

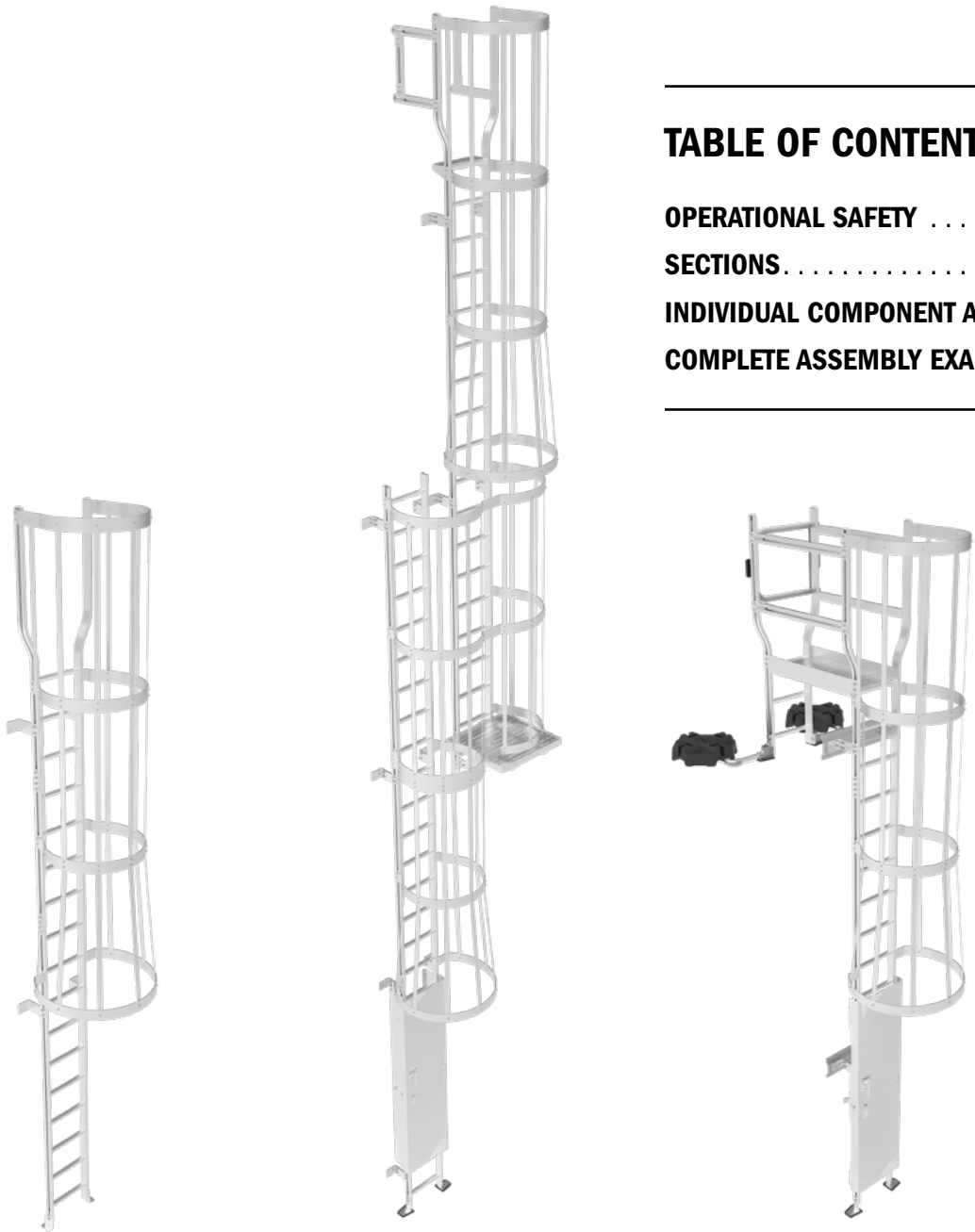


**ALUMINUM FIXED
WALL LADDER**

**OPERATIONAL SAFETY AND
ASSEMBLY INSTRUCTIONS**

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Pictures may differ from actual product.



**READ THESE INSTRUCTIONS CAREFULLY BEFORE USING THIS PRODUCT.
KEEP THIS MANUAL HANDY FOR FUTURE REFERENCE.**

OPERATIONAL SAFETY



READ BEFORE BEGINNING ASSEMBLY.

FAILURE TO UNDERSTAND AND FOLLOW ALL SAFETY RULES AND ASSEMBLY INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.



METAL CONDUCTS ELECTRICITY:

Do not use this equipment where contact may be made with power lines or other live electrical circuits.

OPERATION AND SAFETY

- A competent person or structural engineer must conduct an initial assessment of the work, evaluate the integrity of the supporting structure to which this system will be attached, and ensure that it is capable of supporting the required design loads.
- Verify that all components listed in the order have been supplied upon delivery and have been installed. Use only original parts that are in good working condition to assemble the product. Do not modify or remove any part of this product unless authorized by Metaltech or a qualified engineer.
- The fixed ladder must be assembled and installed by competent persons who have been trained in its selection, installation, use, and maintenance, and who have thorough knowledge of the applicable standards and codes, enabling them to perform the work safely.
- The installation instructions must be read and followed in conjunction with the technical drawings provided. Anchors must be installed in accordance with the requirements of this document or the applicable standards, whichever are more stringent, to ensure compliance with the design and installation drawings.
- Use appropriate protective equipment during installation, such as platform ladders, scaffolding, and safety harnesses.
- Carefully inspect the structure to ensure that it has been properly assembled. All connections, fasteners, and bolts must be tightened in accordance with the specifications and using the appropriate hardware. Overtightening may damage the components.
- When components must be cut to size, this work must be performed on site by qualified personnel. Deburr all edges and apply corrosion protection to exposed surfaces.

EQUIPMENT INSPECTION

- Always inspect the equipment before each use. Do not use the system if it shows any abnormalities, is incomplete, or is not in perfect technical condition.
- Immediately remove from service any ladder showing defects or damage. Any missing label or component requires the ladder to be taken out of service until it has been replaced with an original version.
- Moving components, such as hinges, safety gates, and safety doors, must be checked at least once a year to ensure proper operation.
- A periodic inspection of the system must be performed by a competent person to ensure safe operation, including the overall integrity of the system, proper tightening of fasteners, and proper operation of moving components such as gates, doors, etc.
- The inspection must be performed at least once a year. Inspections, along with their findings and any required corrective actions, must be documented in order to maintain a record and preserve the manufacturer's warranty.

USE

- Fixed ladders must be used only by authorized, competent, and trained personnel.
- Do not use this equipment if you are in poor health, under medication, or under the influence of drugs or alcohol, as this may compromise your safety.
- Do not use in hazardous weather conditions.
- Do not use alone in situations where emergency assistance may be required.
- Maintain three points of contact with the ladder at all times while using it. When exiting the ladder, keep both hands on the guardrail until you have reached a stable position.
- Do not subject the ladder to dynamic loads, such as swinging or jumping, and do not use it for any purpose other than its intended use. If the ladder is subjected to an abnormal load, do not use it until it has been replaced or validated by a competent person.
- Properly close all devices, such as platforms, doors, and gates, after use, and prevent access by unauthorized persons.
- Clean ladder systems after each use to ensure their safety and durability. Remove all dirt, corrosive substances, or contaminants.

COMPLIANCE WITH STANDARDS

- The fixed ladder has been designed to meet the following standards:
 - CSA Z259.2.4
 - ANSI A14.3
 - OSHA 29 CFR 1910.23
 - NBC
 - RSST
 - OBC
 - CCR Title 8 §3277
- Always comply with the applicable local or national legislation governing the installation and use of this type of equipment.
- Cages are considered a means of fall direction rather than a means of fall prevention. Where permitted by legislation, they may be used in conjunction with fixed ladders and fall protection systems.

TOOLS

The following tools are required for assembly:

- Circular saw or angle grinder with an aluminum-cutting blade
(do not use a diamond blade)
- Drill and drill bits
- Adjustable wrench
- Torque wrench
- Sockets: 3/4", 7/16", 9/16", T30
- 5/16" Allen key
- Level
- Measuring tape

Bolts	Type	Socket	[N·m]	[lb·ft]
VB-BFHT1_4X1GM	Torx 1/4"	T30	14	10
VB-BSFH1_2X1GM	Hex 1/2"	3/4"	136	100

Table 1 : Tightening torque

WARNING

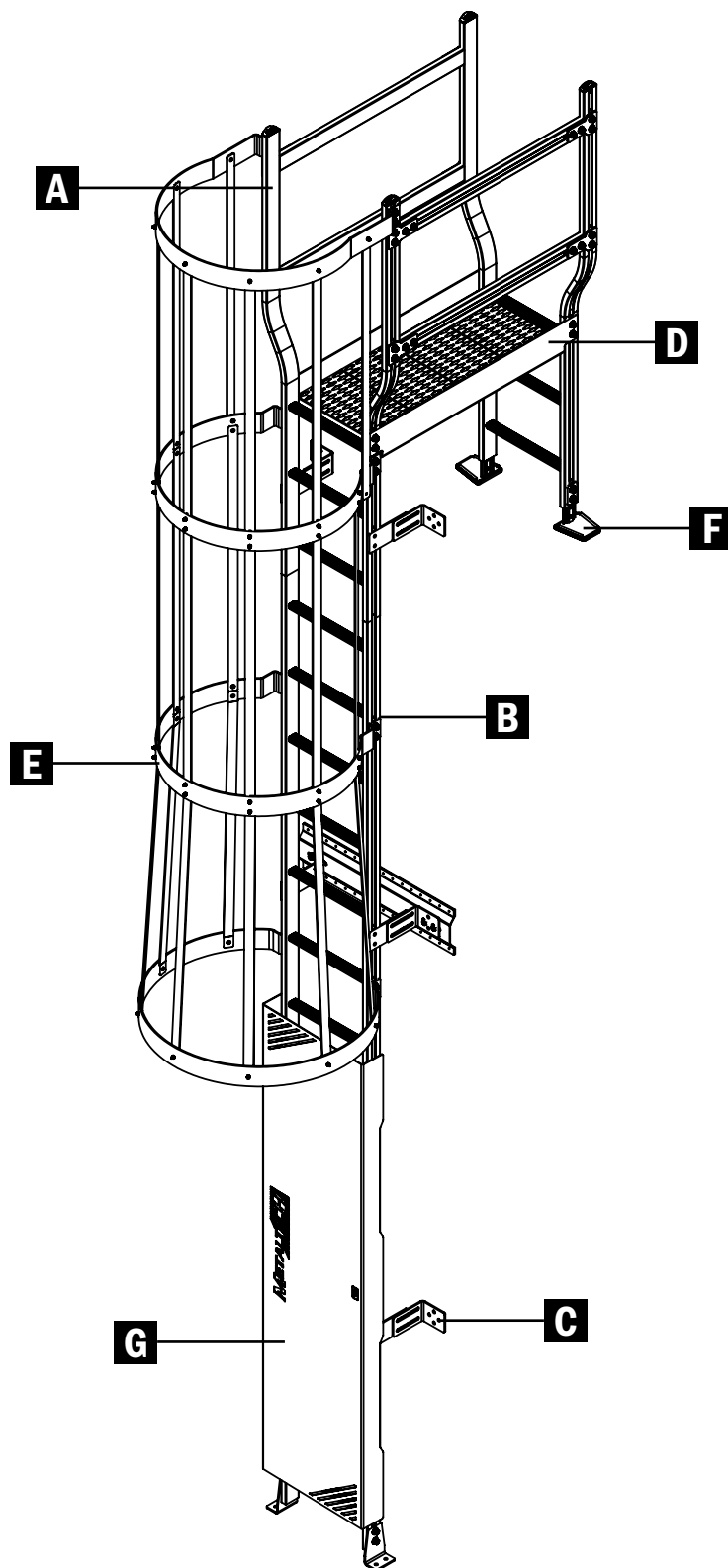
All bolts must be tightened to the torque specified in Table 1 to ensure the validity of the installation.

IMPORTANT

The tightening torque must be applied using a torque wrench.

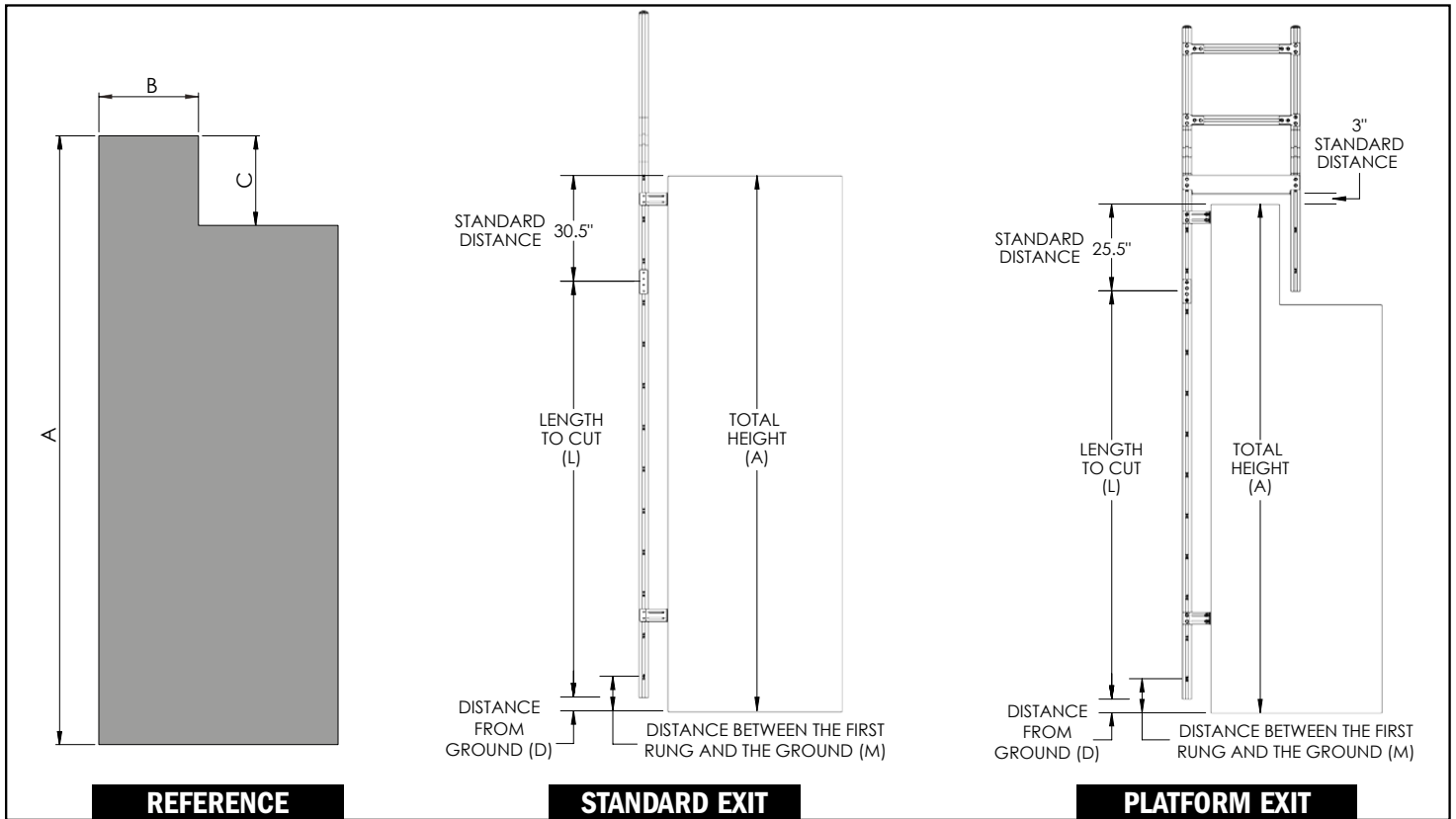
SECTIONS

- A. STARTING SECTION
- B. VERTICAL LADDER
- C. ANCHOR
- D. EXIT PLATFORM
- E. CAGE
- F. SUPPORTS
- G. GATE



A. STARTING SECTION | B. VERTICAL LADDER

DETERMINE THE DIMENSIONS SPECIFIC TO YOUR INSTALLATION



Use the diagram above to determine the required ladder length (L) based on the building dimensions.

Configuration with standard exit (exit arms / step):

The top rung must be aligned with the upper surface of the building. To determine the ladder length to be cut (L):

- Subtract the standard distance of the top section (30.5") and the desired ground clearance (D) from the total height (A). $L = A - 30.5" - D$.

Configuration with platform exit:

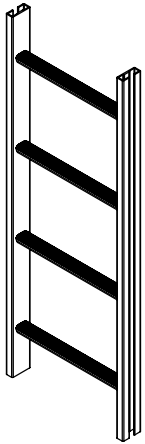
The platform size must be selected according to the parapet width (B) (see Exit Platform section). To determine the ladder length to be cut (L):

- Subtract the desired ground clearance (D) and the standard distance of the top section (25.5") from the total height (A). $L = A - 25.5" - D$.

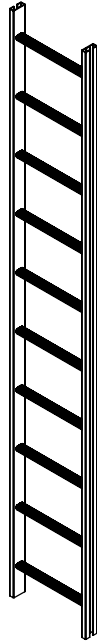
Important

The distance between the first rung and the ground (M) may be regulated. Refer to the applicable local standards when sizing the fixed ladder.

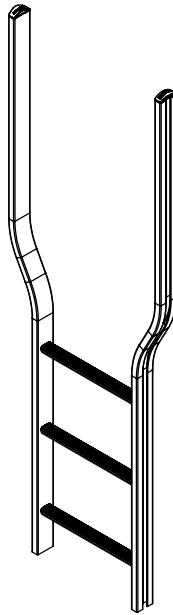
COMPONENTS



E-EFAL04A
4 FT LADDER



E-EFAL10A
10 FT LADDER



E-EFAEVK
HANDRAILS
(EXIT)



E-EFAT4
SECTION
CONNECTOR



E-EFAID
INSTALLATION
IDENTIFICATION
PLATE

INSTALLATION

Ladder sections must be assembled on the ground in a horizontal position to ensure accurate and safe installation. An identification label (E-EFAID) must be affixed at the bottom of the ladder, at the access point. One (1) label is supplied with each installation. In the event of loss or damage, a replacement label must be requested and installed. Ladder assembly must begin with the starter section (E-EFAEVK).

Section Assembly

To assemble two ladder sections, loosen the bolts on the section connector (E-EFAT4) to allow it to be inserted into the installed section and the adjoining section.

Position the connector so that it is centered between the two sections, then retighten the bolts to secure the assembly in place.

Warning :

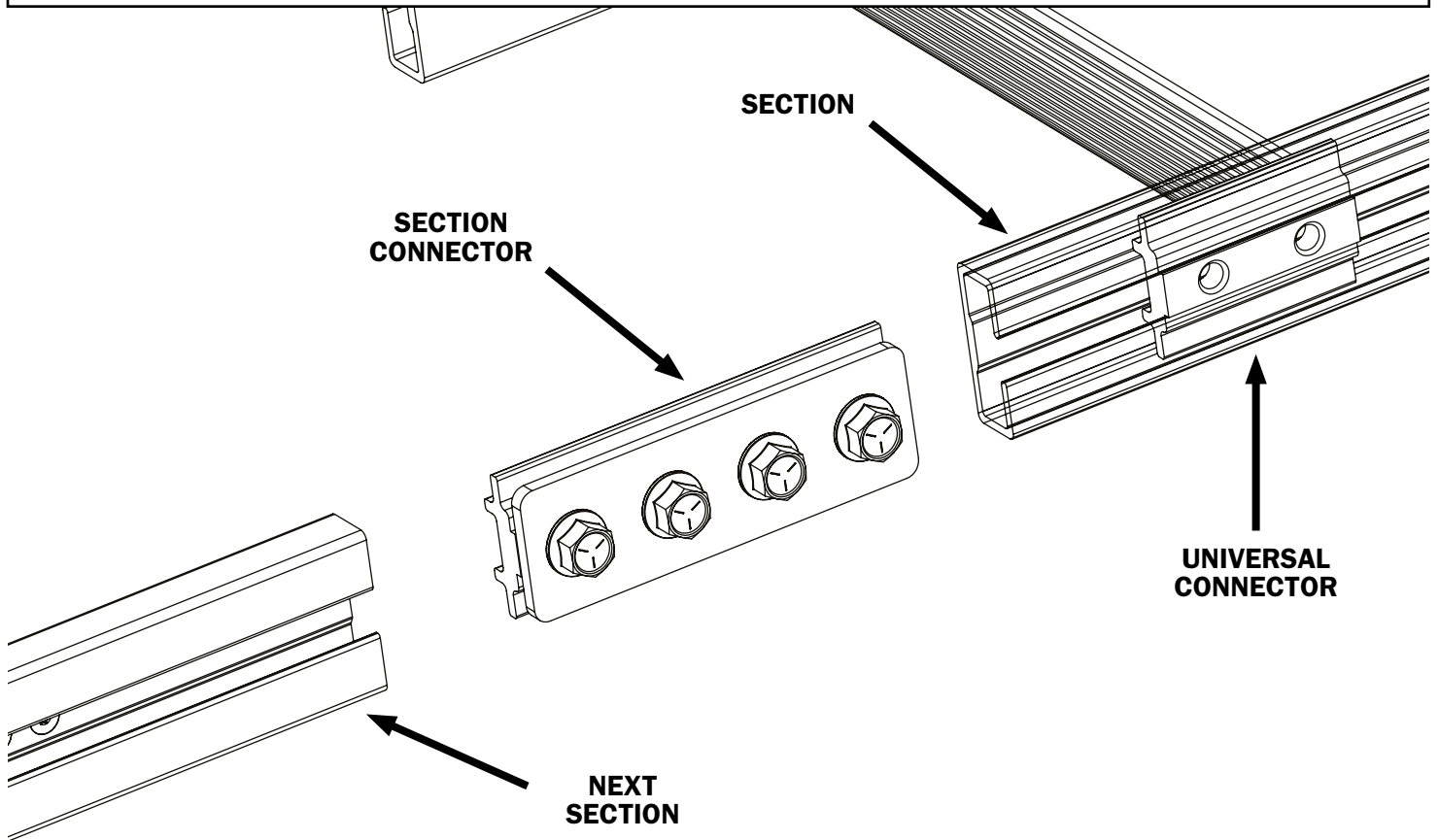
Do not apply excessive tightening torque, as this may damage the threads of the aluminum connector.

Important

Component assembly should be carried out in a logical sequence, from top to bottom, to facilitate installation and prevent interference between components.

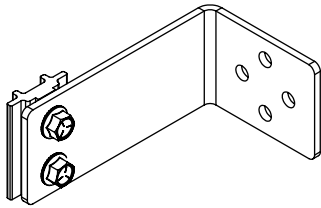
For components such as wall brackets and the cage, universal connectors must be inserted into and positioned within the ladder sections before assembling the next section.

It is essential to plan and verify the location of each component before assembly to ensure a compliant installation and avoid the need for subsequent adjustments.

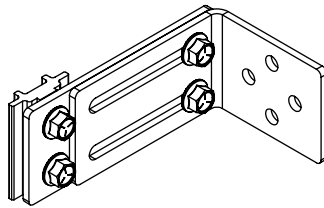


C. ANCHOR

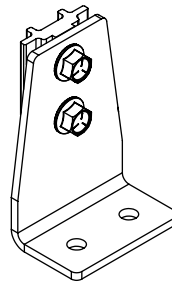
COMPONENTS



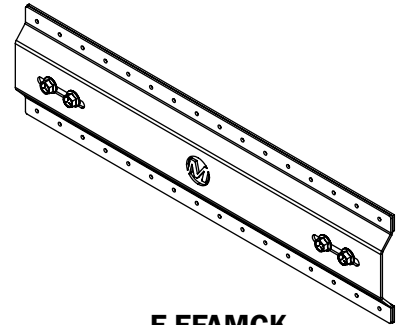
E-EFAMF
7" FIXED
WALL BRACKET



E-EFAMA
7" TO 11.25"
ADJUSTABLE
WALL BRACKET



E-EFAFF
ANCHORED
BASE



E-EFAMCK
CLADDING
MOUNTING PLATE

LAYOUT

The following requirements apply to both sides of the ladder (right and left). Wall brackets must be installed in pairs.

- The maximum spacing between wall brackets is 10 ft.
- A minimum of one (1) wall bracket per ladder section is required.
- The brackets at both ends of the ladder must be located no more than three (3) rungs from the end of the ladder (approximately 2 ft) to ensure maximum rigidity.
- The distance between the centerline of the ladder (rungs) and the wall surface must not be less than 7 in. at any point.
 - Where obstructions are present (e.g., gutters), use a longer wall bracket (E-EFAMA).

INSTALLATION

Before installation, measure the total wall height to determine the location of the wall brackets.

Install the wall brackets using hardware specific to the supporting structure (concrete, steel, masonry, etc.) referring to their installation specifications.

Preparation and Verification

- Verify that the wall surface is:
 - Flat
 - Plumb
 - Structurally adequate
- If necessary, use adjustable wall brackets (E-EFAMA) to compensate for irregularities.
- A qualified person must determine the type and quantity of anchors required based on the supporting structure and the applicable loads.

ANCHORING REQUIREMENTS

- Use only anchors approved by the authority having jurisdiction.
- The contractor responsible for the installation must verify the integrity of the supporting structure before installation.
- Anchors are not supplied and must be selected according to the specific application.
- If in doubt, consult a structural engineer or the anchor manufacturer.

ASSEMBLY

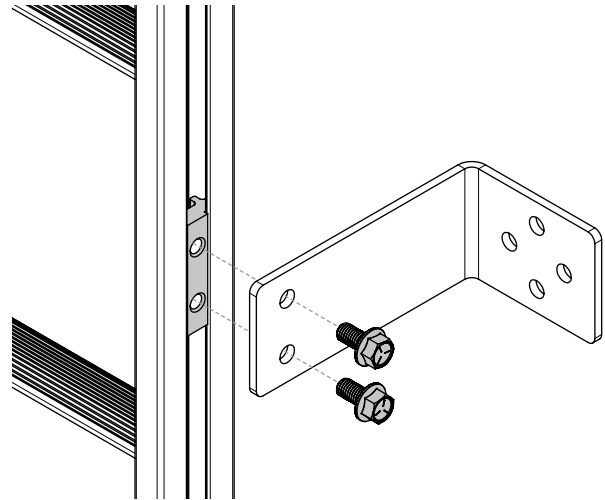
Wall brackets may be installed before or after the ladder has been raised into its vertical position. Brackets must be installed symmetrically on both sides of the ladder.

As with section connectors, it is necessary to loosen the bolts to allow the connectors to slide into the ladder sections.

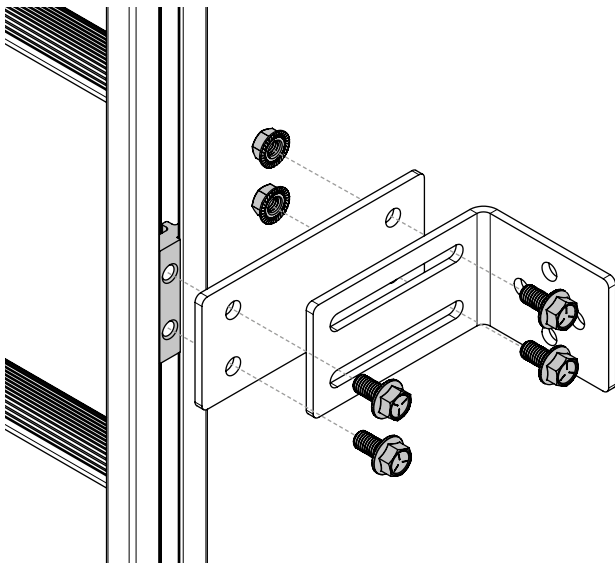
Warning :

Do not apply excessive tightening torque, as this may damage the threads of the aluminum connector.

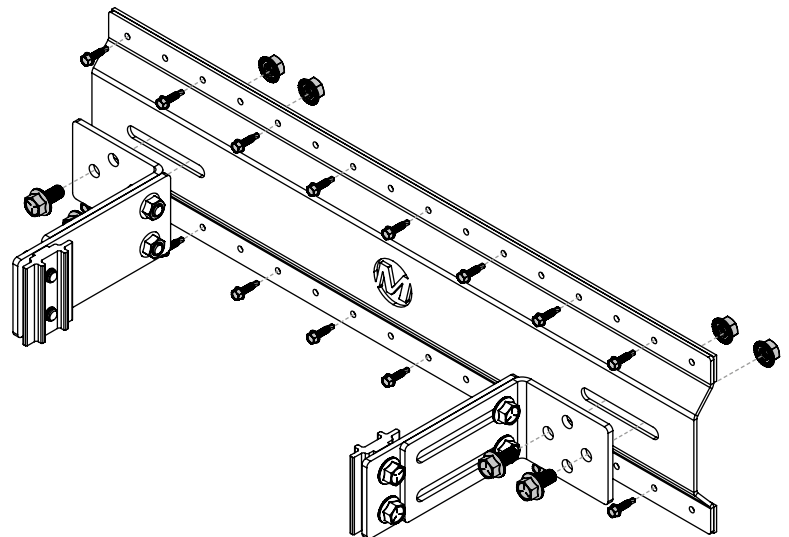
- Use :
 - Fixed wall brackets (E-EFAMF)
 - Or adjustable wall brackets (E-EFAMA), as required
- For installation on cladding, use the cladding mounting bracket (E-EFAMCK).



FIXED WALL BRACKET



ADJUSTABLE WALL BRACKET

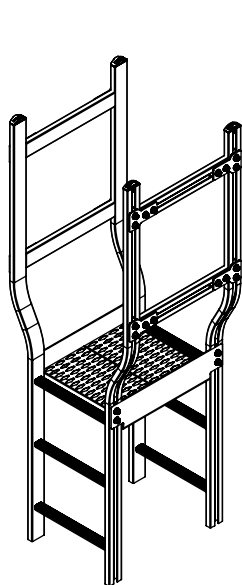


**ADJUSTABLE WALL BRACKETS
WITH CLADDING MOUNTING PLATE**

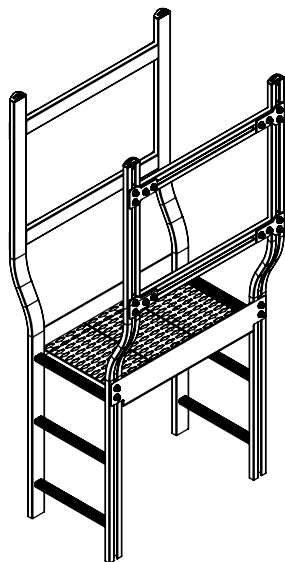
D. EXIT PLATFORM

LADDER DESCENT

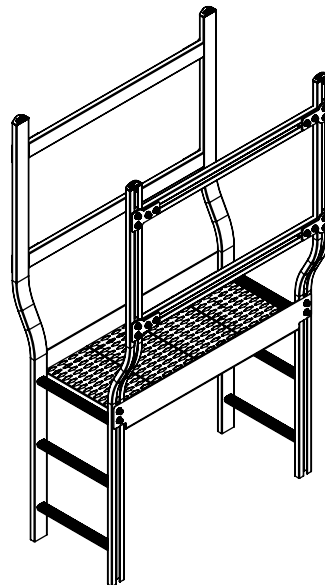
COMPONENTS



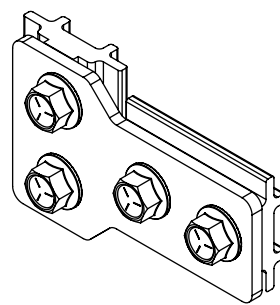
E-EFAEP2K
EXIT PLATFORM WITH
2 DECK SECTIONS



E-EFAEP3K
EXIT PLATFORM WITH
3 DECK SECTIONS



E-EFAEP4K
EXIT PLATFORM WITH
4 DECK SECTIONS



E-EFATT
TRANSVERSE
T-CONNECTOR

CONFIGURATION WITH EXIT PLATFORM

For a platform exit configuration, the platform assembly must be completed in accordance with the applicable diagram. Assembly using the connectors must begin from the starter section (E-EFAEVK).

A platform consists of the following components:

- 2x Starter sections
- 1x Platform (2' - 4')
- 4x Guardrails (2' - 4')
- 8x T-Connectors (E-EFATT)
- 4x End caps

Warning :

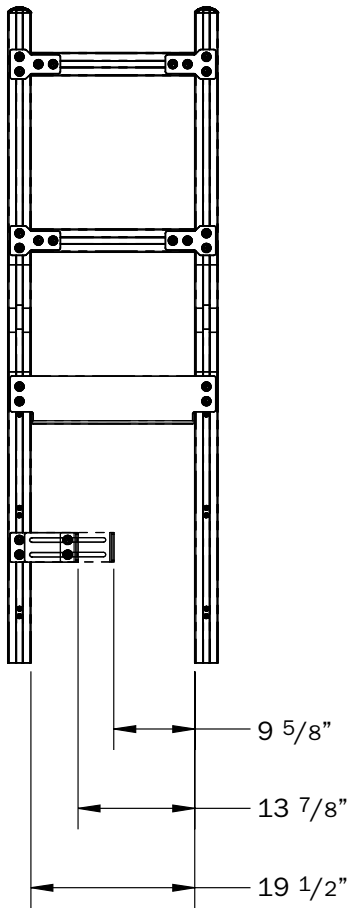
Do not apply excessive tightening torque, as this may damage the threads of the aluminum connector.

PLATFORM SELECTION

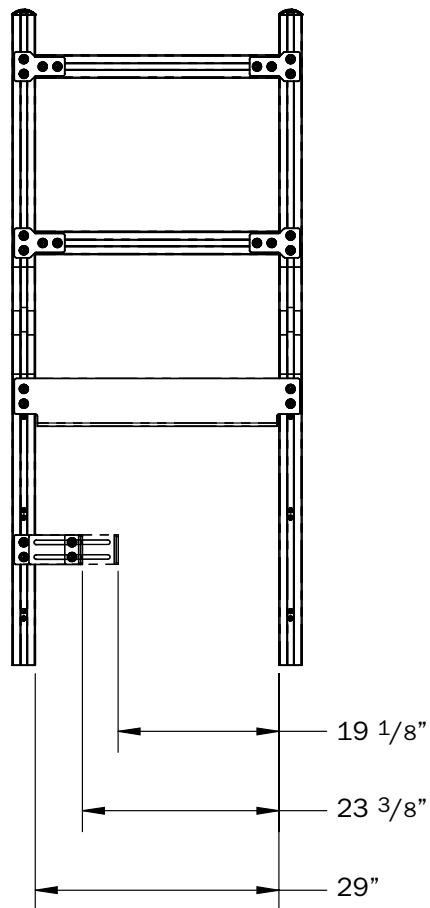
The selection of the exit platform is determined by the width of the parapet.

The dimensions shown below apply to E-EFAMF fixed wall brackets. Allow for a clearance up to 4.25 in. more restrictive when E-EFAMA adjustable wall brackets are used.

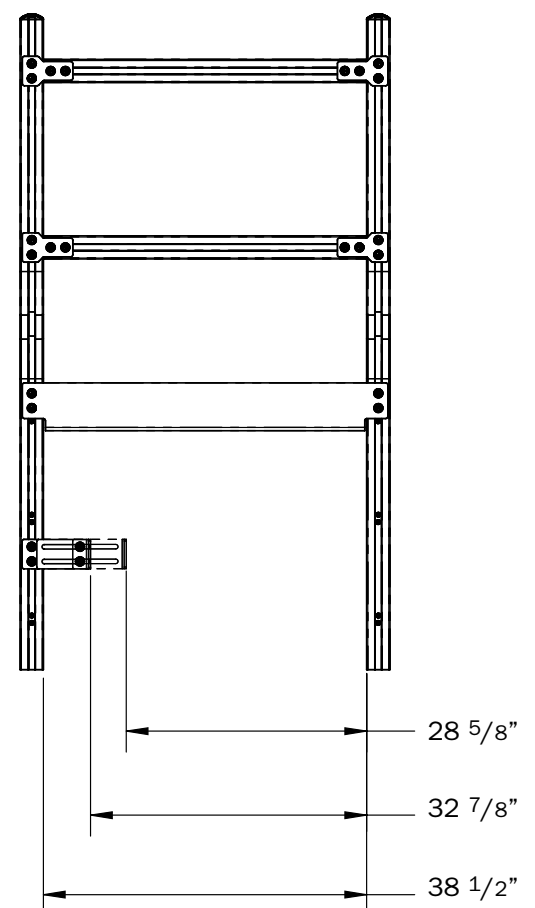
E-EFAEP2K



E-EFAEP3K

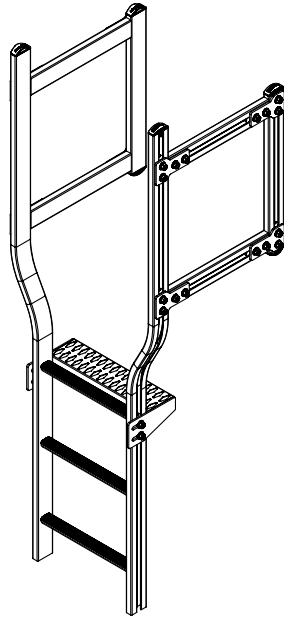


E-EFAEP4K

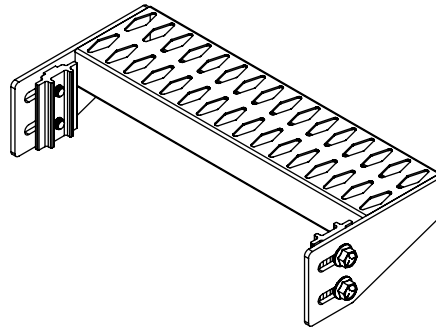


STEP

COMPONENTS



E-EFAEWK
EXIT WITH HANDRAILS, STEP
AND SAFETY RAILINGS



E-EFAES
STEP

STANDARD EXIT CONFIGURATION (EXIT ARMS / STEP)

For a standard exit configuration with exit arms, assembly must be completed in accordance with the applicable diagram. Assembly using the connectors must begin from the starter section (E-EFAVK).

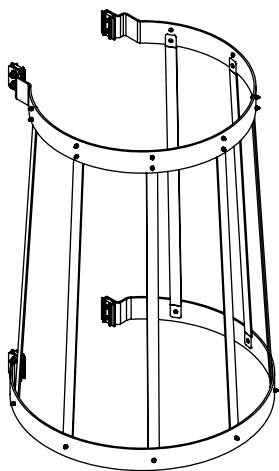
A standard exit with exit arms consists of the following components:

- 1x Starter section
- 2x Exit arms
- 1x Exit step (E-EFAES)
- 8x T-Connectors (E-EFATT)
- 6x End caps
- Associated hardware

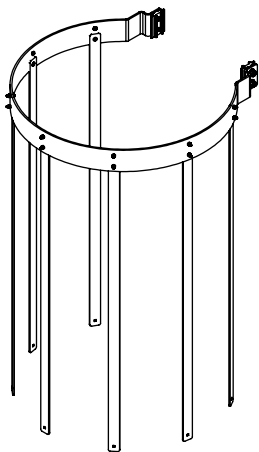
E. CAGE

STANDARD SECTIONS

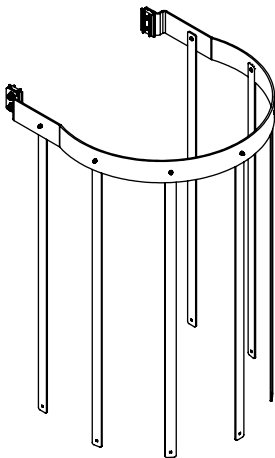
COMPONENTS



E-EFACBK
BOTTOM SAFETY
CAGE SECTION



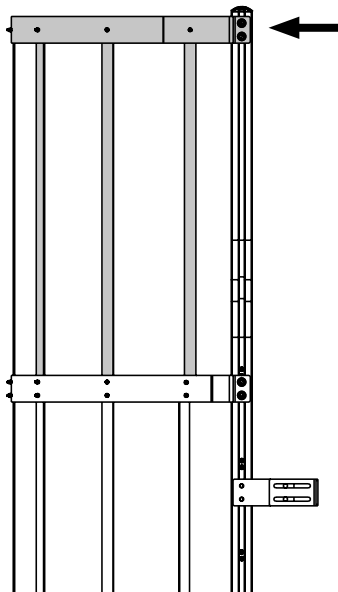
E-EFACMK
MIDDLE SAFETY
CAGE SECTION



E-EFACTK
TOP SAFETY
CAGE SECTION

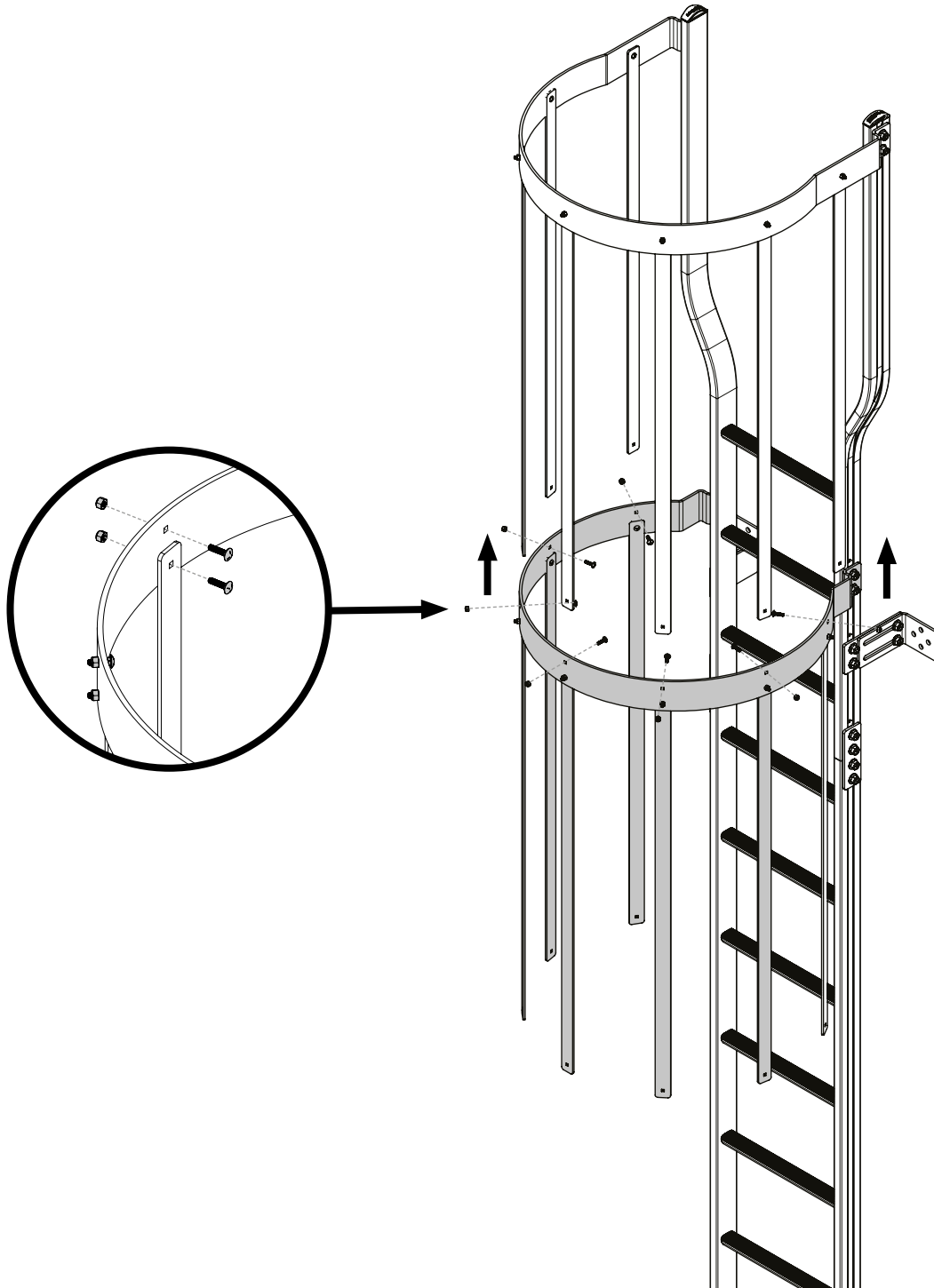
LAYOUT

The number of cages and their location must be selected in accordance with the applicable regulations.
The top of the upper cage section (E-EFACTK) must be aligned with the top of the starter section (E-EFAEVK).



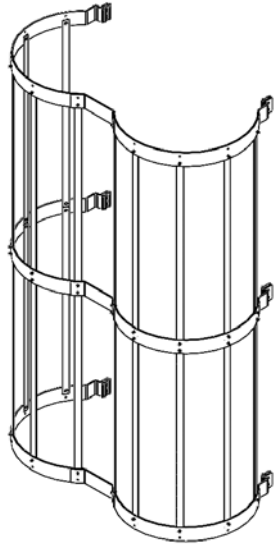
It is recommended to assemble the cages from top to bottom, starting at the exit section. Attach the next cage hoop to the section, then slide it upward until it aligns with and connects to the cage above. Repeat this process for each subsequent section.

Bolt Orientation: Install the bolts so that the rounded head faces the inside of the ladder and the nut faces the outside. This arrangement reduces the risk of snagging the user's clothing, harness, or equipment while climbing or descending the ladder.

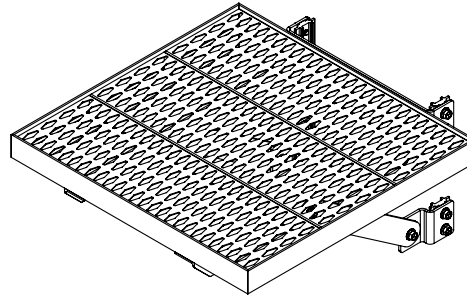


TRANSITION SECTION

COMPONENTS



E-EFACSK
CHANGE-OF-DIRECTION
SAFETY CAGE



E-EFAPCK
TRANSITION
LANDING

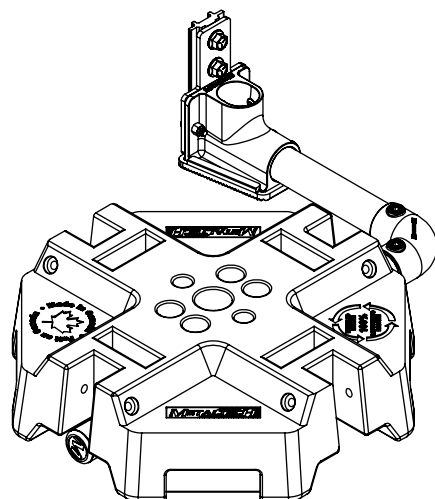
TRANSITION SECTION

The transition section and the transition landing may be used together. The transition safety cage must be positioned adjacent to the other safety cage sections so that no gap remains between them.

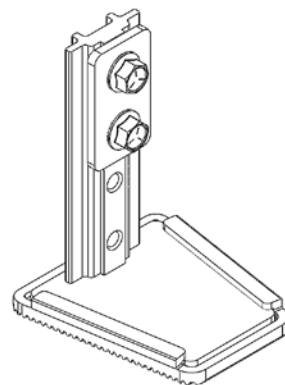
Verify that this configuration complies with all applicable local regulations.

F. SUPPORTS

COMPONENTS



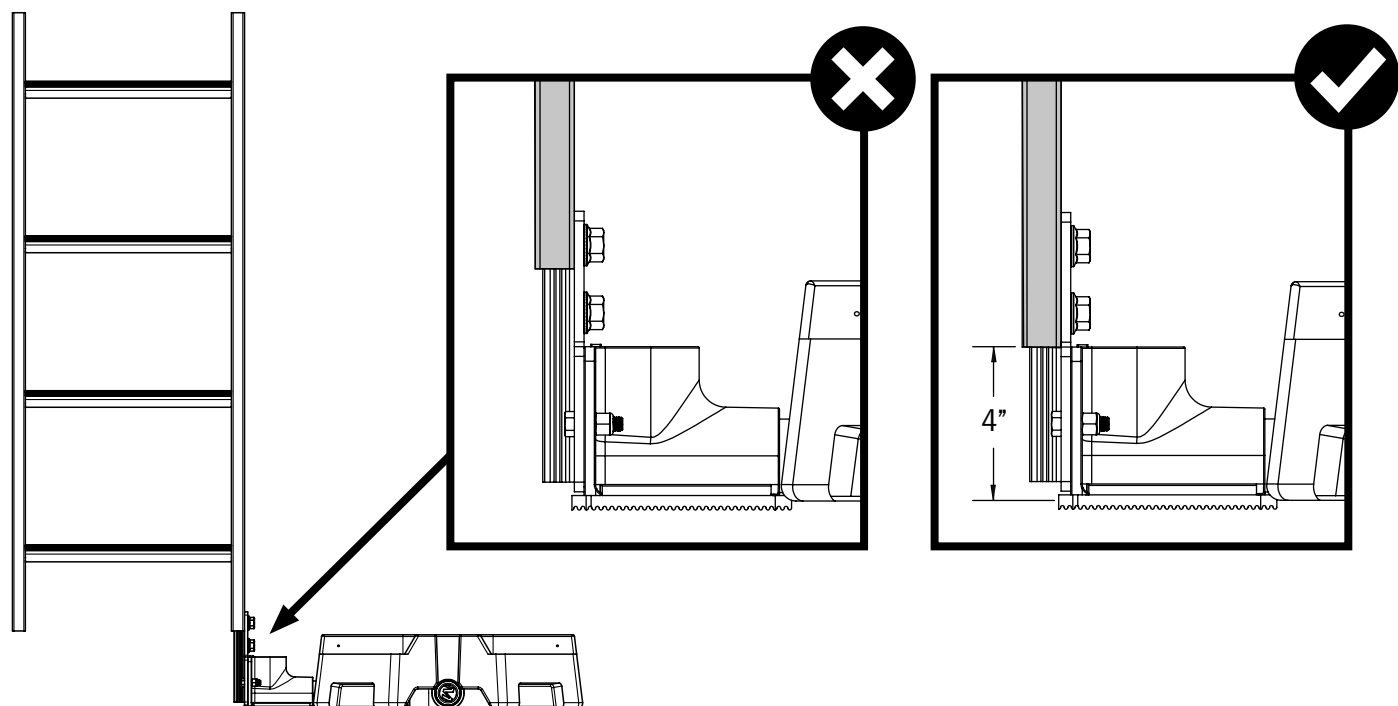
E-EFAFBK
SELF-SUPPORTING
BASE



E-EFAFA
ANTI-SLIP FOOT

INSTALLATION

When using floor supports, allow a minimum clearance of 4 in. between the bottom of the ladder section and the ground to ensure proper attachment of the support.



G. GATE

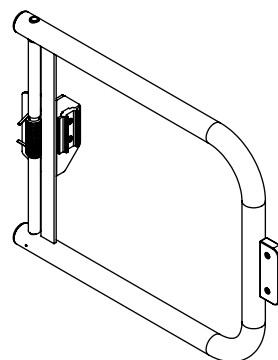
COMPOSANTS



E-EFASDK
STANDARD GATE



E-EFASDCK
EXTENDED GATE



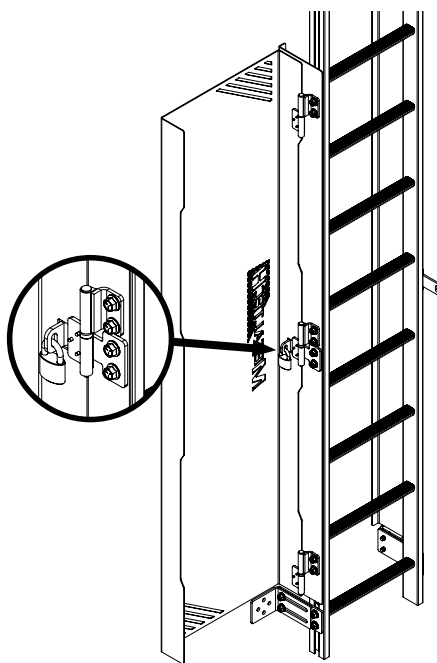
E-EFASG
ACCESS GATE

USE

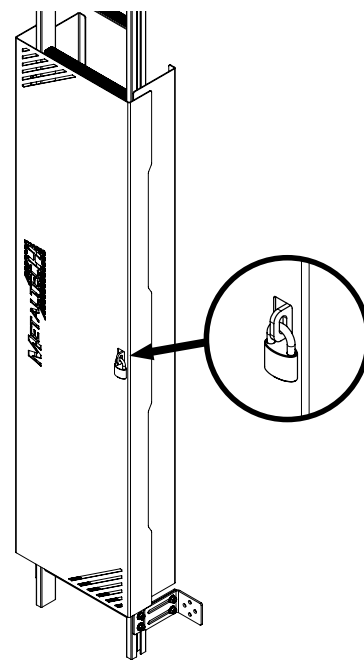
When using the ladder, the gate may be secured in the open position to ensure that it does not close.

After using the ladder, close and lock the gate to ensure that the ladder cannot be accessed by unauthorized persons.

The access gate is designed to close automatically behind the user.

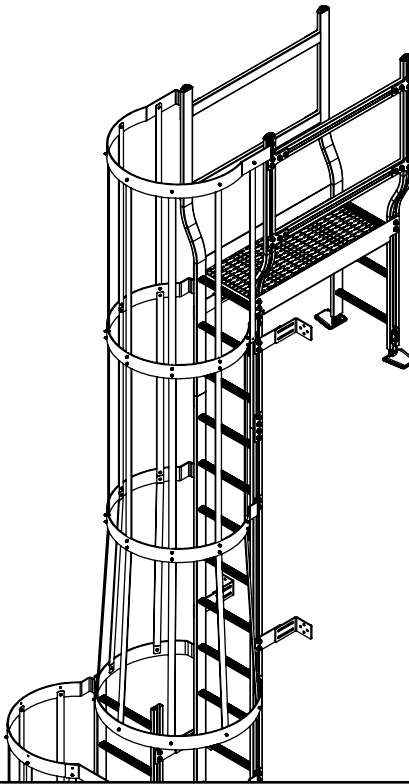


Open position

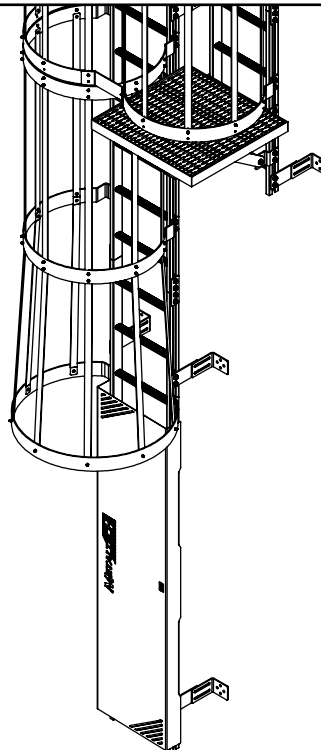


Close position

SECTIONS



COMPONENT ASSEMBLY

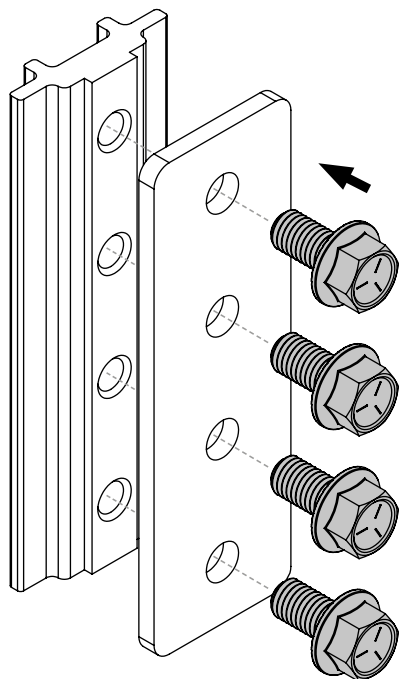


1. INDIVIDUAL COMPONENT ASSEMBLY

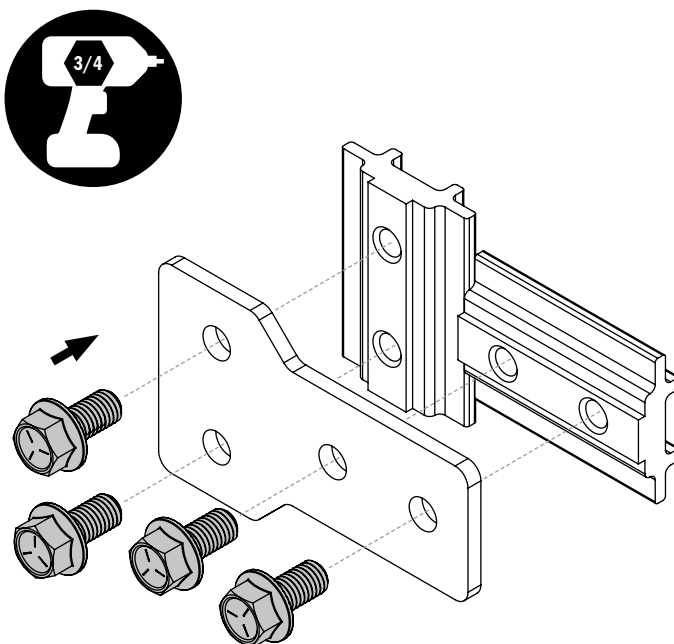
Begin by assembling the components required for the project. Ensure that the connector bolts are not overtightened so that they can slide easily into the ladder section and exit section extrusions at the indicated locations.

1.1 CONNECTOR

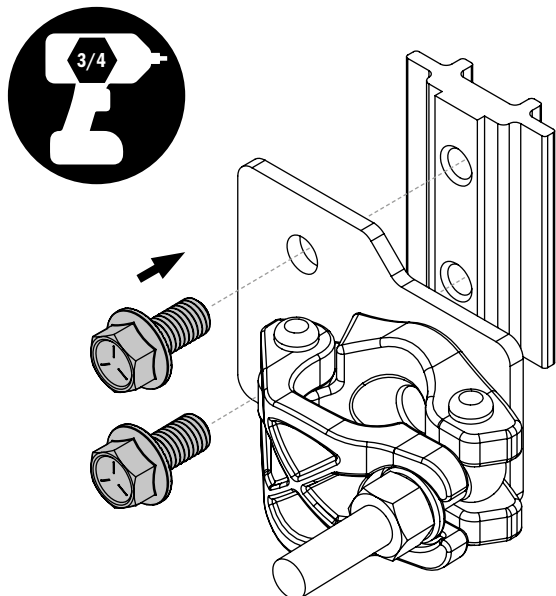
E-EFAT4



E-EFATT

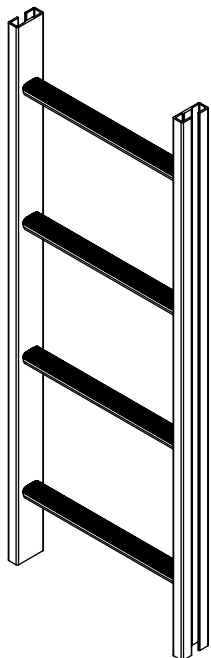


E-EFATR

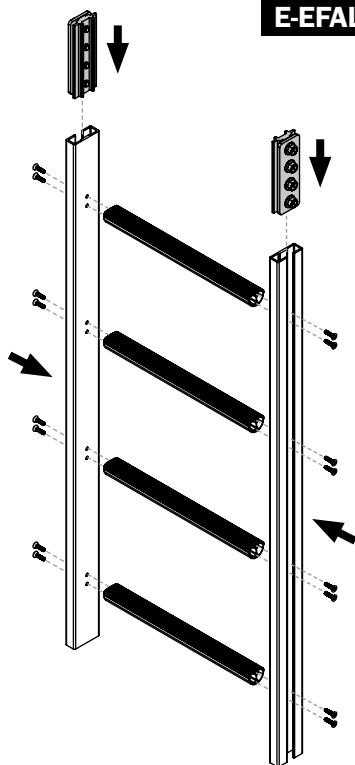


1.2 LADDER SECTION

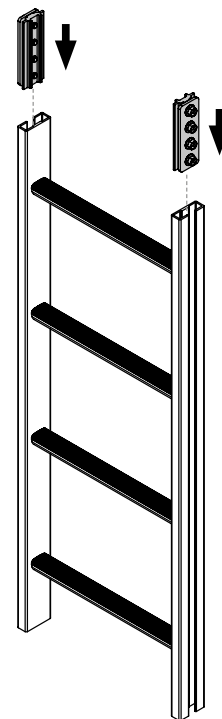
E-EFAL04A / E-EFAL10A



E-EFAL04K / E-EFAL10K

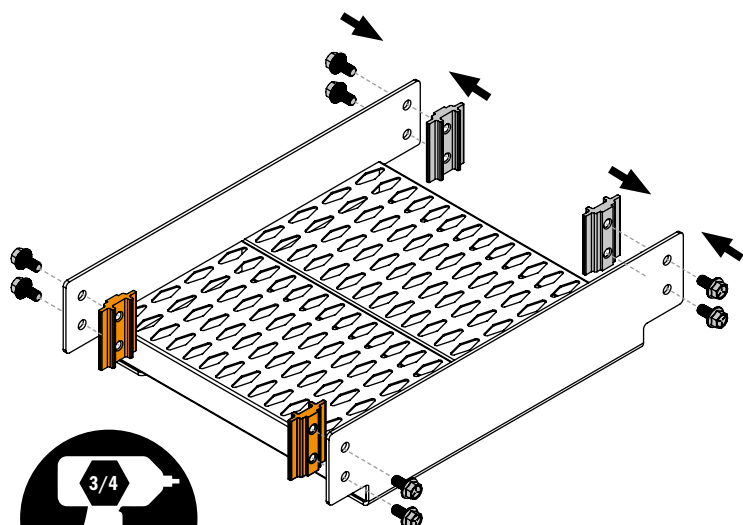


E-EFAL04AK / E-EFAL10AK

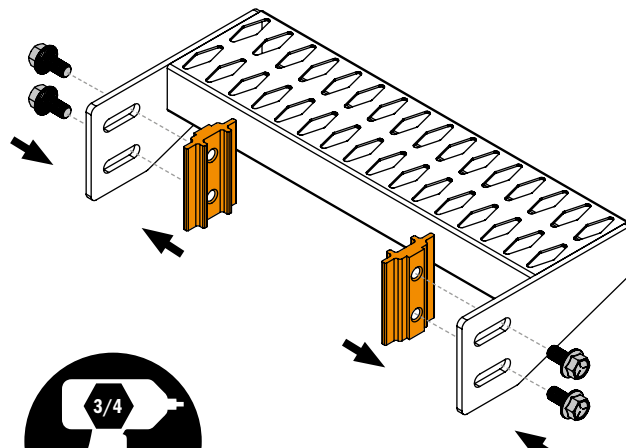


1.3 STEP AND LANDING

E-EFAP2K / E-EFAP3K / E-EFAP4K

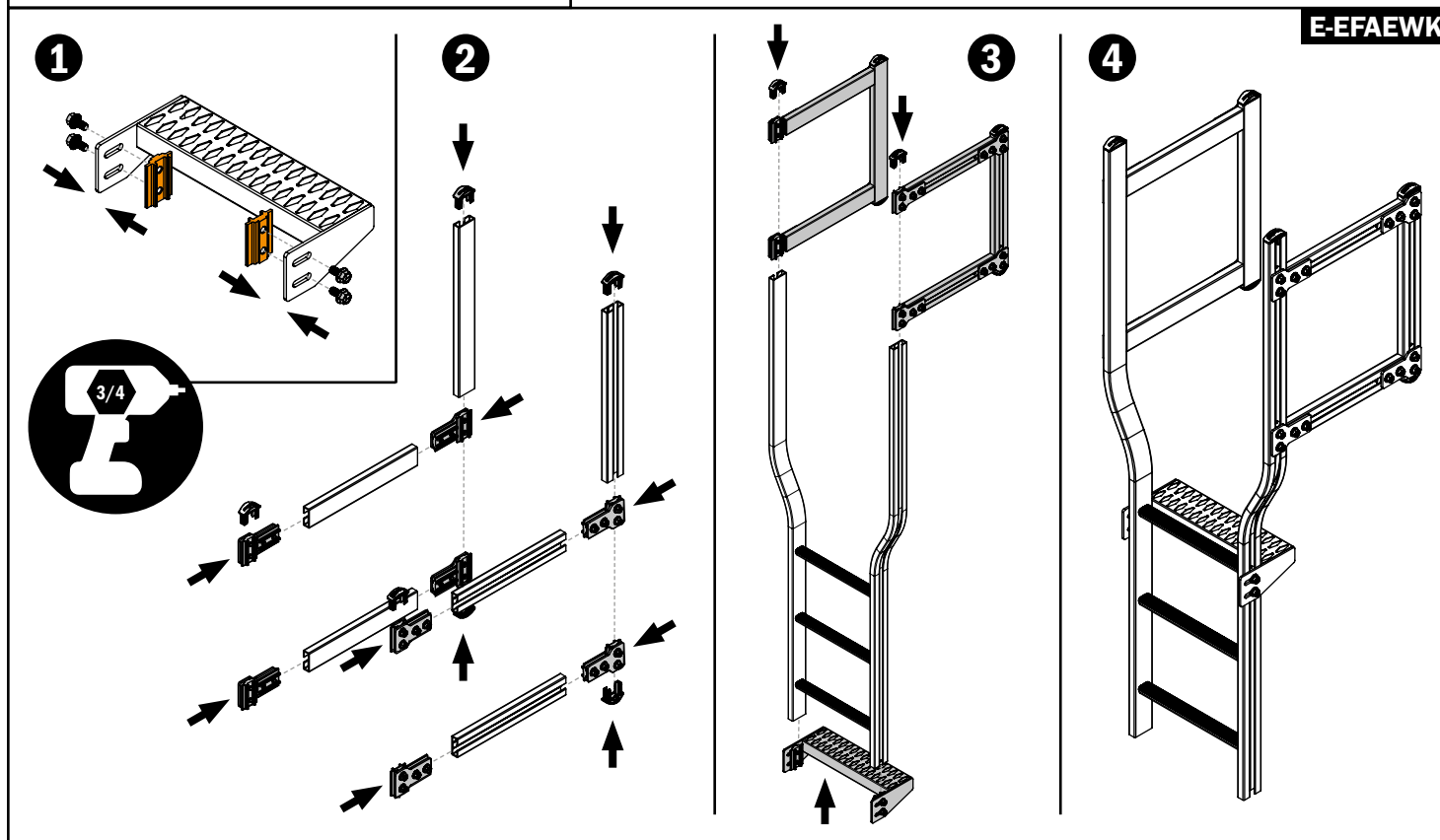
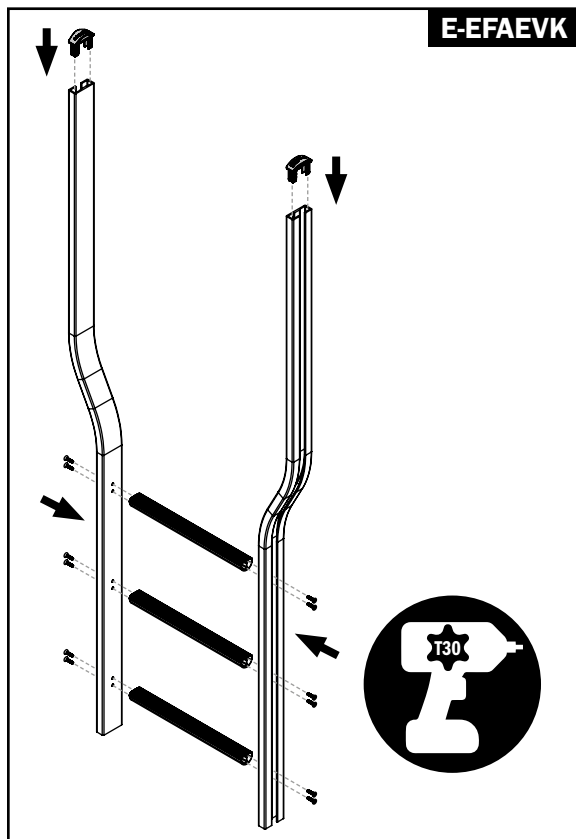


E-EFAES

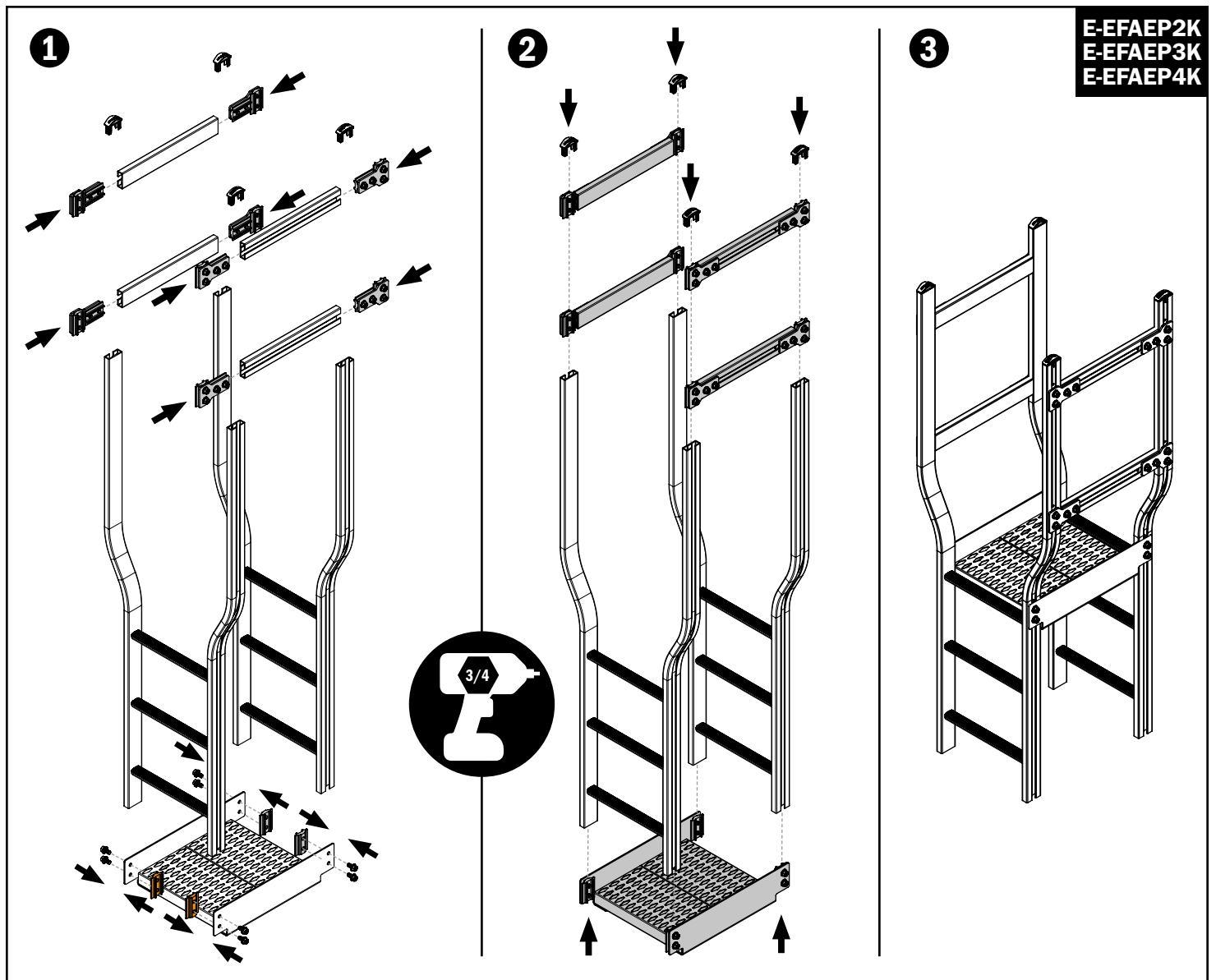


CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

1.4 EXIT



CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

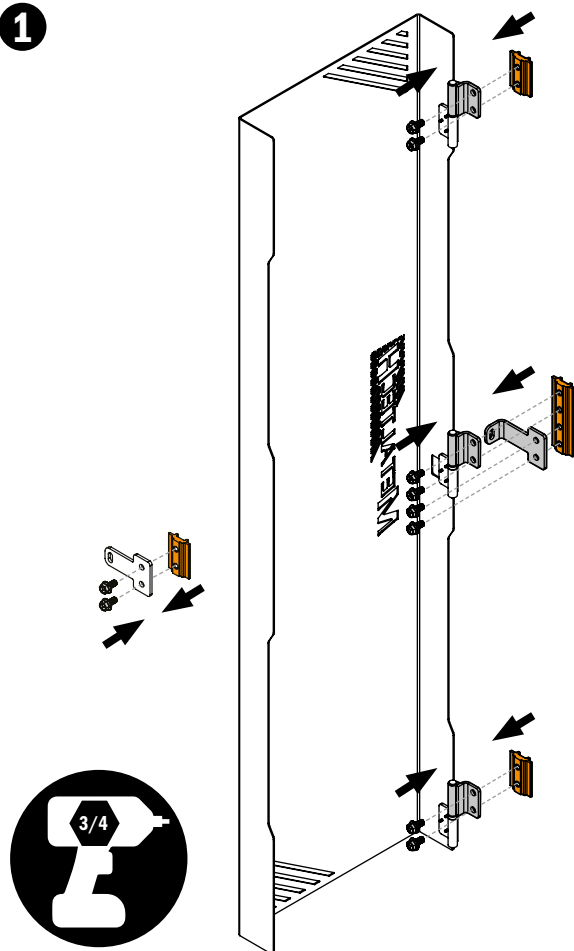


● CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

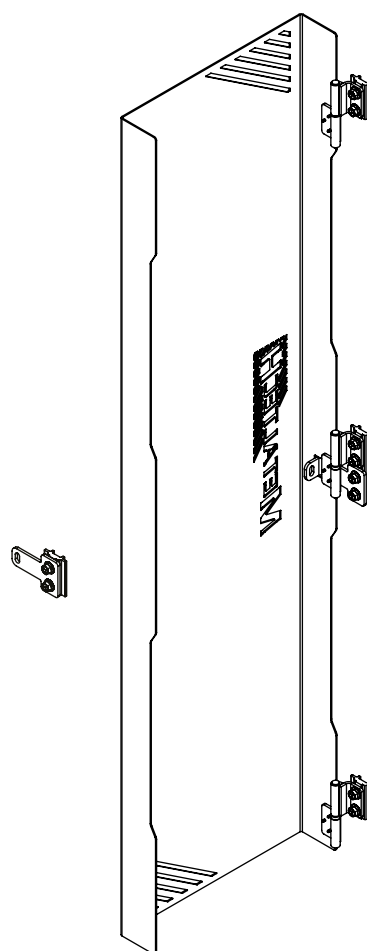
1.5 GATE

E-EFASDK

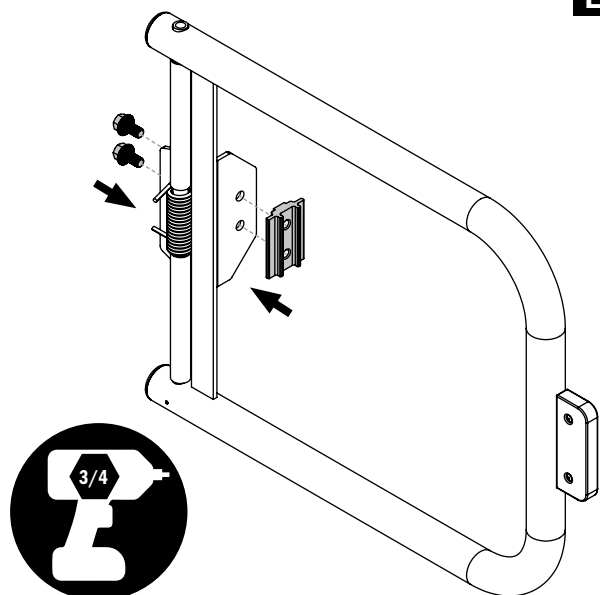
1



2

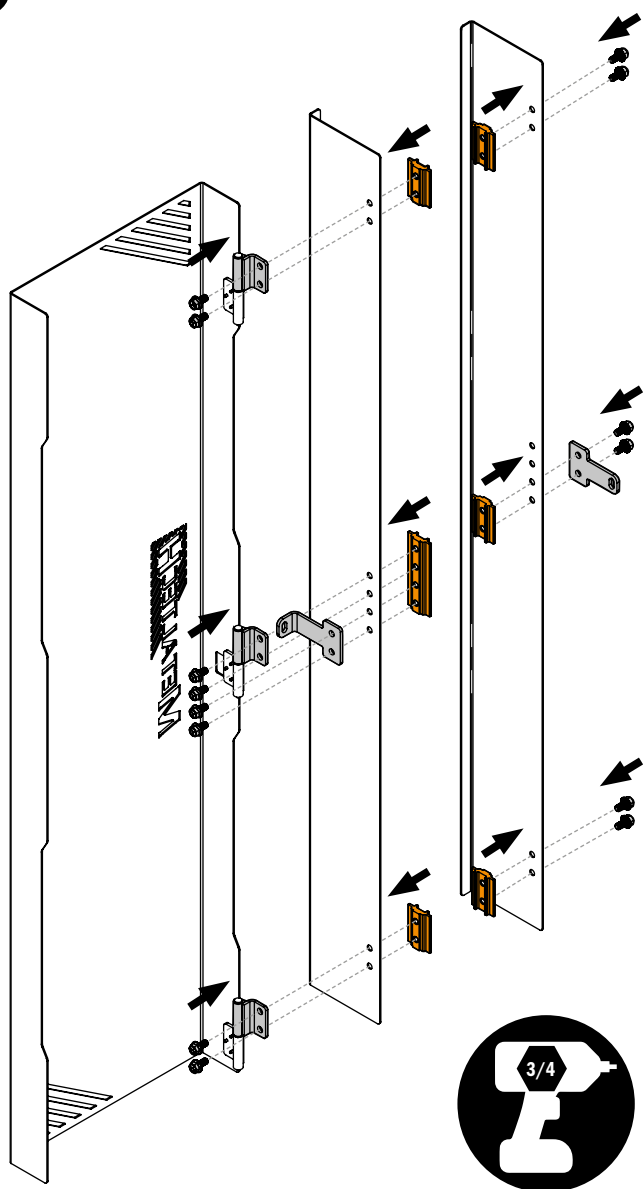


E-EFASG

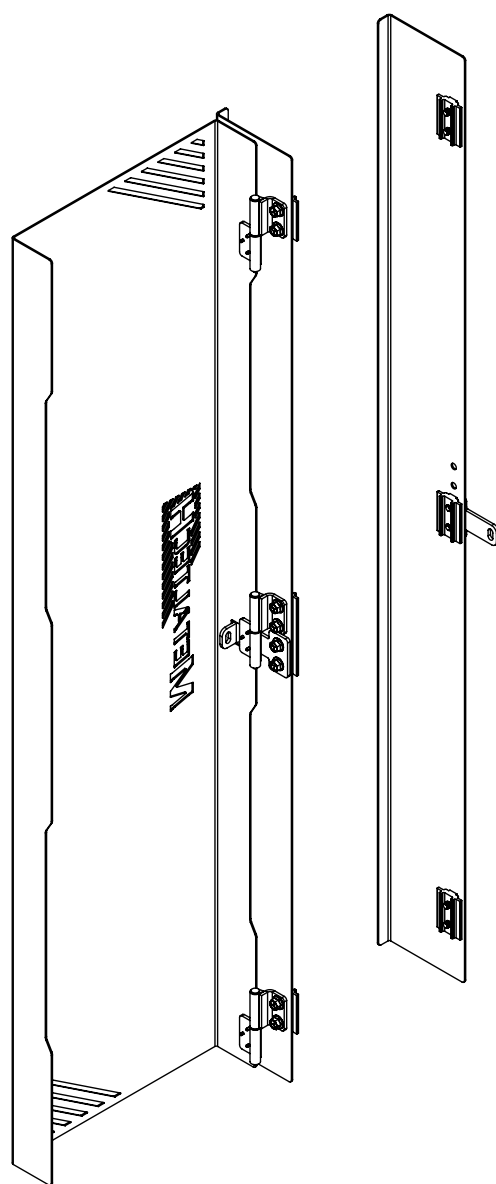


● CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

1



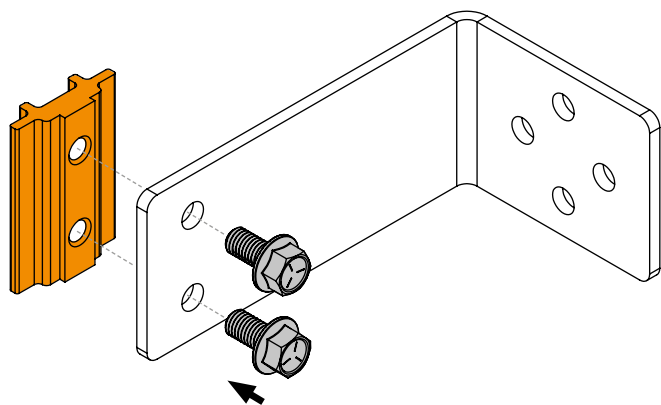
2



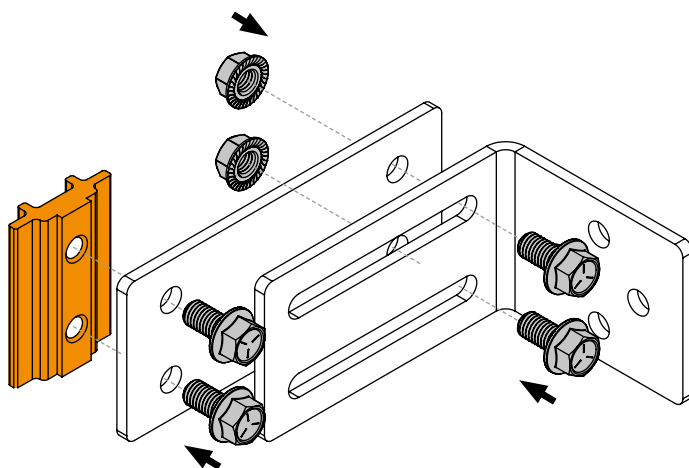
● CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

1.6 WALL BRACKET

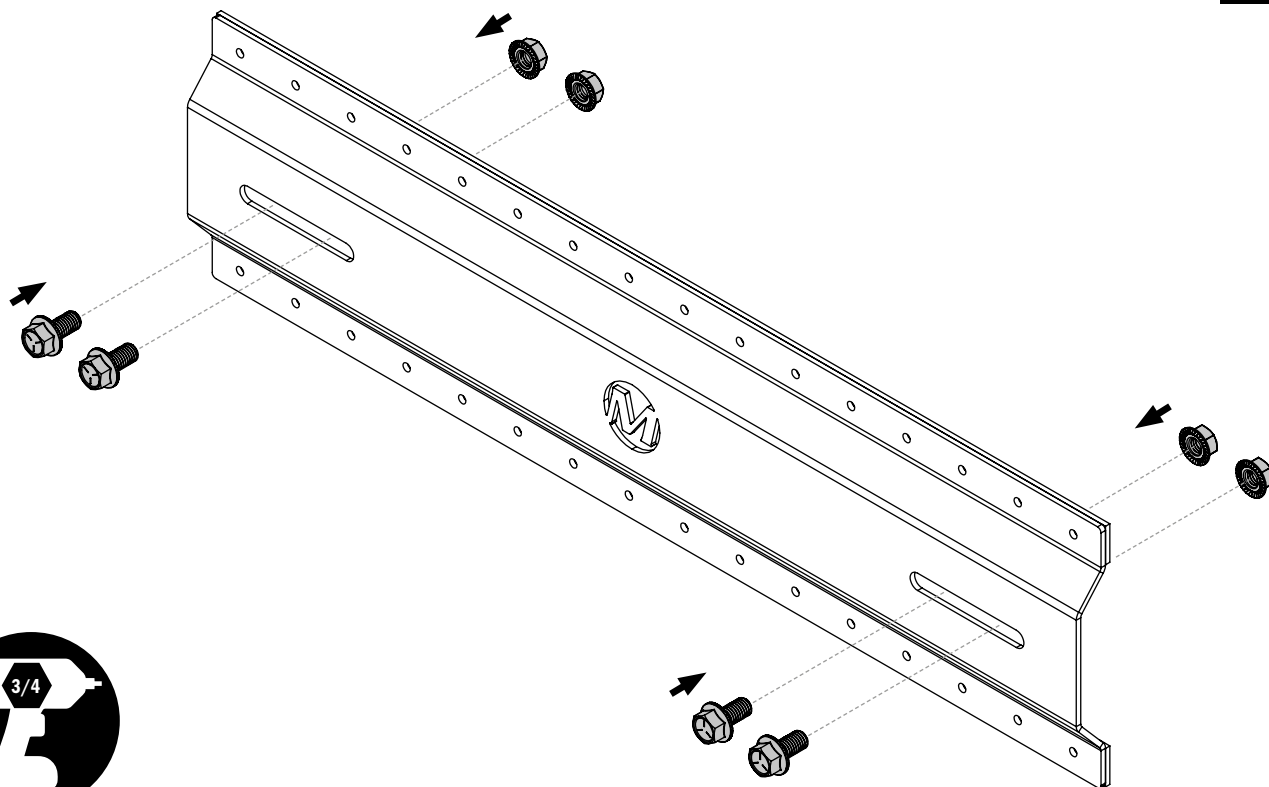
E-EFAMF



E-EFAMA



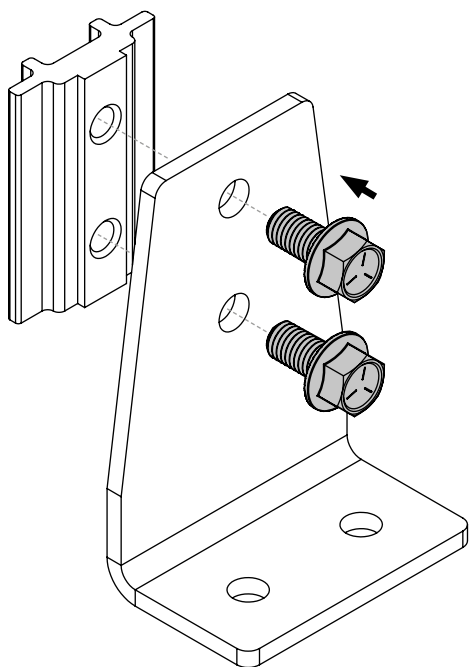
E-EFAMCK



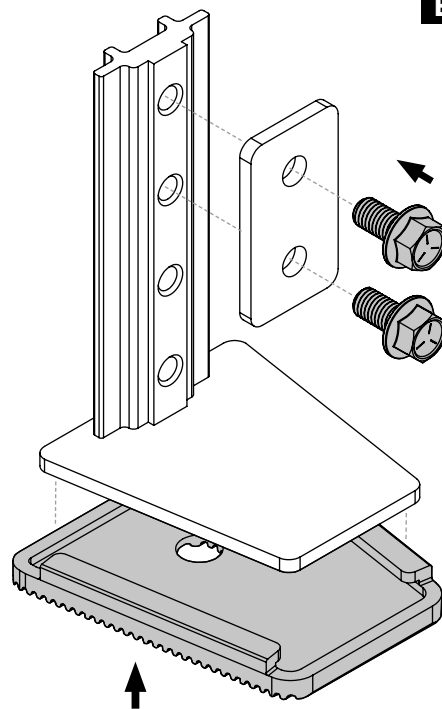
 **CAUTION:** These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

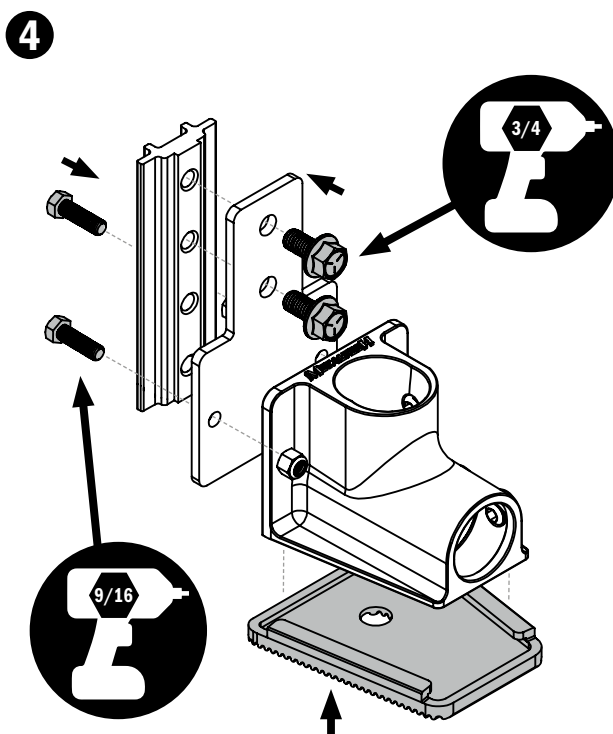
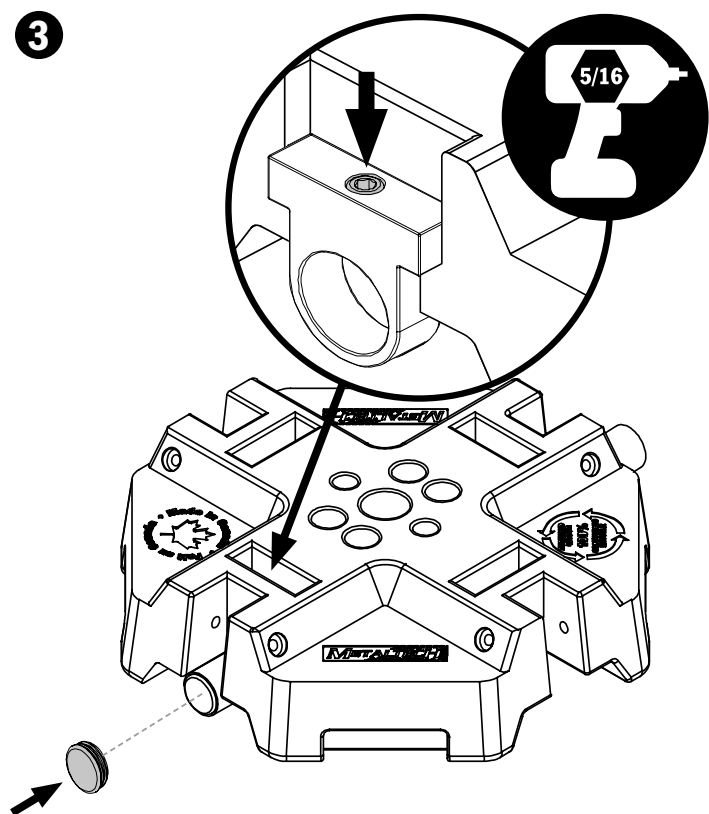
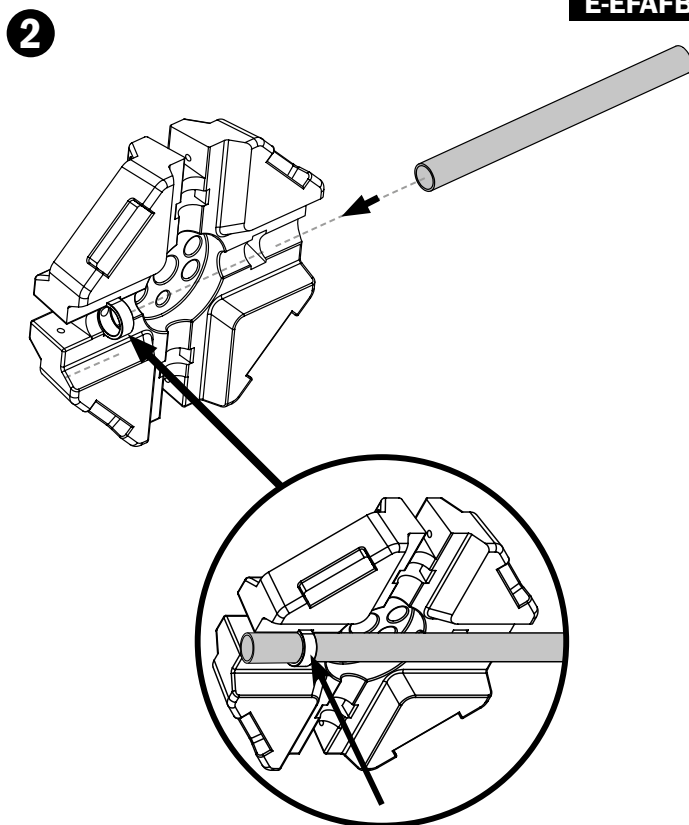
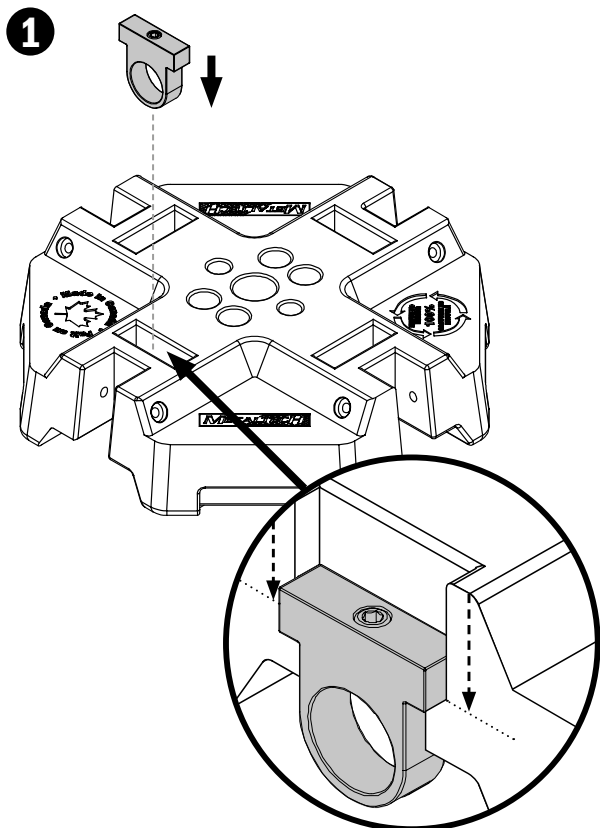
1.7 FOOT AND BASE

E-EFAFF

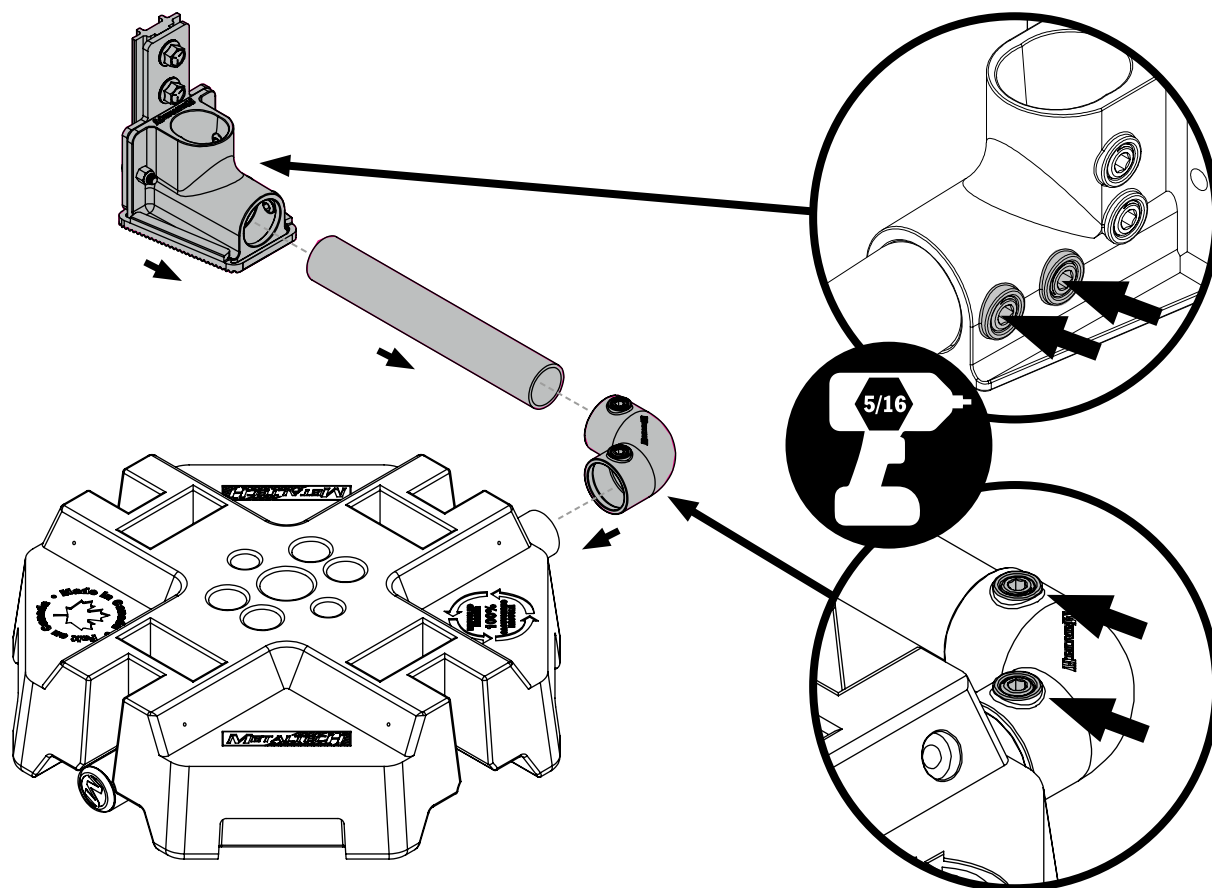


E-EFAFA

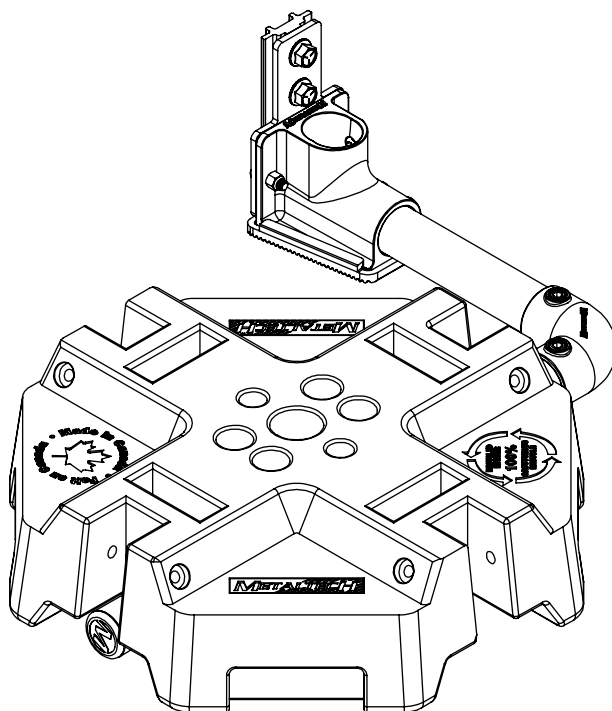




5

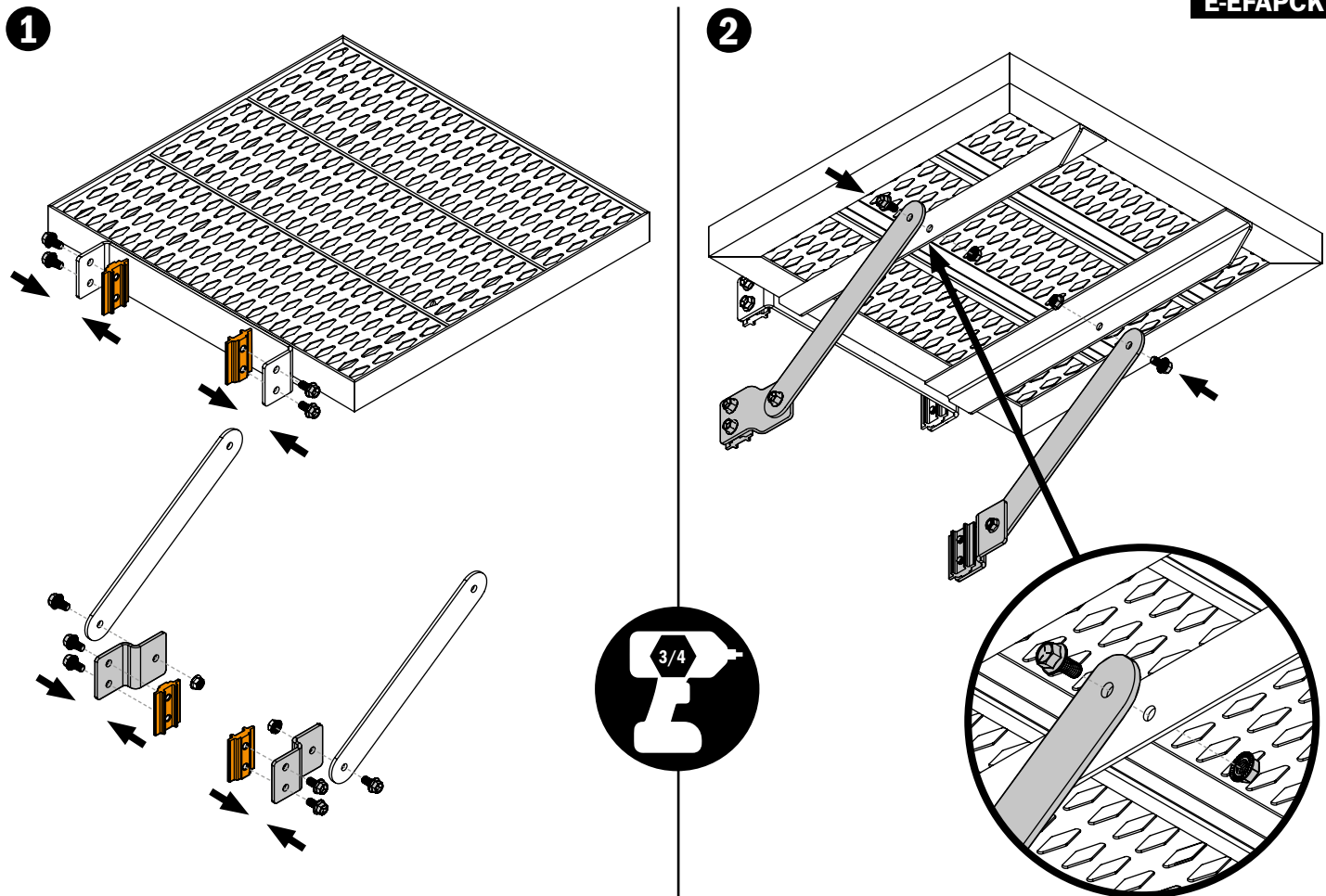


6



1.8 TRANSITION LANDING

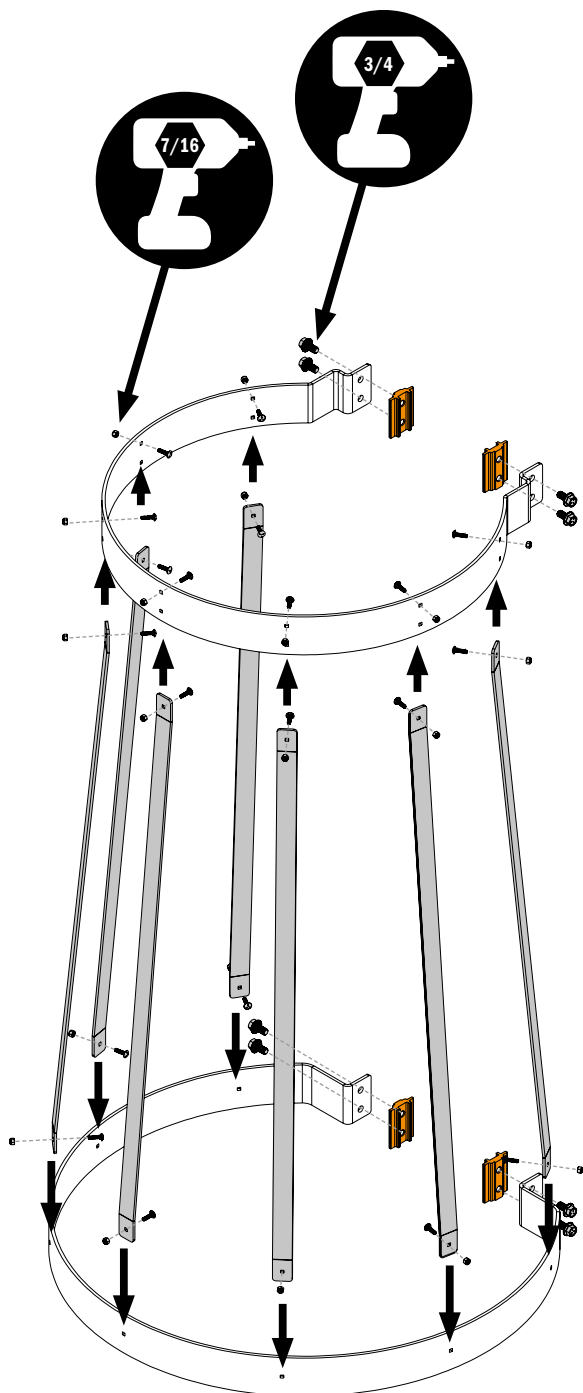
E-EFAPCK



 **CAUTION:** These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

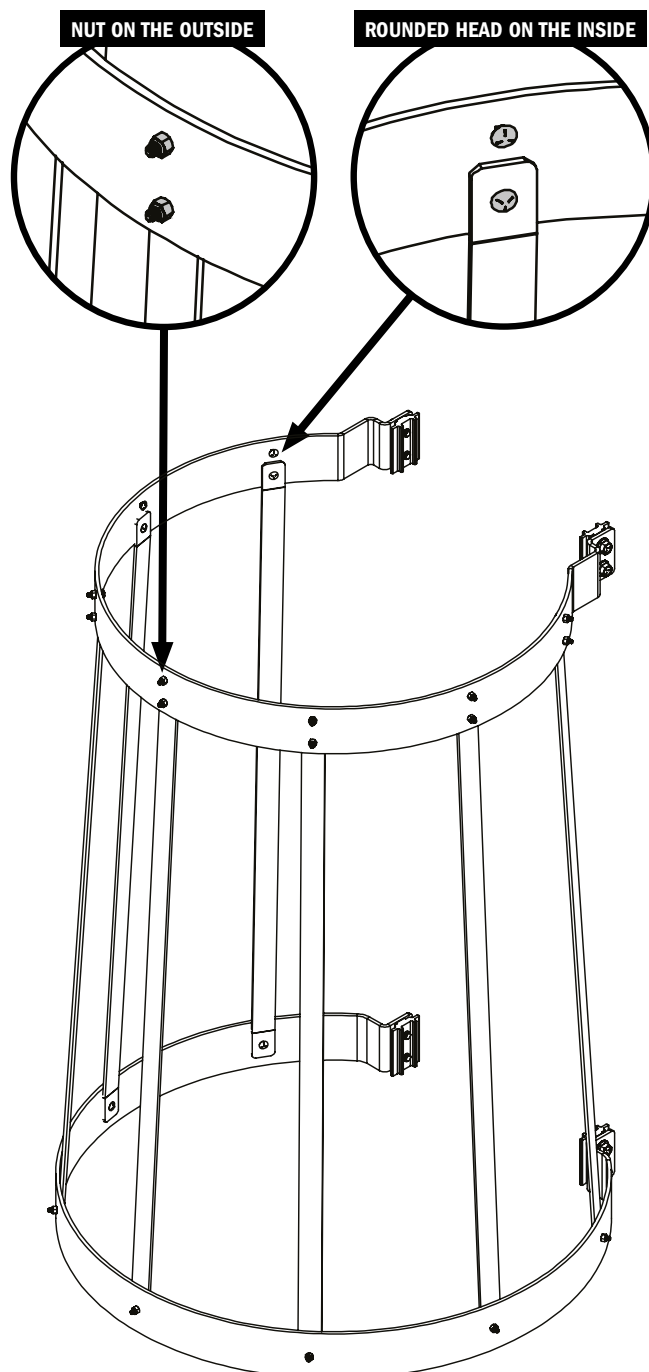
1.9 CAGE

1



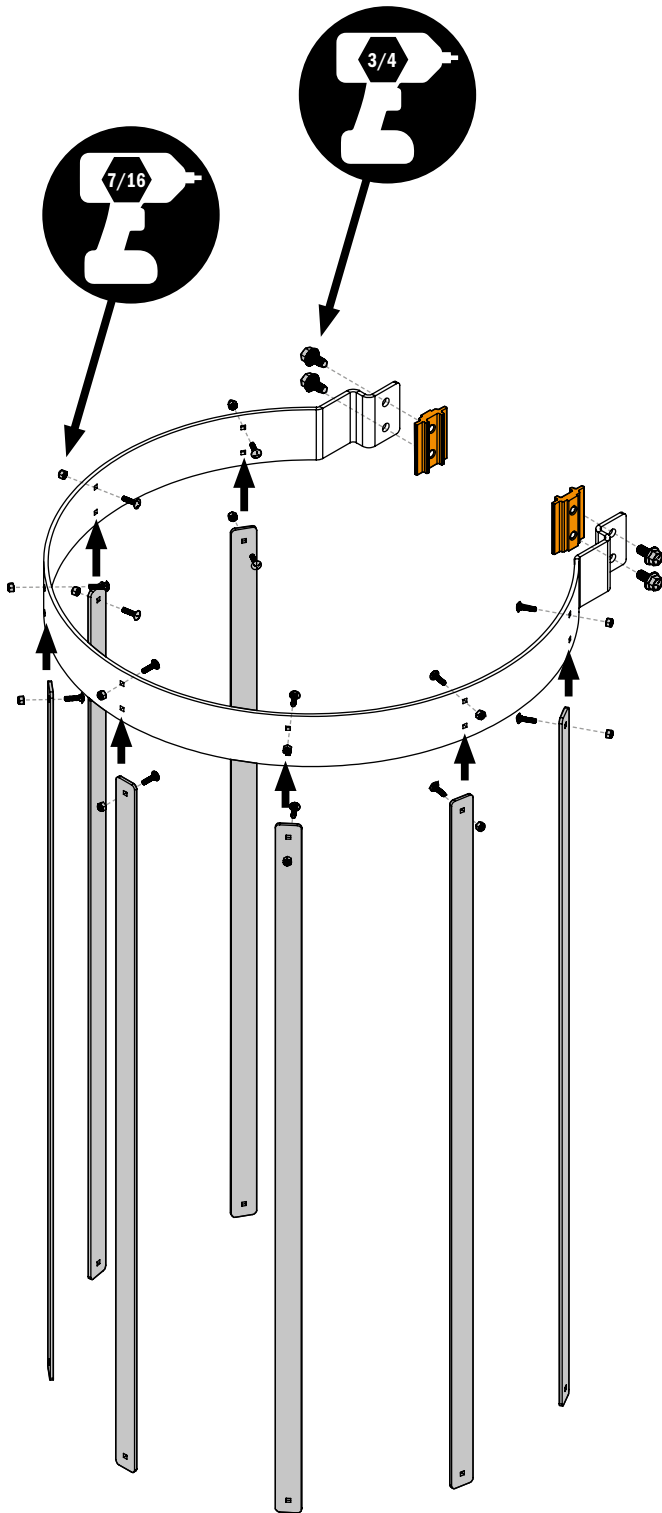
2

E-EFACBK

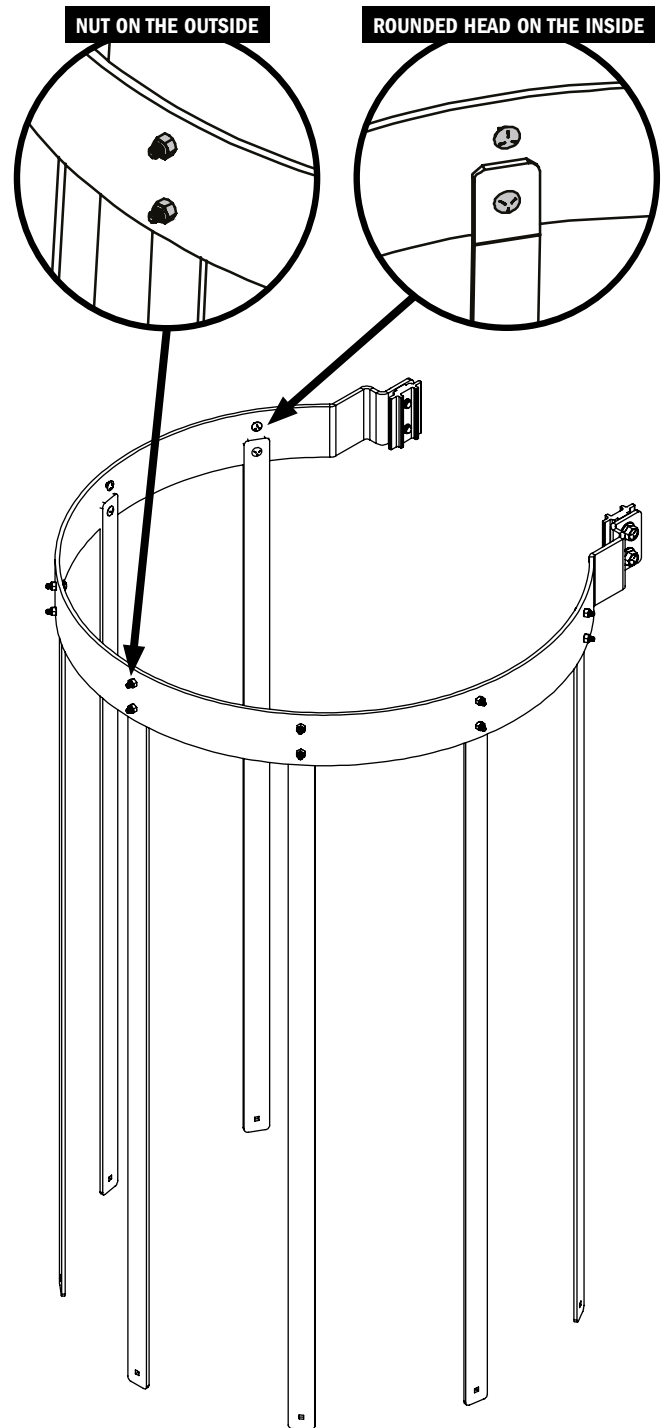


CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

1

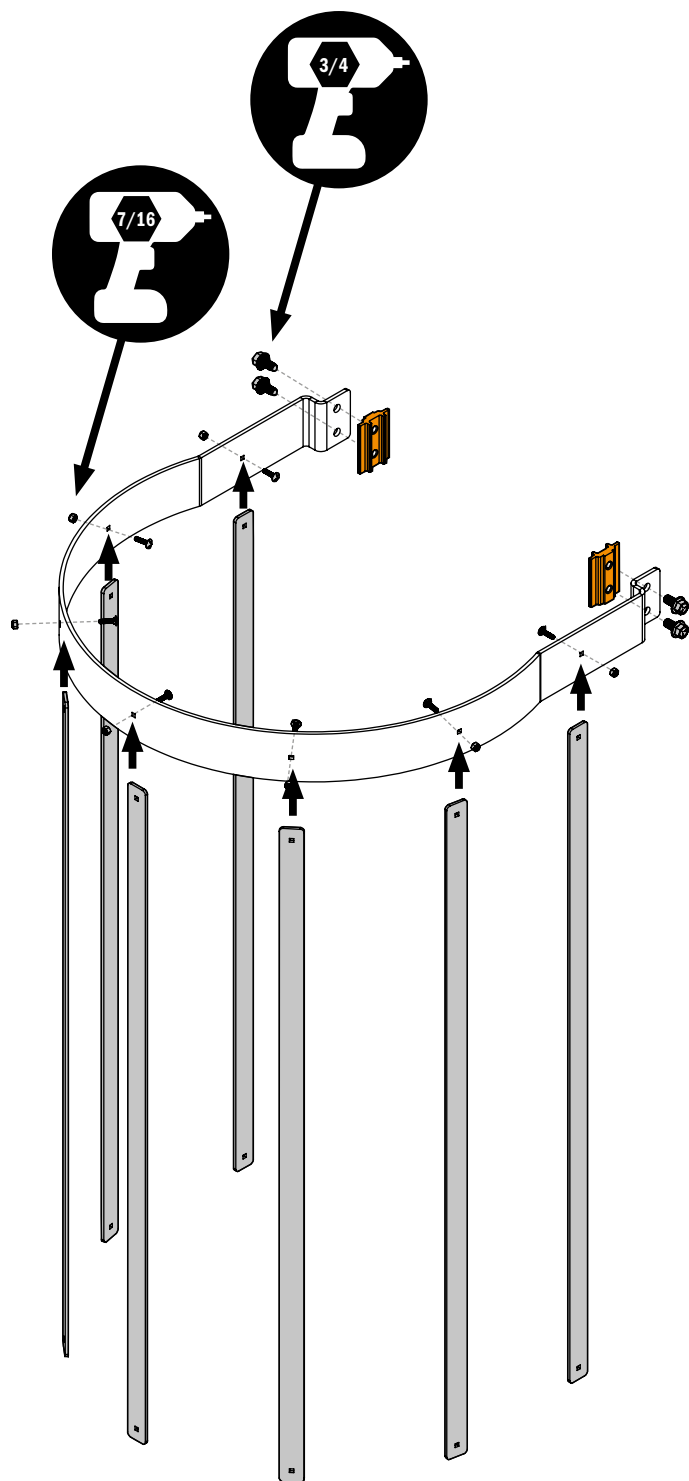


2

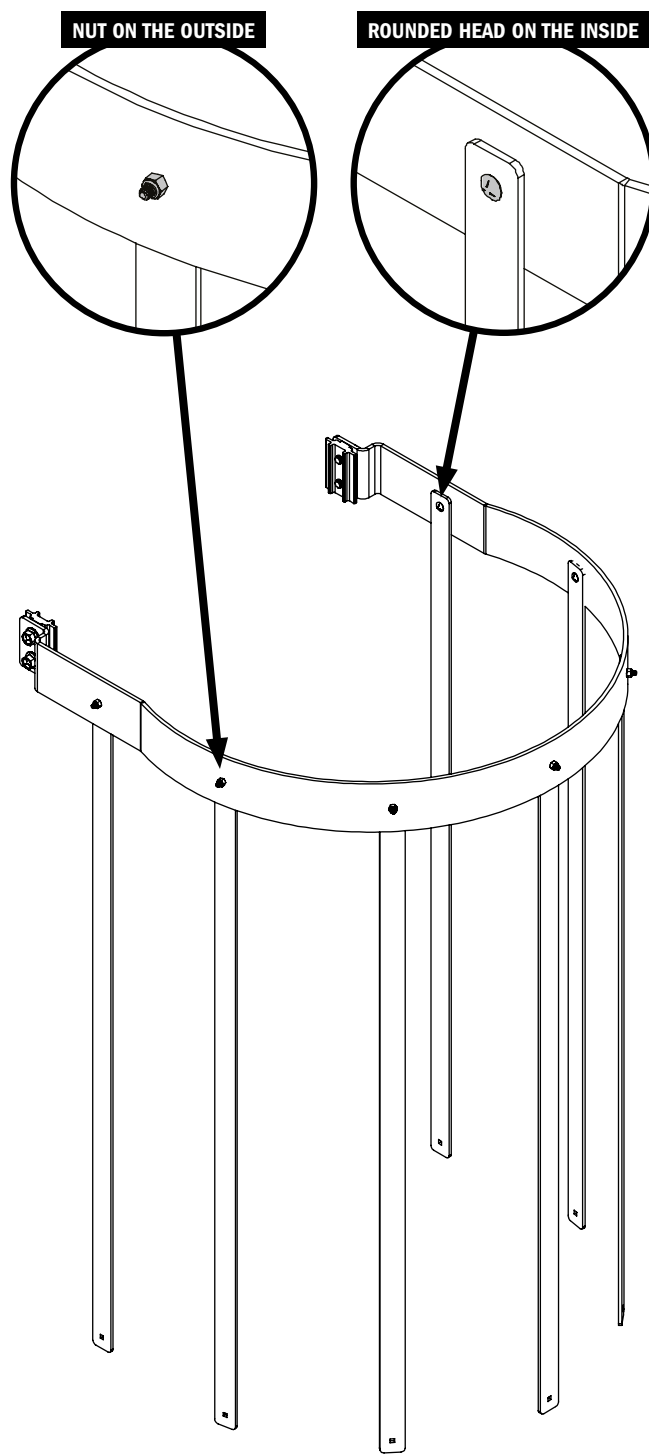


CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

1

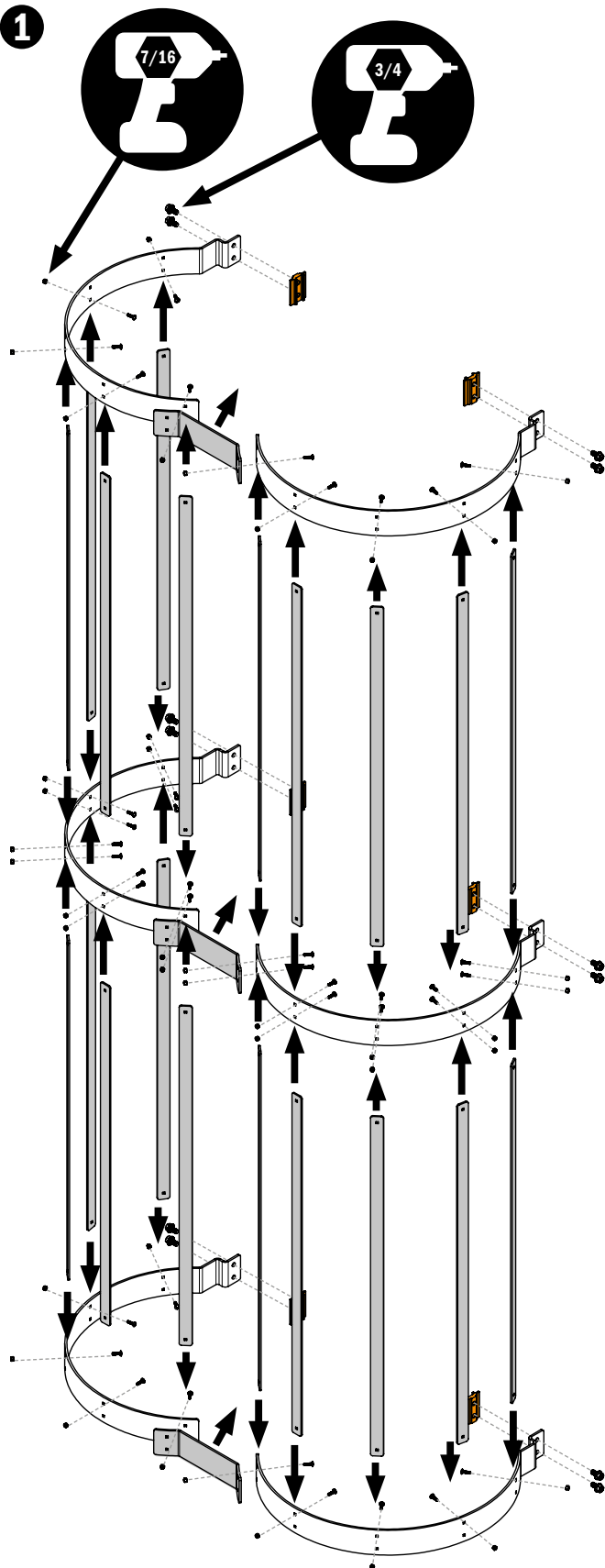


2

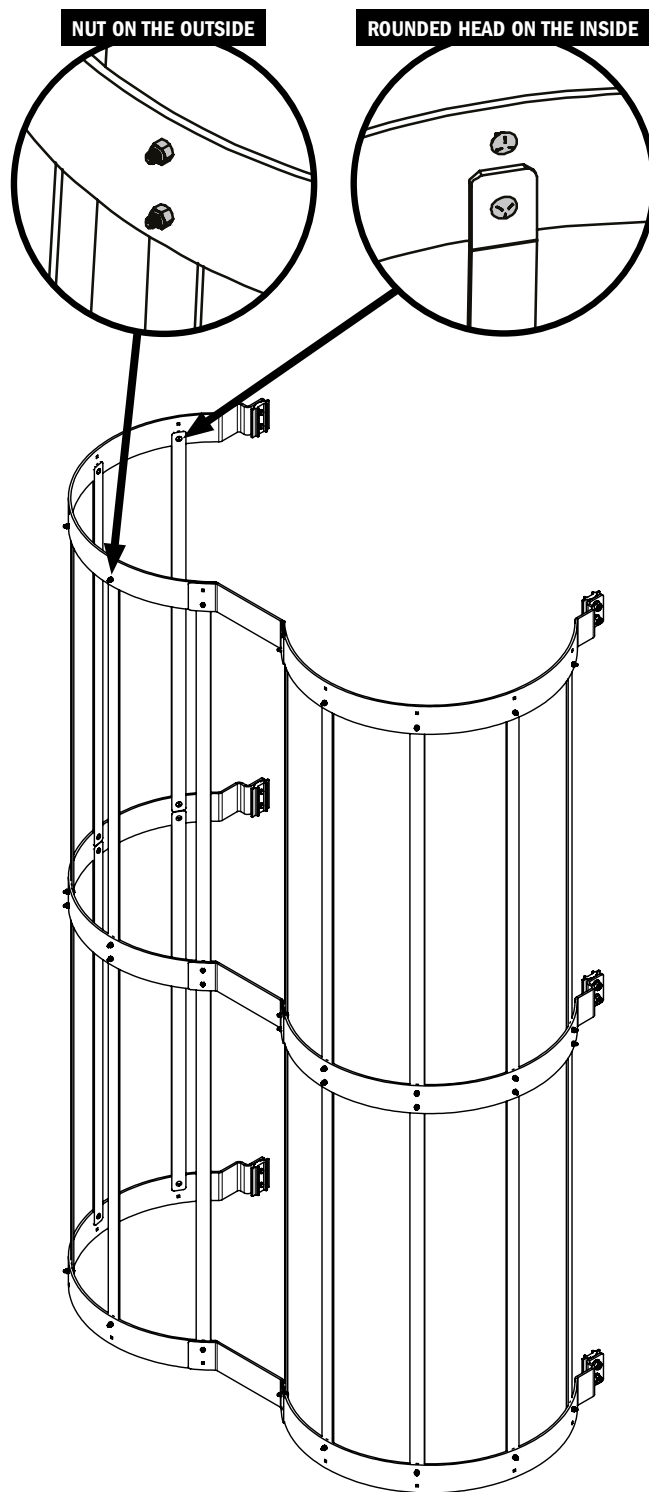


● CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

1



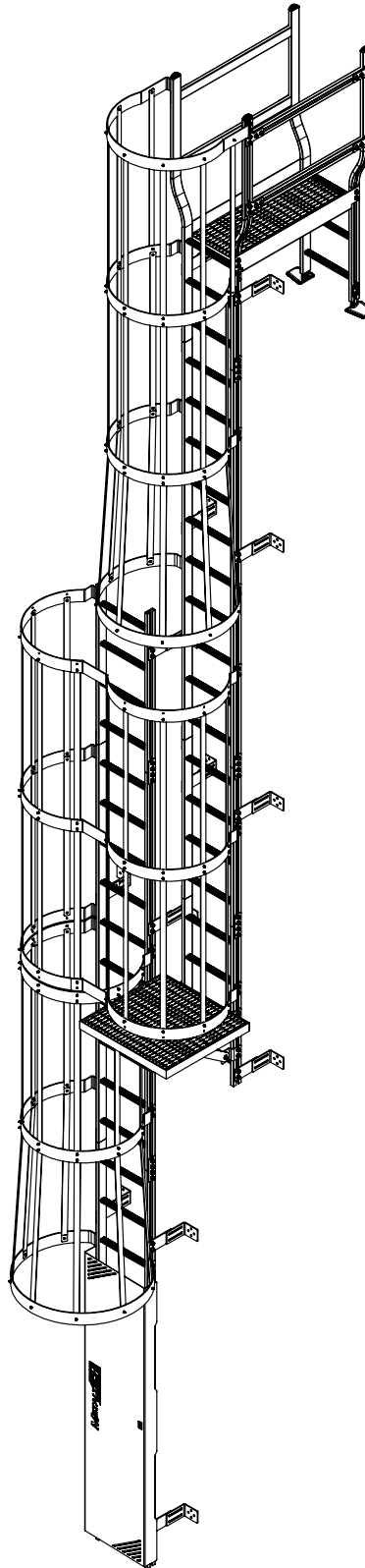
2



CAUTION: These universal connectors must be inserted and positioned in the ladder sections before assembling the next section.

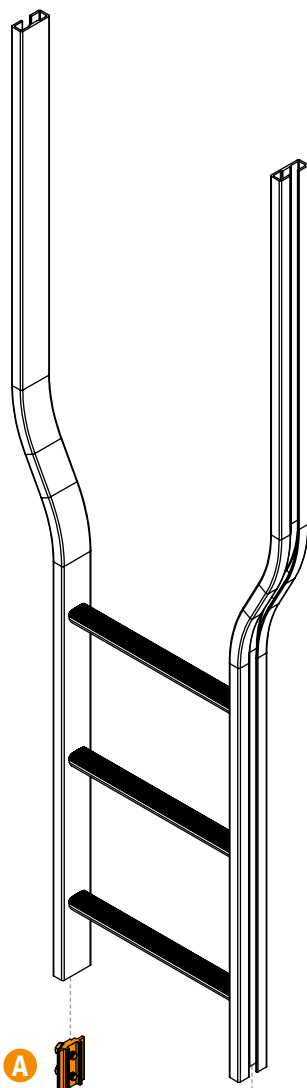
2. COMPLETE ASSEMBLY EXAMPLE

Assemble the various components together by sliding the connectors into the side extrusions, then tighten the bolts to secure them in place. Follow a general top-to-bottom sequence for the different sections.



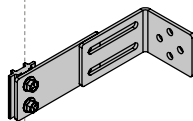
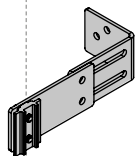
2.1 STARTING SECTION

1



A

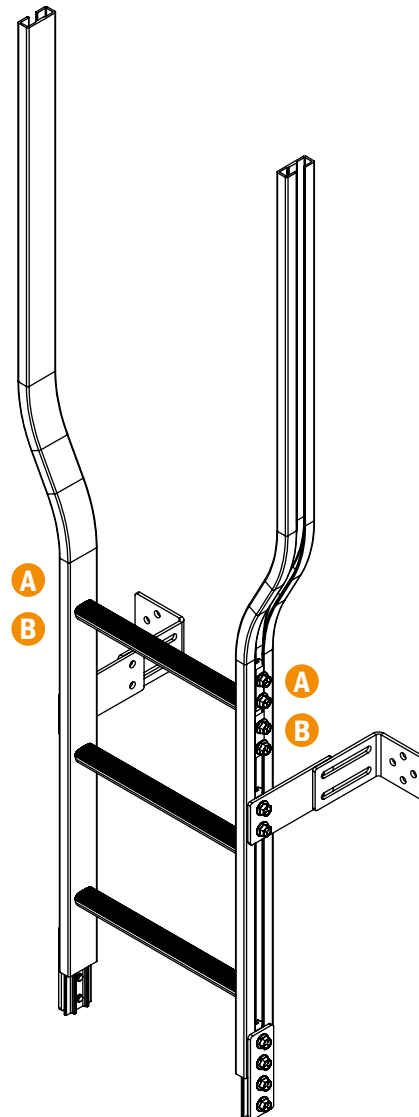
B



A Connector for landing E-EFAP4K

B Connector for safety cage E-EFACMK

2

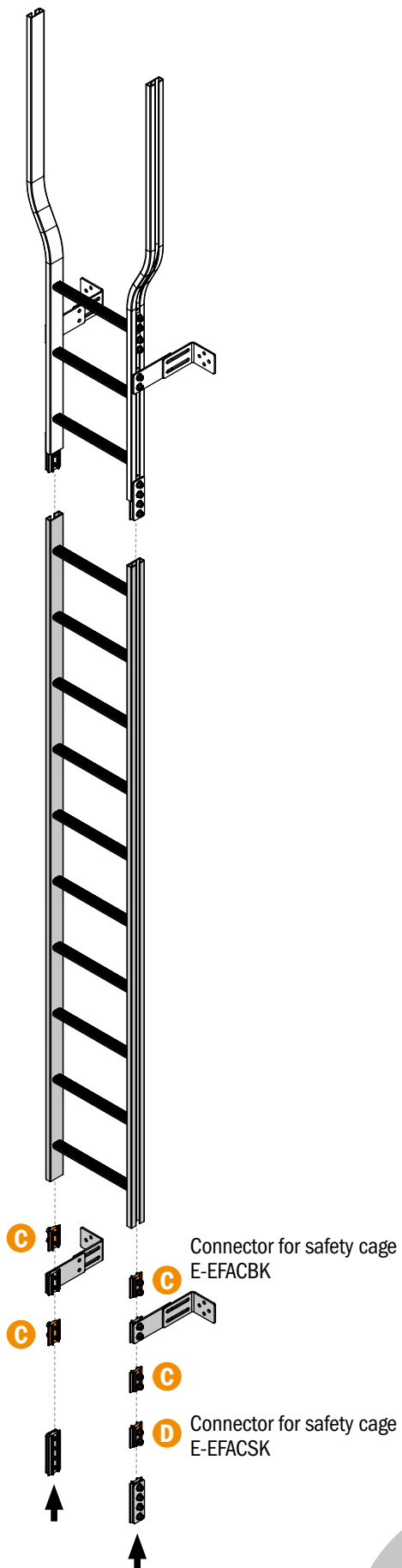


A
B

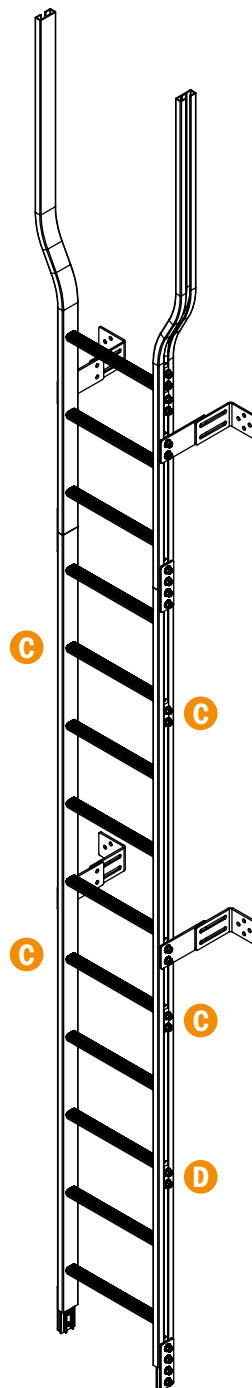
A
B

2.2 10 FT LADDER

1



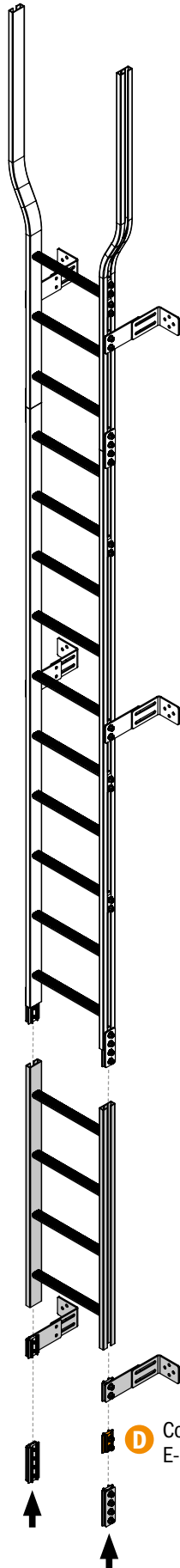
2



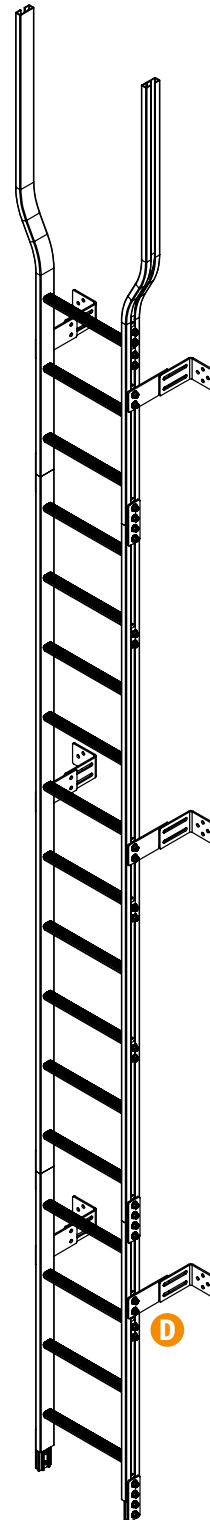
ASSEMBLY

2.3 4 FT LADDERS

1



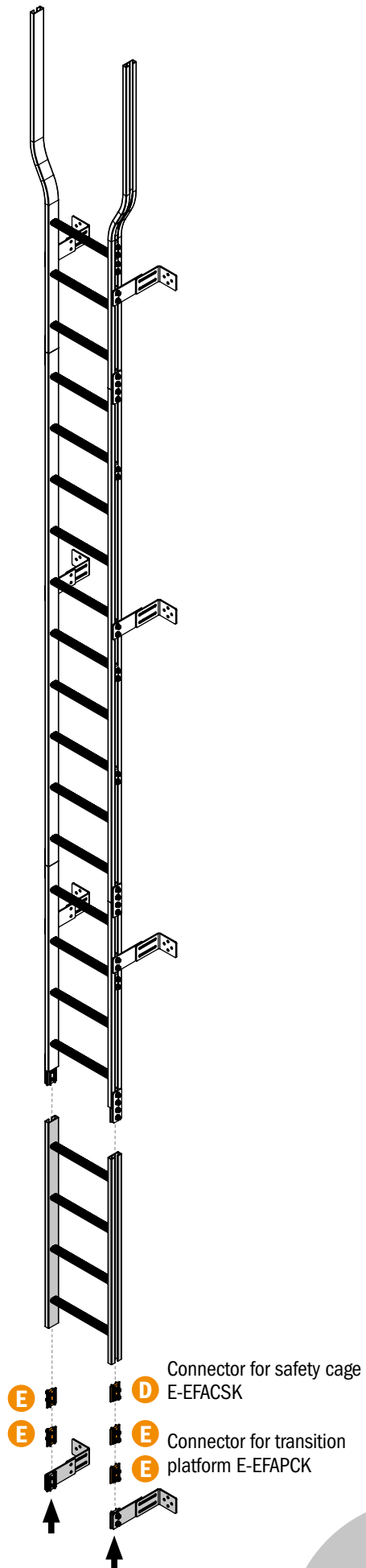
2



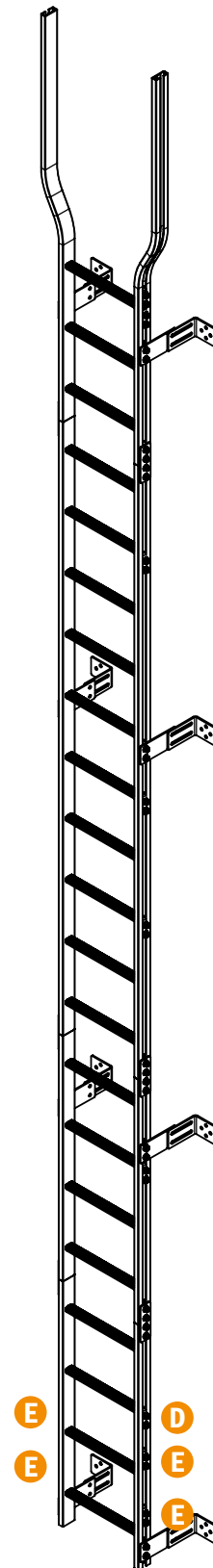
D Connector for safety cage
E-EFACSK

ASSEMBLY

3



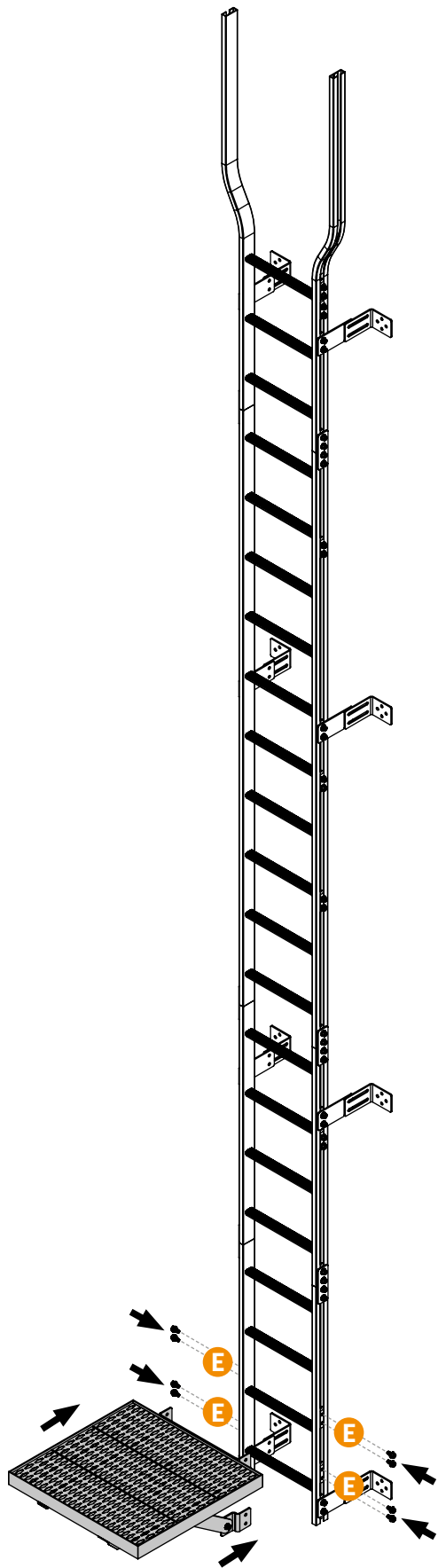
4



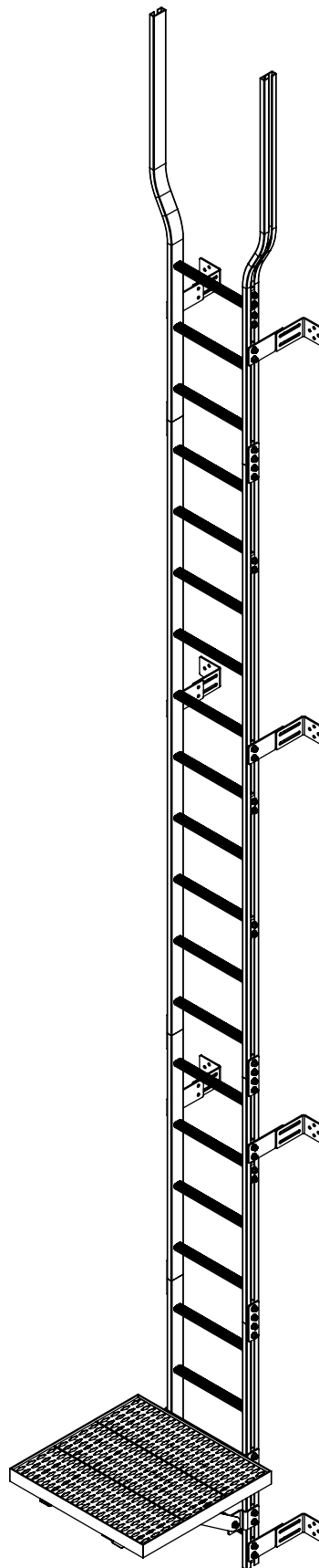
ASSEMBLY

2.4 TRANSITION PLATFORM

1

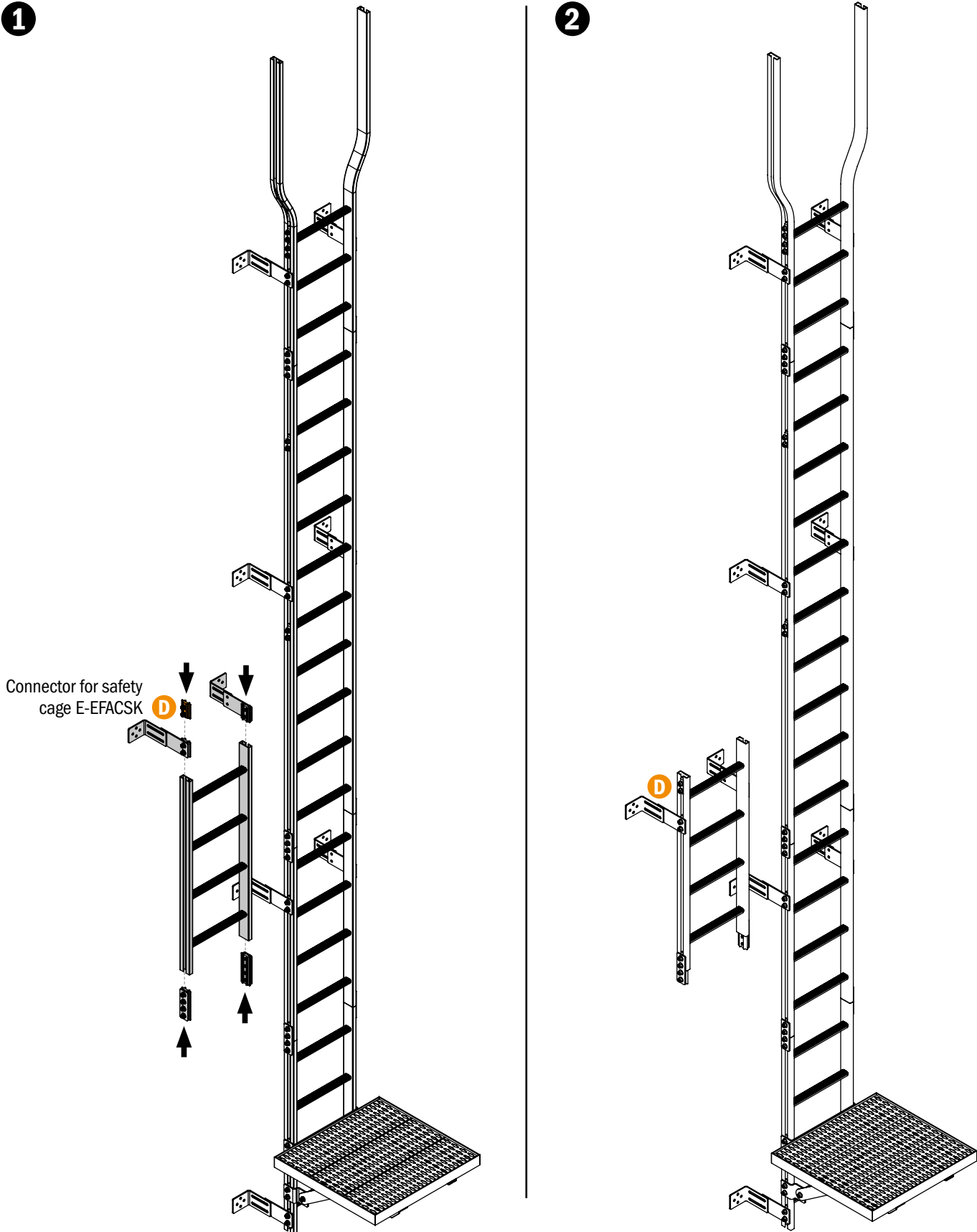


2

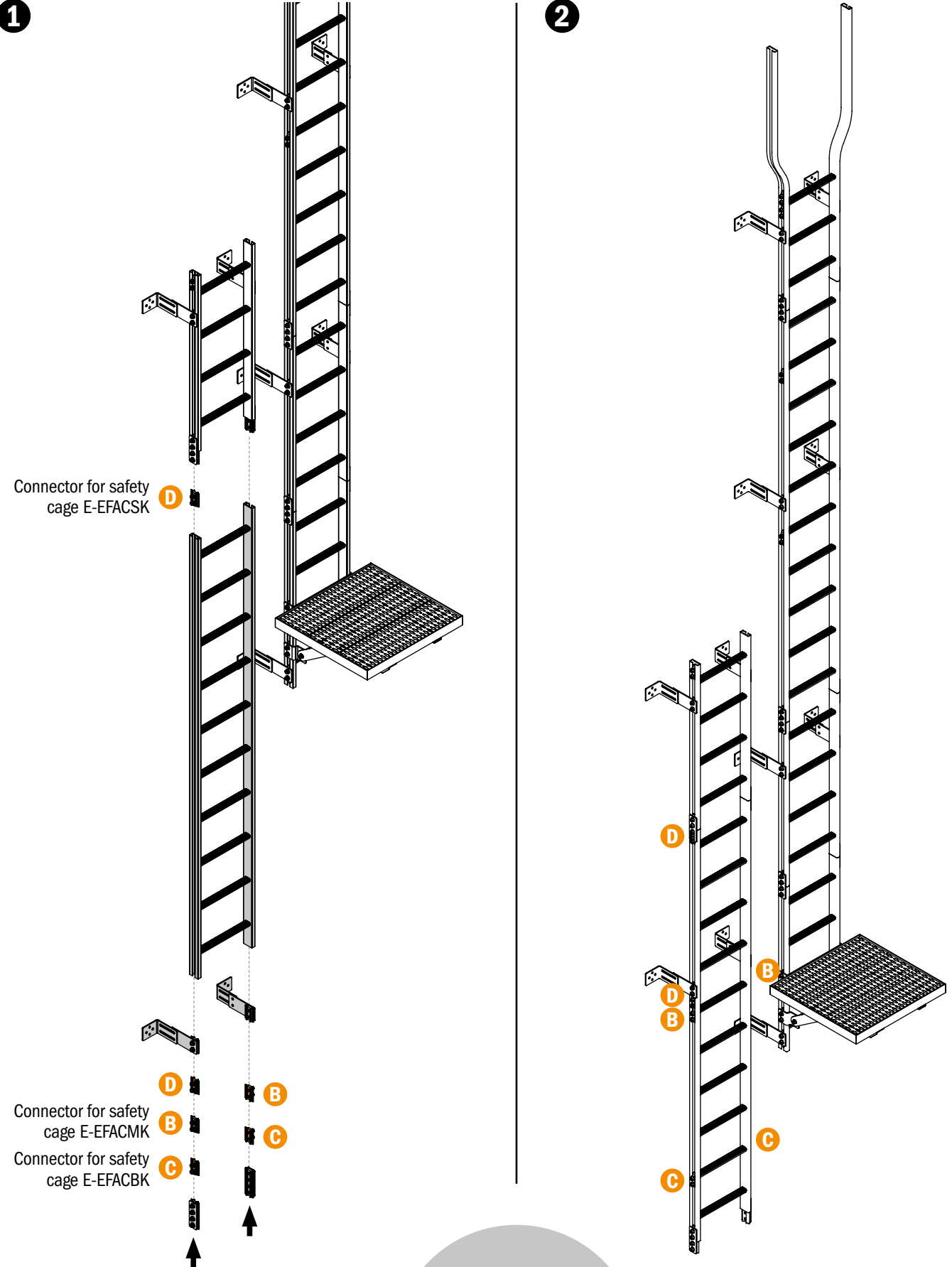


ASSEMBLY

2.5 4 FT LADDER

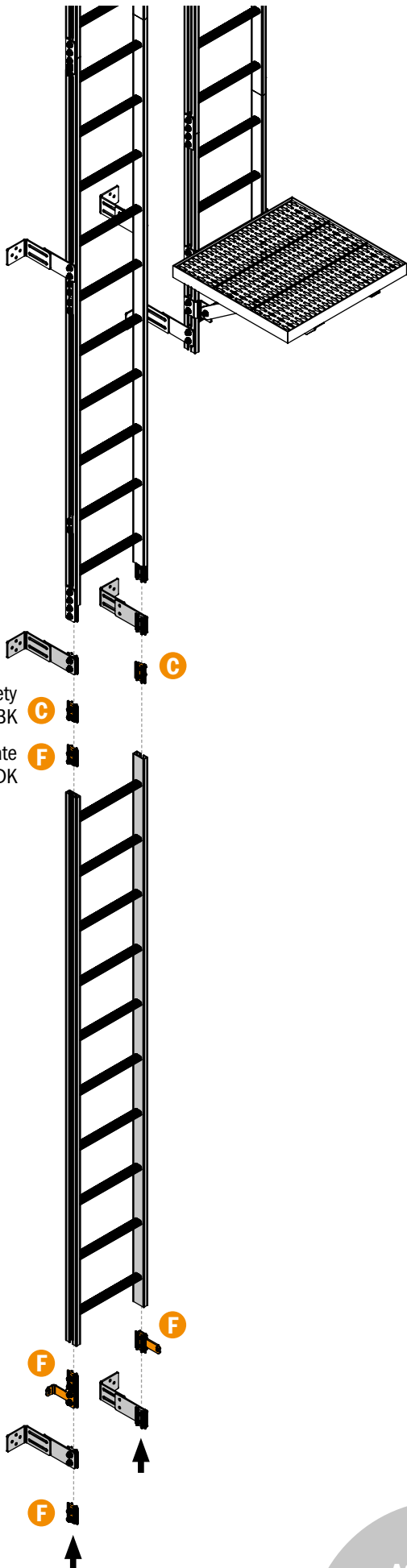


2.6 10 FT LADDERS

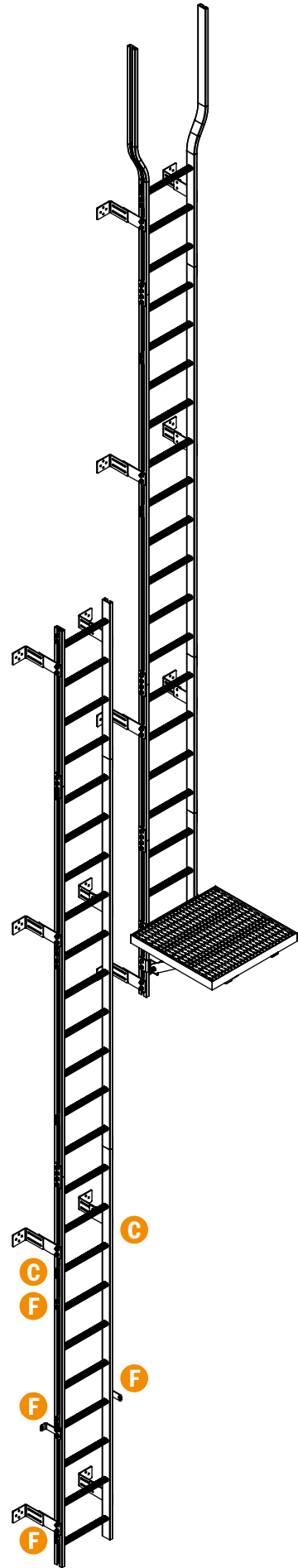


ASSEMBLY

3

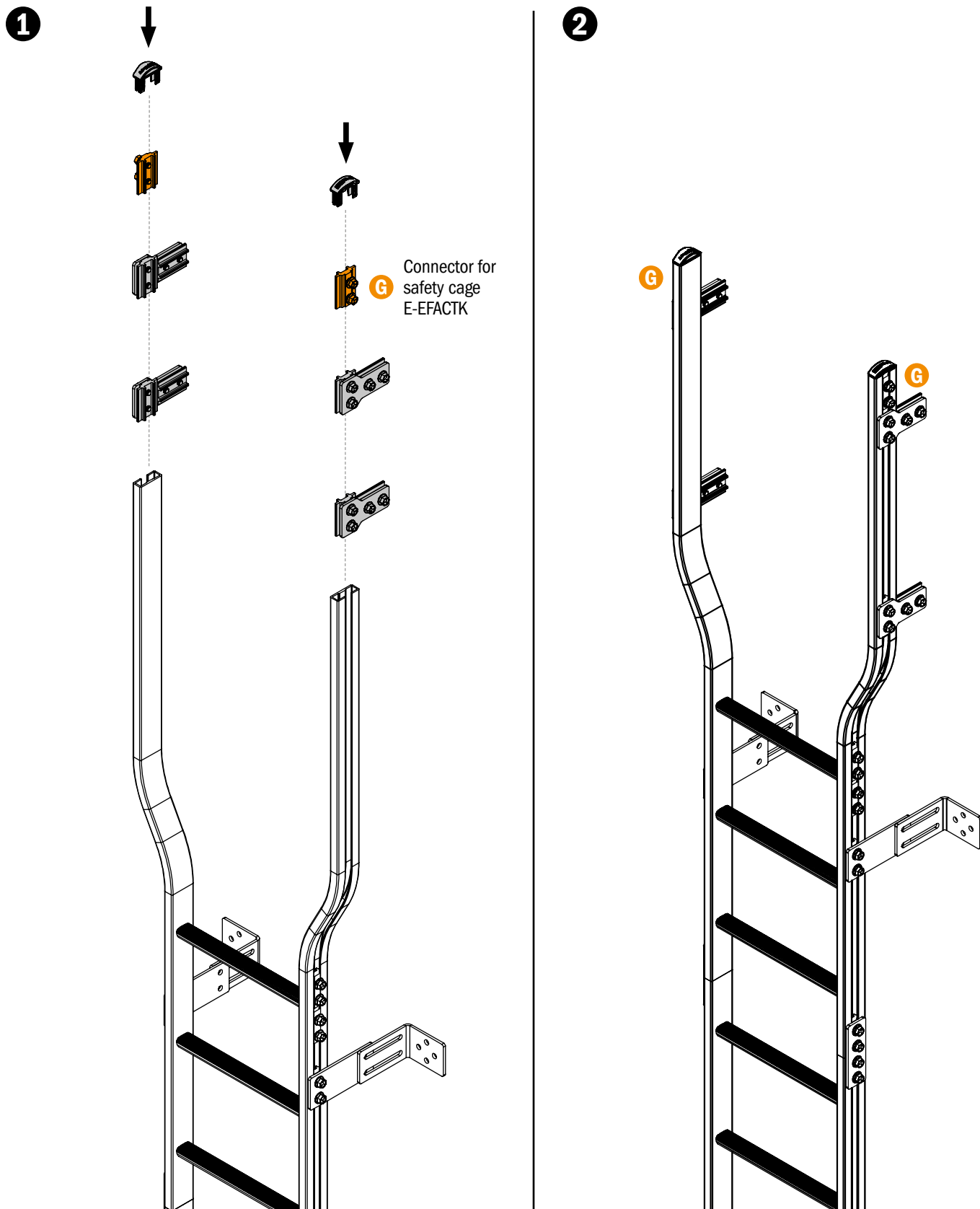


4

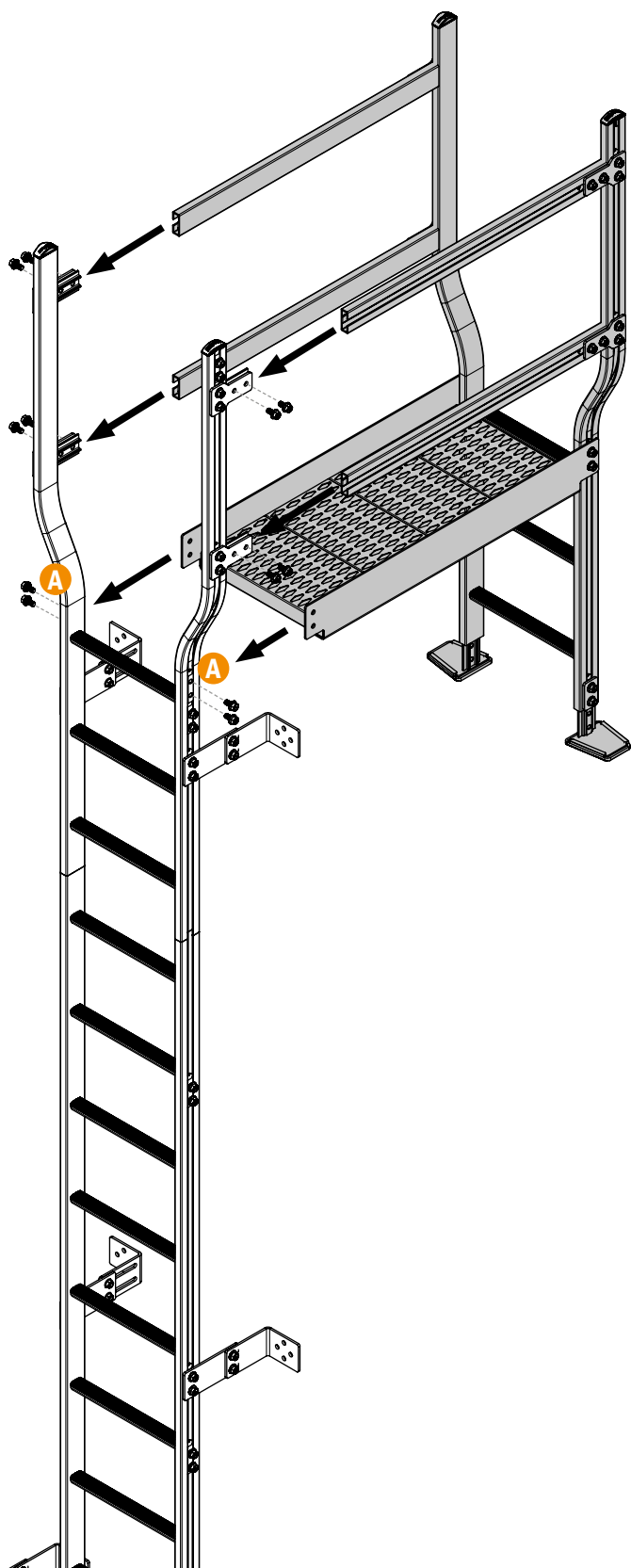


ASSEMBLY

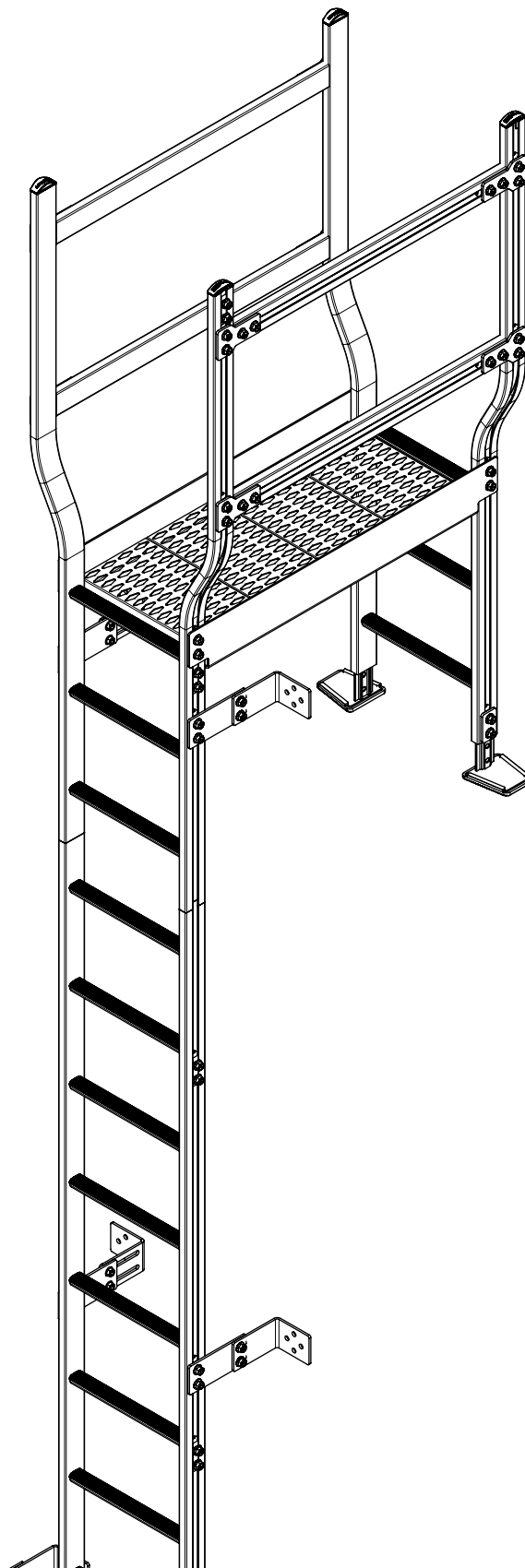
2.7 EXIT SECTION



3

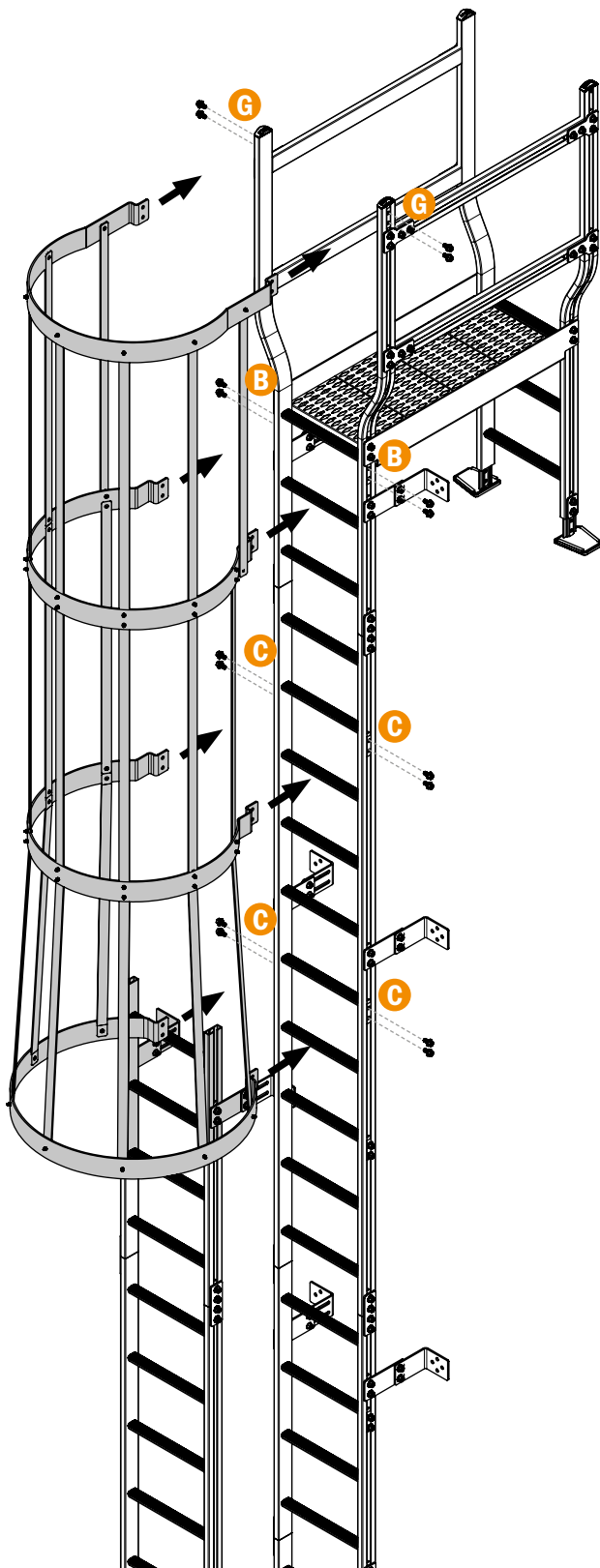


4

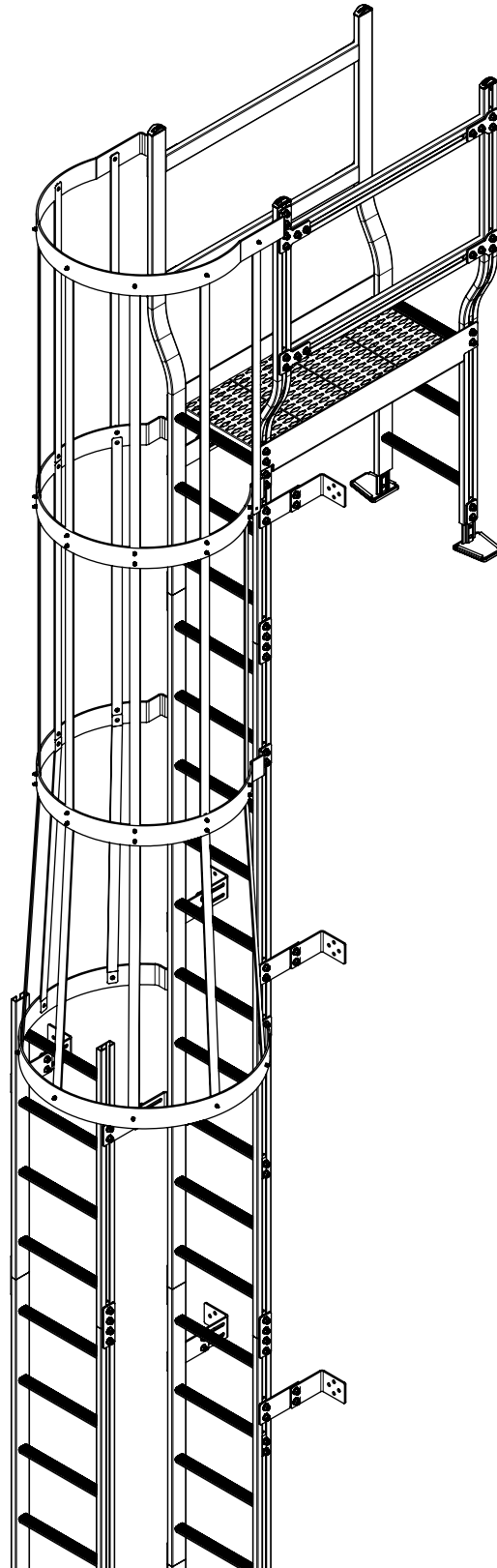


2.8 TOP SAFETY CAGE SECTION

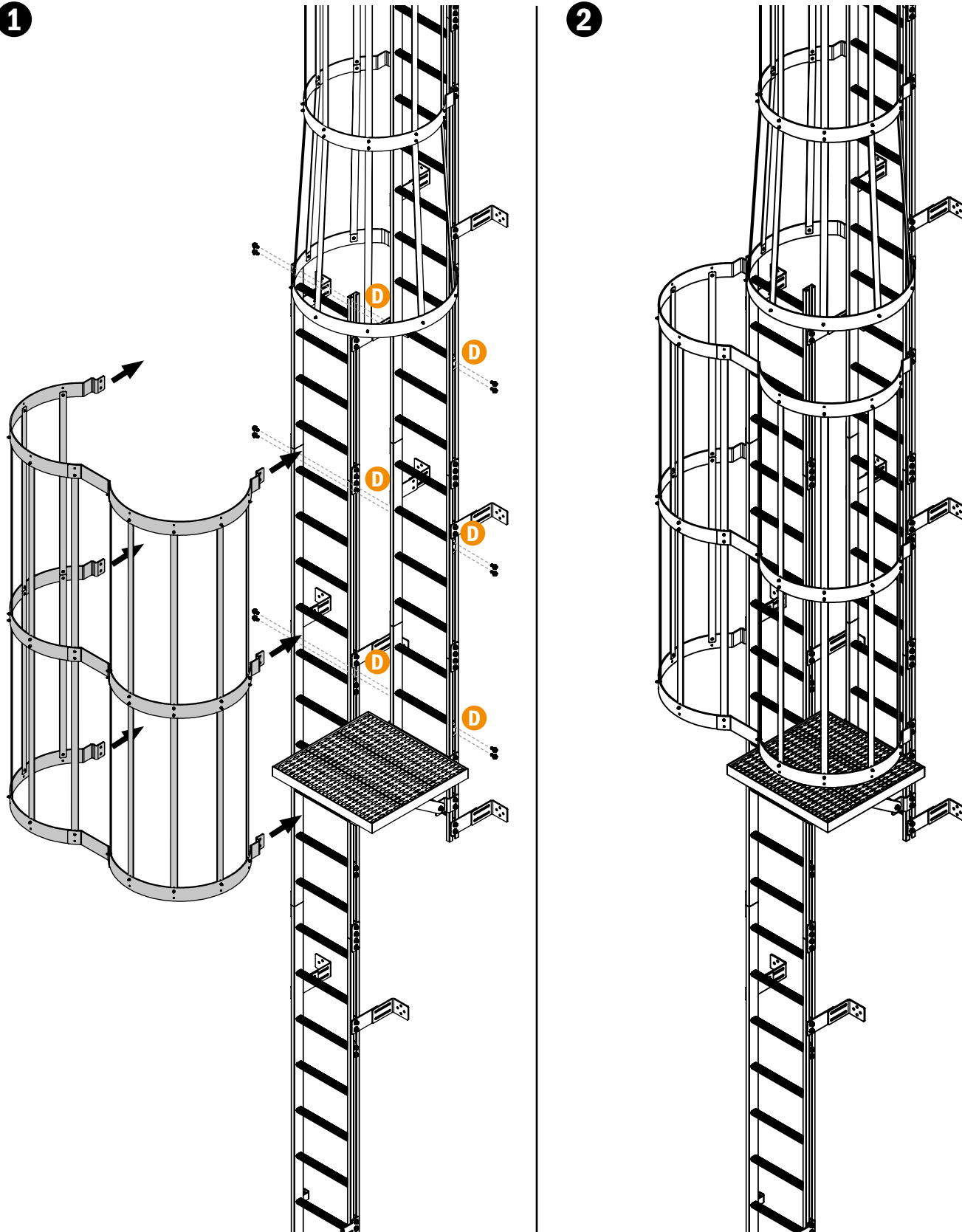
1



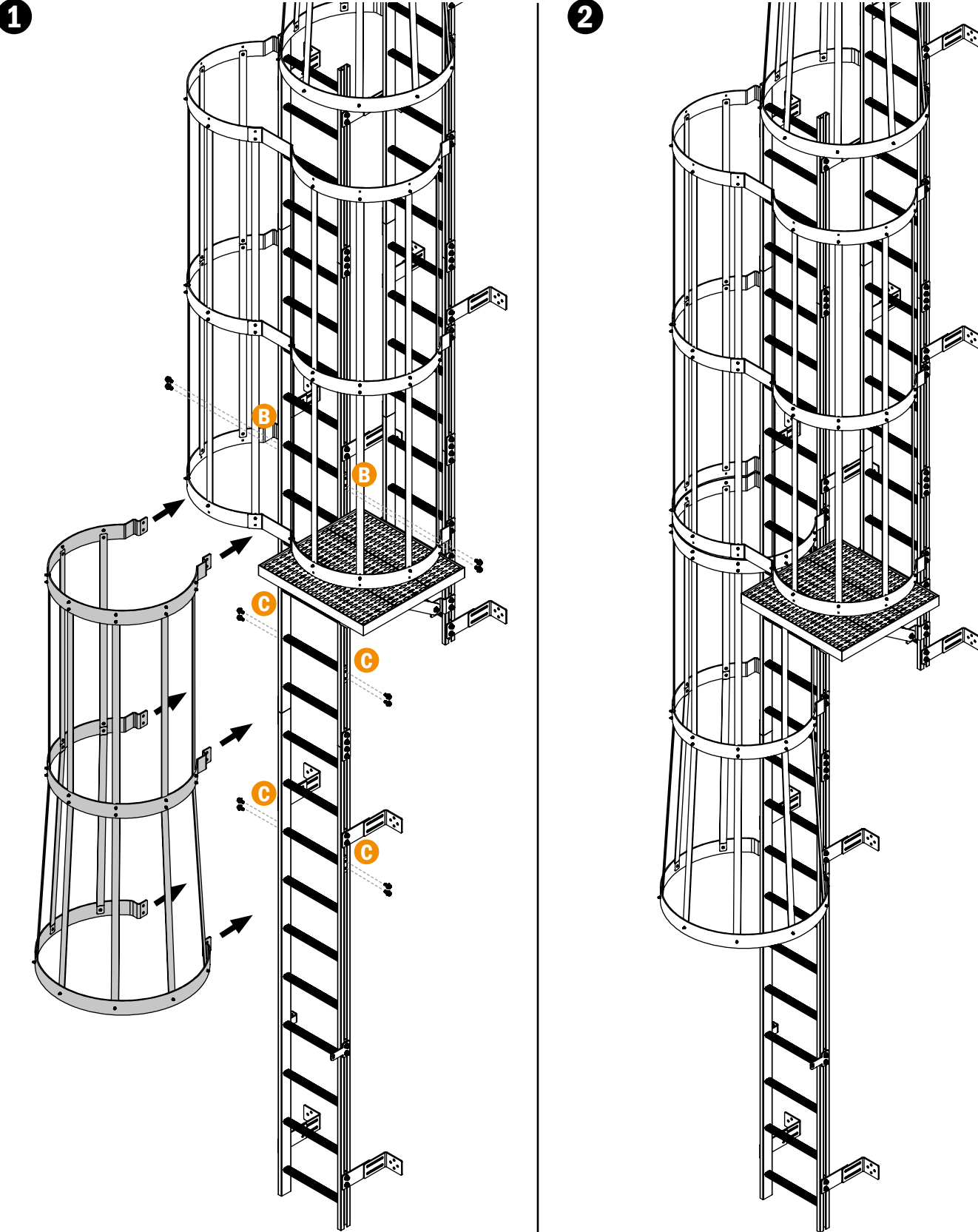
2



2.9 TRANSITION SAFETY CAGE SECTION

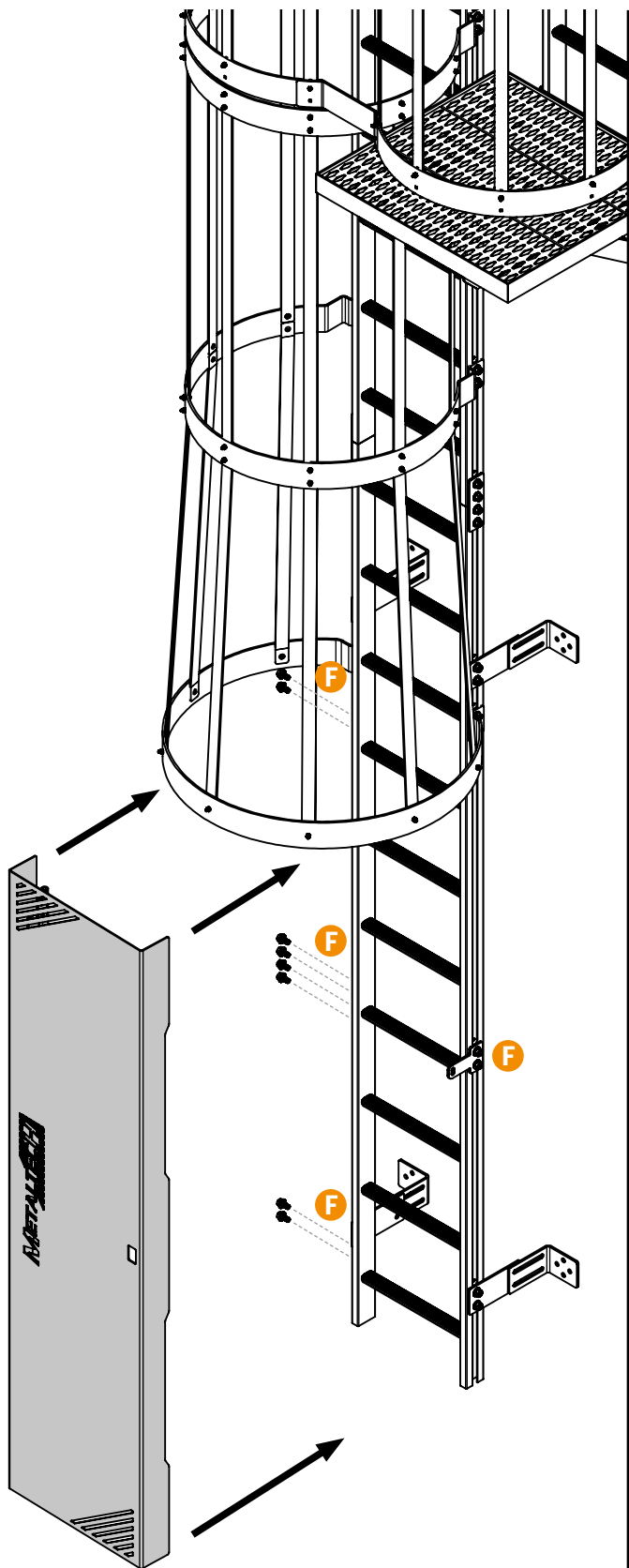


2.10 BOTTOM SAFETY CAGE SECTION

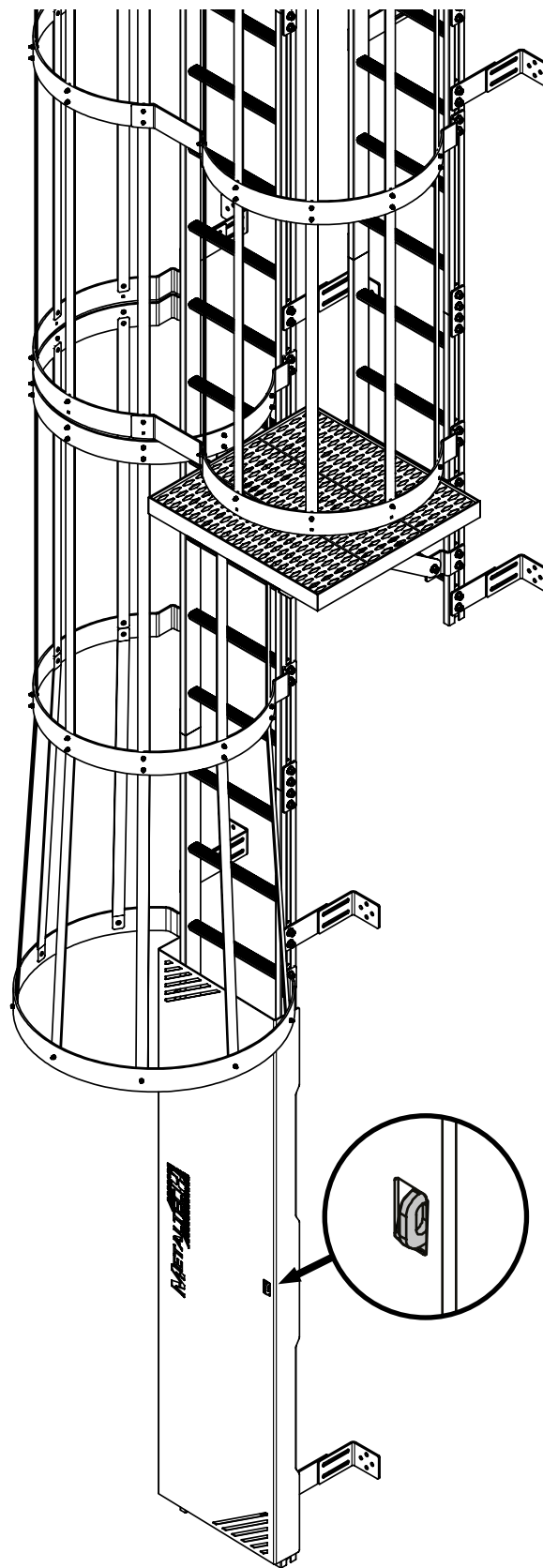


2.11 GATE

1



2



Customer Service

1 800 567-0605

Our customer service staff is available to help you. For help with product assembly, to report damaged or missing parts, or for any other information about this product, please call our toll-free number.

KEEP THIS MANUAL FOR FUTURE REFERENCE

Keep this manual and the original sales invoice in a safe, dry place for future reference.

Ten-Year Limited Warranty

Metaltech-Omega Inc. guarantees this product against any material defect. Please return this product, freight prepaid, to Metaltech-Omega Inc. At its own discretion, Metaltech-Omega Inc. will replace or repair this product and return it within a reasonable time. This warranty does not cover any damage(s) caused by any incorrect or inappropriate use, care or maintenance. Proof of purchase must accompany the return.



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