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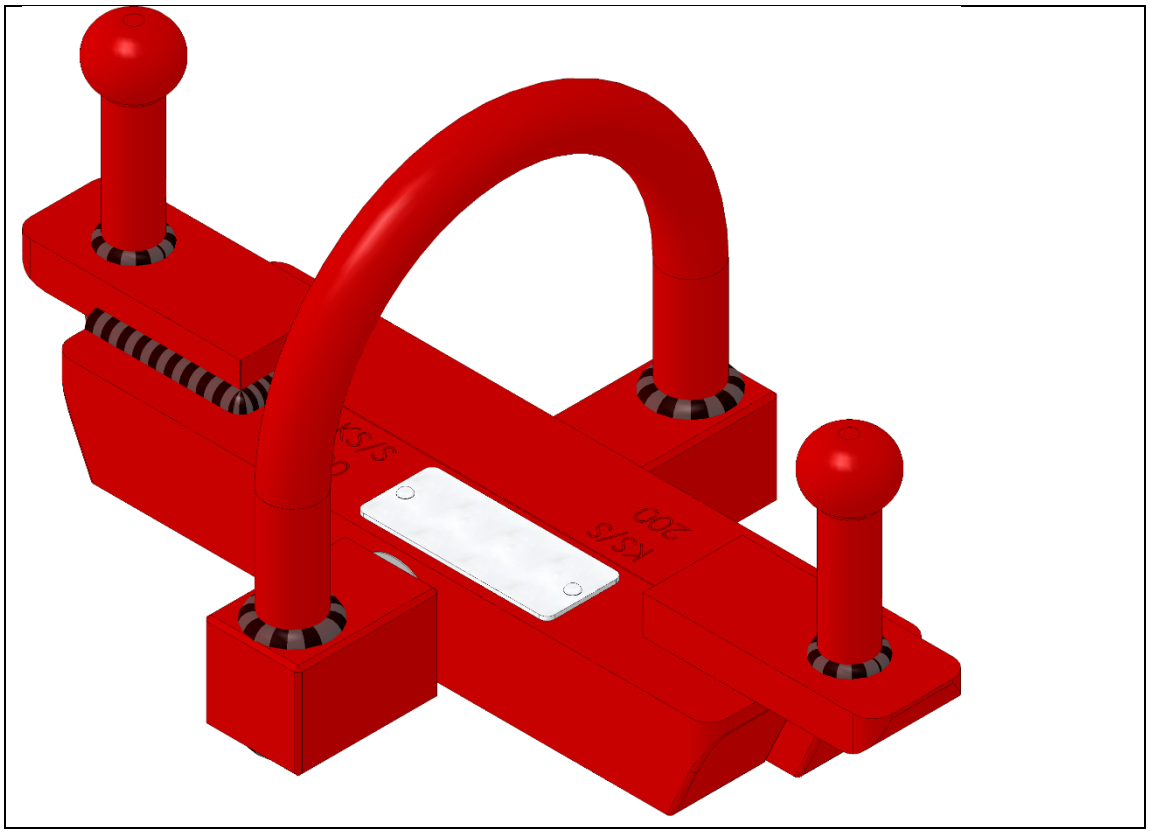

User Guide

Installation aid
FASERFIX®KS
FASERFIX®SUPER
FASERFIX®BIG SLG
NW 100 – NW 300

Revision

Date	Version	Chapter	Reason	Authorised person
28.08.2018	00.01	all	new version	Dr. -Ing. Bernd Schiller

This user guide was prepared to the best of our knowledge. If you notice any errors or uncertainties please let us know. We are also grateful for any tips or suggestions. Please contact:

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Contents

1 General Information

1.1 Delivery and responsibilities

The installation aid was developed and built under the responsibility of Hauraton GmbH & Co. KG.

Subsequent changes by the operator are not within the responsibility of the manufacturer.

1.2 Definition

1.2.1 Loose installation aid

An installation aid is something which can be fixed directly or indirectly by the user to a hook or to another connecting element of a crane, a winch or a hand-controlled manipulator without affecting the integrity of the crane, the winch or the hand-controlled manipulator

1.2.2 Interlocking support device

A device with a direct mechanical connection to the load which is not only based on friction, suction force or magnetic force

1.2.3 Load capacity

Maximum load that the loose load-bearing device can lift under the conditions specified by the manufacturer

1.3 Basis of assessment

- Machinery directive 2006/42 EC
- DIN EN 13155 – Cranes – Safety – Loose installation aid
- DIN EN ISO 12100 – Safety of machines – General design principles – Risk assessment and risk reduction (ISO 12100:2010)
- Employer's liability insurance association rules (BGR 500 – old), chapter 2.8 – Operation of load-bearing equipment in hoisting device

  or German social accident insurance rule (DGUV Regel 100-500 – new), chapter 2.8 (contents from previous VBG 9a)

2 Safety

2.1 General information

The user guide is to be carefully read and kept on hand. The user has to ensure that the user guide can be viewed at any time and is stored in an easily accessible location. If a user guide is lost, a new one can be obtained from Hauraton GmbH & Co. KG.

The independent application of the installation aid requires that only those persons who are familiar with these tasks to be instructed by the operator.

The user guide does not replace the necessary individual training of the user.

According to DIN EN 13155, loose installation aids are allowed to be used up to a maximum of 20,000 load changes. After that, the maximum life expectancy of the installation aid is reached. The installation aid must be taken out of operation, scrapped or if possible, completely overhauled.

The operating association regulation employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new), chapter 2.8 must be observed and adhered to.

To operate the installation aid, there are handles fixed to the arms of the shears. The resulting two-handed operation prevents the interference of the operator in the shearing and crushing area.

The installation aid may only be used for vertical lifting with an even (symmetrical) load distribution. The installation aid is to be attached to the eyelet provided.

Any diagonal pulling of the installation aid is not permitted.

The crane hook must be located above the center of gravity of the load and in the vertical alignment of the center of gravity of the load.

The installation aid can be stored safely on a flat surface.

When moving the installation aid, it is important to avoid swinging or striking it against objects and parts of the building. In this case, a lower traversing speed is to be selected.

A tightening against resistance is to be avoided since friction or hooking can result in higher loads than the permissible load-bearing capacity.

Standing under a suspended load is forbidden. Transport of drainage channels must not be carried out by persons.

All parts of the installation aid must be able to move freely.

The specified load capacity must not be exceeded.

2.2 Intended use

The installation aids FASERFIX BIG SLG/ SUPER/ KS 100 - 300, are intended for the transport of Hauraton drainage channels types BIG SLG, KS and SUPER in nominal widths 100 mm to 300 mm on construction sites.

The installation aid is designed as a spring-loaded shears.

The locking in of the installation aid in the recesses of the drainage channels is done by positioning the installation aid on the angle housing directly above the recesses. Pressing down on the handles of both arms of the shears causes it to lock into place.

Once the installation aid is locked into the recesses, the drainage channel can be lifted and transported with a suitable hoist and sling.

Two installation aids must be used for lifting the channels!

When transporting drainage channels, it is important to avoid the risk of load collisions as higher loads can occur.

2.3 Safety signs

2.3.1 Structure of the safety instructions

The following signal words are used in connection with safety symbols to illustrate possible dangers in this document.

Danger!
Death or serious bodily injury **will occur** if the appropriate precautions are not taken.

Warning!
Death or serious bodily injury **may occur** if the appropriate precautions are not taken.

Caution!
Minor bodily injury can occur if the appropriate precautions are not taken.

Attention!
Material damage may occur if the appropriate precautions are not taken.

Information
Here you will find information and advice to help carry out the following activities effectively and safely.

2.3.2 Safety signs and their meanings

The meaning of the safety signs is indicated by form and colour.

Form	Colour	Meaning
	Safety colour red Contrast colour white	Prohibition
	Safety colour yellow Contrast colour black	Warning
	Safety colour blue Contrast colour white	Mandatory

2.3.3 Symbols used in this document

Symbol	Meaning
	Warning of a hazard
	Warning of a suspended load
	Safety shoes must be worn

2.4 Safety instructions

The basic prerequisite for the safe handling and trouble-free operation of the installation aid is the knowledge of the basic safety instructions and the health and safety regulations.

This user guide contains all the important information to operate the installation aid in a safety-related manner.

The internal safety regulations must be observed.

Danger!

Risk of injury by persons standing in hazardous areas.

- When transporting the drainage channels ensure that no persons are in hazardous areas.
- All persons involved in the hazardous area must be informed before initiating any movements.

Warning!

Risk of injury due to missing PPE.

> When working with the installation aid wear proper PPE: safety shoes and gloves.

2.5 Requirements for personnel, duty of care

2.5.1 General information

Never let the installation aid be operated by personnel who are under the influence of reaction-reducing agents or are not able to operate for health reasons.

Personnel who are being trained, instructed or are placed in an apprenticeship program should only be allowed to work with the installation aid under constant supervision of an experienced person.

Note

The user guide must always be available at the installation site. The place of storage must be known to the employees.

2.5.2 Duty of care

The personnel must:

- read and understand the user guide
- be trained in the operation of the installation aid
- know how the individual tasks are performed
- be mentally and physically able to use the installation aid

2.5.3 Training

Work with the installation aid may only be carried out by reliable, trained and instructed personnel.

Minimum age

- Personnel must be at least 18 years old.
- Exception: for training purposes, apprentices under 18 may operate the system in the presence of a supervisor.

2.6 What to do in an emergency

Note the following points:

- Locations of first-aid stations must be known.
- Personnel must be informed about what to do in case of emergency.
- The proper conduct must be checked regularly and documented accordingly.

In case of emergency:

- Implementation of first aid to those injured.
- Call a doctor or paramedic.
- Inform superiors.
- Instructions from the supervisor or support staff must be followed.

3 Technical data

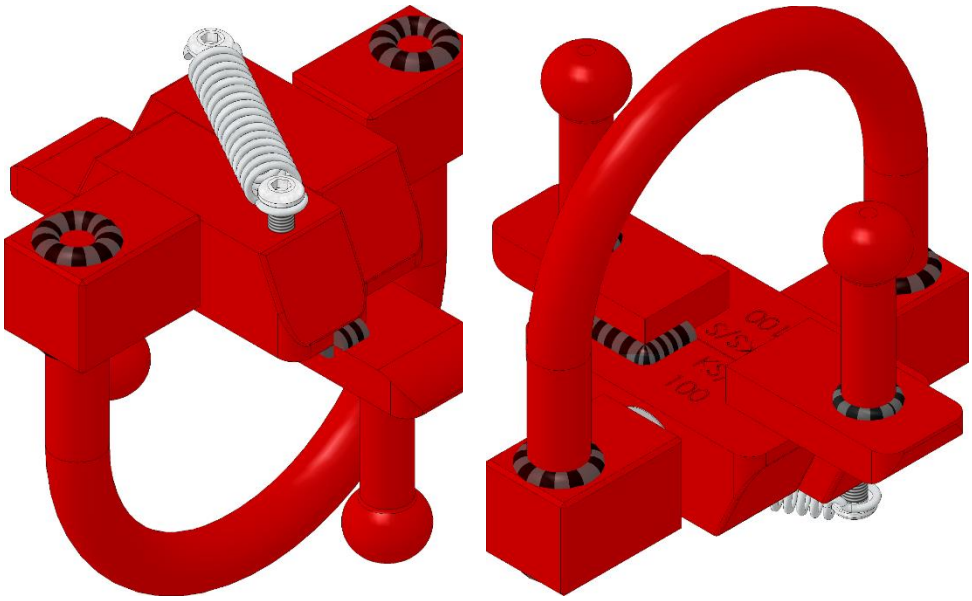
Load capacity	
Load capacity FASERFIX BIG SLG / SUPER / KS NW 100	280 kg
Net weight FASERFIX BIG SLG / SUPER / KS NW 100	1.6 kg
Load capacity FASERFIX BIG SLG / SUPER / KS NW 150	280 kg
Net weight FASERFIX BIG SLG / SUPER / KS NW 150	2.1 kg
Load capacity FASERFIX BIG SLG / SUPER / KS NW 200	280 kg
Net weight FASERFIX BIG SLG / SUPER / KS NW 200	2.6 kg
Load capacity FASERFIX BIG SLG / SUPER / KS NW 300	280 kg
Net weight FASERFIX BIG SLG / SUPER / KS NW 300	3.7 kg

Environmental conditions	
Permissible ambient temperature	-40 °C to 80 °C

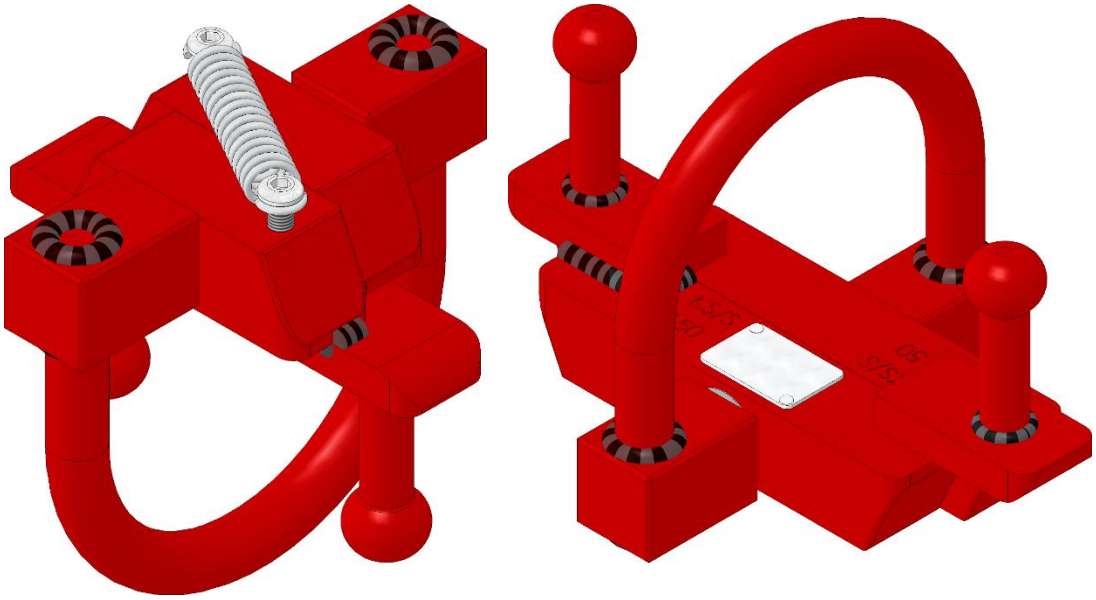
Load change	
Max. load change	20,000

4 Product description

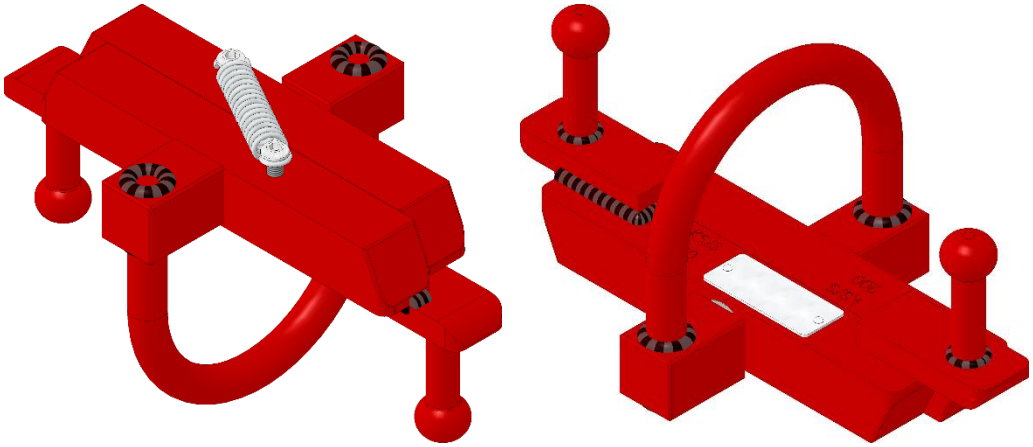
4.1 Drawing FASERFIX BIG SLG/ SUPER/ KS – 100



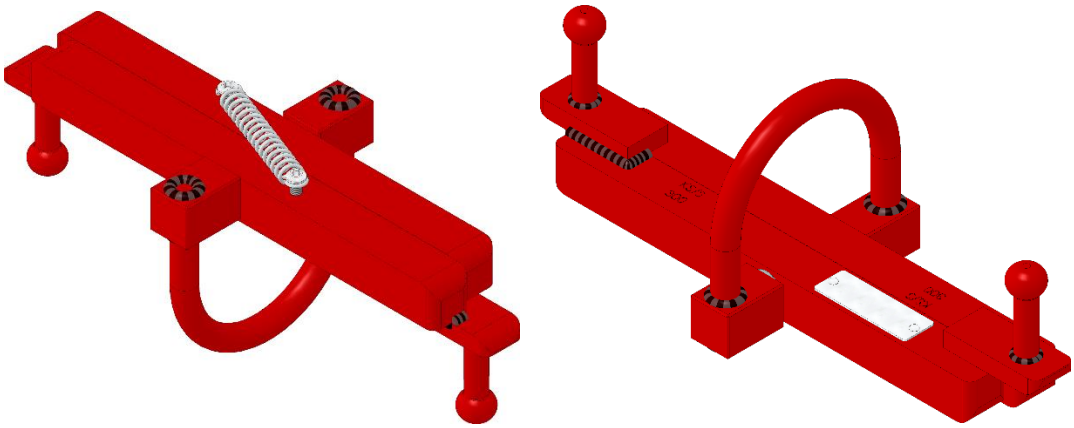
4.2 Drawing FASERFIX BIG SLG/ SUPER/ KS – 150



4.3 Drawing FASERFIX BIG SLG/ SUPER/ KS – 200



4.4 Drawing FASERFIX BIG SLG/ SUPER/ KS - 300



4.5 Functional description

The installation aid is designed as a shears and has a spring which holds it in its resting position as well as in a positive locking position in the recesses of the drainage channel.

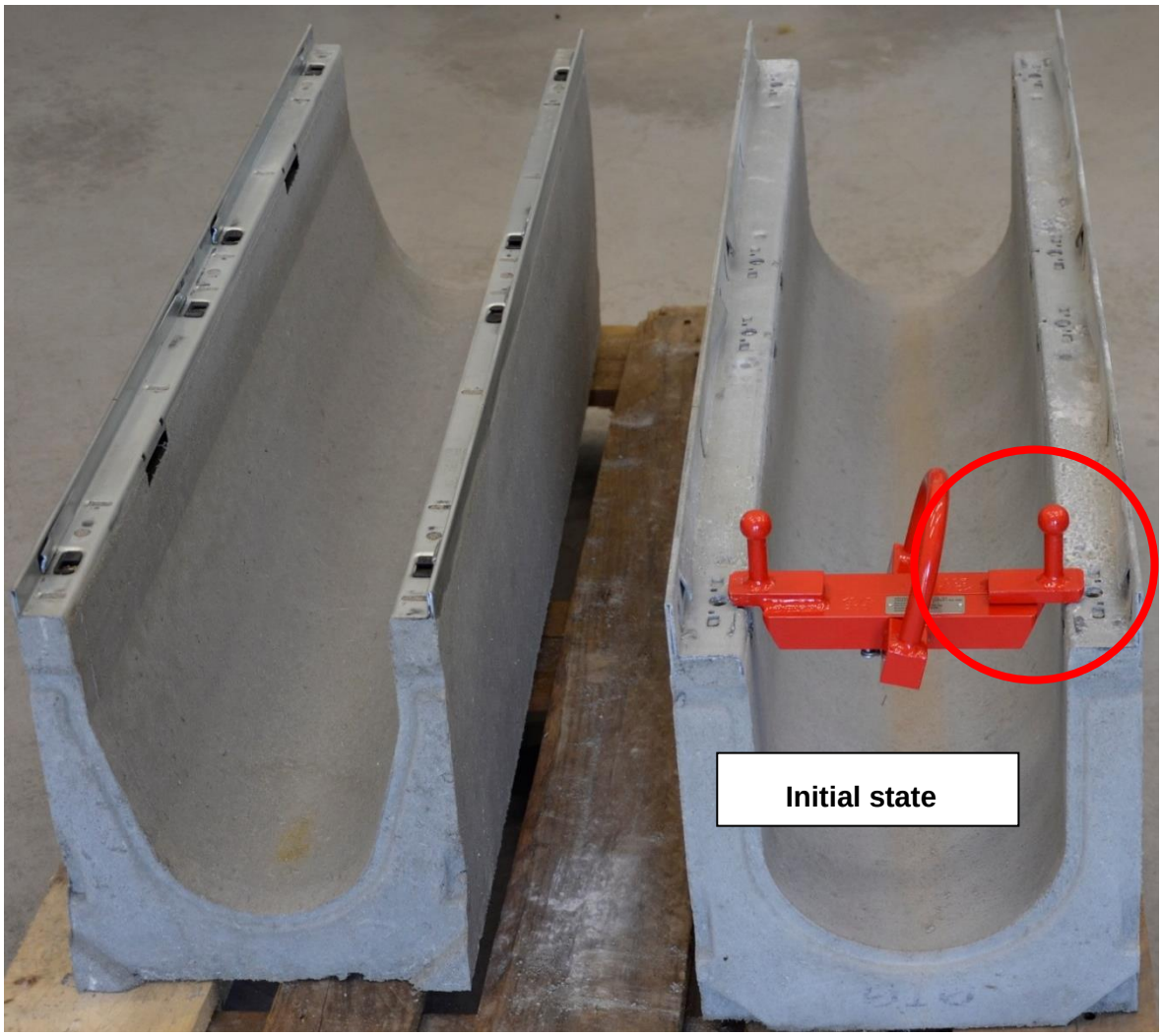
The locking of the installation aid into the recesses of the drainage channels is done by positioning the installation aid on the angle housing directly above the recesses. Pressing the handles down on both shears arms causes them to snap into the recesses.

Once the installation aid is locked into the recesses, the drainage channel can be lifted and transported with a suitable hoist and sling.

The locking mechanism of the installation aid must be checked by the operator before each lifting operation.

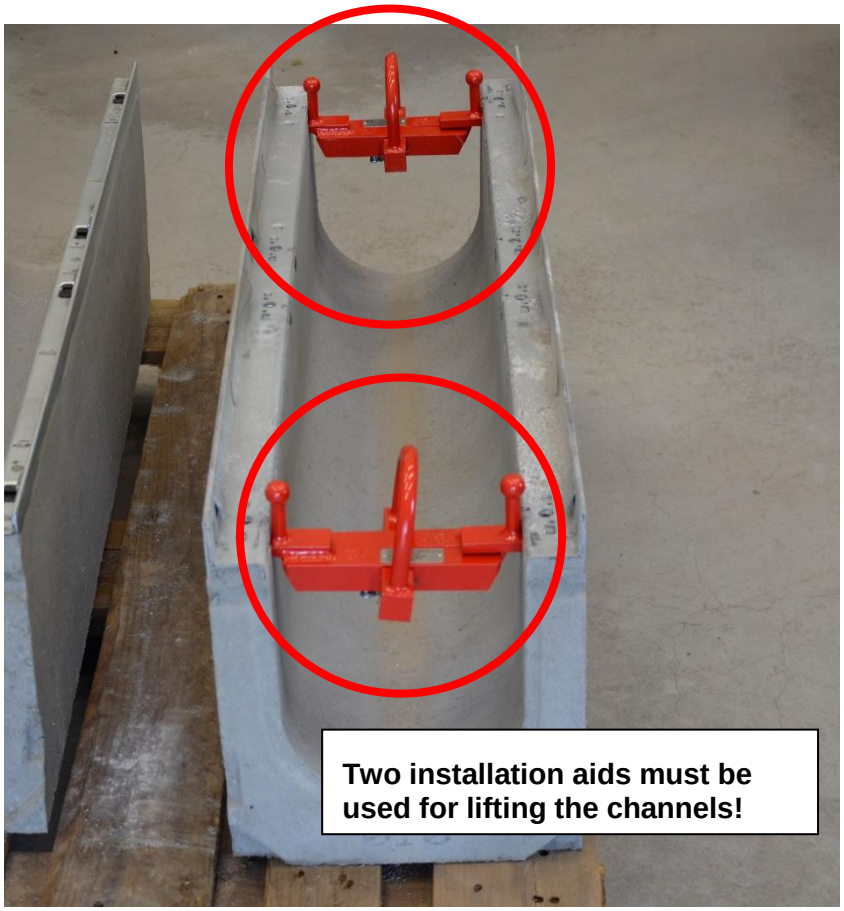
After setting down the drainage channel and after relieving the load on the sling, the installation aid can be moved downwards out of the recesses by pressing further on the arms of the handles provided for this purpose. The installation aid is released from the channel with a slight turn to the right or left.

4.6 Positioning the installation aid on the drainage channel



4.7 Locking the installation aid into the drainage channel

4.8 Installation aid locked in according to regulations



4.9 Removing the installation aid from the channel

5 Maintenance

5.1 Safety instructions for maintenance and repair

Caution!

Danger of crushing in shearing zone of installation aid

> Parts subjected to swing force when working

5.2 Inspection before initial operation

The installation aid was subjected to an internal manufacturing inspection. Nevertheless, the installation aid has to be tested by a specialist before the first commissioning by the operator according to employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new).

A specialist is someone who has sufficient knowledge in the field of load-bearing equipment due to their professional training and experience and who is familiar with the relevant state health and safety regulations, accident prevention regulations, guidelines and generally accepted rules of technology (e.g. DIN EN standards) to the extent that he can assess the safe working condition of load-bearing equipment.

The tests before the first commissioning are essentially visual and functional tests. They shall include the examination of the condition of the components, the intended assembly as well as the completeness and effectiveness of the safety devices.

Furthermore, the presence of the type label/marking of the installation aid must be checked.

5.3 Inspection before each use

The installation aid should be subjected to a visual inspection before each use by the user/operator.

It shall include the examination of the condition of the components, the intended assembly as well as the completeness and effectiveness of the safety devices. Care is to be taken with dirt or debris which can influence or restrict the operation of the installation aid.

5.4 Regular inspection

Regular inspections, according to employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new), must be carried out on installation aids by a specialist at least once a year. Depending on the conditions of use and the operating conditions, additional tests may be required. These test intervals should be determined by the operator of the installation aid as part of the risk assessment.

The regular inspection consists mainly of a visual and functional test. It covers the condition of the components (testing for cracks, deformations, severe corrosion and wear), the correct assembly, as well as the completeness and effectiveness of the safety devices. Care is to

be taken with dirt or debris which can influence or restrict the operation of the installation aid.

All movable parts such as bolts, springs and screw connections, must be checked for completeness, functional safety as well as wear and mobility. In case of wear on moving parts, the maximum cross-section reduction given in employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new), must be taken into account. Special manufacturer-specific requirements for the wear indicator must also be observed. Furthermore, the presence of the type plate as well as the marking of the installation aid must be checked.

5.5 Special inspection

Special inspections, according to employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new), shall be carried out in case of damage and special occurrences which can affect load-bearing capacity. Accessories must be inspected according to the respective regulations of the employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new).

They have to include the examination of the condition of the components and equipment (inspection for cracks, deformations, etc.), the intended assembly as well as the completeness and effectiveness of the safety devices.

All movable parts such as bolts, springs and screw connections, must be checked for completeness, functional safety as well as wear and mobility. In case of wear of moving parts, the maximum cross-section reduction specified in employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new), must be taken into account. Special manufacturer-specific requirements for the wear indicator must also be observed.

5.6 Service life of installation aid

- The limits of wear correspond to the specifications of employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new), chapter 2.8 point 3.15.4.1, subpoint 7.

The maximum permissible wear on the towing eyelet is 5%

The maximum permissible wear on the hooks is 5%

- 20,000 load cycles

5.7 Repairs

No repairs may be carried out without the consultation with the manufacturer. If a repair is carried out by the operator after consultation with the manufacturer, a test certificate must be drawn up.

Failure to observe the previous instructions may void claims under product liability or guarantee.

5.8 Disposal

According to DIN EN 13155, a loose installation aid is permitted a maximum of 20,000 load changes. After that, the maximum life expectancy of the installation aid is reached. The installation aid must then be taken out of operation and scrapped.

6 Declaration of conformity

see following page

EC-Declaration of conformity according to Machinery Directive 2006/42/EC Annex II 1.A

The manufacturer / distributor

HAURATON GmbH & Co. KG
Werkstraße 13

76437 Rastatt / Germany

hereby declares that the following product:

Product description:	Installation aid
Series/type designation:	FASERFIX BIG SLG/ SUPER/ KS 100 - 300
Serial number:	0045, 0014, 0028, 0059

complies with all applicable provisions of the above-mentioned directives, as well as other applicable directives (below) – including their amendments applicable at the time of the declaration.

The following harmonised standards were applied:

- DIN EN 13155 – Cranes – Safety – Loose installation aid
- DIN EN ISO 12100 – Safety of machinery – General principles of design – Risk assessment and risk reduction (ISO 12100:2010)

The following additional regulations were applied:

- Employer's liability insurance association rules (BGR 500 – old) / German social accident insurance rule (DGUV Regel 100-500 – new), chapter 2.8 – Operation of load-bearing equipment in hoisting device

Name and address of the person authorised to compile the technical documentation:

Dr.-Ing. Bernd Schiller

Head of Research & Development

HAURATON GmbH & Co KG

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Date: August 28th, 2018

Authorised representative, technical documentation