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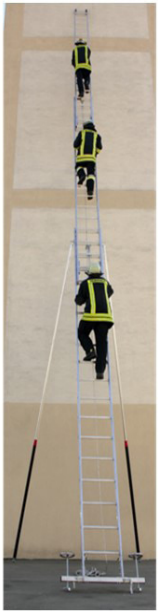
User Manual
Fire Ladders
ÖNORM EN 1147 and F 4047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1. General intended use

In the fire service, ladders replace fire-fighting and rescue routes when traffic routes within buildings are not available or impassable. Always refer to “The right ladder for each assignment”.

2. General safety information

1. Portable fire ladders may only be used by personnel who have been trained to do so in accordance with the current regulations.
2. Ladders may only be used if they are suitable for purpose and are not suffering from any safety defects.
3. The requirement for safe usage is familiarity with the safety information and safety regulations.
4. This user manual, particularly the safety regulations, must be observed by all personnel.
5. The provisions issued by the Austrian Federal Fire Association “Portable ladders” must be obeyed in all drills and assignments.
6. Ladders must undergo a visual inspection before and after use to find signs of wear, defects and faults.
7. Ladders must be inspected at regular intervals as set out in the Guideline GP-02 issued by the Austrian Federal Fire Association.
8. When using ladders we recommend that personnel should be distributed evenly on the ladder. The minimum distance between personnel should be 2 m.
9. Access ladders should not be used to rescue people by carrying them up or down.

3. Accident prevention when using portable ladders

The latest version of Austrian Federal Fire Association publication 22 applies to training, drills and assignments.
Type-tested portable ladders for fire service use comply with the latest versions of ÖNORM EN 1147 and F 4047 in terms of their properties and design. The type test also comprises a test of their load capacity and stability in usage conditions.
Suitable precautions must be taken to prevent the ladders tipping over or rolling. Only then can they be considered to be stable.

1. Fire service protective suit
2. Fire service helmet with neck guard
3. Fire service gloves
4. Fire service footwear
5. Fire service safety belt if specifically instructed.

If particular dangers are involved, special personal protective equipment may have to be provided which is specially designed for such dangers and is provided in sufficient quantity.

The following dangers, among others, may arise when ladders are used for training, drills and assignments.

Falling: For example when using a damaged ladder or a ladder which is not suitable for purpose, due to incorrect climbing.

Falling over/Falling down: For example due to not erecting the ladder on a stable base, incorrect water drainage from the ladder or the lack of proper securing in a side wind.

Rolling/Slipping: For example when climbing an unsecured ladder or traffic routes.

Toppling over: For example if a ladder is leaned against unsecured support points such as anchoring wires, rods, panes of glass, unlocked doors and the like.

Electricity: For example if the ladder is erected in the immediate vicinity of or comes into contact with trolley wires or other live cables.

In order to prevent these dangers, we urgently recommend that you read and observe the following instructions with care.

4. General use

1. Ladders may only be used for the purpose for which they are designed. They must not be used for any other purpose.
2. Portable fire ladders may only be used by personnel who have been trained to do so in accordance with the Austrian Federal Fire Association regulations and who are familiar with this user manual.
3. Check all the parts of the ladders to ensure that they are in proper working order and fully functional before you start to use them. Ladders must not be used if they are found to be defective.
4. Ladders may only be erected on surfaces with an adequate load-bearing capacity. If necessary, this can be achieved by placing the ladders on supports which spread the load.
5. Ladders must be secured to prevent them slipping.
6. Ladders must be secured to prevent them slipping and falling over, for example by securing the head of the ladder using a fastening line or by holding the ladder.

7. Ladders must be erected at a leaning angle of 65° - 75° to the surface on which they are supported.
8. Ladders may only be leaned against secure support points.
9. At exit points the ladders must overlap by at least three rungs or 1 m unless other equivalent ways of securing them are available.
10. At entry openings, ladders must be leaned flush to one side of the opening.
11. If ladders are used outdoors special attention must be paid to the wind conditions to prevent them tipping over, for example secure the head of the ladder.
12. If ladders are erected near or on traffic routes, ensure that they are adequately protected, for example by erecting protection posts, warning lights, warning signs, etc.
13. Ensure that you do not exceed the maximum load capacity.
14. Never jump on to a ladder.
15. Climb ladders as evenly as possible without causing oscillations.
16. When climbing up, down or from one ladder to another only hold on to the rungs, not the legs of the ladder
17. When climbing a ladder, keep your body close to the ladder and use your hands to hold on to the rungs only.
18. Squat to climb on to or off the ladder at the parapets of wall openings.
19. Never climb beyond the top support point of a ladder.
20. Water may only be used to fight fires from portable ladders using jet pipes with shut-off controls. The ladder must be secured at its head and the person operating the jet pipe must be secured with a safety belt. B pipes must not be used from portable ladders.
21. Open and close jet pipes slowly when on a ladder so as to prevent pressure surges.
22. Do not direct water to the side when on a ladder.
23. When climbing ladders carry the hose over your shoulder, do not attach it to a belt.
24. Carry hose lines on ladders only up to the first storey. It is safer to pull up hoses using hauling lines.
25. Do not allow hose lines to hang freely from ladders, instead they must be secured in the rungs using hose holders.
26. Users must receive regular training in the correct use of ladders.
27. Remember that you must not touch overhead electric cables when erecting and using ladders. You must maintain an adequate safety distance between ladders or personnel on ladders and live components.
28. An unmanned ladder erected on a site must not be removed without further investigation.

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5. Extension ladder, 3-part

5.1 Technical data

Order No.	Description	Rungs	Weight	Length retracted	Length extended
116106	3-part extension ladder, 14,0 m	19	95 kg	6,10 m	14,00 m

Maximum load capacity: Three people or 324 kg
Clear width of the bottom ladder: 490 mm
Clear width of the middle ladder: 430 mm
Clear width of the top ladder: 370 mm
Rung spacing: 300 mm

5.2. Equipment

Rope brake
Round rungs Ø 34 mm
Two supports with a non-slip coating
Top ladder with two wall rollers
Cross foot with spindle height adjustment and pointed support plate

5.3. Safety information

Only hold extension ladders by the legs, not by the rungs, when extending and retracting them. Only hold the ladder by the outsides of the legs, do not curl your thumbs around the legs. Caution – risk of crush injuries.

Do not climb extended ladders until the spring-loaded hooks are on the rungs and the top ladder sections have been secured by the pull rope to prevent them retracting.

At least four people are required to move the extension ladder into position.
Never climb free-standing extension ladders with specified supports.

5.4. Use

The ladder must be removed from and placed on the vehicle by two teams (four people).

The machine operator will help the two teams to take the ladder off the vehicle.

All four people must hold the ladder by the rungs and carry it to the assignment area with straight arms and the foot of the ladder at the front.

The extension ladder must be positioned under the entry opening. The distance of the bottom end of the ladder to the building depends on the assignment height. The supports are secured to the ladder.

Undo the holding straps for the support bars.

Two people must pick up the support bars and secure the foot of the ladder. The other two people at the head of the ladder erect the ladder whilst the two people at the support bars help in the erection process by pulling.
Erect the ladder at a slight angle to the leaning position.

The two people at the support bars secure the ladder. One person stands in front of the ladder and ensures that the foot of the ladder has a secure position. He must place one foot on the cross bar and hold the ladder by the outside of the legs for this purpose. This person also monitors the extension of the ladder.

The fourth person undoes the pull rope and extends the ladder to the required height. To secure the ladder in the required height the spring-loaded hooks must be pulled over the relevant rung on the ladder. Allow the ladder to fall into place slowly until you hear the spring-loaded hooks come to rest on the rungs.

Check whether all the spring-loaded hooks are correctly positioned.
Particularly in darkness the delayed engaging noise of the spring-loaded hooks makes it easy to check that they are in the correct position.
This audible check should be practiced repeatedly in daylight, however, and then checked again by a visual inspection.

After the extension process, relieve the stress on the pull rope and secure it to a rung ideally using a clove hitch.

Lean the head of the ladder against a solid support point and align the support bars sideways so as to prevent excessive bending or side movement of the ladder.

The two support bars and the foot of the ladder must each be secured by a person.

The ladder is now ready to be climbed.

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To retract the ladder, return it to its almost vertical position, with two people on the support bars securing the ladder.
Release the pull rope from the rung and extend the ladder until the drag hooks on the release assembly pass over the rungs.
Ensure that this is the case on both extending ladder parts.

Important.

During the retraction process keep your hands on the legs only, not on the rungs since otherwise you will expose yourself to a risk of crush injury.
The ladder may be damaged if you retract it too quickly.
Retract the ladder slowly.
To ensure that the rope brake does not slow the ladder down when you do not want it to, the pull rope must be held at a slight angle inwards away from the ladder.

To lower the ladder, the personnel on the support bars secure the foot of the ladder by each placing one foot on the bottom cross bar; the others stand in front of the ladder and slowly lower it towards the front.

The two people on the support bars help this process by holding the ladder.

When the ladder is on the ground, place the two support bars in the holders and secure them with the holding straps. The pull rope must be secured to the ladder.

The extension ladder can now be carried from the assignment location by four people. Carry the ladder by the rungs with a straight arm with the foot of the ladder at the front.

The machine operator helps both teams with the loading process.

6. Extension ladder, 2-part

6.1 Technical data

Order No.	Description	Rungs	Weight	Length retracted	Length extended
116107	2-part extension ladder, 8,0 m	15	40 kg	4,70 m	8,00 m
116108	2-part extension ladder, 9,0 m	17	44 kg	5,30 m	9,00 m
116109	2-part extension ladder, 10,0 m	19	49 kg	5,90 m	10,00 m

Maximum load capacity: Two people or 216 kg
Clear width of the bottom ladder: 420 mm
Clear width of the top ladder: 360 mm
Rung spacing: 300 mm

6.2. Equipment

Rope brake
Round rungs Ø 34 mm
Top ladder with two wall rollers
Non-slip ladder feet

6.3. Accessories

Two supports with a non-slip coating

6.4. Safety information

Only hold extension ladders by the legs, not by the rungs, when extending and retracting them. Caution – risk of crush injuries.
Do not secure extended ladders until the spring-loaded hooks are on the rungs and the top ladder section has been secured by the pull rope to prevent it retracting.

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At least four people are required to move the extension ladder into position.
Never secure free-standing extension ladders with supports.

6.5. Use

The ladder must be removed from and placed on the vehicle by two teams (four people).The machine operator will help the two teams to take the ladder off the vehicle

All four people must hold the ladder by the rungs and carry it to the assignment area with straight arms and the foot of the ladder at the front.

The extension ladder must be positioned under the entry opening. The distance of the bottom end of the ladder to the building depends on the assignment height.

If the ladder has supports they must be secured to the ladder.
Undo the holding straps for the support bars.

The two people at the head of the ladder erect the ladder whilst the two people at the support bars help by pulling.

If the ladder does not have support bars the two people at the head of the ladder erect the ladder. The two people at the feet of the ladder secure the ladder. They do so by each placing one foot on the bottom ladder legs.

The two people at the feet of the ladder also secure the ladder by the side legs.
They help to erect the ladder by pulling.

The fourth person undoes the pull rope and extends the ladder to the required height.
To secure the ladder in the required height, the spring-loaded hooks must be pulled over the relevant rung on the ladder.

The two people at the support bars secure the ladder.
One person stands in front of the ladder and ensures that the foot of the ladder has a secure position.
He must place one foot on the cross bar and hold the ladder by the outside of the legs for this purpose. This person also monitors the extension of the ladder.

Allow the ladder to fall into place slowly until you hear the spring-loaded hooks come to rest on the rung. Check whether the spring-loaded hooks are correctly positioned. Particularly in darkness the engaging noise of the spring-loaded hooks makes it easy to check that they are in the correct position. This audible check should be practiced repeatedly in daylight, however, and then checked again by a visual inspection.

After the extension process, relieve the stress on the pull rope and secure it to a rung ideally using a clove hitch.

Lean the head of the ladder against a solid support point.
If the ladder has support bars, they must be aligned sideways so as to prevent excessive sagging or sideways movement of the ladder.

The ladder is now ready to be climbed.

If the ladder has support bars, the two support bars and the foot of the ladder must each be secured by one person.
If the ladder does not have support bars, two people must secure the legs of the ladder and a further person must secure the foot.

To retract the ladder move it to a near-vertical position with two people securing the ladder by the legs or, if the ladder has them, by the support bars. Release the pull rope from the rung and extend the ladder until the drag hooks on the release assembly pass over the rungs.

You can now let down the ladder slowly.

Important.
During the retraction process keep your hands on the legs only, not on the rungs since otherwise you will expose yourself to a risk of crush injury.
The ladder may be damaged if you retract it too quickly.

If the ladder does not have support bars, two people must help to secure the foot of the ladder and hold it by the side legs. The foot must be placed on the bottom cross bar or earth spike for this purpose.

Two people move in front of the ladder and slowly lower it forwards, the two people on the ladder legs or support bars help by holding the ladder.

When the ladder is on the ground, place the two support bars in the holders and secure them with the holding straps.
The extension ladder can now be carried from the assignment location by four people. Carry the ladder by the rungs with a straight arm with the foot of the ladder at the front.

The machine operator helps both teams with the loading process.

7. Scaling ladder Part A & Part B

7.1 Technical data

Order No.	Description	Rungs	Weight	Length
116102	Scaling ladder top part B	7	9,5 kg	2,70 m
116101	Scaling ladder bottom part A	9	8,6 kg	2,70 m
116103	Scaling part T3	2	2,7 kg	0,75 m
116104	Scaling ladder connecting part	-	5,3 kg	

Maximum load capacity	Two people or 216 kg
Max. length (4 parts, 3 x top part + 1 x bottom part)	approx. 8400 mm
Weight of part A	approx. 8.6 kg
Weight of part B	approx. 9.5 kg
Max. weight (4 parts)	approx. 38.0 kg
Rung spacing:	273 mm

7.2. Equipment

Steel spring-loaded locking pins
Rungs 30 x 30 mm
Non-slip ladder feet

The scaling ladder complies with ÖNORM EN 1147 and F4047 and is regarded as the standard ladder used by the Austrian Fire Service as a result of its versatility. Made up of four ladder parts which fit together, each with a length of 2700 mm, the maximum rescue height of the ladder is 7200 mm. The four ladder parts can be used singly or fitted together in pairs to form a step ladder with two equally long sides and are therefore suitable for getting over obstacles.

The ladder can hold two people in all its length configurations.

Since it can be extended by adding more parts to the bottom and top (in a horizontal position), the ladder is also suitable for use in constricted areas such as shafts or for making rescues from ice.

The scaling ladder can also be used as a tool, for example as a double ladder or hose bridge.

Scaling ladders are generally stored in pairs one on top of the other on the roof of large fire fighting vehicles. They may have to be stored in single parts on smaller vehicles.

Although a scaling ladder made up of four identical scaling ladder parts, also known as B parts, is regarded as functional, for safety reasons it is generally advisable to use a so-called A part with two additional rungs as the bottom part instead of one of these B parts.

7.3. Use

Scaling ladders can be handled by three and four people. Generally they should be removed from and placed on the vehicle by two teams. Scaling ladders must be carried to the assignment site by four people. Carry the ladders by the rungs with a straight arm with the foot of the ladder at the front.

The scaling ladder must be positioned under the entry opening. The distance of the bottom end of the ladder to the building depends on the assignment height. The top ladder parts must now be retracted to the head end of the ladder parts beneath them.

Open and lock the spring-loaded pins on the bottom ladder.

To put the ladder parts together, two people must hold up the bottom ladder parts by the top rung in one hand whilst controlling the spring-loaded pin on the top ladder with the other hand. The others now slide the ladder parts together.

Ensure that the spring-loaded pins are engaged in the assembled ladder parts. If you only require three ladder parts, the fourth ladder part can now be removed by releasing the spring-loaded pins.

The two people at the feet of the ladder secure the ladder.
They must place one foot on the bottom ladder leg for this purpose and hold the ladder by the outside of the legs. The two people at the head of the ladder erect the ladder whilst the other two help by pulling.

The assembled ladder can also be placed against the wall of the building. The two people at the feet of the ladder secure the ladder. They must place one foot on the bottom ladder leg and hold the ladder by the outside of the leg for this purpose. The two people at the head of the ladder erect the ladder whilst the other two help by pulling.

After aligning the ladder it can be climbed whilst one person secures it at the bottom whilst the other one climbs it.

To lower the ladder it must be moved to a near-vertical position with two people secure it at its feet.

Two people move in front of the ladder and slowly lower it forwards, the other two people help by holding the ladder legs.

Open the spring-loaded pins on the right and left.

The two top scaling ladders can now be removed by the two teams and placed on the scaling ladders on the ground.

The scaling ladders can now be carried away from the assignment site by the two teams. Carry the scaling ladders by the rungs with a straight arm with the ladder spikes at the front.

The scaling ladders are stored on the vehicle in pairs.

If the scaling ladder must be erected in a constricted area this can be done by adding more parts to the bottom. Two people raise the ladder part using the spring-loaded pins and the legs and place it at an angle against the building if possible.

Please ensure that you hold the legs for as long as possible to prevent the ladder tipping over sideways.

A third person now attaches another ladder part into the fittings on the raised ladder from underneath.

Ensure that the spring-loaded pins engage properly.
More ladder parts can be added in the same way.

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8. Inspections

8.1. Inspection intervals

Ladders should be subjected to a visual inspection and load test by an authorized person using the following timetable:

- At least once a year
- If the ladder appears to be unfit for use
- If the ladder has been used for a purpose other than its intended purpose
- After the effects of severe heat
- After any repair work unless this only involves the replacement of the ropes or wire cable

Ladders which are damaged or defective or appear to be no longer fit for use must be withdrawn from use. Defective equipment must be reported to your line manager without delay. These ladders must not be returned to use until they have been repaired expertly, returned to their original strength and can be used safely again.

Ladders which do not meet regulations must be withdrawn from use.

The results of all inspections must be entered in an inspection sheet or record book.

8.2. Trained expert

Trained experts for completing inspection work on fire ladders are specially trained members of the fire service (for example the equipment manager).

The skills required for this purpose can be acquired at fire service colleges or from the manufacturers.

9. Visual inspection

Bear in mind the following points when conducting a visual inspection:

- Ensure that there are no signs of damage or permanent deformation after the load test.
- Check the ladder legs and rungs for cracking, splintering, severe deformation and wear.
- Check the strength of the joint between the leg and rungs
- Check the strength of all screw and rivet connections.
- Check welds for cracking or obvious defects.
- Check for signs of corrosion on load-bearing components and remove any you find.
- Check the alignment of the ladder for torsion and sagging.
- Check the feet of the ladder for signs of severe wear or other defects.
- The model plate must be in place

Additional checks on aluminium 2 and 3-piece pull rope ladders

- Check the function of the ladder release assemblies and ensure that they are undamaged and secure.
- Check cables for signs of wear and ensure that they are secured and adjusted correctly.
- Check the guides and fittings for signs of damage.
- The rope brake must be securely connected to the rungs and function perfectly.
- Check the play between the ladder and guides.
- Check that the extender limit stops are in position and secure.
- Check the support bars and non-slip coating are undamaged.
- Check the wall rollers for signs of damage and wear.

Additional checks for aluminium scaling ladders

- Check that the connections and spring-loaded locking pins are secure.
- Check that the spring-loaded locking pins have a good spring force and are functional.

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10. Repair and maintenance

10.1. General

Repair work may only be carried out by trained experts.

If rungs (30 x 30 mm) are replaced on the scaling ladder, ensure that the defective rungs are replaced with perfect rungs of the same type. The strength of the legs must not be adversely affected. Round rungs cannot be replaced.

Ladders which are beyond repair should be destroyed without delay.

Use only genuine parts from the manufacturer for repairs.

Secure all screw connections to prevent them coming loose unintentionally.

Do not repair deformed ladders – scrap them.

Also check that a ladder repair is actually economically viable.

10.2. Lubrication points

Ensure that rungs and pull ropes are not soiled with grease or oil. If this does happen, clean the soiled areas without delay using methlyated spirits, for example.

Only use household cleaning products for cleaning purposes. Do not use any cleaning products which contain solvents.

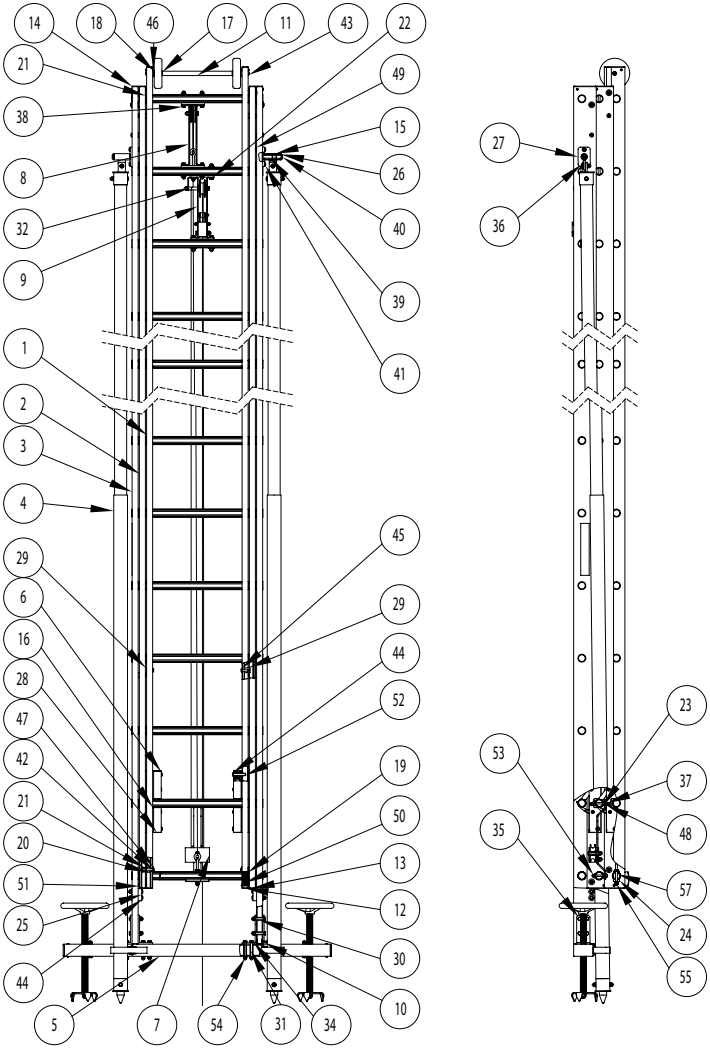
Use grease rather than oil for lubrication purposes. The grease must be able to withstand temperatures of at least 100°C.

Plastic guides, release assemblies and cable pulleys must not be lubricated.

11. Spare parts

11.1 Extension ladder, 3-part

11.1.1 3-part extension ladder, 14.0 m



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Item No.	Quantity	Designation	Part No..
1	1	Top ladder, flanged	01475.100.00.7
2	1	Middle ladder, flanged	01475.200.00.7
3	1	Bottom ladder, flanged	01475.300.00.7
4	2	Support, complete	01475.400.00.7
5	1	Cross bar	01475.500.00.7
6	4	Triggering	832003
7	1	Rope return puller, complete	01474.650.00.7
8	1	Rope pulley holder, complete	01474.640.00.7
9	1	Rope brake	01474.600.00.0
10	4	Bracket	01474.510.00.7
11	1	Spacer tube for wall roller	01474.110.00.7
12	4	End cap 90°	01474.120.00.7
13	4	End cap 90°	01474.220.00.7
14	4	End cap 90°	01474.320.00.7
15	2	Support holder	01411.100.50.0
16	4	Spacer	7027331
17	1	Cross tube for wall roller	00194.005.96.0
18	2	Wall roll 125mm	860001
19	2	Black edition	00167.004.01.1
20	8	Storage recording	00194.005.99.0
21	8	Role	00194.006.03.6
22	4	Recording block	00194.006.00.7
23	2	Recording block	00194.006.02.7
24	1	Recording block	00194.006.01.7
25	2	Stop for ladder	00194.006.22.6
26	2	Recording	00194.005.97.0
27	2	Recording	00165.012.37.0
28	8	Spacers	7027382
29	8	Stop for ladder	00165.012.46.7
30	12	Sleeve	00194.000.18.0

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Order No.	Quantity	Designation	Part No.
31	8	Sleeve	00194.003.26.0
32	1	Sleeve	851001
33	8	Socket	00167.000.45.1
34	8	Hex screw	00100.337.00.0
35	8	Hex screw	00100.333.00.0
36	2	Hex screw	811001
37	2	Hex screw	00101.289.00.0
38	7	Hex screw	00101.334.00.0
39	2	Countersunk screw	00111.421.00.0
40	2	Pan head screw	00106.416.00.0
41	4	Pan head screw	00106.332.00.0
42	8	Pan head screw	00106.329.00.0
43	2	Pan head screw	811003
44	12	Pan head screw	811017
45	8	Pan head screw	811026
46	2	U-washer	00145.012.05.6
47	21	U-washer	00145.208.00.0
48	4	U-washer	812004
49	33	U-washer	812001
50	4	Sheet metal screw	00150.089.00.0
51	20	Drilling screw	00150.551.00.0
52	8	Blind rivet nut	815001
53	2	Cap nut	00140.406.00.0
54	34	Cap nut	00140.408.00.0
55	4	Hex screw	813005
56	8	Blind rivets	820003
57	1	Wire rope	00180.001.81.0
58	1	Polyester rope	114005

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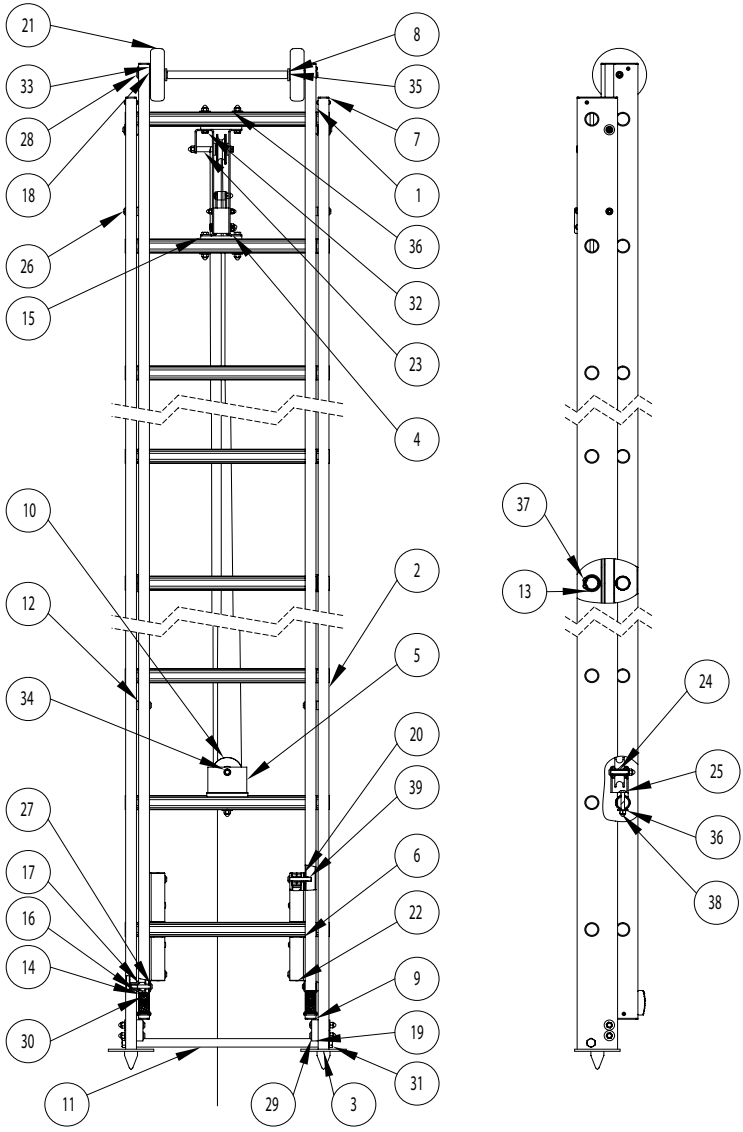
11.2 Extension ladder, 2-part
11.2.1 2-part extension ladder, 8.0 m



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Item No.	Quantity	Designation	Part No..
1	1	Top ladder, flanged	01476.100.00.7
2	1	Bottom ladder, flanged	01476.300.00.7
3	2	Ladder toe	01476.400.00.0
4	1	Rope brake	01474.600.00.0
5	1	Housing	01476.900.10.7
6	2	Triggering	832003
7	2	End cap 90°	01474.320.00.7
8	1	Spacer tube	01476.750.00.7
9	4	End cap 90°	01474.120.00.7
10	1	Rope pulley complete	7115858
11	1	Cross tube	00165.012.44.7
12	4	Stop for ladder	00165.012.46.7
13	2	Sleeve	00167.000.45.1
14	2	Black edition	00167.004.01.1
15	2	Recording block	00194.006.00.7
16	4	Role	00194.006.03.6
17	4	Storage recording	00194.005.99.0
18	1	Cross tube	00194.006.06.0
19	2	Stop for ladder	00194.006.22.6
20	2	Spacer	7027331
21	2	Wall roll 125mm	860001
22	4	Spacers	7027382
23	1	Sleeve	851001
24	1	Sleeve	00194.002.47.0
25	1	Pan head screw	00106.334.00.0
26	4	Pan head screw	811026
27	4	Pan head screw	00106.329.00.0
28	2	Pan head screw	811003
29	9	Pan head screw	811017
30	4	Sheet metal screws	00150.089.00.0

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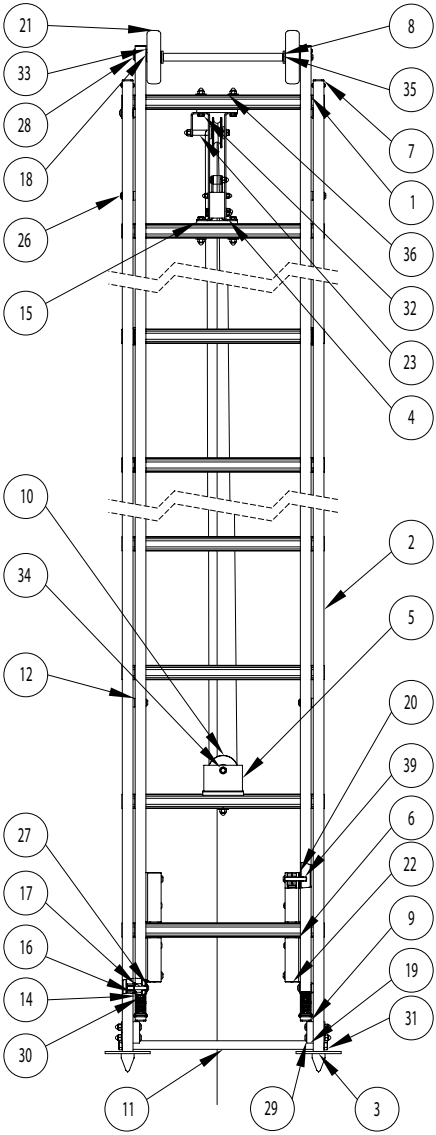
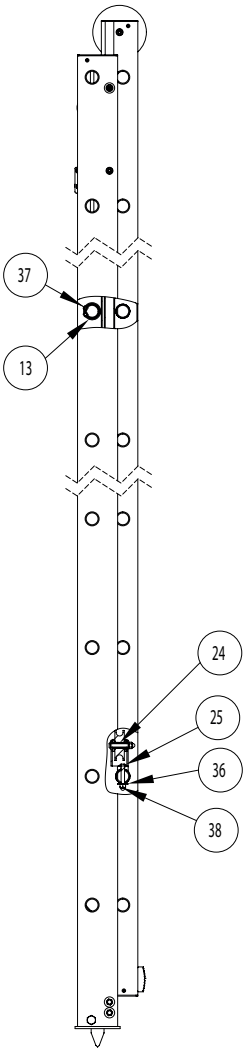
Order No.	Quantity	Designation	Part No.
31	2	Hex screw	811010
32	4	Hex screw	00101.334.00.0
33	12	Drilling screw	00150.551.00.0
34	2	U-washer	812001
35	4	U-washer	00145.012.05.6
36	13	U-washer	00145.208.00.0
37	4	Blind rivets	820003
38	11	Cap nut	00140.408.00.0
39	4	Blind rivet nut	815001
40	1	Polyester rope	00180.002.03.0

11.2.2 2-part extension ladder, 9.0 m





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116108

Item No.	Quantity	Designation	Part No..
1	1	Top ladder, flanged	01477.100.00.7
2	1	Bottom ladder, flanged	01477.300.00.7
3	2	Ladder toe	01476.400.00.0
4	1	Rope brake	01474.600.00.0
5	1	Housing	01476.900.10.7
6	2	Triggering	832003
7	2	End cap 90°	01474.320.00.7
8	1	Spacer tube	01476.750.00.7
9	4	End cap 90°	01474.120.00.7
10	1	Rope pulley complete	7115858
11	1	Cross tube	00165.012.44.7
12	4	Stop for ladder	00165.012.46.7
13	2	Sleeve	00167.000.45.1
14	2	Black edition	00167.004.01.1
15	2	Recording block	00194.006.00.7
16	4	Role	00194.006.03.6
17	4	Storage recording	00194.005.99.0
18	1	Cross tube	00194.006.06.0
19	2	Stop for ladder	00194.006.22.6
20	2	Spacer	7027331
21	2	Wall roll 125mm	860001
22	4	Spacers	7027382
23	1	Sleeve	851001
24	1	Sleeve	00194.002.47.0
25	1	Pan head screw	00106.334.00.0
26	4	Pan head screw	811026
27	4	Pan head screw	00106.329.00.0
28	2	Pan head screw	811003
29	9	Pan head screw	811017
30	4	Sheet metal screws	00150.089.00.0

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116108

Order No.	Quantity	Designation	Part No.
31	2	Hex screw	811010
32	4	Hex screw	00101.334.00.0
33	12	Drilling screw	00150.551.00.0
34	2	U-washer	812001
35	4	U-washer	00145.012.05.6
36	13	U-washer	00145.208.00.0
37	4	Blind rivets	820003
38	11	Cap nut	00140.408.00.0
39	4	Blind rivet nut	815001
40	1	Polyester rope	114005

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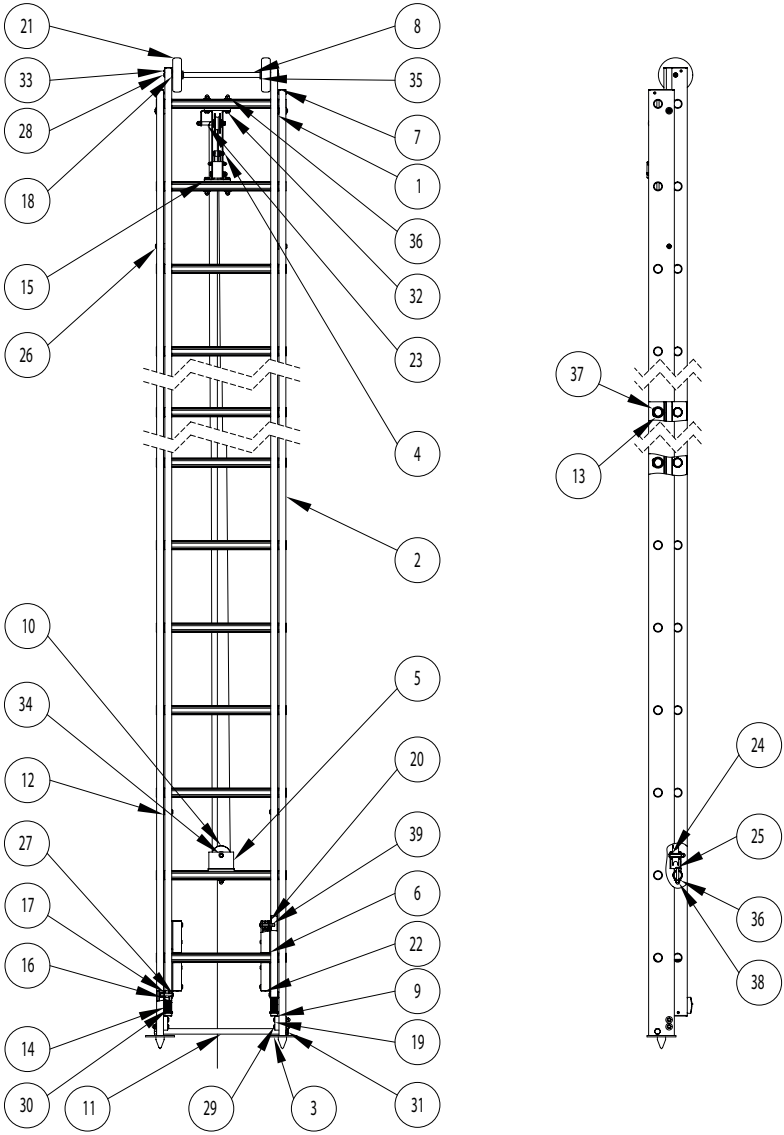
11.2.3 2-part extension ladder, 10.0 m



MUNK
RETTUNGSTECHNIK

116109

Item No.	Quantity	Designation	Part No..
1	1	Top ladder, flanged	01478.100.00.7
2	1	Bottom ladder, flanged	01478.300.00.7
3	2	Ladder toe	01476.400.00.0
4	1	Rope brake	01474.600.00.0
5	1	Housing	01476.900.10.7
6	2	Triggering	832003
7	2	End cap 90°	01474.320.00.7
8	1	Spacer tube	01476.750.00.7
9	4	End cap 90°	01474.120.00.7
10	1	Rope pulley complete	7115858
11	1	Cross tube	00165.012.44.7
12	4	Stop for ladder	00165.012.46.7
13	2	Sleeve	00167.000.45.1
14	2	Black edition	00167.004.01.1
15	2	Recording block	00194.006.00.7
16	4	Role	00194.006.03.6
17	4	Storage recording	00194.005.99.0
18	1	Cross tube	00194.006.06.0
19	2	Stop for ladder	00194.006.22.6
20	2	Spacer	7027331
21	2	Wall roll 125mm	860001
22	4	Spacers	7027382
23	1	Sleeve	851001
24	1	Sleeve	00194.002.47.0
25	1	Pan head screw	00106.334.00.0
26	4	Pan head screw	811026
27	4	Pan head screw	00106.329.00.0
28	2	Pan head screw	811003
29	9	Pan head screw	811017
30	4	Sheet metal screws	00150.089.00.0

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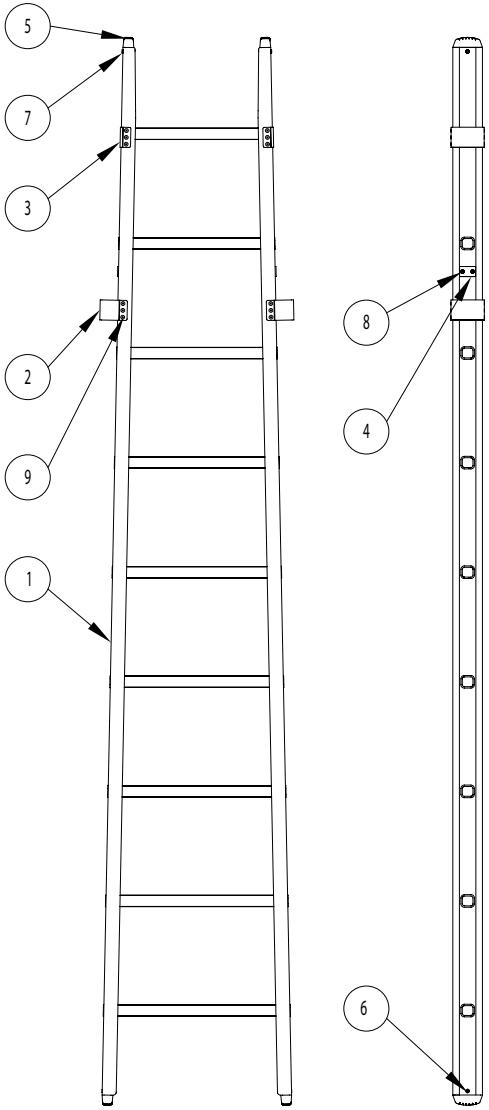
116109

Order No.	Quantity	Designation	Part No.
31	2	Hex screw	811010
32	4	Hex screw	00101.334.00.0
33	12	Drilling screw	00150.551.00.0
34	2	U-washer	812001
35	4	U-washer	00145.012.05.6
36	13	U-washer	00145.208.00.0
37	4	Blind rivets	820003
38	11	Cap nut	00140.408.00.0
39	4	Blind rivet nut	815001
40	1	Polyester rope	114005

11.3 Scaling ladder

11.3.1 Scaling ladder Part A bottom section



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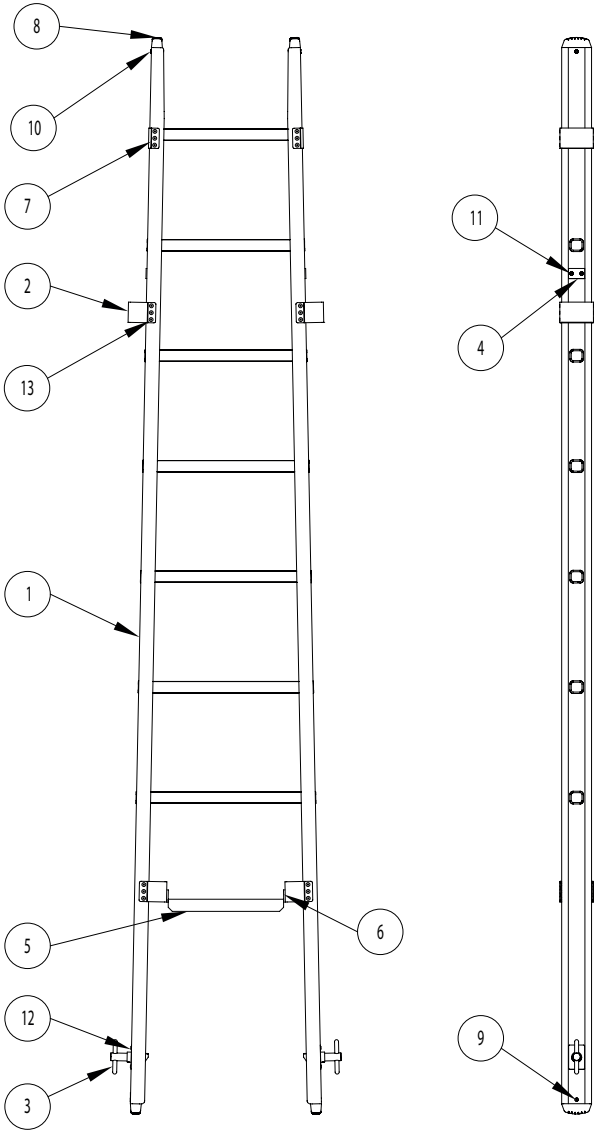
116101

Order No.	Quantity	Designation	Part No.
1	1	Scaling ladder	01401.200.10.7
2	2	Connector	820005
3	2	Stopper	01403.000.04.7
4	2	Stop	01403.000.05.7
5	4	Rubber shoe	820001
6	4	Cylinder head screw	00103.237.00.0
7	4	Hex nut	813002
8	4	Blind rivet	00152.264.45.0
9	24	Blind rivet	820002

11.3.2 Scaling ladder Part B bottom section



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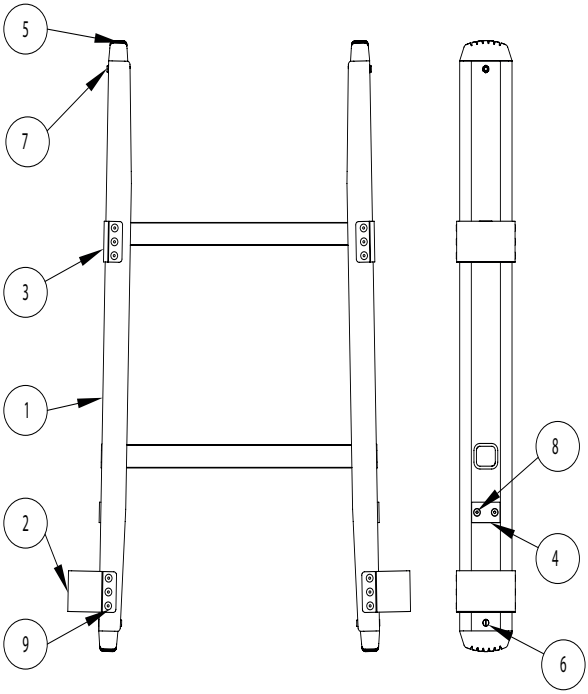
116102

Order No.	Quantity	Designation	Part No.
1	1	Scaling ladder	01401.300.10.7
2	4	Connector	820005
3	2	Ladder lock, galvanized	00165.000.32.0
4	2	Stop	01403.000.05.7
5	1	U-profile	01401.200.31.7
6	2	Angle	01401.200.30.7
7	2	Stopper	01403.000.04.7
8	4	Rubber shoe	820001
9	4	Cylinder head screw	00103.237.00.0
10	4	Hex nut	813002
11	4	Blind rivet	00152.264.45.0
12	4	Blind rivet	820003
13	36	Blind rivet	820002

11.3.3 Scaling ladder, scaling part



116103

Order No.	Quantity	Designation	Part No.
1	1	Ladder part	01401.400.00.7
2	2	Connector	820005
3	2	Stopper	01403.000.04.7
4	2	Stop	01403.000.05.7
5	4	Rubber shoe	820001
6	4	Cylinder head screw	00103.237.00.0
7	4	Hex nut	813002
8	4	Blind rivet	00152.264.45.0
9	24	Blind rivet	820002

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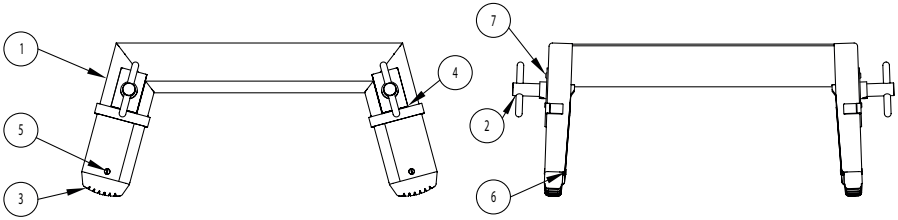
11.3.4 Scaling ladder, connecting part



116104

Order No.	Quantity	Designation	Part No.
1	1	Connecting part	01401.500.00.7
2	4	Ladder lock, galvanized	00165.000.32.0
3	4	Rubber shoe	820001
4	4	Spacer plate	7012078
5	4	Cylinder head screw	00103.237.00.0
6	4	Hex nut	813002
7	8	Blind rivet	00152.220.45.3

12. Warranty and liability

The scope, duration and form of the warranty are set out in the Terms and Conditions of Sales and Delivery of MUNK GMBH. The operating instructions in force at the time of delivery shall always be applicable to warranty claims arising out of or in connection with deficient documentation.

The following shall apply in addition to the Terms and Conditions of Sales and Delivery:

No liability shall be accepted for personal injury or damage to property arising for one or more of the following reasons:

- Use of the fire ladder for a purpose other than its intended use
- Incorrectly completed repair work
- If spare parts other than genuine spare parts are used
- Use of the ladder with defective components
- Inadequately trained or unsuitable assembly and user personnel
- Modifications to the fire ladder
- Catastrophes caused by interference from foreign bodies or force majeure

The operator is responsible for ensuring compliance with safety regulations and that the equipment is used for the purpose for which it is designed.

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MUNK GMBH Günzburg, 28.02.2024

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Notes

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Notes

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Sicherheit. Made in Germany.

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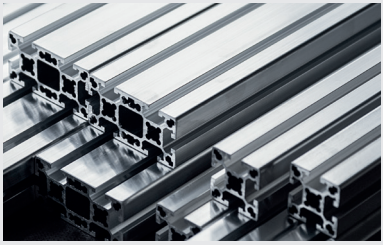
MUNK Günzburger Steigtechnik

MUNK Rettungstechnik



MUNK Profiltechnik

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