

OPERATING AND MAINTENANCE MANUAL FOR THE GUIDED TYPE FALL ARRESTER

**Twin
stop**



Type 200000I

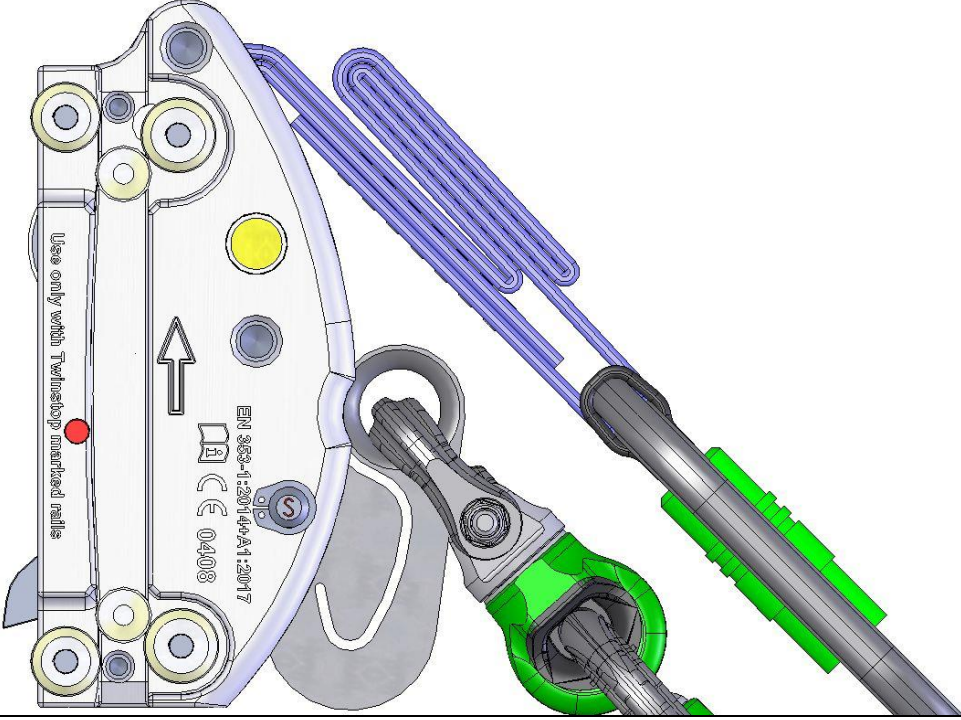
Content

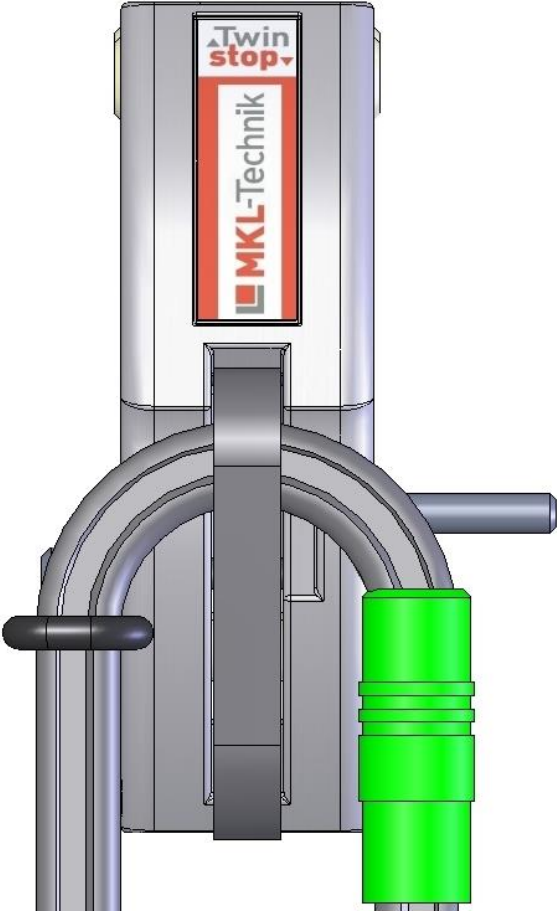
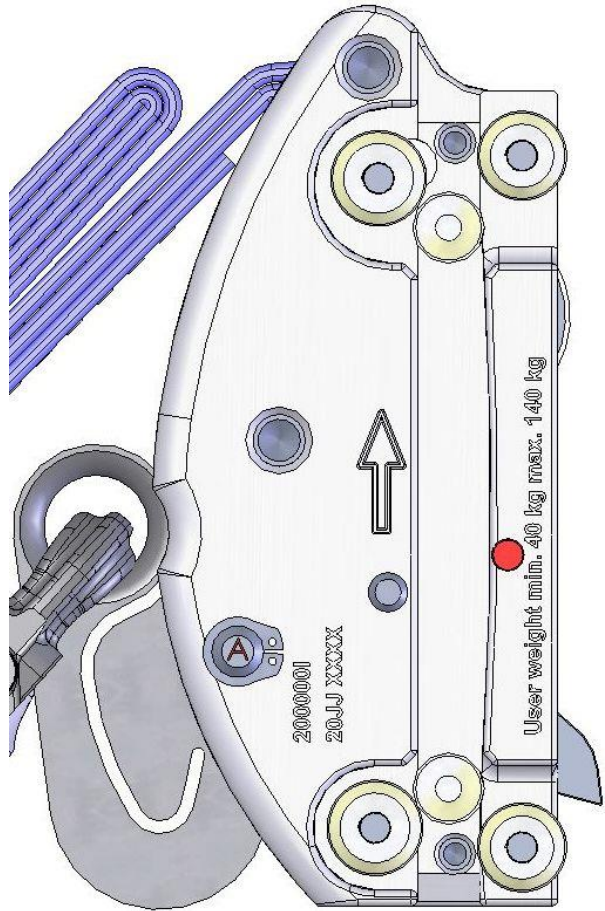
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1 - Introduction and markings

Thank you for buying a MKL-Technik GmbH fall arrester. You received a guided type fall arrester Twinstop® with these instructions. In order to guarantee maximum safety, we kindly ask you to double check that all data on the received fall arrester corresponds with the pictures below.

A supplement to the product data (Chapter 10 "Inspection") must be made.

Left side

<u>Inspection tag</u> Shows when the next inspection is requested. <u>EN 353-1:2014+A1:2017</u> Standard of the guided type fall arrester including rigid anchor rail  Read and take care of instruction CE 0408 NB-number of the monitoring agency <u>Use only with Twinstop marked rails</u> The fall arrester Twinstop® may only be used in Twinstop® marked rails

Front side	Right side
	
Twin stop Model name of the Twinstop® fall arrester  Manufacturer	<u>Directional arrow</u> Always points upwards <u>200000I / 200000I2</u> Type of the guided type fall arrester <u>20JJ XXXX</u> Year of manufacturing and serial number <u>User weight min. 40 kg max. 140 kg</u> Weight for a guaranteed function is min. 40 kg and max. weight is 140 kg respectively 1 person.

In case the information on your fall arrester does not match the information written in the columns above, please contact us immediately:

MKL- Technik GmbH
Kirchenlamitzer Straße 20
95126 Schwarzenbach a. d. Saale
Germany

Service Phone: +49 (0) 9284 8011465
Web: info@mkl-technik.de

2 - General

Twinstop® is a guided type fall arrester including a rigid anchor line in accordance to EN 353-1:2014+A1:2017. The use is preferably made on ladders or crampons as mounted guard or is part of a protective device.

Guided type fall arresters including a rigid anchor line are safety devices to prevent accidental falls from high places. They need to be installed where ever access is needed to heights of more than 3 m or 5 m respectively.

Guided type fall arresters including a rigid anchor line must apply to EN 353-1:2014+A1:2017 and need to pass the EU-type examination in accordance to the REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL. Furthermore is the use of such devices requested accordingly to the directive of Health and Safety at the use of personal protective equipment.

3 - Function of guided type fall arresters

With the use of a full body harness, the user is connected to the guided type fall arrester. The fall arrester is guided in a rigid rail system. The fall arrester blocks in case of an accidental fall and stops descend. The free fall distance in such systems is reduced to a minimum.

End-stops on the top and bottom end of the rail provide a controlled removal of the fall arrester from the rail system.

When inserting the fall arrester into the vertical rail, pay attention to the directional arrow on the body of the fall arrester, it must always be in the upright position.

 Caution!	When using a fall arrest system be aware that within the first 2 m it may not properly stop a fall because it has not achieved the minimum clearance. This, however, is dependent on the height of the user and the geometric position of the person to the guide rail and full body harness.
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4 - General Safety Advices

1. Before using a fall arrester including a rigid anchor line, every user needs to understand and comply with the user instructions.
2. In case personal protective equipment (PPE) will be used, this user instruction must be followed as well.
3. All user instructions must to be provided to the climbing staff on site.
4. The equipment may only be used within the specified operating conditions and for the intended use.
5. Incorrect combination of individual elements of the equipment may result in the impairment or even inefficiency of the safe operation of one or more elements.
6. Guided type fall arresters and the rigid anchor line must be visually inspected before each use. If any damage is determined, or if there are any doubts about proper functioning, the system must not be used. See §8 function test
7. Parts that have been damaged by an accidental falls or simply by using the system must be withdrawn from further use.
8. Manipulating or modifying the fall arrester or rigid rail without the consent of the manufacturer is prohibited.
9. The fall arrester needs to be attached on the front D-ring at belly or chest level on the harness, which has to be certified in accordance to EN 361.
10. Guided type fall arresters are for protection while climbing a vertical access. For any other activities, such as working from a ladder, the climber needs to use proper anchorage equipment, like shock absorbing lanyards / work positioning lanyards, etc.

11. Belly and chest harnesses need to be tight to the body
12. The safety of the user depends on the effectiveness and durability of the equipment. Therefore, guided type fall arresters and their rigid anchor line must be checked annually and within a period of 12 months by a qualified person. Repairs may only be carried out by the manufacturer.
13. It must be ensured that the necessary space below the user is sufficiently large so that in case of a fall no impact on the ground or against another obstacle is possible.
14. In principle, no changes may be made to the system that are not performed by the manufacturer or approved by the manufacturer.
15. All persons working on job sites using PPE against falls need to be in good physical conditions. A medical test, like the German G41 (DGUV 250-449), can help to confirm the condition of a potential climber. Exclusion criteria are e.g. Alcohol and drug use, dizziness, nausea, fear of heights or similar.
16. Fall protection systems may only be used by people that have been trained or that are experienced with the risks associated of high workplaces, and that are aware of how to use fall protection.
17. Before using a rescue plan must be set up specifying how to make rescue activities safe and efficient. When using the plan, the instruction needs to be followed correctly.
18. All information on the fall arrester, the rigid anchor line and PPE needs to be correct and visible to all. An unreadable label is equivalent to a lack of safety.
19. PPE that has gotten wet during use must be dry out naturally. It should be kept away from heaters, stove, sun, etc.
20. Responsible notified body:
TÜV AUSTRIA Deutschland GmbH, Seilfahrt 12, 44809 Bochum,
Germany, notified body number: 0408

5 - Twinstop[®] as a system

Just another fall arresting system?

The fall arrest system consists of:

- rigid anchor line (rail)
- guided type fall arrester
- full body harness

The novelty of the Twinstop[®] system is the function of the fall arrester

The fall arrester is connected with the front D-ring at chest level of the full body harness. The fall arrester is released by leaning back, so that the claw is pulled horizontally from the guide rail. In this position the user can freely climb up and down the ladder.

In case of an accidental fall the feeler wheel rolls over a catch, the downward speed is increasing, so the claw has no time to move back into the housing. The claw will move against the catch and block. The claw is additionally pressed into the rail by the downward motion of the anchorage point. The anchorage point is not directly connected to the claw. Therefore, the claw cannot be disengaged through movements of the person climbing. The design of the blocking system guarantees that the block function is not impaired by spring breakage or contamination.

Notice! 	By the features described above the fall arrester provides double safety at any inclination of the guiderail as well as an from any external effects independent function. Examples of external effects are: • The user weight • The user size • The user behavior • The design of the harness • The material of the harness • Dirt, dust, paintings, cement, etc. on the fall arrester
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6 - Implementing Twinstop® on existing guide rail systems

The existing guide rail system must provide conformity to the Twinstop®. This conformity must be shown by an additional identification plate placed at the beginning of a rigid anchor line (rail system). The certification can only be performed by the manufacturer or by a company certified by the manufacturer.

Since the fixed guide and the accompanying fall arrester combined with the fall arrest harness together form the fall arrest system, the Twinstop® system may only be used on climbing routes that certify this conformity.



Caution!

Guide Rail systems without the designation tag shown below are not certified for use with a Twinstop® Fall arrester. The identification plate needs to be placed at the beginning of a vertical access.

Identification plate for guided type fall arresters including rigid anchor line



certifies the conformity of a rail system that must be used with Twinstop® fall arrester

EN 353-1:2014+ A1:2017

European standard designation number

Date of manufacturing

must correspond with the year of construction

CE 0408

EC-type examination conformity stamp and NB-number of the notified body



Use only with fall arrester type Twinstop®



User and maintenance instructions available, these must be read before using.

Identification plate for rigid anchor line of the company
Logaer Maschinenbau GmbH

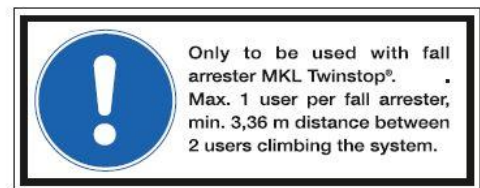


FALL PROTECTION
... simply reliable!

Rigid anchor line for guided type fall arresters
Certified accordingly EN 353-1:2014+A1:2017



CE 0408



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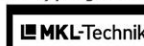


Use a full body harness must comply to EN 361

MKL-Technik GmbH

Manufacturer of the guided type fall arresters including a rigid anchor line

Mitlaufendes **Auffanggerät** einschl. fester Führung:
Guided type **fall arrester** including rigid anchor line:

 
MKL-Technik GmbH
www.mkl-technik.de
Nur Originalbauteile zulässig
Only original components may be used

Twin stop
200000 I+H+X
EN 353-1: 2014
+A1:2017 (2018)
CE 0158 + CE 0408

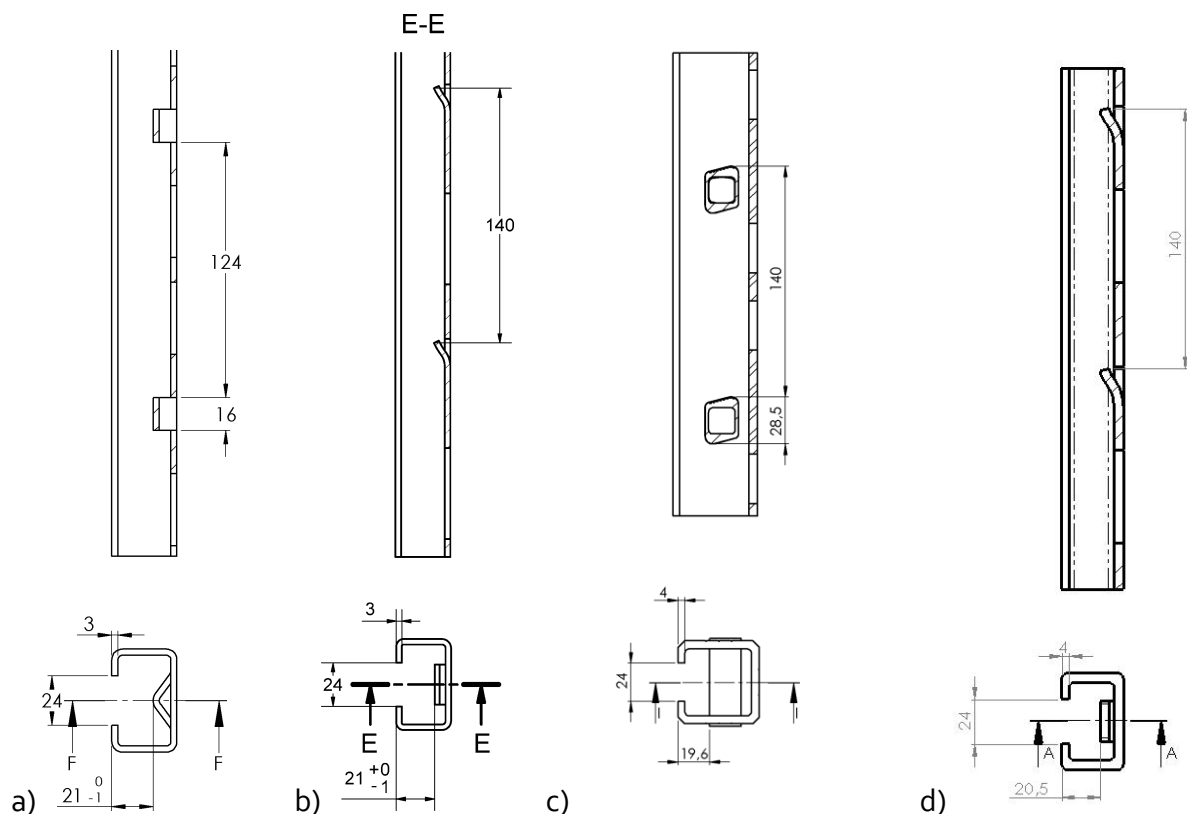


safety climbing systems GmbH
Type
Tr280 / Tr273,3 / R140
Tr280-3 / CC / NC

The guided type fall arrester Twinstop® may only be used in the rails of the MKL-Technik GmbH which have been tested and certified with the fall arrester. The following profile cross sections are available:

Steel rails (hot-dip galvanized) with C shape profile With tunnel catches 140mm, as a ladder or guide rail	50x31,5 mm Illustration "a"
Steel rails (hot-dip galvanized) with C shape profile With catches 140mm, as a ladder	50x30 mm Illustration "b"
Stainless Steel rails (pickled) with C shape profile With tunnel catches 140mm, as a ladder or guide rail	50x31,5 mm Illustration "a"
Aluminum rails with C shape profile With catches 140mm, as a ladder	52x51 mm Illustration „c"
Aluminum rails with C shape profile With catches 140mm, as a guide rail	52x33 mm Illustration „d"

Following profile cross sections:



 Attention!	Principally the Twinstop® fall arrester can be used in rails mentioned above at inclination + 20° or – 20° reclined, as well as a sidewise inclination (left and right) of 15°.
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7 - Safety advices for using a Twinstop® system

The Twinstop® fall arrester serves exclusively the safety of **one** person.

The max. load including tools and equipment is 140 kg.

The minimum load without tools and equipment may not be below 40 kg.

Items / Objects may not be transported with the fall arrest system.

The Twinstop® fall arrester is considered as PPE, the user should ensure it is properly stored (i.e. kept out of adverse weather), and may not be left in the guide rail.

The Twinstop® fall arrester needs to be visually inspected to ensure proper functioning before each use. Before and after each use, the fall arrester should to be cleaned from dirt, dust, paint, cement, etc.

The Twinstop® fall arrester should to be transported and stored in a proper container.

 Caution!	The Twinstop® fall arrester must not be manipulated or modified by the user. Twinstop® or modification could cause serious injury or death.
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The Twinstop® fall arrester must be used with original parts.

The Twinstop® fall arrester may only be used in guide rail systems that have been certified for the use with Twinstop® by the manufacturer or by a company authorized by the manufacturer. This must be always shown by an identification plate (see chapter 6) placed at the beginning of the access.

 Caution!	Our warranty is null and void if non-original parts are used or if the Twinstop® fall arrester is used with an uncertified guide rail system. This is also the case if the inspection period has expired or if the inspection was not be done by an authorized person.
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The Twinstop® fall arrester may only be used in combination with a full body harness in accordance to EN 361, which needs to provide a dorsal D-ring on the back of the harness as well as a dorsal D-ring in front at chest or belly level for connecting to the fall arrester.

 Caution!	The full body harness must be always tight. If the harness becomes loosen while climbing it has to be adjusted immediately at a safe position. Using a not fitting harness is causing risks for life and limb.
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The carabiner at the swivel of the Twinstop® fall arrester needs to be connected directly with the belly D-ring of the harness.

The carabiner at the sling needs to be connected to the chest D-ring of the harness.

 Caution!	The length of the connector may not be modified. It is prohibited to use extensions or shorten for instance by taking in or out additional connectors.
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The Twinstop® fall arrester has been tested and certified to function properly in temperatures ranging from -35° to + 50° Celsius.

At temperatures below zero degrees, the fall arrester has to be dry before using.

To guarantee perfect functioning, the wheels of the fall arrester should turn freely, the feeler wheel are may not be damaged and the reciprocal movement between the claw and the feeler wheel is guaranteed.

The Twinstop® fall arrester may not come into contact with aggressive substances such as acid, bleaches, aggressive detergents, etc.

Usage in explosive environments can only be certified through the manufacturer.

The minimum fall clearance below feet level to use a Twinstop® fall arrester for a person with fall factor two is 2 m.

A fall arrester may be used by one person. However a system can be used by several persons respectively each with its individual fall arrester. The maximum number of users is only limited by the length of the system. The minimum distance between two users is 3,36 m. For instance at a system with 12,6m length you can have 3 persons simultaneously climbing.

Basically the lifespan of a Twinstop[®] fall arrester is not limited, since the entire fall arrester is made of durable material. However, depending on user frequency and environment the fall arrester can be worn out in a way that a further usage is impossible. Further on the annual inspection is the main criterion whether a fall arrester can be kept in service.

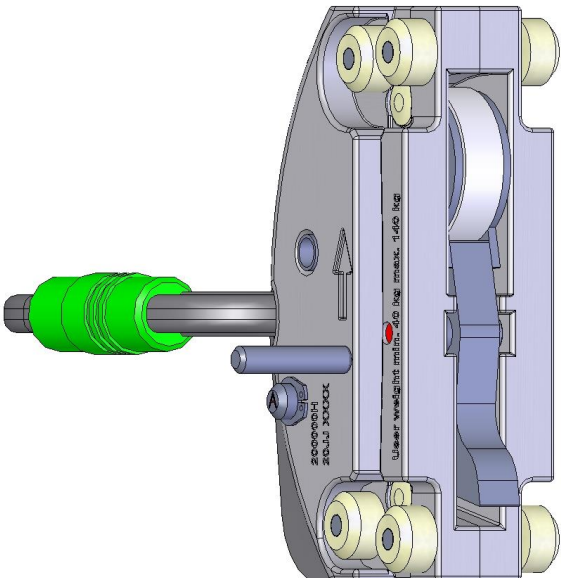
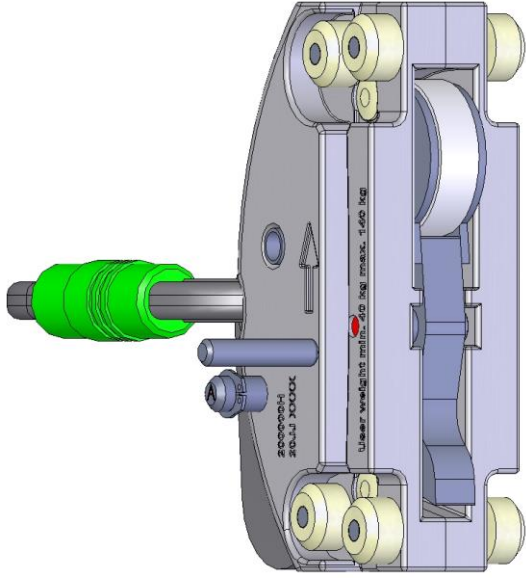
8 - Use of the Twinstop[®] fall arrester

8-1 Insert Twinstop[®] fall arrester

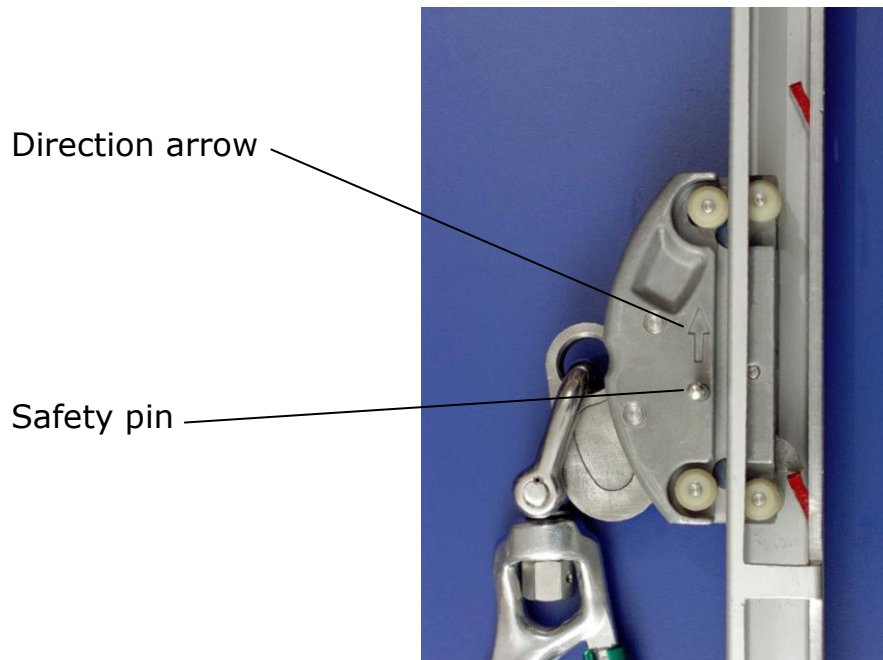
Before inserting check the existing guide rail for suitability.

- Use fall arrester only in guide rails type Twinstop[®].
- Use fall arrester only in guide rails with current annual inspection.

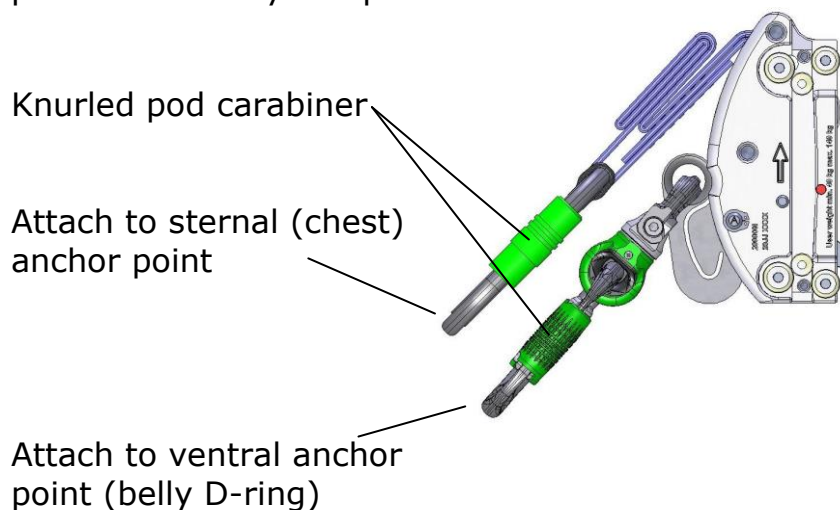
In order to ensure a maximum comfort for the climber, the adjustable sliding lever needs to be pushed into position, before inserting the fall arrester into the rail. The position of the adjustable sliding lever does only affecting the comfort however not at all the safety of the system.

	
Application in Profiles with cross section 51x52 mm	Application in Profiles with cross section 32x50 and 33x52 mm
Adjustable sliding lever pushed to marked „A“.	Adjustable sliding lever pushed to marked „S“

The Twinstop® fall arrester is inserted at the bottom end of a guide rail system at the entry gate. You must pay attention to the direction indicator on the Twinstop® fall arrester. It is an arrow placed on the right side of the Twinstop® fall arrester, and it must point upwards. A second indicator is the metal safety pin right below the arrow on the right side of the Twinstop® fall arrester. This pin will be stopped at the end stop respectively on stop shoes which are placed on the entering- / exit- point.



After inserting the Twinstop® fall arrester, the self locking carabiner at the shock absorber needs to be opened and attached to the ventral anchor point (belly D-ring) of the harness. The connection is successful when the knurled pod on the carabiner gate moves automatically into the double locking position. The same applies to the carabiner of the textile webbing sling. This must be hooked into the sternal anchor point. Only then is the securing process correctly completed.





Caution!

Incorrect connection between the carabiner of Twinstop® fall arrester, and the D-ring of the full body harness could lead to serious injury or loss of life.

8-2 Remove Twinstop® fall arrester

The Twinstop® fall arrester can be taken out of the guide rail system after passing an endstop, respectively at a entering- / exit- point. To remove the Twinstop® fall arrester at a entering- / exit point please pay attention on the corresponding user instruction.



Caution!

Before removing the Twinstop® fall arrester from the guide rail, the user needs to secure otherwise with corresponding PPE against falling.

An additional attachment is also required if the user is working from the guide rail system, or is resting on the guide rail system. These attachments must be made at proper anchor points.

The attachment point has to be chosen as high as possible. Ideal fall factor 0 (overhead) in order to reduce the free fall distance to a minimum.

If an anchor point in fall factor 1 or 2 is the only option, please pay attention, that the clearance is big enough to avoid the person hitting to the ground or the next obstacle before getting stop by the lanyard or retractable.

8-3 Rescuing of a casualty

In order to be able to carry out a rapid rescue, a rescue concept must be in place before work begins.

In the case of a fall and a person suspended in a harness it has to be ensured that the casualty will be forwarded by a skilled and trained rescue person to a medic not later than 20 minutes after the fall.

Depending on the situation at site, it can be needed to lift or lower the person.

In case of lifting the person can stay connected with the fall arrester because the arrester is passing the rail upwards freely.

In case of lowering the casualty, the person needs to be released from the fall arrester, because the system is blocking in this direction.



Caution!

Before releasing the casualty from the fall arrester, it has to be secured that the person is protected against fall, for example by using a rescue descender

9 – Function test of the Twinstop[®] fall arrester and rigid anchor line

Before using fall arresters including a rigid anchor line a visual and physical test has to be examined. Herewith following points have to be considered:

MKL rigid rail / ladder

- Twinstop[®] type plate is placed and readable
- Last inspection less than 12 months
- Bottom end stop installed
- All screws mounted and tight fastened
- No mechanical impact (grindings, cuts,..)
- All joint connectors mounted
- Top end stop /rigid end stop mounted
- No structural or dimension changing corrosion
- No thermal discoloration

Twinstop[®] fall arrester

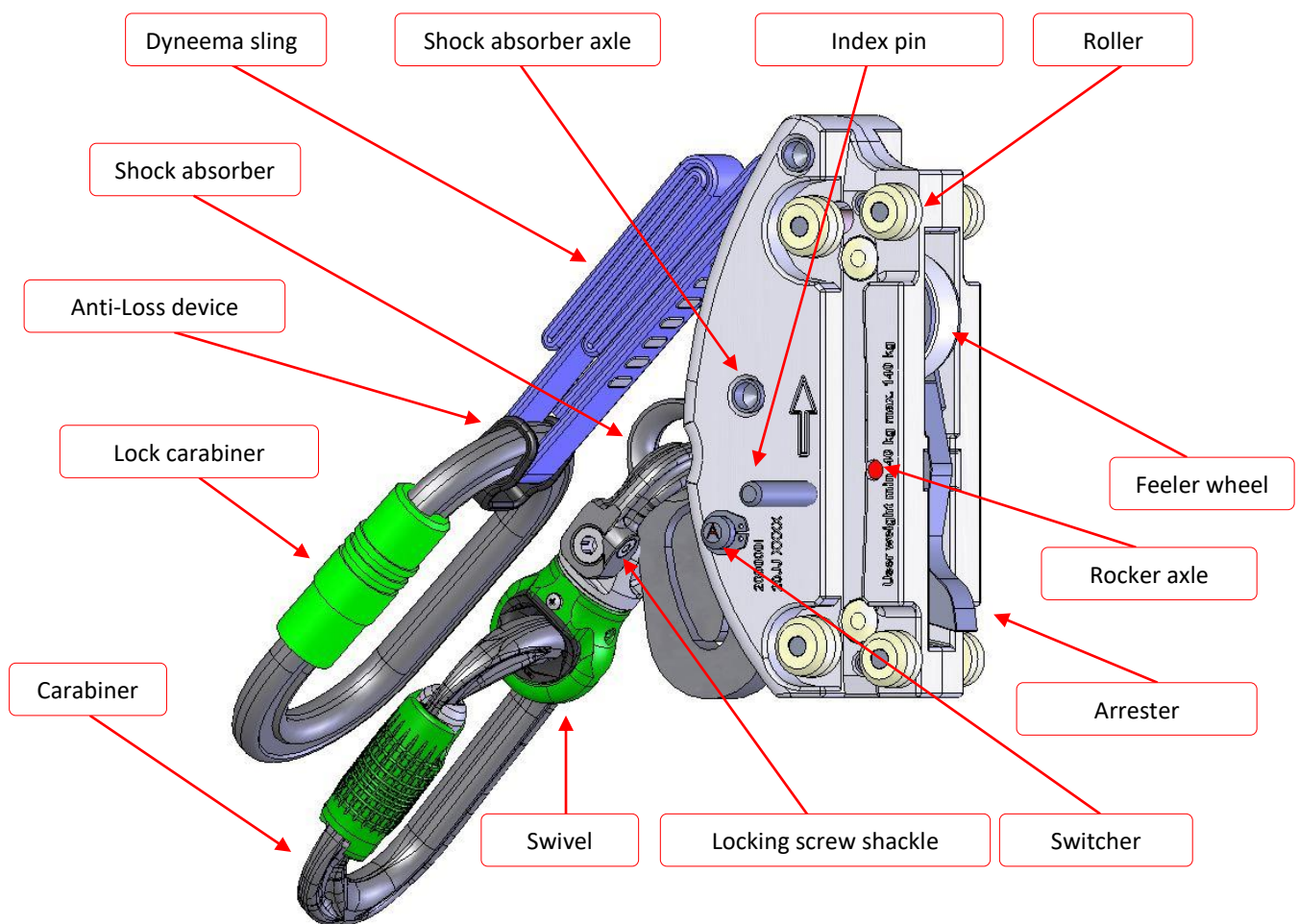
- Last inspection less than 12 months
- Type and serial number readable
- Rollers turn freely
- Feeler wheel protrudes of the housing by pulling shock absorber (check spring force)
- Index pin in place
- Arrester protrudes of the housing at least 8,5 mm when the feeler wheel is pushed in the housing.
- Rivet connection at the housing and carabiner are tight
- Anchor, shock absorber, housing and carabiner do not show mechanical impact (grindings, cuts,...)
- Carabiner locks automatically
- Housing and carabiner are not deformed
- Anti-loss device is in place

10 - Inspection sheet Twinstop® fall arrester

Notice!



Guided type fall arresters need to be inspected annually by an authorized person. An authorized person is someone who is familiar through schooling and has experience with fall arrest systems as well as confident with the necessary work safety directives and technical requirements in a way that allows him to evaluate the safety condition of fall arrest systems.



Type 2000001

Furthermore, the carabiner and the readability of all markings on the Twinstop® fall arrester need to be inspected.

The described elements need to be checked for damages, erosion, and stress caused by an accidental fall. Any defect needs to be documented in the diagram below.

	OK	Not OK
Arrester is easy to move, does not grind or block		
Shock absorber is easy to move, does not grind or block		
Arrester dips into housing when shock absorber is pulled		
Unloaded: Height of arrester in the locked state 8,5 mm		
Housing is crack-free		
Slide elements exist 4x		
All rollers turn freely		
All rollers are firmly glued on the axle		
Wear limit roller: diameter min. 12.7 mm		
Axle of the roller springs		
Index pin exists and is fixedly mounted		
Shock absorber axle riveted on both sides		
Serial-No. and NB Number existing		
Switcher is easy to move		
Switcher with safety rings secured on both sides		
Swivel turns freely		
Swivel is fixedly mounted to the carabiner		
Locking screw on shackle is mounted		
Dismantling device (O-ring) is mounted		
Carabiner closes and locks self-acting		
Rocker axle with safety lacquer on both sides		
Dyneema sling not damaged or torn		

The specified or pictured parts are to be checked by the expert for function, damage and wear or stress due to falling. Deficiencies are to be noted in the table below. Fall arrester and operating instructions are to be sent to the manufacturer for repairs.

This guided type fall arresters including rigid anchor line have no expiration date because all components are made of durable materials. However, depending on the frequency of use and the environmental conditions, the fall arrester may wear out, so that further use is not possible.

The components must be checked by a qualified person at least once a year or as required. The test result must be documented. In addition, these results of the annual review also decide on re-use.

The Dyneema sling must be replaced at the latest after 10 years or depending on the wear.



Caution!

Repairs must be done by the manufacturer only.

Task/ cause	Achievement	Name	Date	Signature

In order to provide reliable documentation, the following information should be recorded (if applicable).

Type / Model	☐ 200000I ☐ 200000I2
Serial number	
Date of purchase	
Date of first use	
Other product info	
Other user info	

This information can be recorded by the user as well as by the manufacturer.

If the Twinstop® fall arrester is sold to a third party, the user manual must be translated into the respective language of the new owner.

This manual is just a translation. Only the German version is valid.



EU-Baumusterprüfbescheinigung
Gemäß Modul B der PSA-Verordnung (EU) 2016/425
Certificate of EU Type-Examination
According to Module B of the PPE-Regulation (EU) 2016/425

Zertifikatsnummer: 2683-2307-PSA23-081-Z

Certificate number:

Ausgabe: 2

Issue:

Hersteller:

Manufacturer

MKL-Technik GmbH
Kirchenlamitzer Straße 20
95126 Schwarzenbach a. d. Saale
Germany

Produkt:

Product:

Persönliche Schutzausrüstung gegen Absturz — Mitlaufende Auffanggeräte einschließlich fester Führungen (Kat. III, PSA)

Personal fall protection equipment — Guided type fall arresters including rigid anchor lines (cat. III, PPE)

Typ:

Type:

„Twinstop®“

„Twinstop®“

**Regelwerke /
Harmonisierte Normen**

*Rules and Regulations /
Harmonized standards:*

PSA Verordnung (EU) 2016/425
EN 353-1:2014+A1:2017
EN 365:2004

**Technische
Spezifikationen:**

Technical specifications:

PPE-R/11.116;
PPE-R/11.119;
PPE-R/11.137;

Zertifizierungsbericht: PSA23-081 Zertifizierungsbericht
PSA23-131 Zertifizierungsbericht

Certification Report:

Bemerkungen:

Remarks:

Siehe Anhang

See annex

Seitenzahl Anhang: 7

Pages Annex:

Hiermit bestätigt die TÜV AUSTRIA GMBH als notifizierte Stelle (ID-Nr. 0408), dass das Produkt den grundlegenden Gesundheitsschutz- und Sicherheitsanforderungen gemäß Anhang II der PSA-Verordnung (EU) 2016/425 entspricht. Grundlage dieser EU-Baumusterprüfbescheinigung ist das zur Prüfung und Zertifizierung vorgelegte Prüfmuster und die technische Dokumentation. Für eine PSA der Kategorie III darf die Bescheinigung nur in Verbindung mit einem Konformitätsbewertungsverfahren nach Modul C2 oder D verwendet werden.

TÜV AUSTRIA GMBH as notified body (ID no. 0408) hereby confirms that the product complies with the essential health and safety requirements according to Annex II of the PPE Regulation (EU) 2016/425. The basis of this EU Type-Examination certificate is the test specimen and the technical documentation submitted for testing and certification. For PPE of category III, the certificate may be used only in conjunction with a conformity assessment procedure according to module C2 or D.

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Vorgängerdokument (Zertifikat) / Previous Document (Certificate)

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Datum / Date

[Online Verification](#)



22.08.2024
Ausstellungsdatum
Date of issue

Dipl.-Ing. (FH) Nicolai Stickdorn
Zertifizierungsprüfer
Certification Examiner / Certification Body

Dipl.-Ing. (FH) Stefan Wiegand
Zertifizierungsbeauftragter
Certification Representative / Certification Body

30.06.2028
Gültigkeitsdatum
Expiry date

Zertifikat / Certificate | 2683-2307-PSA23-081-Z | Ausgabe / Issue: 2

TÜV AUSTRIA GMBH, Notified Body 0408

FM-INE-PSA-Z-0102d
Revision: 00
Seite / Page: 1/1

Auszugsweise Vervielfältigung nur mit Genehmigung der TÜV AUSTRIA GMBH gestattet. Alle Prüf- Inspektions- und Überwachungstätigkeiten erfolgten gemäß OM System der TÜV AUSTRIA GMBH
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Deutschstraße 10
1230 Vienna / Austria
Tel: +43 (0) 504 54
Mail: info@tuv.at
Web: <http://www.tuv.at>



Produkt: Persönliche Schutzausrüstung gegen Absturz — Mitlaufende Auffanggeräte einschließlich fester Führungen (Kat. III, PSA)

Product: Personal fall protection equipment — Guided type fall arresters including rigid anchor lines (cat. III, PPE)

Typ: „Twinstop®“

Type: „Twinstop®“

Ausführung: Die mitlaufenden Auffanggeräte einschließlich der festen Führungen sind Bestandteile eines der Auffangsysteme nach EN 363.

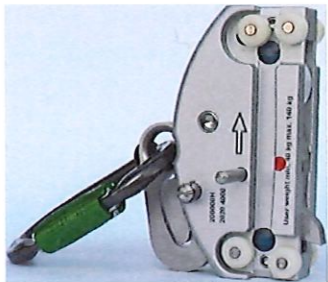
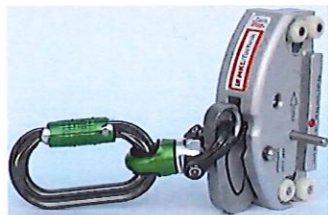
Die festen Führungen, bestehend aus Schienen mit Halterungen, Schienenstößen und Endsicherungen, werden an geeigneten baulichen Einrichtungen mit ausreichender Festigkeit in vertikaler Anordnung, mit einer maximalen Vorwärts-/Rückwärtsneigung bis zu 20° und/oder einer Seitwärtsneigung bis zu 15°, installiert. Die verbindenden Einzelteile der mitlaufenden Auffanggeräte dienen der Anbindung an entsprechende Auffangösen (A) von Auffanggurten nach EN 361. Die geführten mitlaufenden Auffanggeräte begleitet den Benutzer während vertikaler Positionsänderungen ohne manuelle Betätigung und blockieren an der Führung im Falle eines Sturzes mit einer selbsttätigen und energieabsorbierenden Funktion.

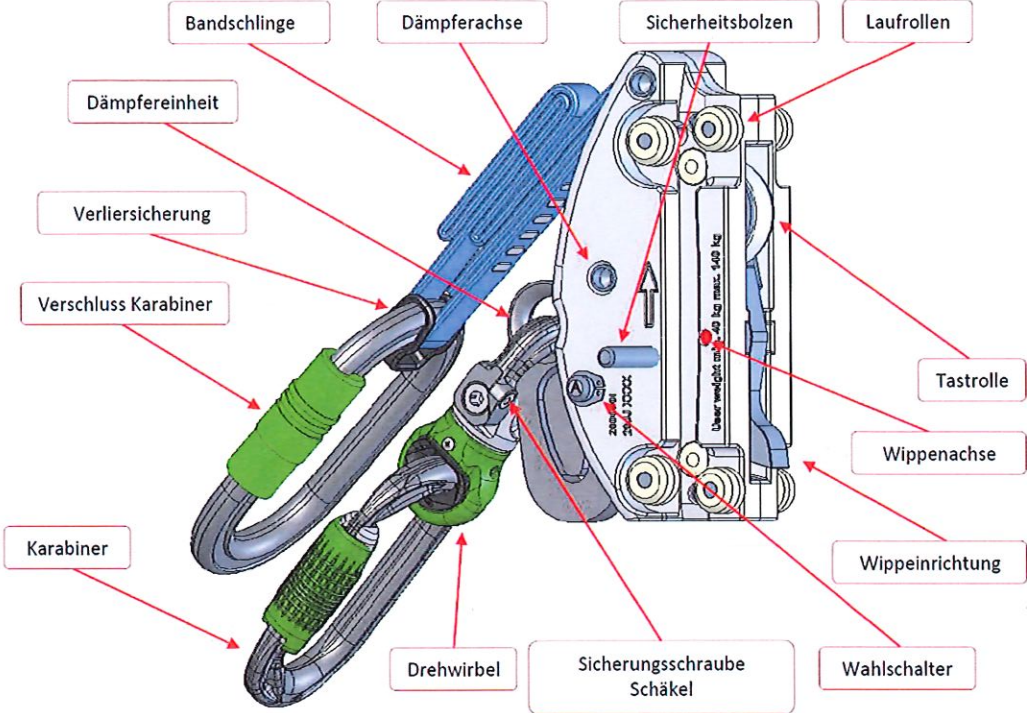
Model:

The guided type fall arresters including the rigid anchor lines are elements of one of the fall arrest systems according to EN 363. The rigid anchor lines, consisting of rails with brackets, rail joints and stop devices, are installed on suitable structures with sufficient strength in a vertical arrangement, with a maximum forward/backward angle of up to 20° and/or a sideways angle of up to 15°.

The connecting elements of the guided type fall arresters are used for connection to corresponding fall arrest attachment points (A) of full body harnesses according to EN 361. The guided type fall arresters accompany the user during vertical position changes without manual operation and lock at the anchor line in the event of a fall with an automatic and energy dissipating function.

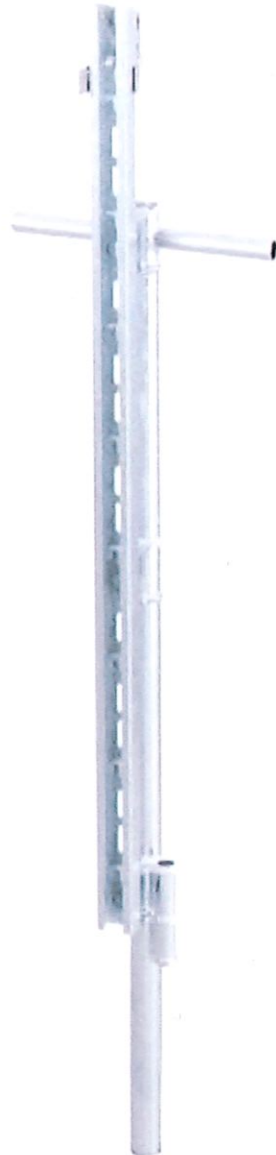
Ausführung <i>Model</i>	„Twinstop®“ Mitlaufende Auffanggeräte einschließlich fester Führungen Guided type fall arresters including rigid anchor lines
Minimale Nennlast der Auffanggeräte <i>Minimum nominal load of the fall arresters</i>	40 kg
Maximale Nennlast der Auffanggeräte <i>Maximum nominal load of the fall arresters</i>	140 kg
Werkstoffe der festen Führungen <i>Materials of the rigid anchor lines</i>	Aluminium; verzinkter Stahl oder Edelstahl Aluminium; galvanised steel or stainless steel
Maximaler Halterabstand <i>Maximum bracket distance</i>	2,24 m
Rückwärtsneigung der Führung <i>Backward angle of the anchor line</i>	bis zu 20° up to 20°
Vorwärtsneigung der Führung <i>Forward angle of the anchor line</i>	bis zu 20° up to 20°
Seitwärtsneigung der Führung <i>Sideways angle of the anchor line</i>	bis zu 15° up to 15°

Mitlaufende Auffanggeräte <i>Guided type fall arresters</i>	200000H	200000I	200000X
minimale Bruchlast <i>Minimum breaking load</i>	>15 kN	>15 kN	>15 kN
Abbildungen <i>Figure</i>	 200000H	 200000I	 200000X
	 200000H2	 200000I2	 200000X2
	 200000H3	--	--
mögliche Ver- bindungselemente nach EN 362 <i>Possible connectors according to EN 362</i>			

Konstruktion Design			
Halterungen für feste Führungen Brackets for rigid anchor lines	Aluminium Aluminium  200311	Stahl, verzinkt Steel, galvanised  200176	Edelstahl Stainless steel  200119
	--	 200236	 200250A

	Aluminium <i>Aluminium</i>		Stahl, verzinkt <i>Steel, galvanised</i>			Edelstahl <i>Stainless steel</i>	
							
	200123	200058	200121 200695	200177	200178 200216	200179	200180 200214
Feste Führungen mit Verbindern <i>Rigid anchor lines with rail joints</i>							
	200283 200551	200126		200203	200205		
							
	200340			200201	200191		

**Schachteinstiegs-
vorrichtung**
Manhole access device



200260



200261

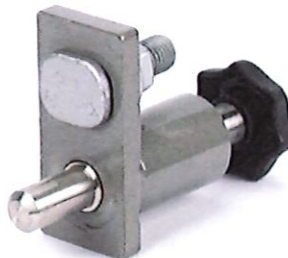
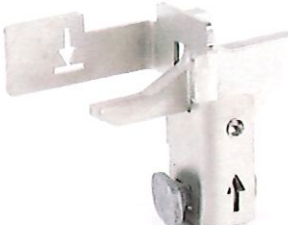
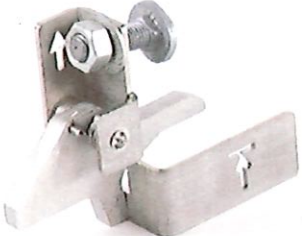
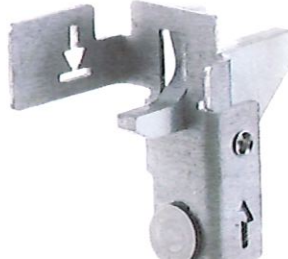


200663

**Ausstiegs-
vorrichtung**
Exit device



200222

Endsicherungen Typ B <i>Stop devices type B</i>	starr, verzinkter Stahl <i>rigid, galvanised steel</i>	öffnenbar <i>openable</i>	
	 200197A	 200597	 200625
	 200599	öffnenbar, unten <i>openable, bottom</i>	öffnenbar, oben <i>openable, top</i>
	starr, Edelstahl <i>rigid, stainless steel</i>	 200402	 200405
	 200285	 200227	 200230
	Einschub- sicherung gegen falsche Ausrichtung <i>Slide-in protection against incorrect alignment</i>		
	 200597		

Bemerkungen: --

Remarks: --

Referenz Reference	Norm Standard	Abschnitt Section	Prüfung Test
PSA23-081	EN 353-1:2014+A1:2017 EN 365:2004	4 – 7 4	Baumusterprüfung / Type Examination
PSA23-131	EN 353-1:2014+A1:2017 EN 365:2004	4 – 7 4	Baumusterprüfung entnehmbares Auffanggerät „200000X und X2“ / Type Examination removable fall arrester '200000X and X2'

Änderungen: Die folgenden Änderungen sind durch die Zertifizierungsstelle der TÜV AUSTRIA GMBH bestätigt.

Amendments: The following changes are confirmed by the certification body of TÜV AUSTRIA GMBH.

Zertifikatsnummer Certificate Number	Ausgabe Issue	Datum Date of Issue	Änderungen – Beschreibung Amendments – Description
2683-2307-PSA23-081-Z	1	06.07.2023	Erstausgabe First Issue
2683-2307-PSA23-081-Z	2	22.08.2024	Ergänzung/Überarbeitung von: - Halterabstand 2,24 m - Produktdarstellungen - Artikel-/ Seriennummern - 200000X - 200000X2 - 200625 - 200222 - 200058 - 200695 - 200216 - 200340 - 200201 - 200191 - 200663 - 200222