

Installation instructions for Weline

WIRE PROTECTION AND LIFELINE ATTACHMENTS
FOR VARIOUS PRODUCTS AND ROOF TYPES.



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Read this before starting the installation!

- It is extremely important that the points in this guide are followed when installing the Weline cable system.
- Pay particular attention to how you tighten the wire corners so that the cable runner runs freely past the corner.
- Also note that MA1008 describes which forces the system must endure.

Weland app

Download our app and follow the installation instructions. In the app you will find pictures, documentation, information about inspections/annual checks, installation instructions and news from Weland.

The app is called **Weland Norge** and exists for iOS and Android.



Support point

Our support points (the points between the end mounts) come in 3 versions, Tube, Track and Claw. The maximum distance between these points is 10m and in snowy areas we recommend 5m up to 15° slope. Between 15-50° inclination, the maximum distance is 2.5 metres. Over 50° slope max 1.2 metres. If the user wants to use the wire as support when working, we recommend a distance of maximum 2.5 meters between the support points.

Note! Support does not mean that you can work suspended in the system, e.g. over the edge of the roof.



Tube

Tube for straight lines, corners and level differences. Here you connect your line to the cable runner that sits on the cable.



Track

Tracks for straight lines where you connect the carabiner to a cable runner that sits on the cable.



Claw

Claw for straight stretches where you connect the carabiner right into the wire.



	Detalj	Art. nr.
1	Sealing plate OPTI 360x450	TP3645
2	Sealing plate (518x346) elevated 350x520	TP3551
3	Coach bolt M10x30	VB1301/VB1305

	Detalj	Art. nr.
4	Bolt M10x20	BU1201/BU1200
5	Nut M10	MU1001/MU1010
6	Rubber washer Ø50 M10	GB5010

Bitumen-based sealing layer

1. Protective cover and covering collar

The protective cover must be **at least 150 mm larger** than the sealing plate in all directions. For TP3551, the cover must also be cut to the raised section.

If deemed necessary by the installer, a covering collar must also be fitted under the sealing plate. This collar must be 50 mm larger than the sealing plate.

The sealing layer must be tested in accordance with EN 13707: 204+A2:2009 and satisfy the following minimum requirements:

Tensile strength: 550 N/50 mm

Shearing durability in joints: 550 N/50 mm

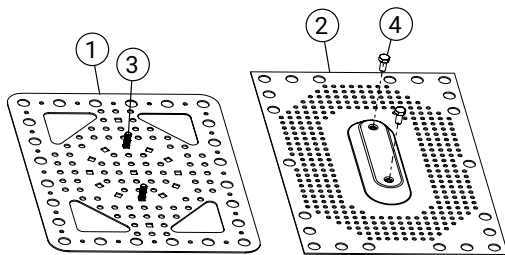
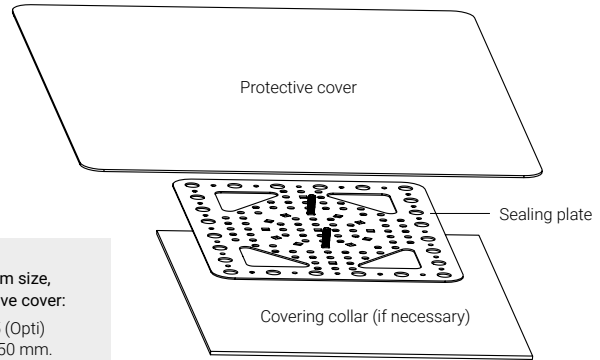
Tear strength: : 150 N

Resistance to cracks in joints: 150 N/50 mm

Minimum size, protective cover:

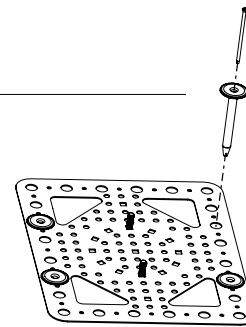
TP3645 (Opti)
660 x 750 mm.

TP3551 (Raised)
818 x 646 mm



2. Bolts

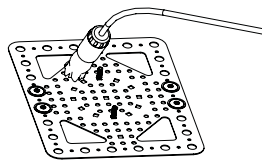
The OPTI sealing plate is installed using 2 coach bolts (3). Two M10x20 bolts (4) are fitted to the raised sealing plate (2).



3. Mechanical attachment

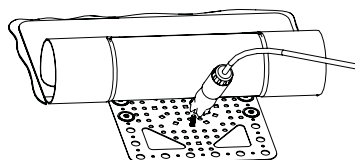
The sealing plates are installed mechanically to the bearing under-roof using **at least 4 attachments, each of which must be rated to handle a tensile force of 1kN.**

NB Mechanical attachments are to be purchased separately and selected based on the type of roof construction.



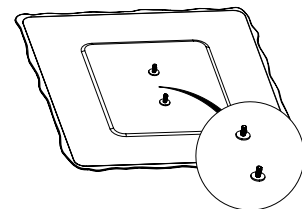
4. Pre-heat the substrate

Mark and pre-heat the substrate under the sealing plate so that the bitumen compound melts through the perforations in the plate.



5. Heating the sealing plate

Heat the protective cover together with the bitumen compound that has melted up through the sealing plate. Take care to ensure that sufficient heat is applied to melt the sealing plate into both layers. Finish by heating the protective cover around the entire sealing plate, securing it to the substrate.



6. Rubber washer

Finish by placing rubber washers (6) on the coach bolts (3)/bolts (4) and fit the bracket on top. Tighten the nuts (5).

Part	Part. no.
1 Sealing plate OPTI 360x450	TP3645
2 Coach bolt M10x30	VB1301/VB1305

Part	Part. no.
3 Nut M10	MU1001/MU1010
4 Rubber washer Ø50 M10	GB5010

PVC/TPO-based sealing layer

1. Protective cover and covering collar

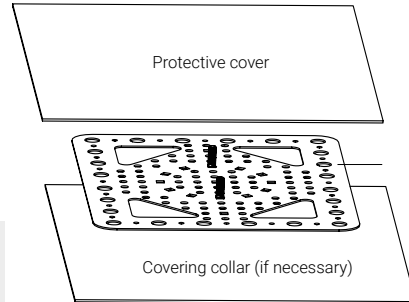
The protective cover must be **at least 50 mm larger** than the sealing plate in all directions.

If deemed necessary by the installer, a covering collar must also be fitted under the sealing plate. This collar must be 50 mm larger than the sealing plate.

The sealing layer must be compliant with EN 13956 and satisfy the following requirements:

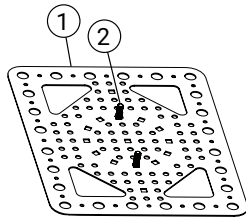
- Tensile strength: min. 1050 N/50 mm (EN 12311-2)
- Tear strength: min. 210 N/50 mm (EN 12310-2)
- Shear strength in joints: min. 1000 N/50 mm (EN 12317-2)
- Crack resistance in joints: min. 150 N/50 mm (EN 12316-2)

Minimum size, protective cover:
TP3645 (Opti)
550 x 460 mm.



2. Coach bolt

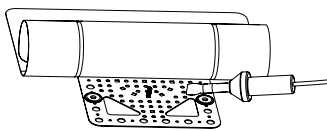
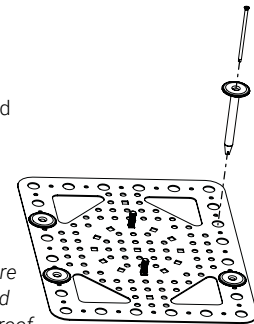
The OPTI sealing plate (1) is installed using 2 coach bolts (2).



3. Mechanical attachment

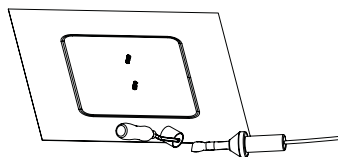
The sealing plates are installed mechanically to the bearing under-roof using **at least 4 attachments, each of which must be rated to handle a tensile force of 1kN.**

NB Mechanical attachments are to be purchased separately and selected based on the type of roof construction.



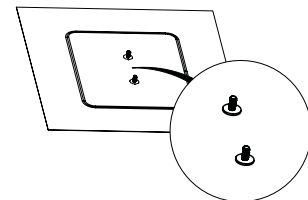
4. Welding sealing plate

Heat around the sealing plate and in the large triangles before fitting the protective cover.



5. Welding protective cover

Weld the protective cover securely around the sealing plate and carefully ensure that the surfaces also attach to each other in the triangles.



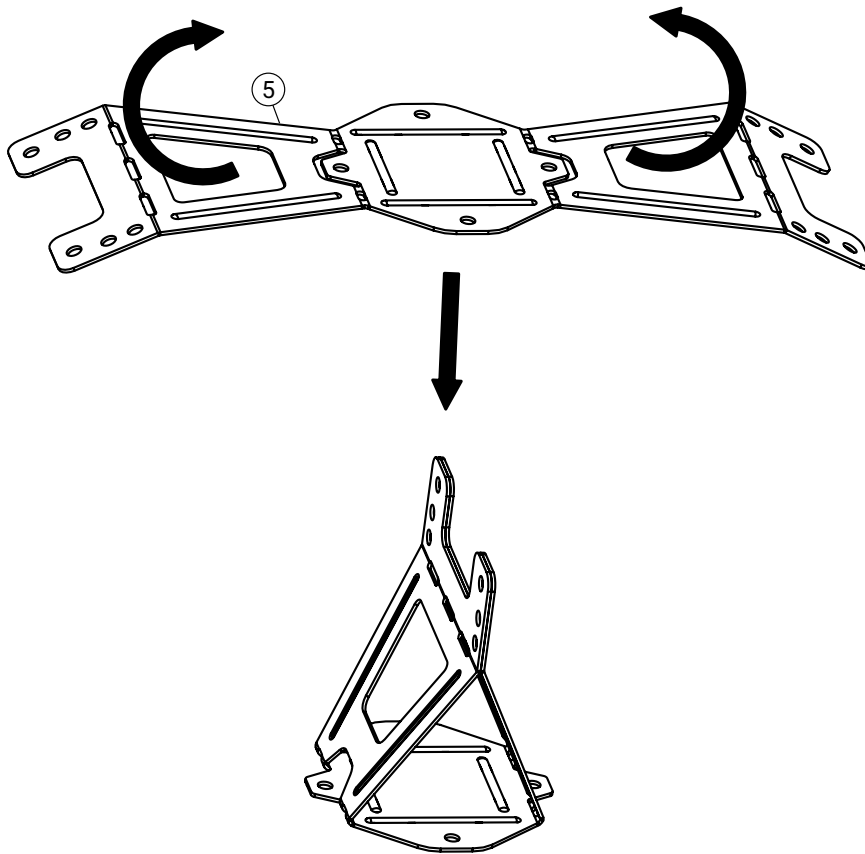
6. Rubber washer

Finish by placing rubber washers (4) on the coach bolts (2) and secure using nuts (3).

	Detalj	Art.nr.
1	Bracket for wire support	WL1001
2	End bracket wire	WL1002
3	Wire support claw	WL1003
4	Wire support track	WL1004
5	Bracket plain roof	WL1020
6	Wire runner open	WL1010
7	Wire bracket tube	WL1012
8	Wire joining tube	XWL1006

	Detalj	Art.nr.
9	Wire clamping sleeve	XWL1014
10	Wire	XWL1008
11	Coach bolt M10x30	VB1301/ VB1305
12	Bolt M10x20	BU1201/ BU1200
13	Nut M10	MU1001/ MU1010
14	Rubber washer Ø50 mm M10	GB5010
15	Infosign APP	IS1810

The maximum separation between supports is 10 m up to 15 degrees pitch.
 Between 15-50 degrees gradient, the max. separation is 2.5m.
 Above 50 degrees gradient, the max. separation is 1.2 m.

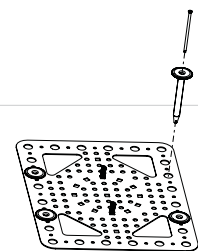


1. Fold Wire bracket

Fold the bracket (5) together by hand as illustrated above.

NB: Bend only once. If this is bent several times, it will be damaged and must be replaced.

For mechanical fitting of attachment plate, see MA1008



	Detalj	Art.nr.
6	Wire runner open	WL1010
10	Wire	XWL1008

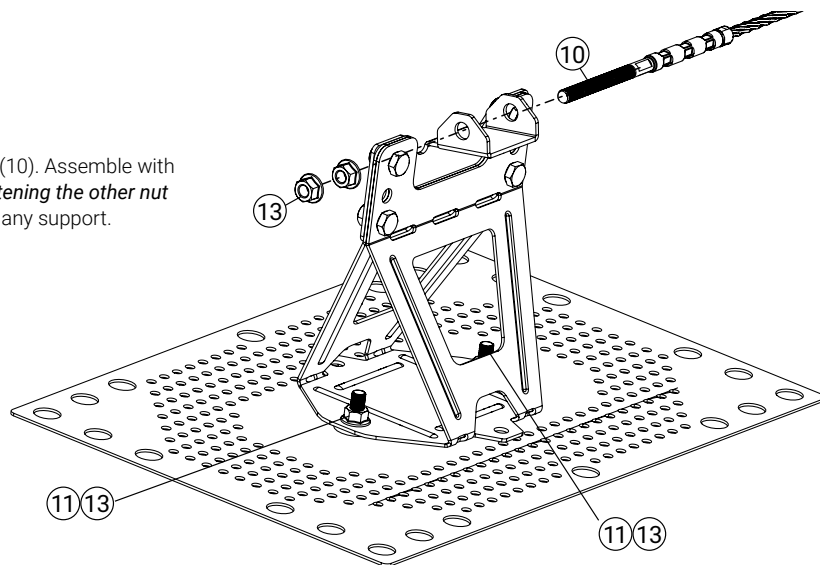
	Detalj	Art.nr.
11	Coach bolt M10x30	VB1301/ VB1305
13	Nut M10	MU1001/ MU1010

2. Installation of end bracket and wire

Start with one end bracket and continue with the wire supports. Pull the wire through, leaving a little slack. Then mark where the last bracket (the end bracket) is to be installed.

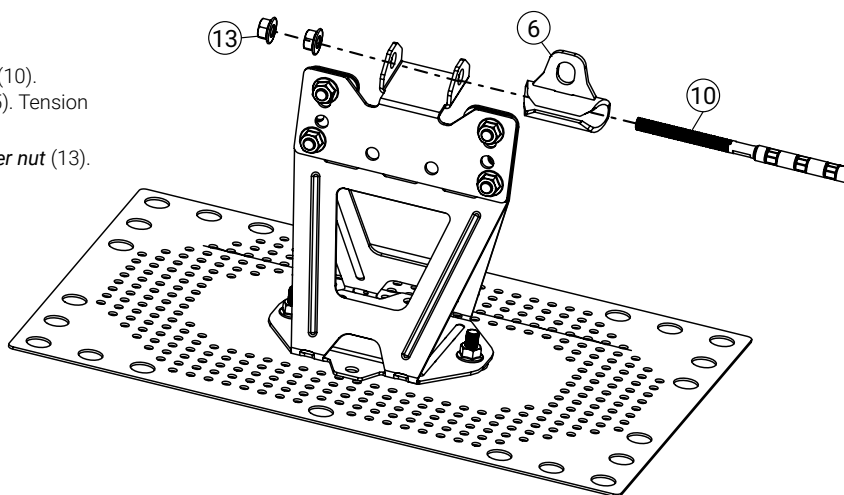
Install the first wire terminal

Install the first wire terminal (10). Assemble with two nuts (13) **Secure by tightening the other nut (13)**. Route the wire through any support.



Install the last wire terminal

Install the last wire terminal (10). Thread on any wire runner (5). Tension the wire so it does not sag. **Secure by tightening the other nut (13)**.



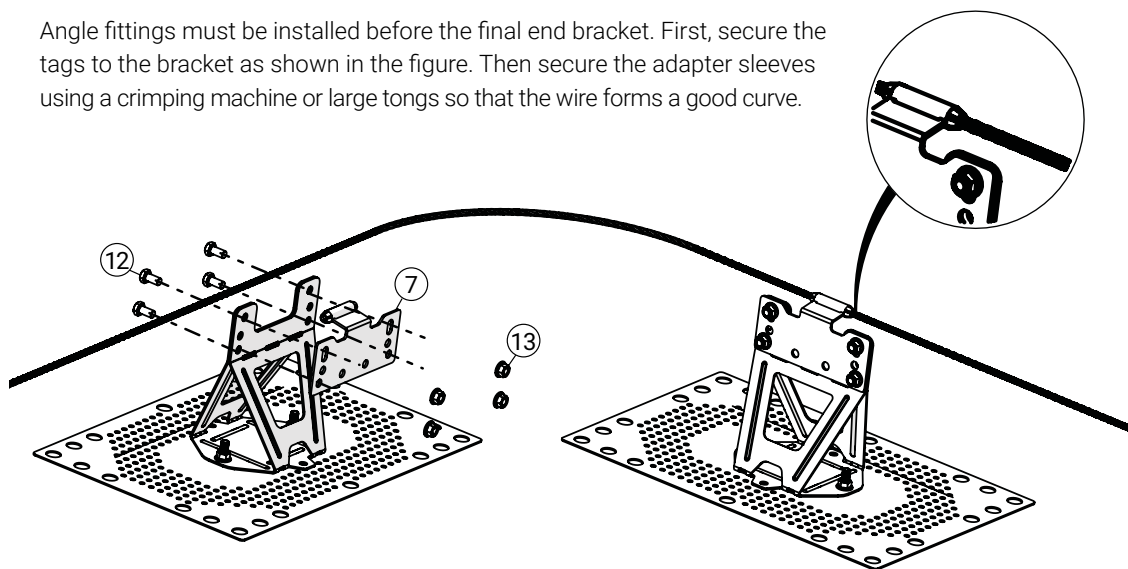
	Detalj	Art.nr.
7	Wire bracket tube	WL1012
9	Wire clamping sleeve	XWL1014

	Detalj	Art.nr.
12	Bolt M10x20	BU1201/ BU1200
13	Nut M10	MU1001/ MU1010

Wire Support Tube

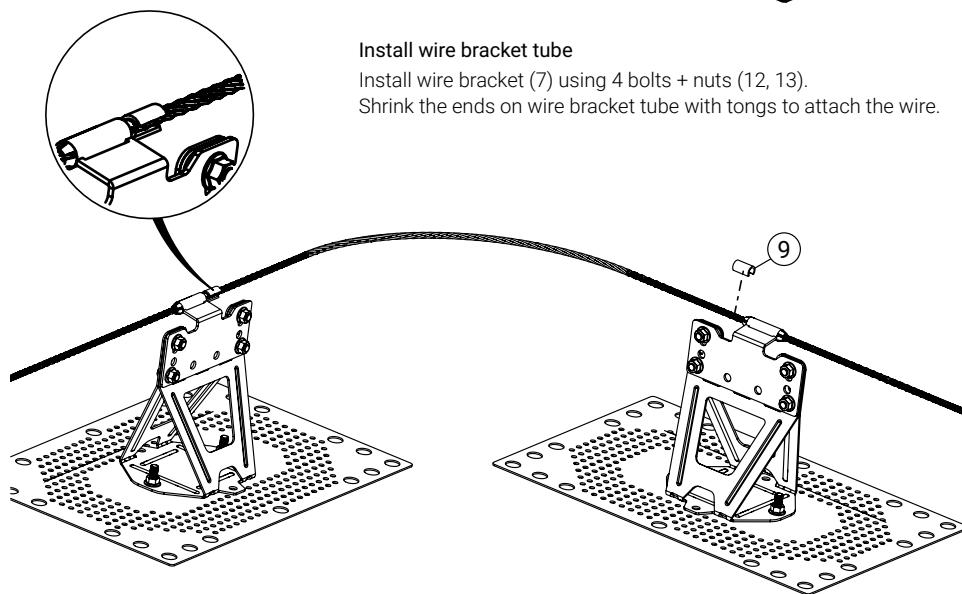
Used when you want to route the wire at corners, where there are level differences, and cross straight sections. The user connects to a wire runner and can then move freely along the wire or roof surface. The support can also be fitted on facade ladders, roof bridges, and roof ridges.

Angle fittings must be installed before the final end bracket. First, secure the tags to the bracket as shown in the figure. Then secure the adapter sleeves using a crimping machine or large tongs so that the wire forms a good curve.



Install wire bracket tube

Install wire bracket (7) using 4 bolts + nuts (12, 13).
Shrink the ends on wire bracket tube with tongs to attach the wire.

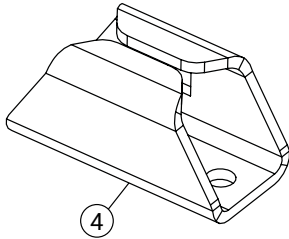


Wire clamping sleeve

The sleeves (9) are pressed against the bracket, so the wire keeps its shape. Make the pinch using a press or with large tongs.

	Detalj	Art.nr.
1	Bracket for wire support	WL1001
4	Wire support track	WL1004
11	Coach bolt M10x30	VB1301/ VB1305

	Detalj	Art.nr.
12	Bolt M10x20	BU1201/ BU1200
13	Nut M10	MU1001/ MU1010

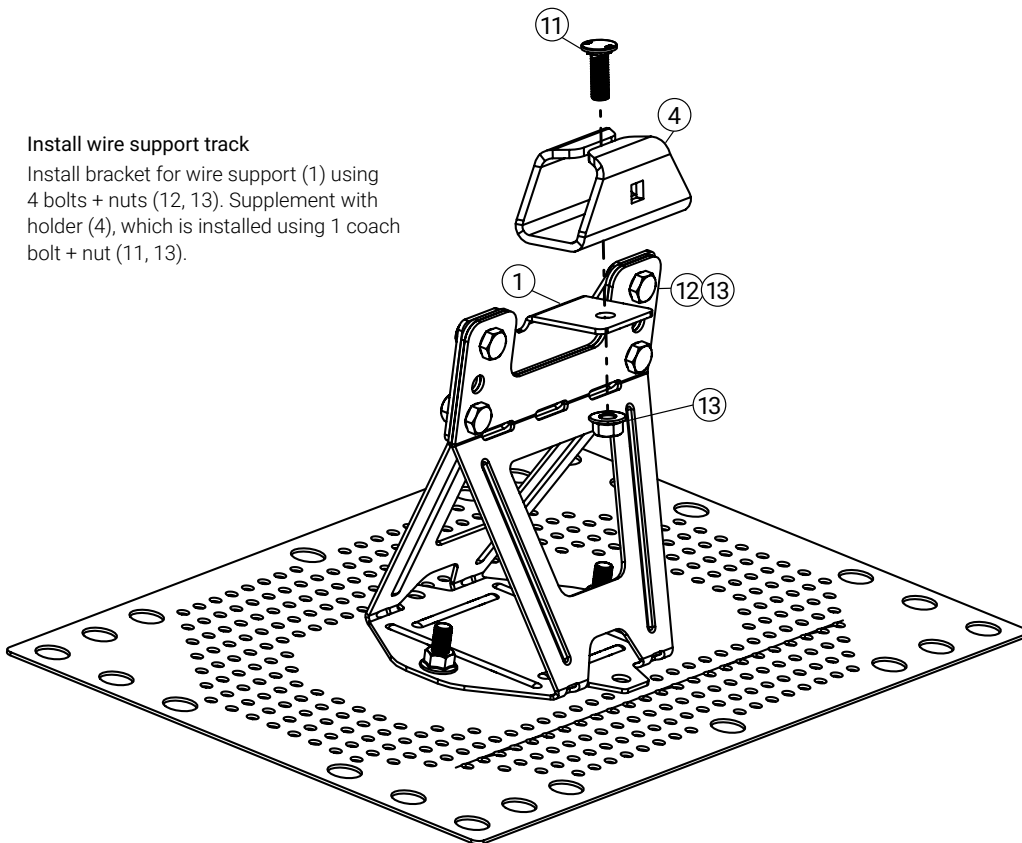


Wire Support Track for straight sections

The user attaches their carabiner clip to the runner on the wire. This allows them to move freely across the entire roof surface without having to reconnect. It is ideal for use on straight, horizontal, or flat sections (maximum pitch 15 degrees).

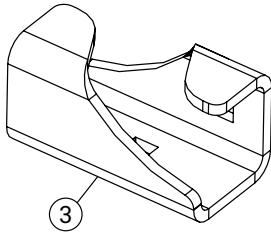
Install wire support track

Install bracket for wire support (1) using 4 bolts + nuts (12, 13). Supplement with holder (4), which is installed using 1 coach bolt + nut (11, 13).



	Detalj	Art.nr.
1	Bracket for wire support	WL1001
3	Wire support claw	WL1003
11	Coach bolt M10x30	VB1301/ VB1305

	Detalj	Art.nr.
12	Bolt M10x20	BU1201/ BU1200
13	Nut M10	MU1001/ MU1010

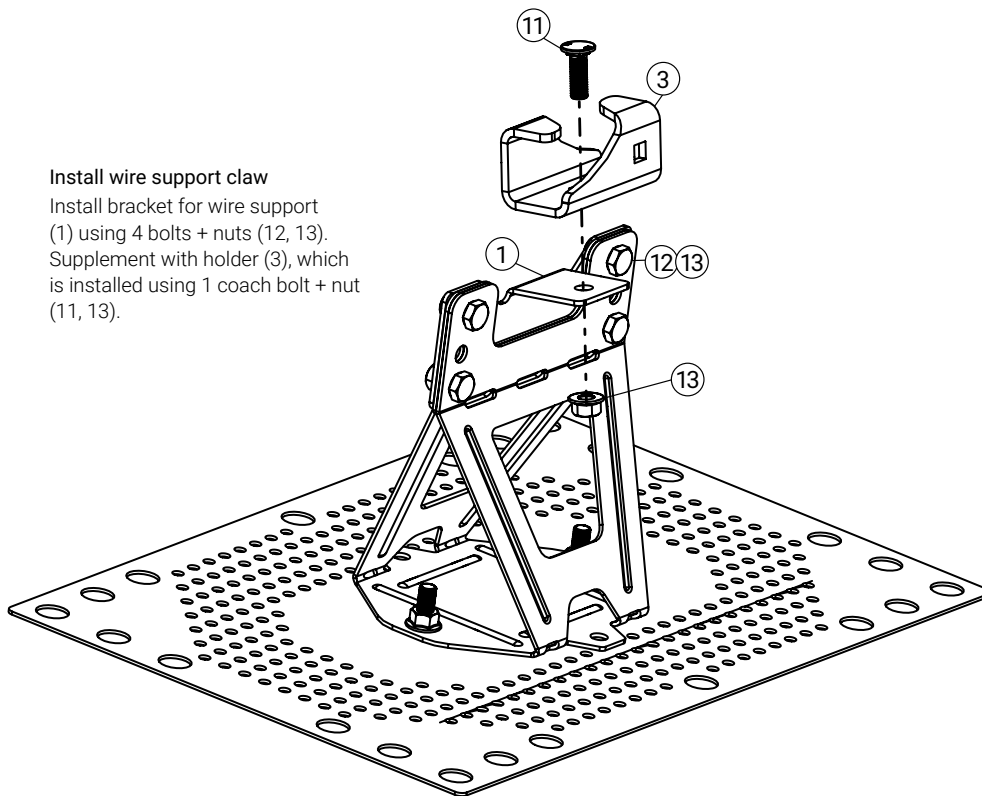


Wire Support Claw for straight sections

The user connects their carabiner clip to the wire. This allows them to move freely across the entire roof surface without having to reconnect. It is ideal for use on straight, horizontal, or flat sections (maximum pitch 15 degrees).

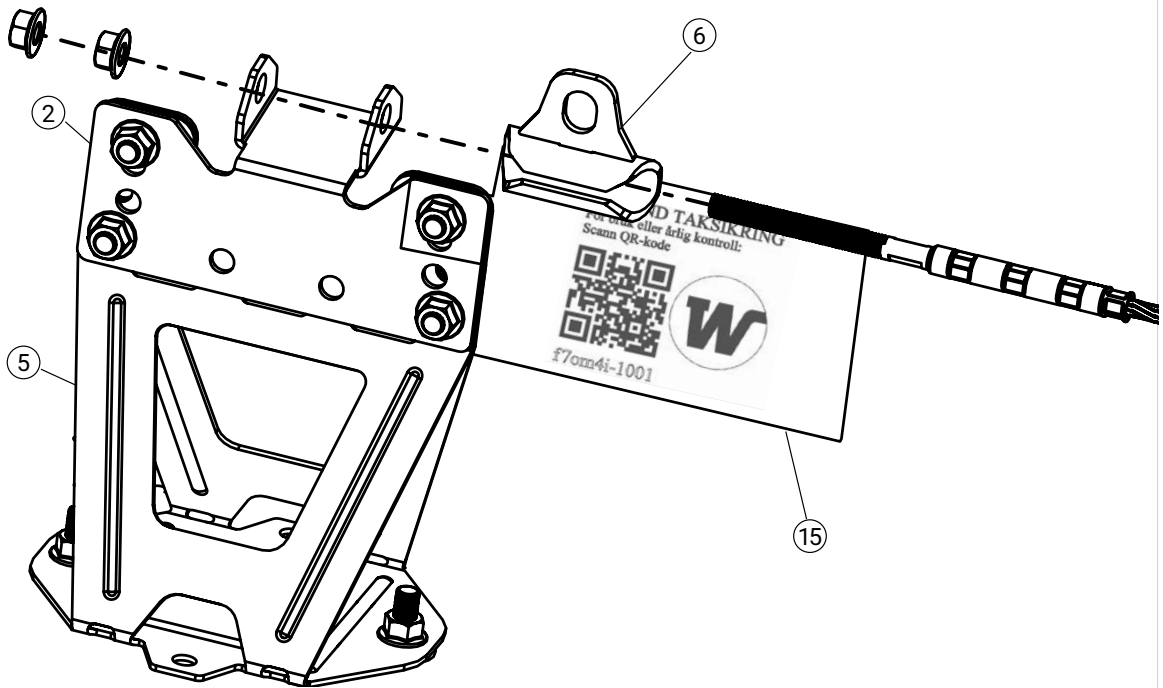
Install wire support claw

Install bracket for wire support (1) using 4 bolts + nuts (12, 13). Supplement with holder (3), which is installed using 1 coach bolt + nut (11, 13).



	Detalj	Art.nr.
2	End bracket wire	WL1002
5	Bracket plain roof	WL1020

	Detalj	Art.nr.
6	Wire runner open	WL1010
15	Infosign APP	IS1810

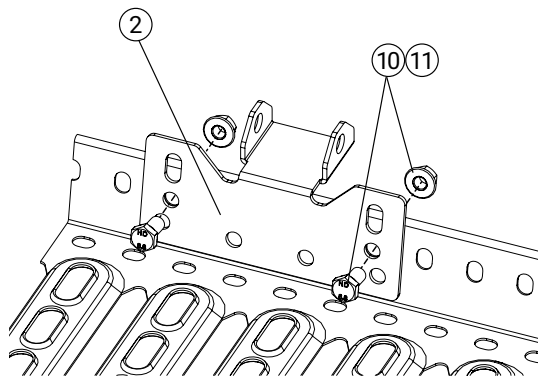


Fold WL1020 (5) Install Info Sign App (15) at the same time as End Bracket WL1002 (2) as shown in the figure.

Part	Part no.
1 Bracket for wire support	WL1001
2 End bracket wire	WL1002
3 Wire support claw	WL1003
4 Wire support track	WL1004
5 Wire runner open	WL1010
6 Wire bracket tube	WL1012

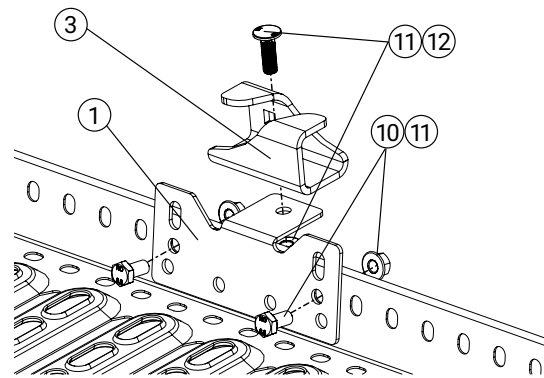
Part	Part no.
7 Wire joining tube	XWL1006
8 Wire clamping sleeve	XWL1014
9 Wire	XWLXXXX
10 Bolt M10x20	BU1201/ BU1200
11 Nut M10	MU1001/ MU1010
12 Coach bolt M10x30	VB1301/ VB1305

The maximum separation between supports is 10 m up to 15 degrees pitch.
 Between 15-50 degrees gradient, the max. separation is 2.5m.
 Above 50 degrees gradient, the max. separation is 1.2 m.



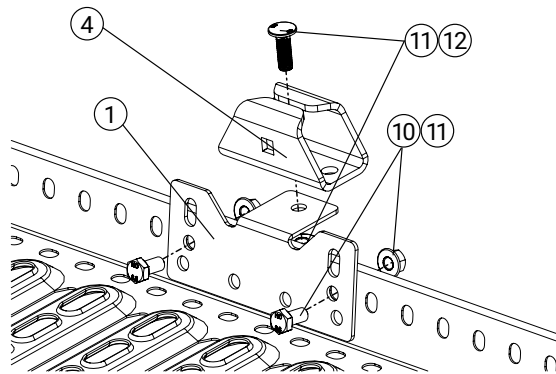
1. Brackets

Install end bracket (2) using 2 bolts + nuts (10, 11).



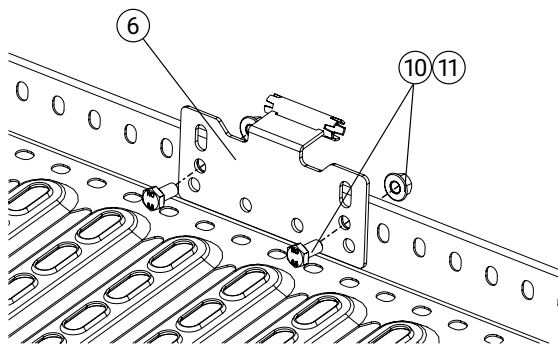
2a. Support claw

Install bracket for wire support (1) using 2 bolts + nuts (10, 11). Supplement with holder (3), which is installed using 1 coach bolt + nut (11, 12).



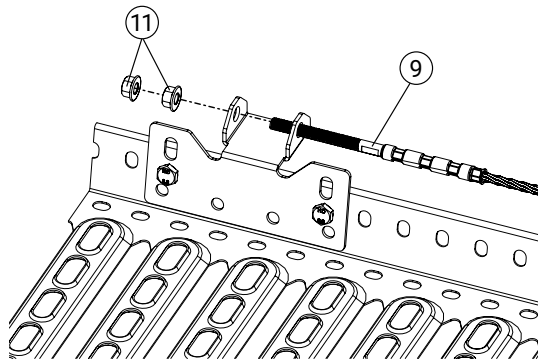
2b. Support track

Install bracket for wire support (1) using 2 bolts + nuts (10, 11). Supplement with holder (4), which is installed using 1 coach bolt + nut (11, 12).



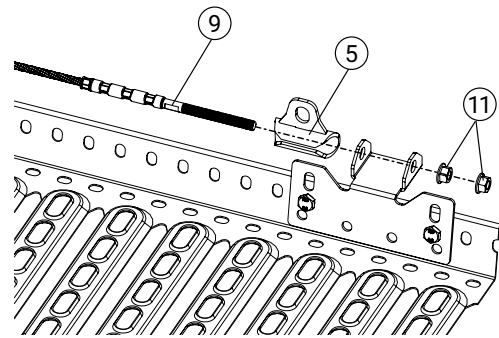
2c. Support tube

Install wire support tube (6) using 2 bolts + nuts (10, 11).



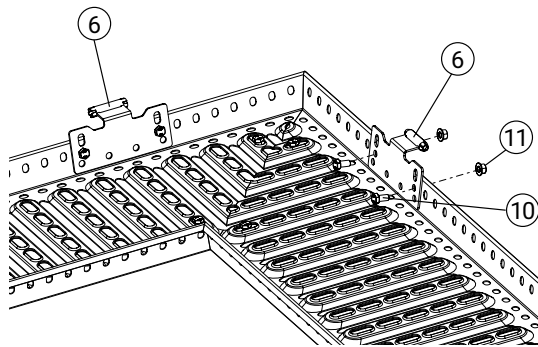
3. Wire installation

Install the first wire terminal (9). Assemble with 2 nuts (11)
Secure by tightening the other nut (11). Route the wire through any support.



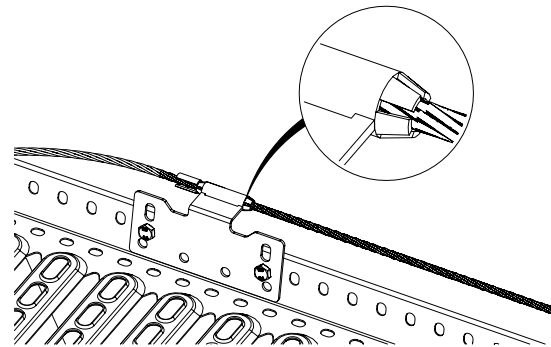
4. Wire installation

Install the last wire terminal (9). Thread on any wire runner (5). Tension the wire so it does not sag.
Secure by tightening the other nut (11).



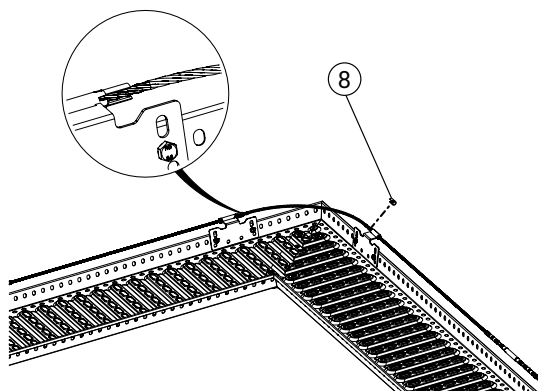
5. Wire corner

Install wire bracket tube (6) using 2 bolts + nuts (10, 11).
 Make a uniform hoop of the wire, so the runner runs freely.



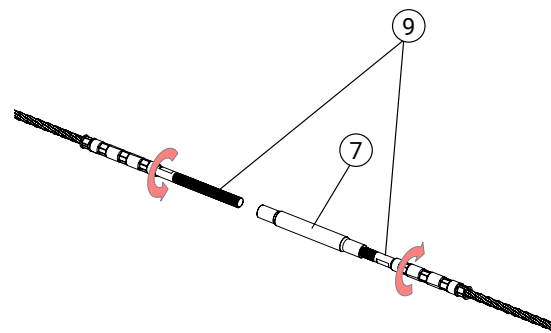
6. Shrinking

Shrink the ends on wire bracket tube with tongs to attach the wire.



7. Wire corner

The sleeves (8) are pressed against the bracket, so the wire keeps its shape. Make the pinch using a press or with large tongs.



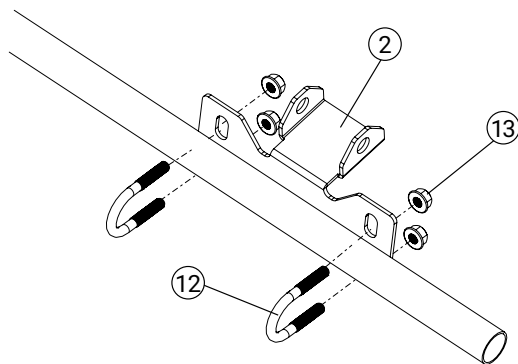
8. Wire joint

Screw in the wire terminals (9) to the centre, so they meet in the wire joining tube (7). Tighten so the terminals lock against each other.

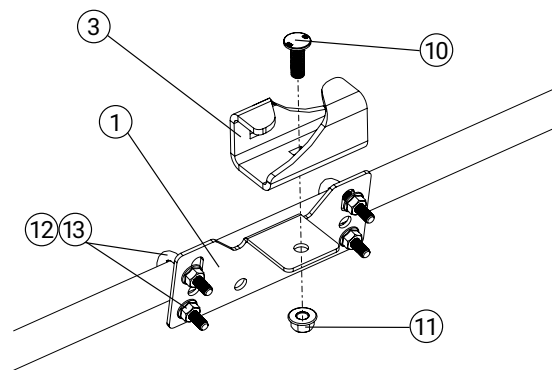
Part	Part no.
1 Bracket for wire support	WL1001
2 End bracket wire	WL1002
3 Wire support claw	WL1003
4 Wire support track	WL1004
5 Wire runner open	WL1010
6 Wire bracket tube	WL1012
7 Wire joining tube	XWL1006

Part	Part no.
8 Wire clamping sleeve	XWL1014
9 Wire	XWLXXXX
10 Coach bolt M10x30	VB1301/VB1305
11 Nut M10	MU1001/MU1010
12 U-fitting	XBY0850
13 Nut MB	MU0801/ MU0805

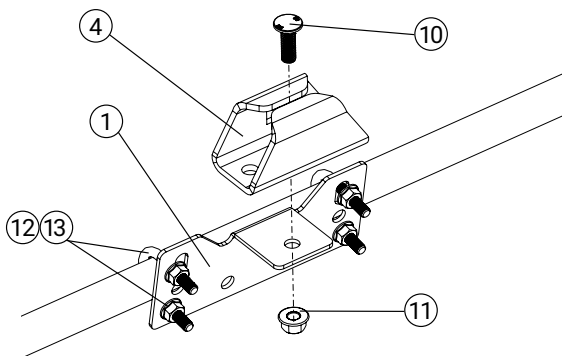
The maximum separation between supports is 10 m up to 15 degrees pitch.
 Between 15-50 degrees gradient, the max. separation is 2.5m.
 Above 50 degrees gradient, the max. separation is 1.2 m.



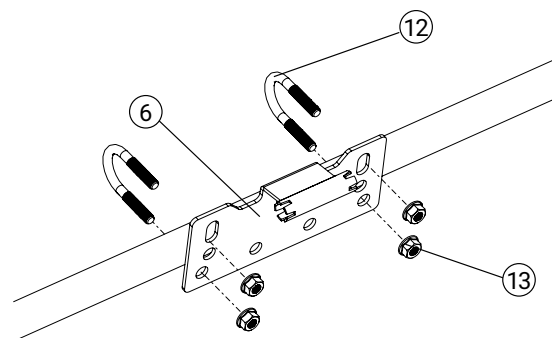
1 Bracket
 Install end bracket (2) using 2 U-fittings + nuts (12,13).



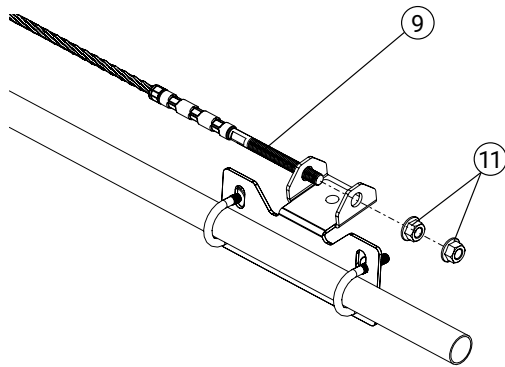
2a. Support claw
 Install bracket for wire support (1) using 2 U-fittings + nuts (12, 13). Supplement with holder (3), which is installed using 1 coach bolt + nut (10, 11).



2b. Support track
 Install bracket for wire support (1) using 2 U-fittings + nuts (12, 13). Supplement with holder (4), which is installed using 1 coach bolt + nut (10, 11).

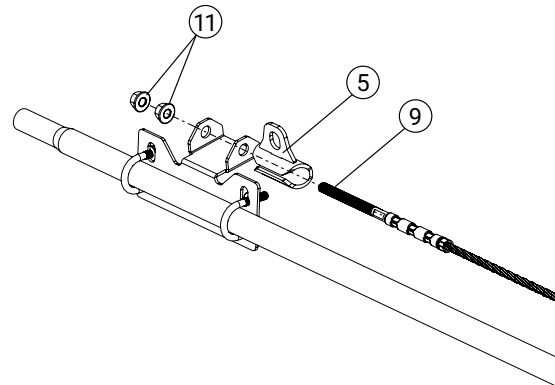


2c. Support tube
 Install wire support tube (4) using 2 U-fittings + nuts (12, 13).



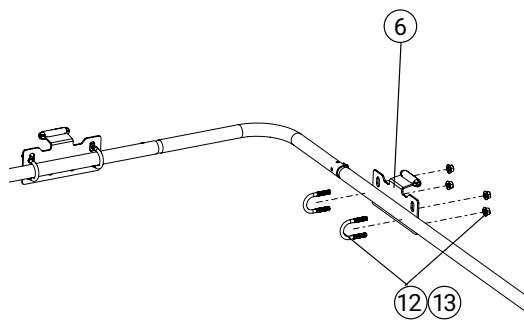
3. Wire installation

Install the first wire terminal (9). Assemble with 2 nuts (11) **Secure by tightening the other nut (11)**. Route the wire through any support.



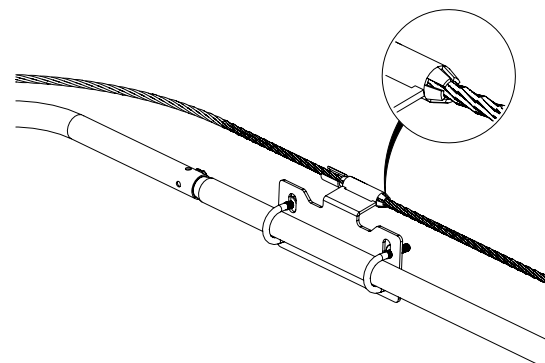
4. Wire installation

Install the last wire terminal (9). Thread on any wire runner (5). Tension the wire so it does not sag. **Secure by tightening the other nut (11)**.



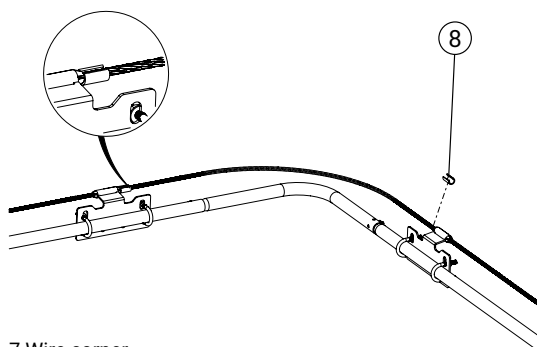
5 Wire corner

Install wire bracket tube (6) using 2 U-fittings + nuts (12, 13). Make a uniform hoop of the wire, so the runner runs freely.



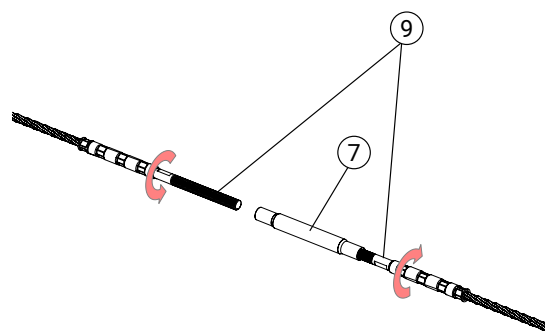
6. Shrinking

Shrink the ends on wire bracket tube using tongs to attach the wire.



7 Wire corner

The sleeves (8) are pressed against the bracket, so the wire keeps its shape. Make the pinch using a press or with large tongs.



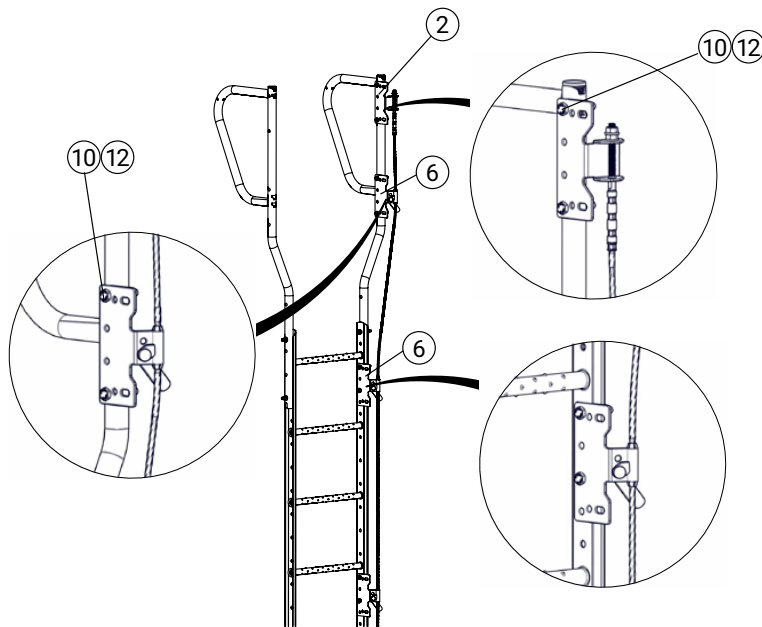
8. Wire joint

Screw in the terminals (9) to the centre, so they meet in the butt connector (7). Tighten so the terminals lock against each other.

Part	Part. no.
1 Bracket for wire support	WL1001
2 End bracket wire	WL1002
3 Wire support claw	WL1003
4 Wire runner open	WL1005
5 Wire bracket tube	WL1012
6 Fall stop mount	WL1013

Part	Part. no.
7 Wire clamping sleeve	XWL1014
8 8 mm wire	XWL1008
9 Bolt M10x20	BU1201/BU1200
10 Bolt M10x60	BU1601
11 Coach bolt M10x30	VB1301/VB1305
12 Flange nut M10	MU1001/MU1010

Recommended distances between supports/mounts:
 10 m up to 15 degrees pitch, 2.5 m between 15-50 degrees pitch, and 0.9 m over 50 degrees pitch.

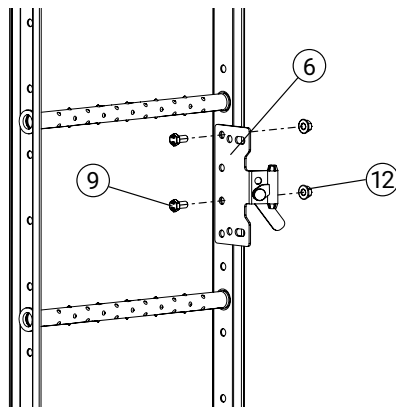


1. Wire installation

Fit upper end bracket wire (2) on the handrail using 2 bolts + nuts (10, 12).

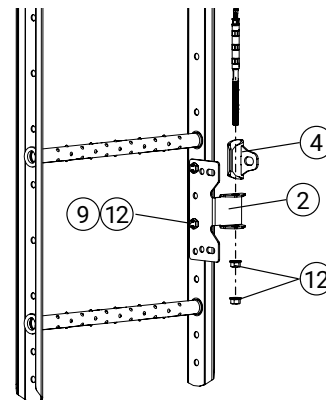
Secure by tightening the other nut (12). If the ladder does not have a handrail, the last end bracket wire (2) is to be located as far up the ladder as possible.

Fit fall stop (6) on handrail using 2 bolts + nuts (10, 12). Route the wire through the fall stop. Crimp the ends of the fall stop (6) using pliers to attach the wire.



2. Fall stop

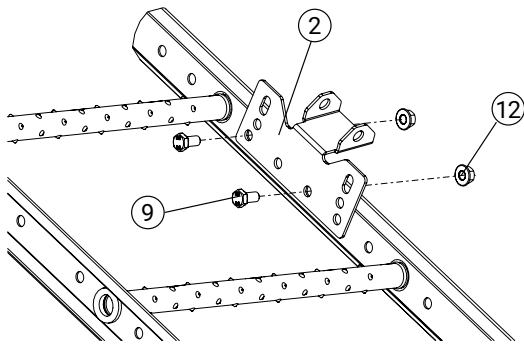
Fit fall stop (6) of c/c 900 mm to cat ladder using 2 bolts + nuts (9,12). Crimp the ends of the fall stop (6) using pliers in order to fix the wire.



3. Wire installation

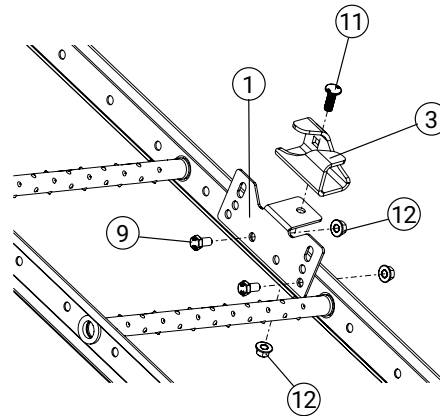
Fit lower end bracket wire (2) using 2 bolts + nuts (9, 12). Thread on any wire runner (4). Tension the wire so it does not sag, fit using 2 nuts (12).

Secure by tightening the other nut.



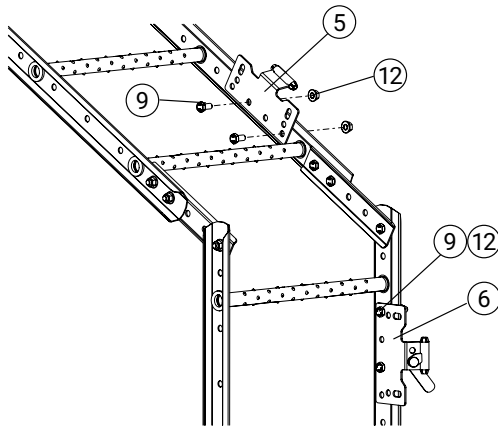
4. End bracket

Install end bracket (2) using 2 bolts + nuts (9, 12).



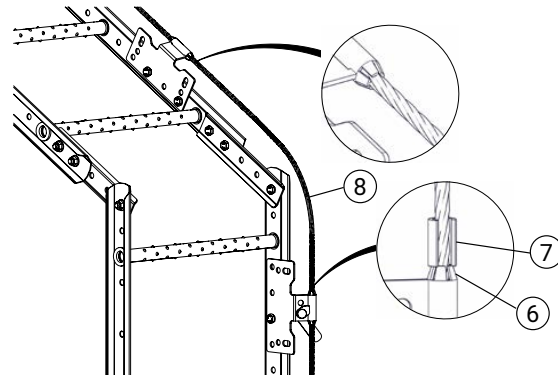
5. Support claw

Install bracket for wire support (1) using 2 bolts + nuts (9, 12). Supplement with holder (3), which is installed using 1 coach bolt + nut (11, 12).



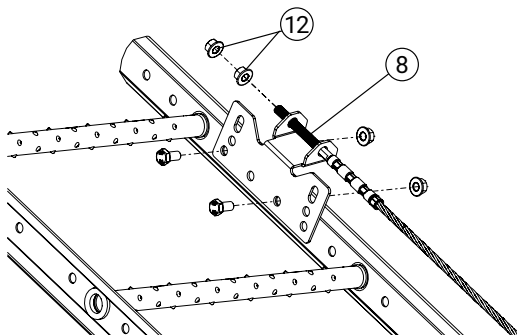
6. Transition

At transitions, fit the fall stop (6) on the cat ladder using 2 bolts + nuts (9,12), and tube attachment (5) on the roof ladder using 2 bolts + nuts (9,12).



7. Wire installation

Make a uniform hoop of the wire (8), so the runner runs freely. Crimp the ends of the fall stop (6) using pliers to attach the wire. Pinch the sleeves (7) against the bracket, so the hoop keeps its shape. Make the pinch using a press or with large tongs.



8. Wire installation

Fit the last wire terminal (8) using 2 nuts (12). Tension the wire so it does not sag. **Secure by tightening the other nut.**



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