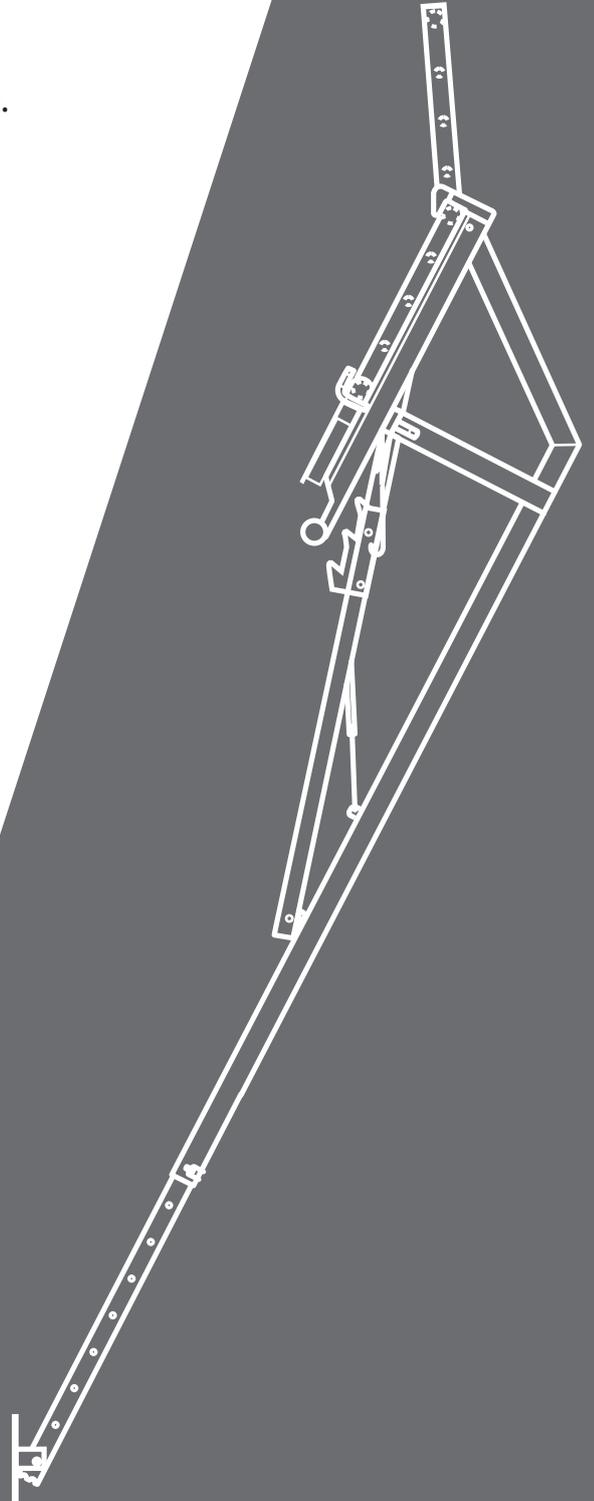


Roofac Edge protection

Version 0, 2023-08-09.

Edge protection that follows EN 13374 +A1 2019.
Class A, B, and C.

*European Union Intellectual Property Office Certificate Of Registration
No: 015024016-0001*



ROOFAC

Manual - EN

Table of contents

1. Overview	4
2. Safety	7
3. Install Roofac edge protection on a gutter, Class A–B.....	8
4. Install Roofac edge protection on a gutter, Class C.....	14
5. Install Roofac edge protection on roof edge, Class A–B.....	21
6. Regulations.....	26

1. Overview

Stand (A)

- B Guardrail lock

- C Guardrail hook

- D Top support

- E Hook strap

- F Under hook

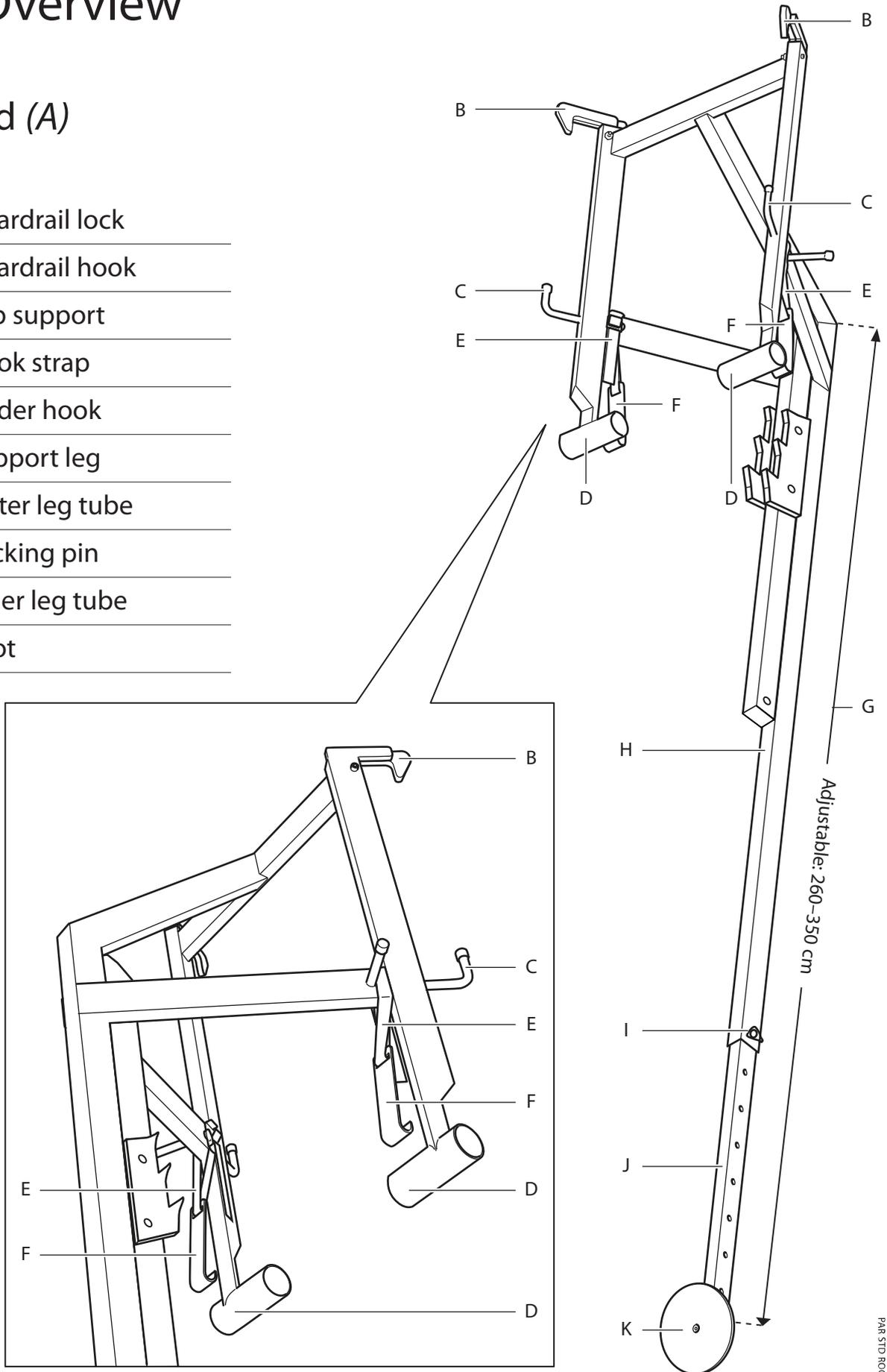
- G Support leg

- H Outer leg tube

- I Locking pin

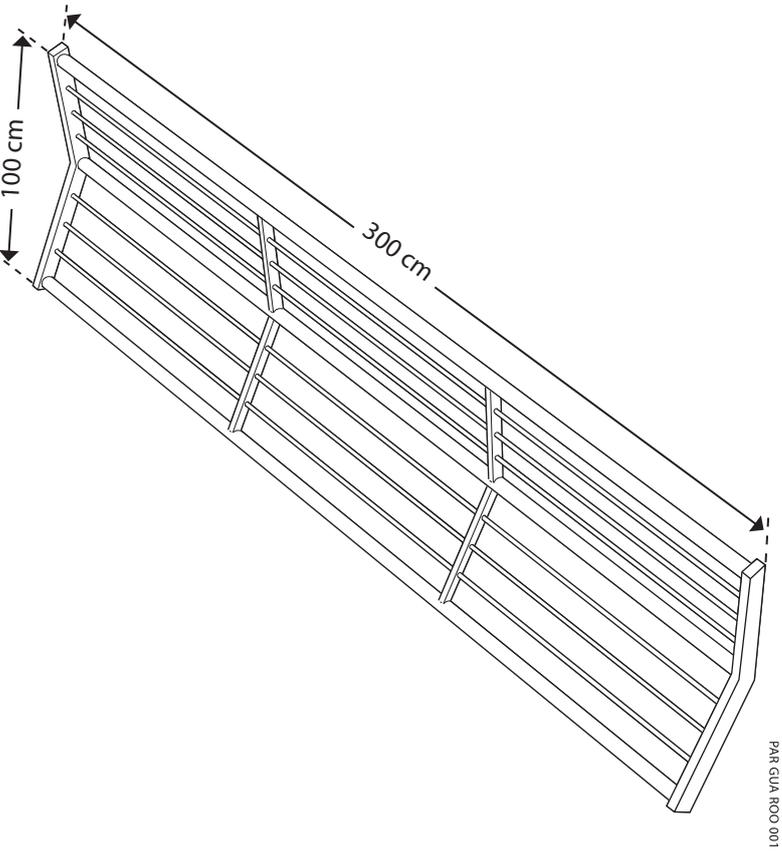
- J Inner leg tube

- K Foot



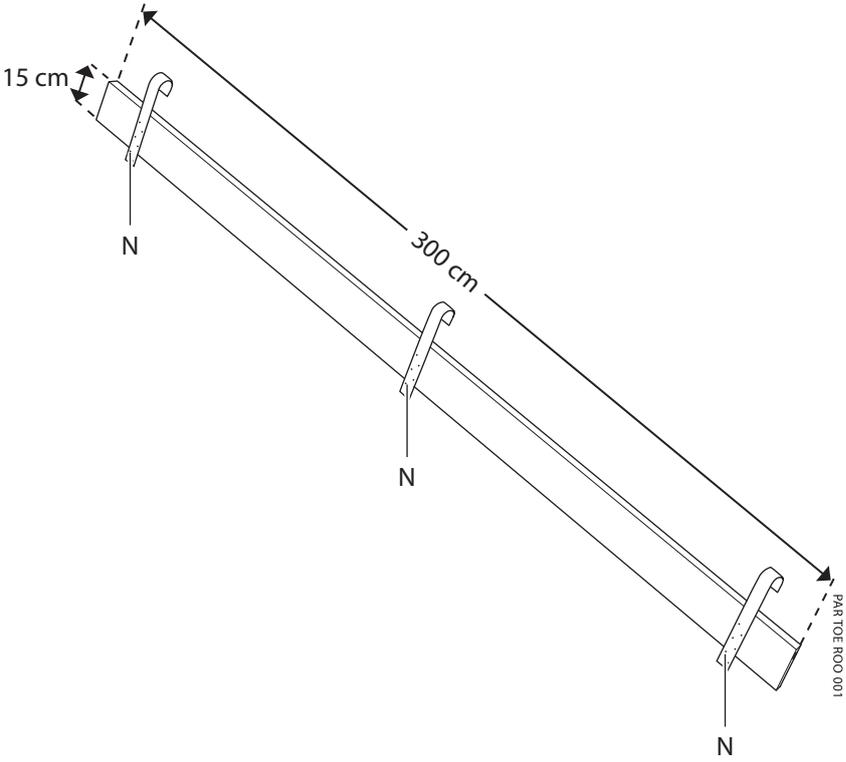
PAR STD ROO 001

Guardrail (L)

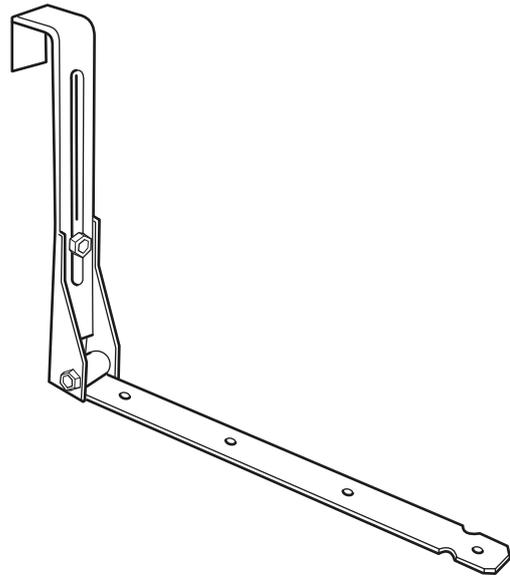


Toe board (M)

N Toe board hook

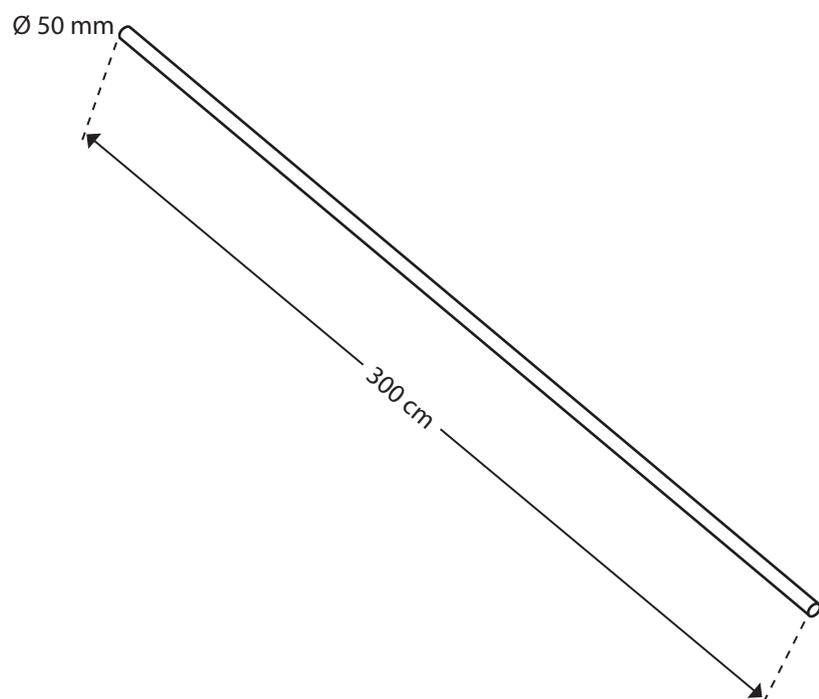


C-hook (*P*)



PAR-CH-ROO 001

C-pipe (*Pa*)



PAR-CP-ROO 001

2. Safety – Read this before installing the Roofac edge protection

Warnings

- ⚠ **WARNING.** Mixing not allowed. RSS Roof cannot be held liable for any damage as a result of not assembling the RSS Roof systems according to the instructions, nor if the RSS Roof systems are used in combination (so-called mixing) with non original RSS Roof parts and components
- ⚠ **WARNING.** The dynamic requirements in the European standard "EN 13374 + A1 2019, "Temporary Edge Protection Systems – Class A, B and C", must be confirmed by testing. If the dynamic requirements in the European standard EN 13374 + A1 2019, Temporary Edge Protection Systems – Class A, B, and C is not confirmed by testing, there is a risk of incorrect use of the Roofac edge protection. If a person uses Roofac edge protection incorrectly, there is a risk of personal injury or death.
- ⚠ **WARNING.** A person who installs the Roofac edge protection must know the EU and local regulations regarding personal fall protection equipment, PPE. If a person who installs the Roofac edge protection does not know the regulations regarding PPE, there is a risk of incorrect use of the PPE. If a person uses PPE incorrectly, there is a risk of personal injury or death.
- ⚠ **WARNING.** Always read the Roofac edge protection instruction before installing the Roofac edge protection. If the person who installs the Roofac edge protection has not read the Roofac edge protection instruction, there is a risk that the components will be put together incorrectly. If the components are put together incorrectly, there is a risk that the Roofac edge protection construction is not stable. If the Roofac edge protection construction is not stable, there is a risk of personal injury or death.
- ⚠ **WARNING.** Never use components other than the components included in the Roofac edge protection package when installing the Roofac edge protection. If a component not manufactured by Roofac is put together with a component included in the Roofac edge protection package, there is a risk that the fall protection is not sufficient. If the fall protection is not sufficient, there is a risk of personal injury or death.
- ⚠ **WARNING.** Only use Roofac edge protection components that are not damaged and that are in operational condition. If the Roofac edge protection components are damaged or and not in operational condition, there is a risk that the fall protection is not sufficient. If the fall protection is not sufficient, there is a risk of personal injury or death.
- ⚠ **WARNING.** Always disassemble a Roofac edge protection construction after exposure to wind force faster than 29 kilometers per hour. An exposure to a wind force faster than 29 kilometers per hour can cause damage and or instability to the Roofac edge protection. If the Roofac edge protection is damaged and or not stable, there is a risk of personal injury or death.
- ⚠ **WARNING.** Never put a wind-resistant and or windproof cover on an installed Roofac edge protection. If a wind-resistant and or windproof cover catches wind, there is a risk of damage and or instability to the Roofac edge protection. If the Roofac edge protection is damaged and or not stable, there is a risk of personal injury or death.

3. Install Roofac edge protection on a gutter, Class A–B

Warnings

- ⚠ **WARNING.** A person who installs the Roofac edge protection must know the EU and local regulations regarding personal fall protection equipment, PPE. If a person who installs the Roofac edge protection does not know the regulations regarding PPE, there is a risk of incorrect use of the PPE. If a person uses PPE incorrectly, there is a risk of personal injury or death.
- ⚠ **WARNING.** Always read the Roofac edge protection instruction before installing the Roofac edge protection. If the person who installs the Roofac edge protection has not read the Roofac edge protection instruction, there is a risk that the components will be put together incorrectly. If the components are put together incorrectly, there is a risk that the Roofac edge protection construction is not stable. If the Roofac edge protection construction is not stable, there is a risk of personal injury or death.
- ⚠ **WARNING.** Never use components other than the components included in the Roofac edge protection package when installing the Roofac edge protection. If a component not manufactured by Roofac is put together with a component included in the Roofac edge protection package, there is a risk that the fall protection is not sufficient. If the fall protection is not sufficient, there is a risk of personal injury or death.
- ⚠ **WARNING.** Only use Roofac edge protection components that are not damaged and that are in operational condition. If the Roofac edge protection components are damaged or and not in operational condition, there is a risk that the fall protection is not sufficient. If the fall protection is not sufficient, there is a risk of personal injury or death.
- ⚠ **WARNING.** Always disassemble a Roofac edge protection construction after exposure to wind force faster than 29 kilometers per hour. An exposure to a wind force faster than 29 kilometers per hour can cause damage and or instability to the Roofac edge protection. If the Roofac edge protection is damaged and or not stable, there is a risk of personal injury or death.
- ⚠ **WARNING.** Never put a wind-resistant and or windproof cover on an installed Roofac edge protection. If a wind-resistant and or windproof cover catches wind, there is a risk of damage and or instability to the Roofac edge protection. If the Roofac edge protection is damaged and or not stable, there is a risk of personal injury or death.

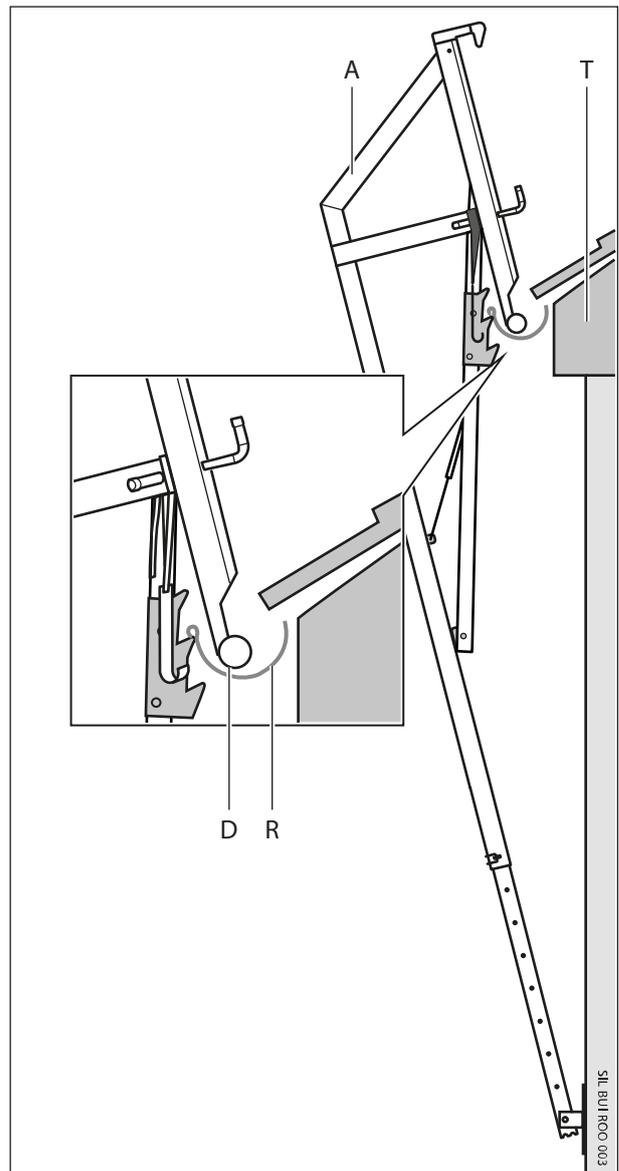
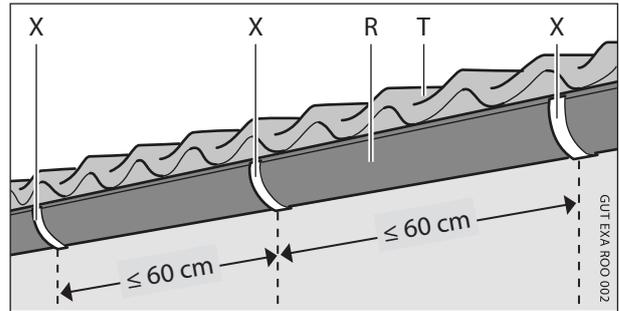
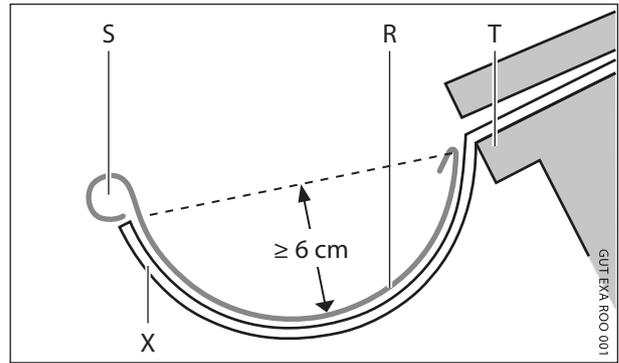
Tools and equipment

- Personal fall protection equipment, PPE.

⚠ WARNING. Only personnel with knowledge of the EU and local regulations regarding personal fall protection equipment, PPE, are allowed to install the Roofac edge protection. Incorrect installation or incorrect use of the PPE may cause personal injury or death.

1. Examine the gutter

- » Make sure that the gutter (*R*) is made of sheet metal, steel and/or zinc.
- » Make sure that the depth of the gutter (*R*) is ≤ 6 cm.
- » Make sure that the gutter (*R*) is not damaged.
- » Make sure that the gutter (*R*) is forward-beaded (*S*).
- » Make sure that the gutter (*R*) is clean.
- » Make sure that the gutter (*R*) is fastened to the roof (*T*) correctly:
 - Make sure that the gutter brackets (*X*) are tightly attached to the roof (*T*).
 - Make sure that the gutter brackets (*X*) are attached to the roof with a center distance of ≤ 60 cm.
- » In cases where the gutter hook is mounted in the front board, you must ensure that the front board is mounted with at least a 5x80mm screw in the roof truss



2. Put the first stand into the gutter

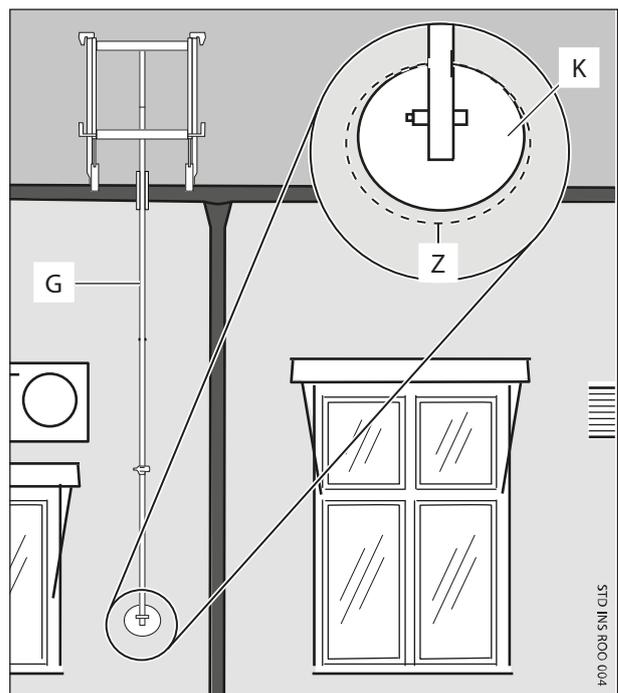
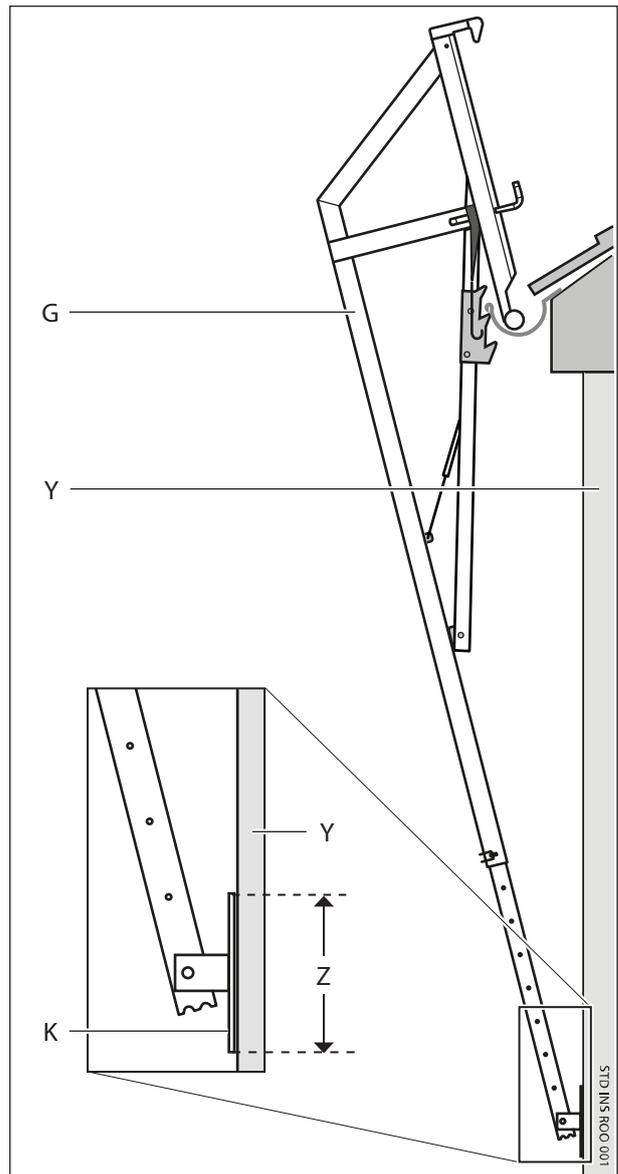
- 2.1 Make sure that there is no gutter joint where the stand (*A*) is put.
- 2.2 Put the top support (*D*) into the gutter (*R*).

3. Examine the position of the foot

- » The full surface of the foot's flat part (Z) is against the façade (Y):
 - The next task is:
 - Examine the foot's (K) contact area on the façade.
- » The full surface of the foot's flat part (Z) is not against the façade (Y):
 - The next task is:
 - Adjust the support leg's (G) length.

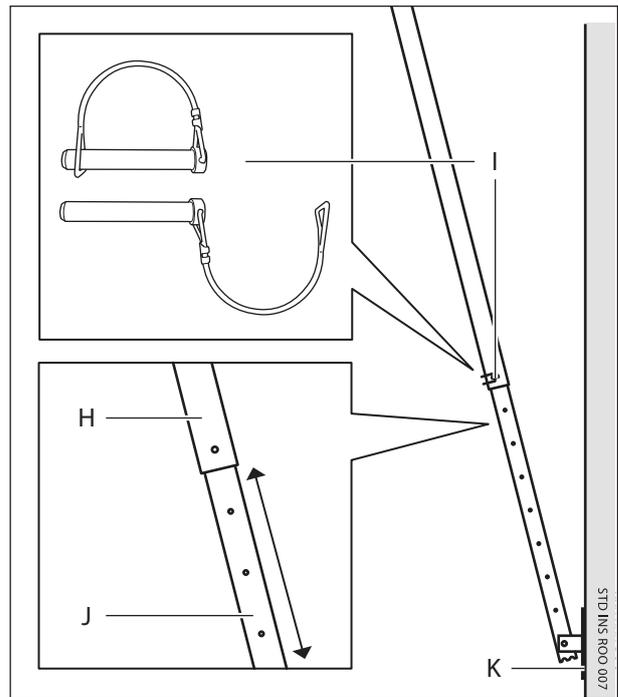
4. Examine the foot's contact area on the façade

- » If the foot's contact area on the façade (Z):
 - is not flat, and or
 - does consist of easily damaged material.
- 4.1 Go to step "5 Adjust the support leg's length".
- » If the foot's contact area on the façade (Z):
 - is flat, and or
 - does not consist of easily damaged material, and or
 - is not ≥ 30 cm above the ground.
- 4.2 Go to step "6 Attach the stand to the gutter".



5. Adjust the support leg's length

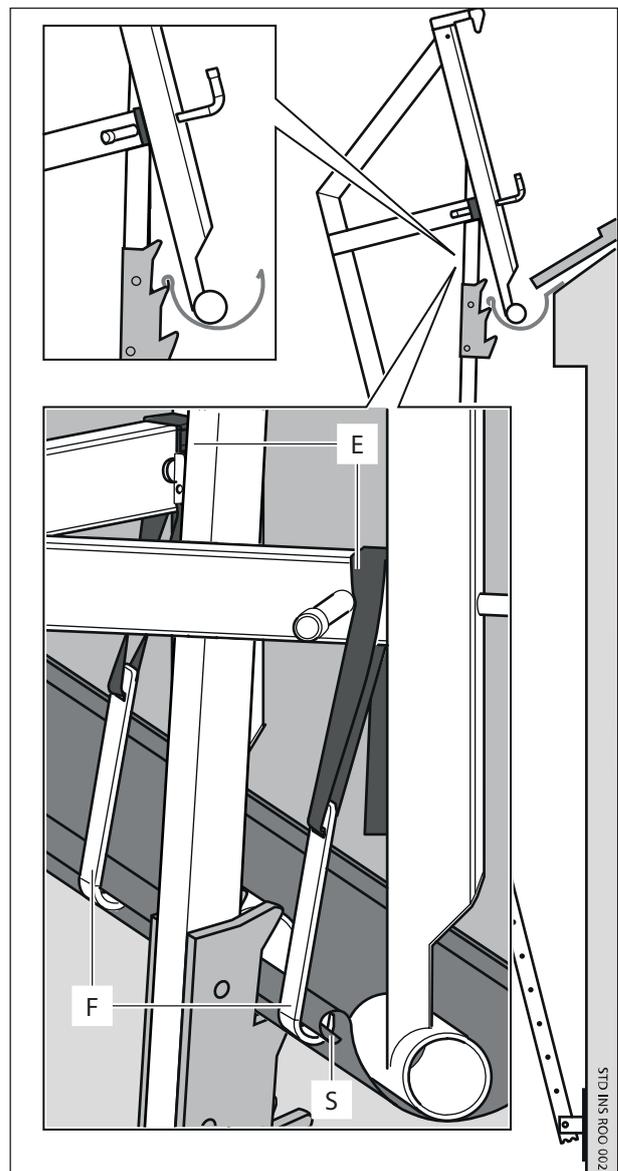
- 5.1 Loosen the locking pin (*l*).
- 5.2 Adjust the length of the support leg by pulling the inner leg tube (*J*) until the foot (*K*) has the correct position:
 - The full surface of the foot's flat part is against the façade.
 - The facade area does not consist of easily damaged material.
 - The foot (*K*) is ≥ 30 cm above the ground.
- 5.3 Lock the outer leg tube (*H*) to the inner leg tube (*J*) with the locking pin (*l*).



6. Attach the first stand to the gutter

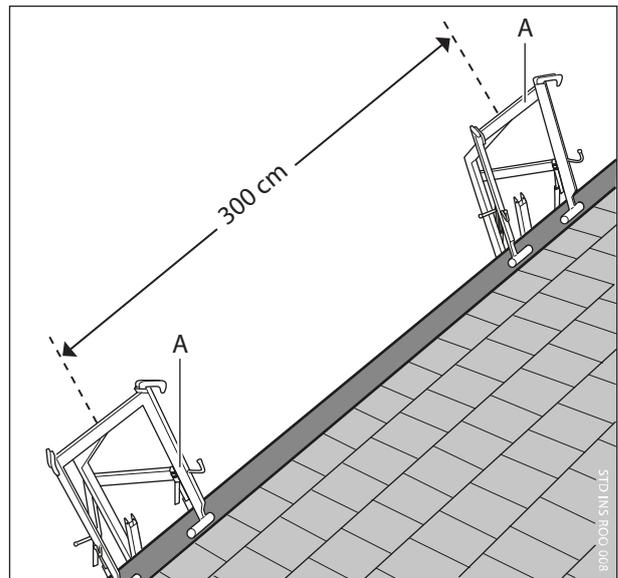
- 6.1 Fasten one of the two under hooks (*F*) to the bead (*S*) by tightening the hook strap (*E*).
- 6.2 Fasten the other one of the two hooks (*F*) to the bead (*S*) by tightening the hook strap (*E*).

Patent pending Nr 2350682-7



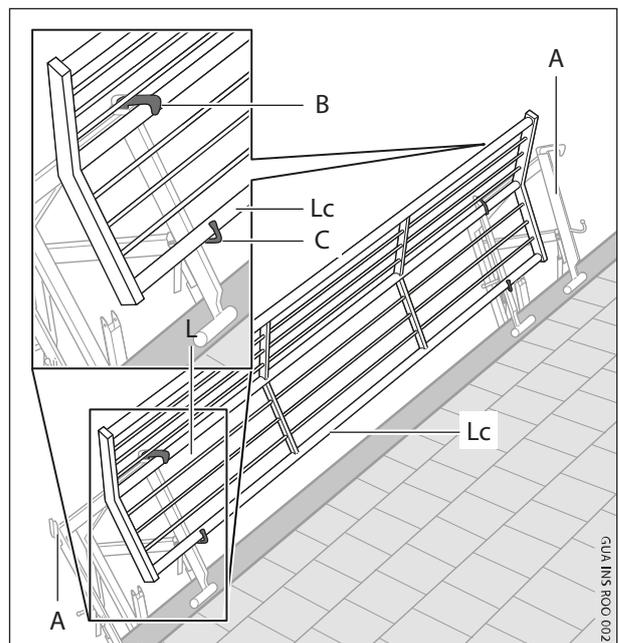
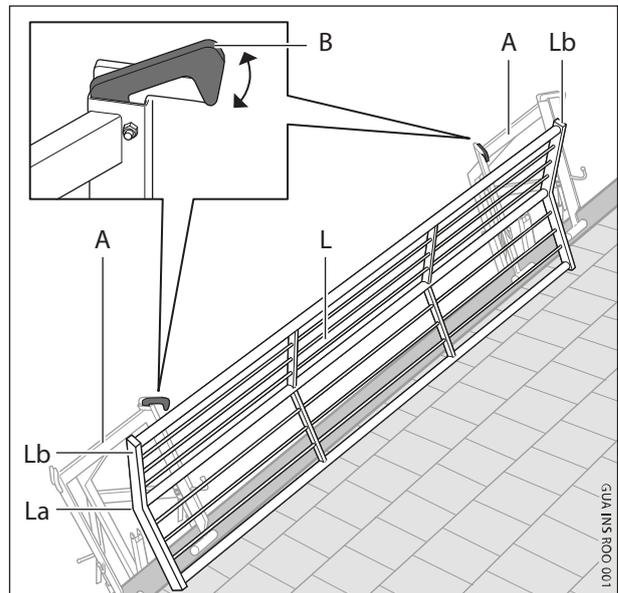
7. Put the next stand into the gutter

- 7.1 Make sure to put the next stand (A) with a center distance of ≤ 300 cm from the existing stand (A).
- 7.2 Obey the procedure in task "2 Put the first stand into the gutter".
- 7.3 Obey the procedure in task "3 Examine the position of the foot".
- 7.4 Obey the procedure in task "4 Examine the foot's contact area on the façade".



8. Attach the guardrail into two stands

- 8.1 Put the guardrail (L) in position against the stands (A).
 - » The guardrail's bend (La) must point away from the roof.
 - » Each of the guardrails' end posts (Lb) must be against one stand (A).
- 8.2 Open the guardrail locks (B) closest to the guardrail (L) on both stands (A).
- 8.3 Put the guardrail's lowest rod (Lc) onto a guardrail hook (C) on both stands (A).
- 8.4 Push the guardrail's highest rod (Ld) into the guardrail locks (B).
- 8.5 Close the guardrail locks (B).



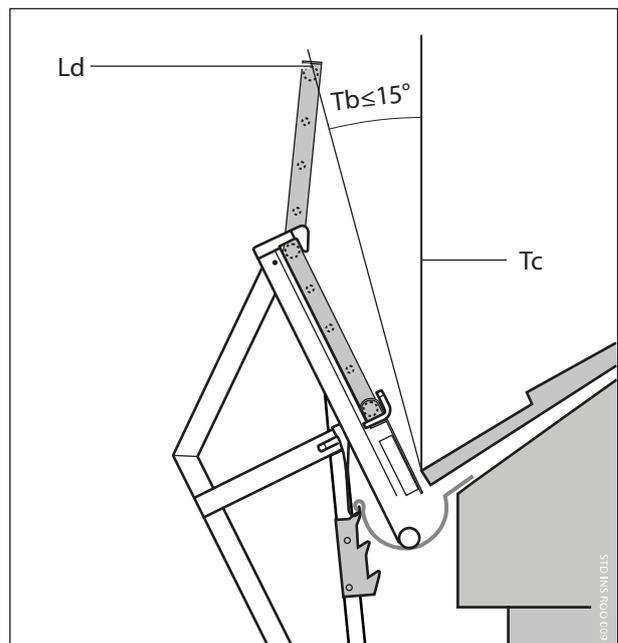
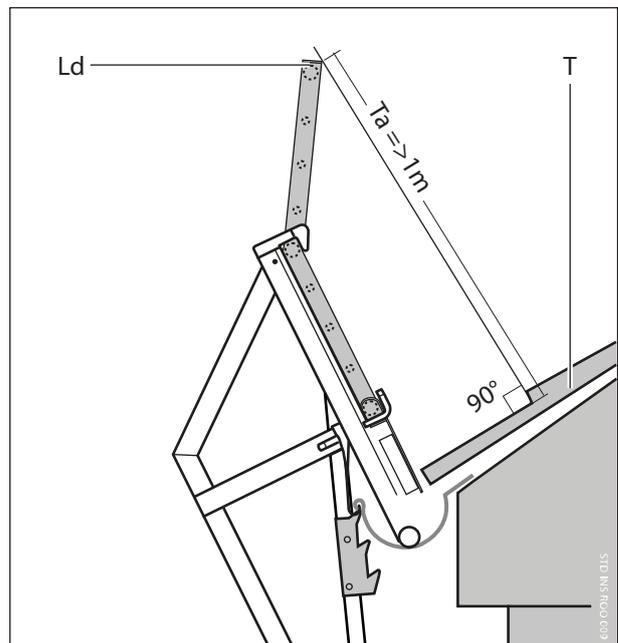
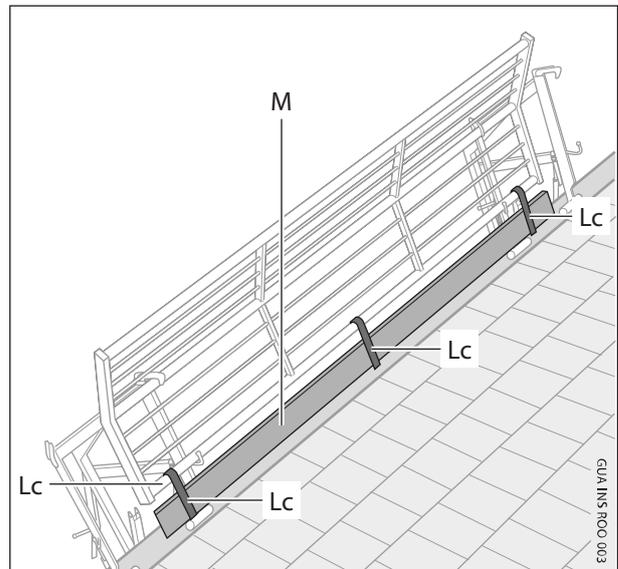
9. Attach the toe board to the guard rail

9.1 Hang the toe board (*M*) onto the guardrail's lowest rod (*Lc*) with the toe board's hooks (*N*).

10. Make sure that the Roofac edge protection installation is stable

10.1 Make sure that the vertical distance (*Ta*) between the roof (*T*) and the top of the guardrail (*Ld*) is ≥ 1 m.

10.2 Make sure that the angle (*Tb*) between the vertical (*Tc*) and the top of the guardrail (*Ld*) is $\leq 15^\circ$.



4. Install Roofac edge protection on a gutter, Class C

Warnings

- ⚠ **WARNING.** A person who installs the Roofac edge protection must know the EU and local regulations regarding personal fall protection equipment, PPE. If a person who installs the Roofac edge protection does not know the regulations regarding PPE, there is a risk of incorrect use of the PPE. If a person uses PPE incorrectly, there is a risk of personal injury or death.
- ⚠ **WARNING.** Always read the Roofac edge protection instruction before installing the Roofac edge protection. If the person who installs the Roofac edge protection has not read the Roofac edge protection instruction, there is a risk that the components will be put together incorrectly. If the components are put together incorrectly, there is a risk that the Roofac edge protection construction is not stable. If the Roofac edge protection construction is not stable, there is a risk of personal injury or death.
- ⚠ **WARNING.** Never use components other than the components included in the Roofac edge protection package when installing the Roofac edge protection. If a component not manufactured by Roofac is put together with a component included in the Roofac edge protection package, there is a risk that the fall protection is not sufficient. If the fall protection is not sufficient, there is a risk of personal injury or death.
- ⚠ **WARNING.** Only use Roofac edge protection components that are not damaged and that are in operational condition. If the Roofac edge protection components are damaged or and not in operational condition, there is a risk that the fall protection is not sufficient. If the fall protection is not sufficient, there is a risk of personal injury or death.
- ⚠ **WARNING.** Always disassemble a Roofac edge protection construction after exposure to wind force faster than 29 kilometers per hour. An exposure to a wind force faster than 29 kilometers per hour can cause damage and or instability to the Roofac edge protection. If the Roofac edge protection is damaged and or not stable, there is a risk of personal injury or death.
- ⚠ **WARNING.** Never put a wind-resistant and or windproof cover on an installed Roofac edge protection. If a wind-resistant and or windproof cover catches wind, there is a risk of damage and or instability to the Roofac edge protection. If the Roofac edge protection is damaged and or not stable, there is a risk of personal injury or death.

Tools and equipment

- Personal fall protection equipment, PPE.
- 4 x 50 x 8 mm fully threaded wood screw per 3 meters.
- Screwdriver.

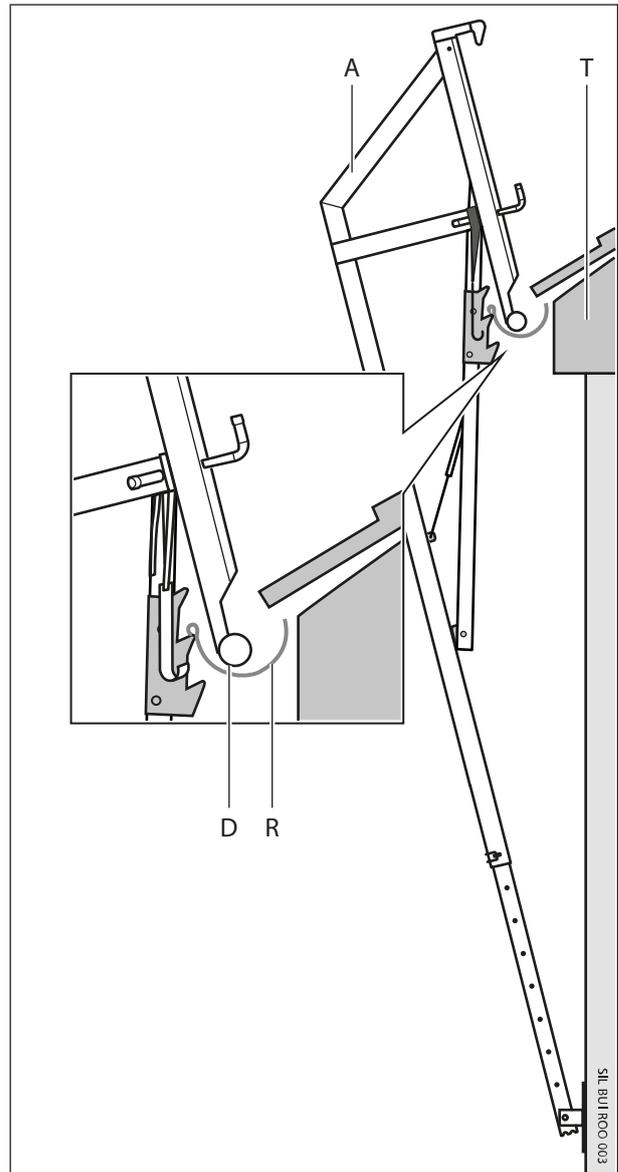
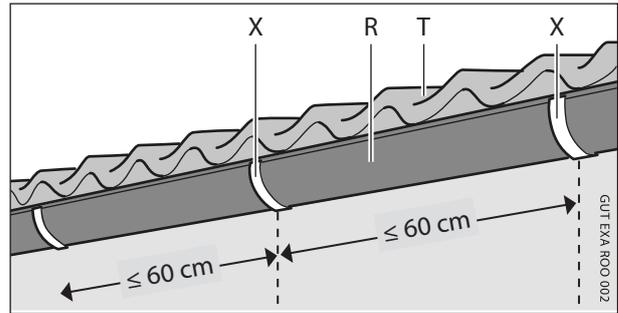
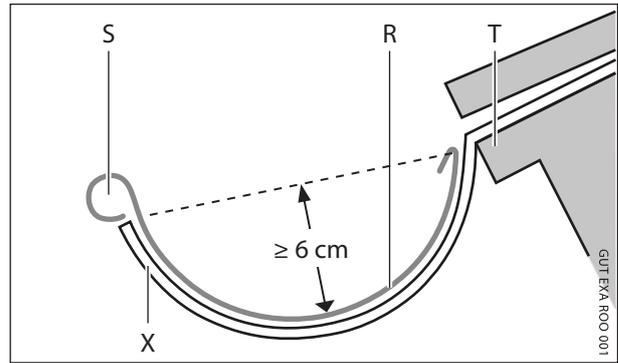
⚠ WARNING. A person who installs the Roofac edge protection must know the EU and local regulations regarding personal fall protection equipment, PPE. If a person who installs the Roofac edge protection does not know the regulations regarding PPE, there is a risk of incorrect use of the PPE. If a person uses PPE incorrectly, there is a risk of personal injury or death.

1. Examine the gutter

- » Make sure that the gutter (*R*) is made of sheet metal, steel and/or zinc.
- » Make sure that the depth of the gutter (*R*) is ≤ 6 cm.
- » Make sure that the gutter (*R*) is not damaged.
- » Make sure that the gutter (*R*) is forward-beaded (*S*).
- » Make sure that the gutter (*R*) is clean.
- » Make sure that the gutter (*R*) is fastened to the roof (*T*) correctly:
 - Make sure that the gutter brackets (*X*) are tightly attached to the roof (*T*).
 - Make sure that the gutter brackets (*X*) are attached to the roof with a center distance of ≤ 60 cm.
- » In cases where the gutter hook is mounted in the front board, you must ensure that the front board is mounted with at least a 5x80mm screw in the roof truss

2. Put the first stand into the gutter

- 2.1 Make sure that there is no gutter joint where the stand (*A*) is put.
- 2.2 Put the top support (*D*) into the gutter (*R*).

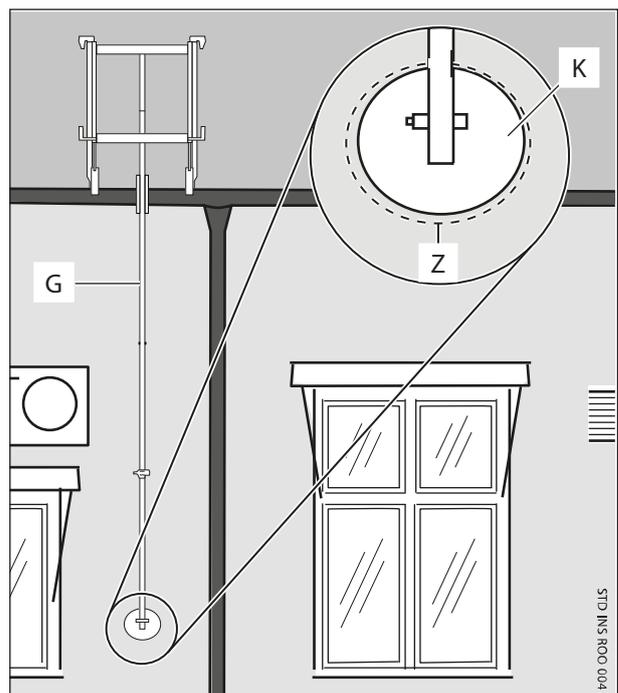
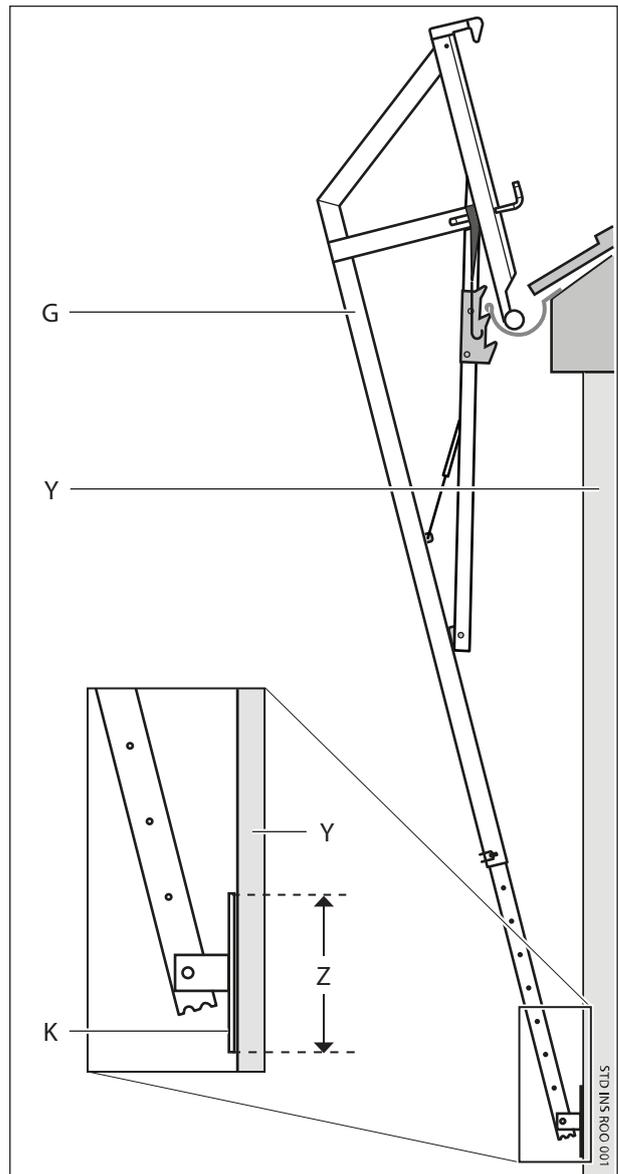


3. Examine the position of the foot

- » The full surface of the foot's flat part (Z) is against the façade (Y):
 - The next task is:
 - Examine the foot's (K) contact area on the façade.
- » The full surface of the foot's flat part (Z) is not against the façade (Y):
 - The next task is:
 - Adjust the support leg's (G) length.

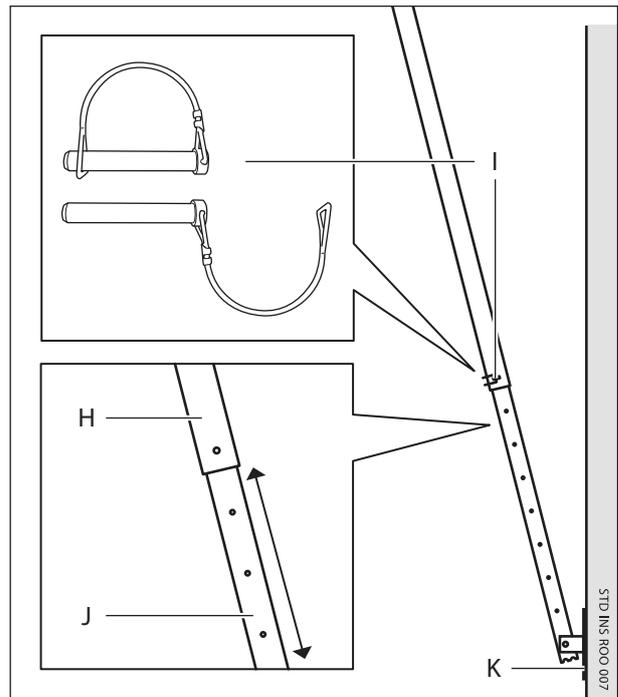
4. Examine the foot's contact area on the façade

- » If the foot's contact area on the façade (Z):
 - is not flat, and or
 - does consist of easily damaged material.
- 4.1 Go to step "5 Adjust the support leg's length".
- » If the foot's contact area on the façade (Z):
 - is flat, and or
 - does not consist of easily damaged material, and or
 - is not ≥ 30 cm above the ground.
- 4.2 Go to step "6 Attach the stand to the gutter".



5. Adjust the support leg's length

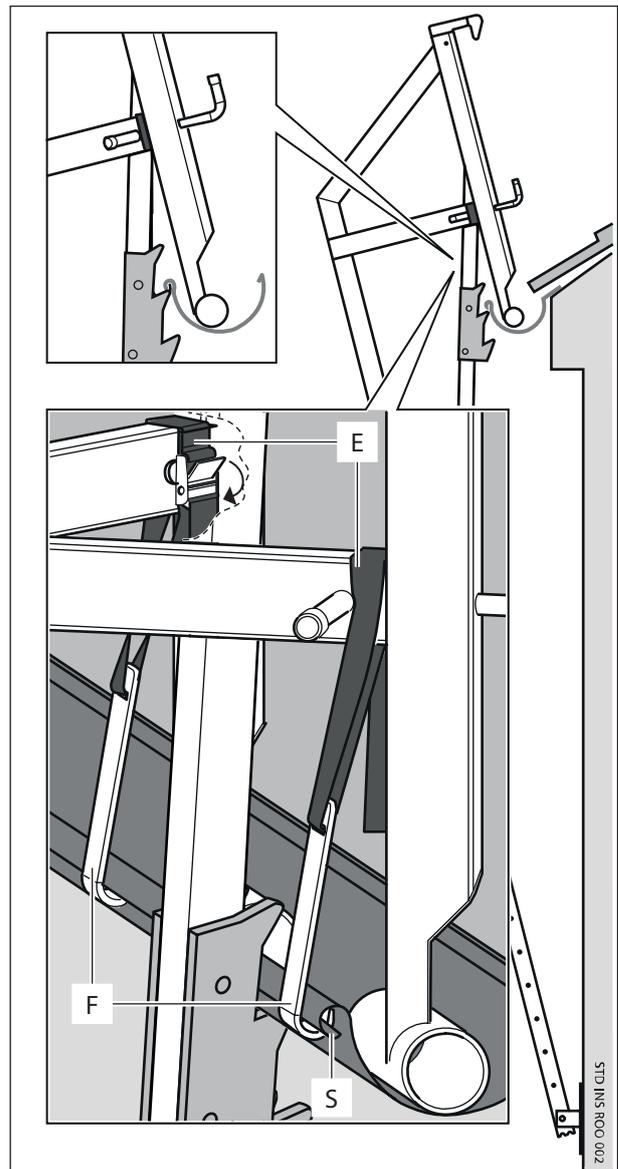
- 5.1 Loosen the locking pin (*l*).
- 5.2 Adjust the length of the support leg by pulling the inner leg tube (*J*) until the foot (*K*) has the correct position:
 - The full surface of the foot's flat part is against the façade.
 - The facade area does not consist of easily damaged material.
 - The foot (*K*) is ≥ 30 cm above the ground.
- 5.3 Lock the outer leg tube (*H*) to the inner leg tube (*J*) with the locking pin (*l*).



6. Attach the first stand to the gutter

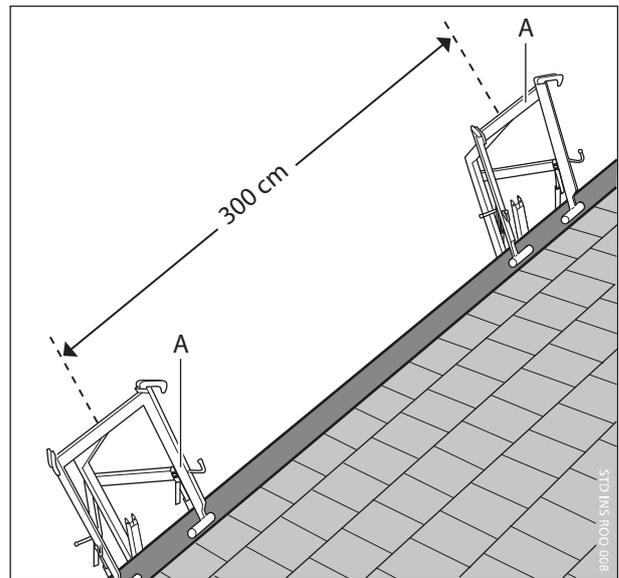
- 6.1 Fasten one of the two under hooks (*F*) to the bead (*S*) by tightening the hook strap (*E*).
- 6.2 Fasten the other one of the two hooks (*F*) to the bead (*S*) by tightening the hook strap (*E*).

Patent pending Nr 2350682-7



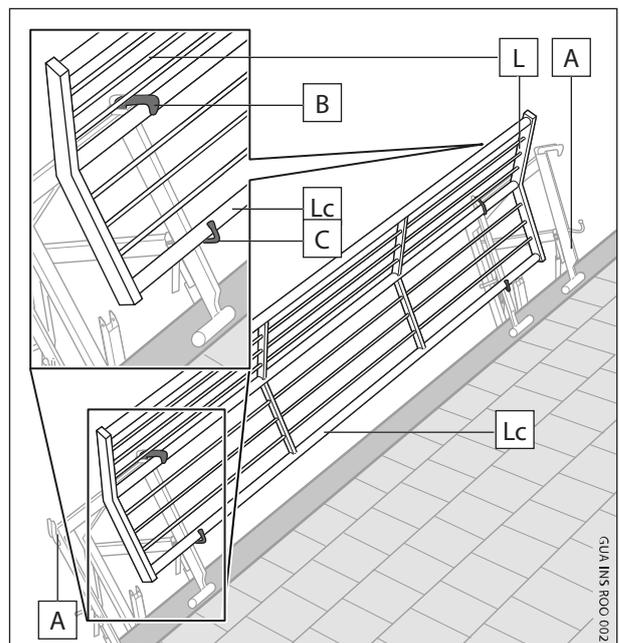
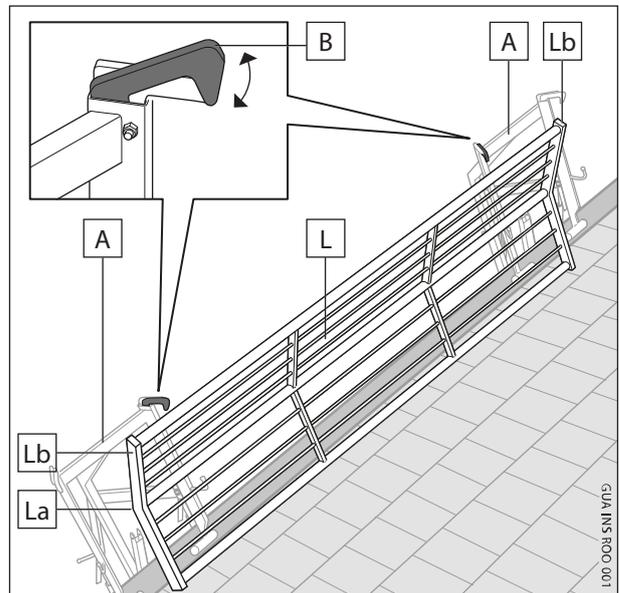
7. Put the next stand into the gutter

- 7.1 Make sure to put the next stand (A) with a center distance of ≤ 300 cm from the existing stand (A).
- 7.2 Obey the procedure in task "2 Put the first stand into the gutter".
- 7.3 Obey the procedure in task "3 Examine the position of the foot".
- 7.4 Obey the procedure in task "4 Examine the foot's contact area on the façade".



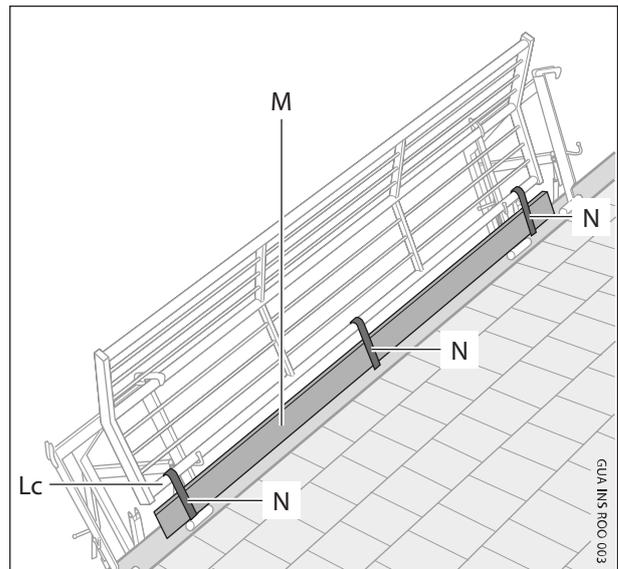
8. Attach the C-rod into two stands

- 8.1 Put the C-rod (Pa) through all four top support in the two stands (A).



9. Attach the guardrail into two stands

- 9.1 Put the guardrail (*L*) in position against the stands (*A*).
 - » The guardrail's bend (*La*) must point away from the roof.
 - » Each of the guardrails' end posts (*Lb*) must be against one stand (*A*).
- 9.2 Open the guardrail locks (*B*) closest to the guardrail (*L*) on both stands (*A*).
- 9.3 Put the guardrail's lowest rod (*Lc*) onto a guardrail hook (*C*) on both stands (*A*).
- 9.4 Push the guardrail's highest rod (*Ld*) into the guardrail locks (*B*).
- 9.5 Close the guardrail locks (*B*).

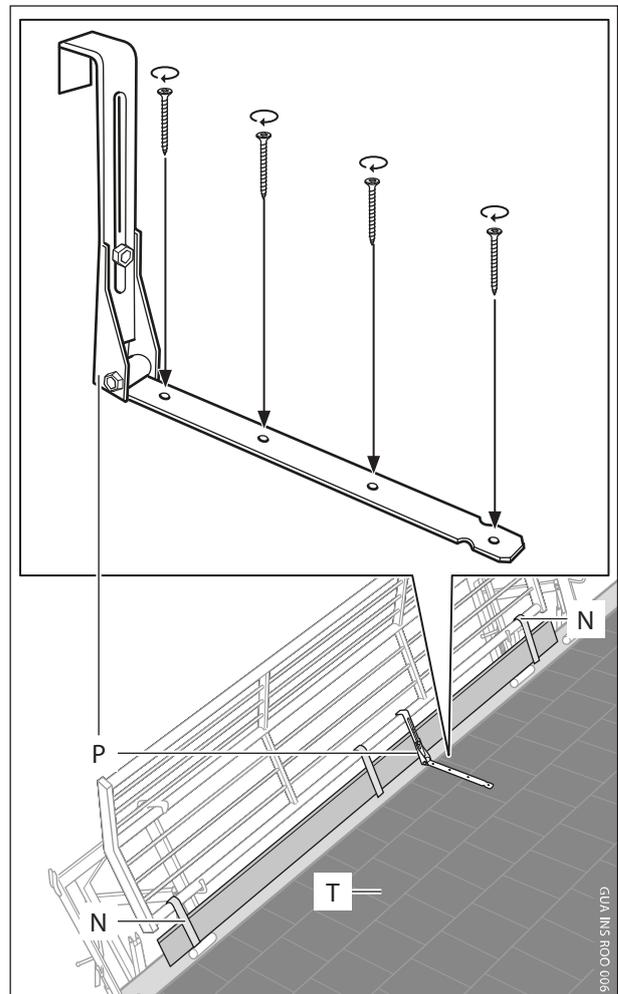


10. Attach the toe board to the guard rail

- 10.1 Hang the toe board (*M*) onto the guardrail's lowest rod (*Lc*) with the toe board's hooks (*N*).

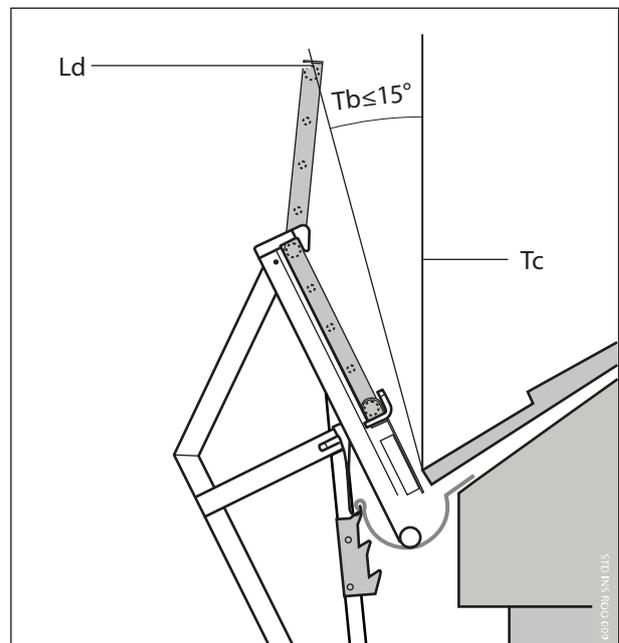
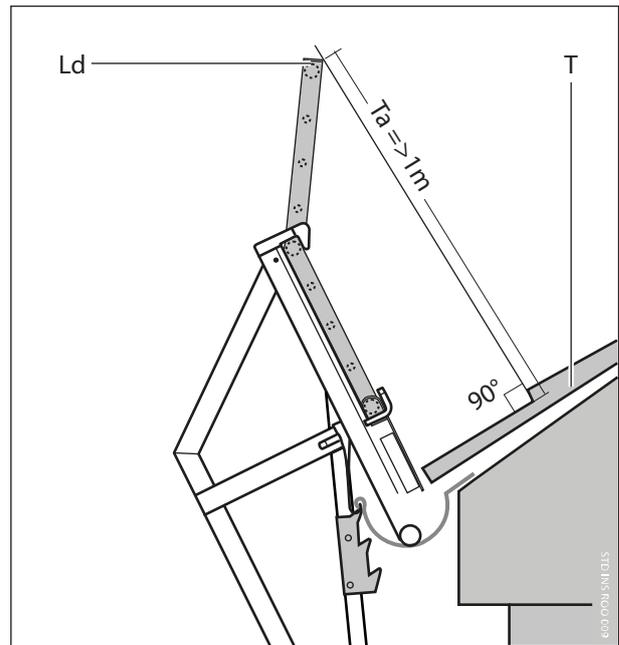
11. Attach the toe board to the roof

- 11.1 Screw the C-hook (*P*) onto the roof (*T*):
The C-hook's (*P*) position must be in between the first and the last toe board hook (*N*).



12. Make sure that the Roofac edge protection installation is stable

- 12.1 Make sure that the vertical distance (Ta) between the roof (T) and the top of the guardrail (Ld) is ≥ 1 m.
- 12.2 Make sure that the angle (Tb) between the vertical (Tc) and the top of the guardrail (Ld) is $\leq 15^\circ$.



5. Install Roofac edge protection on roof edge, Class A–B

Warnings

- ⚠ **WARNING.** A person who installs the Roofac edge protection must know the EU and local regulations regarding personal fall protection equipment, PPE. If a person who installs the Roofac edge protection does not know the regulations regarding PPE, there is a risk of incorrect use of the PPE. If a person uses PPE incorrectly, there is a risk of personal injury or death.
- ⚠ **WARNING.** Always read the Roofac edge protection instruction before installing the Roofac edge protection. If the person who installs the Roofac edge protection has not read the Roofac edge protection instruction, there is a risk that the components will be put together incorrectly. If the components are put together incorrectly, there is a risk that the Roofac edge protection construction is not stable. If the Roofac edge protection construction is not stable, there is a risk of personal injury or death.
- ⚠ **WARNING.** Never use components other than the components included in the Roofac edge protection package when installing the Roofac edge protection. If a component not manufactured by Roofac is put together with a component included in the Roofac edge protection package, there is a risk that the fall protection is not sufficient. If the fall protection is not sufficient, there is a risk of personal injury or death.
- ⚠ **WARNING.** Only use Roofac edge protection components that are not damaged and that are in operational condition. If the Roofac edge protection components are damaged or and not in operational condition, there is a risk that the fall protection is not sufficient. If the fall protection is not sufficient, there is a risk of personal injury or death.
- ⚠ **WARNING.** Always disassemble a Roofac edge protection construction after exposure to wind force faster than 29 kilometers per hour. An exposure to a wind force faster than 29 kilometers per hour can cause damage and or instability to the Roofac edge protection. If the Roofac edge protection is damaged and or not stable, there is a risk of personal injury or death.
- ⚠ **WARNING.** Never put a wind-resistant and or windproof cover on an installed Roofac edge protection. If a wind-resistant and or windproof cover catches wind, there is a risk of damage and or instability to the Roofac edge protection. If the Roofac edge protection is damaged and or not stable, there is a risk of personal injury or death.

Tools and equipment

- Personal fall protection equipment, PPE.

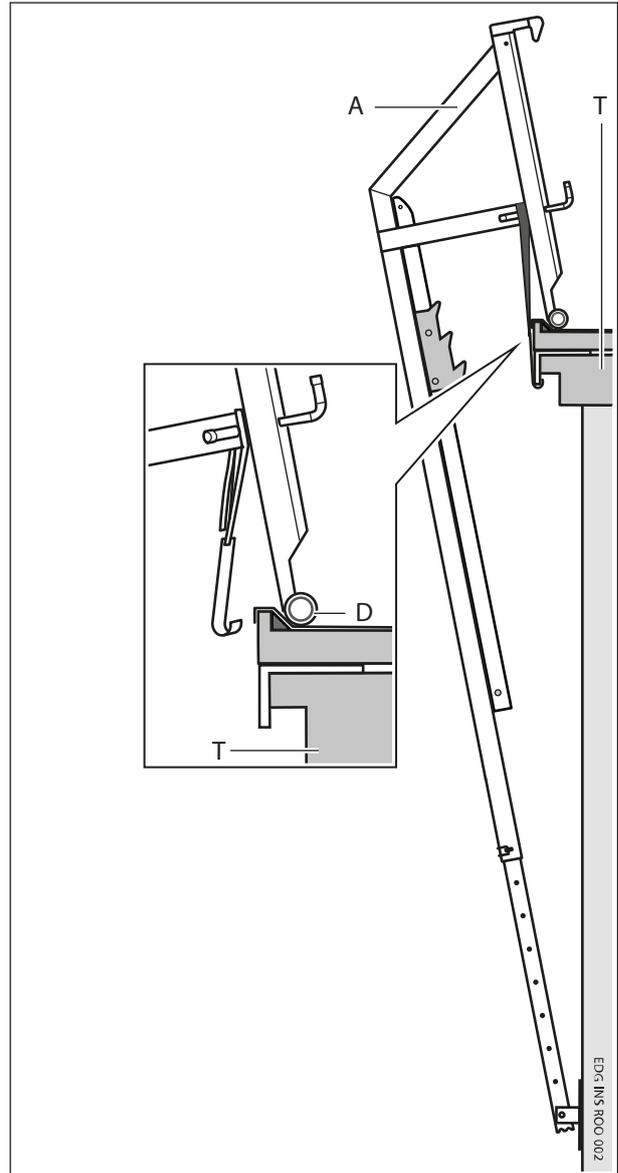
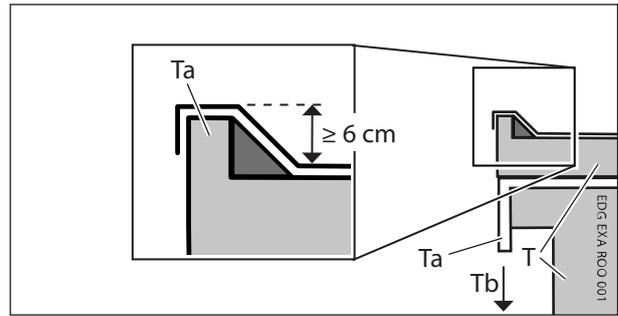
⚠ WARNING. A person who installs the Roofac edge protection must know the EU and local regulations regarding personal fall protection equipment, PPE. If a person who installs the Roofac edge protection does not know the regulations regarding PPE, there is a risk of incorrect use of the PPE. If a person uses PPE incorrectly, there is a risk of personal injury or death.

1. Examine the roof edge

- » Make sure that the roof edge (*Ta*) points towards the ground (*Tb*).
- » Make sure that the roof edge (*Ta*) extends ≥ 6 cm from the roof.
- » Make sure that the roof edge (*Ta*) is not damaged.
- » Make sure that the roof edge (*Ta*) is tightly attached to the roof (*T*).

2. Put the first stand onto the roof

- 2.1 Make sure that there is no roof edge joint where the stand (*A*) is put.
- 2.2 Put the top support (*D*) onto the roof (*T*).

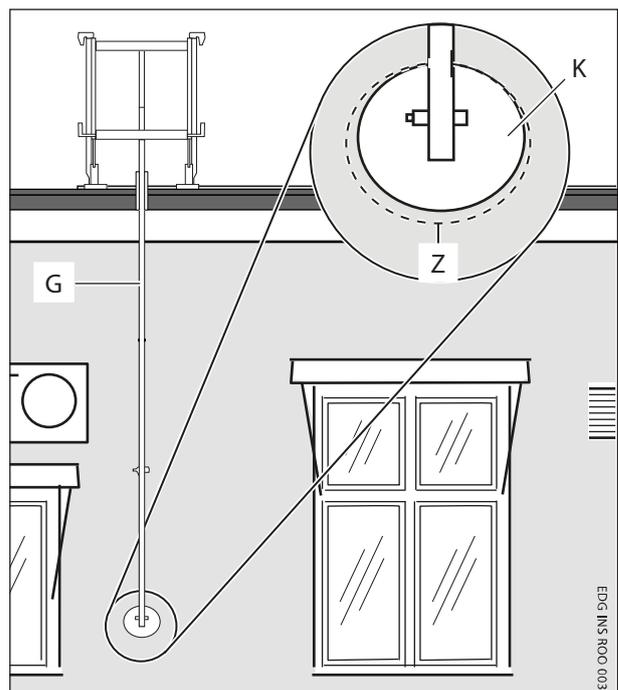
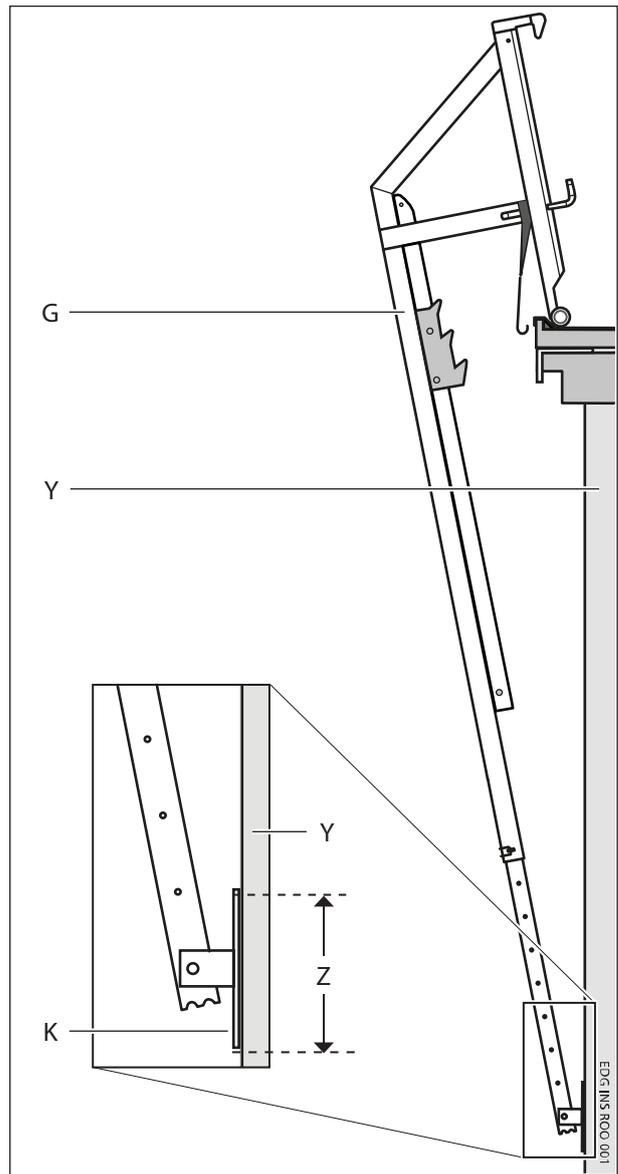


3. Examine the position of the foot

- » The full surface of the foot's flat part (Z) is against the façade (Y):
 - The next task is:
 - Examine the foot's (K) contact area on the façade.
- » The full surface of the foot's flat part (Z) is not against the façade (Y):
 - The next task is:
 - Adjust the support leg's (G) length.

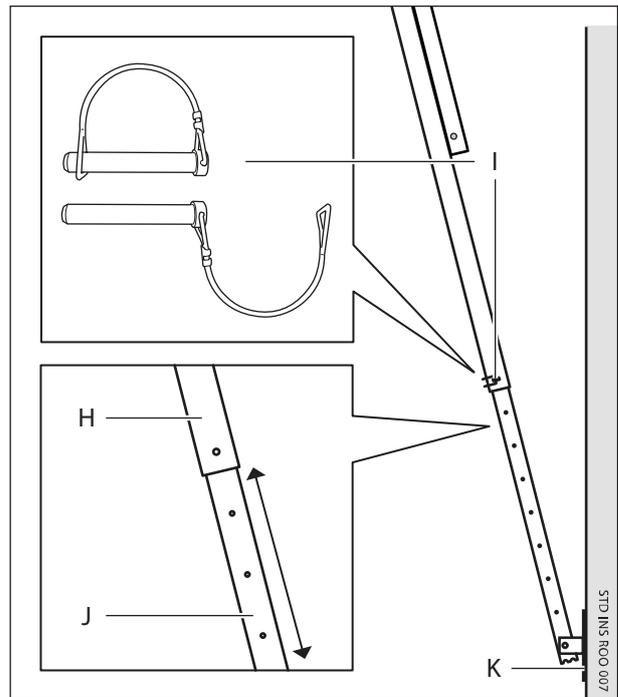
4. Examine the foot's contact area on the façade

- » If the foot's contact area on the façade (Z):
 - is not flat, and or
 - does consist of easily damaged material.
- 4.1 Go to step "5 Adjust the support leg's length".
- » If the foot's contact area on the façade (Z):
 - is flat, and or
 - does not consist of easily damaged material, and or
 - is not ≥ 30 cm above the ground.
- 4.2 Go to step "6 Attach the stand to the gutter".



5. Adjust the support leg's length

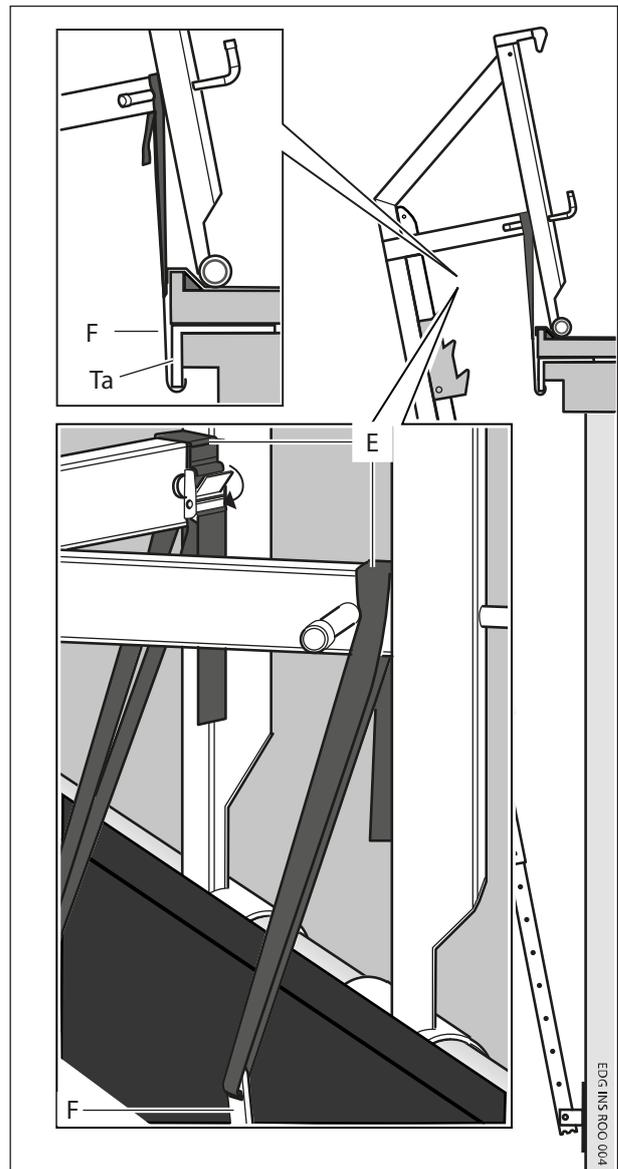
- 5.1 Loosen the locking pin (*l*).
- 5.2 Adjust the length of the support leg by pulling the inner leg tube (*J*) until the foot (*K*) has the correct position:
 - The full surface of the foot's flat part is against the façade.
 - The facade area does not consist of easily damaged material.
 - The foot (*K*) is ≥ 30 cm above the ground.
- 5.3 Lock the outer leg tube (*H*) to the inner leg tube (*J*) with the locking pin (*l*).



6. Attach the first stand to the roof edge

- 6.1 Fasten one of the two under hooks (*F*) to the roof edge (*Ta*) by tightening the hook strap (*E*).
- 6.2 Fasten the other one of the two hooks (*F*) to roof edge (*Ta*) by tightening the hook strap (*E*).

Patent pending Nr 2350682-7

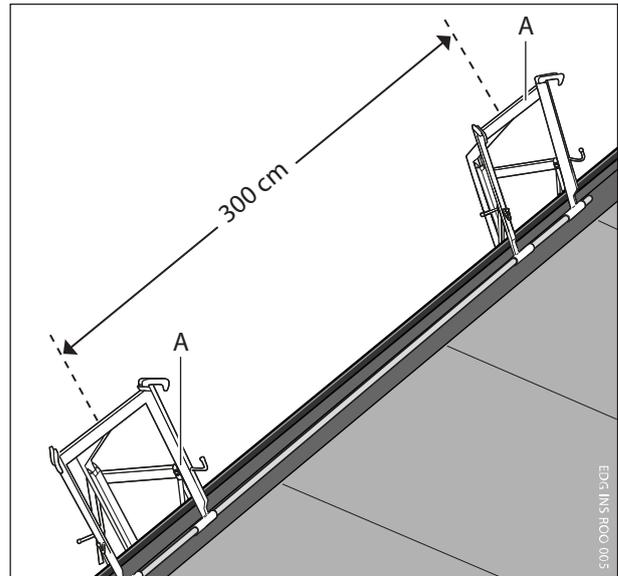


7. Put the next stand onto the roof

- 7.1 Make sure to put the next stand (A) with a center distance of ≤ 300 cm from the existing stand (A).
- 7.2 Obey the procedure in task "2 Put the first stand onto the roof".
- 7.3 Obey the procedure in task "3 Examine the position of the foot".
- 7.4 Obey the procedure in task "4 Examine the foot's contact area on the façade".

8. Attach the C-rod into two stands

- 8.1 Put the C-rod (Pa) through all four top support in the two stands (A).



6. Regulations

EN 13374 + A1 2019, Temporary Edge Protection Systems – Class A, B and C

⚠ WARNING. The dynamic requirements in the European standard EN 13374 + A1 2019, Temporary Edge Protection Systems – Class A, B, and C, must be confirmed by testing. If the dynamic requirements in the European standard EN 13374 + A1 2019, Temporary Edge Protection Systems – Class A, B, and C is not confirmed by testing, there is a risk of incorrect use of the Roofac edge protection. If a person uses Roofac edge protection incorrectly, there is a risk of personal injury or death.

EN 13374 + A1 2019 – DEFINITION OF CLASS							
Class	Static load (kN)			Dynamic load (kN)			
	Fh1	Fh2	Fv	Roof inclination	Fh1	Fh2	Fv
A	0.5	0.2	1.5	Not applicable			
B	0.7	0.4	1.5	10°	5.0	1.0	1.2
	0.7	0.4	1.5	30°	4.4	1.0	2.8
	0.7	0.4	1.5	45°	3.6	1.0	3.8
	0.7	0.4	1.5	60°	2.6	1.0	4.6
C	Not applicable			30°–60°	6.5	1.0	5.1

Calculation of starting point for dynamic loads Class C

- I. One stand takes the full load.
- II. The energy absorption distance on the stand is 120 mm.
- III. The gutter is calculated as a fixed and rigid object.
- IV. The impulse load is 0.03 seconds.

Fh1 The horizontal reaction force on the gutter.

Fh2 The horizontal reaction force on the gutter.

Fv The vertical reaction force on the gutter.

