

Designed for
extreme heights
and depths.





06 Vertical ladders, shaft ladders

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Vertical ladders

Safe and permanent access, even at great heights

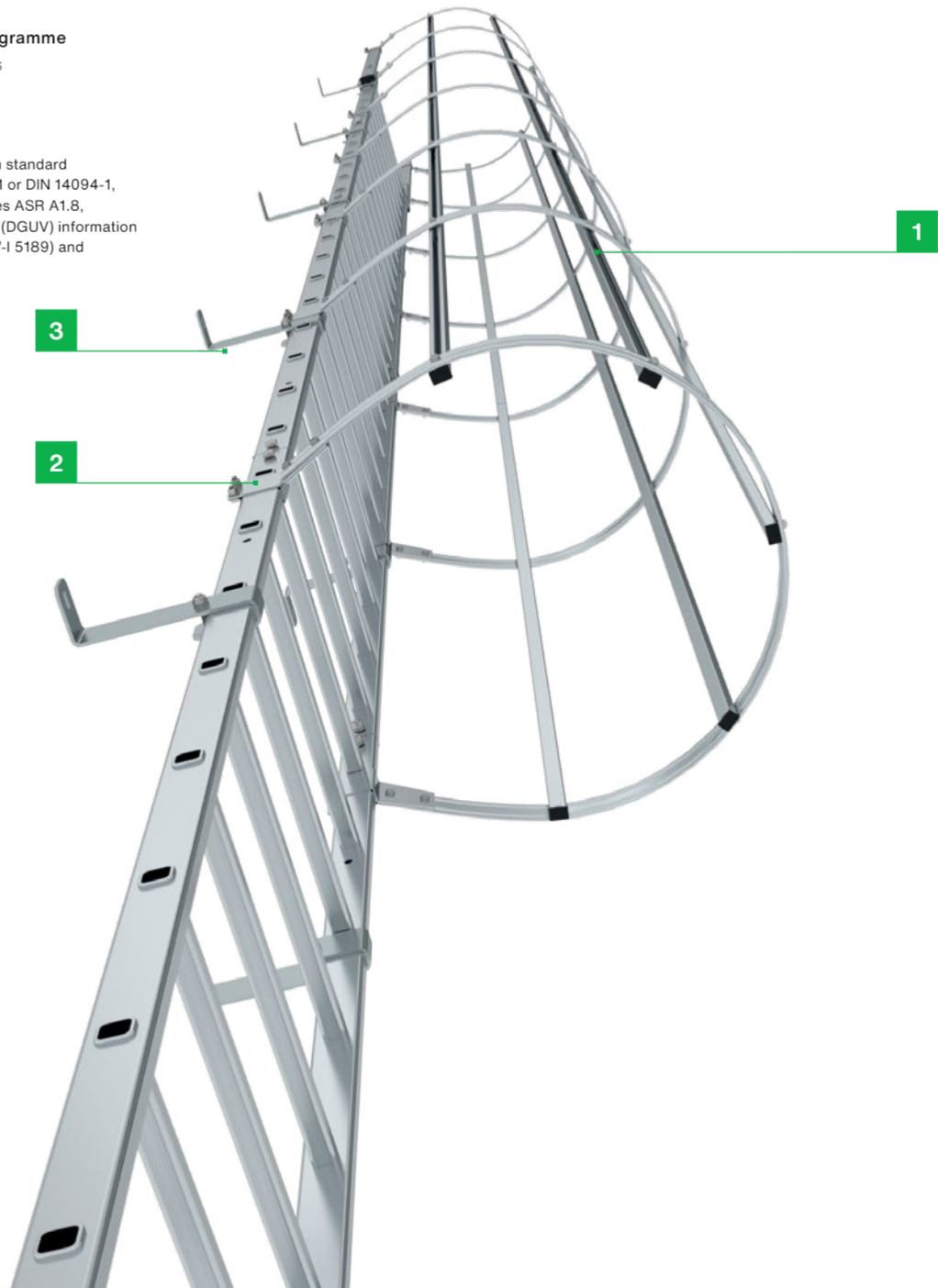


Fast delivery programme

1-3 working days

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Type-tested according to European standard DIN EN ISO 14122-4 or DIN 18799-1 or DIN 14094-1, Technical Regulation for Workplaces ASR A1.8, German Social Accident Insurance (DGUV) information sheet 208- 032 (formerly BGI/GUV-I 5189) and applicable DGUV regulations.



Safety. Made in Germany.

Designed and manufactured in Germany, you can feel our exacting standards in every detail of our products. For maximum safety. Day after day.

Find out more on page 8



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1. Rational modular principle

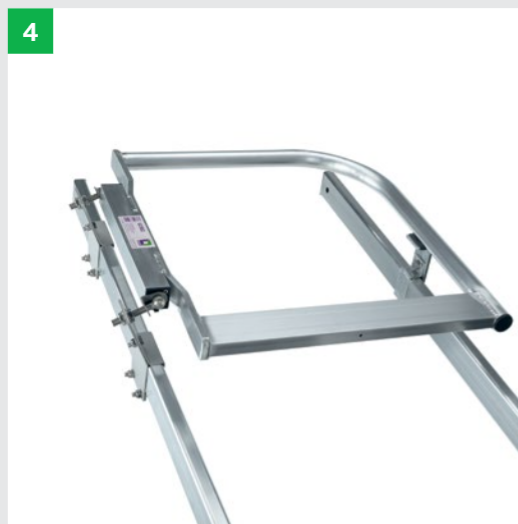
Whether prefabricated or freely combined: every component guarantees the highest quality and efficiency

2. Fixed connection

Ultra-stable rung-to-side-rail connection and corrosion-resistant fixtures



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3. Well thought-out assembly system

Optimised kits for fast and straightforward assembly

4. Safely to your destination

Platforms, exits and access ladders for safe ascent and descent



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5. Optimum protection

End and safety doors for the most diverse circumstances

Depending on condition and purpose, different standards are applicable for the construction of vertical ladders. MUNK Günzburger Steigtechnik vertical ladders meet these standards:

DIN 18799-1/-3: Stationary vertical ladders on buildings

Range of application: On buildings for maintenance and cleaning work. There are specific regulations on chimneys, please send us your enquiry.

DIN 14094-1: Emergency ladder systems

Range of application: Emergency ladder systems allow persons to rescue themselves, but also allow other persons to be rescued (e.g. by the fire service).

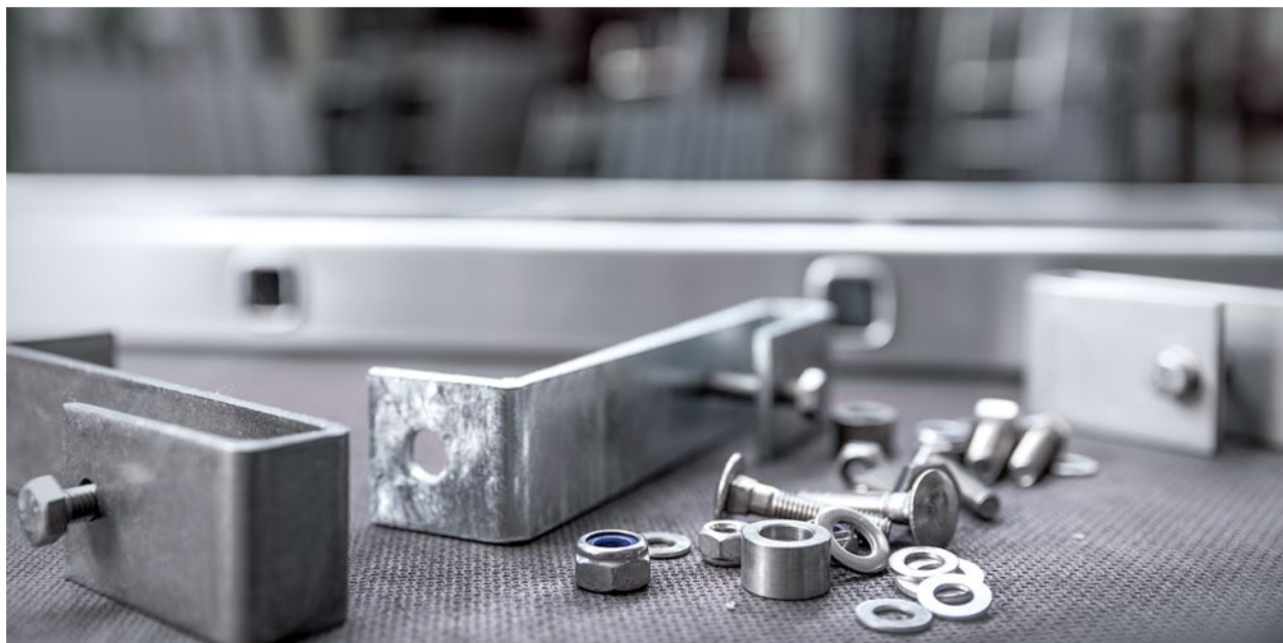
DIN EN ISO 14122-4: Stationary vertical ladders on machinery

Range of application: As access to stationary and mobile machines and mechanical plants. These can also be parts of a building with the main function to provide access to the machine.

We supply vertical ladders in various materials to suit the intended use:

Material	Rungs	Ladder width	Depth of side-rails	Features	Range of application
Colourless anodised aluminium	30 x 30 mm grooved	520 mm	60 mm	Robust and high-quality in appearance	Architecture and for all demanding applications
Bright aluminium	30 x 30 mm grooved	520 mm	60 mm	Cost-effective, lightweight, universal	Indoors and outdoors
Galvanised steel	30 mm perforated rungs	520 mm	60 mm	Very robust and resilient	Industrial and building installations indoors and outdoors
Stainless steel	30 mm perforated rungs	520 mm	60 mm	Durable with long service life	Hygienic, chemical, food industry area; industry and architecture

Vertical ladders modular kit system



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Mounting and fastening

- The mounting sets for fixing the assembled vertical ladder modules are included in the scope of delivery
- The standard scope of delivery includes rigid wall anchors with a wall clearance of 200 mm
- As an option, we also offer adjustable wall anchors instead of standard wall anchors for complex façades (from page 307)
- Dowels and screws for attachment to the wall are not included in the delivery. Please contact reputable wall plug suppliers for more information
- The ground must have sufficient load-bearing capacity. Proof of this as well as proper installation must be provided individually for each construction project. An expert for stability has to check and accept this under his/her own responsibility.
- Comprehensive installation instructions are included and are available at www.steigtechnik.de

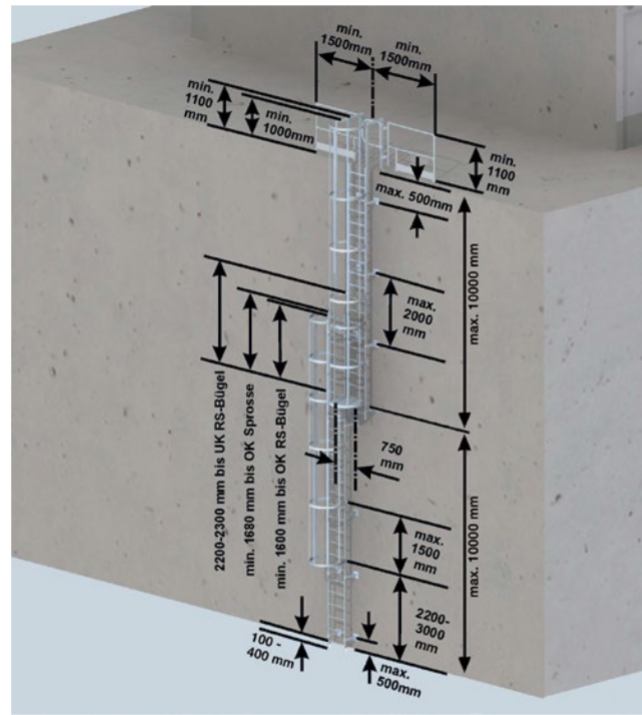
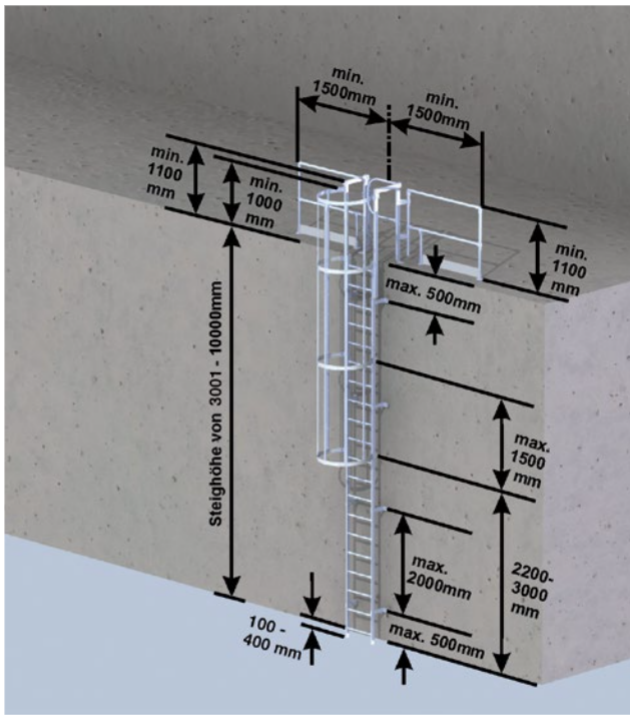


Figure according to the current editions of the DIN 18799-1 and DIN 18799-3 standards

Range of application

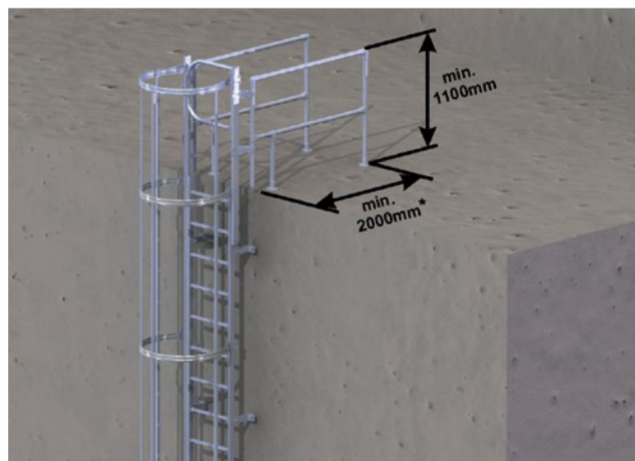
On buildings for maintenance and cleaning work. There are specific regulations governing attachment to and back protection on chimneys – please send us your enquiry.

Irrespective of the climbing height:

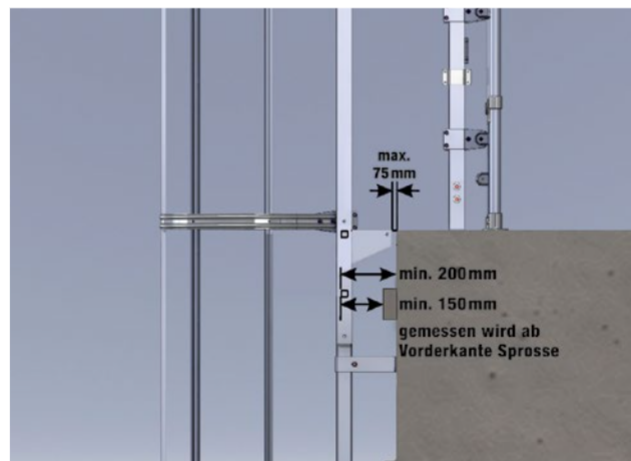
- Either back protection or fall protection can be used as a safety railing (combination not permitted as the rescue of persons is hindered by the back protection)
- The need for an occupational medical examination for suitability for working at height (e.g. G 41) depends on the risk assessment (e.g. total height of ascent, type of safety railing) of the respective vertical ladder systems
- Proof of the load-bearing capacity of the underlying surface must be provided for each construction project by a responsible stability expert
- Barrier (safety door) is always required
- The vertical overlap of successive ladder sections must be at least 1,680 mm
- At unsecured exit levels, railings attached to both sides of the vertical ladder or led into the exit level are required
- Gap at exit step must not be larger than 75 mm
- Step-on dimension: Distance from entry level to the first rung 100–400 mm
- When exiting forwards, the uppermost rung must be at the height of the exit side-rail
- In the case of vertical ladders with fall protection, there must be at least 800 x 800 mm space available in front of the ladder when climbing through the open space; these dimensions should also be observed for new installations in the existing system
- The clearances between the vertical ladder system and the railing must not exceed 180 mm
- The connection to the fall protection must be established and detached from a secured standing position
- A secured standing position is, for example, a platform with railing and secured access
- For safe gripping of the side-rails, the clearance to adjacent parts around the side-rails must be at least 75 mm (except for components forming part of the vertical ladder system)

DIN 18799-1/-3: Stationary vertical ladders on buildings

Single and multiple-flight vertical ladders with back protection



* Distance to roof edge



06

Single-flight vertical ladder with back protection (up to maximum ascent height 10.0 m)

Additional components, such as exit steps, railing and safety doors, may be required depending on the exit situation on site. These components are not included as a complete kit and need to be ordered separately.

Head up to (m)	Ladder length (m) incl. exit side-rail	Anodised aluminium order no.	Plain aluminium order no.	Galvanised steel order no.	Stainless steel order no.	Ladder section 1.96 m	Ladder section 2.80 m	Ladder section 3.64 m	Exit side-rail	Wall anchor, rigid, spacing to wall 200 mm	Ø 700 mm back protection retainer	Back protection strut 3,000 mm	Vertical ladder connector
4.76	5.96	500100	510100	520100	530100	1	1	-	2	6	3	5	2
5.60	6.80	500105	510105	520105	530105	-	2	-	2	8	4	7	2
6.44	7.64	500110	510110	520110	530110	-	1	1	2	8	5	10	2
7.28	8.48	500115	510115	520115	530115	-	-	2	2	10	5	10	2
8.40	9.60	500120	510120	520120	530120	-	3	-	2	10	6	12	4
9.52	10.72	500125	510125	520125	530125	2	2	-	2	12	7	15	6



Multi-flight vertical ladders on request or online at www.steigtechnik.de

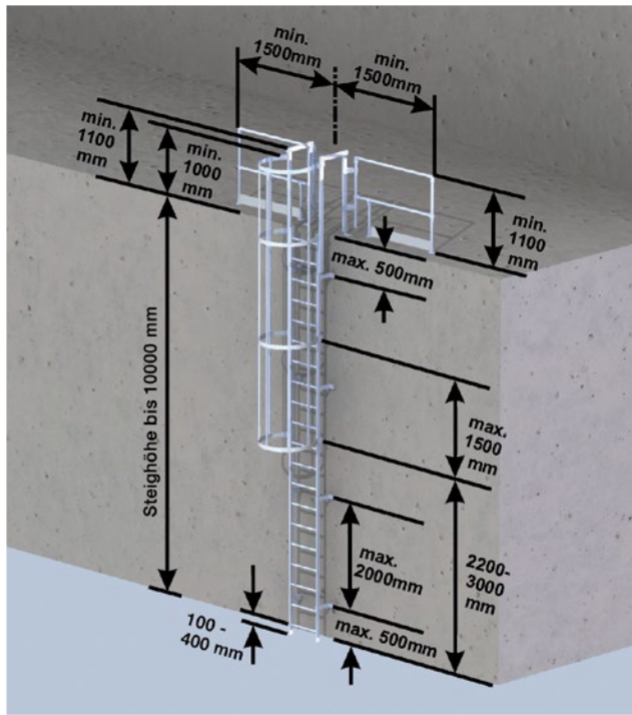
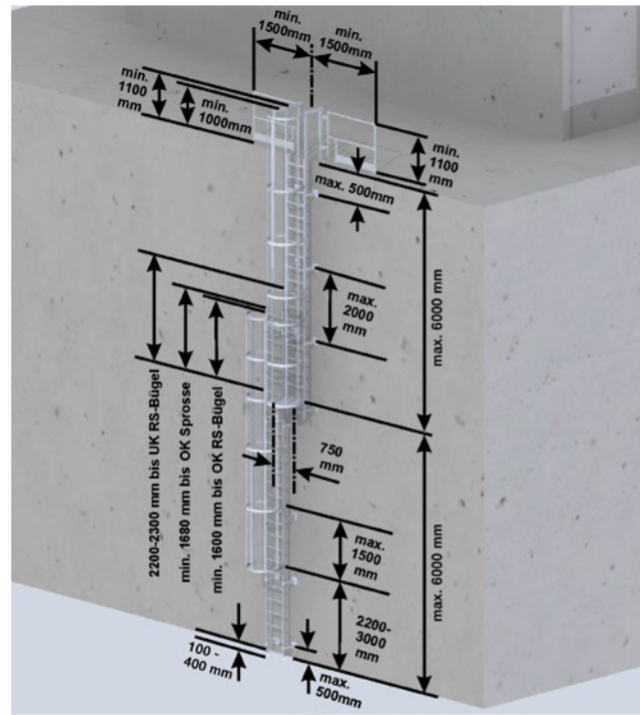


Figure according to DIN 14094-1:2017



Range of application

Emergency ladder systems are building structures that, in the event of danger, allow capable persons to rescue themselves or allow other persons to be rescued

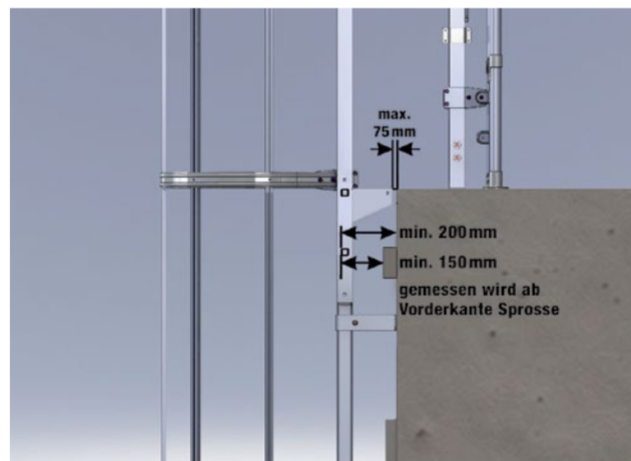
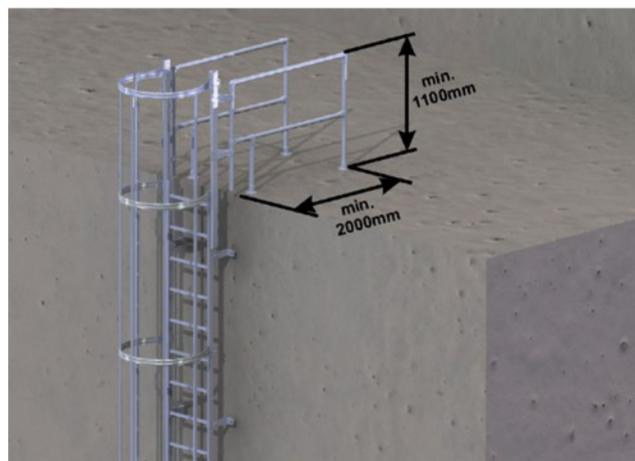
Irrespective of the climbing height:

- Safety railing is not permitted as fall protection
- When planning emergency ladder systems, in particular the access protection, the competent fire control authority has to be involved
- Proof of the load-bearing capacity of the underlying surface must be provided for each construction project by a responsible stability expert
- At unsecured exit points, railings attached to both sides of the vertical ladder or led into the exit level are required
- Gap at exit step must not be larger than 75 mm
- In case of potential drop heights of more than 1.0 m, holding devices have to be fitted on exits, entries and bridges
- For lateral bridging steps, the ladder sections must run at a higher level
- Step-on dimension: Distance between entry level and first rung: 100–400 mm; uppermost rung flush with the entry level
- The clearances between the vertical ladder system and the railing must not exceed 120 mm
- Release mechanism emergency descent ladder via foot control lever or safety barrier

- A vertically movable ladder section is only permitted with the lowest section of ladder. This extendible ladder section must automatically drop into place before it is stood on. In the lowered state, the rungs of the extended ladder section and the lowest ladder section must be at the same height
- Access platforms must cover the entire access opening (e.g. window width) as access options on emergency ladder systems
- The vertical overlap of successive ladder sections must be at least 1,680 mm
- Climb-through openings inside balconies as well as access openings in balcony walls must be secured to prevent anyone from falling. The technical design must ensure that the function is permanently guaranteed
- The emergency vertical ladder should end in load-bearing and secured areas intended for escape routes leading out of the danger areas

DIN 14094-1: Emergency ladder systems

Single and multiple-flight vertical ladders with back protection



* Distance to roof edge

06

Single-flight vertical ladder with back protection (up to maximum ascent height 10.0 m)

Additional components, such as exit steps, railing and safety doors, may be required depending on the exit situation on site. These components are not included as a complete kit and need to be ordered separately.

Ascent height up to (m)	Ladder length (m) incl. exit side-rail	Anodised aluminium order no.	Bare aluminium order no.	Galvanised steel order no.	Stainless steel order no.	Ladder section 1.96 m	Ladder section 2.80 m	Ladder section 3.64 m	Exit side-rail	Wall anchor, rigid, spacing to wall 200 mm	Ø 700 mm back protection retainer	Back protection strut 3.000 mm	Vertical ladder connector
4.76	5.96	500100	510100	520100	530100	1	1	-	2	6	3	5	2
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Multi-flight vertical ladders on request or online at www.steigtechnik.de

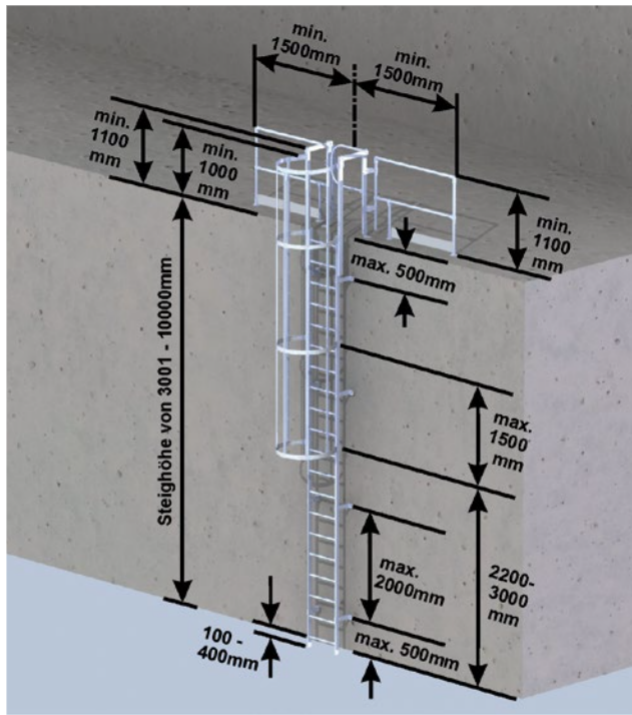
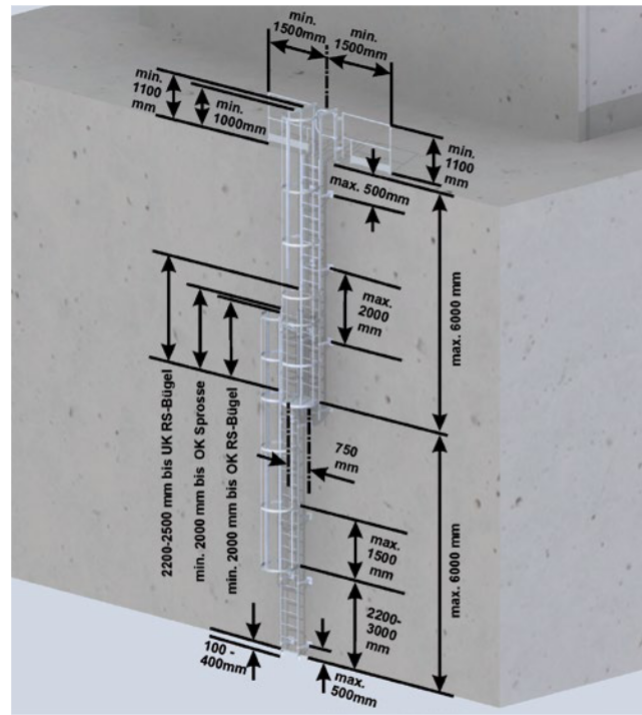


Figure according to DIN EN ISO 14122-4:2016



Range of application

Access to machinery and mechanical systems.

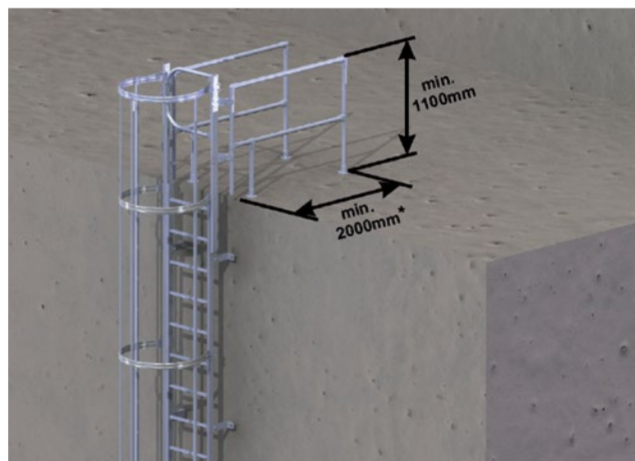
Irrespective of the climbing height:

- As safety railing, back protection is preferable to fall protection (combination is not permitted as the rescue of persons is hindered by the back protection)
- The need for an occupational medical examination for suitability for working at height (e.g. G 41) depends on the risk assessment (e.g. total climbing height, type of fall protection) of the respective vertical ladder systems
- Proof of the load-bearing capacity of the underlying surface must be provided for each construction project by a responsible stability expert
- Barrier (safety door) is always required
- If required by the access situation, vertical ladders with fall protection must be fitted with suitable protective devices (e.g. steel lockable door) to prevent unauthorised use
- For lateral bridging steps, the ladder sections must run at a higher level
- The overlap of the back protection must be at least 2,000 mm for multiple-flight ladders
- At unsecured exit points, railings attached to both sides of the vertical ladder or led into the exit level are required

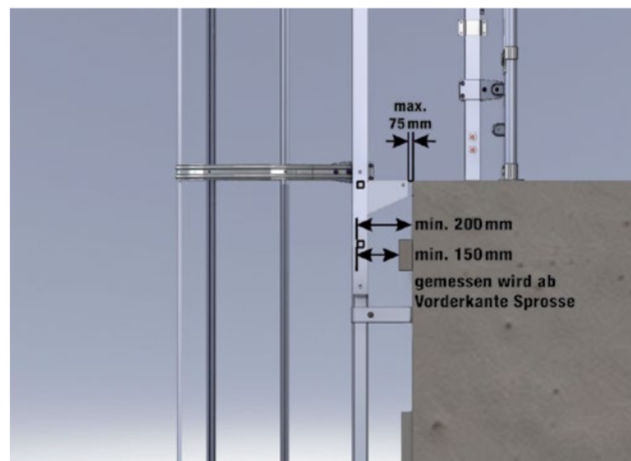
- Gap at exit step must not be larger than 60–75 mm
- Step-on dimension: Distance from entry level to first rung 100–400 mm. The top edge of the uppermost rung must be at the same height as the walking surface of the exit point
- The clearances between the vertical ladder system and the railing must not exceed 120 mm
- The connection to the fall protection must be established and released from a secured standing position. A secured standing position is, for example, a platform with railing and secured access

DIN EN ISO 14122-4: Stationary vertical ladders on machinery

Single and multiple-flight vertical ladders with back protection



* Distance to roof edge



06

Single-flight vertical ladder with back protection (up to maximum ascent height 10.0 m)

Additional components, such as exit steps, railing and safety doors, may be required depending on the exit situation on site. These components are not included as a complete kit and need to be ordered separately.

Ascent height up to (m)	Ladder length (m) incl. exit side-rail	Anodised aluminium order no.	Bare aluminium order no.	Galvanised steel order no.	Stainless steel order no.	Ladder section 1.96 m	Ladder section 2.80 m	Ladder section 3.64 m	Exit side-rail	Wall anchor, rigid, spacing to wall 200 mm	Ø 700 mm back protection retainer	Back protection strut 3.000 mm	Vertical ladder connector
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