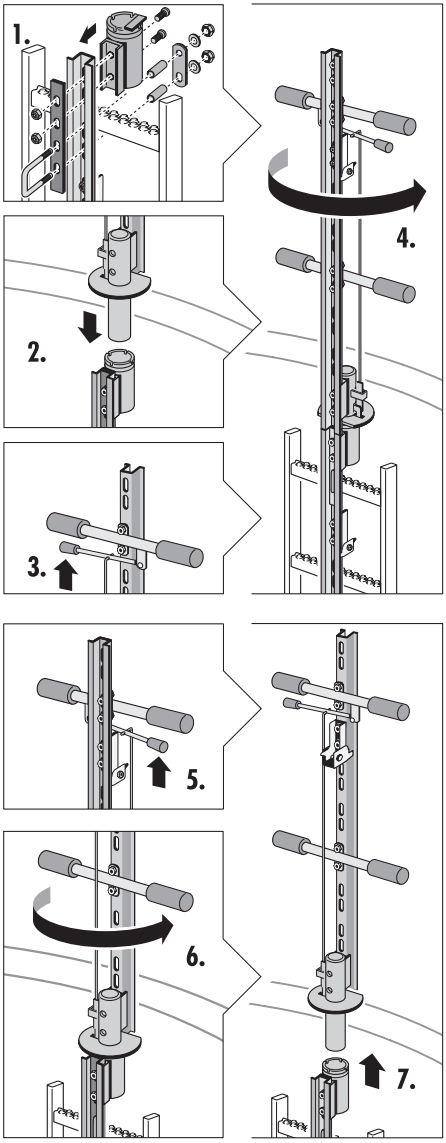
9. Assembly of the system components

9.3 Climbing aid

Detachable climbing aid H-50 Komfort



Climbing aid in position for use.



Assembly and handling of the detachable climbing aid H-50 Komfort:

1. Mount the coupling together with the reinforcement on the fall protection rail.
2. Insert the climbing aid.
3. Lift up the lever to release the lock.
4. Rotate the climbing aid into the position for use.

Removing the detachable climbing aid H-50 Komfort:

5. Lift up the lever to release the lock.
6. Rotate the climbing aid for removal.
7. Remove the climbing aid.

9.4 Transfer device (example of installation)

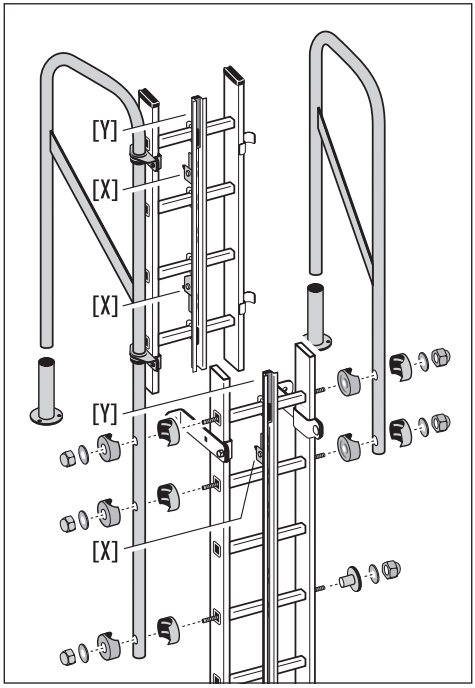
Generally, the H-50 transfer device allows users to step safely onto buildings at the top end/at the start of the ladder.

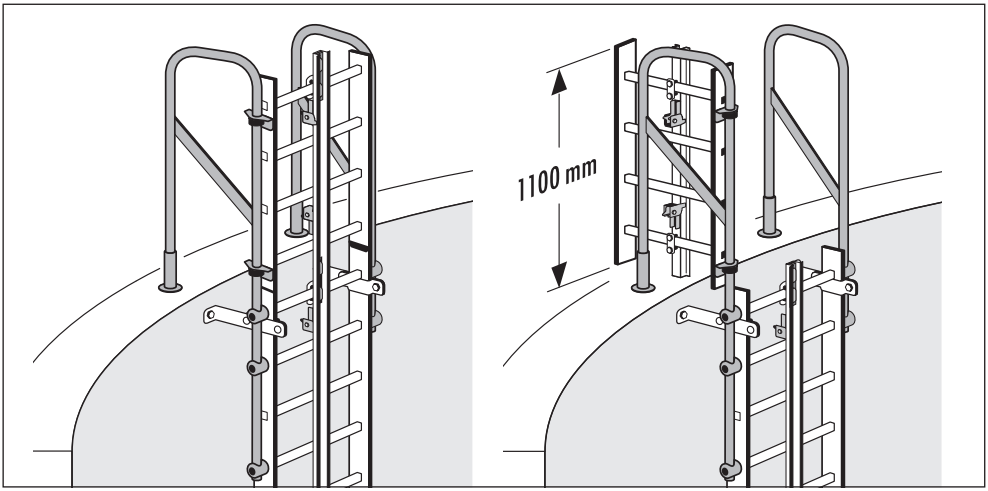
According to DIN 18799-1 and EN ISO 14122-4, the fall protection rail must project at least 1100 mm above the top edge of the building.

The H-50 transfer device swings back.
When the transfer device is closed, the door must lock into its end position.

Assembly of the end-stops:
One end-stop [X] is fitted at both the start and end of the fall protection rail on the section that swings back. The end-stop is fitted between the two upper resp. lower rungs of the vertical ladder.

Observe the positioning of the reinforcement rail [Y].





10. Markings and instructions

A) Type plate for the H-50 fall protection system

Safety instructions when using the fall arrester and the fall protection system.

B) Type plate for the vertical ladder

Information regarding the vertical ladder.

C) Ladder identification plate

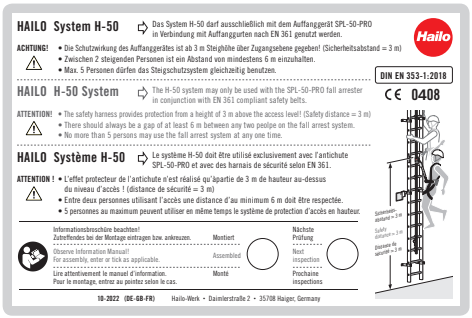
Use instructions (inspection of the H-50 vertical ladder at least once a year by a qualified person, documented by an inspection label).

D) Type plate for the fall protection rail

E) Batch number of the fall protection rail

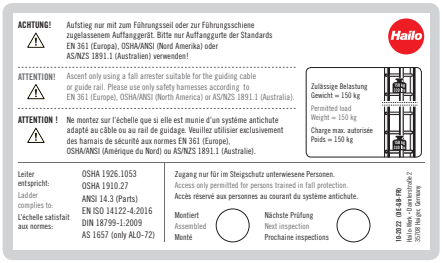
F) Information regarding the H-50 fall protection system

Safety clearance



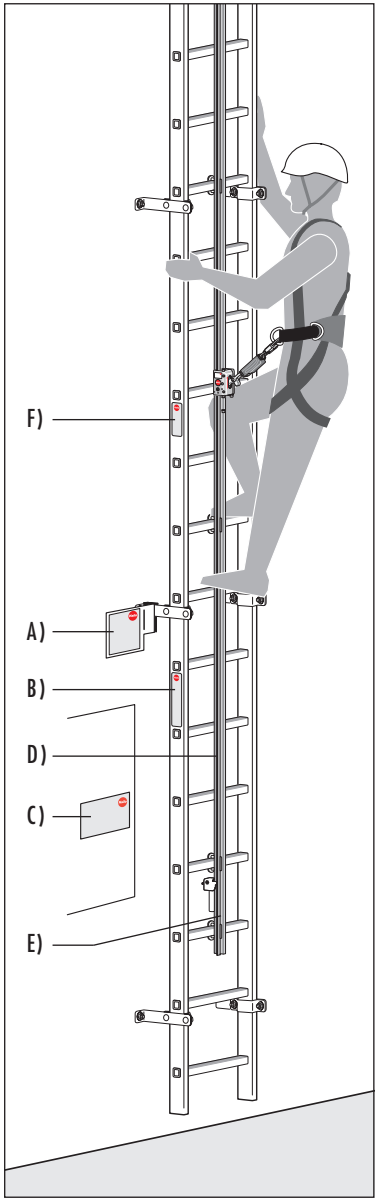
A)

D)



C)

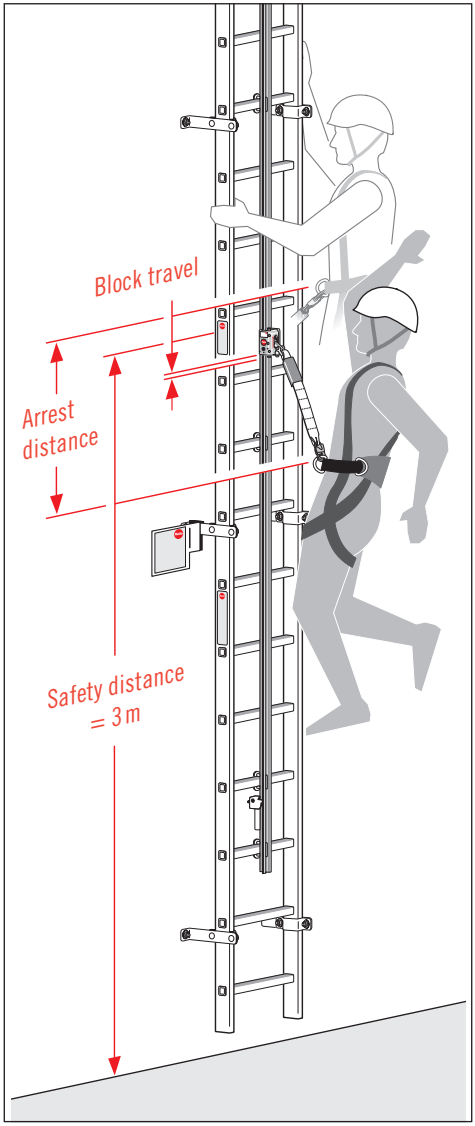
F)



The H-50 fall arrest system must be identified with a type plate at the point of access which indicates the type of fall arrester to be used with the H-50 fall arrest system.

When new types of fall arrester are used, the operator must ensure that this information is clearly visible to the user.

- The SPL-50-PRO fall arrester on the H-50 fall arrest system does not provide protection when the user is on the lower section of the climbing unit (i.e. < 3 m from the top edge – access level).
- The plant operator must install an appropriate warning notice on the building to inform the user beyond all doubt of the safe distance.



Cleaning instructions:

When the components of the fall protection system - in particular the fall protection rail - are dirty, they must only be cleaned with water and an acid-free detergent.

11. Installation report

Assembly company (address):

. . . . . .

. . . . . .

. . . . . .

Installation supervisor:

. . . . . .

Points for inspection after the assembly Fall protection equipment:	*Results:* ✗	*Yes*	*No*
1. Insertion position for the SPL-50-PRO fall arrester: 750 mm - 1200 mm from access level		☐	☐
2. Distance where Hailo H-50 fall protection rail is fastened to a Hailo vertical ladder: ≤ 1680 mm (= distance of 6 rungs)		☐	☐
3. Distance where Hailo fall protection rail is fixed to an existing vertical ladder or step irons (not a Hailo vertical ladder): ≤ 1120 mm (= distance of 4 rungs)		☐	☐
4. Assembly of rail connector according to guidelines		☐	☐
5. Assembly of end-stop at each entry and exit point according to guidelines		☐	☐
6. Assembly of the rail reinforcement at the top end of the fall protection rail according to guidelines		☐	☐
7. Assembly of transfer device according to guidelines		☐	☐
8. Rail mounting point at the start and end of a ladder section		☐	☐
9. Test run with SPL-50-PRO fall arrester carried out without problems		☐	☐
Markings: (see chapter 10. Markings and instructions)			
10. Ladder identification plate		☐	☐
11. Description of the fall protection rail H-50		☐	☐
12. Information plate: “Safe distance 3 m”		☐	☐
13. Inspection label attached		☐	☐

12. Inspection instruction

- The installation supervisor is responsible for ensuring that the ladder system and H-50 fall protection system are properly assembled.
- The following checklist is to be completed by the installation supervisor in detail and in full, permanently and legibly.
- This inspection checklist is an integral part of the installation process and is to be made accessible to the manufacturer or an inspection body on request.

Comments:

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Location, date *Installation supervisor's signature*

Testing must adhere to the respective national operating and testing regulations.

- Fall arrest systems must be inspected for good working order and functionality at least once a year by trained/authorised personnel.
- The testing of all components, each individual subsystem and system must be documented.
- In addition, regular checks must be made depending on the respectively applicable environmental conditions.
  This can mean that the intervals between testing are correspondingly shortened.
- In the event of a fall, then the fall arrest system must be checked without delay by an expert/an authorised person.
- The plant operator is responsible for ensuring that testing and maintenance intervals are observed.

Regular checks of the equipment are a mandatory requirement.
The safety of the user is dependent on the effectiveness and the durability of the equipment.

13. Inspection plan

Inspection plan for recurring inspections of the H-50 fall protection system.

The annual recurring inspections are to be documented by the qualified person in the following tables.

Results: ✗

In the event of a claim, this documentation must be submitted in full.
The manufacturer must be granted access at any time.

1. Ladder system: *	
1.1 Vertical ladder	*Technical condition (wear and corrosion), dents, kinks, cracks and fractures*
1.2 Ladder connector	*Technical condition*
1.3 Ladder bracket	*Technical condition*
1.4 Suspension supports (if present)	*Technical condition*
1.5 Folding rest platform (No. ___ pcs.)	*Function*
1.6 Screw connections	*Technical condition, preload force, tightening torque*
1.7 Transfer device (if present)	*Technical condition*
2. Anchorage of the ladder system:	
2.1 On steel threaded bushes	*Technical condition, preload force, tightening torque*
2.2 On concrete substrate	*Condition of the concrete substrate*
2.3 On other materials	*Structural condition*
3. Fall protection equipment:	
3.1 Rail fastenings	*Technical condition, preload force, tightening torque*
3.2 Surface of the rails	*Technical condition*
3.3 Rail joint connectors	*Technical condition, preload force, tightening torque*
3.4 Rail joint (transitions)	*Rail distance: max. 4 mm*
3.5 End-stop	*Fastening and safe function*
3.6 Reinforcement rail	*Technical condition*
4. Label:	
4.1 Original labels	*All labels present and easily legible?*
4.2 Function test	*Used with fall arrester*
4.3 Documentation	*Inspection correctly and fully documented?*

** = If there is no fixed ladder, only check inspection points 3. and 4.*

Inspection 1		Inspection 2		Inspection 3		Inspection 4		Inspection 5		Inspection 6		Inspection7	
/ Date (Month / Year)		/ Date (Month / Year)		/ Date (Month / Year)		/ Date (Month / Year)		/ Date (Month / Year)		/ Date (Month / Year)		/ Date (Month / Year)	
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YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO

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14. Inspection documentation

Documentation on the sequence of periodic inspections and/or repairs.

Product description / model / trade name

Identification mark

Chargennummer / Seriennummer

Manufacter / Supplier

Hailo-Werk
Daimlerstraße 2, 35708 Haiger, Germany
☎ +49 (0) 2773 82-0
Fax +49 (0) 2773 82-1561
info@hailo-professional.de
www.hailo-professional.de

Date	*Reason of work: a) Regular check, b) Repair* ***Test outcome of the periodic inspection***	

Year of manufacture / expiry date	*Commissioning date / date of first use*
Date of purchase	*Additional information*

	Repairs carried out	*Name and signature of expert*	*Date of next regular check*

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