

Operation Manual

Fall Protection System SiS consisting of a guided type fall arrester S5c with integrated safety traveller HSE-BFD136, self-locking carabiner snap hook and guard rail FSS

According to EN 353-1:2014+A1:2017

C€ 0123

Manual Version 2/2019

Serial number of fall arrester:
Manufacturing date of fall arrester:
Serial number of safety traveller:
Manufacturing date of safety traveller:
Expiry date of safety traveller:
Original Operating

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Notice

This Operation Manual is an integral part of the manhole cover and must be available to operating personnel at all times. The safety guidelines described therein must be observed. If the manhole cover is resold, the operating manual must be supplied with the cover.



The Declaration of Performance is provided for download on https://www.huber.de/prod-download/S5c.zip

Translation

For delivery in the EEA, the Operation Manual is to be translated into the language of the target country. If inconsistencies occur in the text, refer to the original operating manual (German), or contact the manufacturer.

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➤ 1. General

The fall protection system SiS is designed as a fall arrester for the use of safety access ladders type SiS2, safety climbing devices SiS3 and safety guard rails used to climb on step irons SiS4. The system consists of a guided type fall arrester S5c with integrated safety traveller HSE-BFD136, self-locking carabiner hook in accordance with EN 362 and a safety guard rail as guidance.

Every user of the fall protection system must have read these operating instructions and know their contents.

Non-observance of the contents or unintended use of the equipment will involve danger to life. HUBER SE will not assume any liability for consequential damage resulting from such non-observance or unintended use. The operator alone shall bear this risk

Combined with a safety harness conforming to EN 361, the fall protection system SiS represents personal protective equipment that complies with EN 353-1:2014+A1:2017.

The required EC type examination was successfully passed at TÜV SÜD Product Service GmbH, Ridlerstr. 65, 80339 München, Ident. Number: 0123. Annual inspection according to PSA-V (EU) 2016/425 by TÜV Süd Product Service GmbH.

The Employers Insurance Association Rules BGR/GUV-R 198 and 199 must be observed.

Only harnesses with additional front attachment element according to EN 361 are permitted to be used with the fall protection system SiS.

! Warning

- ➤ Changes or additions to the equipment without the prior written consent of the manufacturer are not permitted!
- ➤ Repairs may only be carried out in accordance with the procedures specified by the manufacturer!
- ➤ For equipment used in fall arrest systems, it is essential for safety to select the position of the anchorage device or attachment point and the manner the work is carried out so that free fall and fall height are kept to a minimum!
- ➤ For equipment used in fall arrest systems, it is essential for safety to ensure that there is sufficient free space below the user at the workplace before each use so that in the event of a fall no collision with the ground or other obstacle is possible.



- ➤ Guided type fall arresters including a fixed guide made of stainless steel should not be installed in a highly corrosive atmosphere (e.g. above a swimming pool) due to the risk of non-visible cracks caused by stress corrosion. Unless special control measures have been taken or compatibility has been demonstrated.
- ➤ In the event of a rescue situation, the guided type fall arrester including fixed guide can only be unlocked by pulling it vertically upwards (against the direction of fall).
- ➤ The following hazards can endanger the function of the equipment and must therefore be eliminated:
 - Extreme temperatures
 - Guidance over or around sharp edges
 - Exposure to chemicals
 - Flectrical influences
 - Cuts
 - Abrasion
 - Climatic influences
 - Pendulum movements when falling

> 2. Safety instructions

- ➤ Types of harnesses that do not have the function of a full body harness, or older form B harnesses, must not be used with the fall protection system SiS.
- ➤ The fall protection system must not be connected with the lateral attachment elements which are sometimes provided as additional elements for safety harnesses in the hip area.
- ➤ The protective function of the fall protection system does not take effect as long as the user is moving in the lower area of the safety access ladder. (See chapter 3.)
- ➤ The system function cannot be guaranteed under certain environmental conditions, such as with the presence of oil and dust loads and pollution. In the case of such application conditions the operator has to take into account these conditions in his risk analysis.
- ➤ The user of the fall protection system must be capable, physically and mentally, of going into the plant.

If the prior intake of any pharmaceutical products could not be avoided, inform yourself about potential side effects that could lead to physical impairments or damage.

- ➤ The system is to be used only for safe climbing in and out, and must not be used to position oneself in a place and carry out work from this position.
- ➤ The climbing system should never be used alone. A second person serves as a supervisor and can call for immediate help in the event of an accident. It is strongly recommended to carry along a mobile phone. Only one person may be on the climbing system at a time (except in the case of rescue).
- ➤ The fall arrester S5c must not be used in explosive areas. The fixed guide must not be installed in an aggressive environment or where chemicals are present.
- ➤ Prior to starting working, the user of the fall protection system SiS is responsible to gather from the plant operator sufficient information about rescue measures that may become necessary and how they can be started and carried out.
- ➤ The personal protective equipment must not be used for any other purpose than that specified as intended purpose and by no other persons than those who have been briefed on the safe use of the equipment and therefore have the knowledge required to use the equipment.
- ➤ The fall protection system SiS is designed to protect the user against falls while climbing up or down.
- ➤ The system is however not suitable to allow the user to carry out work and operations within or beside the line of step irons. Special safety measures need to be taken for such work and operations.
- ➤ The system is permitted to be used in the temperature range from 30 °C to + 50 °C. At temperatures below 0 °C, the device must be dry. Other climatic conditions, such as ice, snow or water, may adversely affect the function of the fall protection system SiS.
- ➤ The fall arrester S5c must be checked for damage by a competent / qualified person. The results of his check must without a doubt prove the safe condition and function of the S5b system. If the result gives reason for only the slightest doubt about the safe system function, do in no case use the S5c system any more, for your own safety!



➤ Once the S5c fall arrester has been under stress because it had to react to an incident and catch a falling person, it must not be used again before a technical expert has checked it and given his written approval.

- ➤ The fall arrester S5c should be the personal property of each user and should not be used by any other user. It is advised against allowing other persons to use other user's personal property.
- ➤ The self-locking carabiner must be hooked directly into the front attachment elements of the harness. Do not extend or reduce the distance
- ➤ Manual interference during ascending or descending may adversely affect the function of the fall arrester.
- ➤ Never ascend or descend with your hands off! Activating the release function of the guided type fall arrester or operating the guided type fall arrester during ascent or descent could hinder the safe functioning of the braking mechanism and should only be performed from a safe position where there is no risk of falling.
- ➤ There must be a safe base to stand on at the end of the fall protection system to eliminate the risk of falling.
- ➤ If the fall protection system SiS is sold to another country, the user, for his safety, must be provided with the operating instructions in the local language.

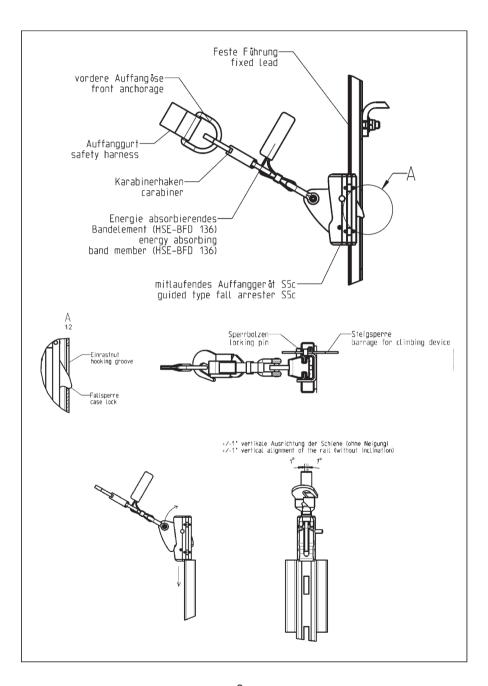
➤ 3. Product description of the fall protection system

The fall protection system SiS consists of:

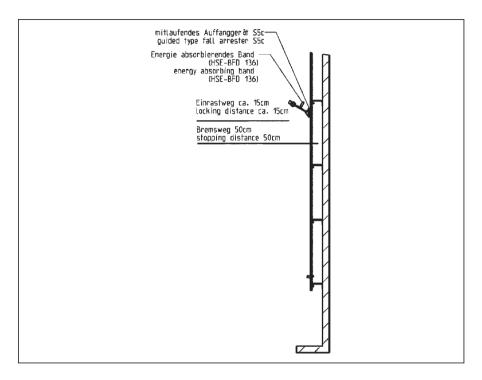
➤ Fixed guidance: safety guard rail

➤ Guided type fall arrester S5c

➤ Belt element: safety traveller HSE-BFD136 with self-locking snap hook





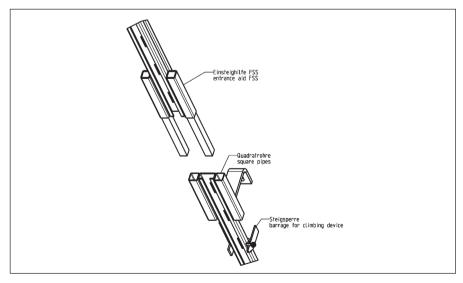


- ➤ The protective function of the fall arrester S5c does not take effect as long as the user stays in the lower area of the fall protection system (< 3 m from top edge of access level).
- ➤ The plant operator must attach a warning sign to the physical structure that unmistakably explains to the user which safety distances are necessary.
- ➤ Minimum wall requirements: Reinforced concrete walls according to DIN 1045:
 - Minimum wall thickness ≥ 120 mm
 - Minimum strength class = C20/25
- ➤ Only one person at a time is permitted to use the fall protection system SiS; the system must never be used by several persons at a time.
- ➤ The following applies to the fall arrester S5c:
 - The weight must not be below the minimum weight of 40 kg without tools and equipment.

- The maximum weight of 136 kg including tools and equipment must not be exceeded.
- ➤ The maximum weight of 136 kg including tools and equipment must not be exceeded.

The maximum brake force of the system is 6 kN.

- ➤ The fall protection system SiS must not be used with any other components than those with a SiS name plate supplied by HUBER SE. It is not permitted to combine the HUBER fall protection system SiS with products of other manufacturers. The guided type fall arrester S5c may only be used in combination with the fixed guide safety guard rail.
- ➤ Do not use any other type of entrance aid with our fall protection system than the HUBER SE entrance aid system. If the user is on the entrance aid with his fall arrester (fall arrester suspended in rail), the user must secure himself against falling by means of an additional antifall guard (PPE, redundancy).
- Read the operating instructions for the safety harness to know how to put on the harness.
- ➤ The waist and chest belts of the harness must be correctly adjusted to ensure it fits tight on the body. The harness must not be used when loose. If the harness becomes loose during ascent or descent, it must be correctly adjusted again by a secured person.
- ➤ The snap hook must be fastened to the front eyelets of the safety harness.





> 4. Inspection before use

- ➤ Prior to every use, check that there is no damage to the fall protection system or where the safety guard rail is inserted or comes out, and check that neither these areas nor the equipment itself are dirty. Check that all fasteners and connecting members fit tightly.
- ➤ The entrance aid makes it easier to get into and out of the chamber and permits the fall arrester to be introduced into the safety guard rail above ground level. Check that the connection is tight.
- ➤ The fall protection system must not be used if defects have been detected or doubts occurred about its safety. Do not use the system again before a technical expert has given his written approval.
- ➤ The safety traveller must be checked before each use, especially for cracks or similar damage. If such damage is present, the arrester system may no longer be used.
- ➤ The marking on the arrester system must be clearly legible, otherwise the system may no longer be used.

> 5. How to use the fall arrester S5c

- ➤ Before you get into the fall protection system, you must insert the "insertable entrance aid" into the provided square pipes.
- ➤ The entrance aid is provided with a ring welded to its rail on the top left which makes sure the traveller is inserted correctly.
- ➤ When inserting the fall arrester, pay attention that the lock bolt points to the right and the fall stop downwards. Otherwise, the fall stop cannot snap into the grooves of the safety guard rail in the event of a fall.
- ➤ Unlock the end stop when inserting or removing the fall arrester. The bolt must automatically move back into horizontal position (locking position).
- ➤ The upper end stop prevents the fall arrester is inserted incorrectly or moves out unintentionally.
- ➤ The bottom end stop also prevents that the fall arrester moves out unintentionally.

. Warning

➤ Attachment and detachment of the fall arrest device from the fixed guide shall be carried out from a safe place or using an additional personal fall arrest system.

➤ 6. Permanent labels engraved on the base body of the S5c fall arrester

Head side		
TECHNOLOGY WASTE WATER Solutions	Company logo	
Huber SE Industriepark Erasbach A1 92334 Berching	Manufacturer's address	

Bottom side = the side running in the rail				
EN 353-1:2014+A1:2017	Number and year of issue of the European Standard			
i	The operating instructions must be read!			
To be used only with HUBER guard rail FSS!				

Left long side	
Up Down	Arrow bottom up
	Permissible weight: 40kg minimum, 136kg maximum



Rear side		
(€ 0123	CE sign with identification number of the notified body	
MM/JJJJ	Month and year of manufacture	
xxx	Serial number of the fall arrester	
S5c	Type:	

> Marking on the packaging:

HUBER TECHNOLOGY WASTE WATER Solutions	Company logo	
Huber SE Industriepark Erasbach A1 92334 Berching	Manufacturer's address	
www.huber.de	Company website	
ММ/ЈЈЈЈ	Month and year of manufacture	

> Marking of the safety traveler:

Energy absorber HSE-BFD 136 for guided type fall arrester S5c

vear of manufacture: 12/2016

serial number: 160300

(i

TECHNOLOGY

The energy absorber is only allowed to be used with guided type fall arrester S6c from company HUBER SE

WASTE WATER Solutions

Marking of the guard rail:





> 7. Installation of the climbing system

Install the system according to the enclosed instructions "Operation Manual for Climbing Systems".

> 8. Maintenance, cleaning, storage and care

- ➤ Detach the fall protection system from the guard rail..
- ➤ Clean it with a brush or damp cloth after every use.
- ➤ Do not use any aggressive materials (such as oils, petrol, acids, or other chemicals).
- ➤ To protect the equipment against damage during transport, transport the guided type fall arrest system in its original packaging only.
- ➤ Protect the energy-absorbing belt element against moisture.
- ➤ Store the fall protection system in a dry, dark place. It must however be dried in a natural way prior to putting it into its storage place and sheltered from direct heat.
- ➤ The fall arrester, belt element and snap hook form one unit and must not be separated!
- ➤ Do not use the fall protection system if it is damaged or has been under stress because it had to catch a falling person. Do not use the system again before the damage has been repaired.
- ➤ Damaged parts must be replaced by original HUBER SE replacement parts.
- Repair work and the replacement of parts must be done by HUBER SE staff only.
- ➤ The maximum permissible usability period for the energy-absorbing belt element HSE-BFD136 is five years from the year of manufacture. After expiration of the maximum permissible usability period the belt element HSE-BFD136 must be replaced with an original part.
- ➤ The fall protection system must regularly be inspected by a technical expert, at least once a year, and inspections recorded in writing.

If these inspections are not carried out regularly, this will lead to nonwarranty on the part of HUBER SE.

- ➤ It is recommended to replace the guided type fall arrester after 10 years of operation at the latest. The guard rail must be inspected annually and replaced if damaged.
- ➤ The user of the fall protection system must observe the applicable accident prevention rules, which are in this case German standards ZH1/709, 710, 55 of Employers Insurance Association and VBG 4,37.

The fall protection system is designed in compliance with the EC standard 89/686 and passed the EC type examination by a notified body. In addition, it underwent continuous category III manufacturing control.

9. Inspection report, documentation– annual maintenance

- ➤ Inspection of the fall arrester takes place once a year, unless shorter inspection intervals become necessary due to special circumstances.
- ➤ Inspection is carried out on the basis of the inspection report on page 16 to 20.

The inspection results have to be noted down in the documentation on page 21 to 23.

- ➤ All inspections have to be executed by a technical expert*.
- ➤ If the fall arrester is returned to HUBER SE for repair or inspection, attach the filled in inspection reports.
- ➤ The operator is responsible that inspection intervals are observed.
- * A technical expert is a person who has sufficient expert knowledge in the field of fall arrester equipment due to his expert education and experience and is so familiar with the respective national safety working regulations, accident prevention regulations, standards and generally acknowledged rules of technology of other EU member states that he is capable of evaluating the operational safety condition and appropriate application of fall arresters.

Additional documentation and inspection report forms are available from the manufacturer if required.



Inspections to be carried out	Inspection No. 1 Date:	
	OK	Not OK
All labels are clearly legible.		
There is no dirt on the fall arrester.		
The lock bolt fits tight and is not bent.		
Treads are clean.		
The engraved arrow is well visible.		
The fall stop moves smoothly.		
The fall stop shows not deformation.		
Rollers turn freely.		
Rollers are not damaged.		
Rollers fit tightly on the axis.		
The tension spring is free of rust.		
The tension spring is not broken.		
There is no dirt on the tension spring.		
There is a screw lock on the shackle.		
The shackle is not broken.		
The shackle does not show any fissures.		
The snap hook is not bent.		
The snap hook does not show any fissures.		
Snap hook is not broken.		

Inspections to be carried out	Inspection No. 2 Date:	
	OK	Not OK
All labels are clearly legible.		
There is no dirt on the fall arrester.		
The lock bolt fits tight and is not bent.		
Treads are clean.		
The engraved arrow is well visible.		
The fall stop moves smoothly.		
The fall stop shows not deformation.		
Rollers turn freely.		
Rollers are not damaged.		
Rollers fit tightly on the axis.		
The tension spring is free of rust.		
The tension spring is not broken.		
There is no dirt on the tension spring.		
There is a screw lock on the shackle.		
The shackle is not broken.		
The shackle does not show any fissures.		
The snap hook is not bent.		
The snap hook does not show any fissures.		
Snap hook is not broken.		



Inspections to be carried out	Inspection No. 3 Date:	
	OK	Not OK
All labels are clearly legible.		
There is no dirt on the fall arrester.		
The lock bolt fits tight and is not bent.		
Treads are clean.		
The engraved arrow is well visible.		
The fall stop moves smoothly.		
The fall stop shows not deformation.		
Rollers turn freely.		
Rollers are not damaged.		
Rollers fit tightly on the axis.		
The tension spring is free of rust.		
The tension spring is not broken.		
There is no dirt on the tension spring.		
There is a screw lock on the shackle.		
The shackle is not broken.		
The shackle does not show any fissures.		
The snap hook is not bent.		
The snap hook does not show any fissures.		
Snap hook is not broken.		

Inspections to be carried out	Inspection No. 4 Date:	
	OK	Not OK
All labels are clearly legible.		
There is no dirt on the fall arrester.		
The lock bolt fits tight and is not bent.		
Treads are clean.		
The engraved arrow is well visible.		
The fall stop moves smoothly.		
The fall stop shows not deformation.		
Rollers turn freely.		
Rollers are not damaged.		
Rollers fit tightly on the axis.		
The tension spring is free of rust.		
The tension spring is not broken.		
There is no dirt on the tension spring.		
There is a screw lock on the shackle.		
The shackle is not broken.		
The shackle does not show any fissures.		
The snap hook is not bent.		
The snap hook does not show any fissures.		
Snap hook is not broken.		



The annually recurring inspections and inspections after repairs or events of a fall have to be recorded in the documentation and signed by a competent person. In the event of damage, the complete test reports and documentation must be provided in full.



Replace the safety traveller after 5 years!

Inspections to be carried out	Inspection No. 5 Date:	
	OK	Not OK
All labels are clearly legible.		
There is no dirt on the fall arrester.		
The lock bolt fits tight and is not bent.		
Treads are clean.		
The engraved arrow is well visible.		
The fall stop moves smoothly.		
The fall stop shows not deformation.		
Rollers turn freely.		
Rollers are not damaged.		
Rollers fit tightly on the axis.		
The tension spring is free of rust.		
The tension spring is not broken.		
There is no dirt on the tension spring.		
There is a screw lock on the shackle.		
The shackle is not broken.		
The shackle does not show any fissures.		
The snap hook is not bent.		
The snap hook does not show any fissures.		
Snap hook is not broken.		

Inspections to be carried out	Inspection No. 6 Date:		
	OK	Not OK	
All labels are clearly legible.			
There is no dirt on the fall arrester.			
The lock bolt fits tight and is not bent.			
Treads are clean.			
The engraved arrow is well visible.			
The fall stop moves smoothly.			
The fall stop shows not deformation.			
Rollers turn freely.			
Rollers are not damaged.			
Rollers fit tightly on the axis.			
The tension spring is free of rust.			
The tension spring is not broken.			
There is no dirt on the tension spring.			
There is a screw lock on the shackle.			
The shackle is not broken.			
The shackle does not show any fissures.			
The snap hook is not bent.			
The snap hook does not show any fissures.			
Snap hook is not broken.			



➤ Documentation of the test reports for the Fall Arrester S5c (according to EN 353-1:2014+A1:2017)

Name and address of operator:						
User name:						
Application place:						
Purchase date:						
First use date:						
Serial number of fall arrester:						

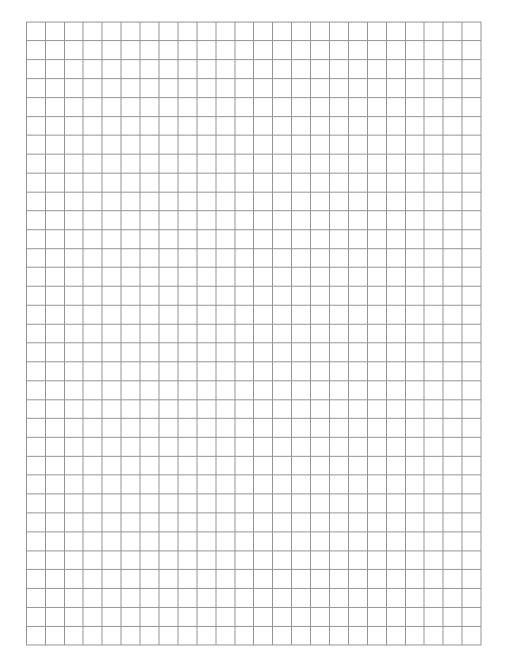
The operator is responsible for the execution of the inspections

and observance of inspection intervals.

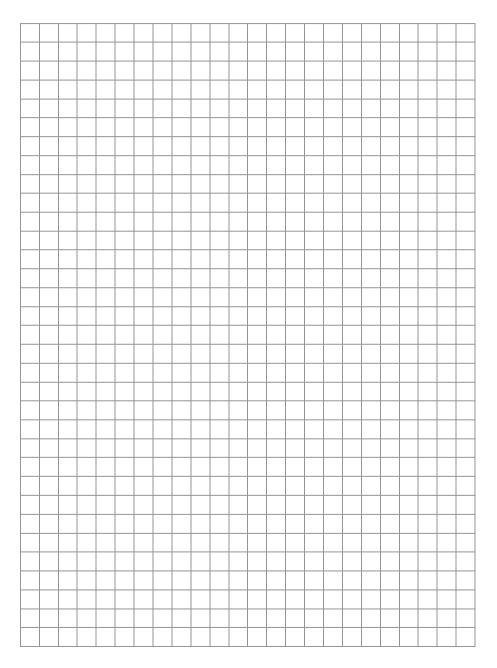
Inspection date			
Reason for inspection: a) Annual inspection b) Repair c) Fall			
Inspection results			
Repair work carried out			
Name and signature of the competent person			
Date of next annual inspection			

Inspection date			
Reason for inspection: a) Annual inspection b) Repair c) Fall			
Inspection results			
Repair work carried out			
Name and signature of the competent person			
Date of next annual inspection			









HUBER SE

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