

GÜNZBURGER STEIGTECHNIK

Assembly instructions

Vertical ladders



CLEVERE LÖSUNGEN MADE IN GERMANY

GÜNZBURGER STEIGTECHNIK enjoys a reputation both in Europe and far beyond as a top name supplier of ladders, scaffold towers and special constructions. Not least because we give you a 15 year quality warranty for our products.

Access solutions from Günzburg have a tradition going back over 110 years, with the company now being run by the fourth generation of the original founding family. With over 200 committed employees, GÜNZBURGER STEIGTECHNIK develops and manufactures solutions which are intelligent in every respect. Hardly surprising, therefore, that our company slogan is "Climb smart". But what do we mean by that exactly? Quite simply - clever products and product details with practical added value for our customers. Like the nivello® ladder shoes, for example, for greater stability and better protection against slipping, or the ergo-pad® grip zone. It makes carrying ladders more comfortable than ever, with less strain on the back.

What has always been of particular importance to us is having our production facilities located at our company headquarters in the Bavarian town of Günzburg. The result of this grounded company policy is a unique promise:

a 15 year quality warranty gives you the good and secure feeling that you have chosen the right product when you choose a Günzburger Steigtechnik GmbH product.

For us, having our own local production facilities in Germany therefore represents both a quality characteristic and a philosophy at the same time – and here too we are a pioneer: we are the first company to have received the "Made in Germany" seal of quality for its products from TÜV Nord.

Speaking of distinctions: For the safeguarding and creation of jobs, service and closeness to customers, a high degree of innovative energy and a commitment to the region, our company received the "National award for small and medium-sized enterprises 2009", the most prestigious award of its kind at national level in Germany.

Solutions from GÜNZBURGER STEIGTECHNIK are used in countless areas of application, ranging from industry and craft businesses to public contractors and private users.

Ask for our free publications:

the access solutions guidebook with over 1,500 standard solutions, our "Special constructions" catalogue featuring a host of field examples of customer solutions already delivered, roller container guidebook or the rescue technology guidebook with professional systems for firefighting, rescue and disaster response work.

You can also visit us on the internet at www.steigtechnik.de

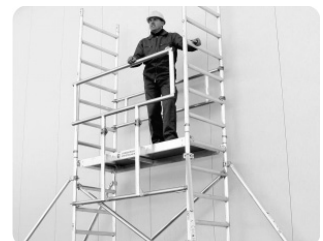


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1 ABOUT THIS DOCUMENT

1 About this document

These assembly instructions belong to the "vertical ladders" and "fall arrestor" products (abbreviated below to "vertical ladder system") supplied by GÜNZBURGER STEIGTECHNIK.

The parts of the product have been developed to conform to the current state-of-the-art and the recognised rules of technical safety. Danger to life and limb of the user or of third parties can nonetheless arise when using the product, or impairments to the product and other material assets can occur.

- ➔ Read the assembly instructions carefully before use.
- ➔ Retain the assembly instructions during the product's service life.
- ➔ Keep the assembly instructions available to the erection and service personnel at all times.
- ➔ Pass on the assembly instructions to each subsequent owner or user of the product.
- ➔ Update the assembly instructions each time the manufacturer issues a revision.

1.1 Other applicable documents

If the climb guard system (fall stop) is used:

- ➔ Additionally, observe our information brochure "Instructions for erecting and using the GÜFA 3 climb guard system".

1.2 Symbols and depictions

The following symbols are used in these assembly instructions:

Symbol	Meaning
➔	One work step required
! NOTE	Notes to help understand or to optimise work procedures

Tab. 1: Symbols and depictions

1.3 Dimensions

- ➔ Dimensions stated without a unit of measurement are mm dimensions

2 PRODUCT INFORMATION

2 Product information

The vertical ladder system has a modular design with a number of different executions. Any height can be reached with the modular system by combining the interacting construction elements. If necessary, individual elements may need to be shortened to the required length on-site.

All points of connection in the vertical ladder system are executed as screwed unions in order to simplify the assembly process.

2.1 Standards and regulations

The vertical ladder system conforms to the following standards and regulations:

Standard	Title
DIN 18799-1	Fixed vertical ladders on construction works - Part 1: Vertical Ladders with side stiles, technical safety requirements and tests
DIN 14094-1	Escape vertical ladder installations - Part 1: Escape vertical ladders with and without falling protection, holding device, platform
DIN EN ISO 14122-4	Safety of machines - Permanent means of access to machinery - Part 4: Fixed vertical ladders

Tab. 2: Standards and regulations

2.2 Categories of people using a vertical ladder system

As per DIN 18799-1

Category	Designation	Explanation
PK1	Experienced people	e.g.: Chimney constructors, antenna technicians; examined for suitability for heights under industrial health and safety provisions, demonstrably experienced and regularly instructed in the use of climb guards
PK2	Inexperienced people	e.g.: Private persons, caretakers; with no experience of climb guards

Tab. 3: Categories of people

2 PRODUCT INFORMATION

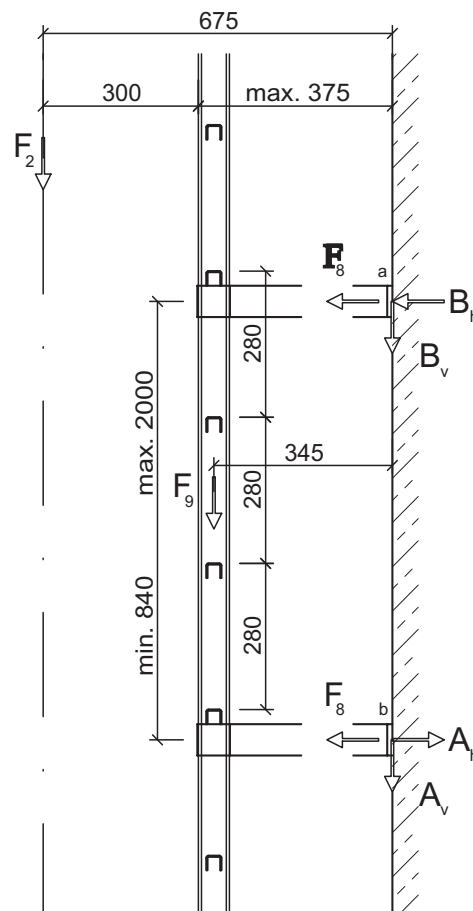
2.3 Pull-out forces for fastenings

! NOTE

The efficiency of the fastening shackles with the stiles as frame (unions resistant to bending) must be ensured.

→ Connect the shackles on the stiles accordingly.

2.3.1 Vertical ladders, without footplate



a Lower connection point, not decisive

Forces per connection point and stile:

$$B = \text{Root} (B_v * B_v + B_h * B_h) = 1.06 \text{ kN}$$

$$B_h = (F_2 * 675 + F_9 * 345) / 840 + F_8 = 0.96 \text{ kN}$$

$$B_v = F_2 / 2 + F_9 / 2 = 0.44 \text{ kN}$$

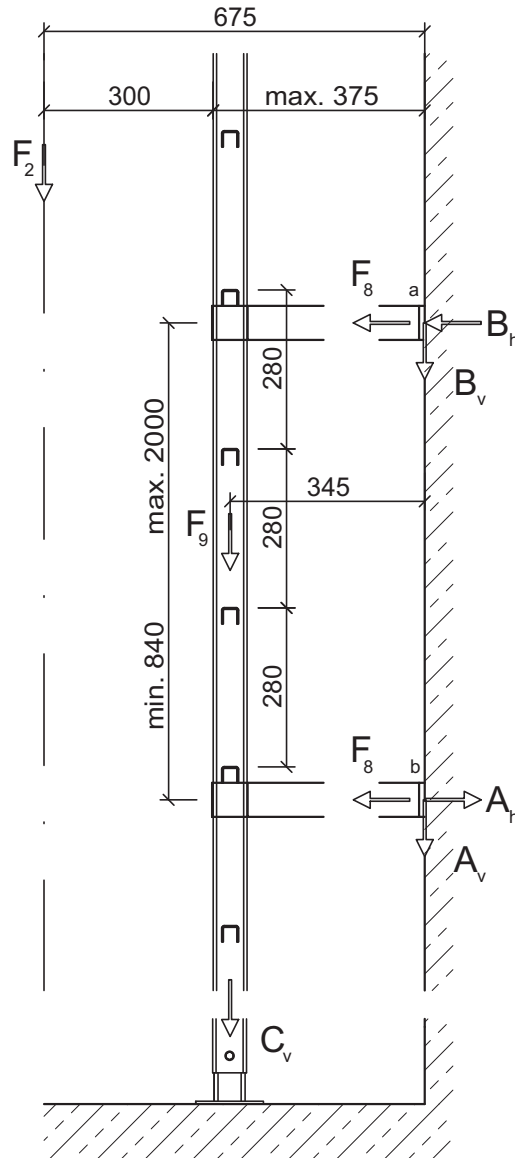
$$F_2 = 0.75 \text{ kN per stile (1.5 kN)}$$

$$F_8 = 0.30 \text{ kN per stile}$$

$$F_9 = 0.13 \text{ kN (per stile; ladder weight: max. 9 kg/m, next fastening point only after 2 m)}$$

2 PRODUCT INFORMATION

2.3.2 Vertical ladders, with footplate



a Lower connection point, not decisive

Forces per connection point and stile:

$$B = \text{Root } (B_v \cdot B_v + B_h \cdot B_h) = 0.69 \text{ kN}$$

$$B_h = (F_2 \times 300)/840 + F_8 = 0.57 \text{ kN}$$

$$B_v = F_2/2 = 0.38 \text{ kN}$$

$$F_2 = 0.75 \text{ kN per stile (1.5 kN)}$$

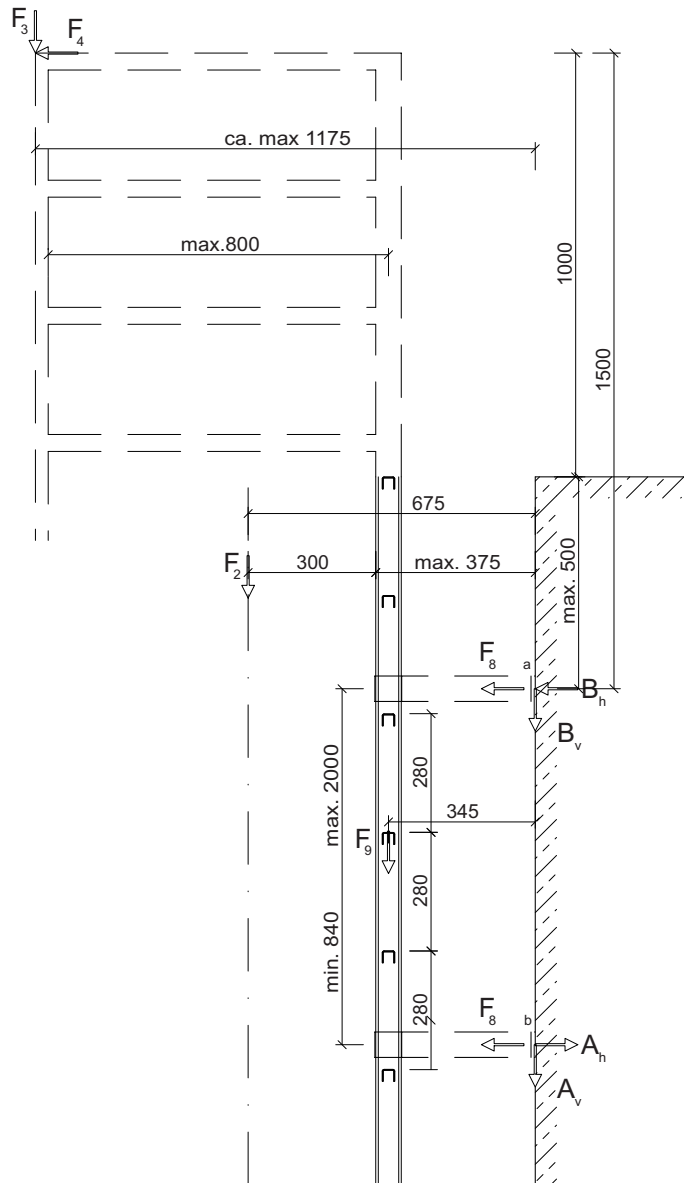
$$F_8 = 0.30 \text{ kN per stile}$$

$$F_9 = 0.13 \text{ kN (per stile; ladder weight: max. 9 kg/m, next fastening point only after 2 m)}$$

$$C_v = (F_2 + F_9)/2 \cdot \text{ladder length (per foothold and per stile)}$$

2 PRODUCT INFORMATION

2.3.3 Vertical ladders with falling protection, without footplate



a Lower connection point, not decisive

Forces per connection point and stile:

$$B = \text{Root} (B_v \cdot B_v + B_h \cdot B_h) = 2.21 \text{ kN}$$

$$B_h = (F_2 \cdot 675 + F_9 \cdot 345 + F_3 \cdot 1175 + F_4 \cdot 1500) / 840 + F_8 = 2.10 \text{ kN}$$

$$B_v = F_2 / 2 + F_9 / 2 + F_3 / 2 = 0.69 \text{ kN}$$

$$F_2 = 0.75 \text{ kN per stile (1.5 kN)}$$

$$F_3 = 0.50 \text{ kN per stile (0.5 kN)}$$

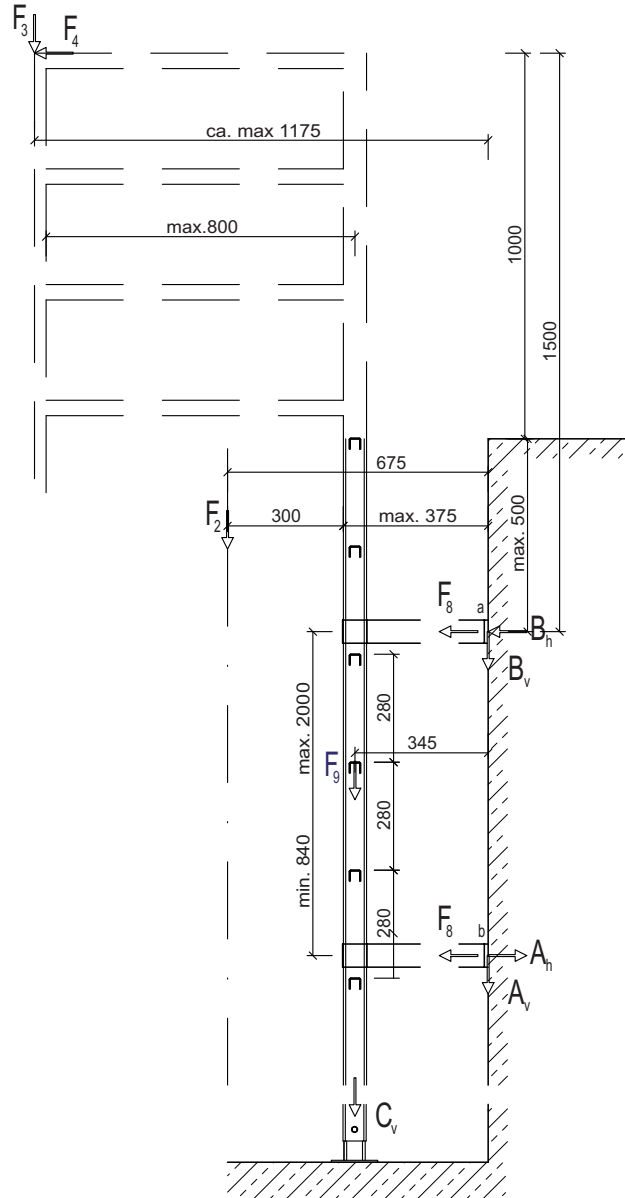
$$F_4 = 0.25 \text{ kN per stile (0.5 kN)}$$

$$F_8 = 0.30 \text{ kN per stile}$$

$$F_9 = 0.13 \text{ kN (per stile; ladder weight: max. 9 kg/m, next fastening point only after 2 m)}$$

2 PRODUCT INFORMATION

2.3.4 Vertical ladders with falling protection, with footplate



a Lower connection point, not decisive

Forces per connection point and stile:

$$B = \text{Root } (B_v \cdot B_v + B_h \cdot B_h) = 1.35 \text{ kN}$$

$$B_h = (F_2 \cdot 300 + F_3 \cdot 800 + F_4 \cdot 1500) / 840 + F_8 = 1.19 \text{ kN}$$

$$B_v = F_2 / 2 + F_3 / 2 = 0.63 \text{ kN (F}_2 \text{ from the most unfavourable aspect)}$$

$$F_2 = 0.75 \text{ kN per stile (1.50 kN)}$$

$$F_4 = 0.30 \text{ kN per stile}$$

$$F_8 = 0.30 \text{ kN per stile}$$

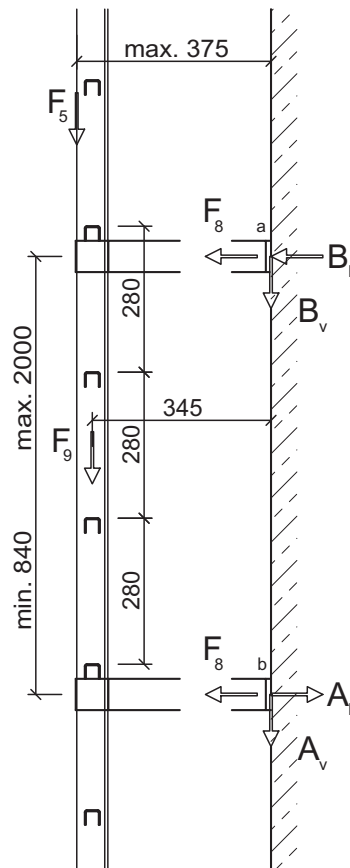
$$F_9 = 0.13 \text{ kN (per stile; ladder weight: max. 9 kg/m, next fastening point only after 2 m)}$$

$$C_v = F_3 + (F_2 + F_9) / 2 \cdot \text{ladder length (per foothold and per stile). Assumption: F}_3 \text{ takes effect only 1x}$$

2 PRODUCT INFORMATION

2.3.5 Vertical ladders with climb guard rail, without footplate

→ Fix the climb guard rail to at least 4 rungs.



a Lower connection point, not decisive

Forces per connection point and stile:

$$B = \text{Root } (B_v \cdot B_v + B_h \cdot B_h) = 2.10 \text{ kN}$$

$$B_h = (F_5 \cdot 375 + F_9 \cdot 345) / 840 + F_8 = 1.39 \text{ kN}$$

$$B_v = F_5 / 2 + F_9 / 2 = 1.57 \text{ kN}$$

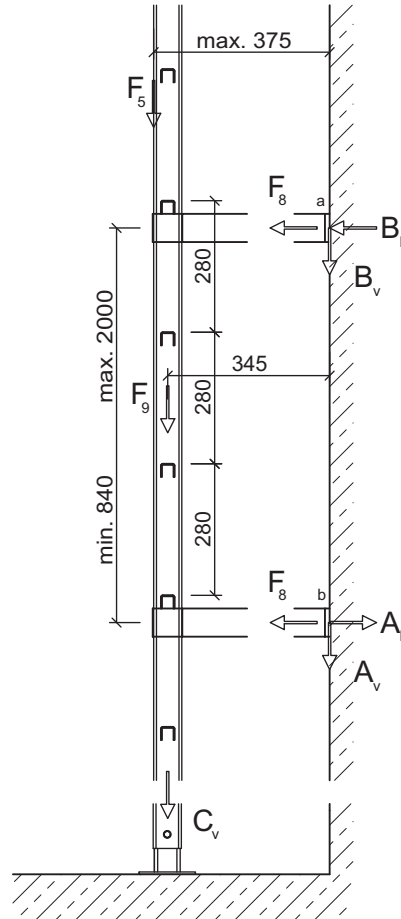
$$F_5 = 3.0 \text{ kN per stile (6.0 kN)}$$

$$F_8 = 0.3 \text{ kN per stile}$$

$$F_9 = 0.13 \text{ kN (per stile; ladder weight: max. 9 kg/m, next fastening point only after 2 m)}$$

2 PRODUCT INFORMATION

2.3.6 Vertical ladders with climb guard rail, with footplate



a Lower connection point, not decisive

Forces per connection point and stile:

$$B = \text{Root} (B_v * B_v + B_h * B_h) = 0.41 \text{ kN}$$

$$B_h = (F_5 * 30) / 840 + F_8 = 0.41 \text{ kN}$$

$$B_v = 0 \text{ kN}$$

$$F_8 = 0.30 \text{ kN per stile}$$

$$F_9 = 0.13 \text{ kN (per stile; ladder weight: max. 9 kg/m, next fastening point only after 2 m)}$$

$$C_v = F_3 + (F_2 + F_9) / 2 * \text{ladder length (per foothold and per stile). Assumption: } F_5 \text{ takes effect only 1x}$$

2 PRODUCT INFORMATION

2.4 Tests

Tested by:

DEKRA Testing & Inspection GmbH
Handwerkstr. 15
D-70565 Stuttgart
Germany

3 SAFETY NOTICES

3 Safety notices

3.1 Intended use

The vertical ladder system has been designed for use as a climbing aid, escape ladder/exit for people in accordance with the standard.

→ Only use original components for assembly and repairs.

Combining components of third party manufacturers or accessories other than those stated in these assembly instructions can impair safety and is not permitted.

The vertical ladder system is not intended to transport loads, such use is not permitted.

3.2 Product safety

→ Only deploy the product in a technically faultless condition and for its intended use. Be aware of hazards, work in a safety conscious manner and observe the assembly instructions.

→ Rectify deficiencies which could impair safety (e.g. deviations from the conditions for the permissible, intended use) without delay.

3.3 Obligations of the site principal

→ Before assembly starts, check whether there is any plant or equipment at the foreseen point of assembly which could endanger those involved.

→ Cordon off plant, machinery and areas to ensure that they do not pose a danger for personnel.

→ Provide these assembly instructions to the operator and to personnel.

→ Issue works instructions for the operator containing all the rules required for safe deployment:

- Review of hazards
- Conduct when using the product
- Conduct if defects are established

3.4 Obligations of the operator

Regulations → Only assemble, use and maintain the product in agreement with the following regulations:

- Assembly instructions
- Specific national and regional regulations and ordinances
- Regional construction ordinance
- Accident prevention regulations and Workplace Directive
- Industrial health and safety directives

3 SAFETY NOTICES

- Works instructions
- Personnel**
 - ➔ Assembly and all other work stated in the assembly instructions may only be planned, supervised and executed by foremen with suitable training and experience.
 - ➔ Only deploy suitable, trained personnel for assembly, service work, conversions, maintenance, repairs and dismantling.
 - ➔ Determine the responsibilities of personnel for assembly, service work, conversions, maintenance, repairs and dismantling in line with their qualifications and job descriptions.
 - ➔ Provide personnel with the pertinent accident prevention and safety regulations and the Workplace Directive.
 - ➔ Provide workers with the necessary personal safety equipment.
 - ➔ Ensure that the following requirements are fulfilled:
 - That personnel have read and understood these assembly instructions, in particular the chapter "Safety instructions".
 - That personnel know the pertinent accident prevention and safety regulations and the Workplace Directive.
 - That personnel wear their personal safety equipment.
- Assembly**
 - ➔ Ensure that all the checks and repair work prescribed in these assembly instructions are performed.

3.5 Structural changes, spare parts

Changes and conversions can endanger the operational safety of the product. These include:

- arbitrary structural changes to the product
- changes to the building structure which influence the safety of the product.

GÜNZBURGER STEIGTECHNIK accepts no liability for damages suffered as a result of such.

Only GÜNZBURGER STEIGTECHNIK itself, a service office authorised by it, or personnel it has authorised and trained are allowed to perform changes or conversions to the product.

- ➔ Only use original spare parts from GÜNZBURGER STEIGTECHNIK.

3 SAFETY NOTICES

3.6 Safety action at certain operational phases

3.6.1 Transport and assembly

Parts of the product falling from heights can cause fatalities or serious injuries.

- Ensure that only authorised personnel trained for the purpose are deployed for slinging loads, operating lifting gear and giving instructions.
- Deploy suitable lifting gear for loads.

There is an injury hazard and a crushing hazard when mounting and aligning the product on the building structure.

- Keep people at a safe distance during assembly.
- Ensure a secure base when erecting the product parts.
- Do not subject the product parts (e.g. ladders, transfer points, platforms) to loads until they have been fully assembled and checked for secure fastening.

3.6.2 Assembly

- ➔ Check that the delivery is complete. Inspect all parts for damage, sort out any damaged components.
- ➔ Before starting assembly, have the following points checked by an expert for adequate stability and ensure that the on-site conditions allow safe assembly:
 - The construction and support works (steel structures) and the base (concrete or stone) must have sufficient bearing capacity.
- ➔ Only use dowel pins or fasteners with general construction approval. If necessary, get in touch with the producer of the dowel pins. Observe the producer's instructions for use.
- ➔ When selecting the dowel pins, observe the load specifications for the individual retainers and wall anchors.
- ➔ If assembly aids (e.g. scaffolds, cranes etc.) are deployed, read and observe the relevant instructions for their operation and use.
- ➔ Mount either falling protection or a fall stop. Do not mount falling protection and a fall stop together on one ladder.
- ➔ If escape ladders are installed: Do not deploy the fall stop system.

3.6.3 Normal operation

Operator

3 SAFETY NOTICES

- ➔ Instruct users in the correct use of the product on a regular basis, although at least once per annum.
- ➔ Do not deploy the product unless it is in a safe and properly functional state.
- ➔ Do not use the product unless all protective fittings are in place and are functioning correctly.
- ➔ Ensure that the product cannot be used by unauthorised persons.

User ➔ Each time before using the product, make a visual check to ensure that it is in good condition, check the safety equipment in particular.

3.6.4 Deficiencies

- ➔ Do not use the product if safety equipment or parts of the product are damaged or if indications of damage are apparent.
- ➔ In case of functional deficiencies or damage to parts of the product, stop the product being used immediately and block off access to it.
- ➔ Sort out damaged parts of the product and replace such with original spare parts. Rectify any damage to the product and deficiencies in its proper functioning immediately.

3.6.5 Inspections and maintenance

- ➔ Observe the intervals prescribed for inspections and repairs.
- ➔ Only have inspections and maintenance work performed by personnel trained for the purpose and authorised by the operator.
- ➔ Do not perform inspections or maintenance work until the product has been secured and cannot be accessed by unauthorised persons. Install appropriate warning signs on the product itself and at points of access.
- ➔ Ensure that all the necessary tools and aids are in a technically faultless state and are operationally safe.

4 INSPECTIONS, REPAIRS, CLEANING, DISPOSAL

4 Inspections, repairs, cleaning, disposal

4.1 Inspections

- Annual inspection**
- ➔ Have the product inspected by a capable person to confirm its faultless state and safe functioning in line with the conditions of deployment and as required by the operational situation, although at least once per annum.
 - ➔ Document inspections and their findings. Checklists can be called up at www.steigtechnik.de.
 - ➔ Note the inspection stickers on the product and renew these after an inspection.

4.2 Repairs

- ➔ Replace damaged components with original spare parts.
- ➔ Do not use spare parts which have not been approved for the product by Günzburger Steigtechnik.

4.3 Cleaning and care

- ➔ Clean away soiling with suitable substances which preserve the material.
- ➔ Do not use any acids or lyes which could attack surfaces.
- ➔ Treat damaged surfaces with anti-corrosion agents.
- ➔ Lubricate moving parts of the ladder, hinges and safety barriers with suitable lubricants.

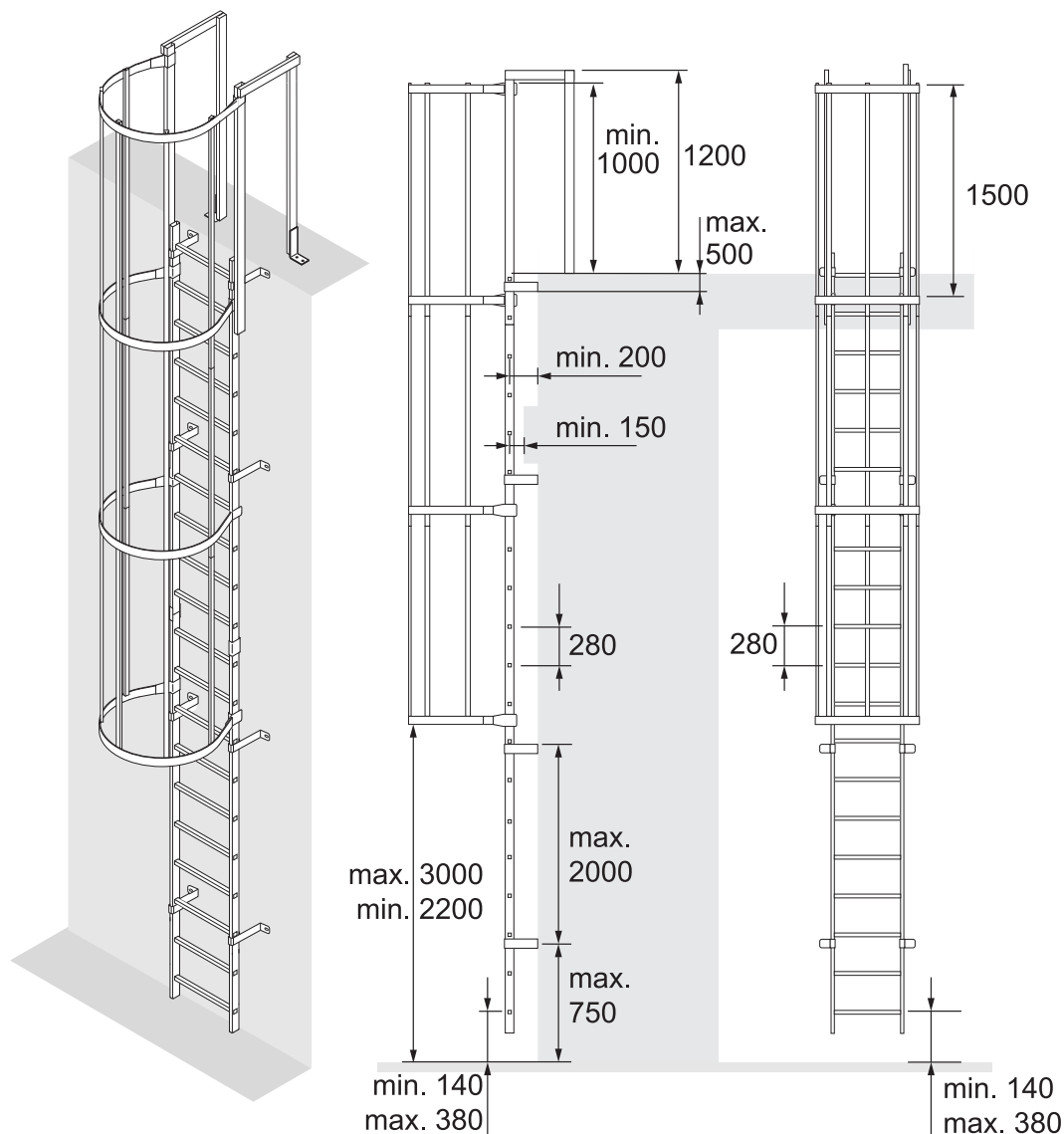
4.4 Disposal

- ➔ Undertake the following steps before disposing of the product:
 - Cordon-off access to the product.
- ➔ Dismantle the product properly and dispose of it in accordance with the regional regulations.
- ➔ Observe the rules and regulations for disposing of metals.

5 VERTICAL LADDERS

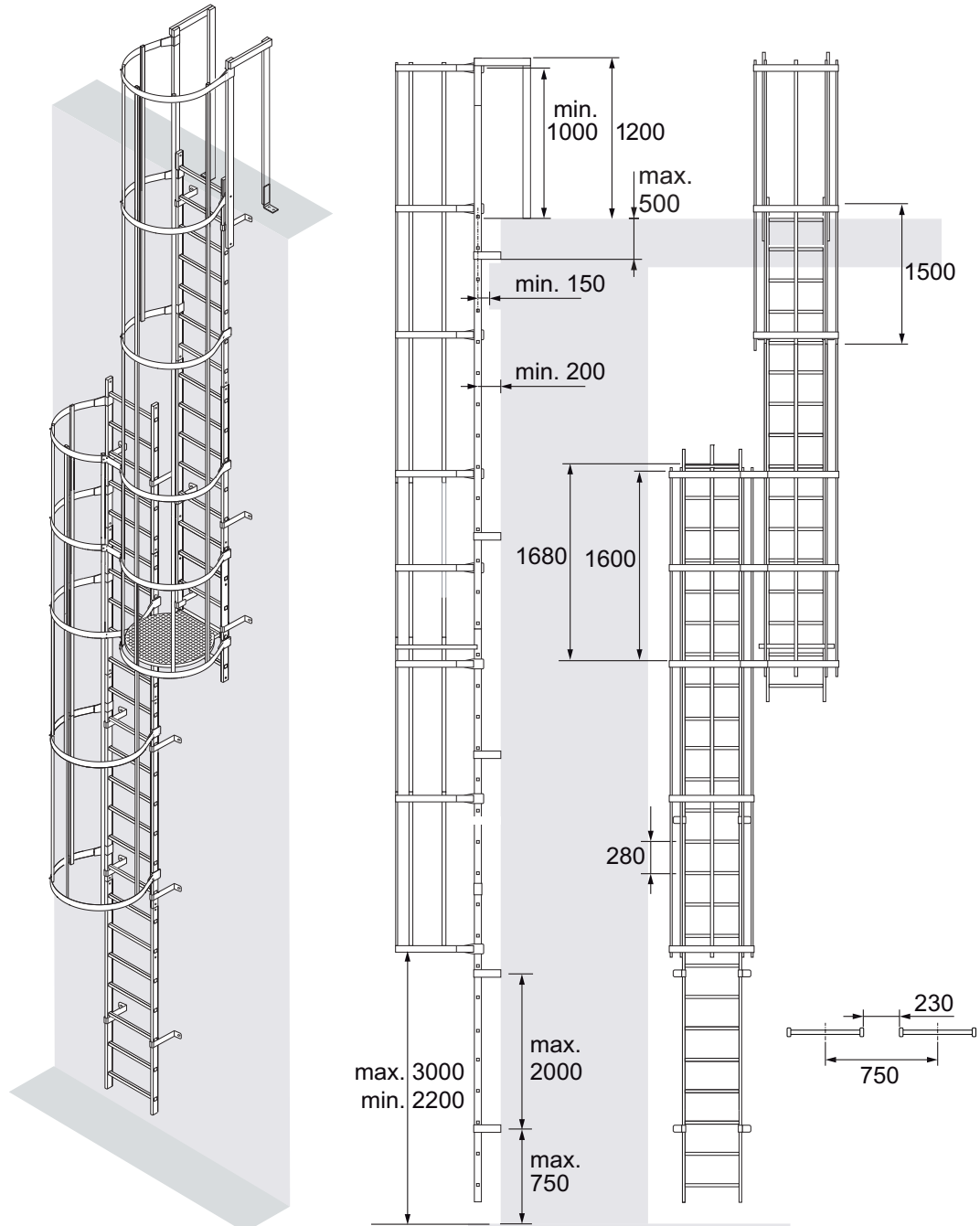
5 Vertical ladders

5.1 System dimensions, single track



5 VERTICAL LADDERS

5.2 System dimensions, dual track

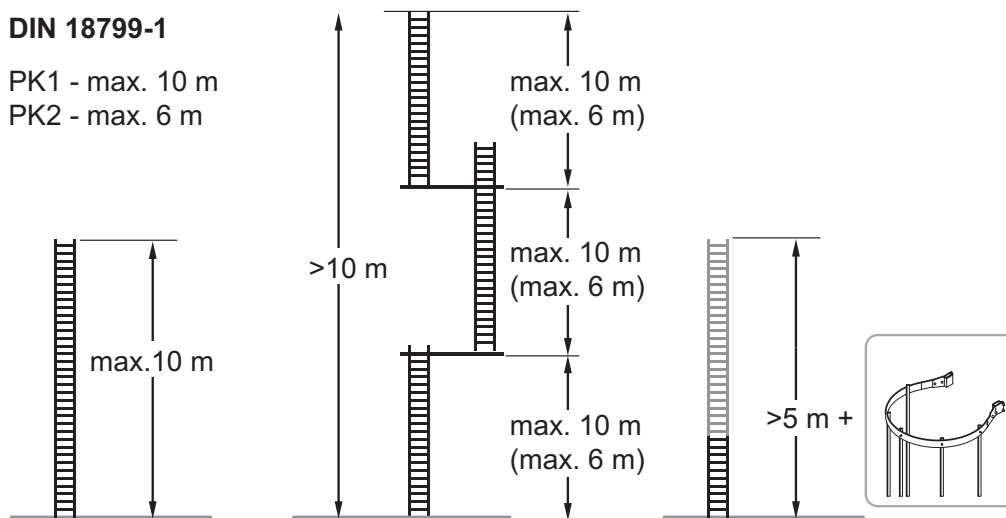


5 VERTICAL LADDERS

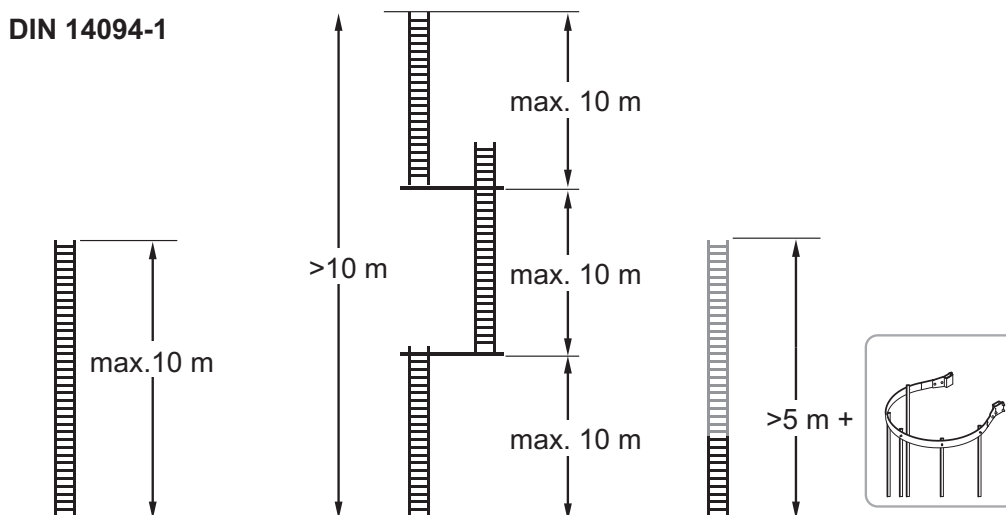
5.3 System dimensions, as per DIN/DIN EN ISO

DIN 18799-1

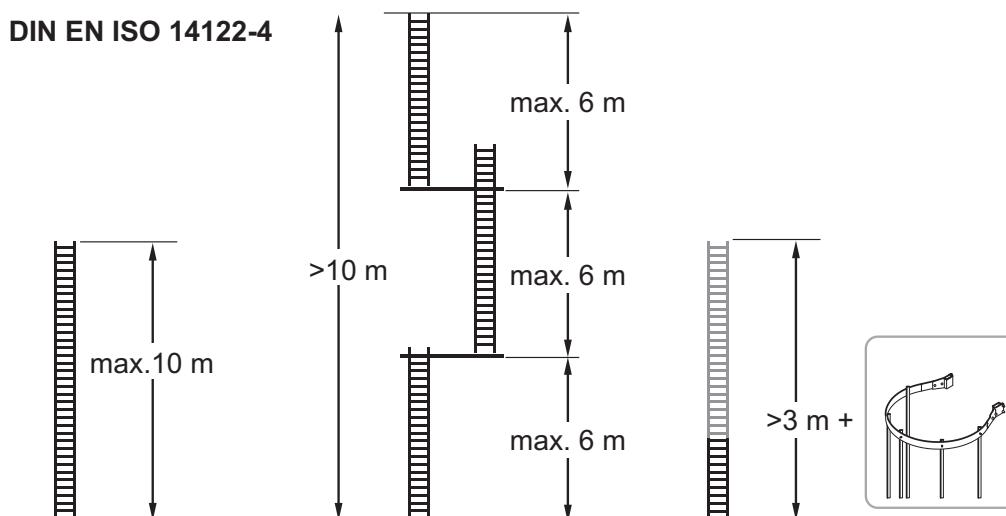
PK1 - max. 10 m
 PK2 - max. 6 m



DIN 14094-1

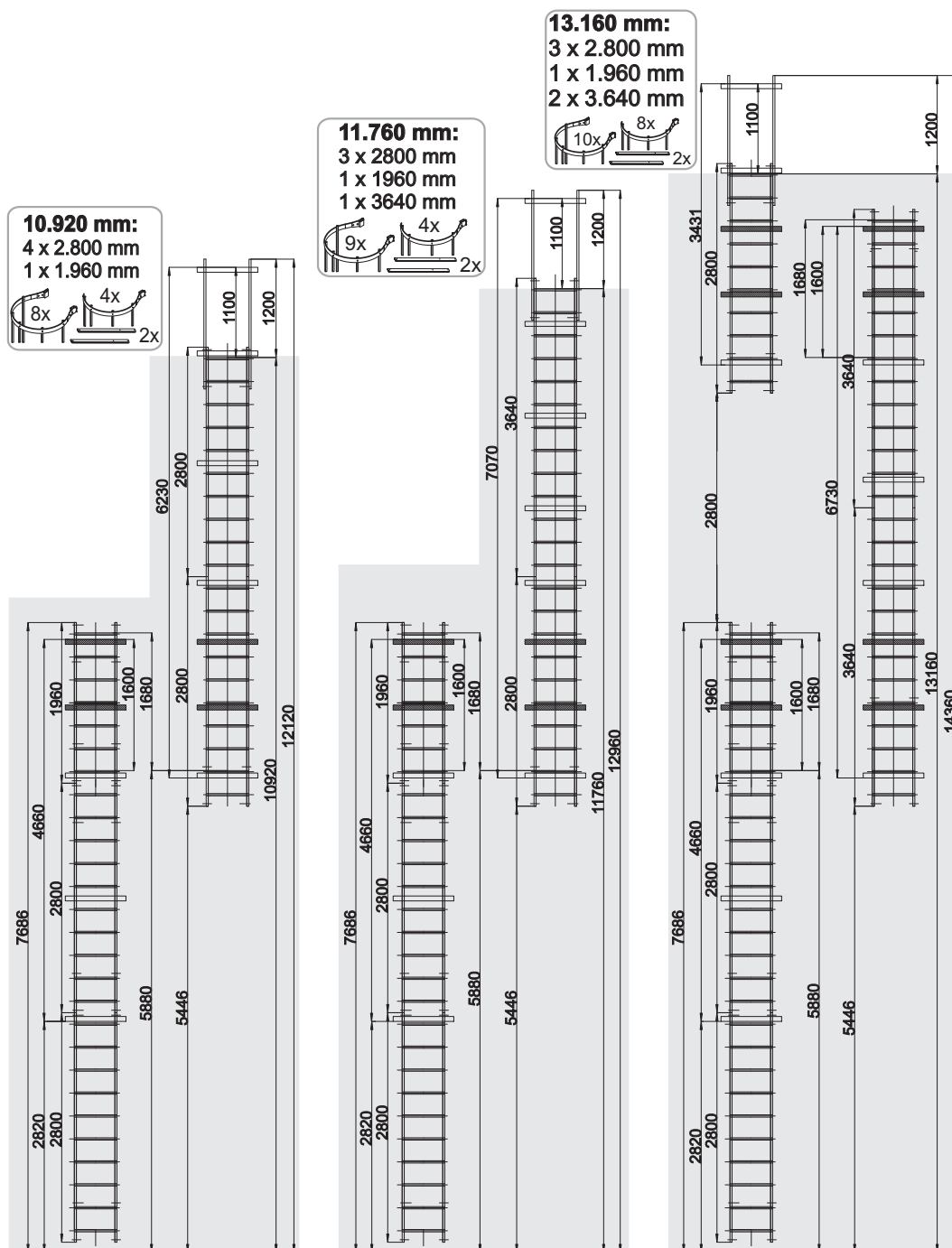


DIN EN ISO 14122-4



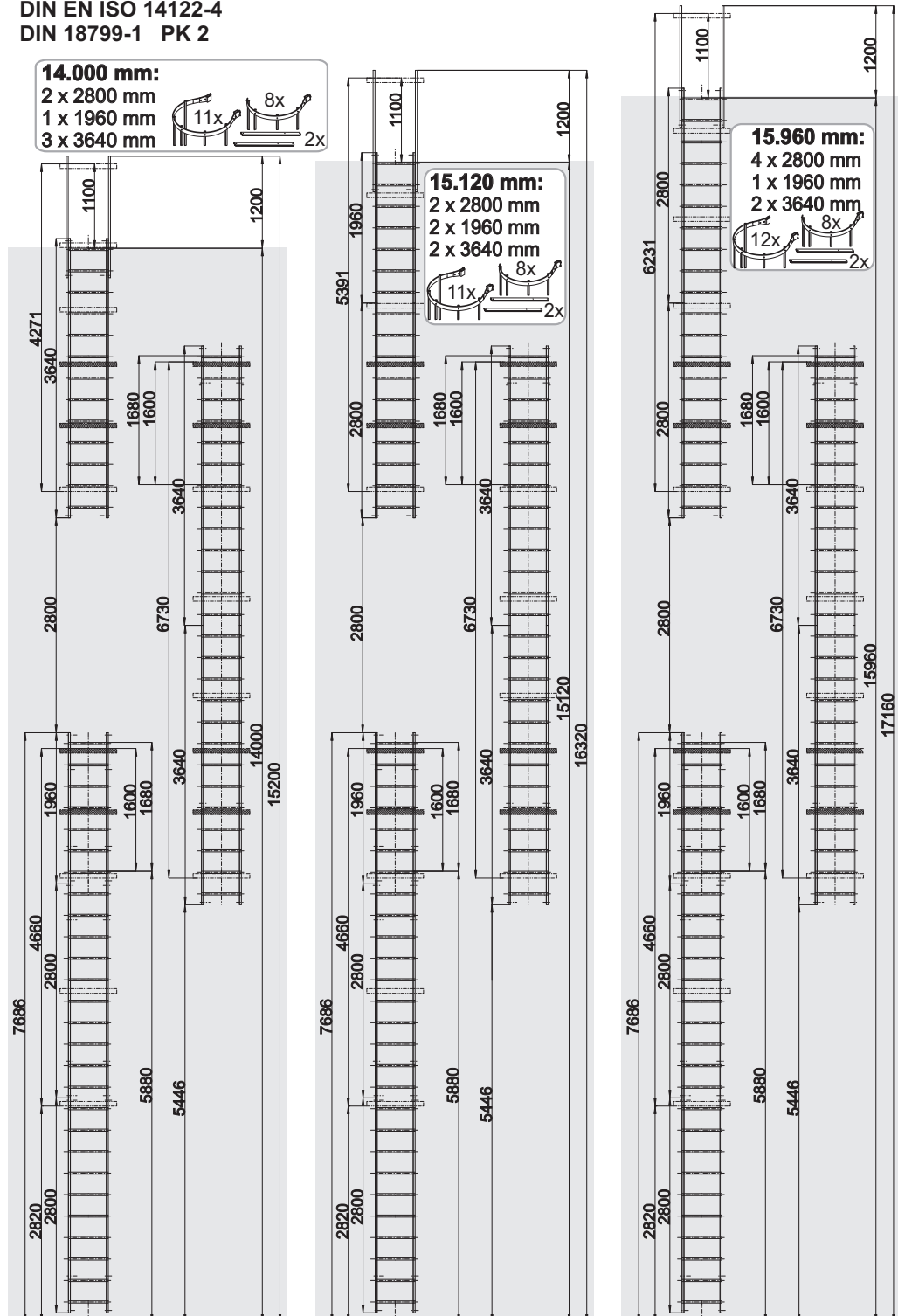
5 VERTICAL LADDERS

DIN EN ISO 14122-4
 DIN 18799-1 PK 2



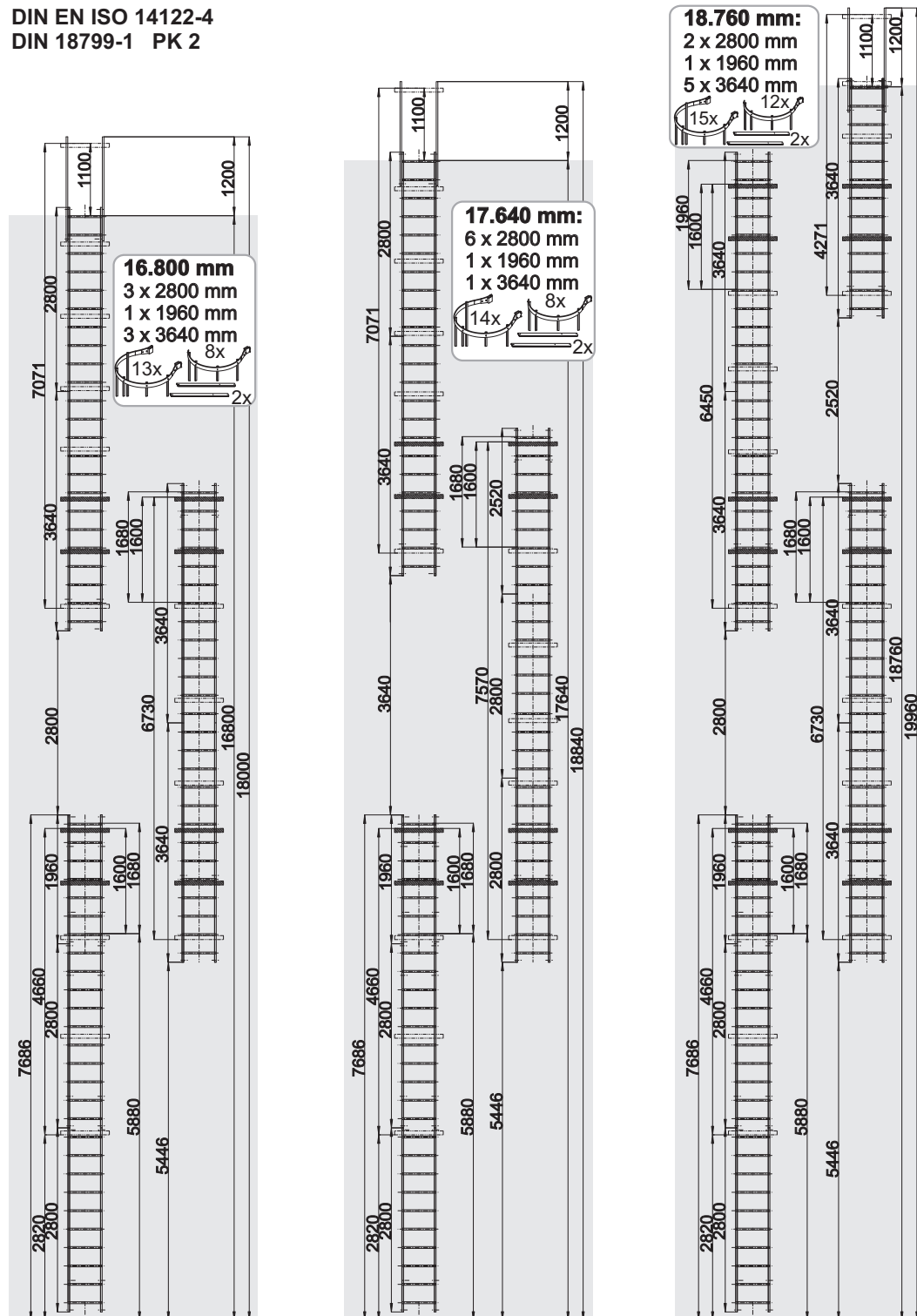
5 VERTICAL LADDERS

DIN EN ISO 14122-4
DIN 18799-1 PK 2



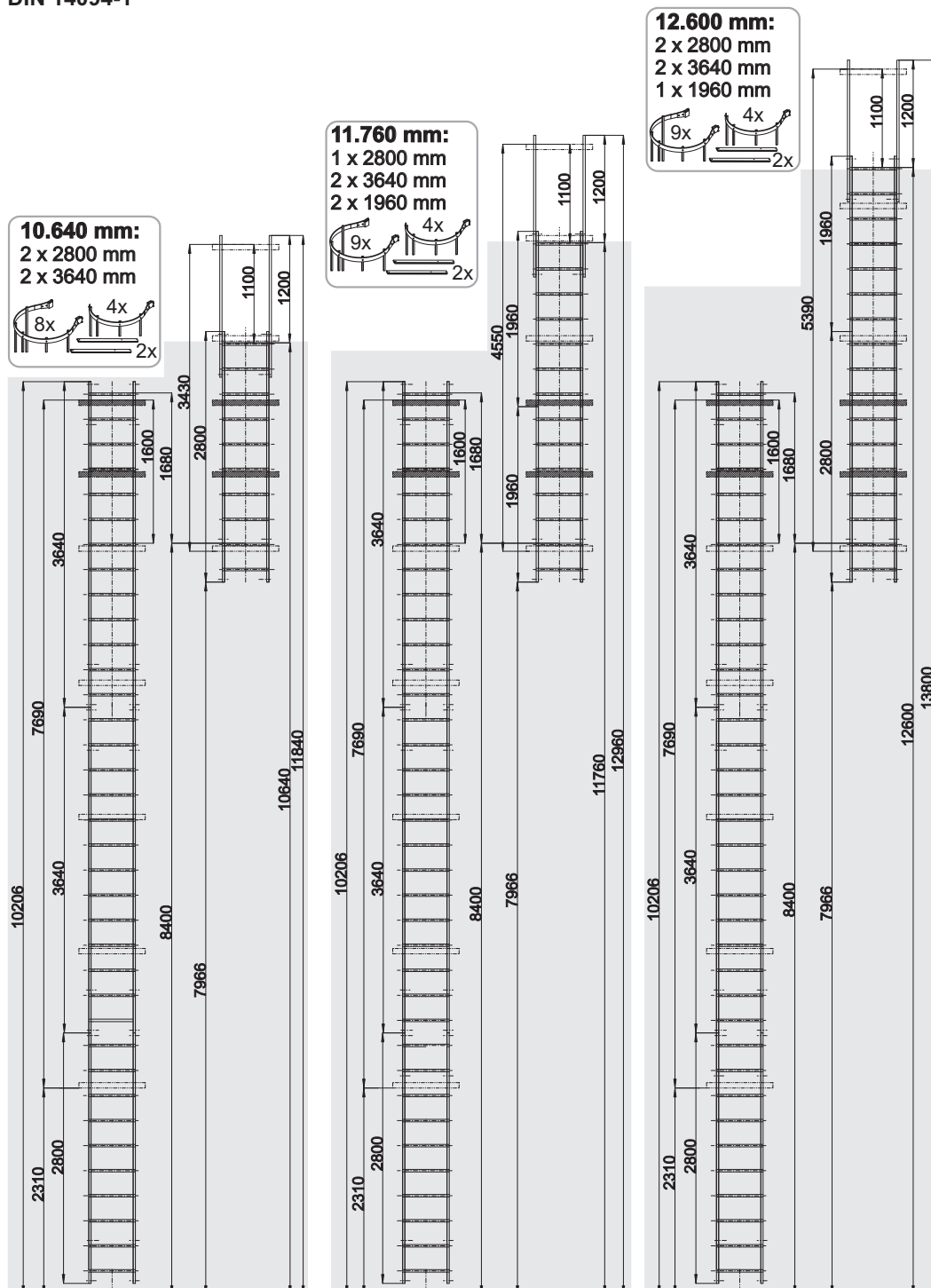
5 VERTICAL LADDERS

DIN EN ISO 14122-4
DIN 18799-1 PK 2



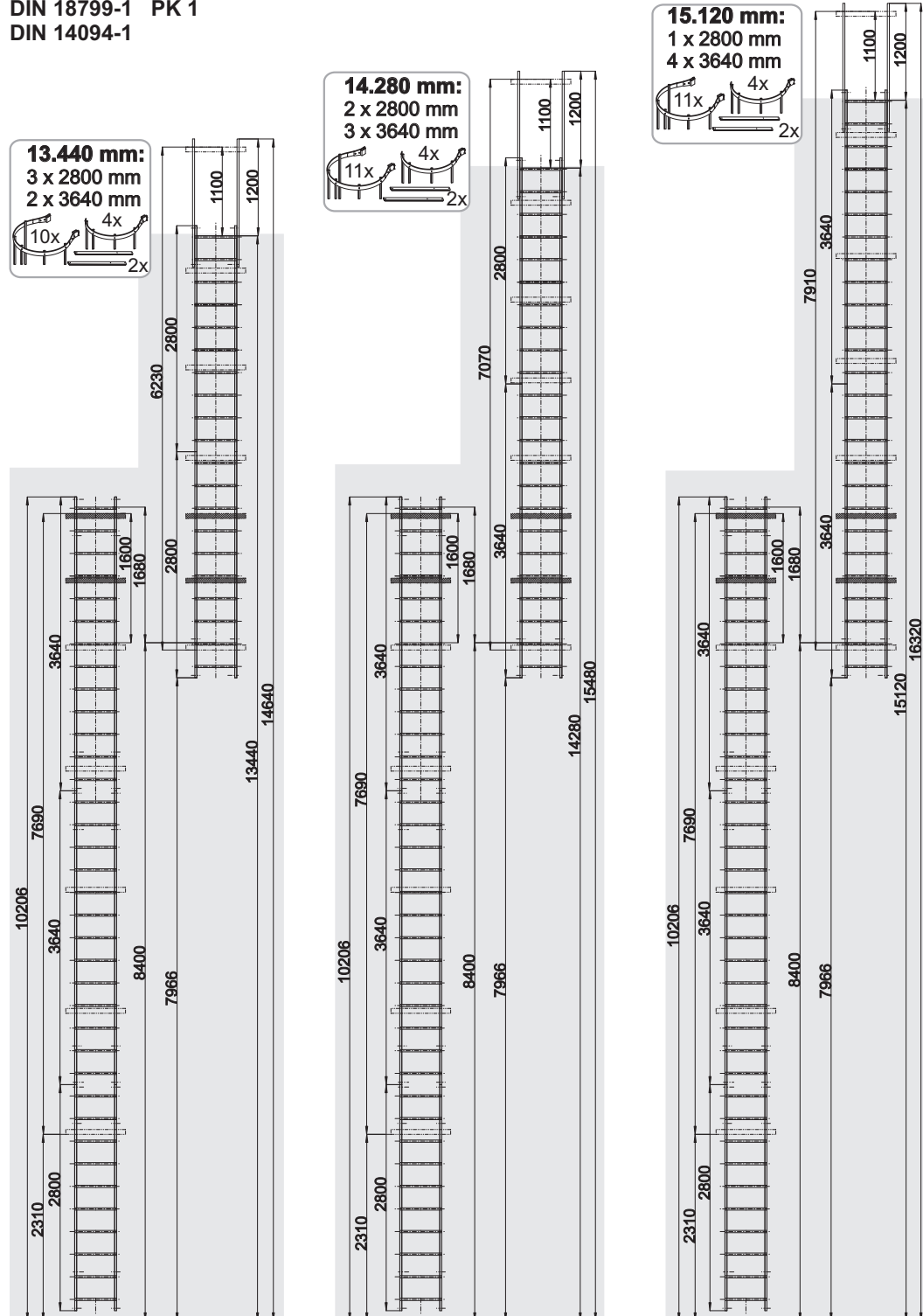
5 VERTICAL LADDERS

DIN 18799-1 PK 1
 DIN 14094-1



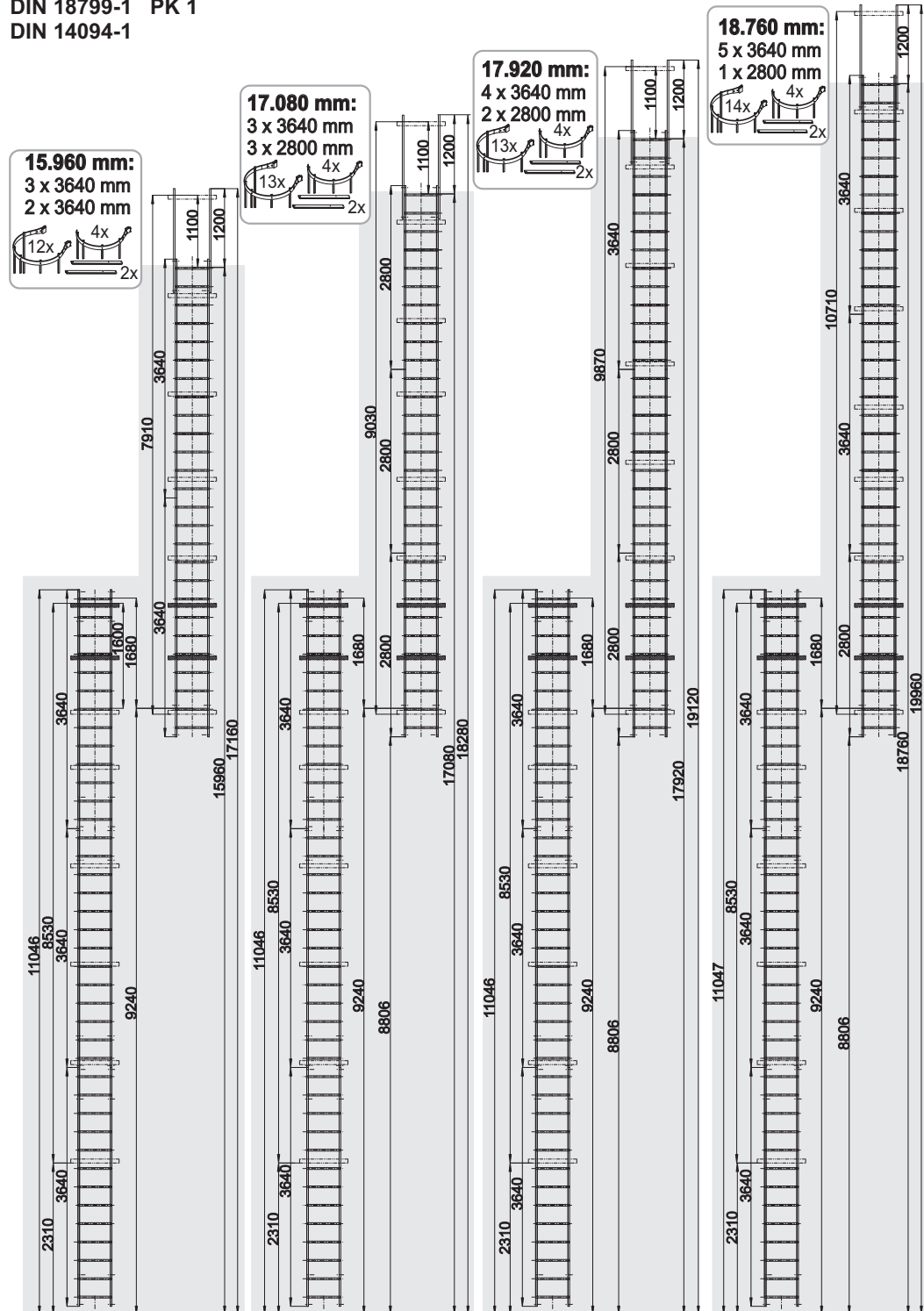
5 VERTICAL LADDERS

DIN 18799-1 PK 1
 DIN 14094-1



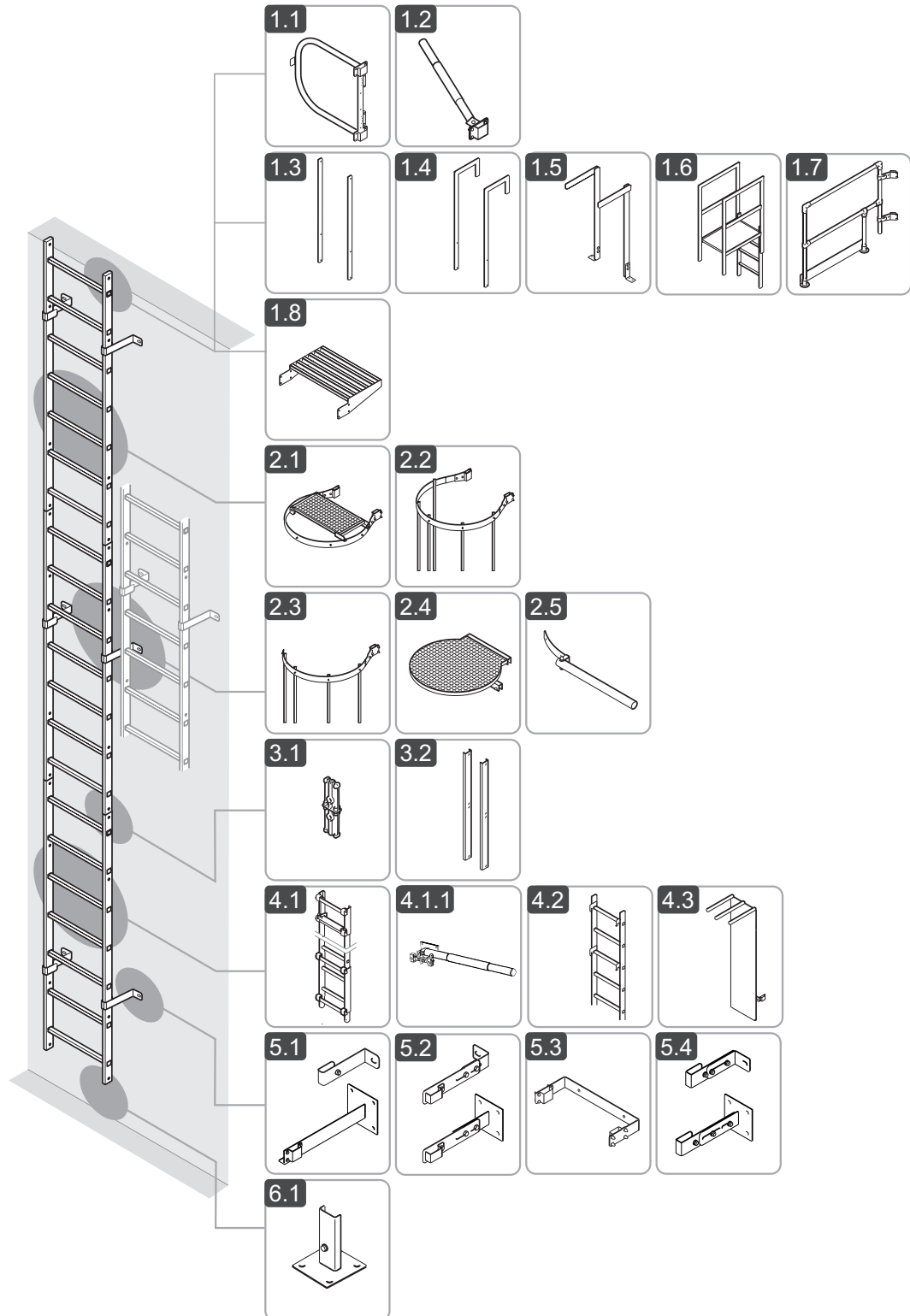
5 VERTICAL LADDERS

DIN 18799-1 PK 1
DIN 14094-1



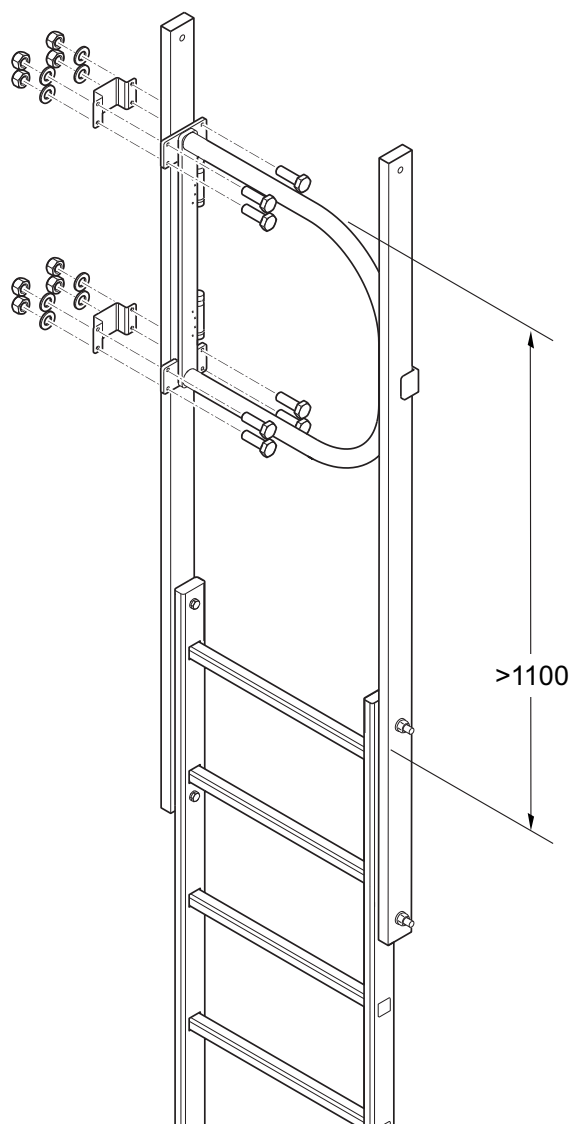
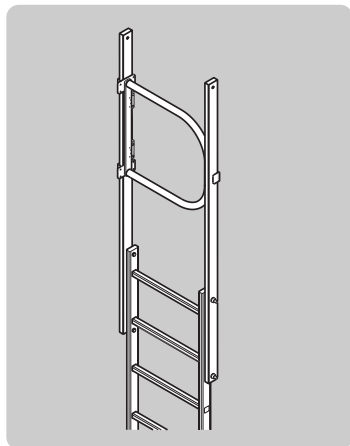
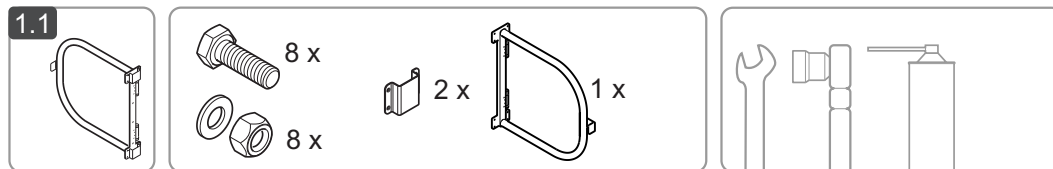
5 VERTICAL LADDERS

5.4 System overview and erection



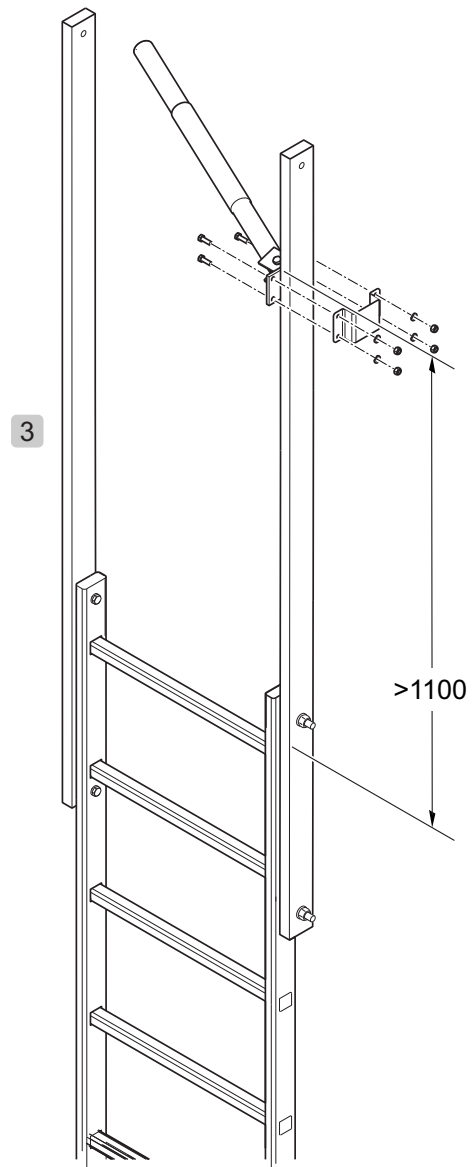
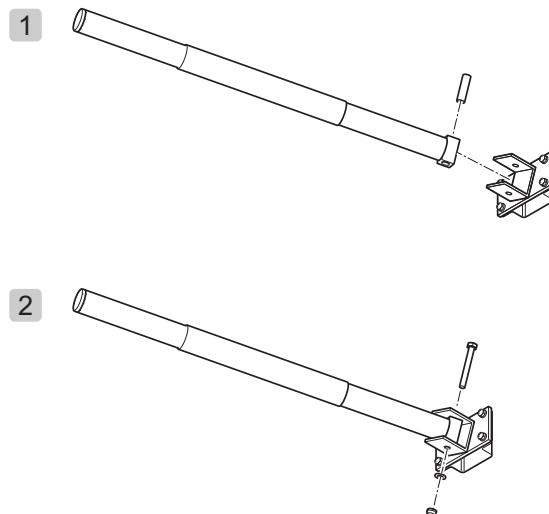
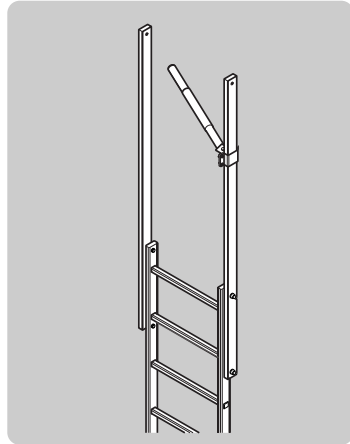
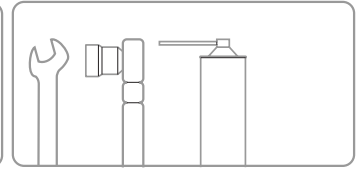
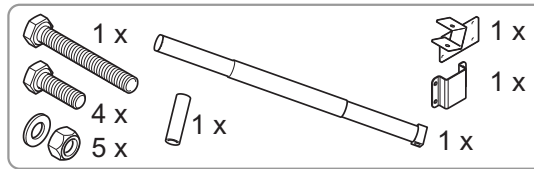
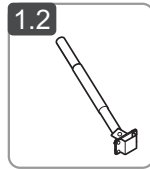
5 VERTICAL LADDERS

Safety door (Order No. 63502)



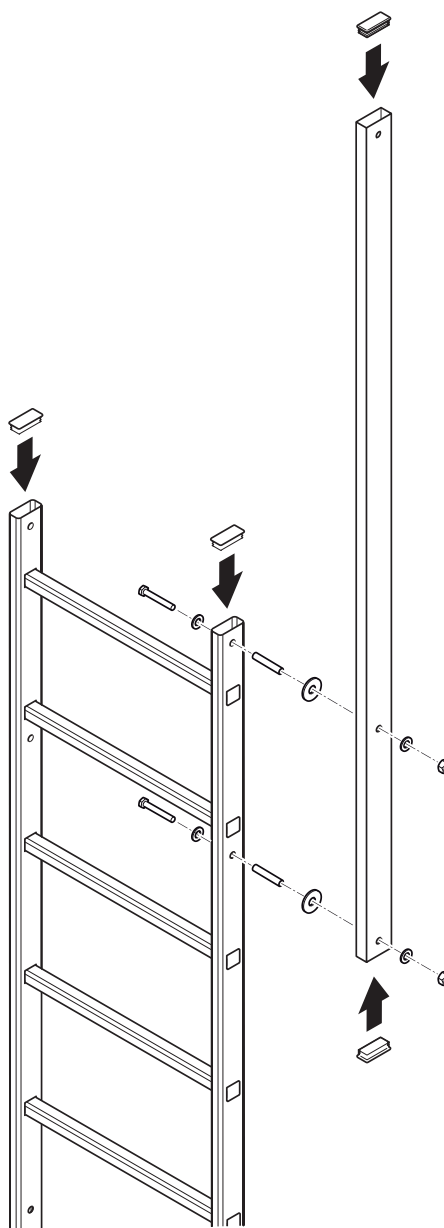
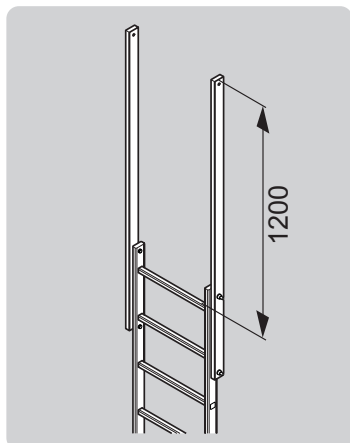
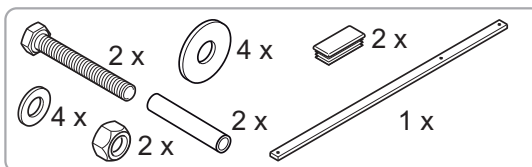
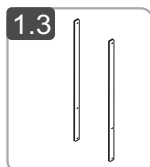
5 VERTICAL LADDERS

Safety barrier (Order No. 63500)



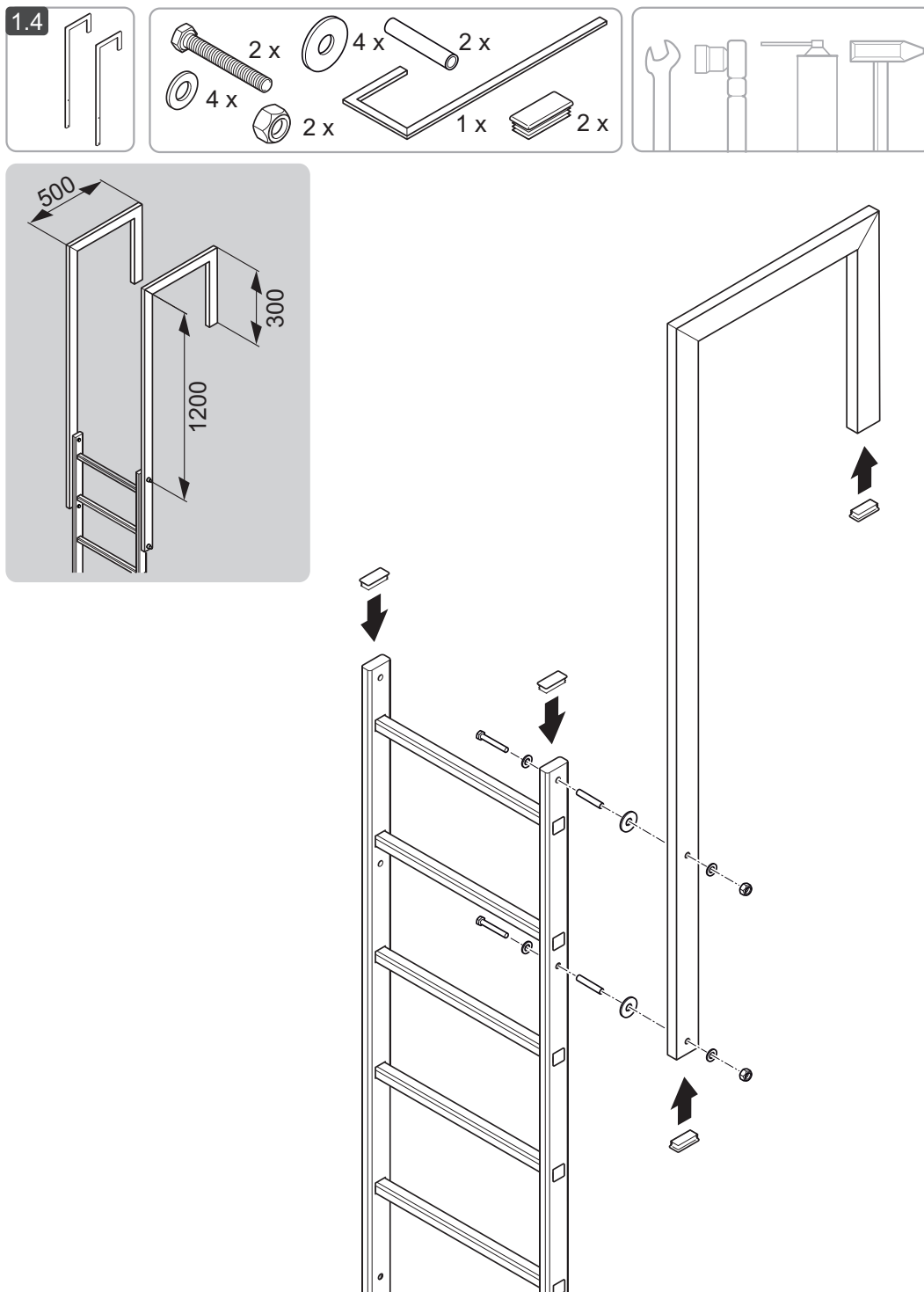
5 VERTICAL LADDERS

Exit stile (Order No. 61243, 62243, 63243, 64243)

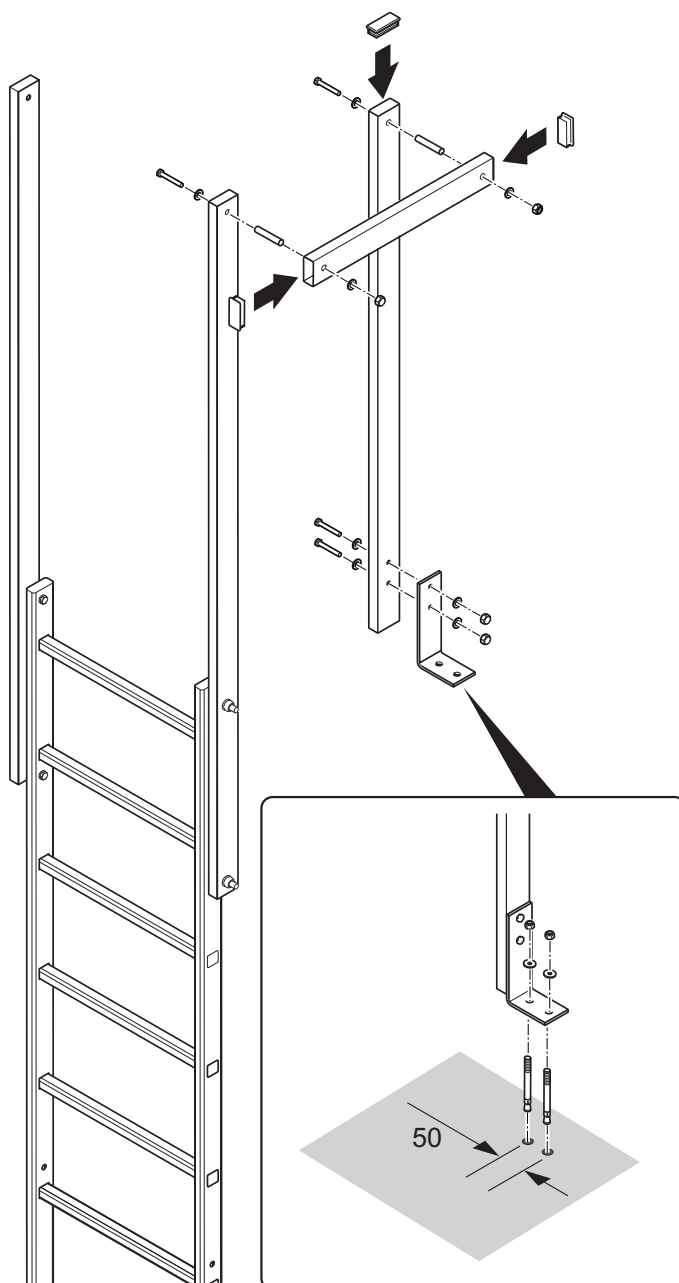
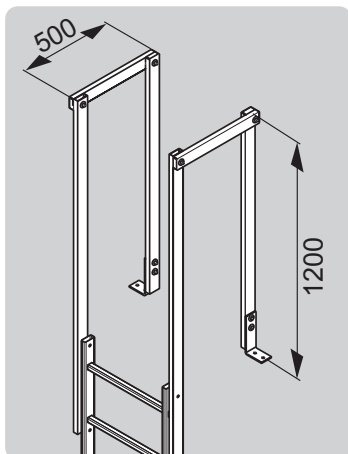
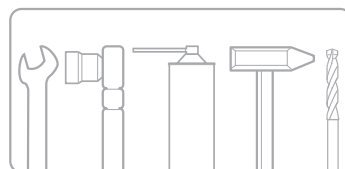
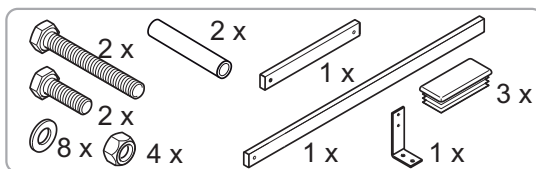


5 VERTICAL LADDERS

Exit railings (Order No. 61049, 62049, 63049, 64049)

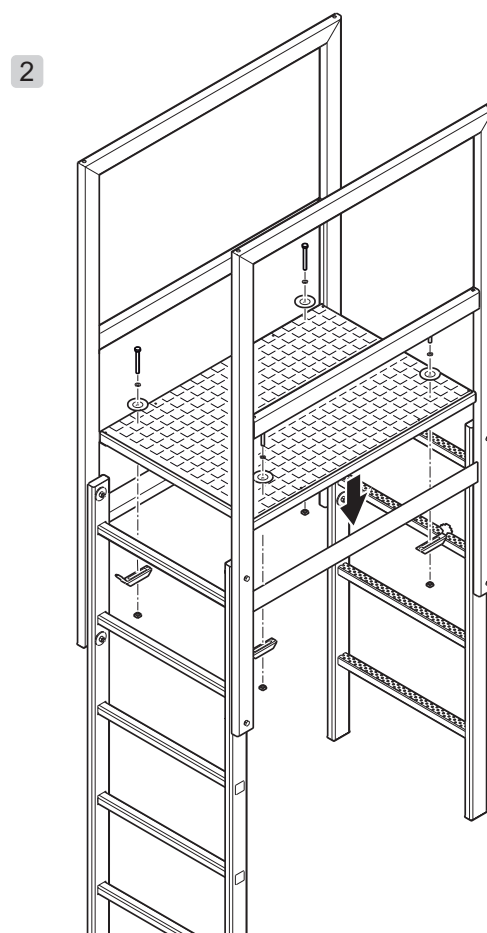
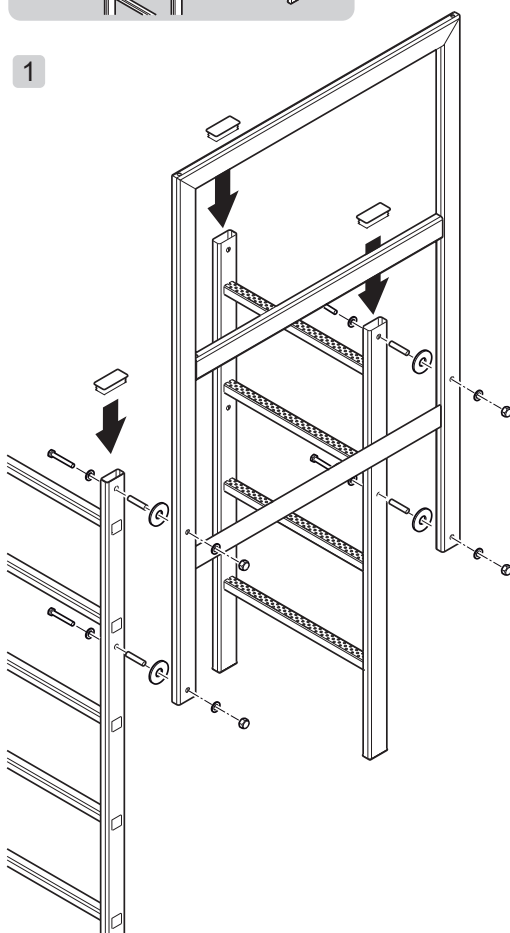
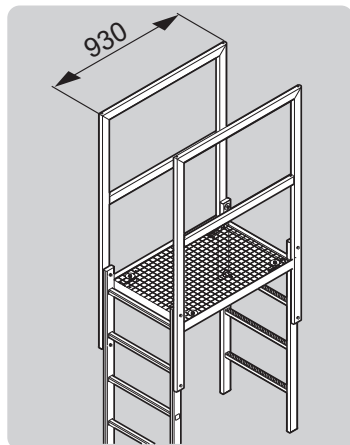
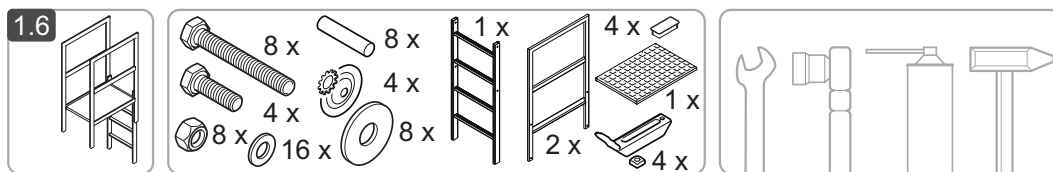


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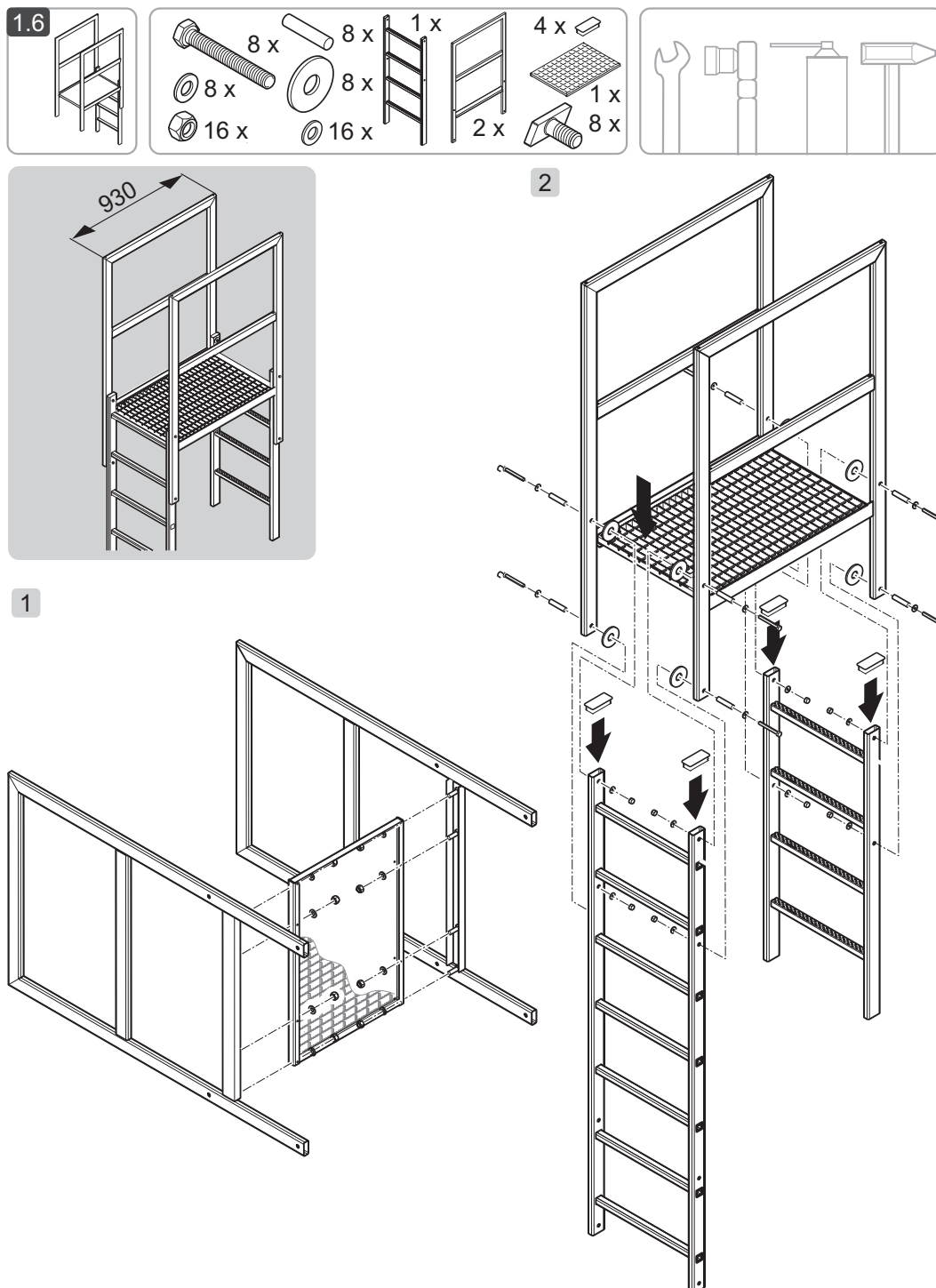
5 VERTICAL LADDERS

Attica top, steel (Order No. 63181, 64181)



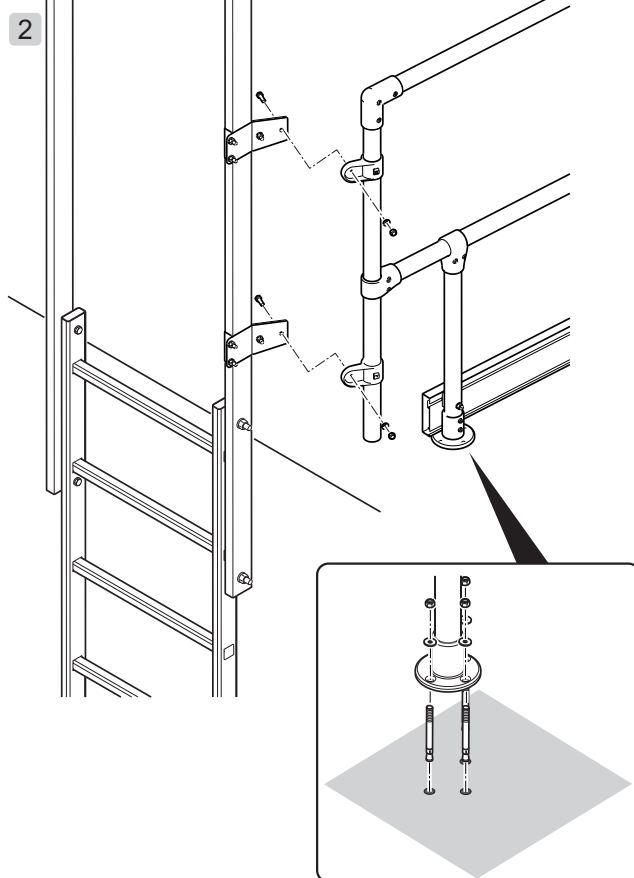
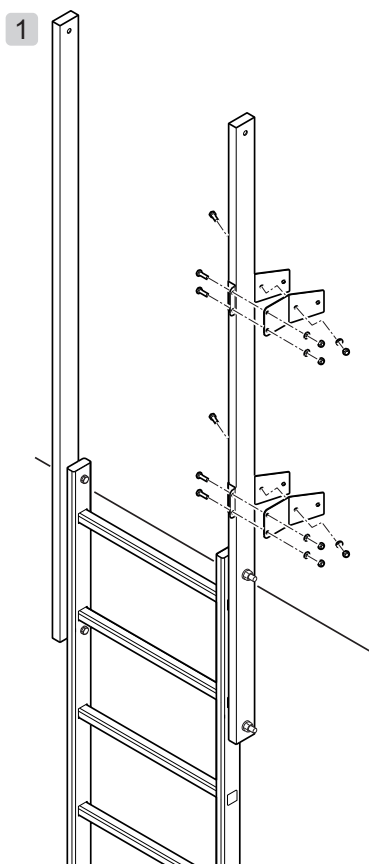
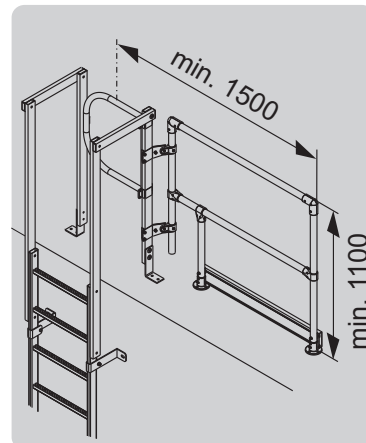
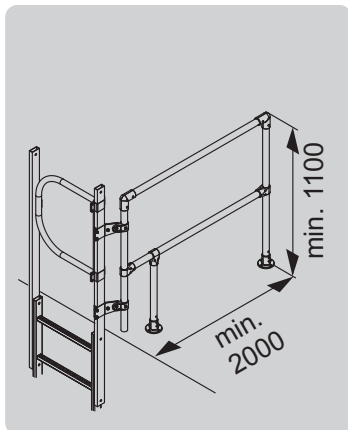
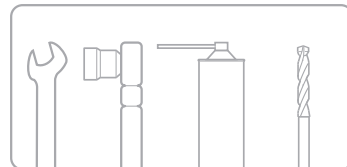
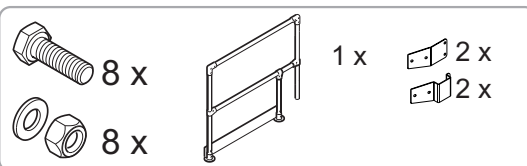
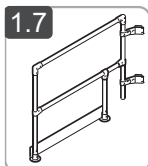
5 VERTICAL LADDERS

Attica top, aluminium (Order No. 61181, 62181)



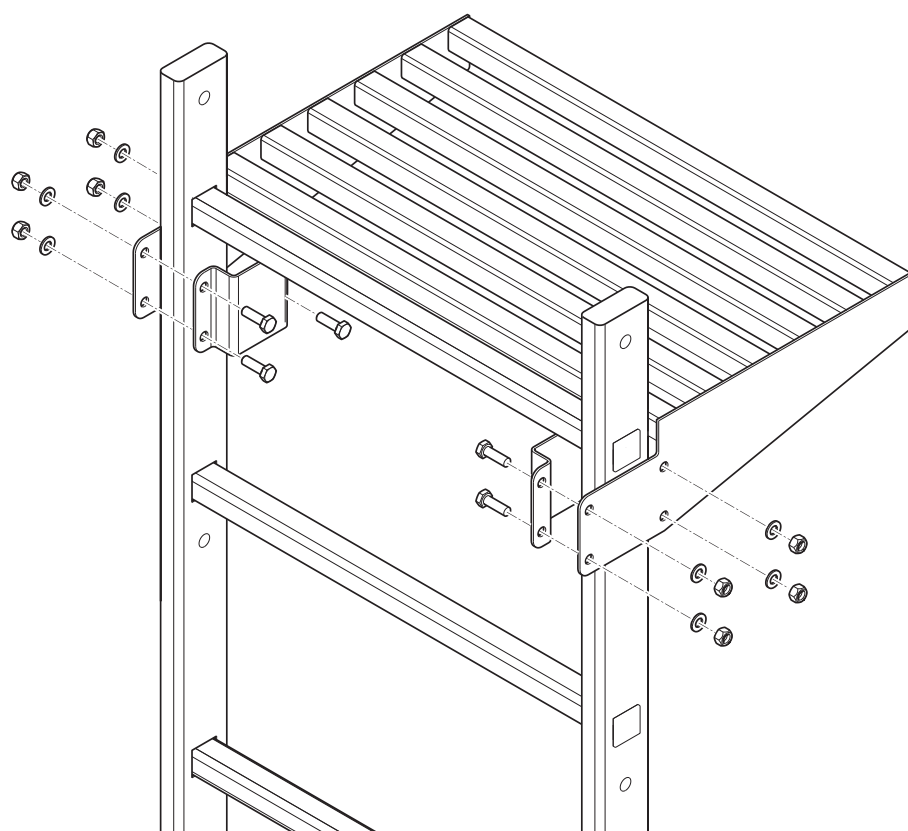
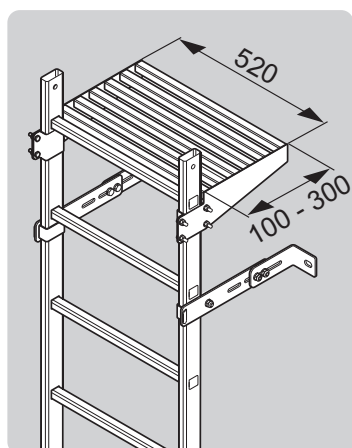
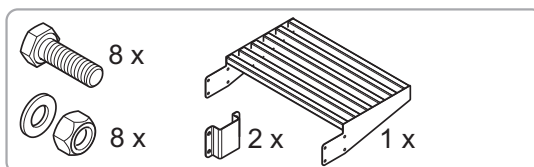
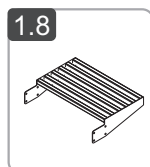
5 VERTICAL LADDERS

Side exit railings (Order No. 60981)



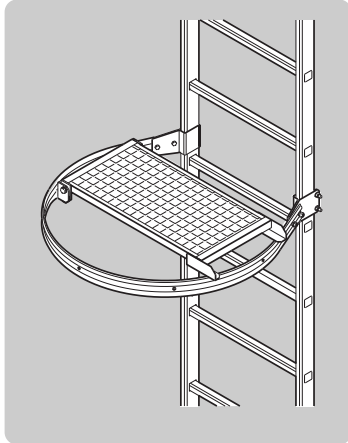
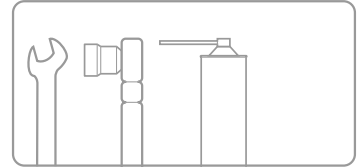
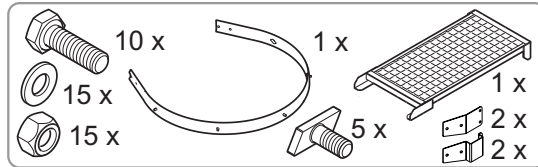
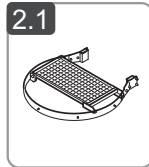
5 VERTICAL LADDERS

Exit step (Order No. 62966, 62967, 62968, 62969, 62970, 63966, 63967, 63968, 63969, 63970)

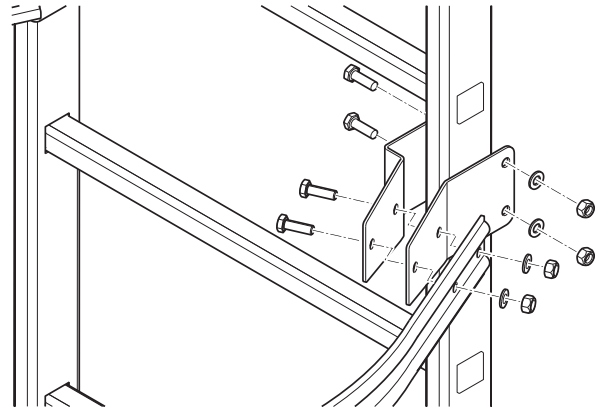


5 VERTICAL LADDERS

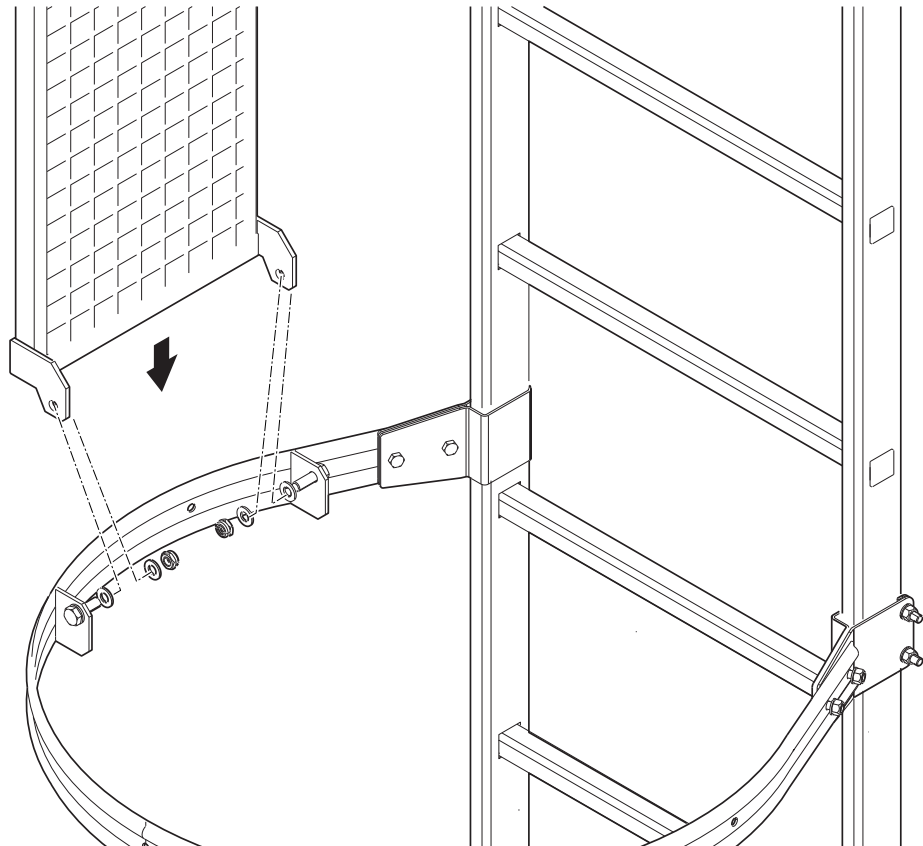
Intermediate platform, foldable (Order No. 62960, 63960)



1



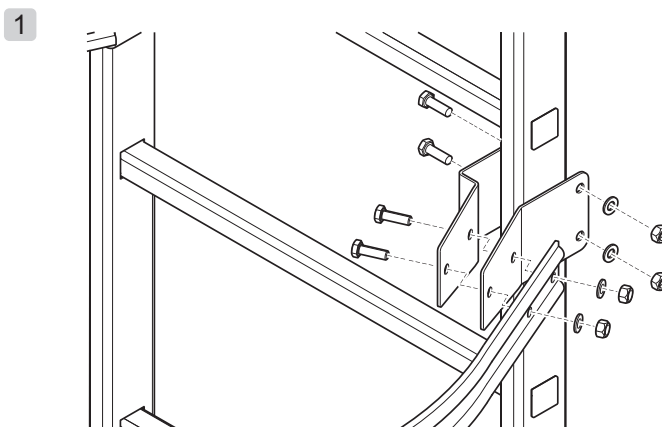
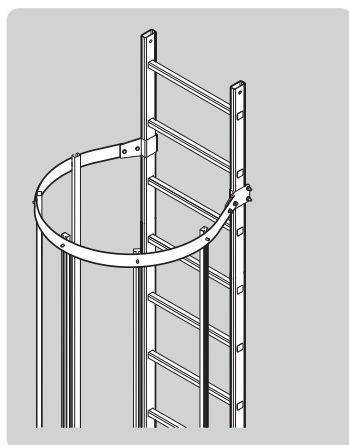
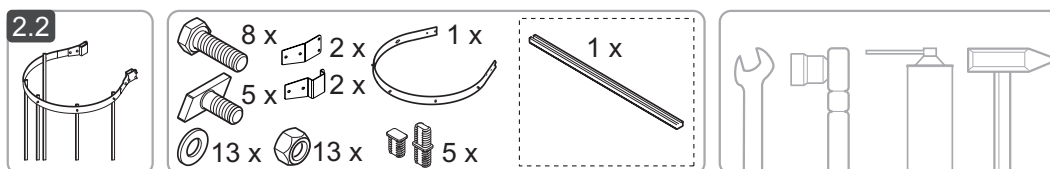
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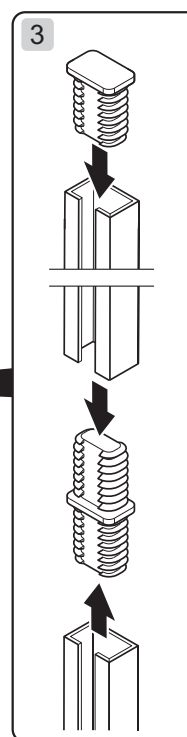
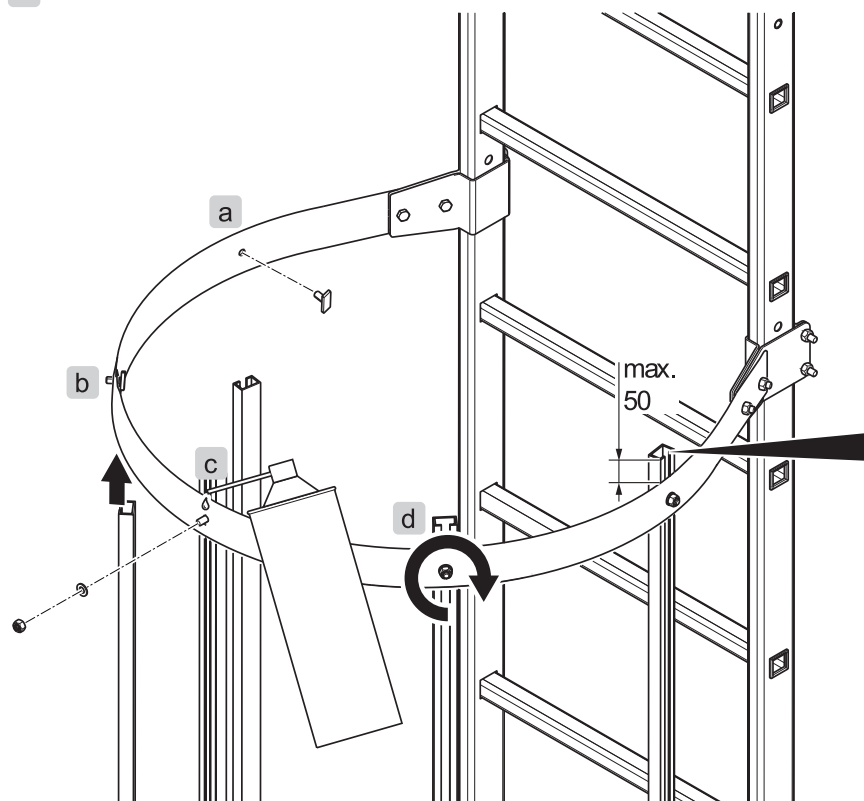
5 VERTICAL LADDERS

Falling protection bracket (Order No. 61234, 62234, 63234, 64234)

Falling protection brace (Order No. 61235, 62235, 63235, 64235)

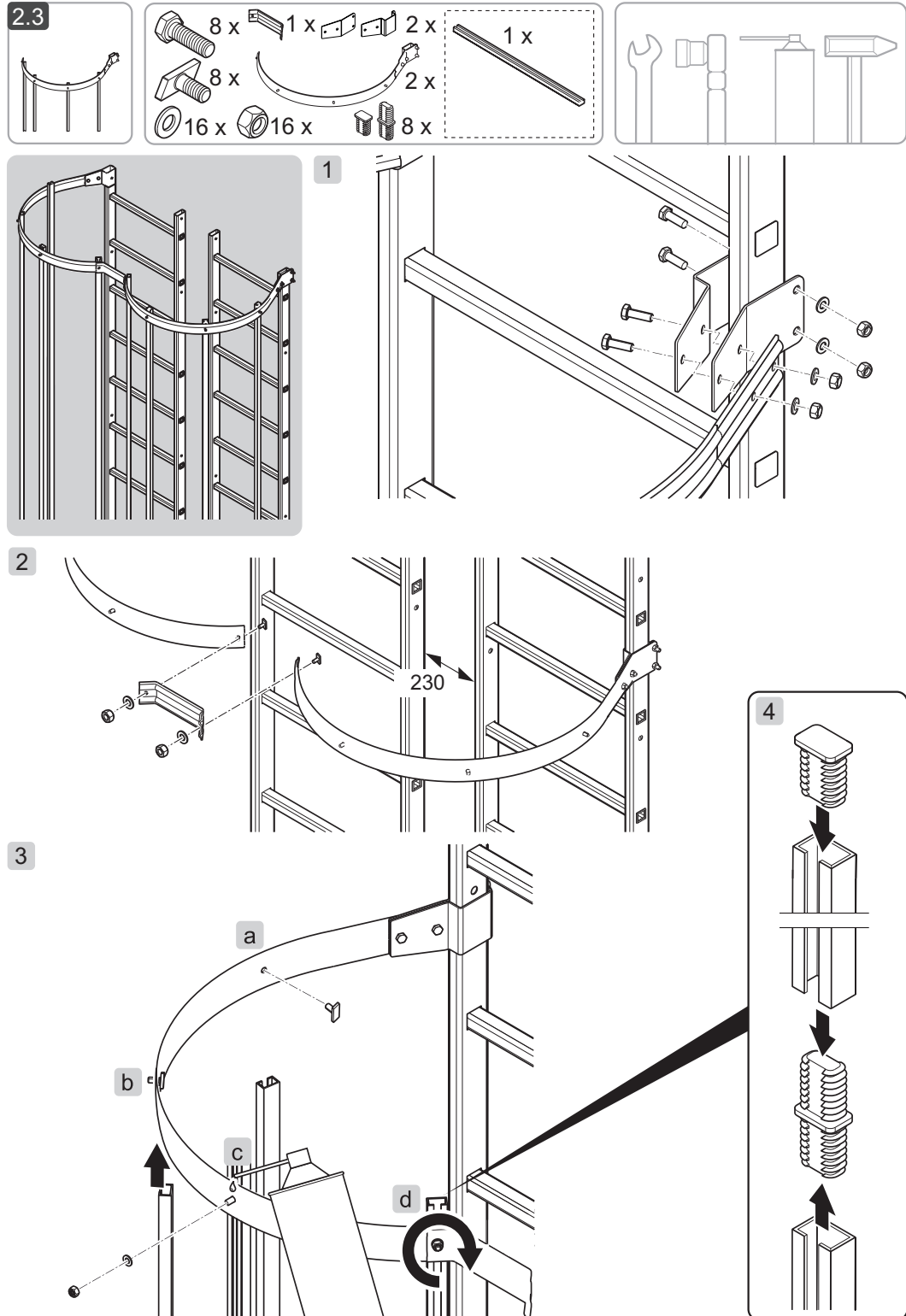


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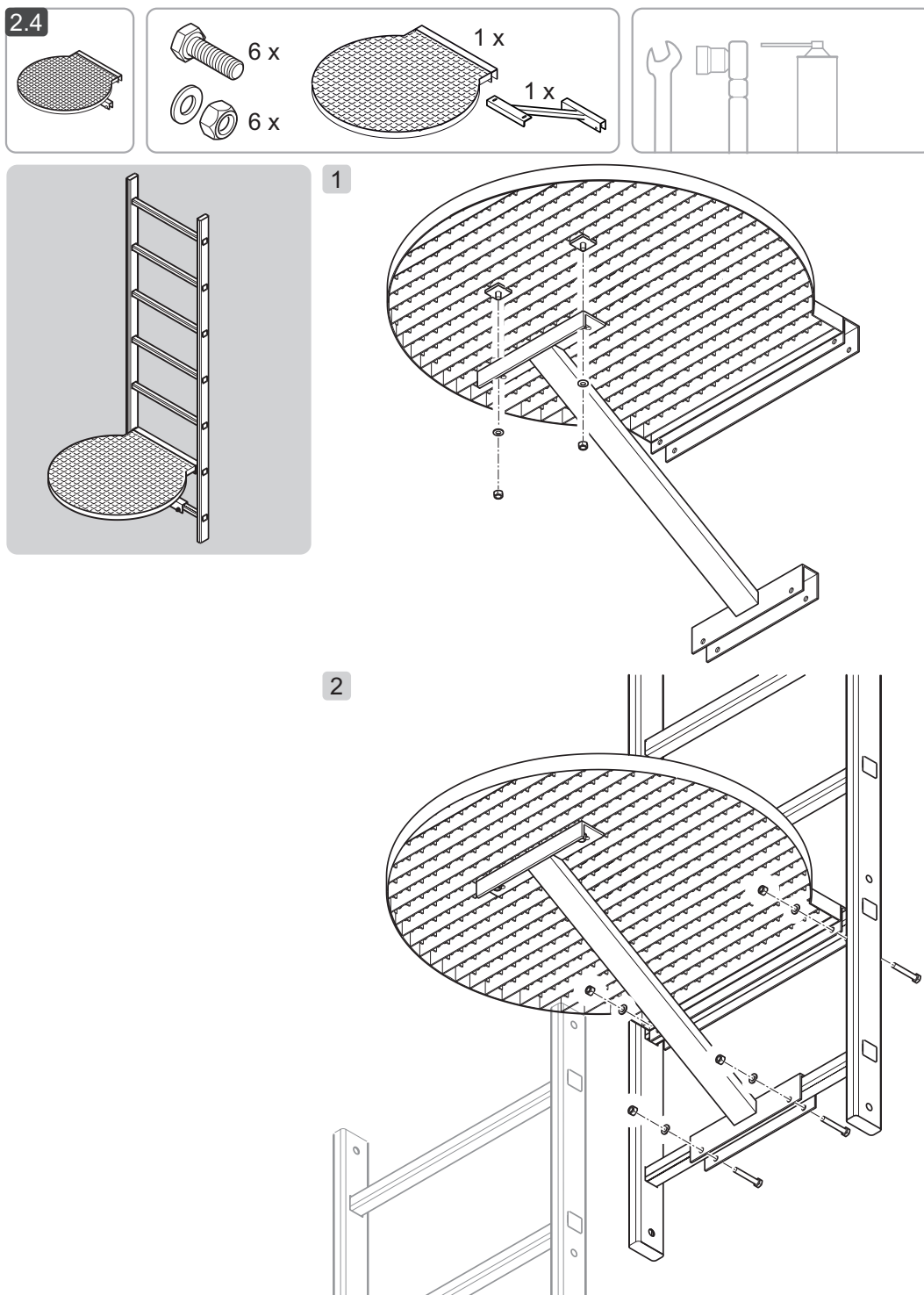
5 VERTICAL LADDERS

Falling protection bracket, offset (Order No. 61963, 62963, 63963, 64963)



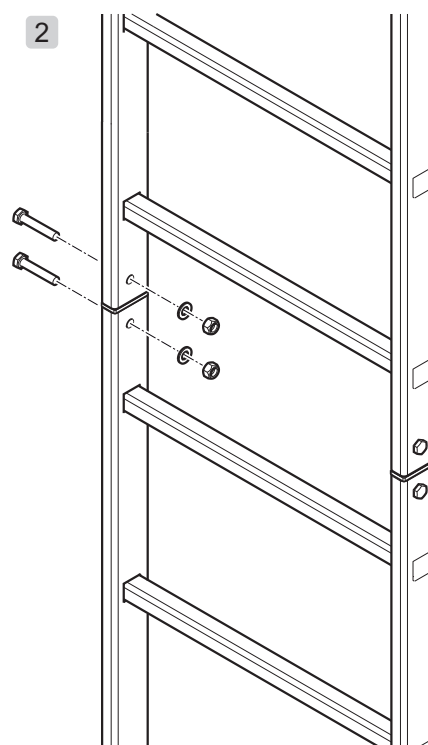
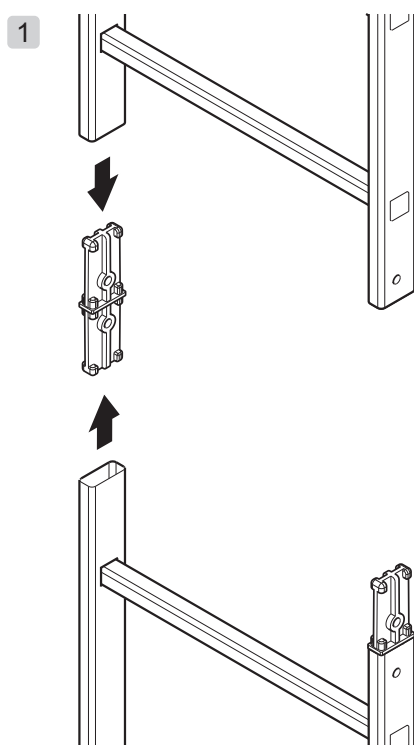
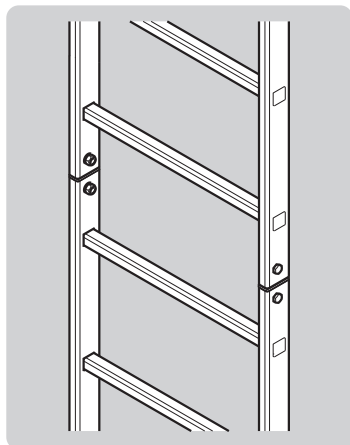
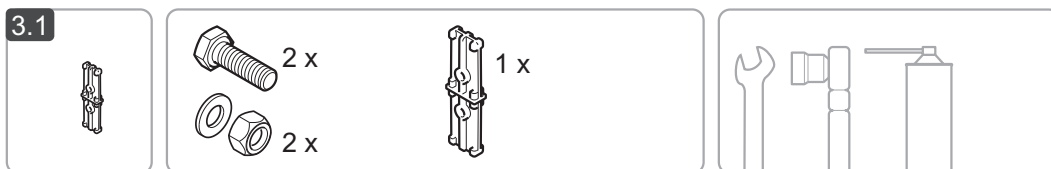
5 VERTICAL LADDERS

Transfer platform (Order No. 63961)



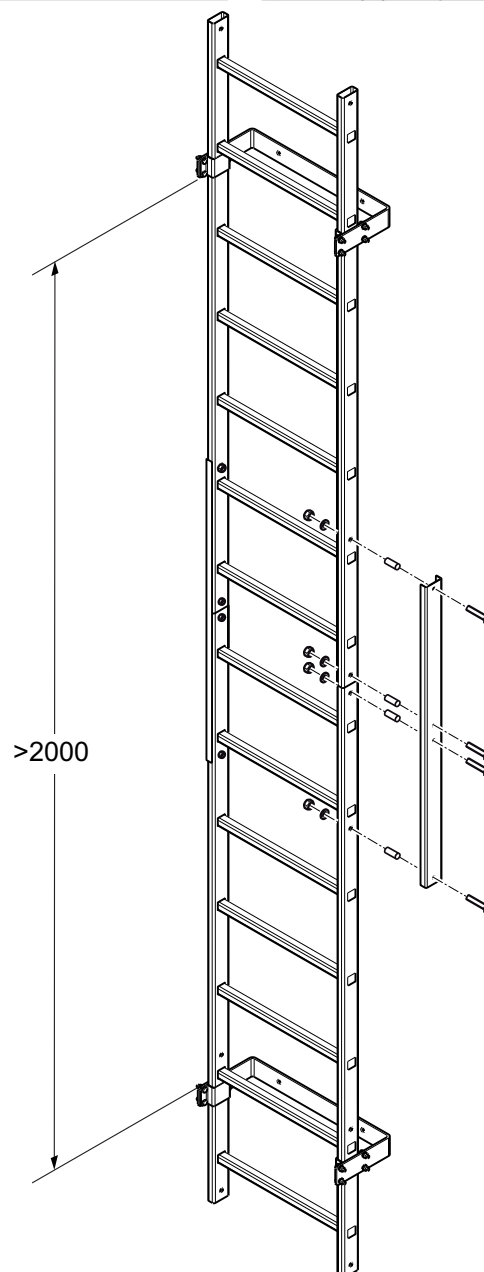
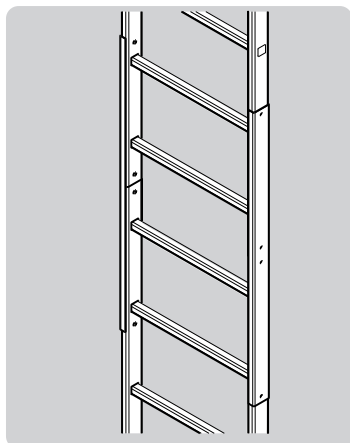
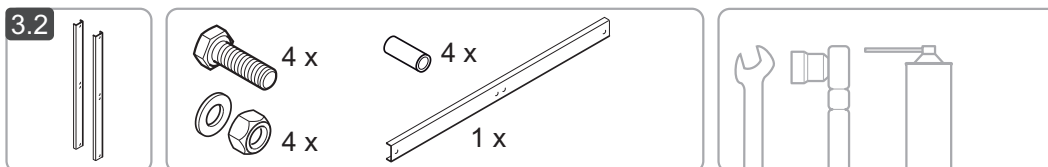
5 VERTICAL LADDERS

Vertical ladder connector (Order No. 61236)



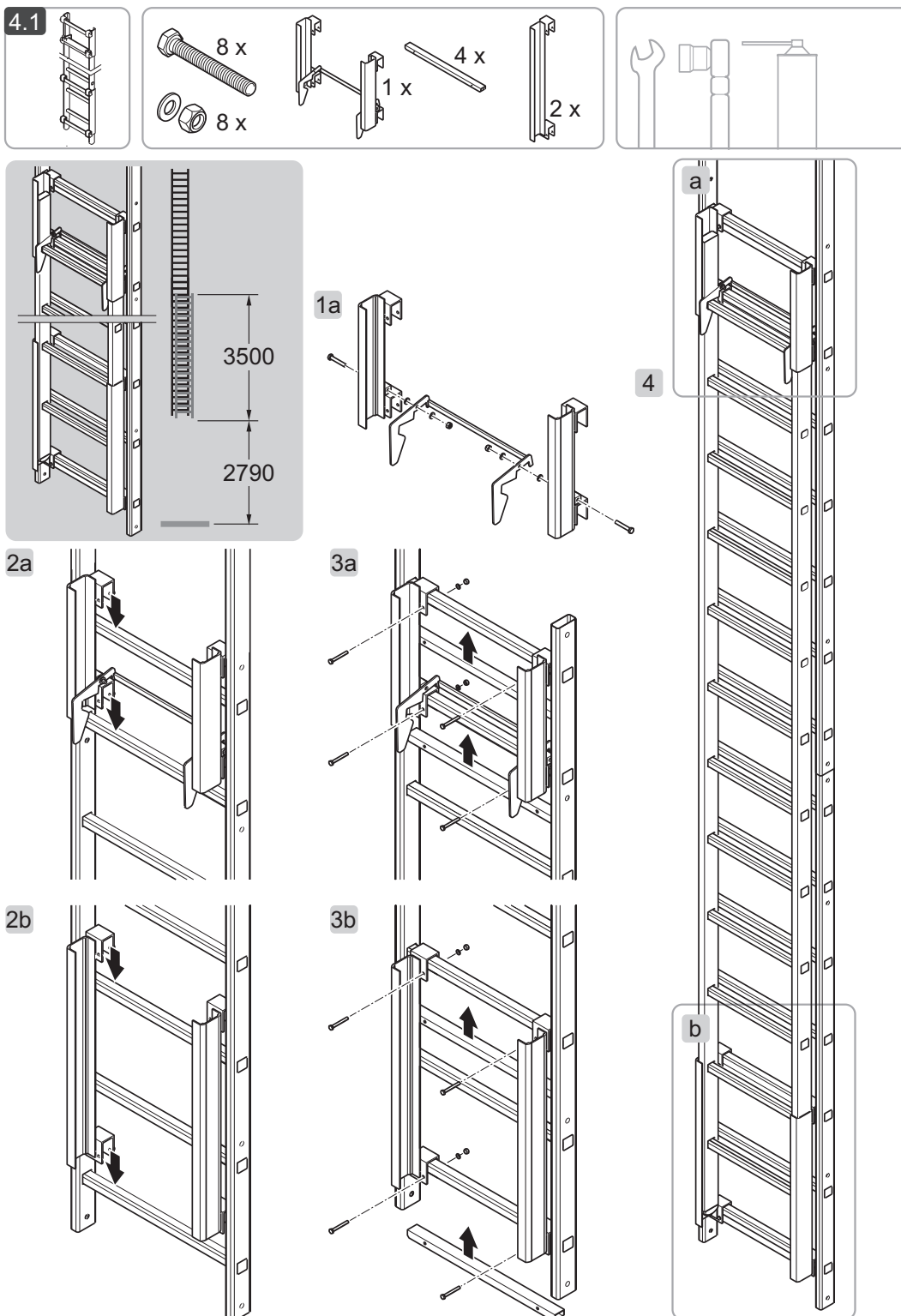
5 VERTICAL LADDERS

Connection brace (Order No. 61239)



5 VERTICAL LADDERS

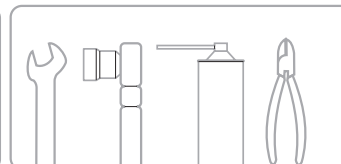
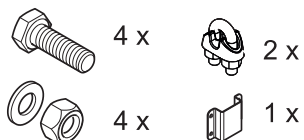
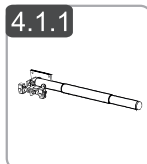
Light metal emergency exit ladder (Order No. 62446)



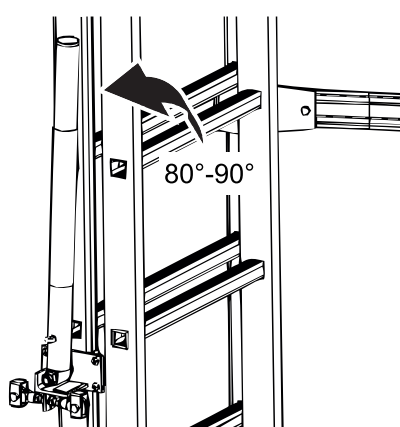
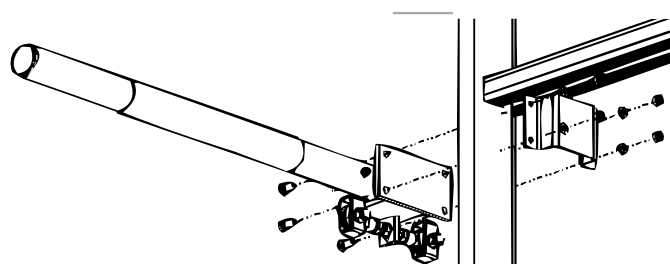
5 VERTICAL LADDERS

Release mechanism (Order No. exit left: 63504 | exit right: 63505)

4.1.1

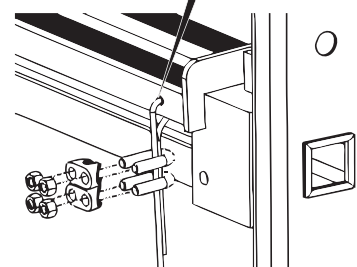
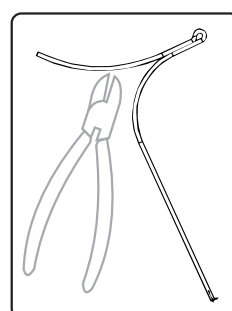


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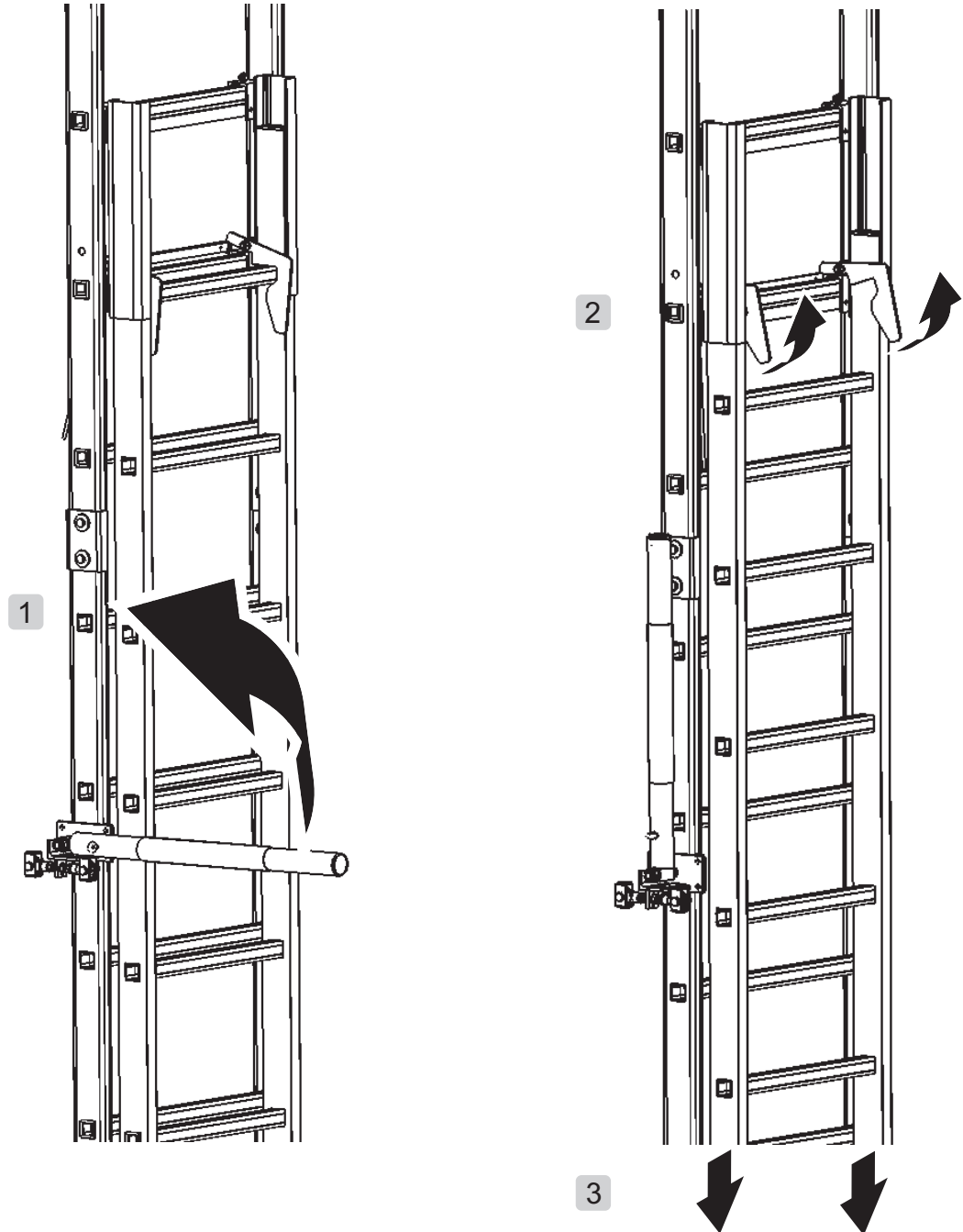
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2



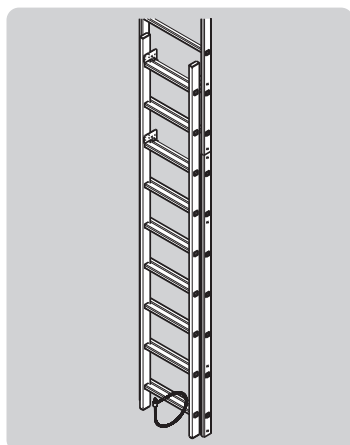
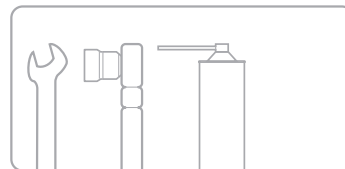
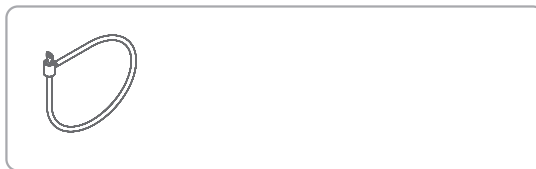
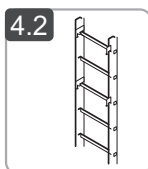
5 VERTICAL LADDERS

Release mechanism - Operational principle



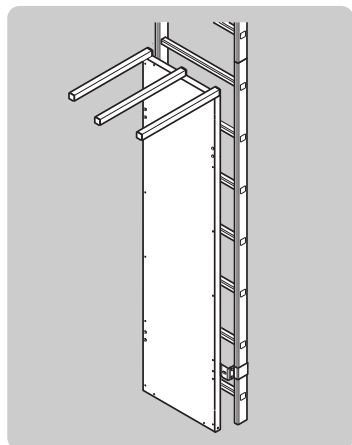
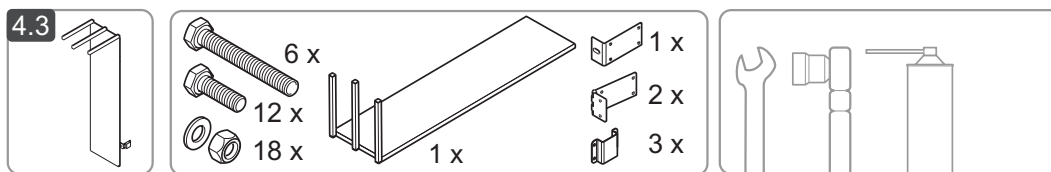
5 VERTICAL LADDERS

Light metal access ladder (Order No. 61445)

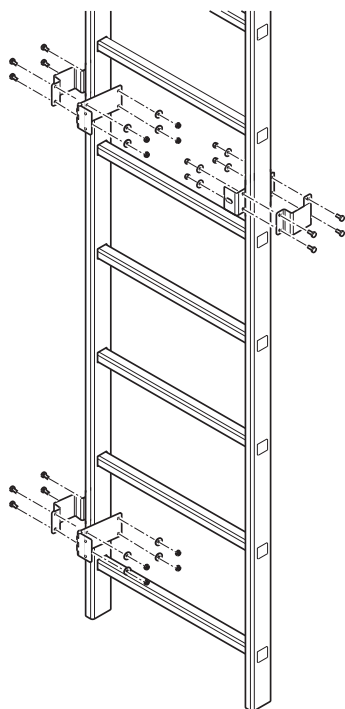


5 VERTICAL LADDERS

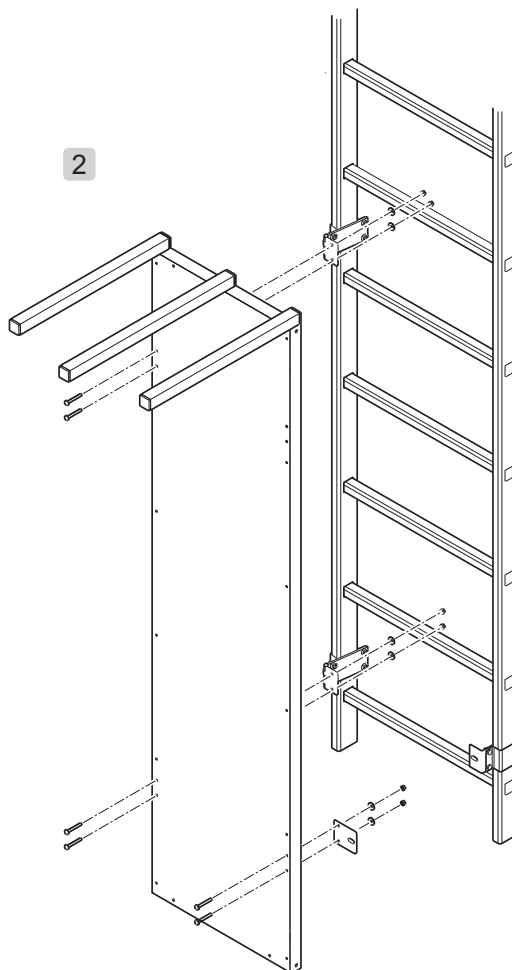
Steel closure doors (Order No. 63498)



1

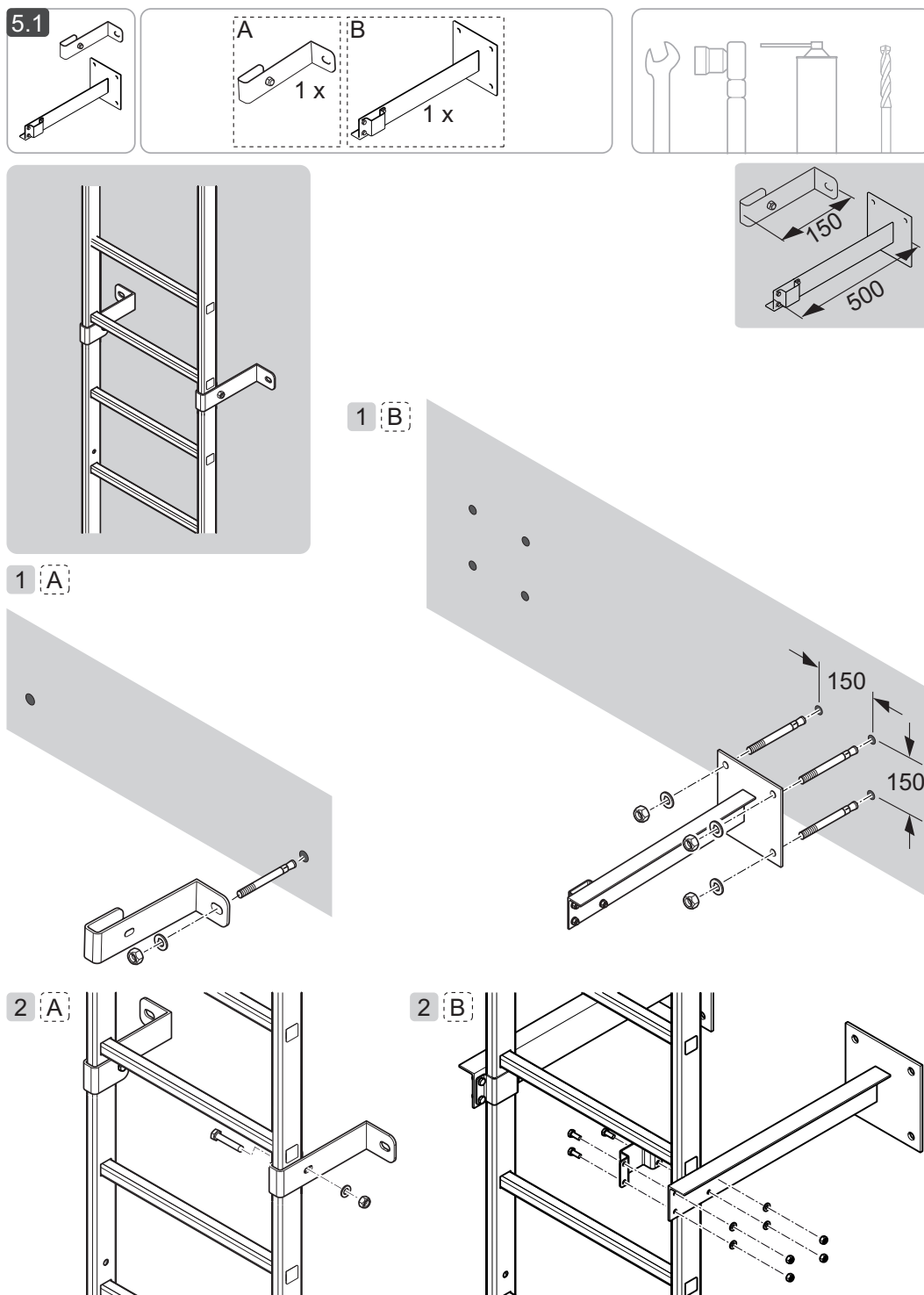


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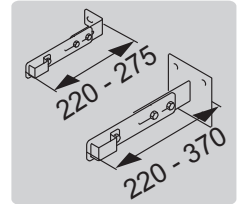
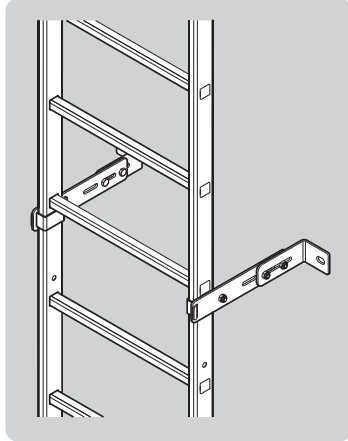
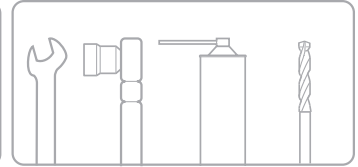
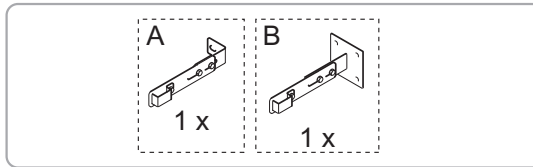
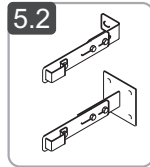
5 VERTICAL LADDERS

Wall anchor, rigid (Order No. 63249, 64249, 63254)



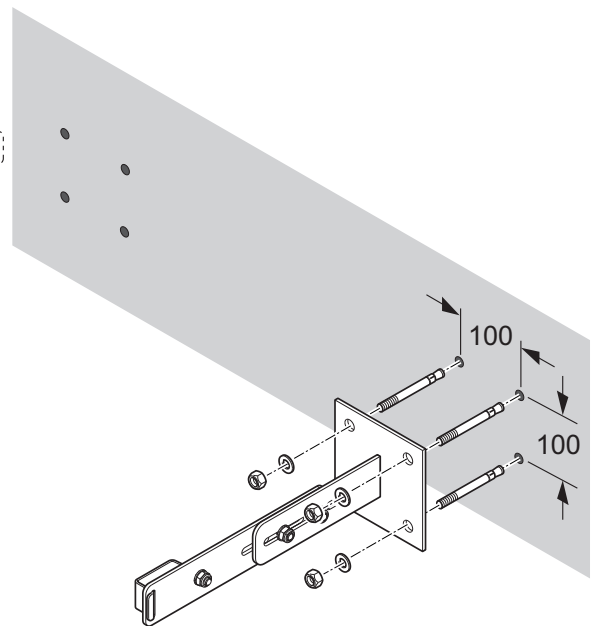
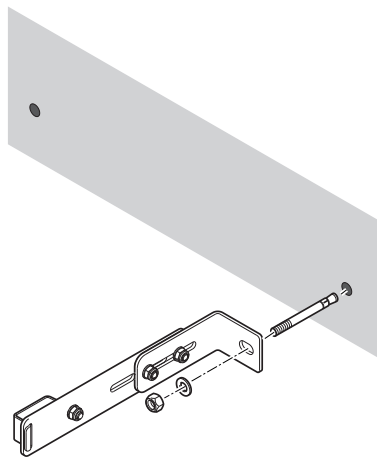
5 VERTICAL LADDERS

Wall anchor, adjustable (Order No. 63262, 64262, 63261, 64261)



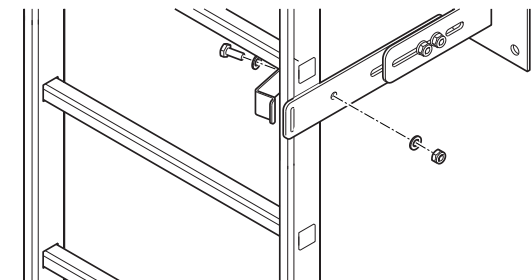
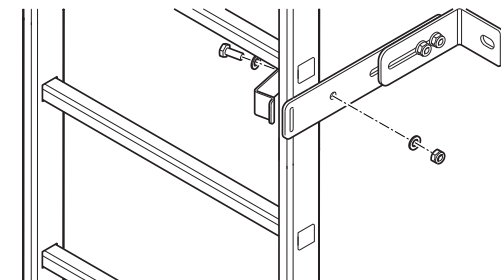
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1 B



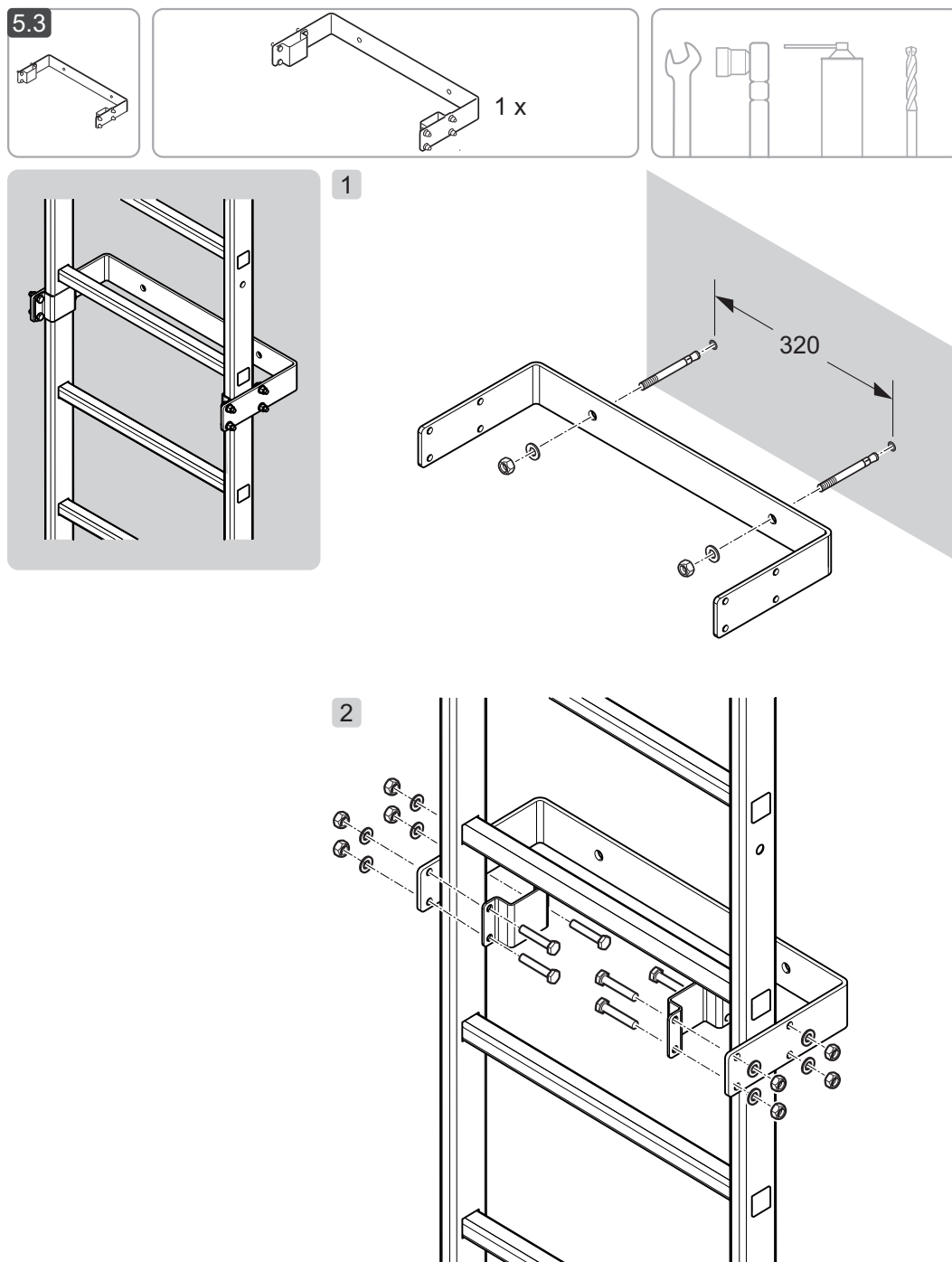
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2 B



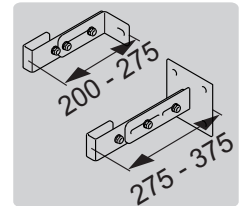
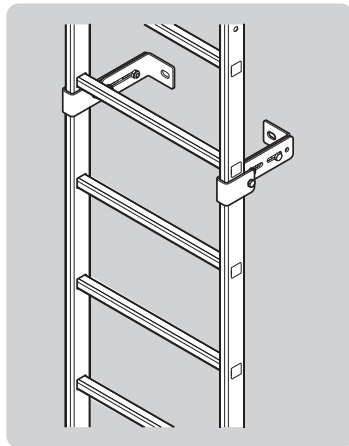
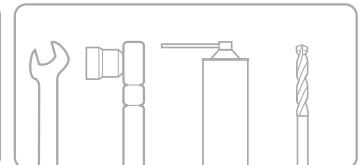
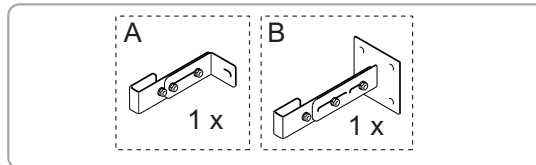
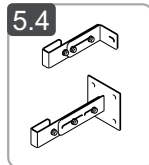
5 VERTICAL LADDERS

U-bracket (Order No. 63257)



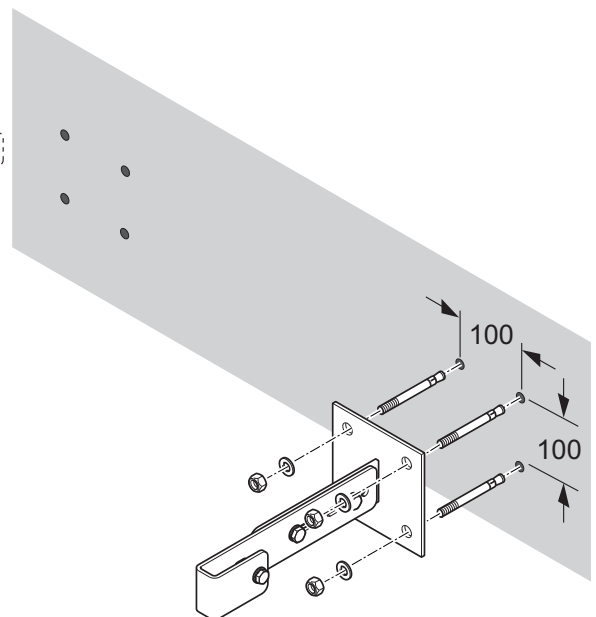
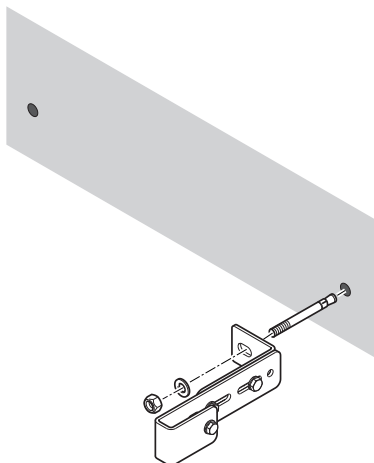
5 VERTICAL LADDERS

Wall anchor, adjustable, with clamping bracket (Order No. 63250, 64250, 63252, 64252, 63251, 64251)



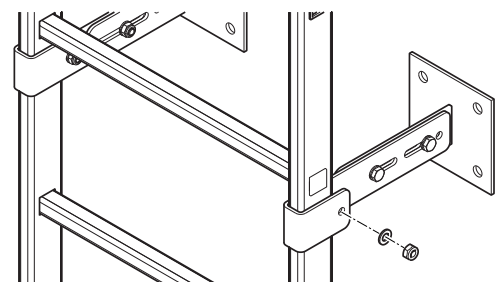
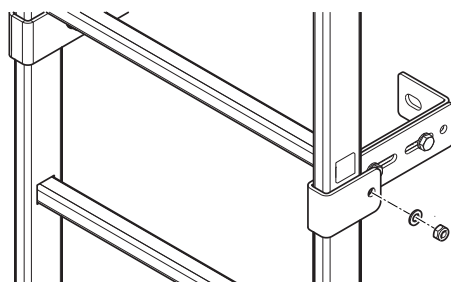
1 A

1 B



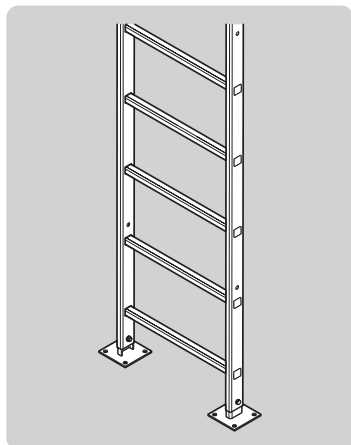
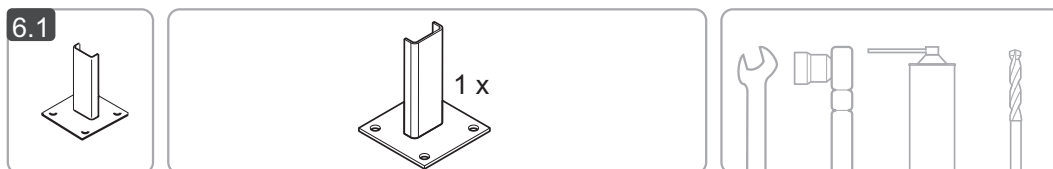
2 A

2 B

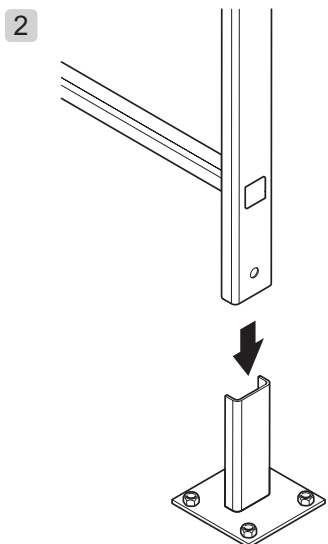
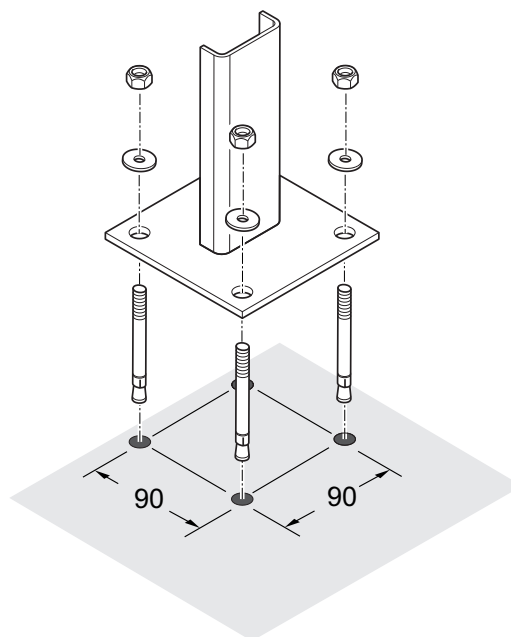


5 VERTICAL LADDERS

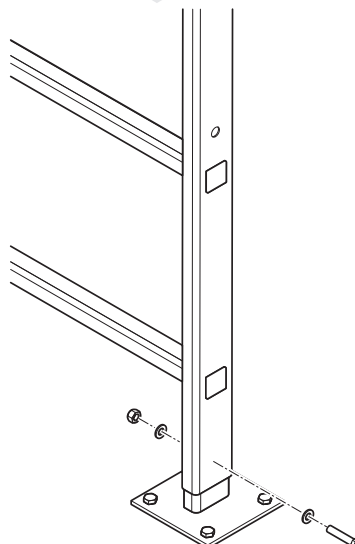
Foot plate (Order No. 63253, 64253)



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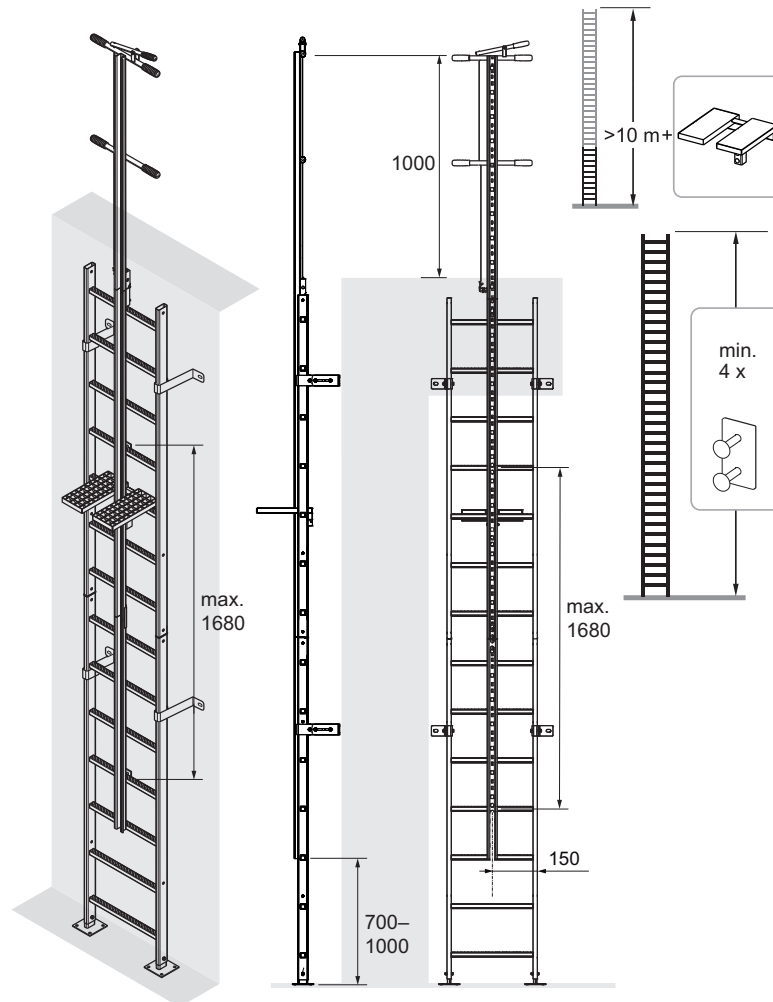
3



6 FALL ARRESTOR

6 Fall arrestor

6.1 System dimensions



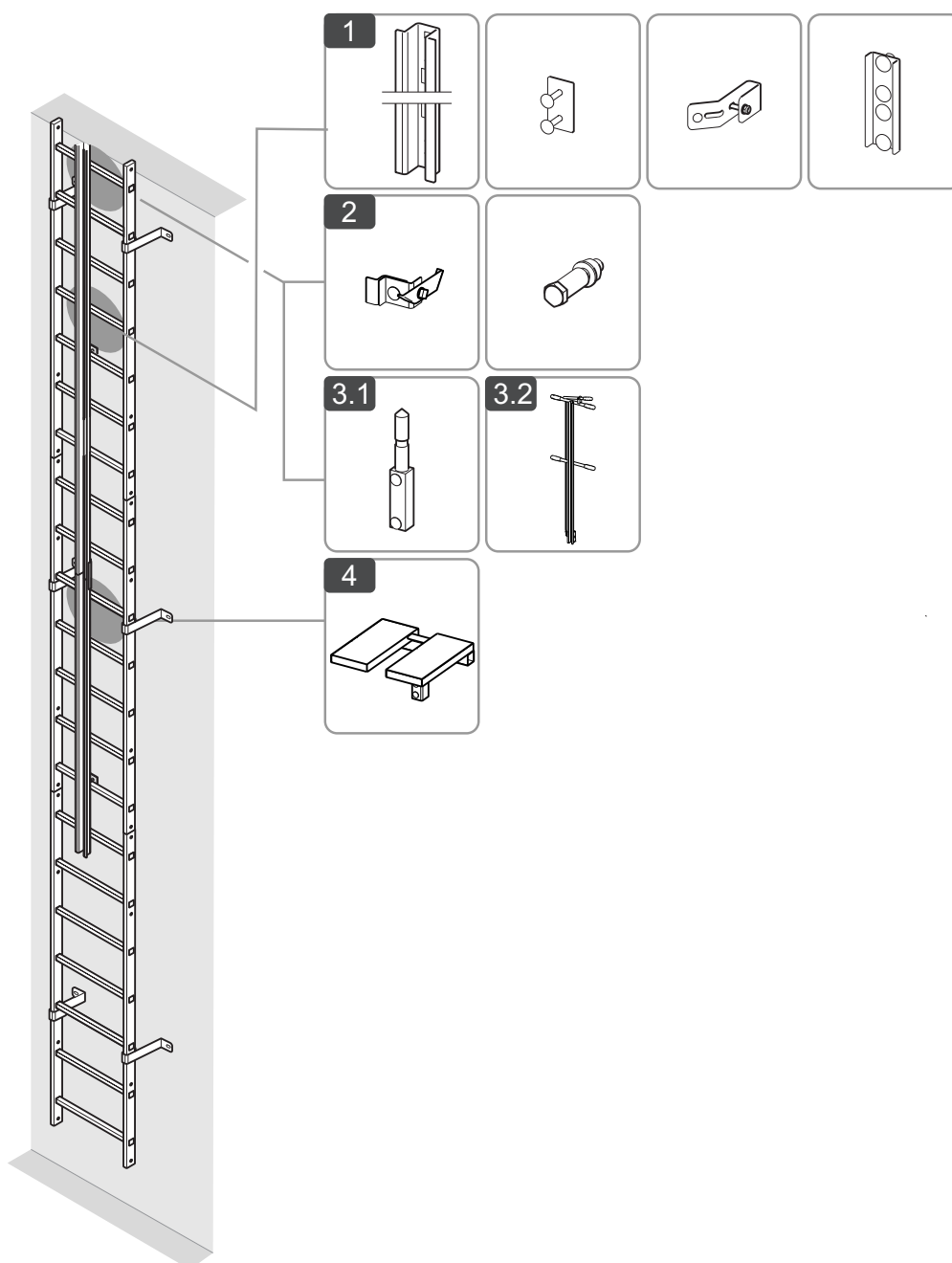
6 FALL ARRESTOR

6.2 System overview and erection

System overview

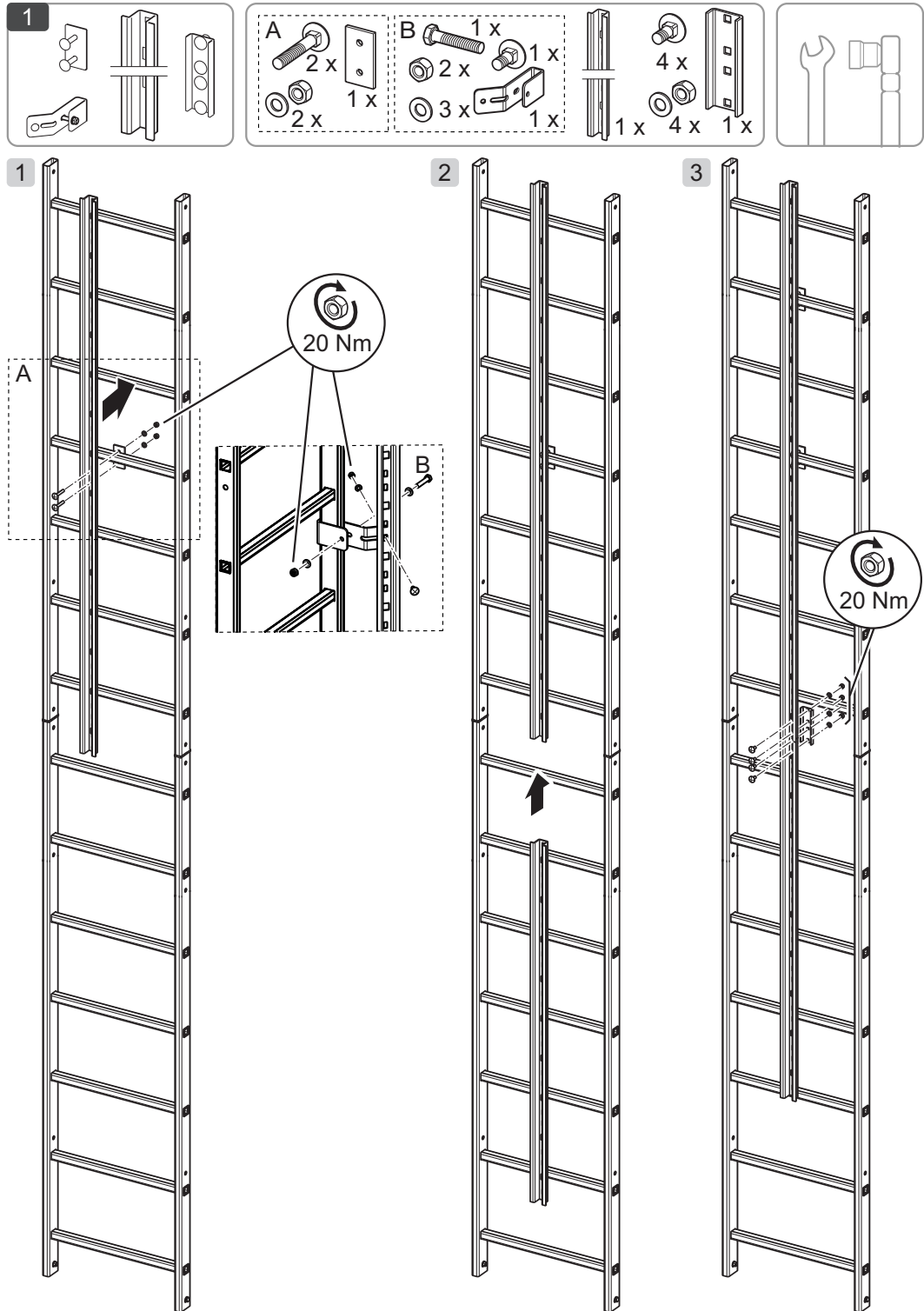
! NOTE

→ Additionally, observe our information brochure "Instructions for erecting and using the climb guard system GÜFA 3".



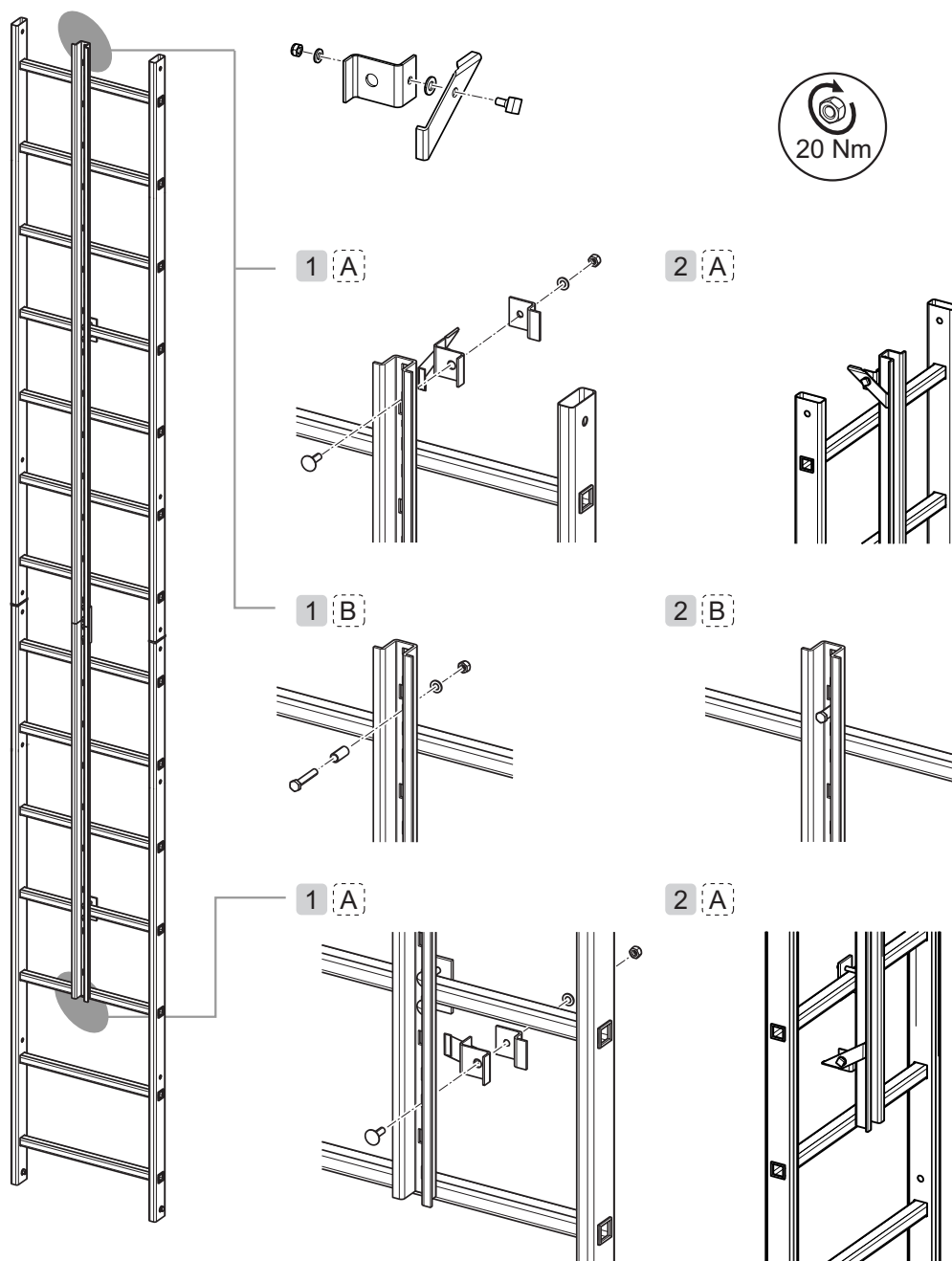
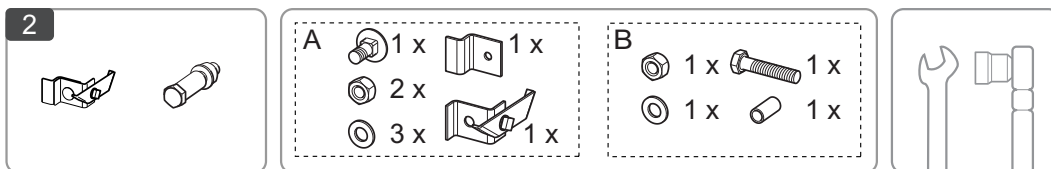
6 FALL ARRESTOR

Fall arrestor rails (Order No. 77530, 77531, 77532, 77550, 77551, 77552, 77059, 77058, 77057)



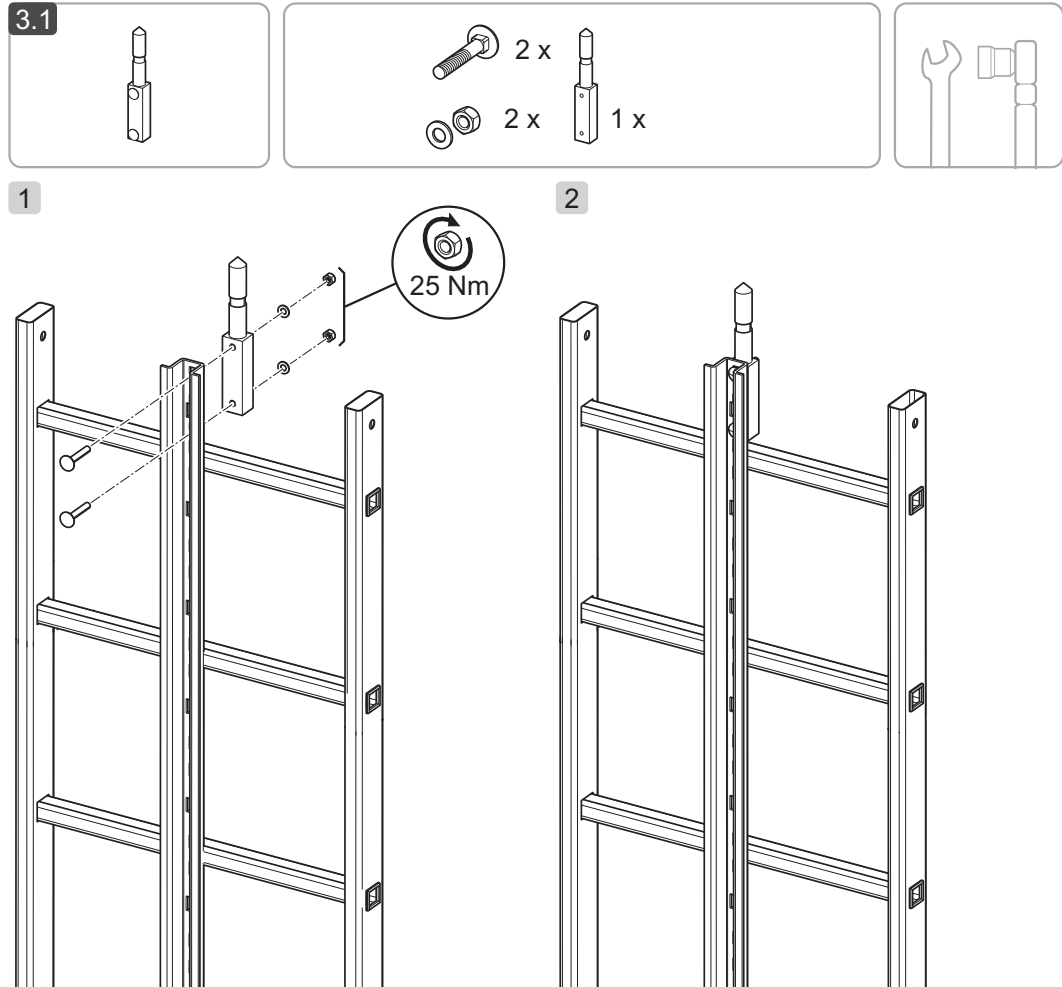
6 FALL ARRESTOR

Rail arrester rigid/removable (Order No. 77564, 77565)



6 FALL ARRESTOR

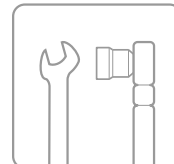
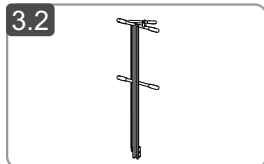
Plug-on piece (Order No. 77563)



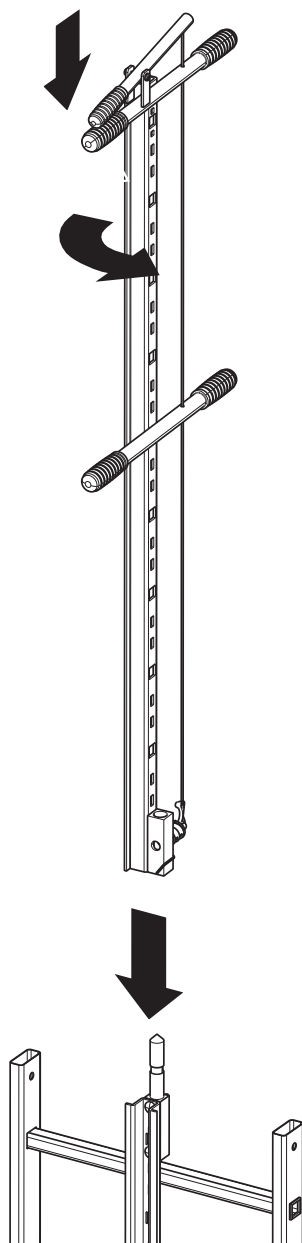
6 FALL ARRESTOR

Access aid (Order No. 77541, 77561)

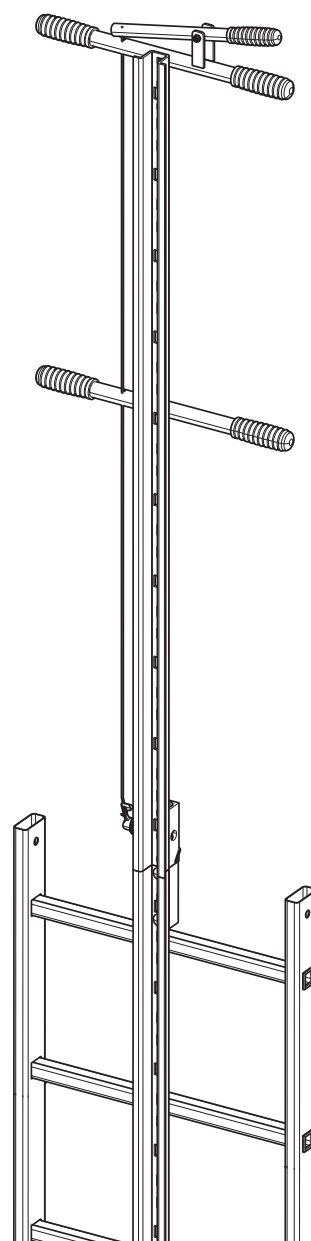
3.2



1

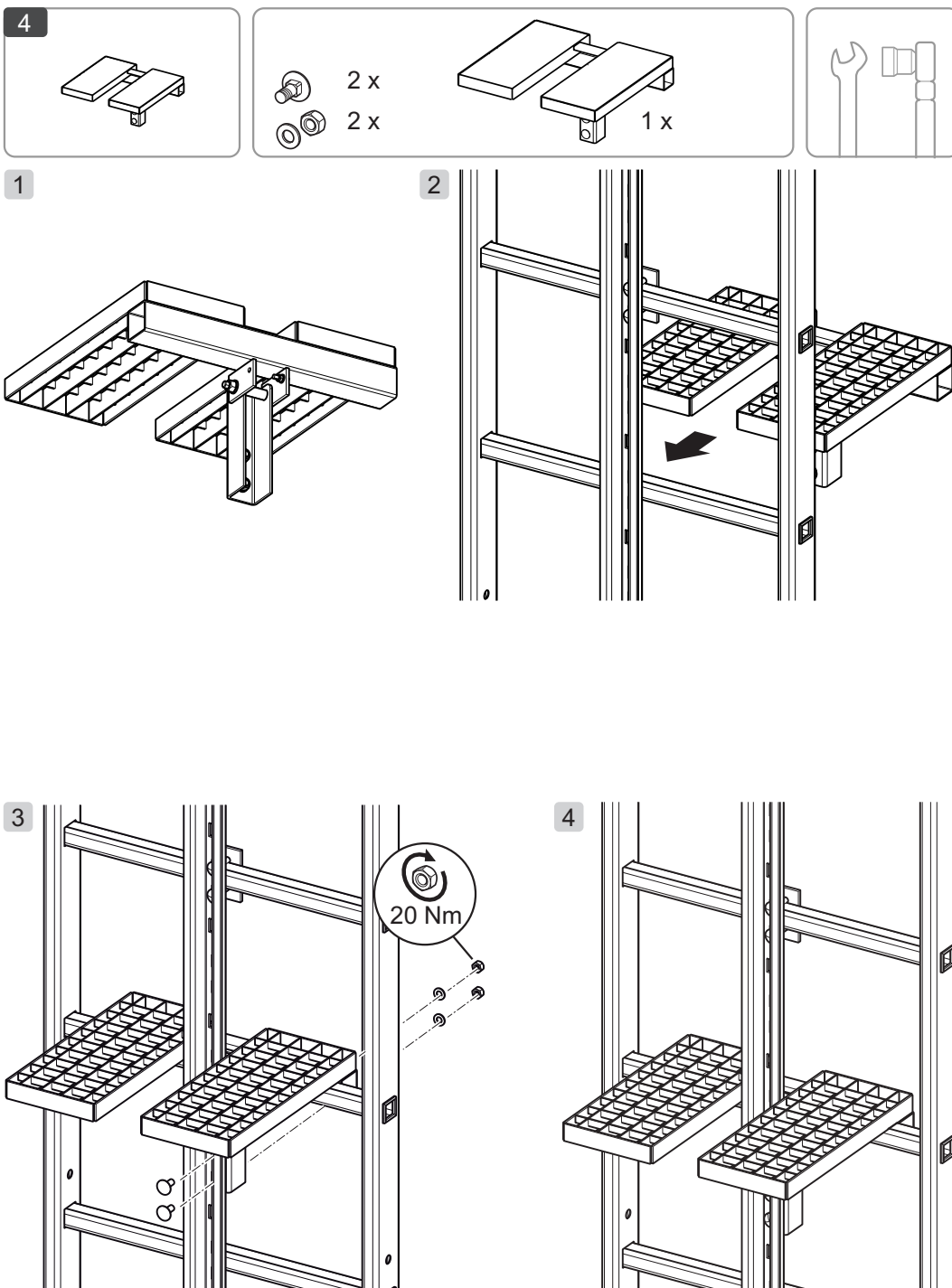


2



6 FALL ARRESTOR

Rest platform (Order No. 77539, 77559)



EXAMPLES OF APPLICATIONS FOR VERTICAL LADDERS



EXAMPLES OF APPLICATIONS FOR VERTICAL LADDERS



EXAMPLES OF APPLICATIONS FOR VERTICAL LADDERS



ÜBERBLICK ÜBER UNSER GESAMTPROGRAMM



- Ladders
- Platforms
- Roller scaffolds
- Bridging elements
- Steps
- Railings



- Special constructions for commercial vehicles and rolling stock, for aircraft, industrial plant, outdoor equipment and buildings