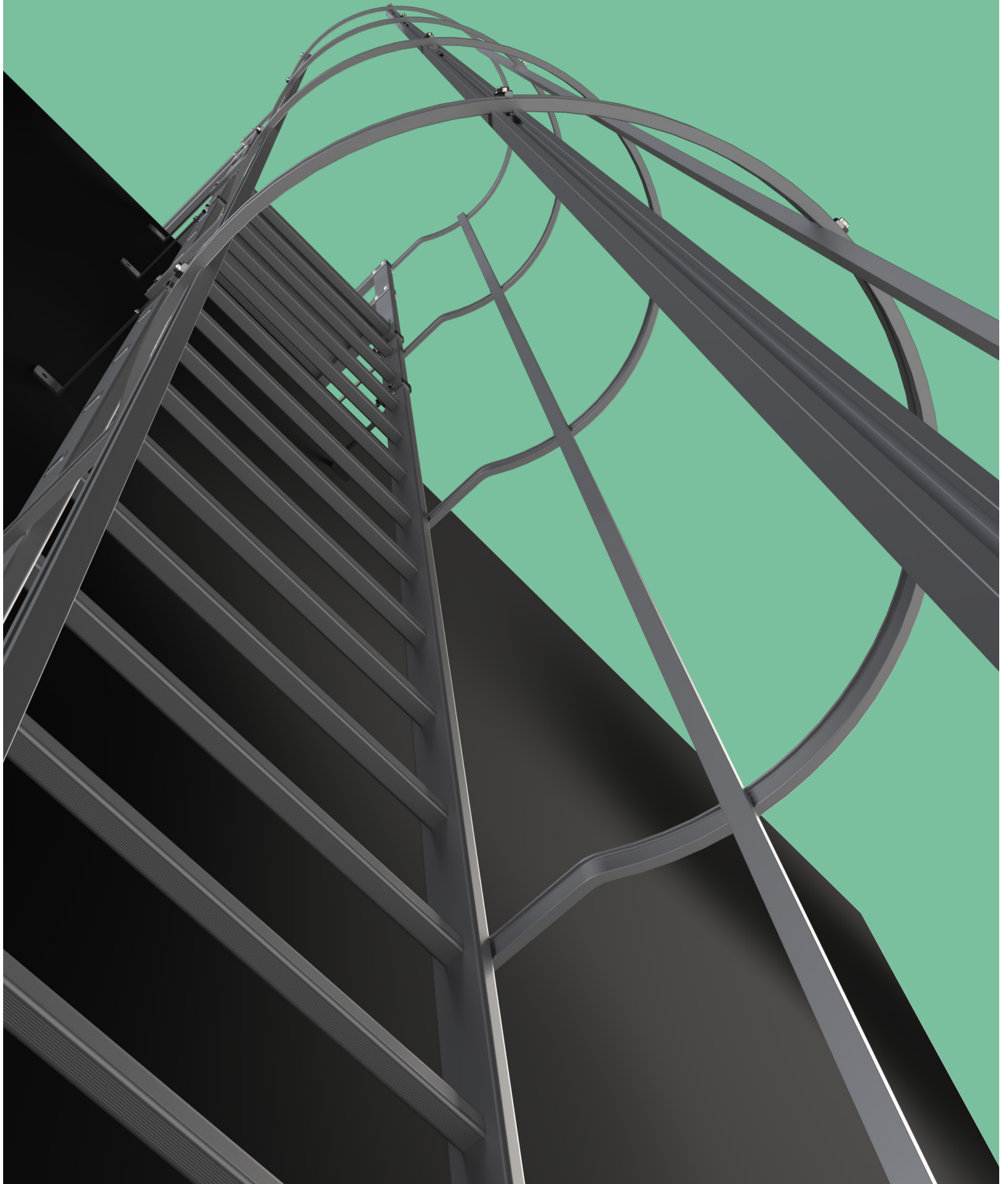


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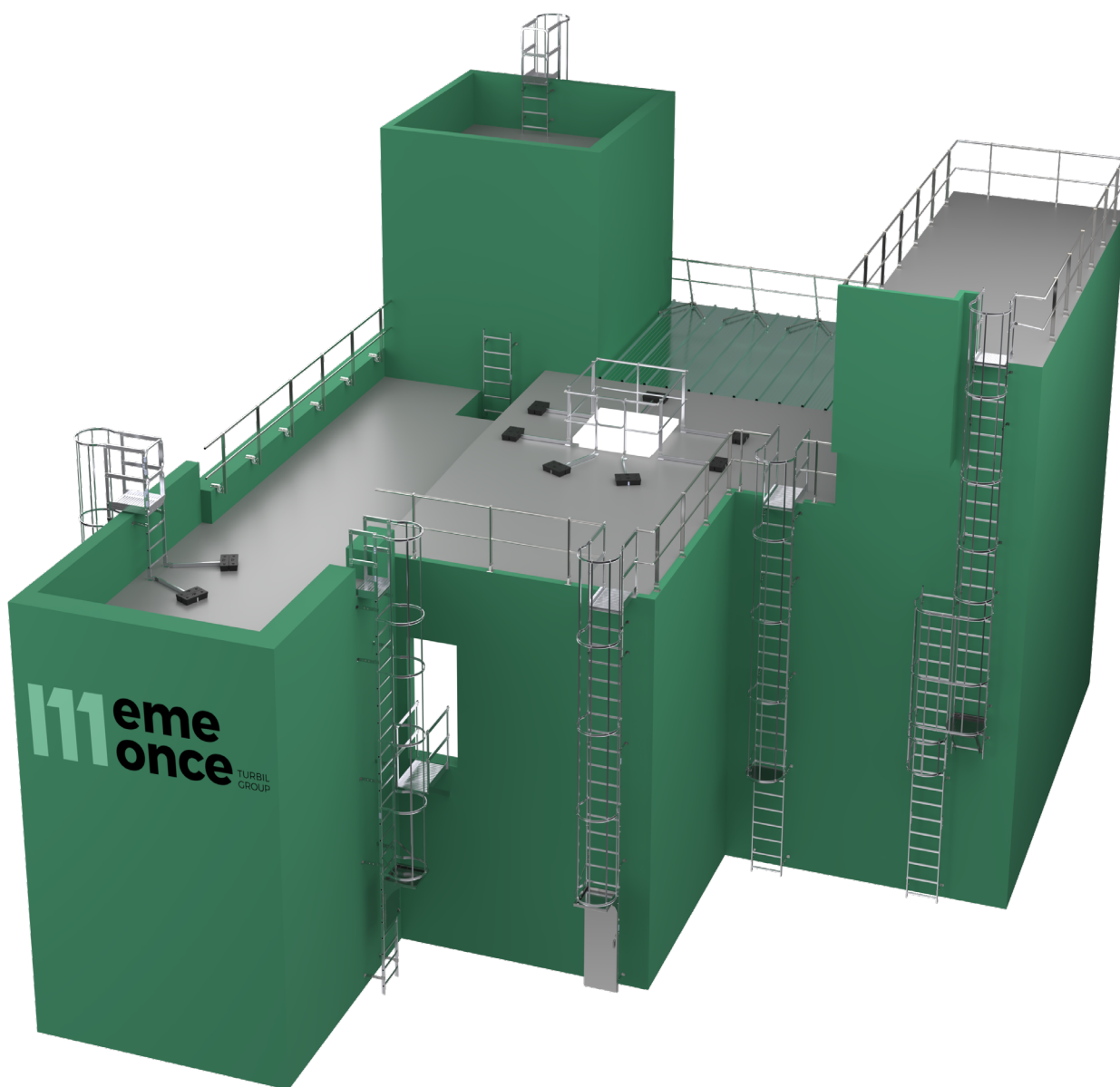


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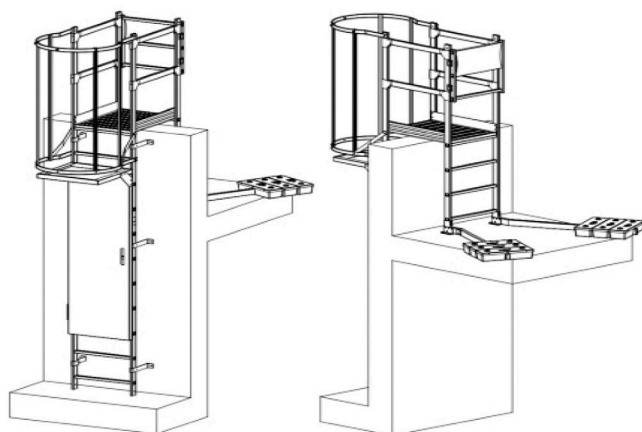
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TECHNICAL AND INSTALLATION MANUAL

NF E85-016:2022 & EN 14122-4:2017



MAIN FEATURES



- Crinoline diameter: 750 mm
- Distance between rungs: 300 mm
- Ladder outer width: 636 mm
- Ladder inner width: 588 mm
- Ladder profile: 65 x 24 mm
- Rungs: 29.5 x 29.5 mm, non-slip
- Made in Spain

ADVANTAGES

DURABILITY

Manufactured in 6063 aluminium (ladders, crinoline, front exit, exit platforms) and high-strength steel with special anti-corrosion treatment (fixing brackets, simple door, half-door).

REINFORCED RIGIDITY

Extruded aluminium profile 65 x 24 mm.
Non-slip aluminium rungs 29.5 x 29.5 mm.

EASY TO INSTALL

Ultra-fast assembly system for easy installation (clip-on fixing brackets for ladder, semi-automatic fixing with one screw), ladder-to-ladder and front exit-to-ladder joints with screw.

SIMPLIFIED LOGISTICS

Standard parts permanently in stock.
Palletised deliveries and individualised identification.

STANDARDS REMINDER

Fixed ladders with safety cages are collective fall protection systems for access at height to machines or buildings.

Thanks to a wide range of accessories, safety cage ladders adapt to their environment and allow for all configurations: with or without intermediate platforms, top exits with roof access, exits under hatches, with or without anchoring, mounting on cladding, etc.

Easy to install on site, the ladders are delivered pre-drilled with pre-mounted fasteners.

ACCESS SYSTEM COMPLIANT WITH THE LATEST STANDARDS

In line with regulatory requirements and standards, Emeonce offers its clients a fixed access ladder system that meets the latest French and European standards.

This system complies with the requirements of standards for fixed ladders, specifically NF E 85-016 and EN 14122-4:

- **NF E 85-016:** up to 8,000 mm (Total Climb Height) without change of ladder flight for access to a building.
- **EN 14122-4:** up to 10,000 mm (TCH) without change of ladder flight for access to machinery.

RECOMMENDATIONS

Clearance between the ladder and fixed parts of the surrounding area must be:

- In front of the ladder: 650 mm, and 600 mm in the case of a non-continuous obstacle
- Behind the rear face of the rungs: minimum 200 mm, and 150 mm in the case of a non-continuous obstacle

SAFETY CAGE (CRINOLINE)

A safety cage consists of horizontal hoops and vertical rails. The maximum distance between two consecutive hoops must not exceed 1,500 mm. The hoops must be attached perpendicularly to the rails of the cage.

The vertical rails of the cage must be fixed to the outer face and evenly distributed. A safety cage must be installed if the climb height exceeds 3,000 mm.

The bottom of the safety cage must be located between 2,200 mm and 3,000 mm above the landing area. The top section of the cage must extend to the height of the landing guardrail. The distance between two cage components must not exceed 300 mm.



STANDARDS REMINDER

GUARDRAILS

When required as fall protection devices, guardrails on landing and departure areas and intermediate platforms must comply with the applicable specifications for guardrails according to NF E 85-015. Guardrails must be installed on the edges of landing platforms with a minimum length of 1,500 mm on either side of the ladder axis or along the full length of the platform if it is shorter than 3,000 mm.

SAFETY GATE

Access to the landing area must be fitted with a gate or an opening that opens inward toward the landing.

SAFE ACCESS AND EXIT FROM THE UPPER PART OF A FIXED LADDER

Handrails / bars must ensure the connection between the ladder uprights and the guardrail handrail on the landing.

These handrails / bars must be fixed to the landing guardrails.

ATTENTION: A platform step / landing with gate and guardrail, or a roof access passage with 400 mm overlap from the landing, is mandatory.

The distance between the departure platform and the first ladder rung must be ≤ 300 mm.

The top rung must be level with the landing platform with a maximum gap of 75 mm.

REST PLATFORM

If the total climb height of a fixed ladder exceeds 8,000 mm, one or more intermediate rest platforms must be provided.

In the case of multiple sections, the height between the ground and the nearest rest platform, or between successive platforms, must not exceed 8,000 mm.

For a single uninterrupted section, the total height between the starting point and the top landing may be increased to 8,000 mm according to NF E85-014, and up to 10,000 mm in compliance with EN 14122-4.

The clearance height between the platform and the bottom of the upper safety cage must be between 2,200 mm and 3,000 mm.

To ensure full compliance, all components must be supplied by EmeOnce. Otherwise, EmeOnce declines any responsibility. Please consult our technical department for configurations including more than two rest platforms.

STANDARDS REMINDER

Before starting the ladder installation, please ensure that each installer is working in safe conditions and has the appropriate protection equipment and setup to carry out the installation under optimal safety conditions.

The installer must ensure that the support structure meets the technical requirements for fixing and using the ladder.

It is strictly forbidden to use **M-LADDER** ladders for mounting other systems.

Ladders are access means to elevated areas reserved for authorized personnel only.

They must not be used as anchor points under any circumstances.

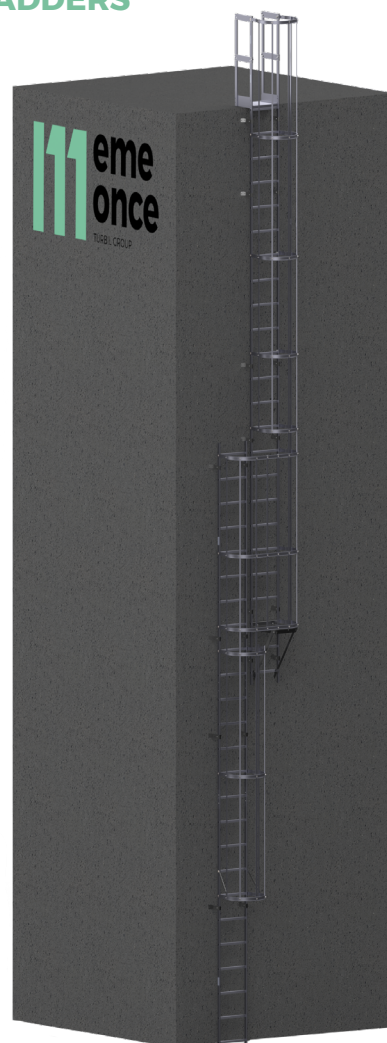
It is therefore strictly prohibited to attach PPE to them, drill or cut them, or perform any modifications, particularly to add parts or accessories other than those provided by the manufacturer.

INSTALLATION PRINCIPLES FOR M-LADDER CRINOLINE LADDERS

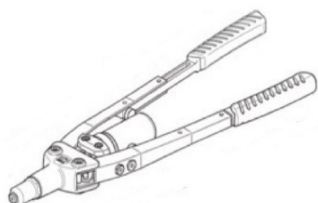
1. Verify that all elements listed in the delivery note are present.
2. Choose your configuration according to the ladder type: freestanding or suspended/fixed..
3. Check the total height to be climbed.
4. Adjust the ladder length if needed. For suspended ladders, the base must be installed 150 mm above the ground.
5. Position the bottom ladder section and fix it using the appropriate fixing brackets. Ensure that the fixing spacing is 2,400 mm center-to-center.
6. Insert the ladder module into the safety cage. Install the ladder-to-ladder joints using the supplied screws. Repeat the process up to the final module.
7. Once all ladder modules are installed, secure the top part and mount the hoops and rails of the safety cage.
8. In the case of roof access, install the passage platform and adjust the lower part of the safety cage as needed based on the final exit level.



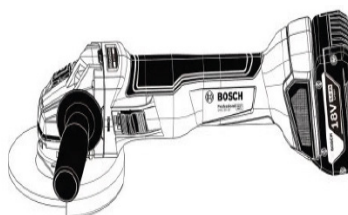
Any damaged component must be replaced with an identical one.



TOOLS NEEDED



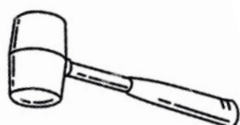
Riveter



Grinder



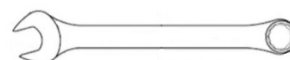
Screwdriver



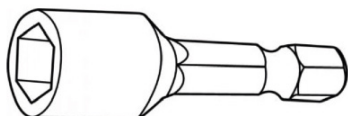
Rubber mallet



Spirit level



15-17 mm spanner



8 mm socket



6 mm Allen key



5 mm HSS drill bit

WRENCH SIZE CHART (mm)

Size	DIN Standard
M6	10 mm
M8	13 mm
M10	17 mm*
M12	19 mm

*With our system, it may be 15 or 17 mm.

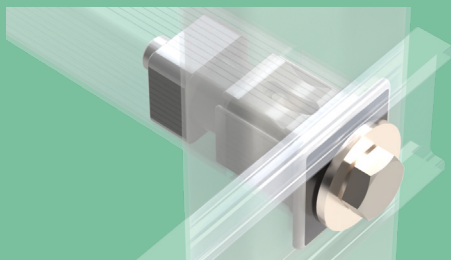
TIGHTENING TORQUE CHART (Nm)

Size	Stainless Steel
M6	3 Nm
M8	6,1 Nm
M10	10 Nm
M12	25 Nm
M14	51 Nm

Screws must be installed using the recommended tightening torque..

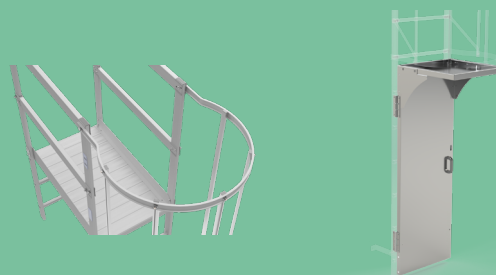
NEW FEATURES

RUNG-MOUNTED ANCHOR PIECE



®Patented product

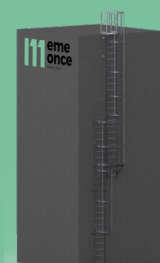
PRE-ASSEMBLED COMPONENTS



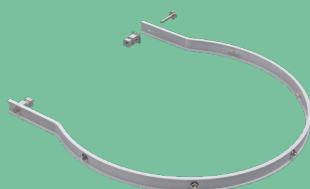
ASSEMBLY AIDS



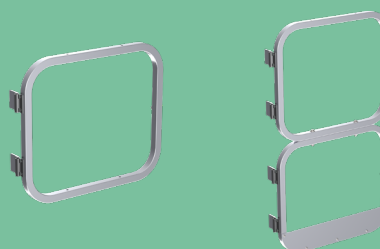
WIDEST LADDER ON THE MARKET



**PRE-ASSEMBLED HOOPS WITH 2
SCREWS**



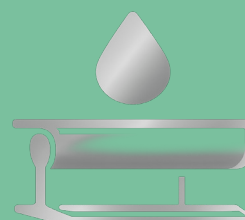
CONVERTIBLE GATE



**LANDING STEPS AND REMOVABLE
PLATFORMS**

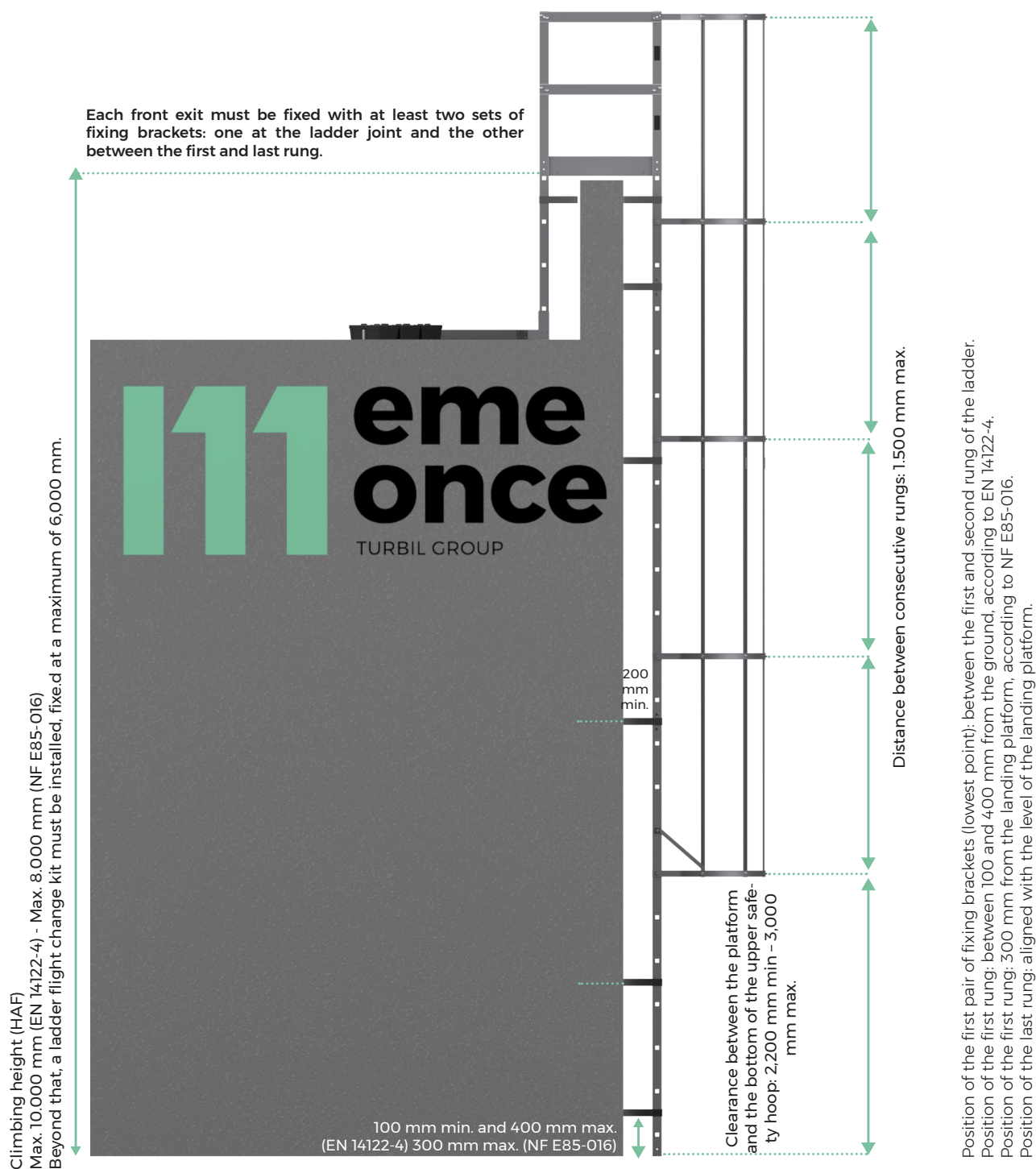


CORROSION-RESISTANT STEEL



DISTANCES TO BE RESPECTED DURING THE INSTALLATION OF THE M-LADDER SAFETY CAGE LADDER

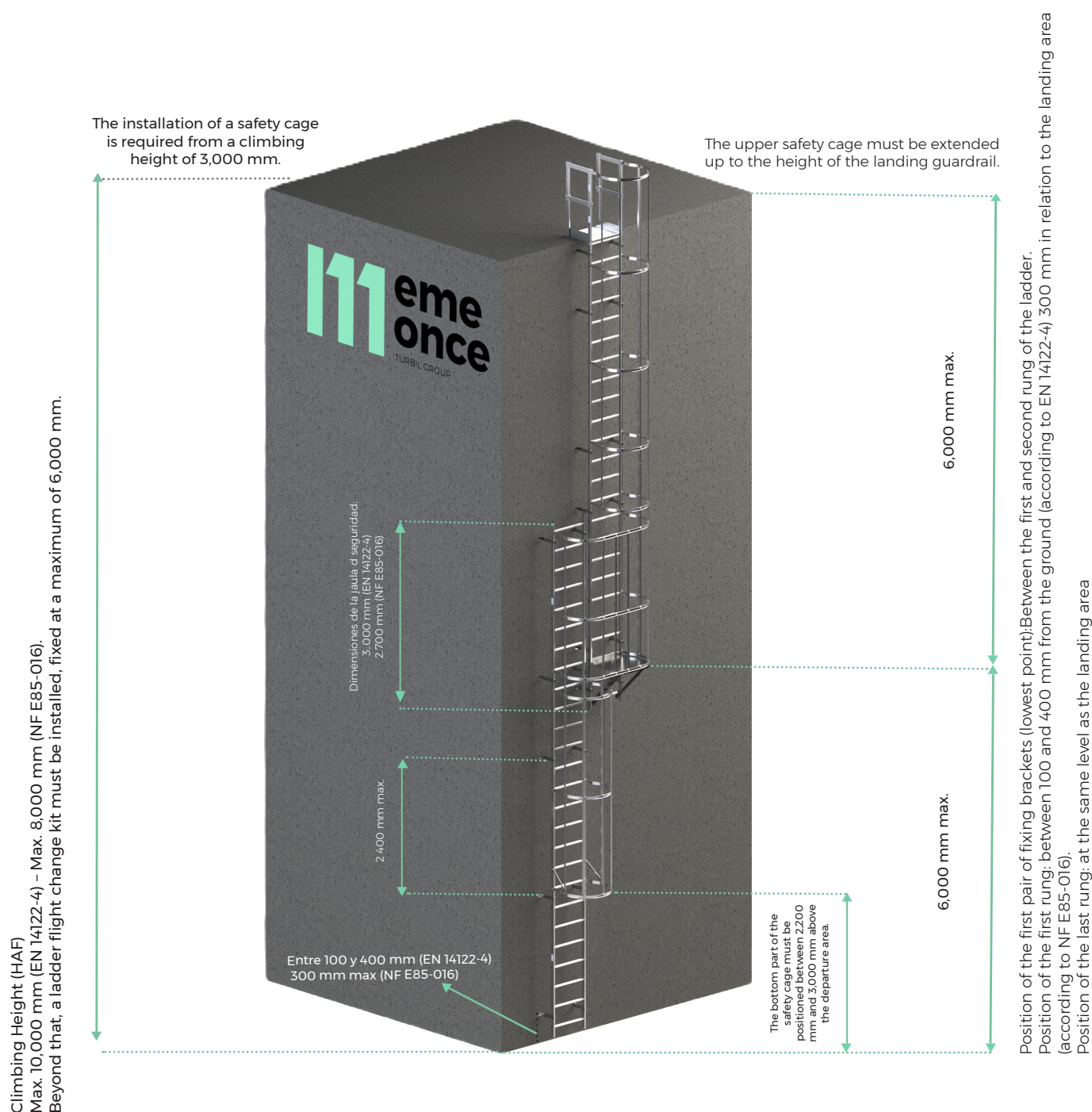
HAF ≤ 8 m (NF E85-016:2022) & HAF ≤ 10 m (EN 14122-4:2017)



WARNING: If the climbing height exceeds 3,000 mm, the installation of a safety cage is mandatory. The upper safety hoop must be extended up to the height of the handrail in the landing area.

DISTANCES TO BE RESPECTED DURING THE INSTALLATION OF THE M-LADDER SAFETY CAGE LADDER

HAF ≤ 8 m (NF E85-016:2022) & HAF ≤ 10 m (EN 14122-4:2017)



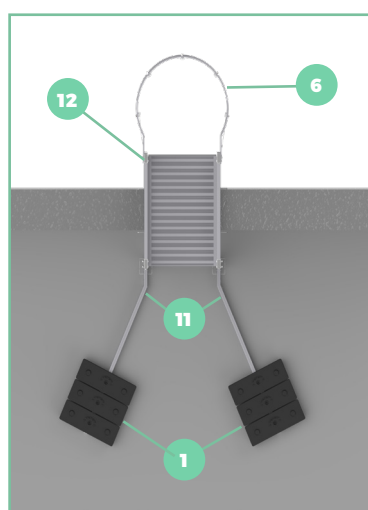
WARNING: In both standards, if a ladder flight change is required, it must be installed starting from 6,000 mm and must also be fixed every 6,000 mm maximum.

M-LADDER SAFETY CAGE LADDER - FREESTANDING TOP EXIT

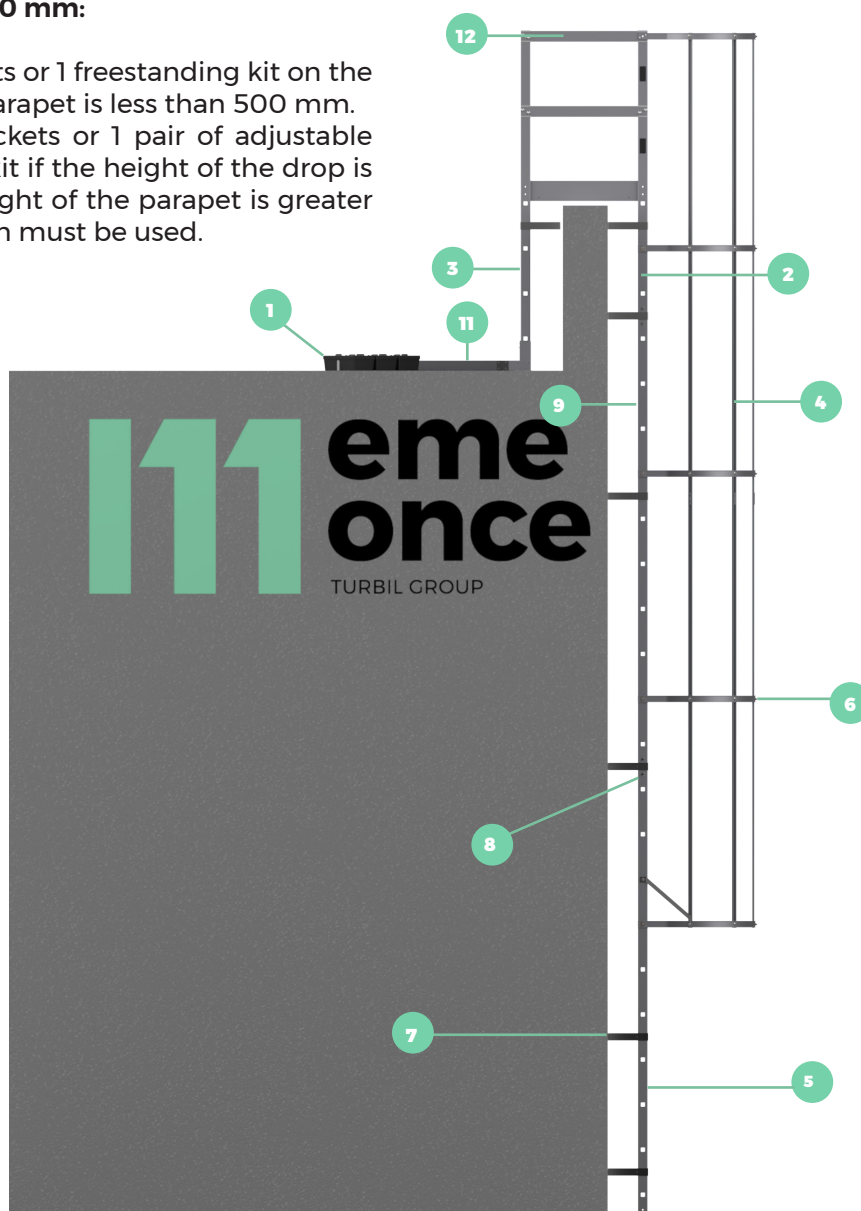
Rest platforms at 800 mm and 1,000 mm:

- 1 pair of adjustable fixing brackets or 1 freestanding kit on the return side if the height of the parapet is less than 500 mm.
- 2 pairs of adjustable fixing brackets or 1 pair of adjustable fixing brackets + 1 freestanding kit if the height of the drop is greater than 500 mm. If the height of the parapet is greater than 270 mm, a landing platform must be used.
- With 450 mm fixing brackets.

Case with return ladder.



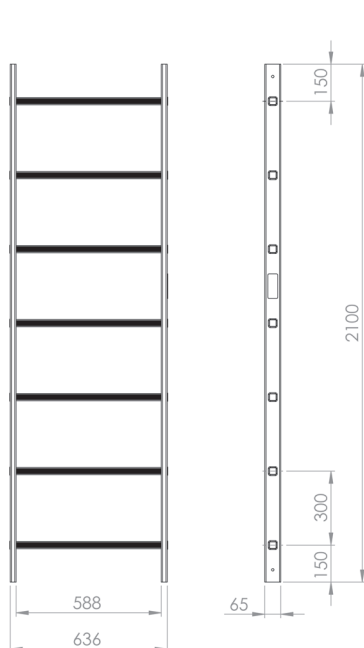
Top view



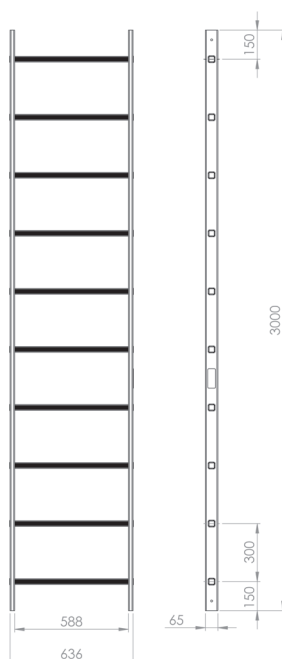
N°	Denomination	Ref.	N°	Denomination	Ref.
1	Counterweight 12,5 kg	32571	7	Simple mounting bracket kit (0-230 mm)	34119
2	Front exit 3 rungs	33967	8	Ladder/ladder junction kit	34120
3	Front exit 4 rungs	33971	9	Ladder/front exit junction kit	34121
4	Stringers 3100 mm	33984	10	Stringer junction kit	34329
5	Ladder length 3000 mm	34067	11	Top-fixed base kit	34330
6	Safety hoop	34087	12	800 mm Exit landing platform	34342

STANDARD LADDERS

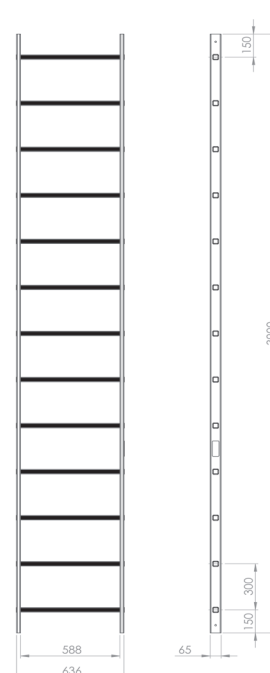
REF. 34063 - 34067 - 33068



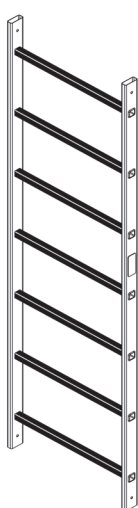
Ladder H2100 mm
Ref. 34063
Material: Aluminium 6063
Weight: 4.16 kg



Ladder H3000 mm
Ref. 34067
Material: Aluminium 6063
Weight: 5.95 Kg

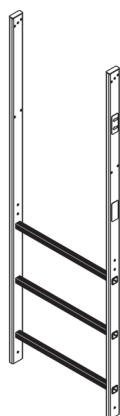
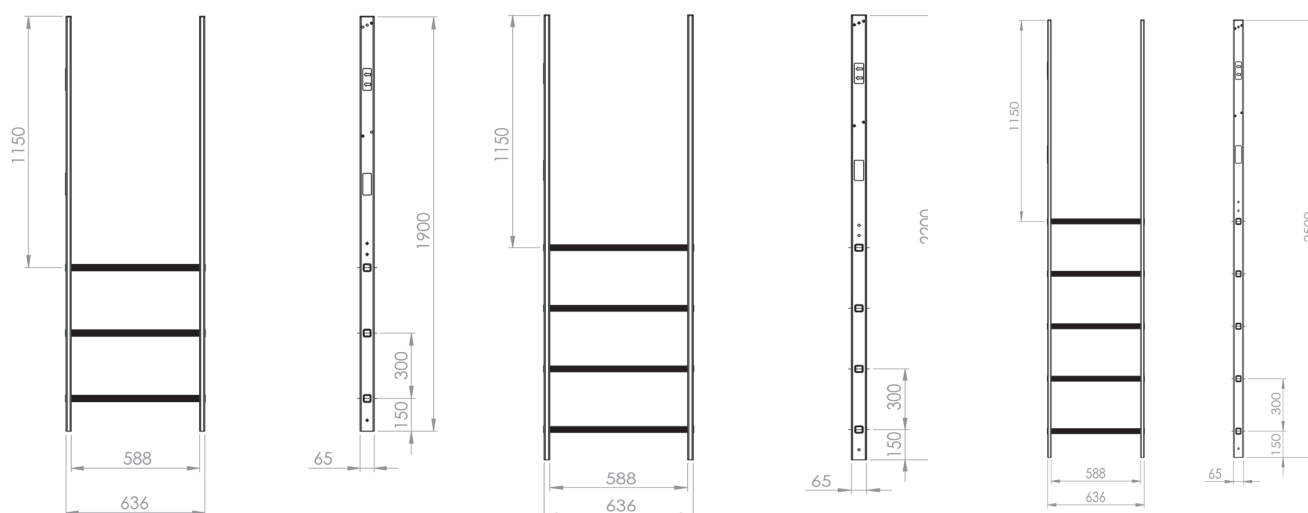


Ladder H3900 mm
Ref. 34068
Material: Aluminium 6063
Weight: 7.73 Kg

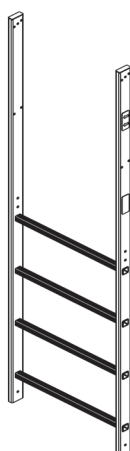


3 standard models: H2100 mm, H3000 mm, H3900 mm
Uprights: 65 × 24 mm - Rungs: 29.5 × 29.5 mm, non-slip

STANDARD FRONT EXIT
REF. 33967- 33971- 33972



Front exit 3 rungs
H750 mm + 1.150 mm
Ref. **33967**
Material: Aluminium 6063
Weight: 3,83 Kg



Front exit 4 rungs
H1050 mm + 1.150 mm
Ref. **33971**
Material: Aluminium 6063
Weight: 4,56 Kg



Front exit 5 rungs
H1350 mm + 1.150 mm
Ref. **33972**
Material: Aluminium 6063
Weight: 5,32 Kg

3 standard models: Front exit 3, 4 or 5 rungs.
Uprights 65 x 24 mm - Rungs 29.5 x 29.5 mm non-slip.

STRINGERS

REF. 33984

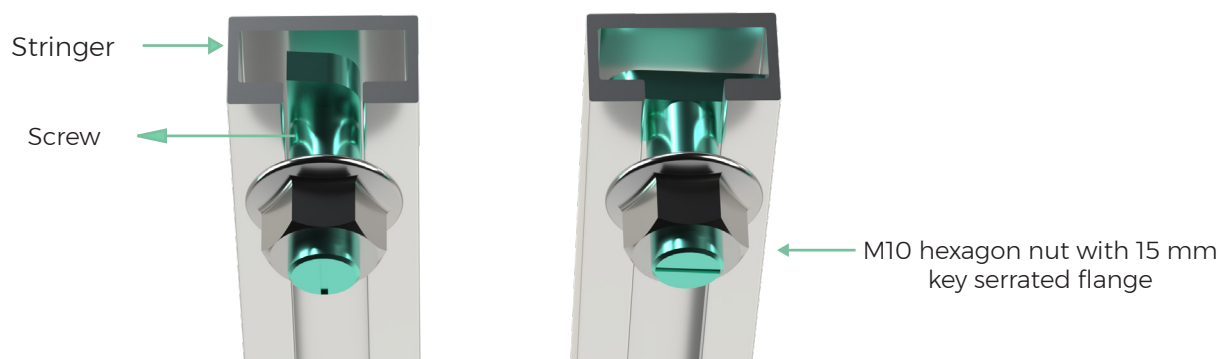
The stringers allow the safety cage to be closed vertically.

The "C" shape of the stringer allows for greater rigidity of the assembly. Installation must be completed with the joining kit and the stringer plug cover. Supplied in 3,100 mm length.

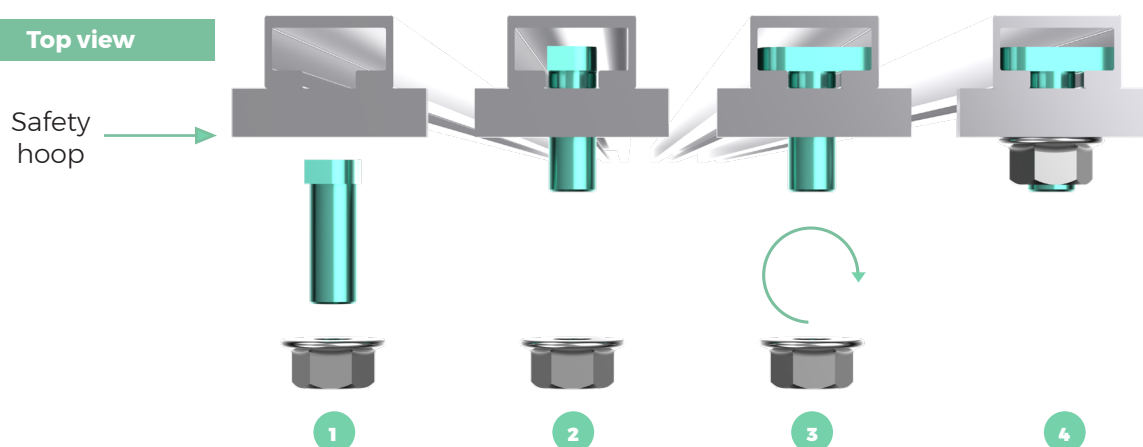


ASSEMBLY PRINCIPLE OF STRINGERS

The hammer-head screw has a visible slot which indicates, when in a horizontal position, that it is in the correct position for fixing.



Top view

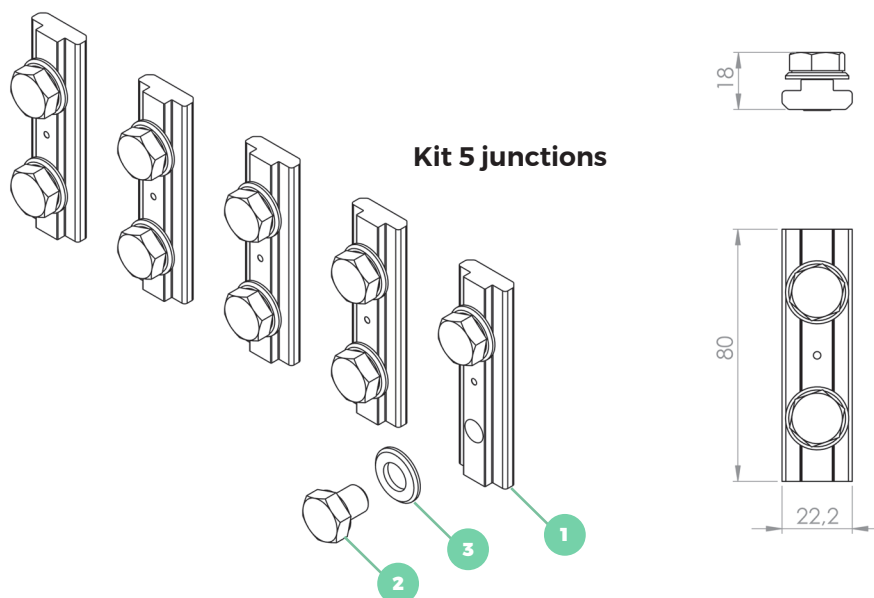


SAFETY CAGE STRINGERS

M-LADDER STRINGER JUNCTION KIT

REF. 34329

The **M-LADDER** stringer junction kit allows you to join the stringers together quickly and easily. They are supplied in batches of 5 units as a complement to the necessary safety cage. They are delivered with screws and their tightening torque is 10 Nm.



N°	Denomination	Ref.	Material	Uds	Weight
1	80 mm stringer junction	34073	Aluminium 6063	5	0,2 Kg
2	M10 x 12 mm screw	34328	Stainless Steel	10	
3	M10 wascher	33245	Stainless Steel	10	

ASSEMBLY PRINCIPLE OF STRINGER JUNCTION KIT

To assemble the stringer junction kit, follow the steps indicated in [figure 1](#), and once the installation is finished, add the stringer plug, as indicated in [figure 2](#).

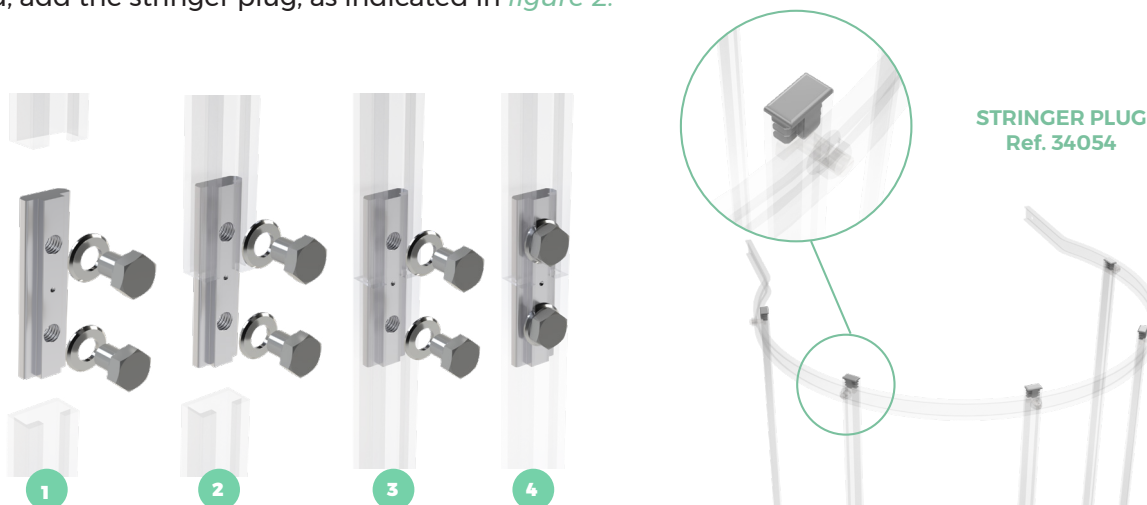


FIGURE 1

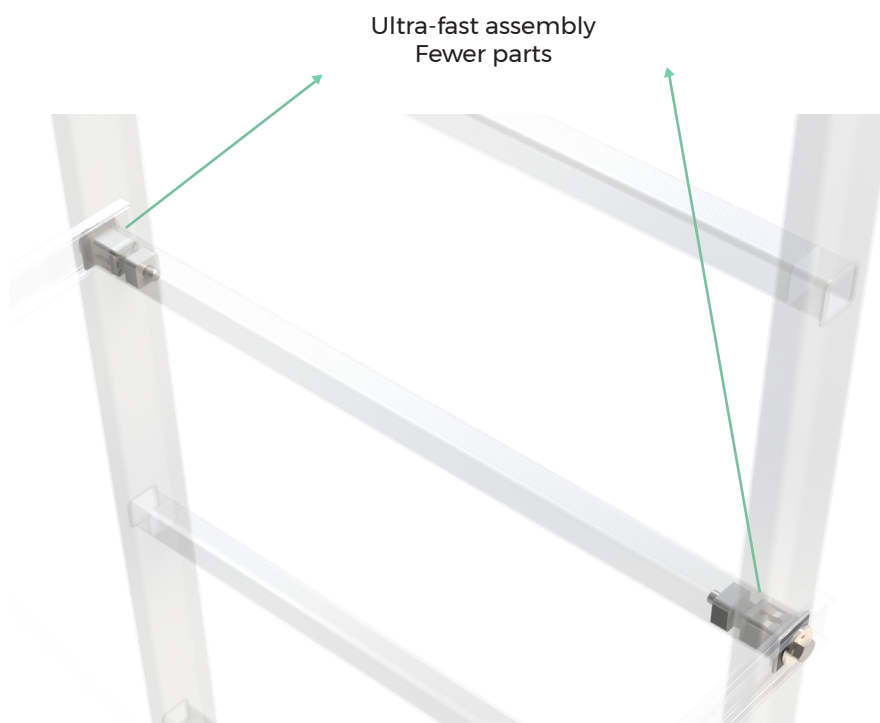
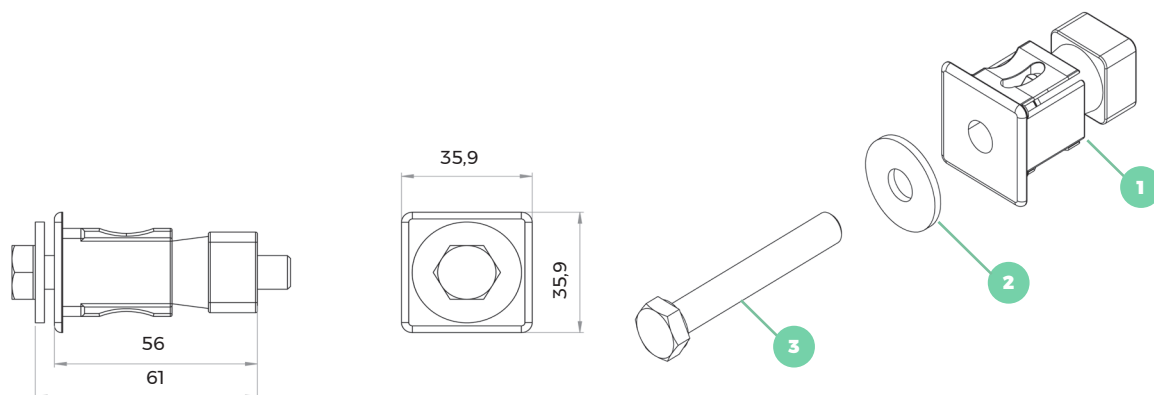
FIGURE 2

ALUMINIUM RUNG ANCHOR POINT

REF. 34089

PATENTED MODEL

The aluminium rung anchor point is used to fix hoops and stringers to the rungs, acting by expansion. It is fixed to the outside of the ladder's uprights, with a tightening torque of 30 Nm.



N°	Denomination	Ref.	Material	Uds	Weight
1	Anchor point	36383	Polyamide + UV	1	0,3 Kg
2	M10 washer	34091	Stainless Steel	1	
3	M10 x 70 mm screw	34092	Stainless Steel	1	

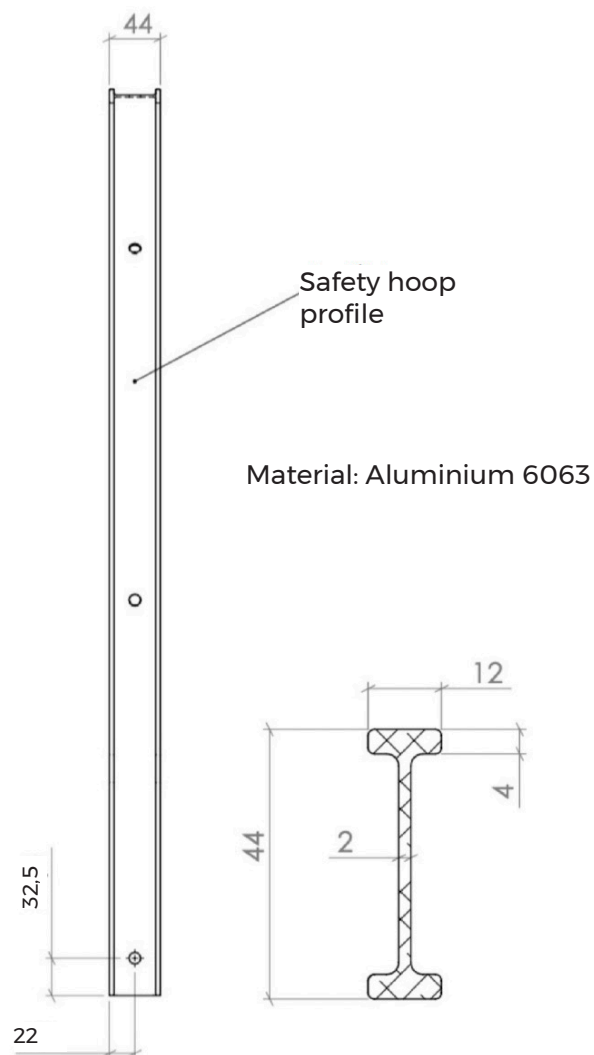
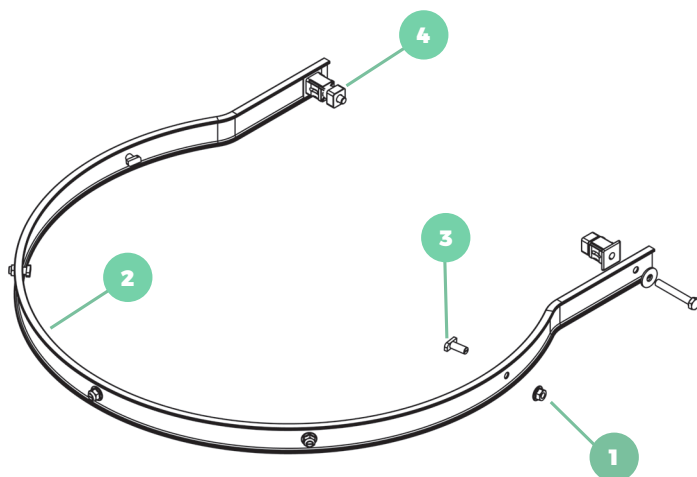
SINGLE SAFETY HOOP

REF. 34087

The single safety hoop assembly is used to attach the hoops to the ladder through the rung using an anchor point. The stringers are fixed inside the hoops using the hammer head screws included in the kit. The tightening torque is 10 Nm.

NEW FEATURES

Includes rung anchor points (ref. 34089) (X2) and stainless steel screws for fixing the stringers (pre-assembled).

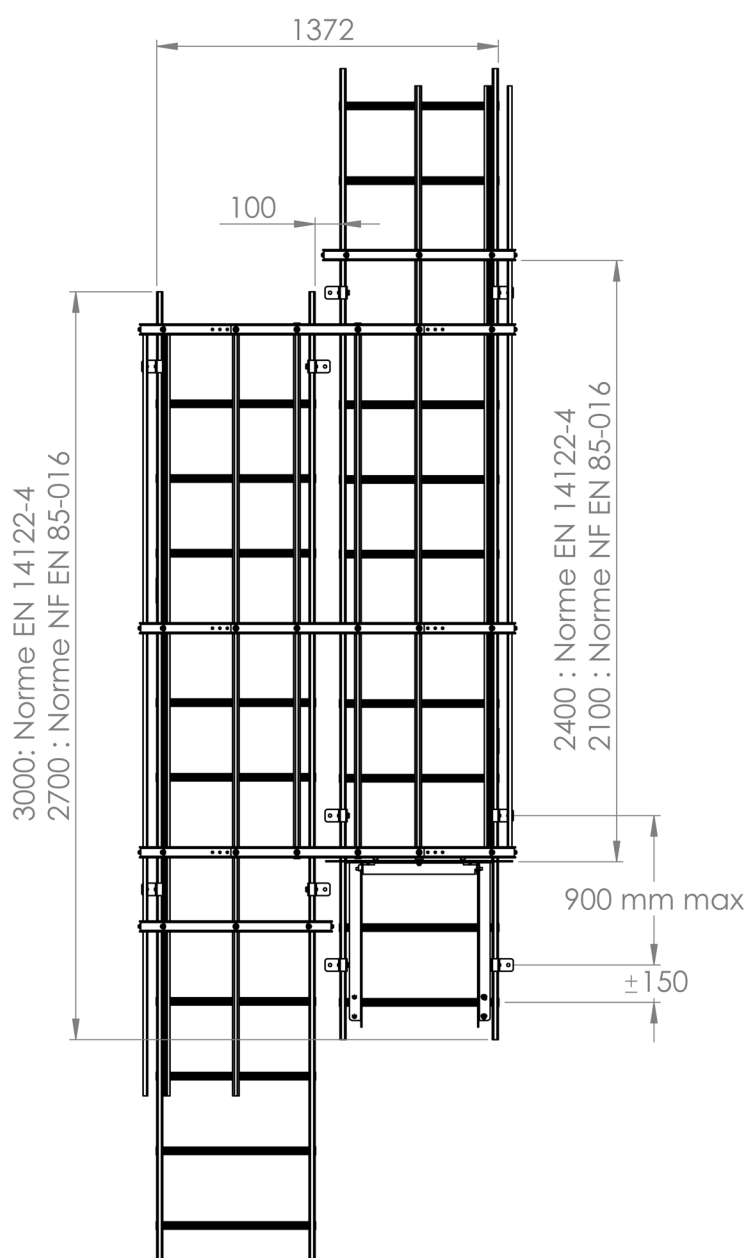
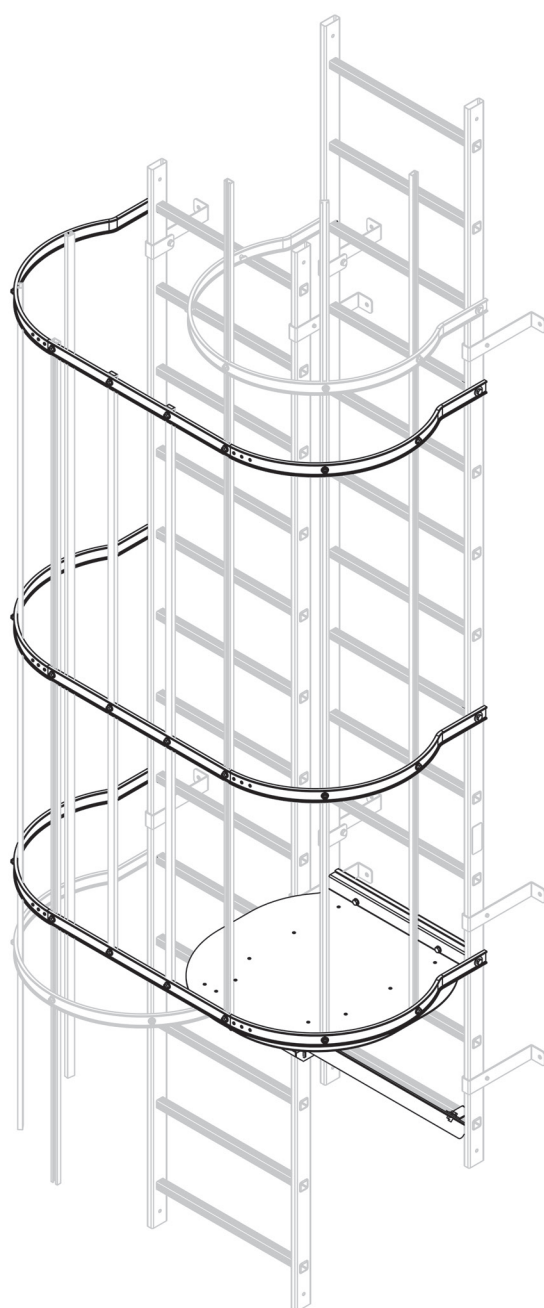


N°	Denomination	Ref.	Material	Uds	Weight
1	M10 hexagon nut with toothed flange	33243	Stainless Steel	5	1,2 Kg
2	Single safety hoop	33980	Aluminium 6063	1	
3	M10 x 25 mm hammer head screw	34088	Stainless Steel	5	
4	Aluminium ladder rung anchor point	34089	Polyamide + UV + Stainless Steel	2	

CHANGE OF FLIGHT

REF. 34094 + REF. 34098

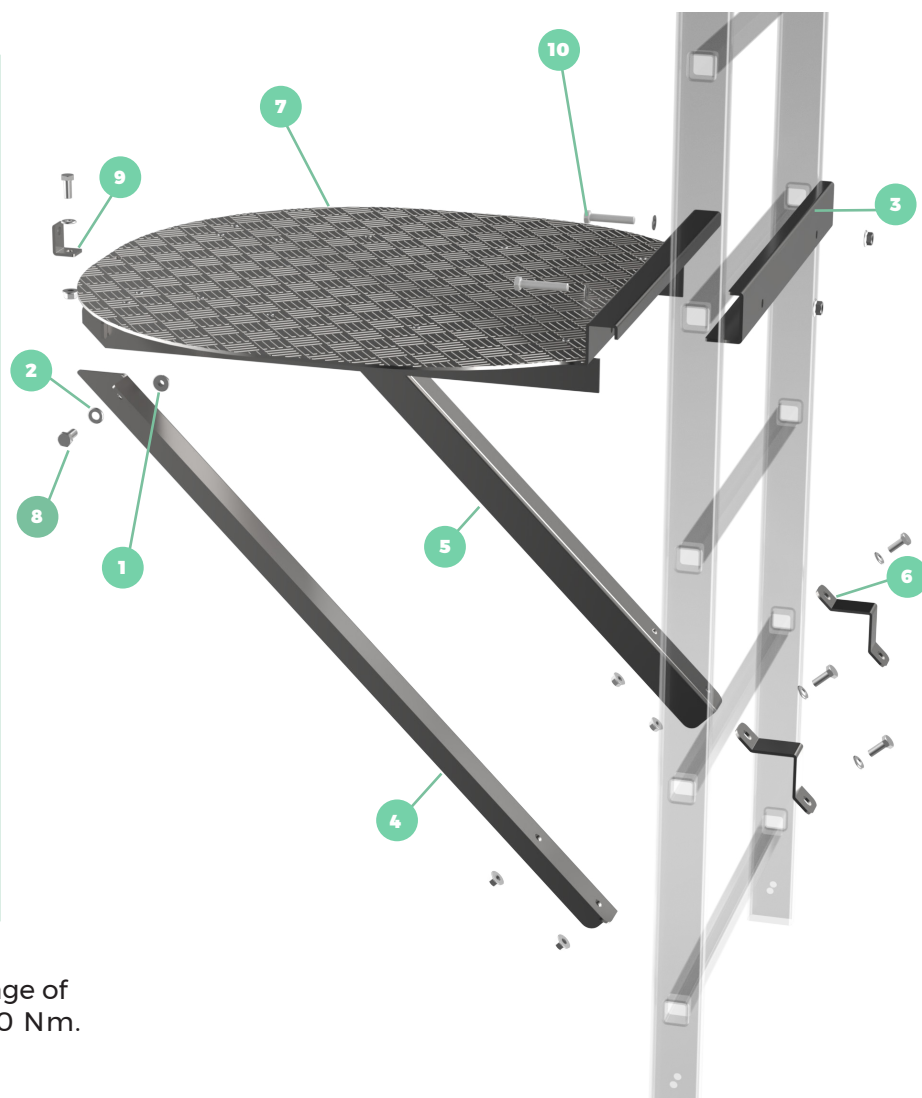
The change of flight is a structure that allows a physical pause during the use of a safety cage ladder. It is mandatory for safety cage ladders of more than 8,000 mm in height to be climbed in accordance with the NF-E 85 016 standard or more than 10,000 mm in accordance with the European standard EN 14122-4. The change of flight is composed of the rest platform kit and the safety hoop kit for change of flight.



CHANGE OF FLIGHT

REST PLATFORM KIT FOR CHANGE OF FLIGHT

REF. 34094



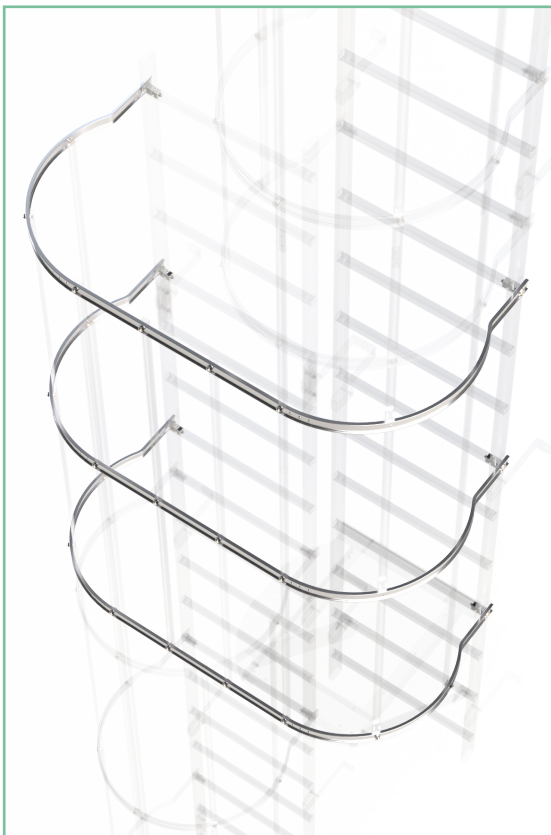
It is installed together with the **M-LADDER** safety hoop kit for change of flight. The tightening torque is 10 Nm. (Ref. 34098)

N°	Denomination	Ref.	Material	Uds	Weight
1	M10 hexagon nut with toothed flange	33243	Stainless Steel	9	11 Kg
2	M10 washer	33245	Stainless Steel	9	
3	Safety cage mounting flange	34032	Aluminium 5754	1	
4	Right rest platform support	34034	Aluminium 5754	1	
5	Left rest platform support	34035	Aluminium 5754	1	
6	Omega tie-down	34036	Aluminium 5754	2	
7	Walkway for change of flight	34093	Aluminium 5754	1	
8	M10 x 25 mm screw	34095	Stainless Steel	7	
9	Platform bracket	34270	Aluminium 5754	1	
10	M10 x 60 mm screw	34768	Stainless Steel	2	

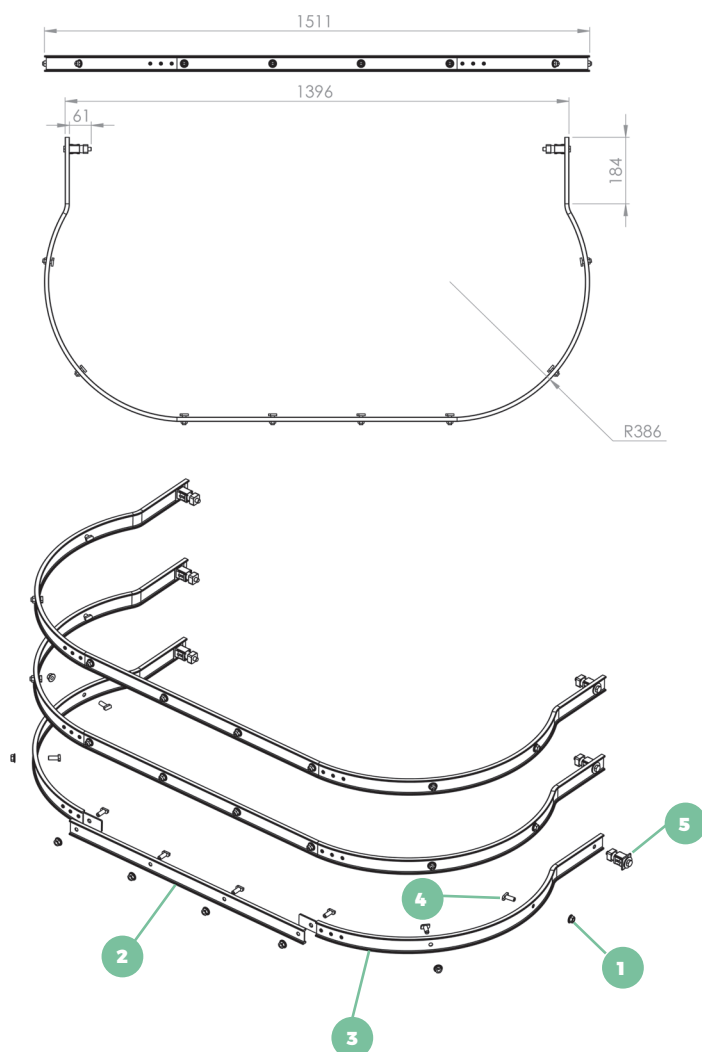
CHANGE OF FLIGHT

SAFETY HOOP KIT FOR CHANGE OF FLIGHT

REF. 34098



It is installed together with the **M-LADDER** rest platform kit for change of flight. The tightening torque is 10 Nm.. (Ref. 34094)



N°	Denomination	Ref.	Material	Uds	Weight
1	M10 hexagon nut with toothed flange	33243	Stainless Steel	24	5,9 Kg
2	Hoop extension	33983	Aluminium 6063	3	
3	Half safety hoop with junction	34081	Aluminium 6063	6	
4	Hammer head screw M10 x 25 mm	34088	Stainless Steel	24	
5	Aluminium ladder rung anchor point	34089	Polyamide + UV + Stainless Steel	6	

CHANGE OF FLIGHT

ASSEMBLY PRINCIPLE OF THE CHANGE OF FLIGHT

To assemble the change of flight, follow these steps:

Kit rest platform for change of flight:

1. Place the right support (4) and left support (5) attached to the rung with the omega fasteners (6), and the M10x25 mm screws (8), M10 washers (2) and hex nut with serrated flange (1).
2. Support the rest platform two rungs higher and attach the supports (4 et 5) to the rest platform (7) with the M10 x 25 mm screws (8), M10 washers (2) and hex nut with serrated flange (1).
3. Install the rear mounting flange (3) that blocks the platform to the rung with the M10 x 60 mm screws (10), M10 washers (2) and hex nut with serrated flange (1).
4. Finally, secure the platform bracket (9) with the M10 x 25 mm screw (8), M10 washer (2) and hex nut with serrated flange (1) to the front end of the platform.

Once the previous points have been installed, install the safety hoop kit for changing of flight: attach the platform bracket (9) to the nearest stringer with the hammer head screw and the nut of the safety hoop.



BRACING KIT

REF. 34103

The bracing kit allows the safety cage to be reinforced and is installed in the first hoop at the bottom. The tightening torque used is 10 Nm.

ATTENTION : Mandatory for each installation.



N°	Denomination	Ref.	Material	Uds	Weight
1	Right bracing	34079	S325 Steel + anti-corrosion treatment	1	0,73 Kg
2	Left bracing	34080	S325 Steel + anti-corrosion treatment	1	
3	M10 hexagon nut with toothed flange	33243	Stainless Steel	2	
4	Hammer head screw M10 x 30 mm	33086	Stainless Steel	2	

ASSEMBLY PRINCIPLE OF BRACING KIT

To assemble the bracing kit, it is fixed to the ladder through the rung using the anchor points that we recovered from the top of the single safety hoop installation. The installation is completed by fixing the bracing kit to the first safety hoop of the installation thanks to the hammer head screws and the corresponding nuts.

Reuse of the aluminium anchor point in the bracing kit



Product received



Product processed



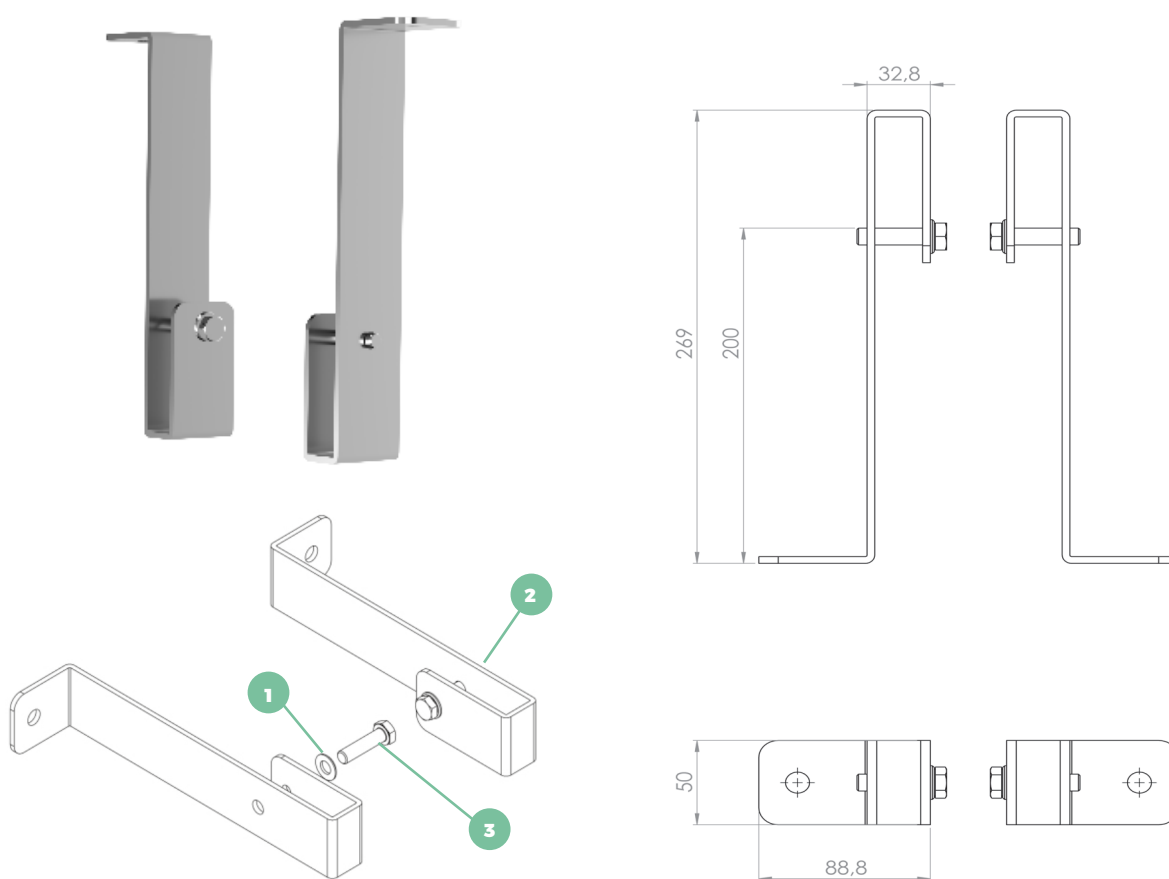
Installation

LADDER FIXINGS

SINGLE FIXING KIT 200 MM

REF. 34119

- Wall fixings with a fixed distance of 200 mm from the wall (external dimensions), allowing the ladder to be adapted to different supports on the same plane.
- Spaced at a maximum of 2,400 mm, the fixings are held in place as a clamp on the uprights.
- They are locked by tightening.
- Supplied in pairs with stainless steel screws.
- The tightening torque used is 10 Nm.



N°	Denomination	Ref.	Material	Uds	Weight
1	M10 washer	33245	Stainless Steel	2	1,4 Kg
2	Single fixing	33991	S325 Steel + anti-corrosion treatment	2	
3	M10 x 40 mm screw	34097	Stainless Steel	2	

LADDER FIXINGS

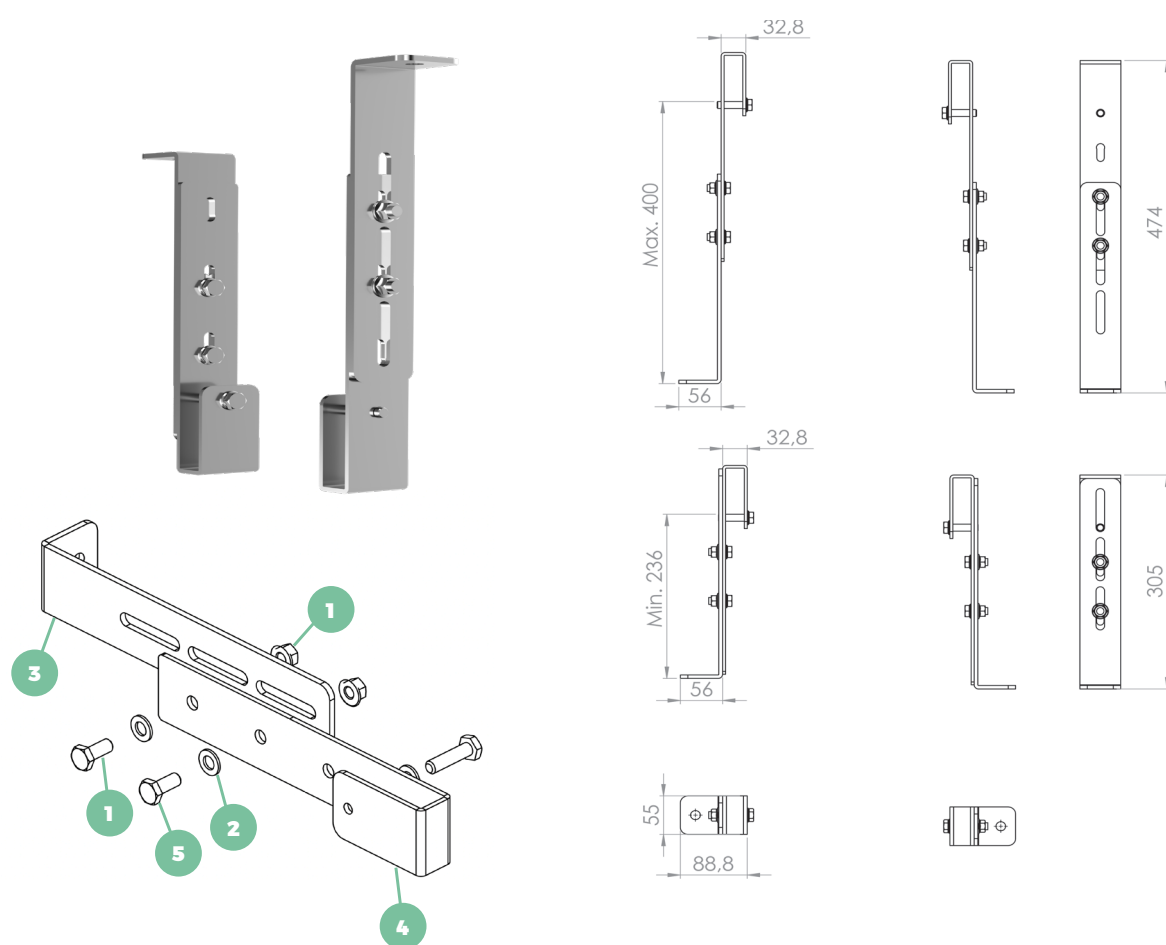
ADJUSTABLE FIXING KIT 400 MM

REF. 34117

- Fixing brackets with adjustable offset from 236 to 400 mm (clearance between the wall and the back of the ladder), allowing the ladder to be adapted to various supports on the same plane.

IMPORTANT: when using 400 mm offset brackets, the bottom of the ladder must be placed on the ground (with a freestanding kit or flat base supports).

- Maximum distance between fixing brackets: 2,400 mm.
- They are clamped directly onto the ladder rails.
- Locking is done by tightening.



N°	Denomination	Ref.	Material	Uds	Weight
1	M10 hexagon nut with toothed flange	33243	Stainless Steel	4	3,0 Kg
2	M10 washer	33245	Stainless Steel	6	
3	Fixed part adjustable fixing (300 mm)	33981	S325 Steel + anti-corrosion treatment	2	
4	Mobile part adjustable fixing	33992	S325 Steel + anti-corrosion treatment	2	
5	M10 x 25 mm screw	34095	Stainless Steel	4	
6	M10 x 40 mm screw	34097	Stainless Steel	4	

LADDER FIXINGS

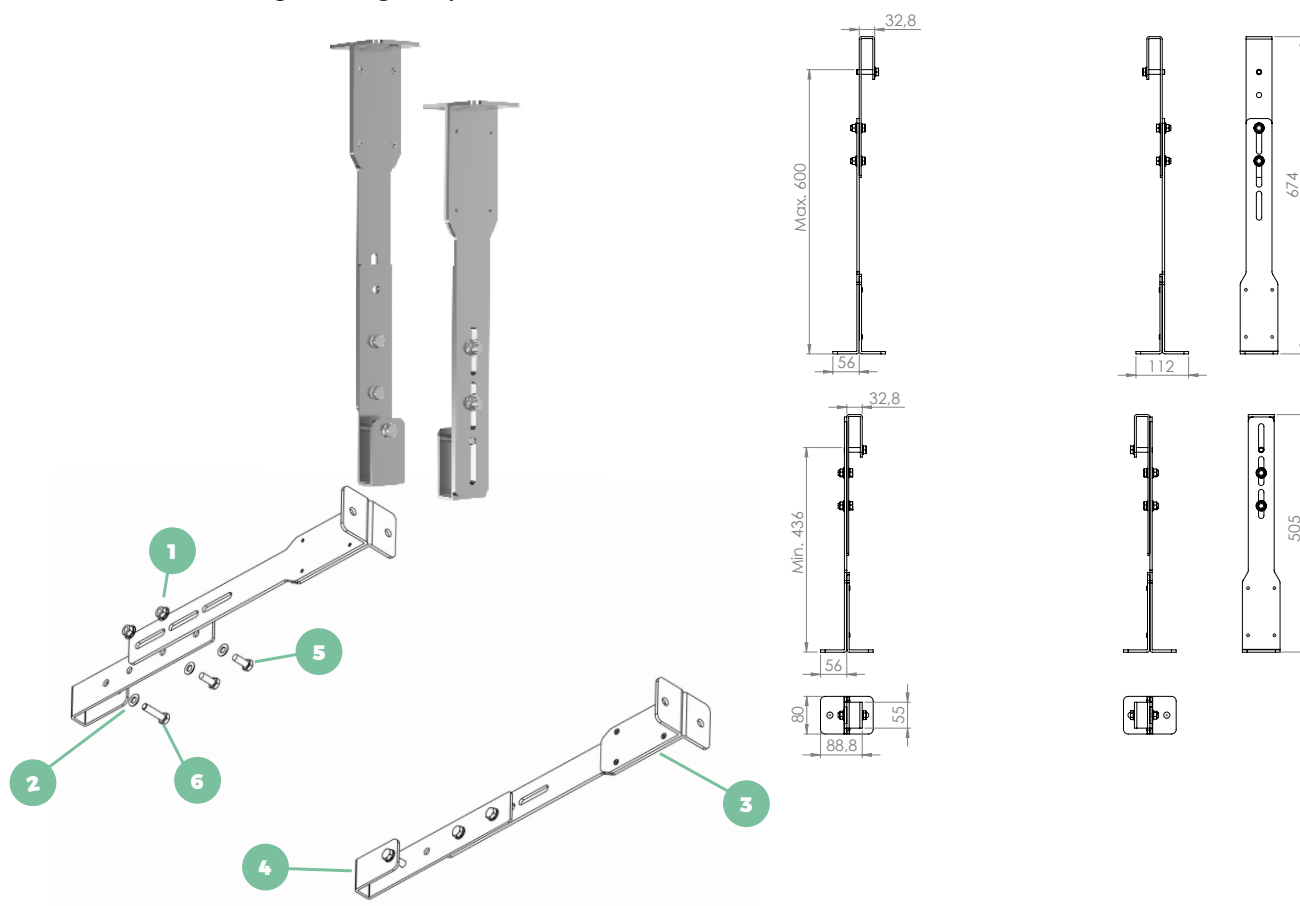
ADJUSTABLE FIXING KIT 600 MM

REF. 34118

- Fixing brackets with adjustable offset from 436 to 600 mm (clearance between the wall and the back of the ladder), allowing the ladder to be adapted to various supports on the same plane.

IMPORTANT: when using 600 mm offset brackets, the bottom of the ladder must be placed on the ground (using a freestanding kit or flat base supports).

- Maximum distance between fixing brackets: 2,400 mm.
- They are clamped directly onto the ladder rails.
- Locking is done by tightening.
- Delivered in pairs, with stainless steel screws included.
- Recommended tightening torque: 10 Nm.



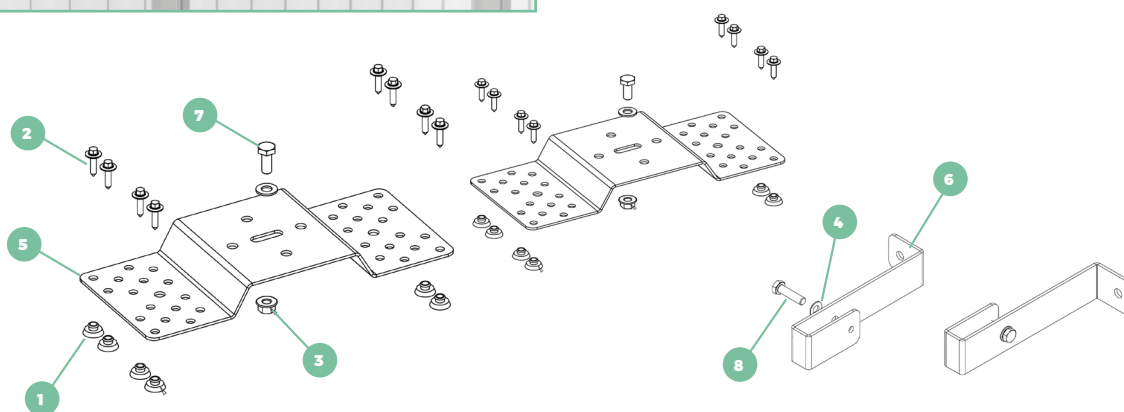
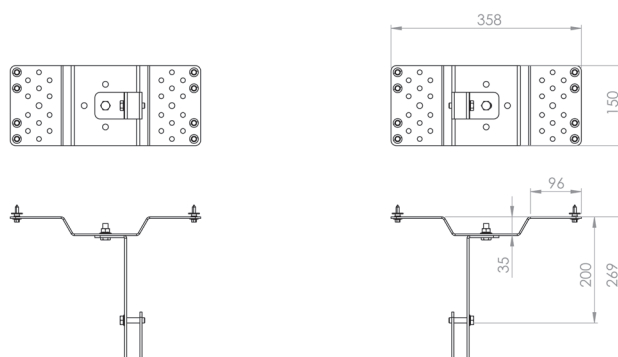
N°	Denomination	Ref.	Material	Uds	Weight
1	M10 hexagon nut with toothed flange	33243	Stainless Steel	4	4,2 Kg
2	M10 washer	33245	Stainless Steel	6	
3	Adjustable fixing fixed part (500mm)	34348	S325 Steel + anti-corrosion treatment	2	
4	Adjustable fixing moving part	33992	S325 Steel + anti-corrosion treatment	2	
5	M10 x 25 mm screw	34095	Stainless Steel	4	
6	M10 x 40 mm screw	34097	Stainless Steel	4	

FIXING FOR STEEL METAL DECK

FIXINGS FIT FOR STEEL METAL DECK

REF. 34327

The fixings for steel metal deck are used to fix the stairs on steel metal deck, with a minimum thickness of 0.4 mm, and thus comply with the minimum space of 200 mm indicated by the regulations. The tightening torque used is 5 Nm for the DBS2 screws and 10 Nm for the M10 screws.



N°	Denomination	Ref.	Material	Uds	Weight
1	Bowl washer Ø 8.5 mm	33172	EPDM	16	4,2 Kg
2	DBS2 screw Ø 6 x 25 mm + Sealing washer	33173	Stainless Steel	16	
3	M10 hexagon nut with toothed flange	33243	Stainless Steel	2	
4	M10 washer	33245	Stainless Steel	4	
5	Steel metal deck fixing	33987	S325 Steel + anti-corrosion treatment	2	
6	Support for steel metal deck plate	33993	S325 Steel + anti-corrosion treatment	2	
7	M10 x 25 mm screw	34095	Stainless Steel	2	
8	M10 x 40 mm screw	34097	Stainless Steel	2	

FIXING FOR STEEL METAL DECK

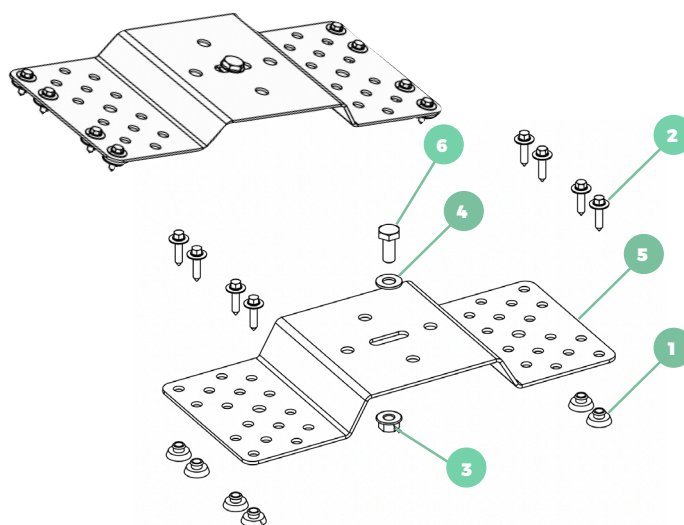
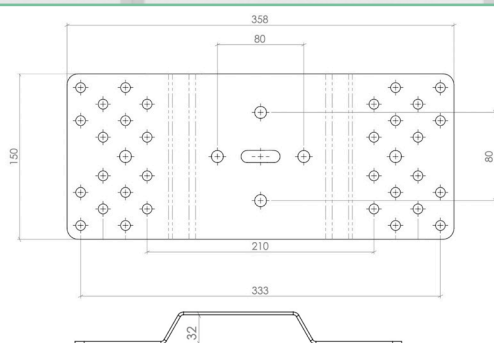
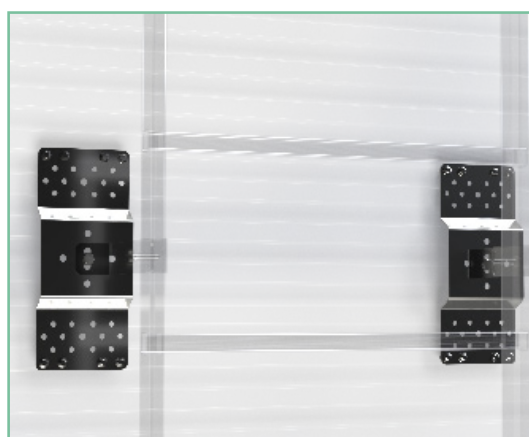
FIXING PLATES KIT FOR STEEL METAL DECK

REF. 34126

- Pair of fixing plates for steel metal deck with screws.
- Allows fixing on steel metal deck with a thickness of at least 0.4 mm.
- Supplied with 2 x 8 DBS screws Ø6 x 25 mm with sealing washers + 2 x 8 EPDM bowl washers Ø 8.5 mm to be inserted behind the fixing plate (between the steel metal deck and the plate) + 2 x M10 and 25 mm screws + 2 x M10 hexagonal nuts with toothed flange - tightening torque for M10: 10 Nm.
- By fixing them, the special watertight washers prevent water penetration, allowing a total waterproofing of the steel sheet (tightening torque 5 Nm)

Adjustable fixings of 400 and 600 mm:

- The ladder must be placed on the ground (with a self-supporting kit or a top-fix kit)
- The vertical forces must be exerted on the exit landing. We advise against using 300 and 500 mm exit landings, only if they are fixed.
- If it is necessary to put two sheets together at changes of direction, contact EmeOnce for validation.



N°	Denomination	Ref.	Material	Uds	Weight
1	Bowl washer Ø 8.5 mm	33172	EPDM	16	2,9 Kg
2	DBS2 screw Ø 6 x 25 mm with washer	33173	Stainless Steel	16	
3	M10 hexagon nut with toothed flange	33243	Stainless Steel	2	
4	M10 washer	33245	Stainless Steel	2	
5	Steel metal deck fixing	33987	S325 Steel + anti-corrosion treatment	2	
6	Ø 10 x 25mm screw	34095	Stainless Steel	2	

EXIT LANDING KIT

The landing kit is used to access terraces and roofs in a safe manner. Its installation is mandatory according to regulations.

The tightening torque used is 10 Nm.

Among the **M-LADDER** exit landing kits we can find:

- 300 mm exit landing kit
- 500 mm exit landing kit
- 800 mm exit landing kit
- 1000 mm exit landing kit

To fix the exit landings to steel metal deck:

- The ladder must be supported on the ground (with a self-supporting kit or a ground fixing kit).
- The vertical forces must be made on the landing. We advise not to use 300 and 500 mm exit landings, only if they are fixed. The tightening torque is 5 Nm.
- The support for steel metal deck must be installed following the rules and instructions of the metal deck manufacturer. Installation must be carried out by qualified persons to ensure the correct fixing of the supports to the metal deck following the specifications of the manufacturer of the metal deck.
- The installer must verify the correct condition of the metal deck (absence of corrosion and correct fixing).

300 MM EXIT LANDING KIT
REF. 34341



500 MM EXIT LANDING KIT
REF. 34302



800 MM EXIT LANDING KIT
REF. 34342

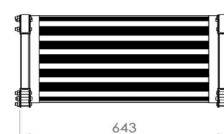
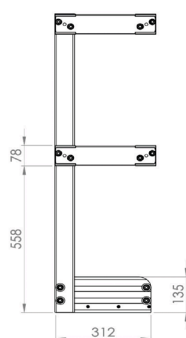
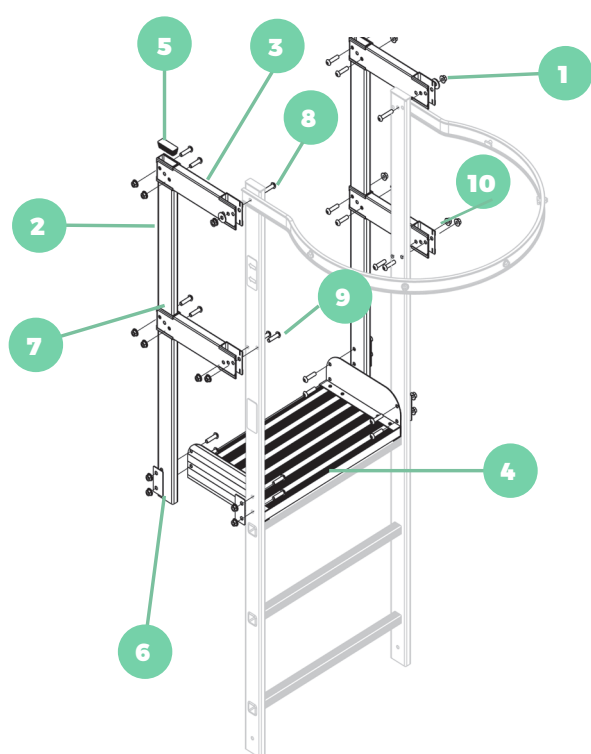


1,000 MM EXIT LANDING KIT
REF. 34343



EXIT LANDING KIT

300 MM EXIT LANDING KIT - REF. 34341

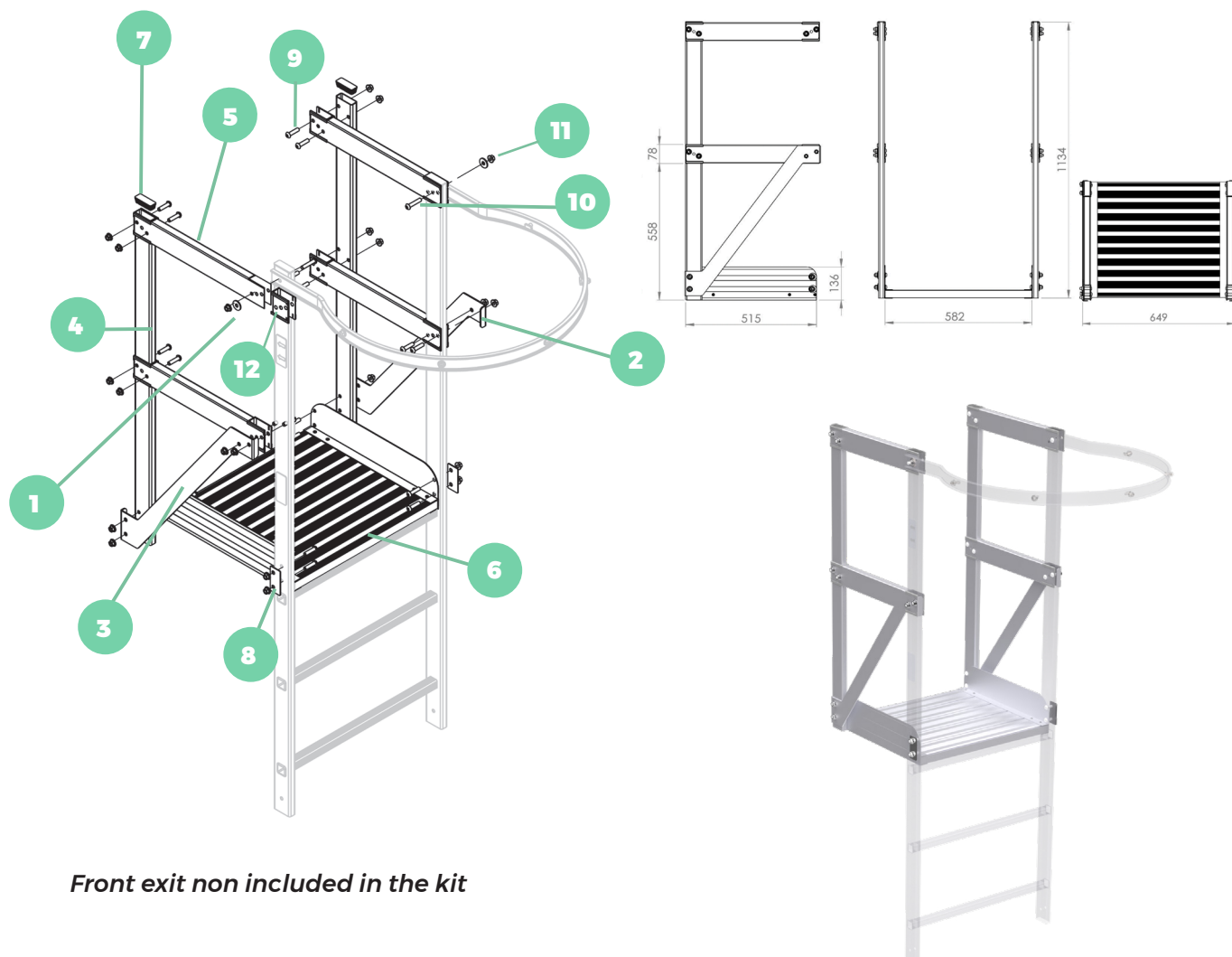


Front exit non included in the kit

N°	Denomination	Ref.	Material	Uds	Weight
1	M10 washer	34091	Stainless Steel	2	5,7 Kg
2	Exit landing upright	34045	Aluminium 6063	2	
3	Exit landing crossbar	34039	Aluminium 6063	4	
4	Exit landing walkway 300 mm	34125	Aluminium 6063	1	
5	Grey plug	34307	Polypropylene	2	
6	Exit landing plate	36078	S325 Steel + anti-corrosion treatment	4	
7	Exit landing crossbar junction	34052	PA + UV	8	
8	M10 x 50 mm screw	36256	Stainless Steel	2	
9	M10 x 40 mm screw	36257	Stainless Steel	20	
10	M10 hexagon nut with toothed flange	33243	Stainless Steel	22	

EXIT LANDING KIT

500 MM EXIT LANDING KIT- REF. 34302

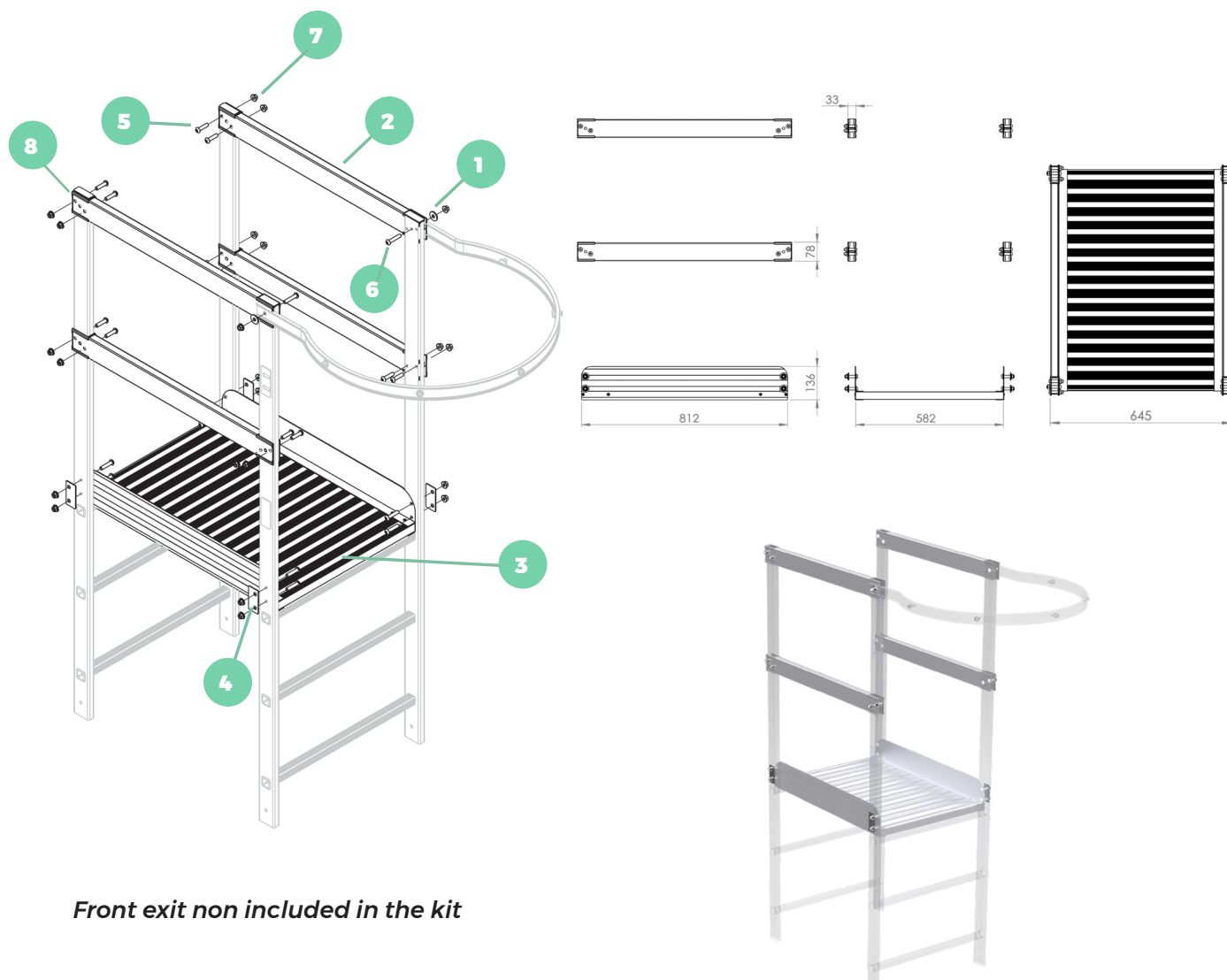


Front exit non included in the kit

N°	Denomination	Ref.	Material	Uds	Weight
1	M10 washer	34091	Stainless Steel	2	10,20 Kg
2	Right exit landing reinforcement	33998	Aluminium 6063	1	
3	Left exit landing reinforcement	33999	Aluminium 6063	1	
4	Exdit landing upright	34045	Aluminium 6063	2	
5	Exit landing crossbar 500 mm	34040	Aluminium 6063	4	
6	Exit landing walkway 500 mm	34124	Aluminium 6063	1	
7	Grey plug	34307	Polypropylene	2	
8	Exit landing plate	36078	S325 Steel + anti-corrosion treatment	2	
9	M10 x 40 mm screw	36257	Stainless Steel	8	
10	M10 x 50 mm screw	36256	Stainless Steel	2	
11	M10 hexagon nut with toothed flange	33243	Stainless Steel	22	
12	Exit landing crossbar junction	34052	PA + UV	8	

EXIT LANDING KIT

800 MM EXIT LANDING KIT - REF. 34342

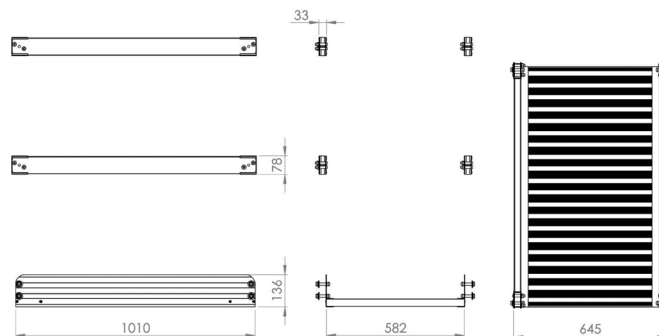
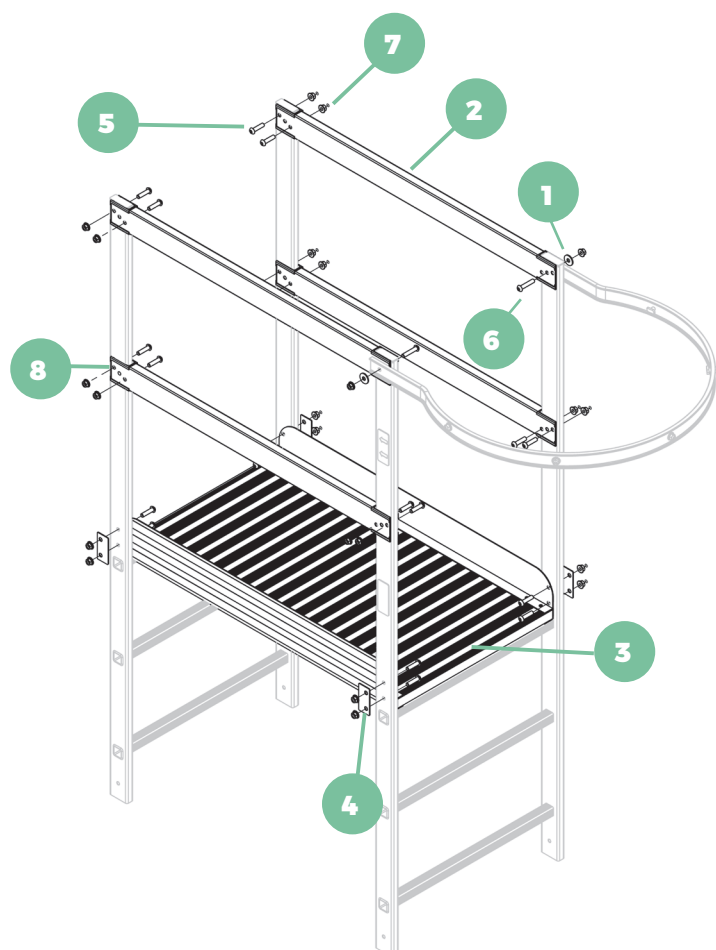


Front exit non included in the kit

N°	Denomination	Ref.	Material	Uds	Weight
1	M10 washer	34091	Stainless Steel	2	9,10 Kg
2	Exit landing crossbar 800 mm	34041	Aluminium 6063	4	
3	Exit landing walkway 800 mm	34123	Aluminium 6063	1	
4	Exit landing plate	36078	S325 Steel + anti-corrosion treatment	4	
5	M10 x 40 mm screw	36257	Stainless Steel	8	
6	M10 x 50 mm screw	36256	Stainless Steel	2	
7	M10 hexagon nut with toothed flange	33243	Stainless Steel	22	
8	Exit landing crossbar junction	34052	PA + UV	8	

EXIT LANDING KIT

1,000 MM EXIT LANDING KIT- REF. 34343



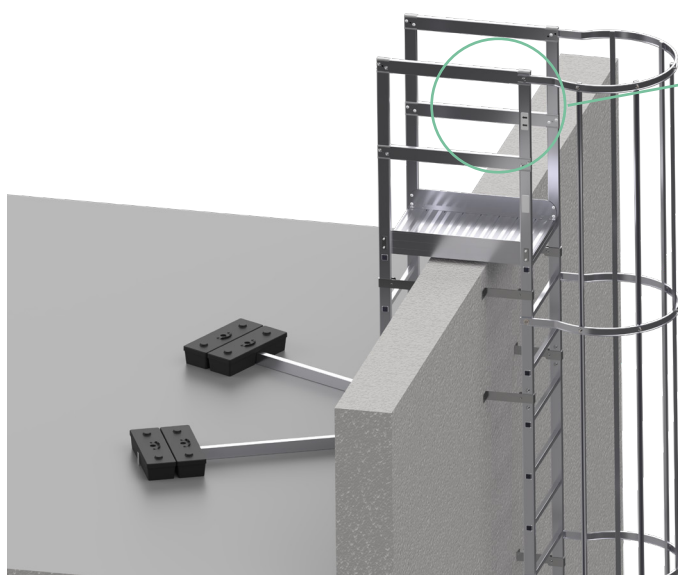
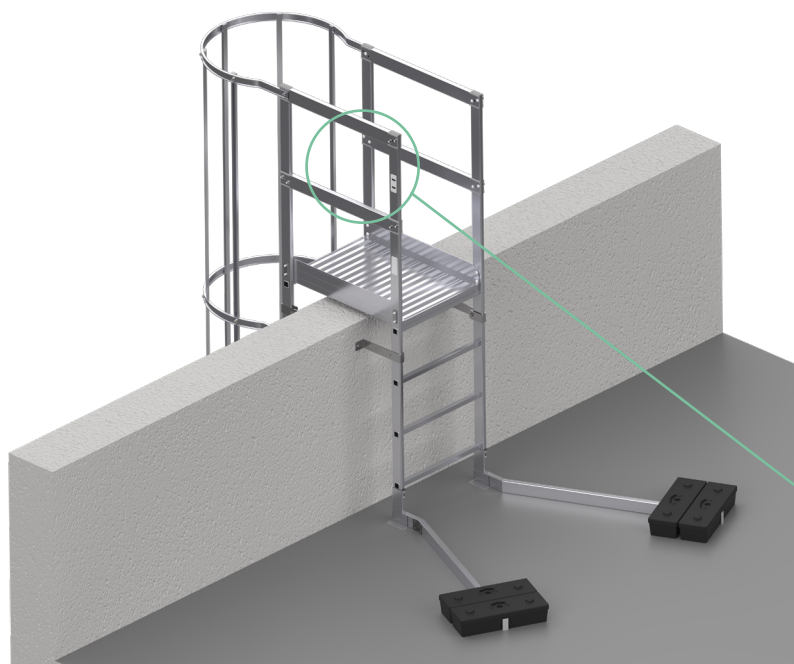
Front exit not included in the kit

N°	Denomination	Ref.	Material	Uds	Weight
1	M10 washer	34091	Stainless Steel	2	11,10 Kg
2	Exit landing crossbar 800 mm	34042	Aluminium 6063	4	
3	Exit landing walkway 800 mm	34122	Aluminium 6063	1	
4	Exit landing plate	36078	S325 Steel + anti-corrosion treatment	4	
5	M10 x 40 mm screw	36900	Stainless Steel	8	
6	M10 x 50 mm screw	36901	Stainless Steel	2	
7	M10 hexagon nut with toothed flange	33243	Stainless Steel	22	
8	Exit landing crossbar junction	34052	PA + UV	8	

EXIT LANDING KIT

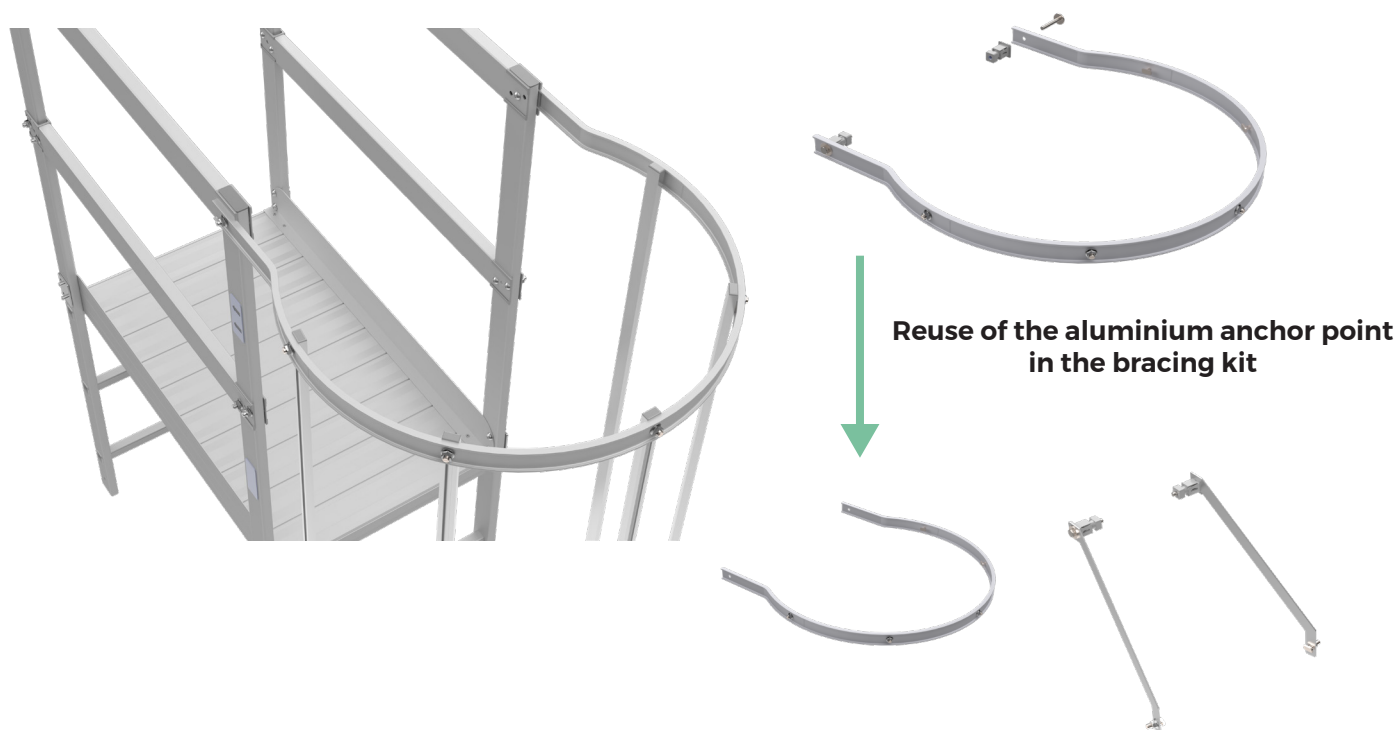
ASSEMBLY PRINCIPLE OF FRONT EXIT

Front exits have a label indicating the direction in which they should be placed. The arrows must always be oriented towards the parapet.



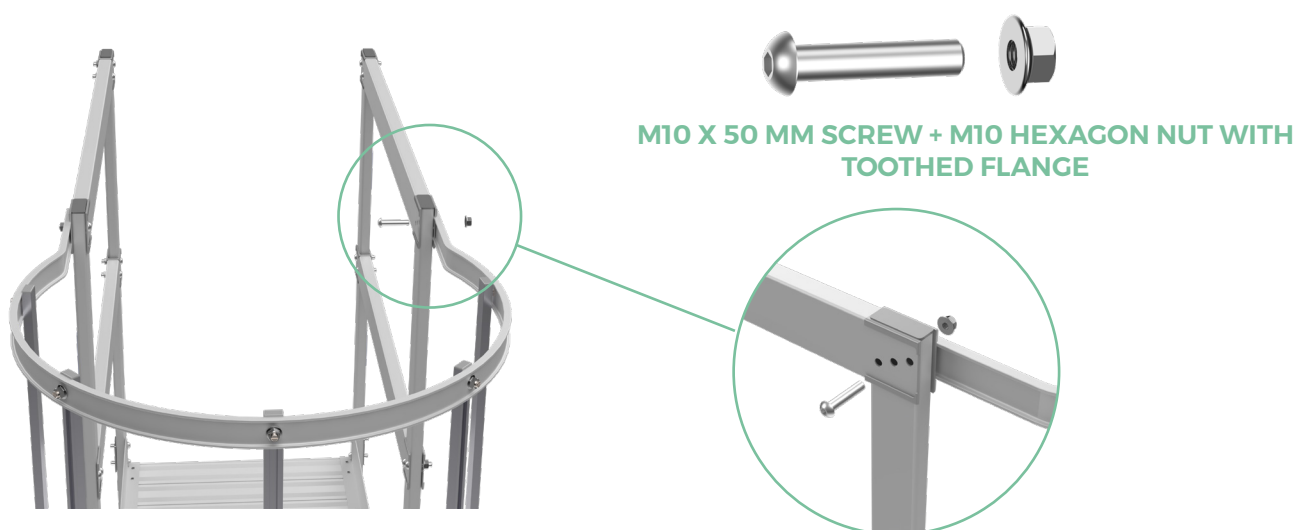
EXIT LANDING KIT

ASSEMBLY PRINCIPLE OF THE LAST SAFETY HOOP



The safety hoop is fixed to the front exit with a M10 x 50 mm screw and a hexagonal nut with M10 serrated flange included in the exit landing kit.

With a screw, we join the front exit, the exit landing and the safety hoop.



SECURITY DOORS

TRAPDOOR



HALF-DOOR



SIMPLE DOOR



COMPLETE DOOR



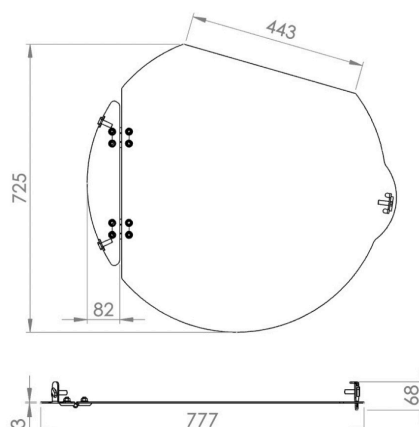
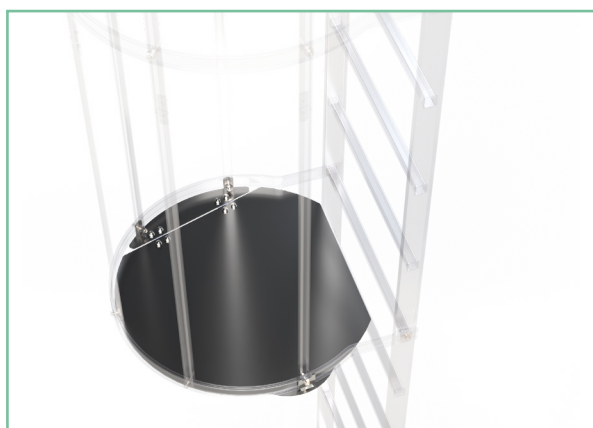
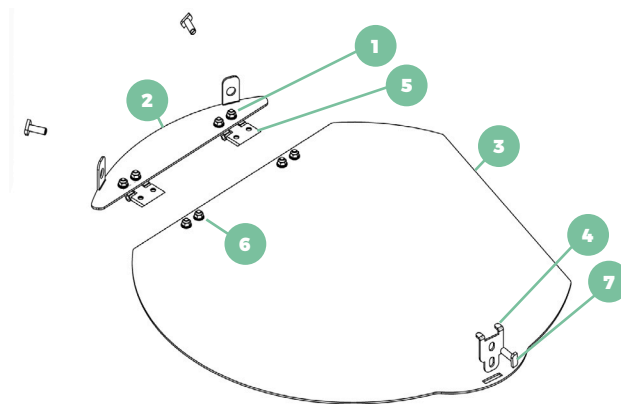
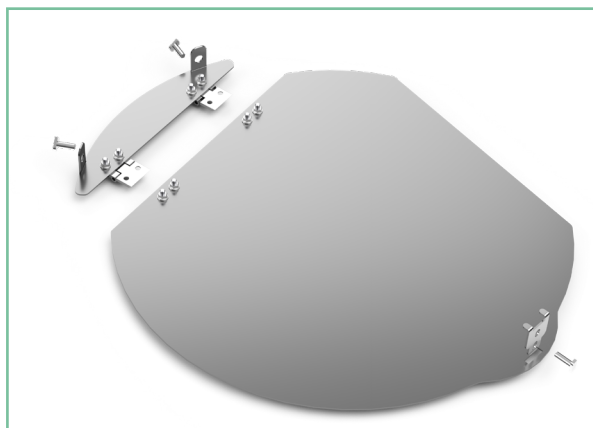
SECURITY DOORS

TRAPDOOR

REF. 34084

Complete trapdoor kit.

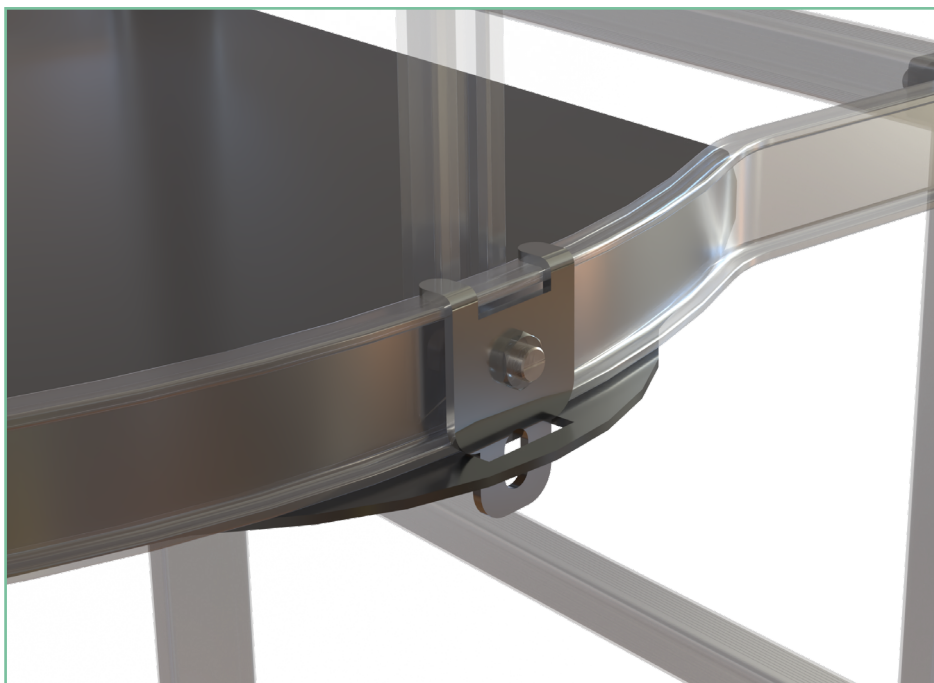
Fixed to the ladder, with pre-assembled anodized aluminum hinges and lock to be able to install a padlock (not included).



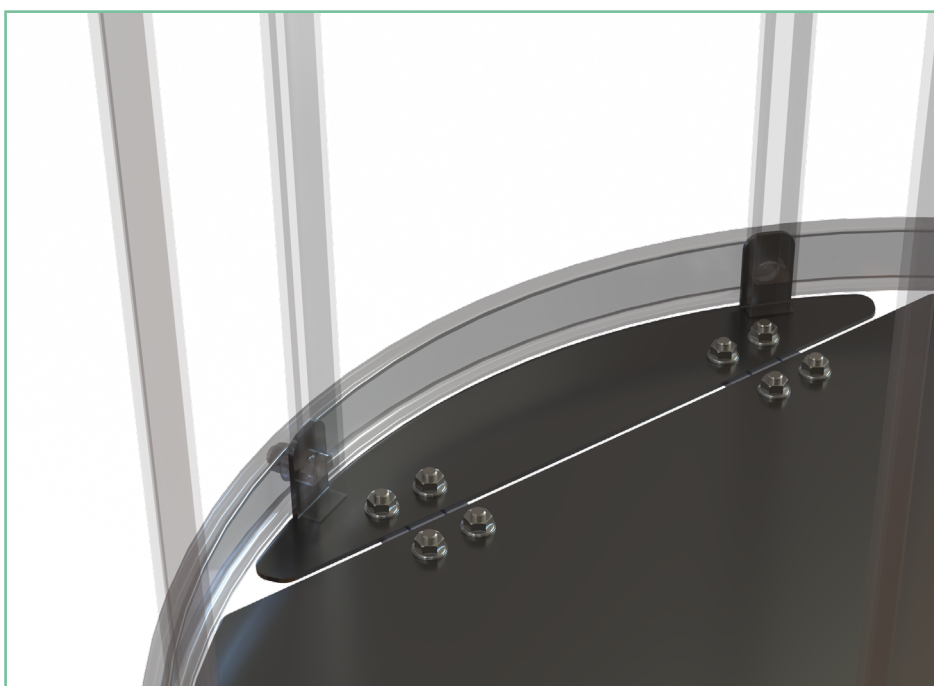
N°	Denomination	Ref.	Material	Uds	Weight
1	Hexagonal nut with M8 serrated flange	33224	Stainless Steel	8	3,6 Kg
2	Fixed part cover	34037	Aluminium 5754	1	
3	Mobile part from the trapdoor	34075	Aluminium 5754	1	
4	Trapdoor closure	34078	S325 Steel + anti-corrosion treatment	1	
5	STD hinge	34083	Aluminium 6063	2	
6	M8 x 20 mm screw	34085	Stainless Steel	8	
7	M10 x 30 mm hammer head screw	34086	Stainless Steel	3	

SECURITY DOORS

DETAILS OF THE TRAPDOOR
REF. **34084**



The closure is fixed to the outside of the safety hoop.



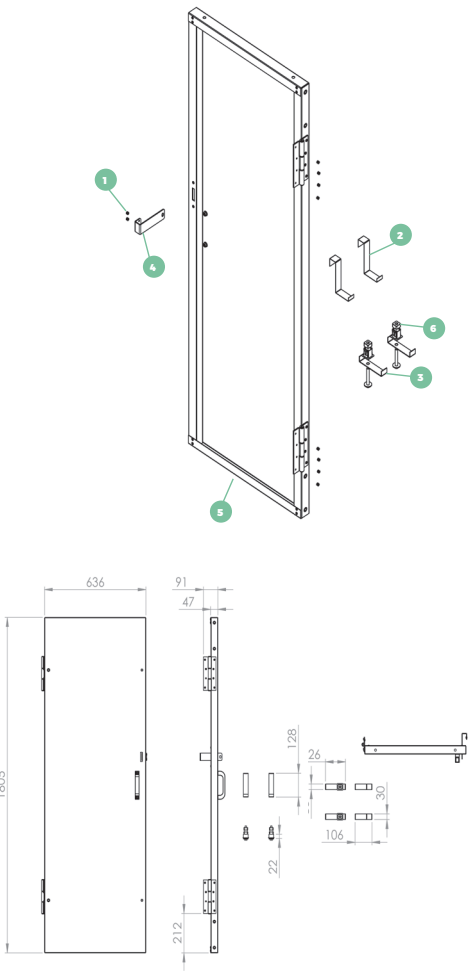
The fixed part is installed between the hoop and the stringer.

SECURITY DOORS

SINGLE DOOR

REF. 34115

Pre-assembled anodized aluminum hinges.
10 fixing rivets included.



N°	Denomination	Ref.	Material	Uds	Weight
1	Rivets 4.8 x 13.5 mm	33821	Stainless Steel	10	20,60 Kg
2	Lower leg	33975	S325 Steel + anti-corrosion treatment	2	
3	Upper door leg	33976	S325 Steel + anti-corrosion treatment	2	
4	Door lock	33996	S325 Steel + anti-corrosion treatment	1	
5	Single door	34114	S325 Steel + anti-corrosion treatment	1	
6	Aluminium ladder rung anchor point	34089	S325 Steel + anti-corrosion treatment	2	

SECURITY DOORS

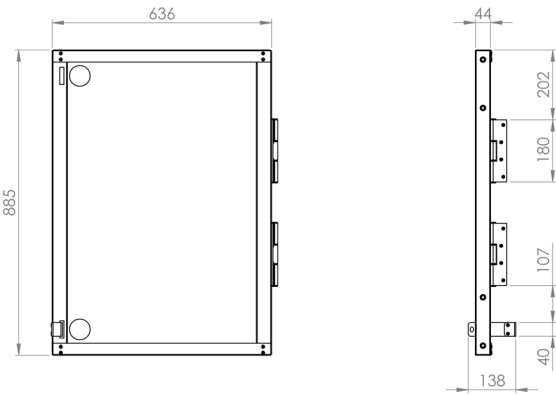
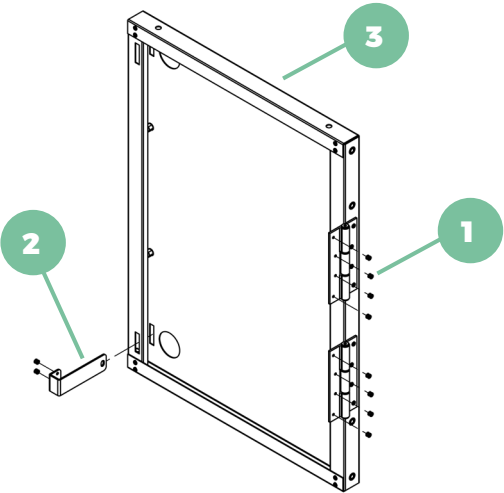
SINGLE HALF-DOOR

REF. 34101

Half door equipped with lock.

- Made of steel with anti-corrosion protection, with factory-pre-assembled anodized aluminum hinges and lock for locking the door with a padlock (not included in the kit).

ATTENTION : By regulation, the half door (ref .34101) cannot be assembled without the upper cover (ref. 34109).



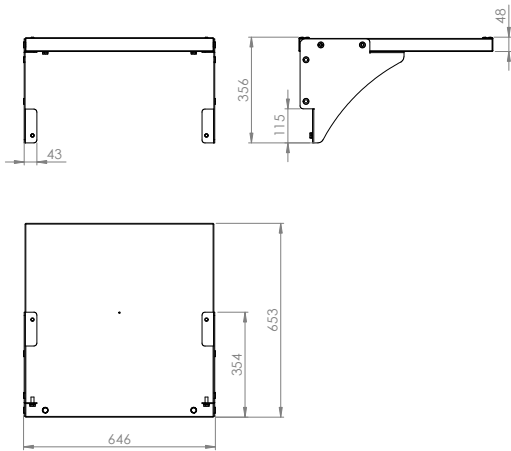
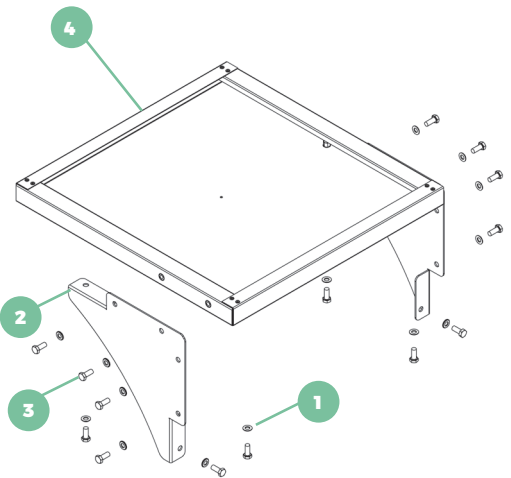
N°	Denomination	Ref.	Material	Uds	Weight
1	Rivet Ø 4.8 x 13.5 mm	33821	Stainless Steel	10	10 Kg
2	Door lock	33996	S325 Steel + anti-corrosion treatment	1	
3	Single half door	34100	S325 Steel + anti-corrosion treatment	1	

SECURITY DOORS

UPPER COVER

REF. 34108

- Upper part of the door equipped with reinforcements.
- Made of S235 steel.
- Delivered with stainless steel screws.
- The upper cover (ref. **34108**) can be used for both the complete door (ref.**34115**) and the half door (ref. **34101**).



N°	Denomination	Ref.	Material	Uds	Weight
1	M10 washer	33245	Stainless Steel	14	11,4 Kg
2	Reinforcement	34026	S325 Steel + anti-corrosion treatment	2	
3	M10 x 25 mm screw	34095	Stainless Steel	14	
4	Half door cover	34102	S325 Steel + anti-corrosion treatment	1	

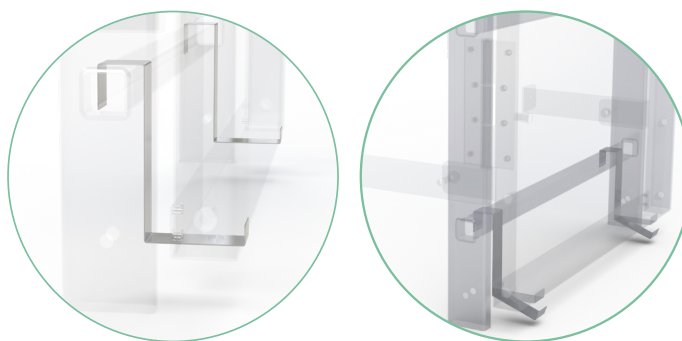
SECURITY DOORS

ASSEMBLY PRINCIPLE OF SINGLE DOOR

The bottom and side positioners are supplied to assist with the assembly of the single door and are removed once the hinges have been fixed to the ladder.

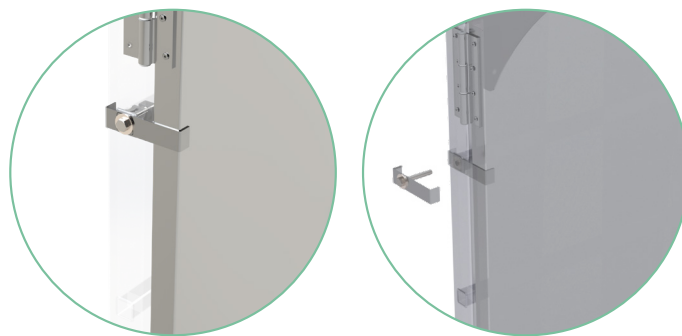
1. The lower positioners are installed on the first rung, closest to the stringers.
2. The door is placed, resting it on the lower positioners and pressing it against the ladder.
3. The side positioners are placed together with the anchor point to the step. In this way, the door is fixed.
4. Using the hinge as a template, the stringers where the rivets will be located are drilled with a 5 mm drill bit.
5. The rivets are installed to join the door hinges to the ladder.
6. Once the door is installed, the legs are folded towards the floor, the side positioners are removed, the door is opened and the lower positioners are removed.

LOWER POSITIONERS



LOWER POSITIONERS

LATERAL POSITIONERS



LATERAL POSITIONERS AND LADDER RUNG ANCHOR POINT

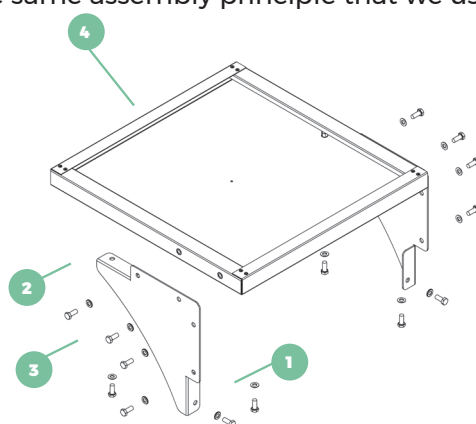
SECURITY DOORS

ASSEMBLY PRINCIPLE OF COMPLETE DOOR

To assemble the complete door, it is necessary to use the single door (ref. **34115**) and the door cover (ref. **34108**).

To assemble the door, follow these steps:

1. The reinforcement pieces (2), which are symmetrical, are installed on the rivet nuts already fixed on the door cover (4) with the M10 x 25 mm screws (3) and M10 washer (7).
2. Once tightened, the assembly is mounted on the single door using the same assembly principle as in point 1.
3. It is fixed to the staircase using the same assembly principle that we used on the single door.



REF. 34115

REF. 34108



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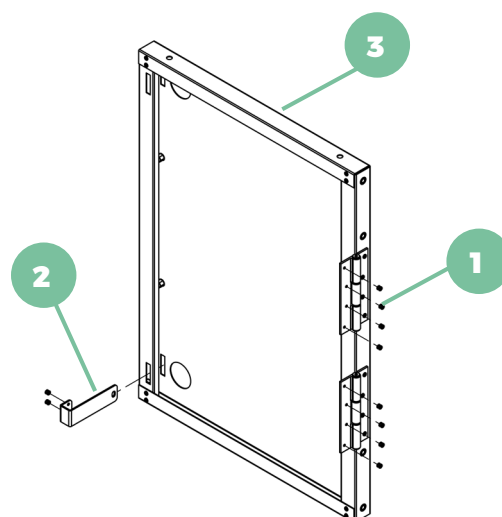
SECURITY DOORS

ASSEMBLY PRINCIPLE OF HALF DOOR

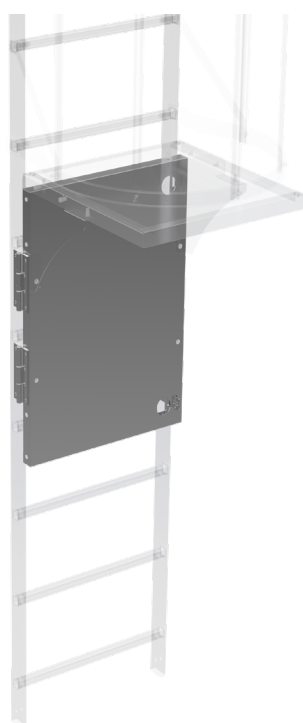
To assemble the half door, it is necessary to use the half door (ref. **34101**) and the upper cover (ref. **34108**).

To assemble the half door, follow these steps:

1. The reinforcement pieces (2), which are symmetrical, are installed on the rivet nuts already fixed to the upper cover (4) with the M10 x 25 mm screws (3) and M10 washer (1).
2. Once tightened, the assembly is mounted on the single door using the same assembly principle as point 1.
3. The half door is fastened to the ladder using two clamps, attached to the ladder stringers. Using the hinge as a template, the stringers where the rivets will be located are drilled with a 5 mm drill bit.
4. The rivets are installed to attach the door hinges to the ladder.
5. Once the door is installed, the clamps are removed.



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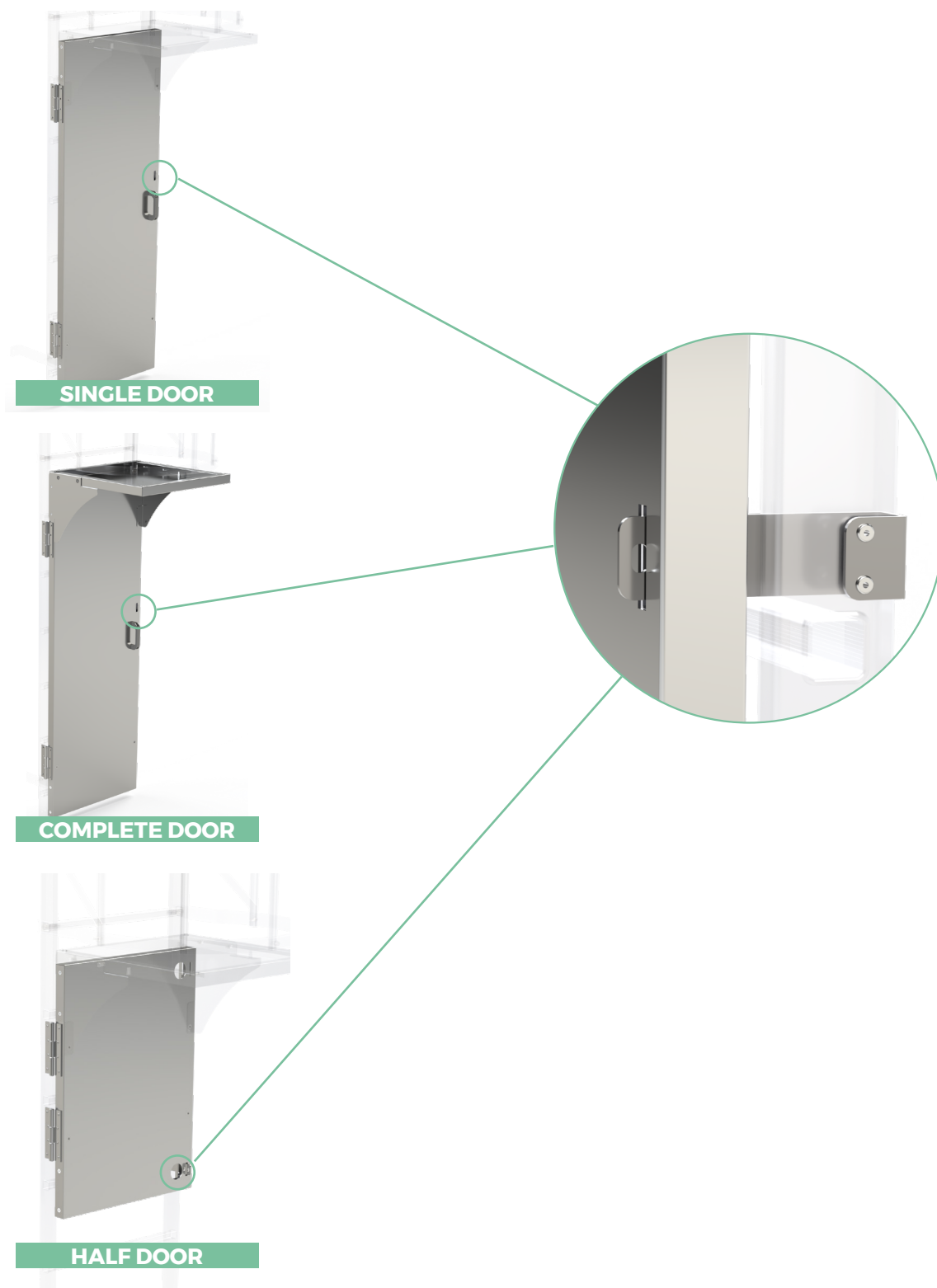
REF. 34101

REF. 34108

SECURITY DOORS

ASSEMBLY PRINCIPLE OF DOOR LOCK

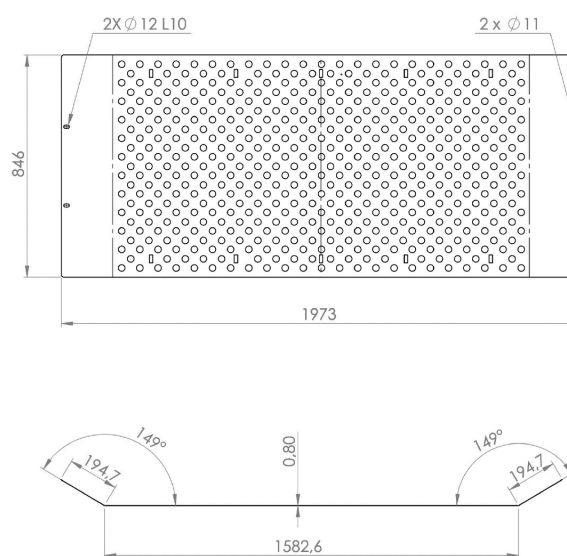
The locking system is common to the 3 security doors and allows the door to be closed to prevent access to the ladder with a padlock (not included). For assembly, once the door is installed, the profile of the ladder is drilled and the lock is riveted, as shown in the images.



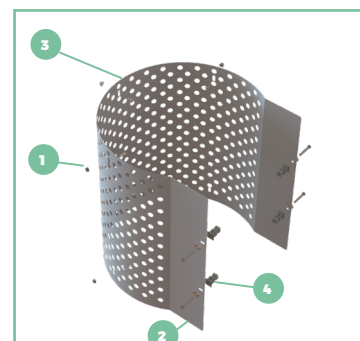
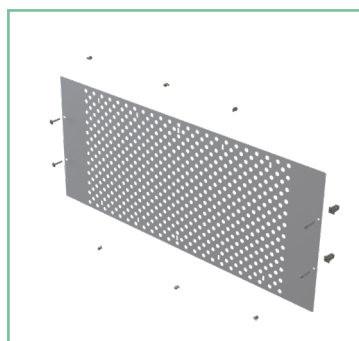
SAFETY LOCK KIT

REF. 34633

The cage safety lock allows you to close the access to the **M-LADDER** ladder from the outside, avoiding possible involuntary falls of technical materials, and at the same time preventing access by unauthorized personnel.



Material: Aluminium 7474
Weight : 3,41 kg



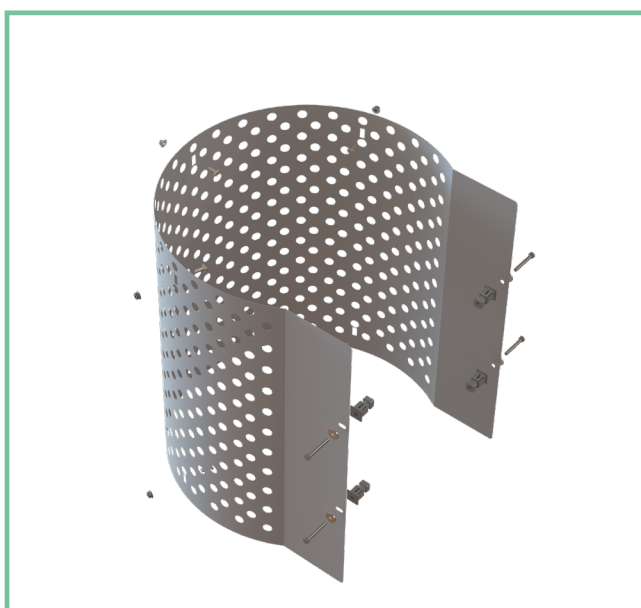
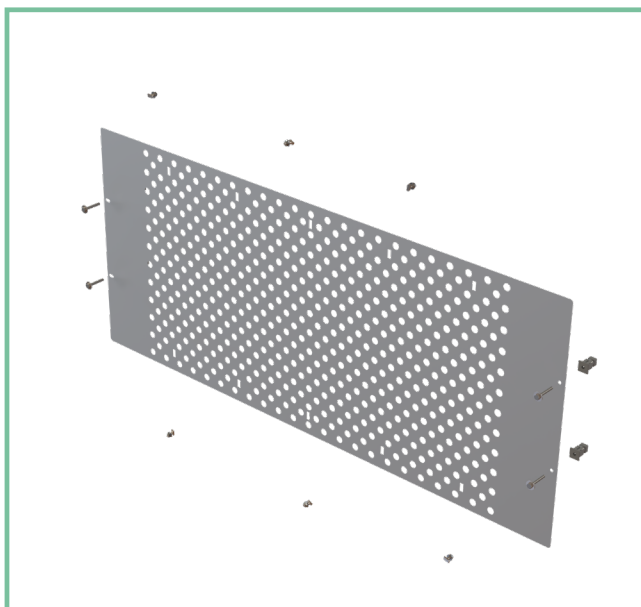
N°	Denomination	Ref.	Material	Uds	Weight
1	M10 hexagon nut with toothed flange	33243	Stainless Steel	6	3,41 Kg
2	Safety cage side plate	34028	Aluminium 5754	1	
3	Hammer head screw M10 x 25 mm	34088	Stainless Steel	6	
4	Aluminium ladder rung anchor point	34089	Polyamide + UV + Stainless Steel	4	

SAFETY LOCK KIT

ASSEMBLY PRINCIPLE OF SAFETY LOCK KIT

To assemble the **M-LADDER** safety lock kit, follow these steps:

1. Position the plate on the front stringers and, on the outside of the same, insert the 2 hammer head screws with their corresponding flange, between the plate and the stringer, turn and proceed to tighten them.
2. Shape the plate around the stringers, proceeding to install the screws with the same installation and tightening method.
3. Once the installation of the screws is finished, place the ladder rung anchor point to finish it.

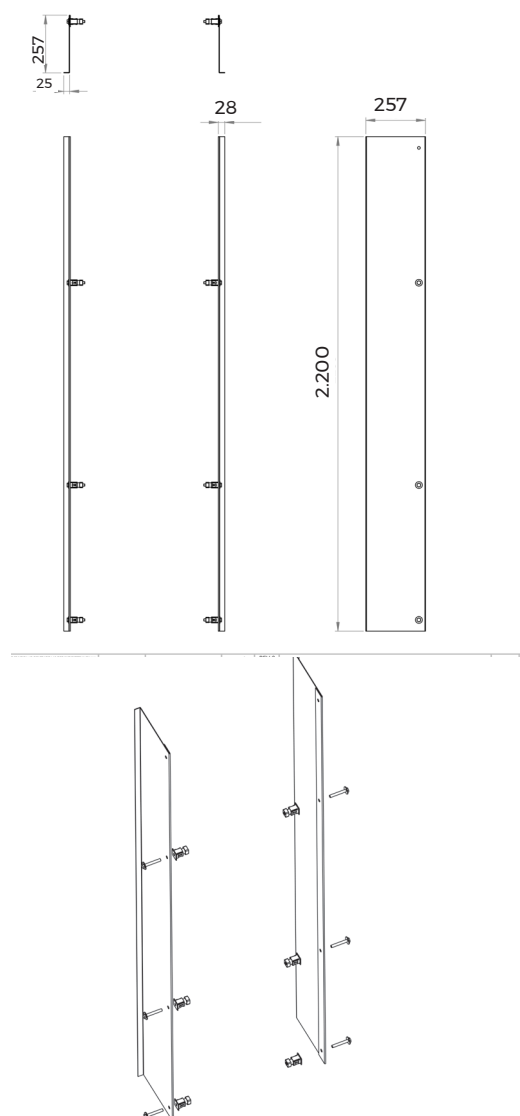


SIDE SAFETY CAGE LOCK KIT

REF. 34099

The kit is used to prevent authorized personnel from using the space between the wall and the ladder as an alternative access point, which would constitute improper use of the ladder. This ensures that the ladder is used correctly and in compliance with current regulations.

The plates are fixed to the ladder rails using rung anchor brackets, which are secured directly to the rungs of the ladder (3 per anti-intrusion plate).



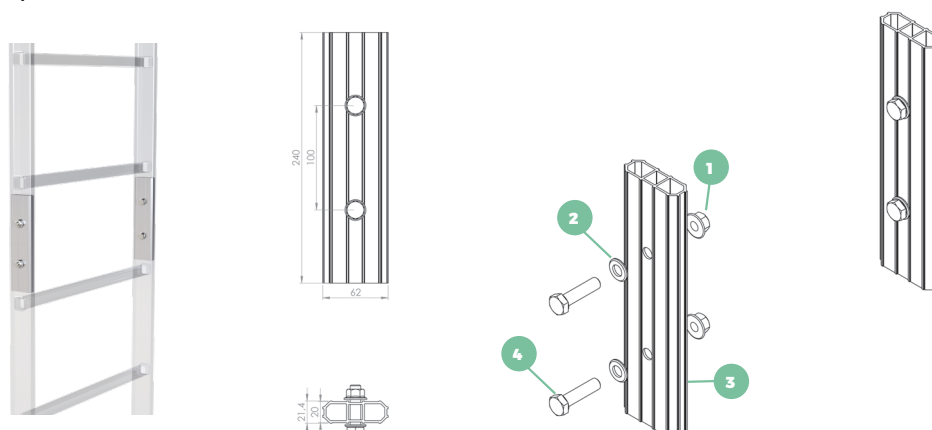
N°	Denomination	Ref.	Material	Uds	Weight
1	Side safety cage lock	34025	Aluminium 5754	2	8,1 Kg
2	Aluminium ladder rung anchor point	34089	Polyamide + UV+ Stainless Steel	6	

JUNCTION KIT

LADDER JUNCTION KIT

REF. 34120

The ladder junction kit allows ladders to be connected together to provide continuity. Made of 6063 aluminium alloy to ensure greater strength of the assembly. The tightening torque is 10 Nm.

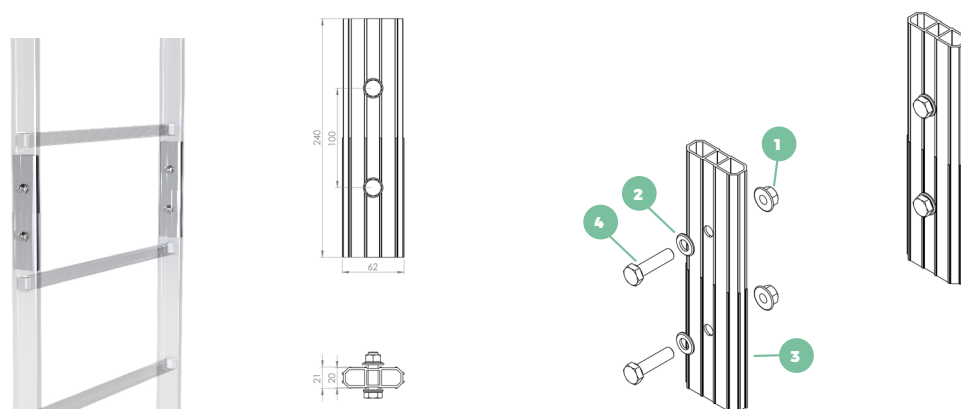


N°	Denomination	Réf.	Material	Uds
1	M10 hexagon nut with toothed flange	33243	Stainless Steel	4
2	M10 washer	33245	Stainless Steel	4
3	Internal union 240 mm	34056	Aluminium 6063	2
4	M10 x 40 mm screw	34097	Stainless Steel	4

LADDER / FRONT EXIT JUNCTION KIT

REF. 34121

The ladder/front-exit junction kit allows the front exit to be connected to a ladder in order to complete the overall assembly. Made of 6063 aluminium alloy to ensure greater strength of the structure. The tightening torque is 10 Nm.

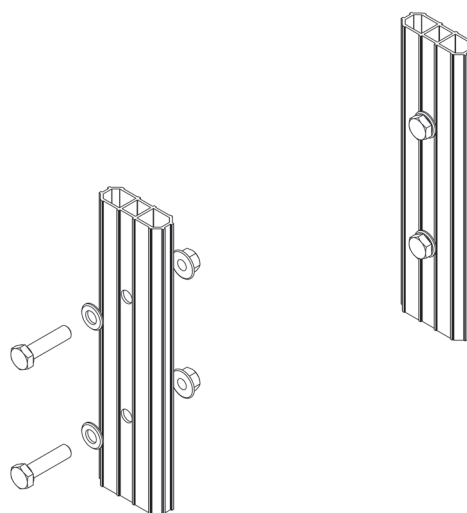


N°	Denomination	Réf.	Material	Uds
1	M10 hexagon nut with toothed flange	33243	Stainless Steel	4
2	M10 washer	33245	Stainless Steel	4
3	240 mm machined internal junction	34055	Aluminium 6063	2
4	M10 x 40 mm screw	34097	Stainless Steel	4

JUNCTION KIT

ASSEMBLY PRINCIPLE OF LADDER JUNCTION KIT

The ladder junction kit is used to connect one **M-LADDER** ladder to another one of them, in a consecutive manner, using screws that are supplied with the kit.



REF. **34120**

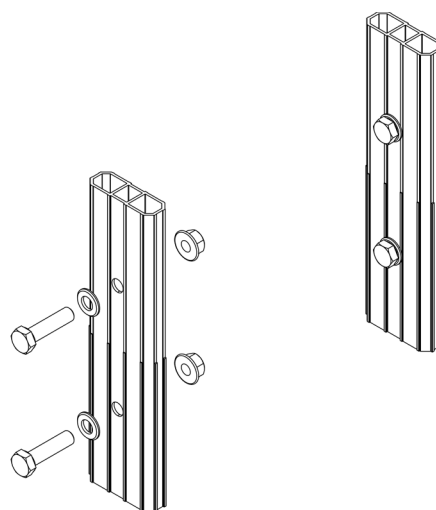
JUNCTION KIT

ASSEMBLY PRINCIPLE OF LADDER/ FRONT EXIT JUNCTION KIT

The ladder/front exit junction kit is used to connect a **M-LADDER** front exit to a **M-LADDER** ladder, using screws that are supplied with the kit.

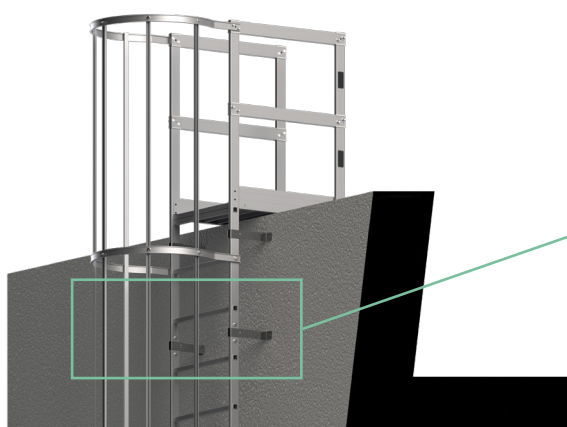
IMPORTANT : It is preferable to install the fixing kit at the level of the ladder/front exit junction as shown in *figure 1*. It is installed with a single screw on the threaded fixing, in an extra-fast way.

It is imperative to secure the face outlet with a minimum of two pairs of fixing legs, one pair of which must be fixed at the ladder/front exit junction. If for technical reasons this is not possible, this pair must be fixed as close as possible to the junctions.

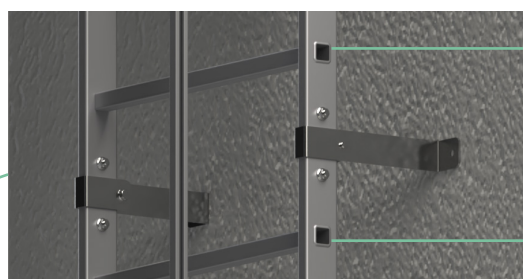


REF. 34121

FIGURE 1



Fixings at the level of the ladder/
front exit junction



Front exit

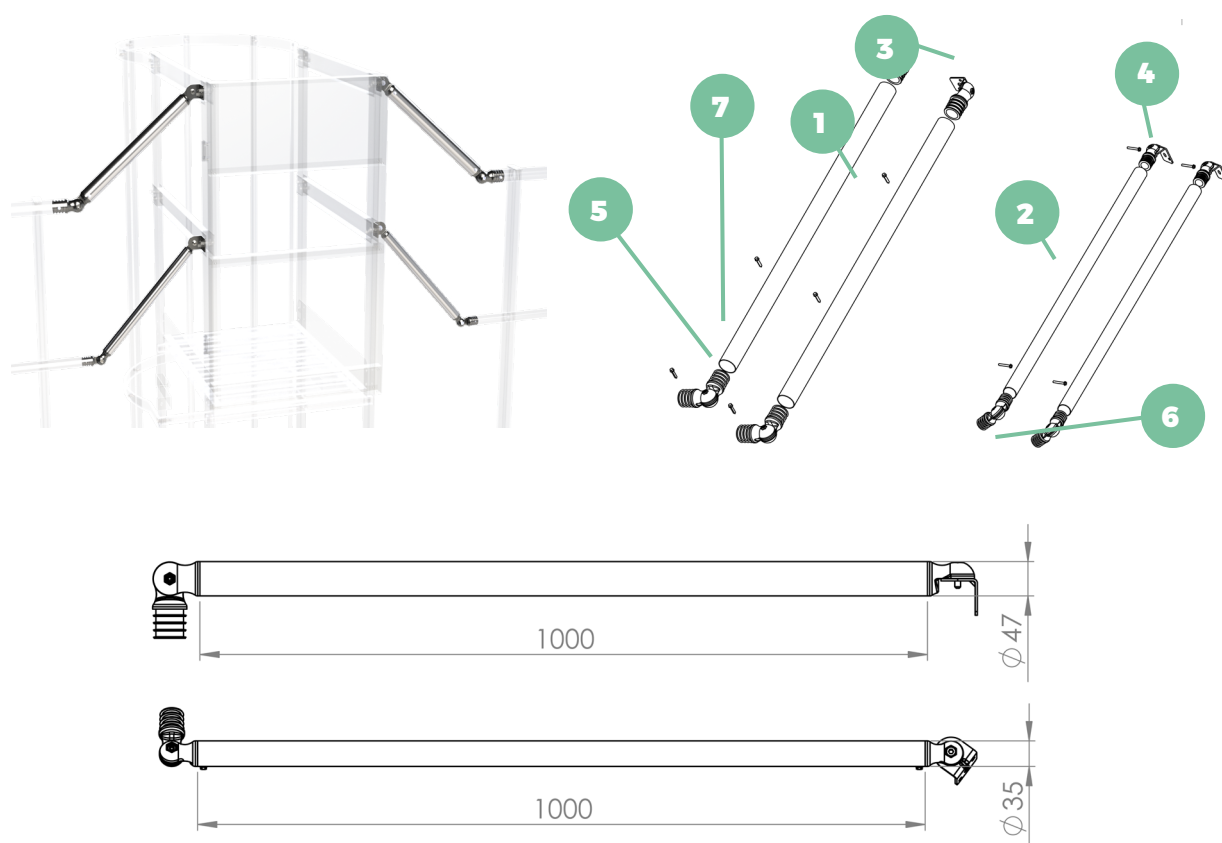
Ladder

JUNCTION KIT

LADDER/GUARDRAIL JUNCTION KIT

REF. 34023

Allows you to connect an **M-SAFE** guardrail to a **M-LADDER** ladder for optimal safety. It is mandatory to fix the screws that accompany the kit. It is possible to mount it on already installed protection systems for special adaptations. The tightening torque is 5 Nm.



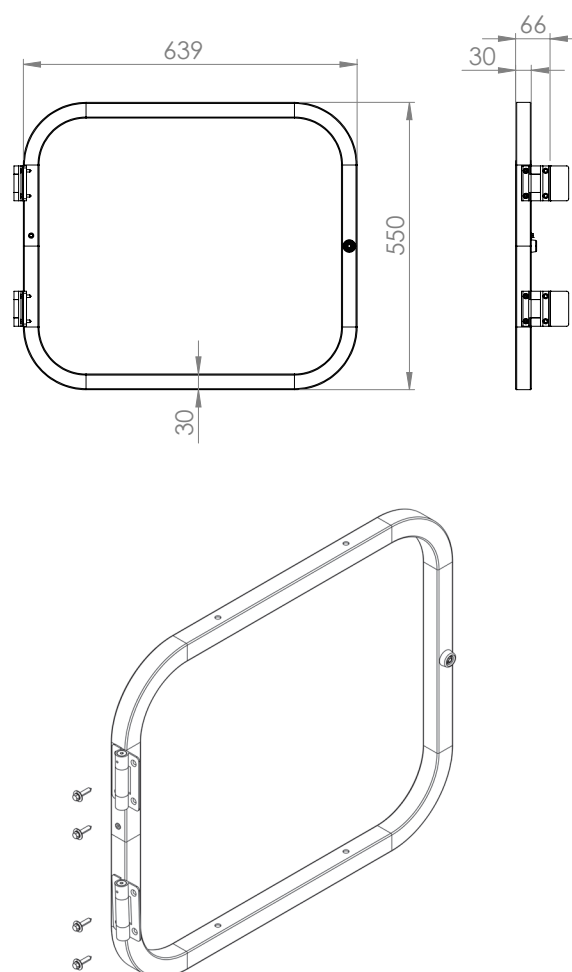
N°	Denomination	Ref.	Material	Uds	Weight
1	Handrail Ø 47 mm L1000 mm without reduction	34001	Aluminium 6063	2	2,34 Kg
2	Knee rail Ø 35 mm L1000 mm without reduction	34002	Aluminium 6063	2	
3	Angle Ø 47mm	32915	Polyamide + UV	2	
4	Angle Ø 35 mm	32916	Polyamide + UV	2	
5	Wall fixing Ø 47 mm	33004	Polyamide + UV + S325 Steel + anti-corrosion treatment	2	
6	Wall fixing Ø 35 mm	33005	Polyamide + UV + Acier S325 + anti-corrosion treatment	2	
7	Self-drilling screw Ø4.8 x 32 mm	33222	Stainless Steel	12	

SAFETY GATES

The safety gate is mandatory when collective protection is present on the roof and if the height of the parapet is less than 1,000 mm (standard NF EN 85-15) or 1,100 mm (standard EN 14122-3). It is installed at the landing area and meets the following requirements:

- Lightweight gate designed for easy opening
- Automatic closing system thanks to spring hinges
- Supplied with bolts and preassembled
- The gate is equipped with two preassembled anodised aluminium hinges for automatic closing
- There are two different safety gate models to meet all needs:
- 500 mm safety gate if the parapet height is greater than or equal to 100 mm
- 1,100 mm safety gate if the parapet height is less than 100 mm

SAFETY GATE 24 REF. 35960

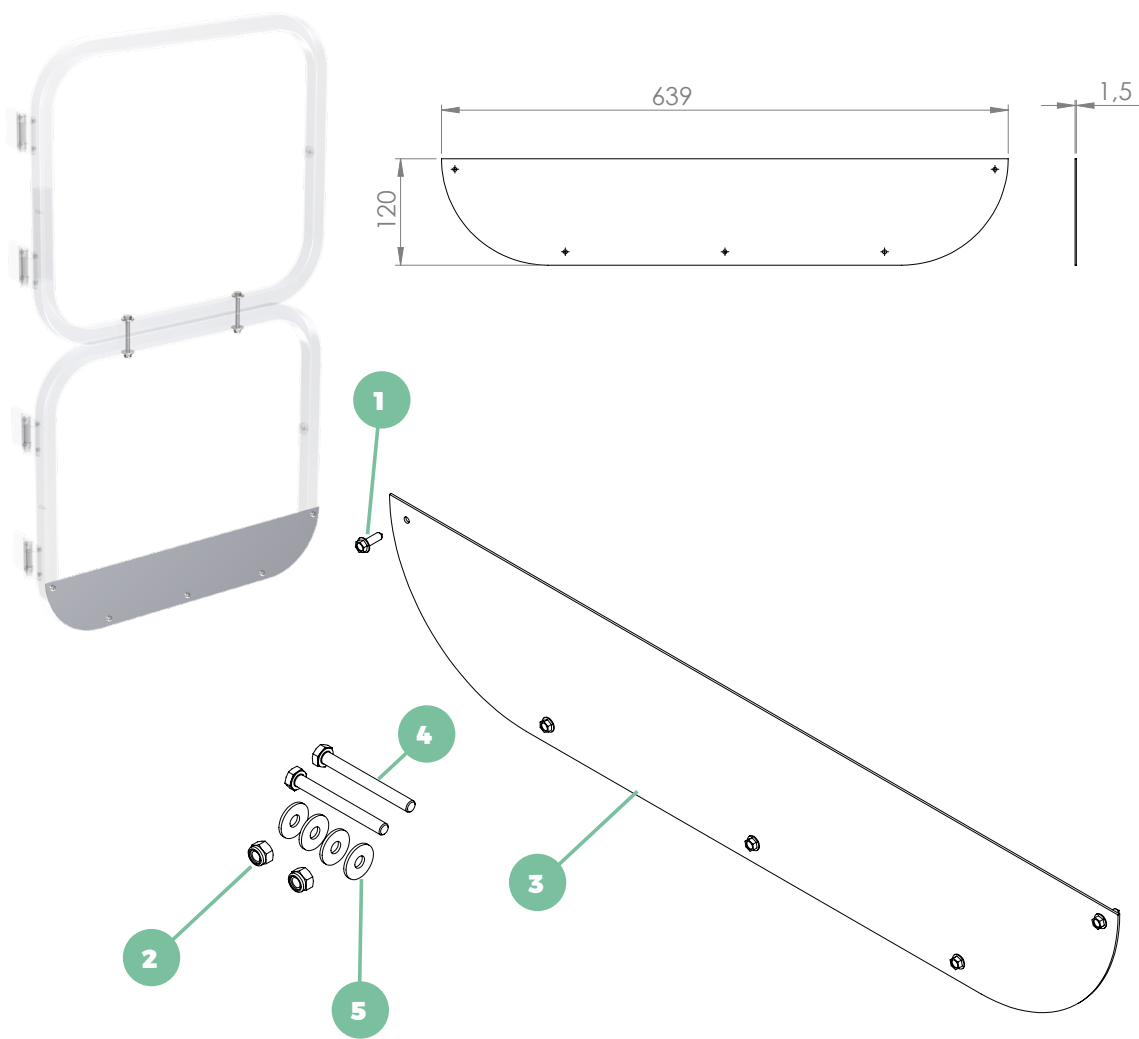


N°	Denomination	Ref.	Uds	Weight
1	DBS2 screw Ø 6 x 25 mm + Washer	33173	4	1,79 Kg
2	Safety gate structure	35735	1	

SAFETY GATES

1100 MM GATE VERSION
REF. 35965

The kit is used to quickly and easily convert two 550 mm gates (model 24) into a single 1,100 mm gate.



N°	Denomination	Ref.	Material	Uds	Weight
1	Self-drilling screw M4.8 X 16 mm	35237	Stainless Steel	5	0,29 Kg
2	Brake nut M8	35250	Stainless Steel	2	
3	Safety gate toe board	35962	Aluminium 5754	1	
4	Screw M8 x 75 mm	35963	Stainless Steel	2	
5	Washer M8	35964	Stainless Steel	4	

SAFETY GATE

ASSEMBLY PRINCIPLE OF SAFETY GATE

Follow the steps below for installation:

1. Position the gate against the upper part of the landing platform and secure it temporarily using clamps.
2. Screw the hinges to the ladder upright using the supplied DBS2 screws and sealing washers.
3. Remove the clamps.
4. Check the opening and closing of the gate, and adjust the hinge spring tension if necessary.



PRINCIPE DE MONTAGE DU PORTILLON 1100 MM

To assemble the 1,100 mm safety gate, it is necessary to have the safety gate (ref. **35960**) and the conversion kit (ref. **35965**).

Follow the steps below for installation:

1. Connect the two 550 mm gates using the M8 x 75 mm screws, M8 washers, and M8 lock nuts, as shown in **figure 1**.
2. Install the toeboard using the M8 x 16 mm self-drilling screws on the underside of the 1,100 mm gate.
3. Position the gate against the upper part of the landing platform and secure it temporarily using clamps.
4. Screw the hinges to the ladder upright using the supplied DBS2 screws and sealing washers.
5. Remove the clamps.
6. Check the opening and closing of the gate, and adjust the spring tension of the hinges if necessary.

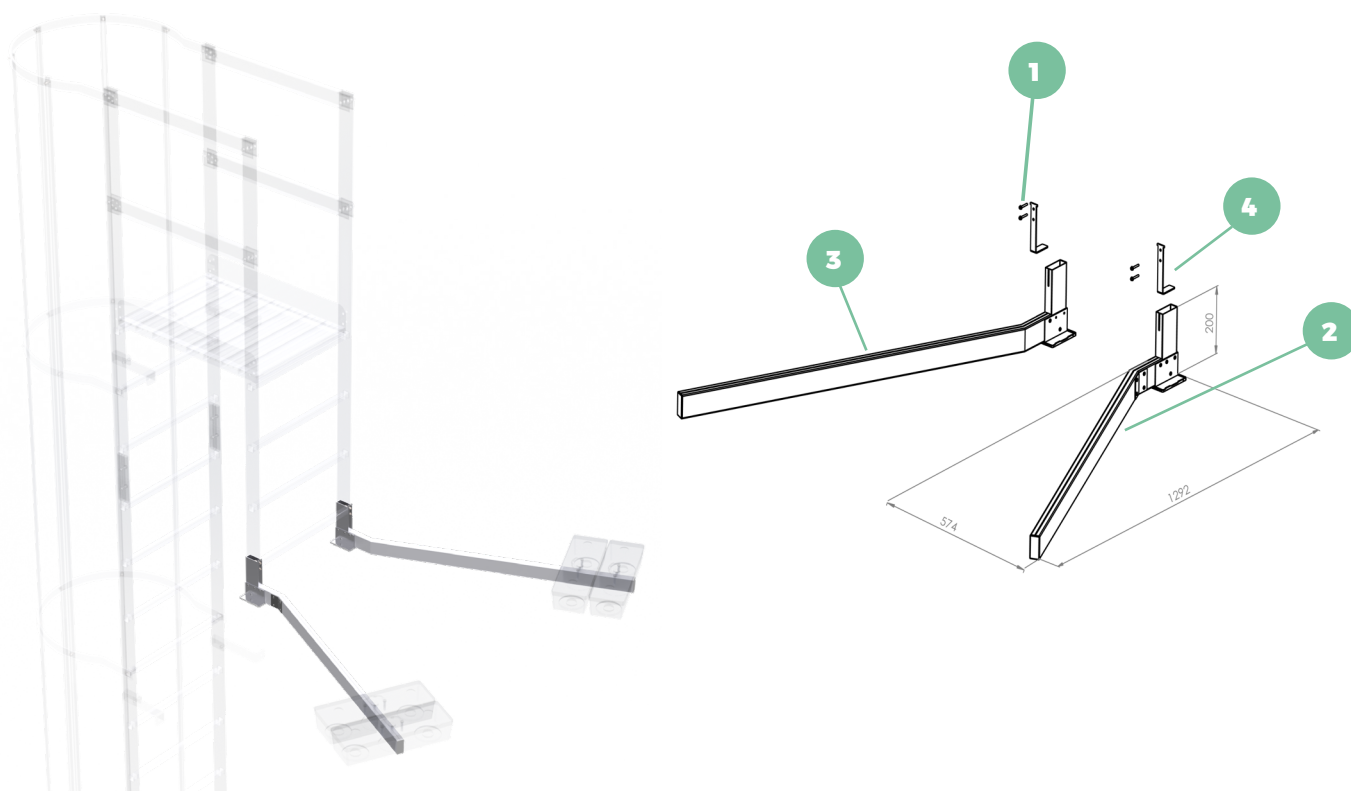


FIGURE 1

LADDER FREESTANDING EXIT KIT

REF. 34330

The ladder freestanding exit kit is used to finish access to the roof in a safe way and without having to drill holes in it, to avoid water leaks. This kit includes support legs and screws.



N°	Denomination	Ref	Material	Uds	Weight
1	Self-drilling screw Ø 4.8 x 32 mm	33222	Stainless Steel	4	2,7 Kg
2	Right curved support leg	34003	Aluminium 6063	1	
3	Left curved support leg	34004	Aluminium 6063	1	
4	Gauge 140 mm	34547	Aluminium 5754		

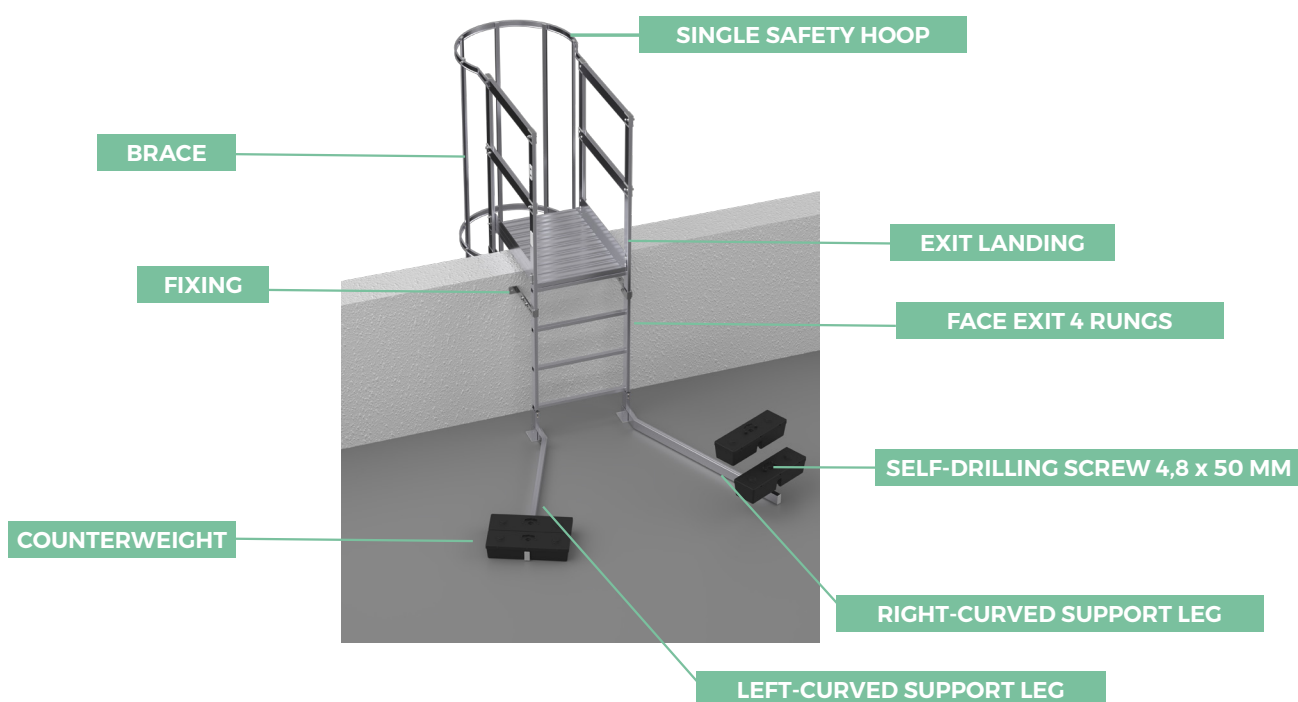
STAIRCASE BASE KIT

ASSEMBLY PRINCIPLE OF LADDER FREESTANDING EXIT KIT

For installation, in addition to the kit, you will need : 1 front exit (height according to requirements (ref. [33967](#), [33971](#), [33972](#)), 4 concrete blocks (ref. [32571](#)) and 4 self-drilling screws 4,8 x 50 mm (ref. [33223](#)).

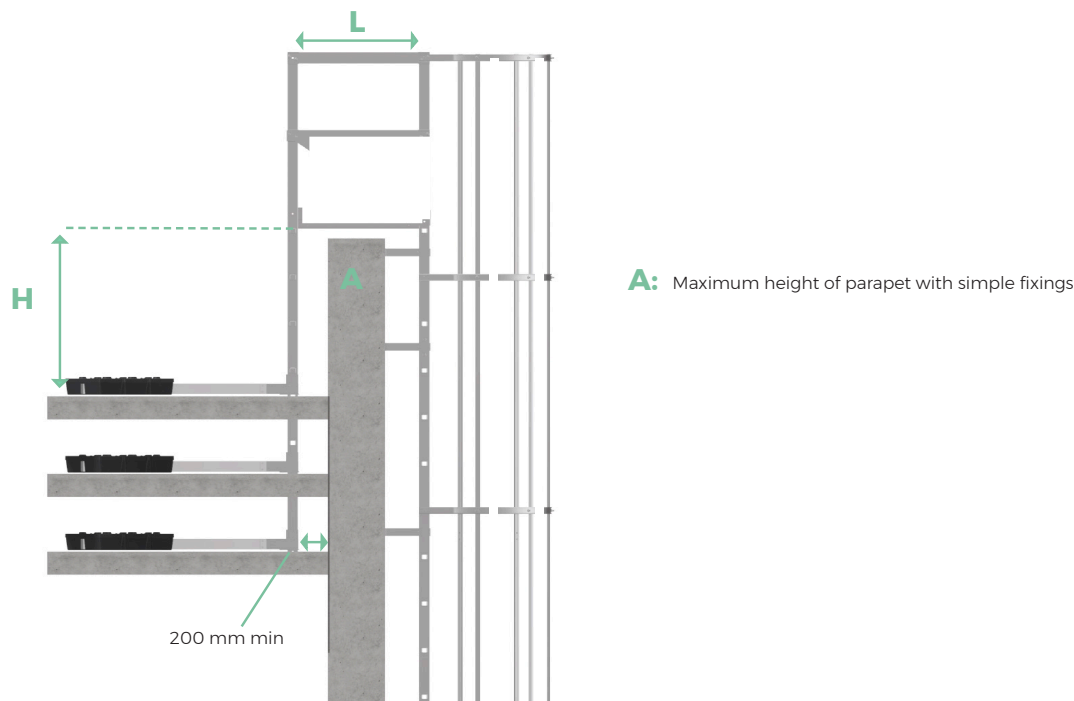
1. Install the brackets (ref. [34547](#)) inside the base plates.
2. Insert each upright of the front exit into the base plates, as shown in Figure 1. Then fix the assembly (base plate + bracket + upright) using the 4.8 x 32 mm self-drilling screws (ref. [33222](#)).
3. Place the concrete blocks (2 per base plate) at the ends of the support legs.
4. Fix each block to the support leg using a 4.8 x 50 mm stainless steel self-drilling screw (one per block).

IMPORTANT: For freestanding returns higher than 1,000 mm, one or more pairs of wall fixings must be installed to secure the front exit to the wall for greater stability..

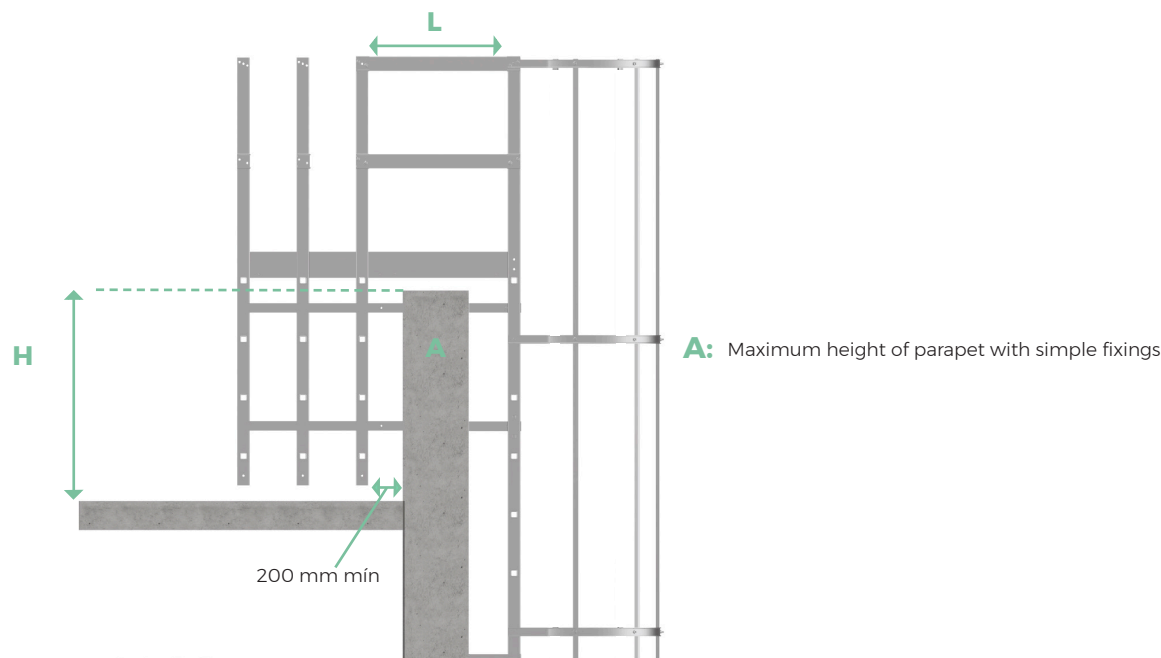


EXIT LANDING KIT CONFIGURATIONS

EXIT LANDING WITH FREESTANDING DESCENT



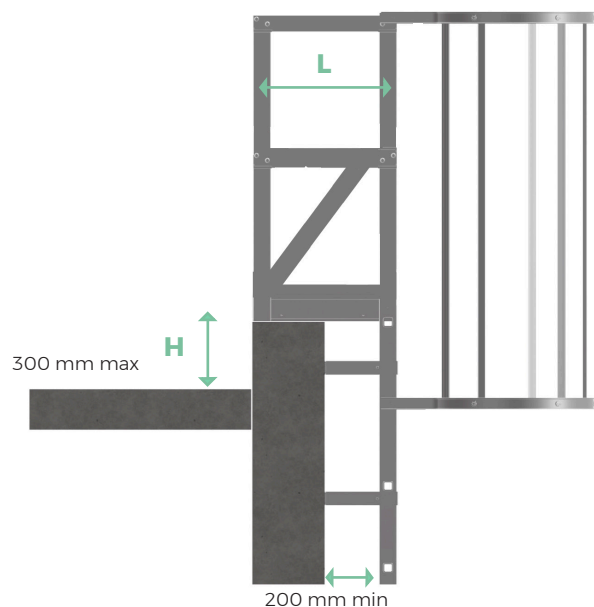
EXIT LANDING KIT FIXED INSIDE THE PARAPET



Exit landing (L)	A	Maximum height of parapet with simple fixings		
		Face exit 3 rungs	Face exit 4 rungs	Face exit 5 rungs
800 mm	315 mm	725 mm	1,025 mm	1,325 mm
1,000 mm	515 mm			

EXIT LANDING KIT CONFIGURATIONS

500 MM EXIT LANDING KIT



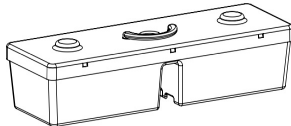
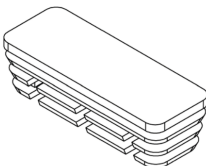
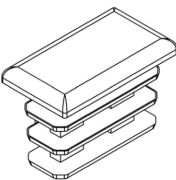





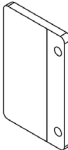
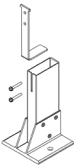
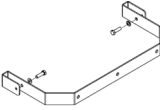
300 MM EXIT LANDING KIT



Width	Denomination	Ref.	Material	Weight
526 mm	500 mm exit landing	34302	Aluminium 6063	13,8 Kg
332 mm	300 mm exit landing	34341	Aluminium 6063	9,3 Kg

ACCESSORIES

The following items are part of the **M-LADDER** accessory range. They can be ordered separately to complete the assembly. They are supplied according to the component reference table on page 61.

<p>REF. 32571</p>  <p>COUNTERWEIGHT</p>	<p>REF. 34307</p>  <p>GREY PLUG</p>	<p>REF. 34054</p>  <p>STRINGER PLUG</p>
<p>REF. 33173</p>  <p>DBS2 SCREW Ø6 x 25 MM</p>	<p>REF. 33172</p>  <p>BOWL WASHER</p>	<p>REF. 34406</p>  <p>RUBBER WASHER</p>
<p>REF. 33223</p>  <p>SELF- DRILLING SCREW 4,8 X 50 MM</p>	<p>REF. 33222</p>  <p>SELF- DRILLING SCREW 4,8 X 32 MM</p>	<p>REF. 35747</p>  <p>SAFETY GATE/ UPRIGHT ADAPTATION KIT</p>
<p>REF. 34786</p>  <p>TOP FIX BASE KIT</p>	<p>REF. 36338</p>  <p>U-SHAPED FIXING</p>	

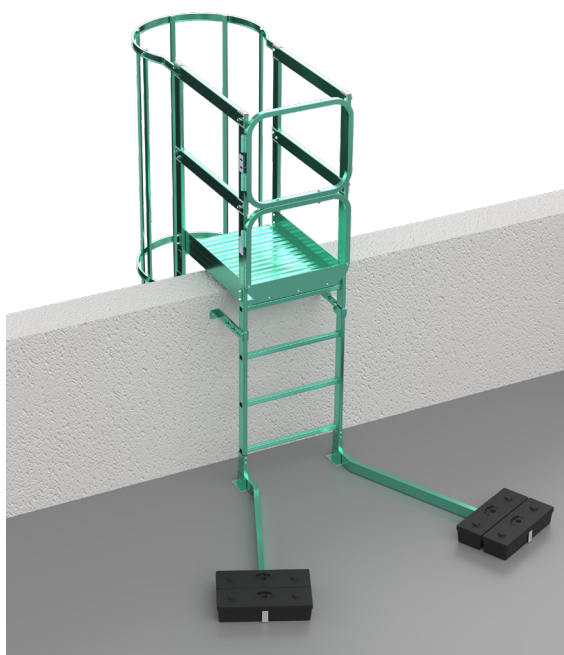
PRESET TABLE ACCORDING TO THE HEIGHT TO BE CROSSED

Ref.	ARTICLE	Height to be crossed											
		3,80	4,40	4,90	5,50	6,30	6,90	7,40	8,00	8,60	9,10	9,70	10,00
		Element making up the crinoline staircase											
34063	Aluminium ladder H2100 mm					1					2	2	1
34067	Aluminium ladder H3000 mm	1	1			1	2	2	1				1
34068	Aluminium ladder H3900 mm			1	1				1	2	1	1	1
34120	Ladder junction kit					1	1	1	1	1	2	2	2
33967	Front exit with 3 rungs - H 750mm + 1150 mm *	1		1			1			1	1		1
33971	Front exit with 4 rungs - H1050mm + 1150 mm *					1			1				
33972	Front exit with 5 rungs - H1350mm + 1150 mm *		1		1			1				1	
34121	Pair of ladder/front-exit junctions	1	1	1	1	1	1	1	1	1	1	1	1
34087	Complete safety cage hoop	3	4	4	4	5	5	6	6	7	7	7	7
33984	Safety cage rail - 3100 mm	5	6	7	8	9	10	11	12	13	13	14	15
34103	Reinforcement hoop kit	1	1	1	1	1	1	1	1	1	1	1	1
34329	Safety cage rail junction		1	1	1	1	1	1	1	1	1	1	1
34054	Safety cage rail end cap	10	10	10	10	10	10	10	10	10	10	10	10
34119	Simple fixing kit (300 mm) **	4	4	4	4	5	5	5	5	6	6	6	6
35960	Safety gate	1	1	1	1	1	1	1	1	1	1	1	1

* To these items, add a landing platform kit depending on the configuration of the parapet.








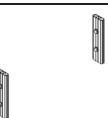
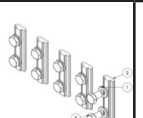
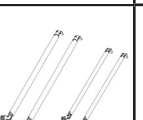
** The type of fixing must be defined according to the support and the required offset.

CUSTOM COLOR OPTION


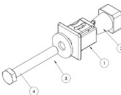
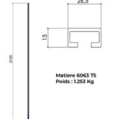





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COMPONENTS REFERENCES

LADDERS	REF.	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	34063	ALUMINIUM LADDER H2100 - 7 RUNGS		All ladders are pre-drilled at each end to facilitate splicing. Connection with additional ladders is done by splicing. Rungs: Non-slip square aluminium rungs, 29.5 x 29.5 mm Rung spacing: 300 mm Overall width: 636 mm Internal width: 588 mm	PALETTE	Aluminium 6063	4,16 Kg
	34067	ALUMINIUM LADDER H 3000 - 10 RUNGS			PALETTE	Aluminium 6063	5,95 Kg
	34068	ALUMINIUM LADDER 3900MM 13 RUNGS			PALETTE	Aluminium 6063	7,73 Kg
FRONT EXIT	REF.	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	33967	FRONT EXIT 3 RUNGS H1895 MM		Front exit with 3, 4, or 5 rungs. Allows for a safe exit thanks to its extended uprights, which serve as exit handrails.	PALETTE	Aluminium 6063	3,83 Kg
	33971	FRONT EXIT 4 RUNGS H2195 MM			PALETTE	Aluminium 6063	4,57 Kg
	33972	FRONT EXIT 5 RUNGS H2495 MM			PALETTE	Aluminium 6063	5,32 Kg
JUNCTION KIT	REF.	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	34120	LADDER / LADDER JUNCTION KIT		Designed to connect two ladders together. Supplied with fastening hardware.	BOX	Aluminium 6063	0,03 Kg
	34121	FRONT EXIT / LADDER JUNCTION KIT		Designed to connect two ladders together. Supplied with fastening hardware.	BOX	Aluminium 6063	0,03 Kg
	34329	STRINGERSJUNCTION		Kit of 5 safety cage rail connectors. Supplied with fastening hardware.	BOX	Aluminium 6063	0,40 Kg
	34023	LADDER / GUARDRAIL JUNCTION KIT		Designed to connect a ladder to a front exit at the top. Supplied with fastening hardware.	PALETTE	Aluminium 6063	3,28 Kg

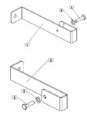
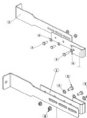
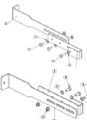










COMPONENTS REFERENCES

SAFETY CAGE	REF..	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	34087	SINGLE SAFETY HOOP SET		Single hoop set including screws	PALETTE	Aluminium 6063	1,20 Kg
	34089	RUNG ANCHOR POINT FOR M-LADDER LADDER		Allows fixing the elements (hoops, reinforcement kit, to the rungs of the ladder by fixing from the outside of the ladder)	BOX	Stainless Steel PA + UV	0,05 Kg
	33984	STRINGERS (VERTICAL BARS FOR SAFETY CAGE)		3100 mm aluminium stringer to join the hoops vertically.	PALETTE	Aluminium 6063	1,20 Kg
	34103	BRACING KIT		The bracing kit includes screws.	BOX	Acier S235	0,30 Kg






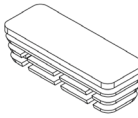


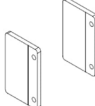
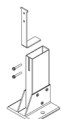
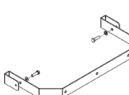
CHANGE OF FLIGHT	REF..	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	34094	REST PLATFORM KIT FOR CHANGE OF FLIGHT		The rest platform kit for change of flight can be used for right and left exits, and includes screws.	PALETTE	Aluminium 5754	11,00 Kg
	34098	SAFETY HOOP KIT FOR CHANGE OF FLIGHT		The safety hoop kit for change of flight is supplied disassembled and includes the screws.	PALETTE	Aluminium 6063	5,90 Kg

EXIT LANDING STEP	REF..	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	34341	300 MM EXIT LANDING STEP KIT		ExitLanding step kit for completing the installation of the M-LADDER ladders, including the screws.	PALETTE	Aluminium 6063	5,70 Kg
	34302	500 MM EXIT LANDING STEP KIT			PALETTE	Aluminium 6063	10,20 Kg
	34342	800 MM EXIT LANDING PLATFORM KIT		ExitLanding platform kit for completing the installation of the M-LADDER ladders, including the screws.	PALETTE	Aluminium 6063	9,10 Kg
	34343	1000 MM EXIT LANDING PLATFORM KIT			PALETTE	Aluminium 6063	11,10 Kg

COMPONENTS REFERENCES

MOUNTING BRACKETS	REF.	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	34119	KIT SINGLE MOUNTING BRACKETS (0 - 230 MM)		M-LADDER mounting brackets kits are used to secure ladders to any type of surface. Includes screws / washers	BOX	S235 Stainless Steel	1,40 Kg
	34117	KIT ADJUSTABLE MOUNTING BRACKETS 400 MM			BOX	S235 Stainless Steel	3,00 Kg
	34118	PAIR OF ADJUSTABLE MOUNTING BRACKET			BOX	S235 Stainless Steel	4,20 Kg
	34327	METAL DECK MOUNTING PLATES AND BRACKET KIT			BOX	S235 Stainless Steel	4,20 Kg
	34126	KIT FIXING PLATES FOR METAL DECK			BOX	S235 Stainless Steel	2,90 Kg
	34330	LADDER FREESTANDING EXIT KIT			PALET	Aluminium 6063	2,70 Kg
SECURITY DOORS	REF.	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	34084	SAFETY TRAPDOOR		The safety trapdoor comes pre-assembled and includes screws.	BOX	Aluminium 5754	3,60 Kg
	34101	HALF SECURITY DOOR		The half door is pre-assembled and includes screws.	BOX	S235 Steel Aluminium 6063	10,00 Kg
	34115	SINGLE SECURITY DOOR		The single door is pre-assembled and includes screws.	PALETTE	S235 Aluminium 6063	20,60 Kg
SAFETY GATES	REF.	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	35960	SAFETY GATE H550 MM		The safety gate comes pre-assembled and includes screws.	PALETTE	S235 Steel	1,79 Kg
	35965	CONVERSION KIT SAFETY GATE H1100		The safety gate conversion kit includes screws.	PALETTE	S235 Steel	0,29 Kg
SEALING	REF.	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	34633	ANTI-INTRUSION SHEET FOR SAFETY CAGE LADDER		The anti-intrusion sheet kit includes the screws.	PALETTE	Aluminium 5754	3,98 Kg
	34099	SIDE CLOSURE KIT		The side closure kit includes the screws	PALETTE	Aluminium 5754	8,10 Kg

COMPONENTS REFERENCES

ACCESORIES	REF.	DENOMINATION	VISUAL	DESCRIPTION	PACKAGING	MATERIAL	WEIGHT
	33173	DBS2 Ø6 x 25 mm SCREW		DBS2 screw for screwing to metal deck with sealing washer. Supplied in batches of 100 units	BOX	Stainless Steel A2	-
	33172	BOWL WASHER		Chimney washer Ø 8,5. Supplied in lots of 100 pcs	BOX	EPDM	-
	34406	RUBBER WASHER		Washer 2mm Ø 23 x Ø 13mm Supplied in lots of 100 pcs.	BOX	EPDM	-
	33223	Ø4.8 x 50 mm SCREW		Self tapping screw Ø 4,8 x 50 mm. supplied in batches of 500 pcs.	BOX	EPDM	-
	33222	Ø4.8 x 32 mm SCREW		Self-drilling screw Ø 4,8 x 32 mm. Supplied in lots of 500 pcs.	BOX	EPDM	-
	34307	LADDER GREY PLUG		Gray cover for stairs. Supplied in lots of 100 pcs.	BOX	PP	-
	34054	STRINGERS'S PLUG		Gray cover for tie rod. Supplied in batches of 100 pcs.	BOX	PP	-
	32571	COUNTERWEIGHT 12,5 KG		Used in self-supporting outlet. To be fixed to each reinforcement leg with 4.8 x 50 mm screws. Supplied in batches of 81 pcs.	PALET	PP + Concrete	12,50 Kg
	35747	SAFETY GATE ADAPTATION KIT		The safety gate adaptation kit (2 pcs) is used as an accessory for installation on an M-SAFE upright. It is supplied in batches of 5 units.	BOX	S235 Steel	-
	34786	LADDER TOP FIX BASE KIT		The ladder top fix base kit (2 pcs) is used to fix the landing ladder on a metal or concrete deck. Includes the screws.	BOX	Aluminium 6063	1 Kg
	36338	U FIXING BRACKET KIT		The "U" fixing bracket kit is used to fasten the safety cage ladders to a post not higher than 100 mm. Includes screws. Supplied in batches of 1 unit.	BOX	S235 Steel	1,95 Kg

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