



LASERSCANNING
EUROPE



Quick Guide

2-way telescope tripod

with optional **3D safety adapter**

2-way telescope tripod with safety adapter

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A tripod has never been so versatile: crank your scanners up high, but also low down. The 2-way telescope tripod enables scanning at heights of up to 4.00 meters and safe upside-down scanning 4.50 meters below the earth's surface.

Depending on your measuring task, the rod with the mounting plates and 5/8" connection can be inserted in the tripod upright or upside-down. The additional extension rods are each securely connected to the previous rod element. This creates a crank rod that can be extended virtually any way you like.

The 3/8" adapter included in the scope of supply enables use of the tripod with the FARO Focus^{3D} and the Trimble TX5 laser scanners.

The 3D safety adapter is used for overhead applications. This enables you to scan overhead easily and safely. The special adapter enables easy assembly and a secure hold. The best protection for your valuable measurement technology - developed and manufactured in Germany.

Use in line with intended purpose

- Deployment with compatible scanner across a number of height ranges without assembly and dismantling
- Scanning at heights and safe overhead scanning by means of the adapter

Compatible laser

- FARO Focus^{3D} S 120, FARO Focus^{3D} X series and HDR series
- Z+F IMAGER 5006 series (5006i, 5006h)
- Leica HDS 7000
- Leica HDS 6200
- Leica HDS 6100
- Leica HDS 6000
- Trimble TX5
- Z+F IMAGER 5010 series (5010C, 5010X)
- Leica ScanStation P40
- Leica ScanStation P30
- Leica ScanStation P20

Safety

To prevent personal injury or damage to property, comply with the safety information provided in this guide. The manufacturer shall assume no liability for damage or impairments resulting from non-compliance.

Explanation of symbols

You will find safety instructions and symbols at corresponding points in the text.



DANGER

Indicates imminent danger that can lead to fatal or life-threatening injuries.



WARNING

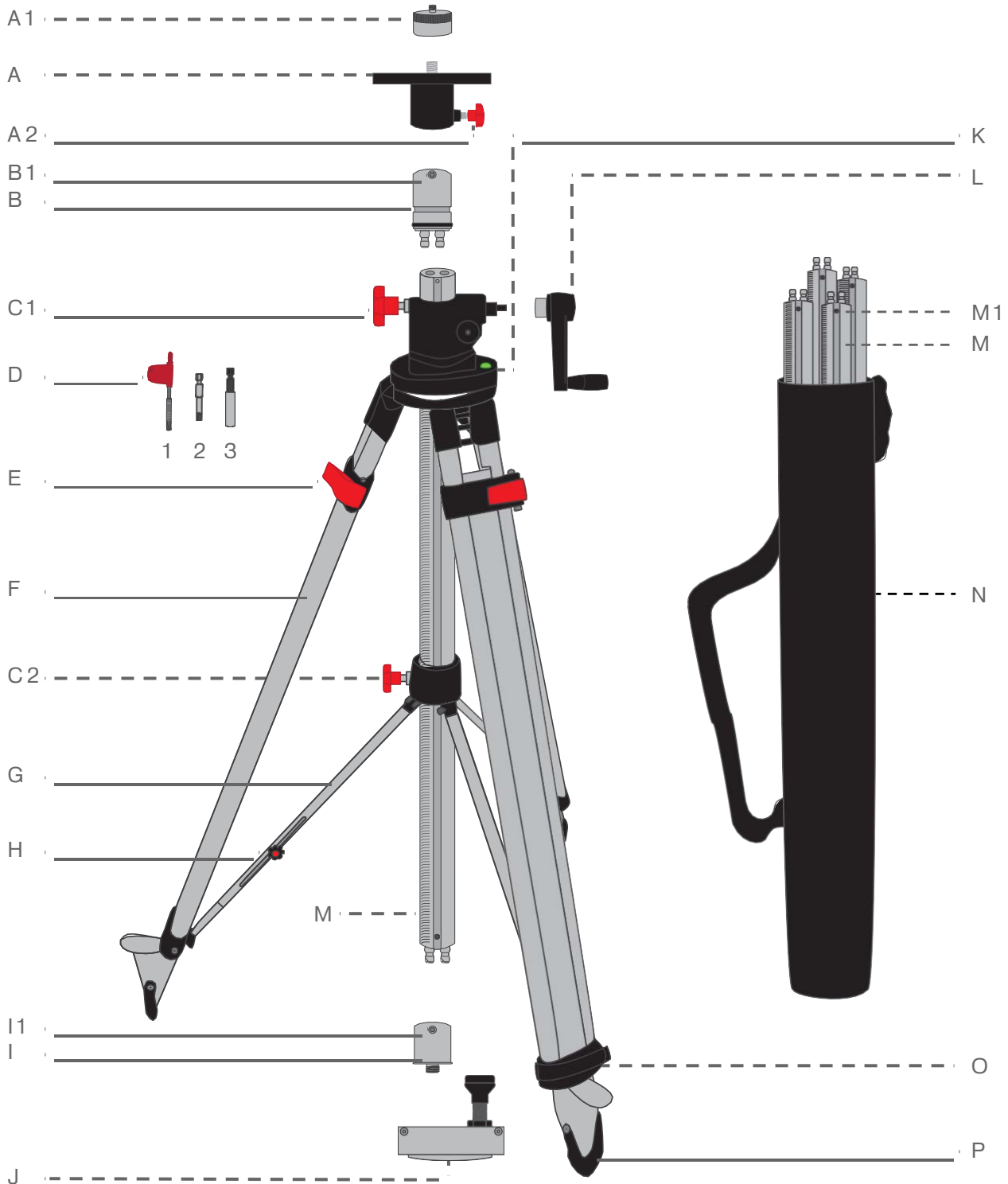
Indicates a possible danger that can lead to fatal or life-threatening injuries.



NOTE

Indicates a tip which, if ignored, can cause damage to property.

2 Scope of delivery

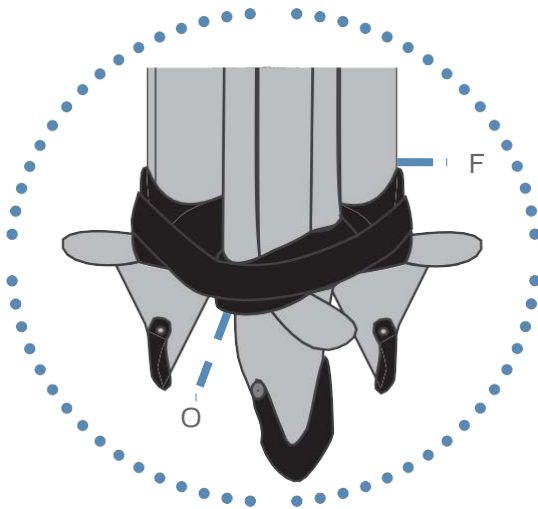


A	Mounting plate with 5/8" connection for the scanner, with 3/8" additional adapter (A 1) and locking bolt (A	I	Toothed column adapter for downward connection with retaining screw (I 1)
B	Toothed column adapter for upward connection with retaining screw (B 1)	J	Safety adapter (2 parts) with bolts
C	Clamping bolts (C 1 and C 2) to lock the toothed column	K	Spirit level
D	1. T-bar socket wrench 2. Bit 3. Bit holder	L	Crank
E	Side clamps	M	Toothed column element and 4 additional toothed column elements (all with retaining screw (M 1))
F	Tripod legs	N	Bag for toothed column elements and accessories
G	Centre braces	O	Velcro lashing strap
H	Locking screws of the center braces	P	Rubber caps

3 Setting up and initial use

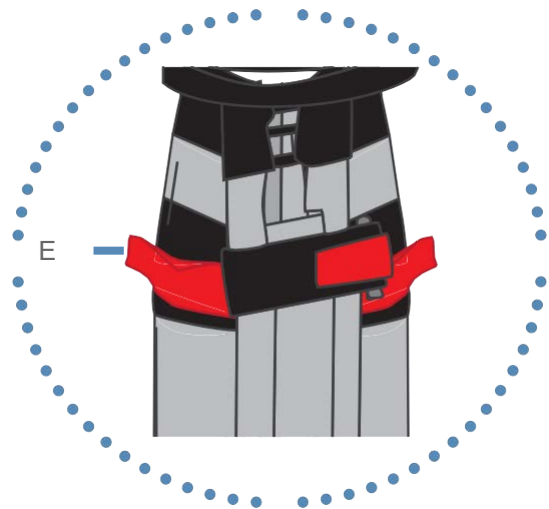
3.1 Setting up the tripod

1



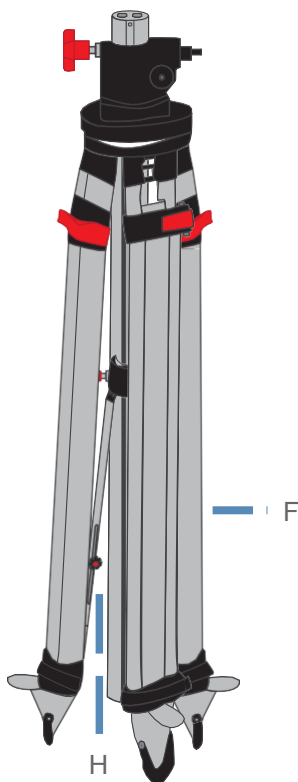
Undo the Velcro lashing strap (O) on the three tripod legs (F).

2



Undo the side clamps (E).

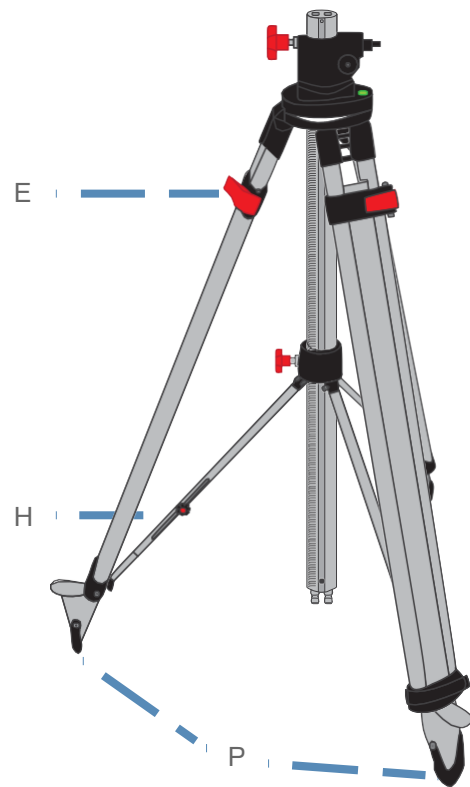
3



3.1 Extend the tripod legs (F) to the desired length.

3.2 Undo the locking screws (H) of the center braces.

4



4.1 Pull the tripod legs (F) apart to the desired width.

Place the tripod securely on the ground.

4.2 Retighten all of the side clamps (E) and locking screws (H).

4.3

NOTE

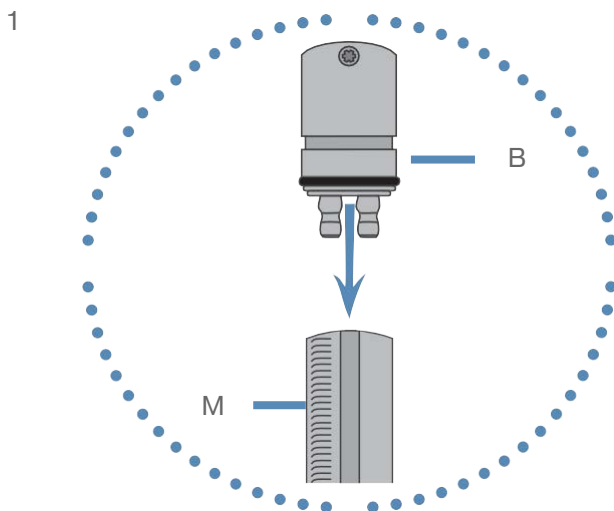
If the position of the tripod is not perpendicular, vibrations occur during rotation of the laser scanner, impairing the quality of the scan. Use the spirit level (K) to set up the tripod vertically.



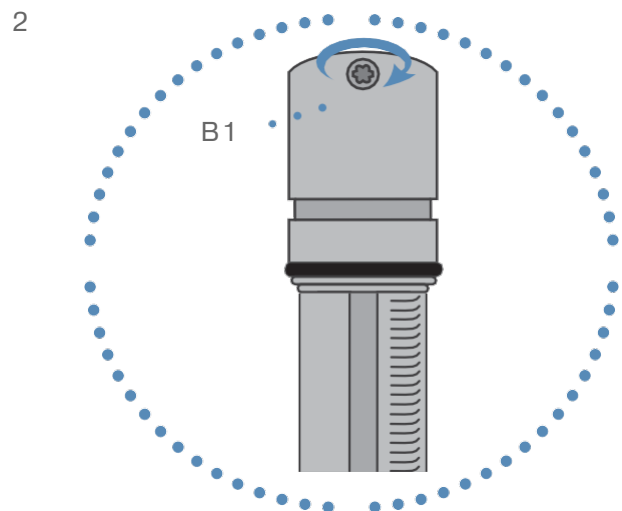
WARNING

If the ground is soft, icy or slippery, there is a risk that the tripod legs will slip. Use the rubber caps (P).

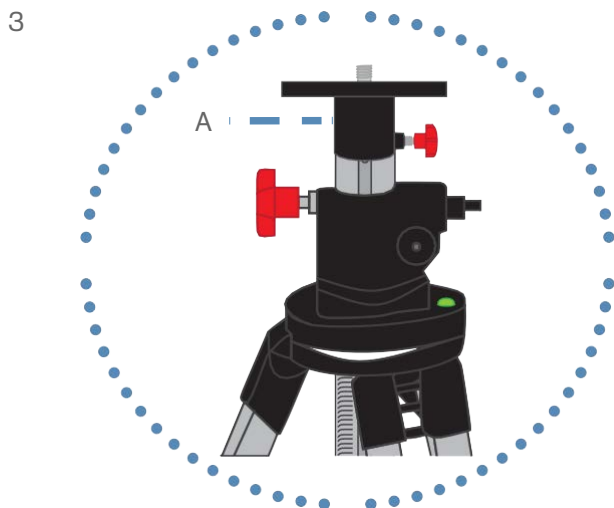
3.2 Operating the tripod upwards



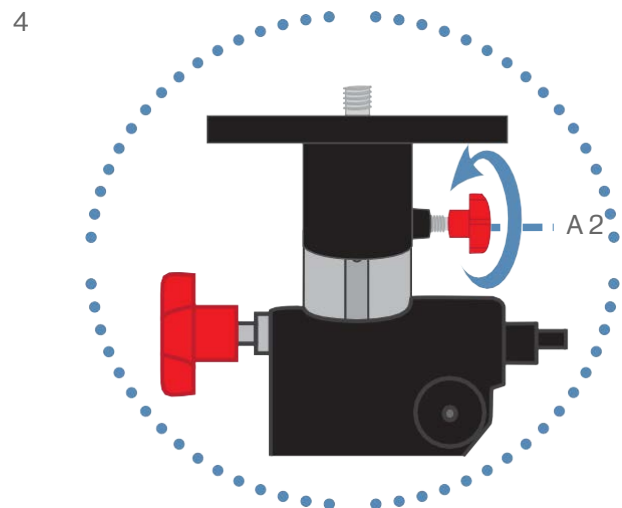
For upward operation, place the toothed column adapter (B) on the upper end of the toothed column element (M).



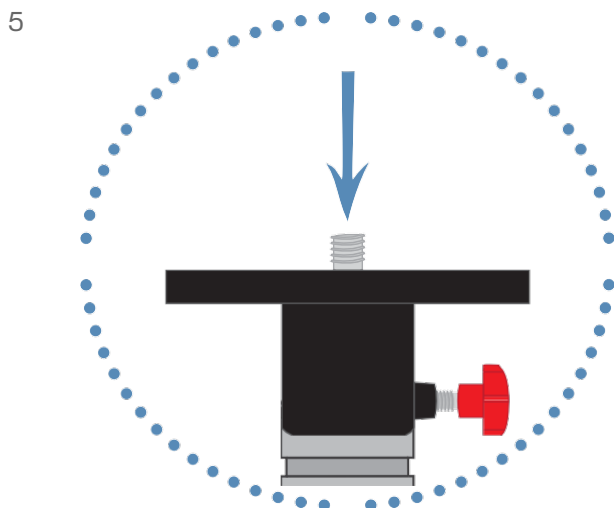
Use the T-bar socket wrench (D 1) to tighten the retaining screw (B 1).



For upwards operation, attach the mounting plate for the laser scanner (A) on the toothed column adapter (B) you have just mounted.

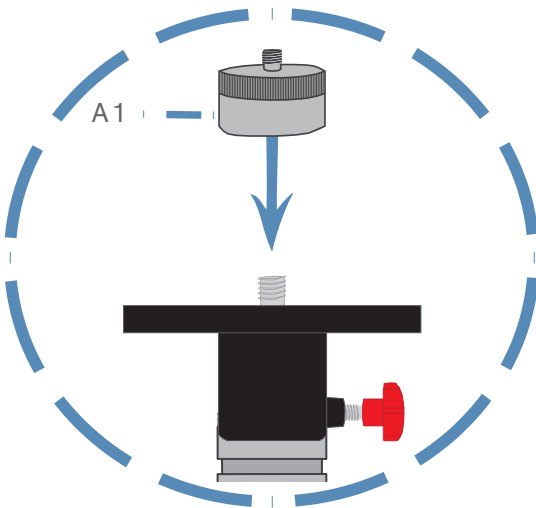


Fix the mounting plate for the laser scanner (A) in place by turning the locking bolt (A 2).



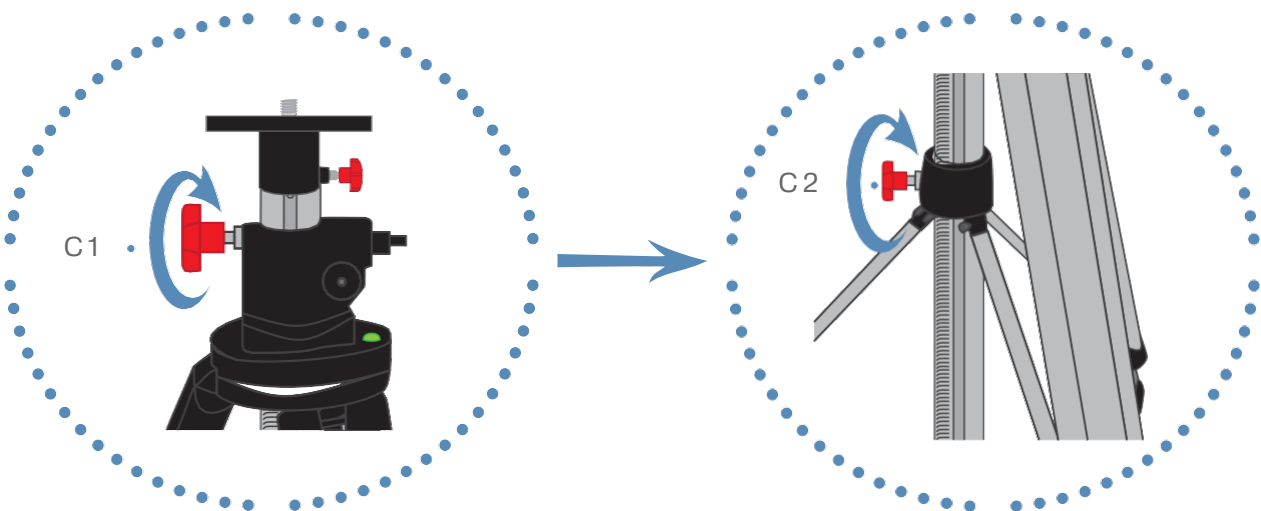
Place the laser scanner with **5/8" connection** on the mounting plate.

TIPP:



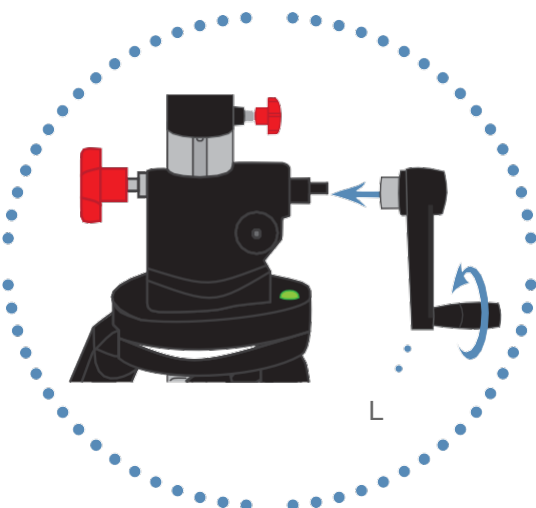
To mount a laser scanner with a 3/8" connection on the tripod, screw the **3/8" adapter (A 1)** onto the mounting plate (A) beforehand.

6



Undo both clamping bolts (top C 1 and in the center C 2) to lock the toothed column elements.

7



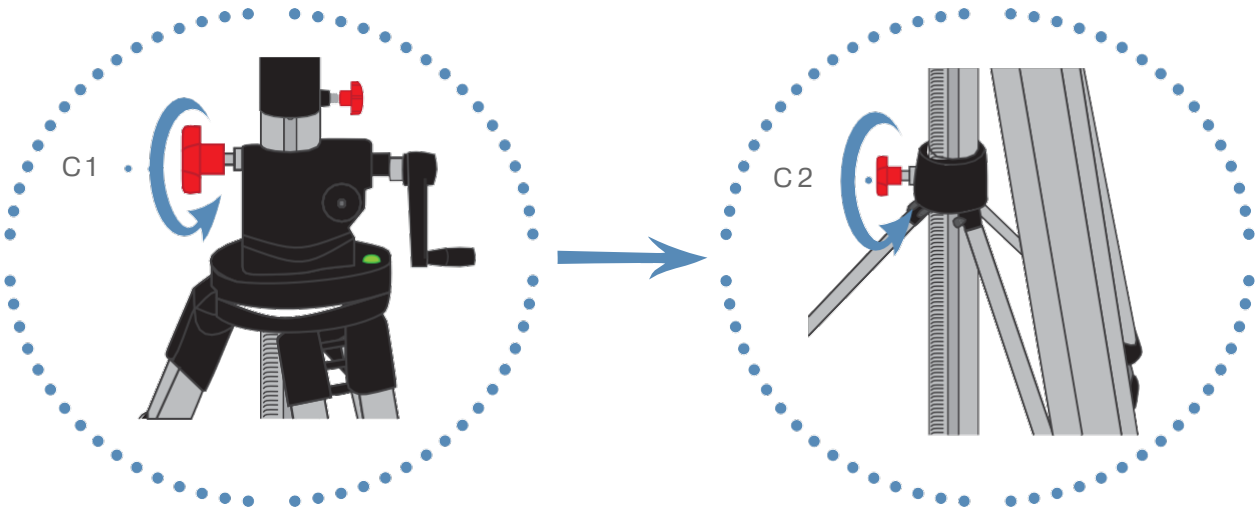
WARNING

The entire crank unit is configured for continuous operation with up to 20 kg. An additional load can damage the tripod. Make sure that the total weight of the toothed column elements and laser scanner does not exceed 20 kg.

TIPP: You can order other toothed column elements at any time on request.

Use the crank (L) to raise the toothed column element to the desired height.

8



Retighten the clamping bolts (top C 1 and in the center C 2) to lock the toothed column element in place.

→ You can now carry out your scans.

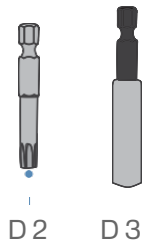


WARNING

Cranking without undoing the clamping bolts beforehand can lead to severe wear in the helical-worm gear unit and damage the crank. Before cranking, always undo clamping bolts C 1 and C 2.

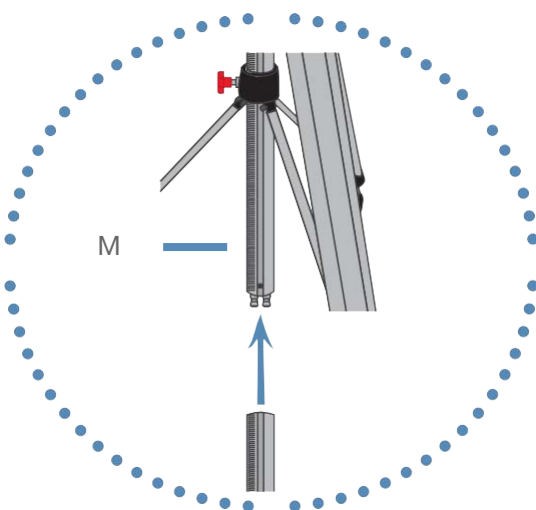
NOTE

Accelerate the extension of the toothed column elements (M) using a cordless drill/screwdriver. Use the bit holder supplied with the accessories (D 2 and D 3).



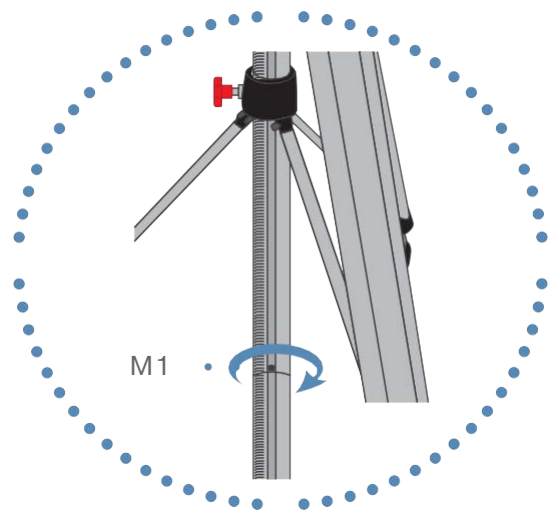
3.3 Mounting other toothed column elements for upward operation

1



Insert another toothed column element (M) on the double pin of the toothed column element located in the tripod.

2



Use the T-bar socket wrench (D 1) to tighten the retaining screw (M 1).



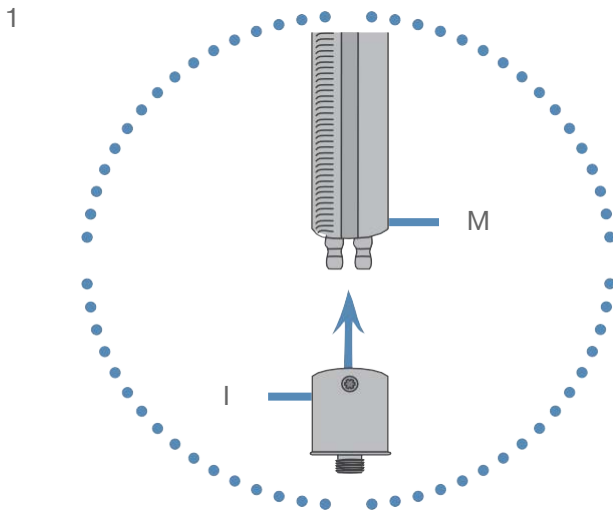
NOTE

If the tripod is set up at too low a height, no toothed column elements can be fitted to create an extension. Extend the tripod to a height of at least 1.10 meters.

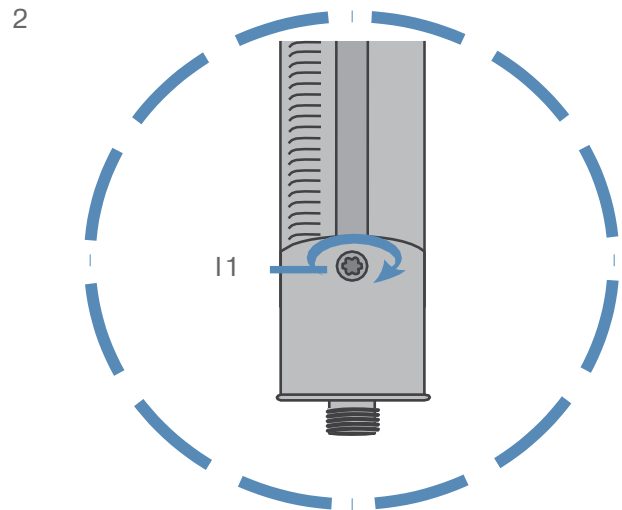
NOTE

A laser scanner can be operated on the tripod up to a height of 6.00 meters. Operation at greater heights can lead vibrations (due to wind when outdoors) and diminish the quality of your scans. It is recommended to scan at a maximum height of 4.00 meters.

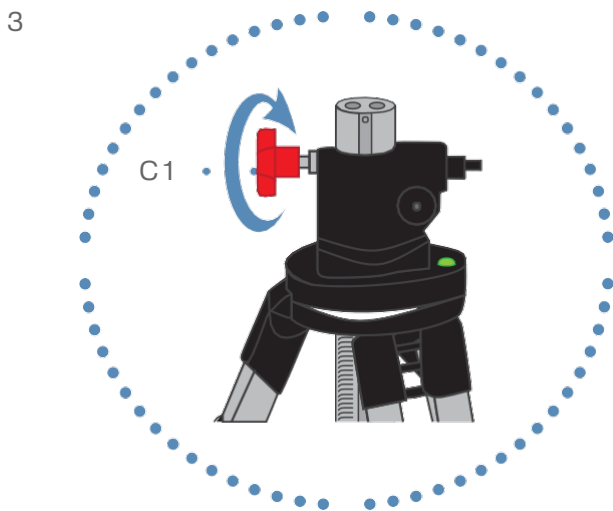
3.4 Operating the tripod downwards



Place the adapter for downward operation (I) on the bottom end of the toothed column element (M).

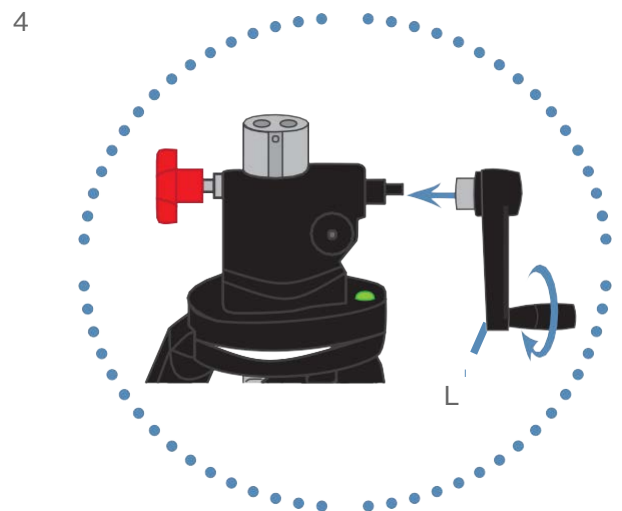


Tighten the retaining screw (I 1) of the adapter.

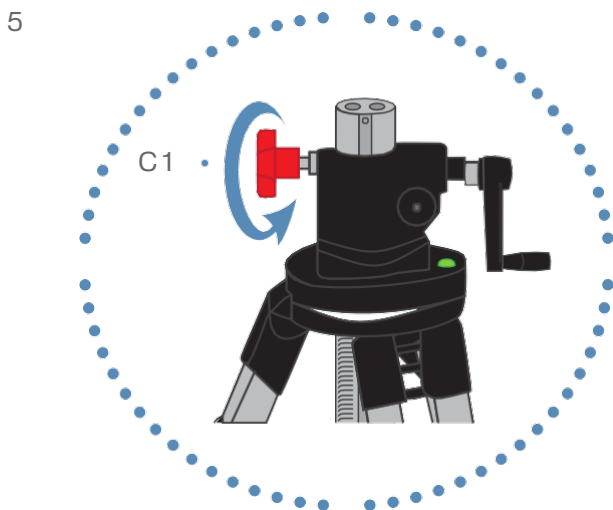


Undo the clamping bolts (top C 1 and in the center C 2) to lock the toothed column elements in place.

→ See chapter 3.2, step 6.



Use the crank (L) to lower the toothed column element to the desired depth.



Retighten the clamping bolt (C 1) to lock the toothed column element in place. → You can now mount the laser scanner and carry out your scans.



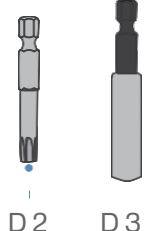
WARNING

If the toothed column element is cranked down too far, the rod and laser scanner can fall. Never crank down so far that the end of the toothed column element at the top can no longer be seen.

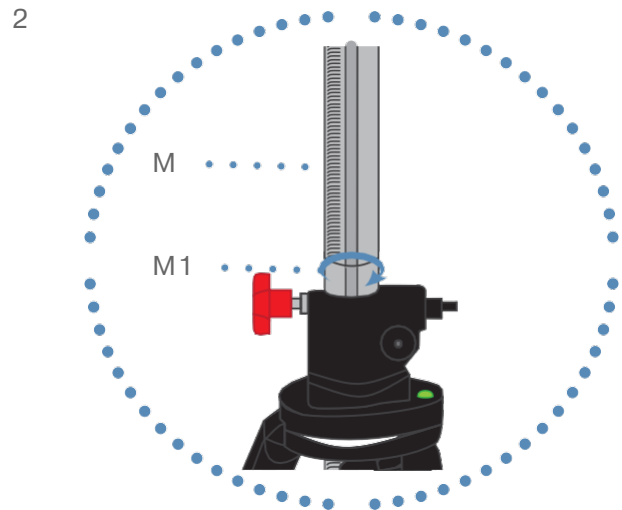
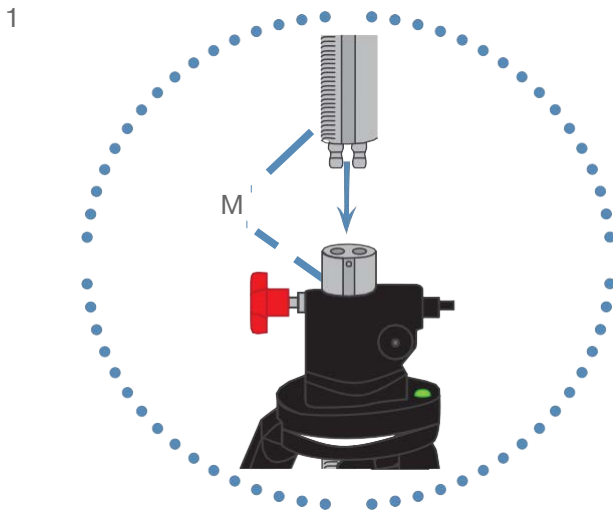


NOTE

Accelerate the extension of the toothed column elements (M) using a cordless drill/screwdriver. Use the bit holder supplied with the accessories (D 2 and D 3).



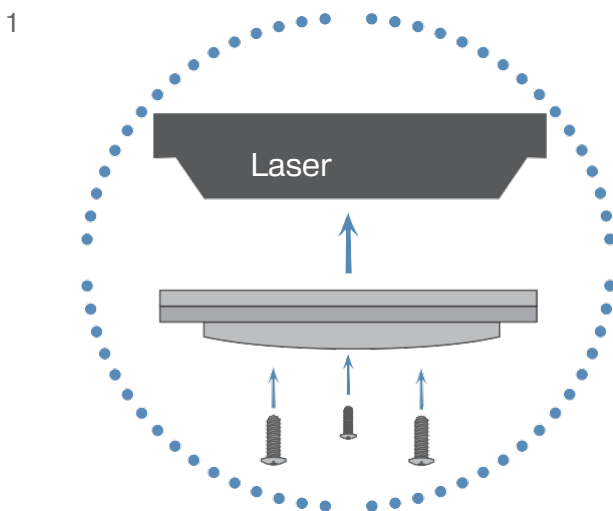
3.5 Mounting other toothed column elements for downward operation



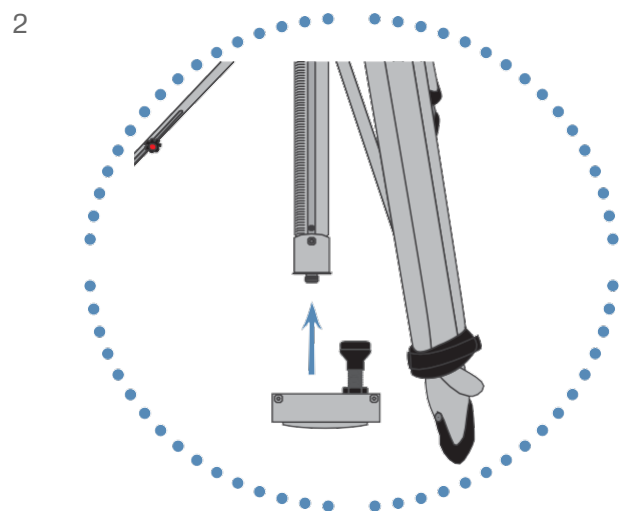
If the toothed column adapter (B) for the upward connection is still attached to the tripod, remove it. Insert another toothed column element (M) on the double pin of the toothed column element located in the tripod.

Take a firm hold of the toothed column element to be inserted (M) and use the T-bar socket wrench (D 1) to tighten the retaining screw.

3.6 Optional: mounting the 3D safety



Bolt the cover plate of the 3D safety adapter onto the original baseplate of the laser scanner.



2.1 Attach the counterpart piece of the 3D safety adapter on the mounted toothed column adapter (I) at the tripod.

2.2 Push the cover plate with the laser scanner into the guide rail of the 3D safety adapter.

2.3 Secure the connection by pulling out the black safety split pin and letting it snap back.

You can now carry out your scans safely.



4 Technical data



2-way telescope tripod	5/8" connection; adapter for laser scanners with 3/8" connection (included in scope of delivery)
Transport length	approx. 1.30 m
Weight	approx. 8.5 kg
Minimum usable height	approx. -4.50 m below the earth's surface
Maximum usable height	approx. 6.00 m (up to 4.00 m is recommended)
Material	Aluminum
Mounting plate for scanner with locking bolt	Diameter 11.0 cm
Toothed column elements	1.00 m each
Crank drive	with crank or cordless drill/screwdriver
3D safety adapter	
Weight	200 g
Dimensions	10.0 cm x 10.5 cm x 10.0 cm
Compatible laser scanners	All laser scanners with 5/8" and 3/8" connection; a maximum of 20 kg is permitted with continuous operation

5 Disclaimer



Laserscanning Europe GmbH assumes no liability and grants no warranty, neither expressly nor by implication, with regard to the information contained in this operating manual.

Buyers of the product bear the costs of all required services or repairs and damage caused as a result of improper use of this product or non-compliance with the safety instructions as well as direct or indirect damage and loss (including loss of profit and information loss) resulting from product deficiencies.

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