Operating instruction

Scraper Tool FWSG SE

FRIATEC

aliaxis

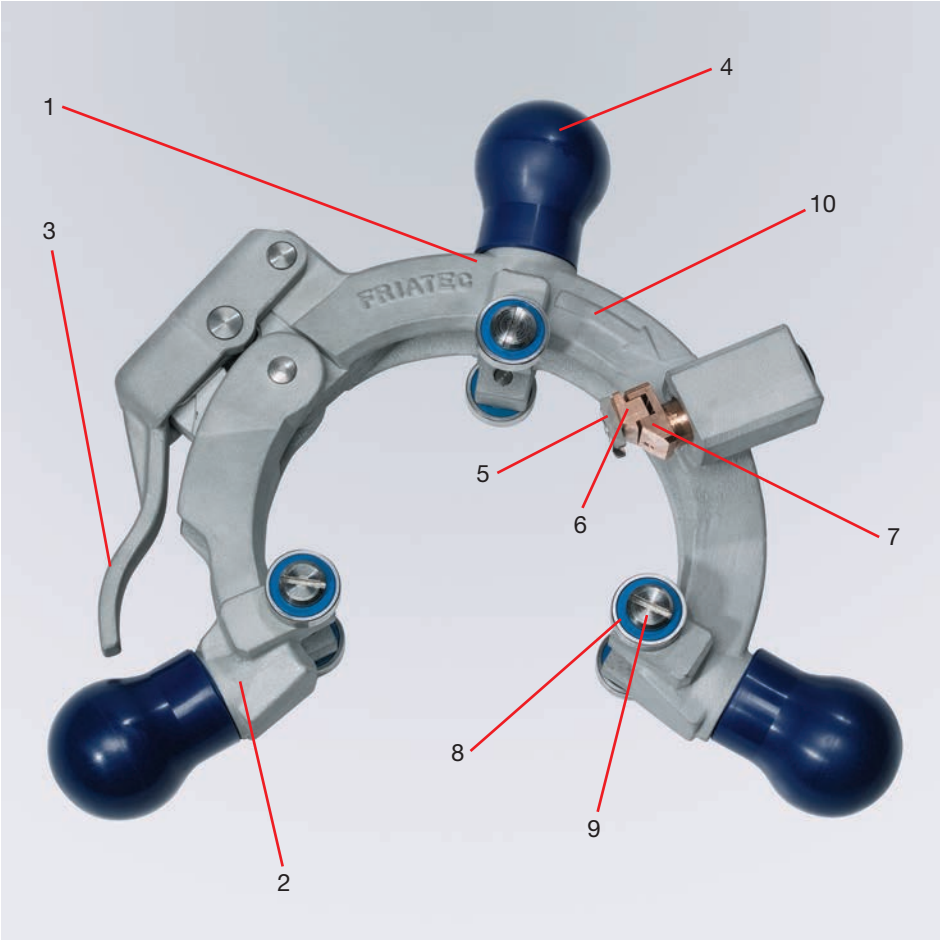

fig. 1

1. upper part
2. lower part
3. clamping lever
4. ball handhold
5. scraper blade
6. blade housing
7. blade holder
8. roller
9. fitting screw
10. arrow showing direction for scraping

Contents

1. Preliminary notes

1.1 Safety notes and hints

In these operating instructions, the following symbols with warnings are used:

Symbol	Meaning
⚠ **CAUTION**	Danger to persons. Failing to observe this can cause low to medium severity injuries.
NOTICE	Danger to objects. Failure to comply can result in objects damage.
INFORMATION	Application tips and other useful information. Failing to observe this cannot cause injury.

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1.2 Designated use

The FWSG SE scraper tools are precision tools and serve for the removal of the oxide layer as preparation for an electrofusion joint which forms on the surface of PE pipes during storage. They are ideal for scraping the surface areas of FRIALEN saddle fittings on the pipe and preparing for fitting fusion at the outlet spigot or end of the pipe.

The service life depends on the frequency of use and the external influences during use and/or the storage or transport of the tool.

These operating instructions apply in connection with the FRIALEN Safety Fittings assembly instructions.

FWSG SE	dimension	article No.
FWSG SE 2 IPS	2 IPS	613512
FWSG SE 3 IPS	3 IPS	613513
FWSG SE 4 IPS	4 IPS	613514
FWSG SE 6 IPS	6 IPS	613515
FWSG SE 8 IPS	8 IPS	613516
FWSG SE 12 IPS	12 IPS	613519

NOTICE

Before any fusion, a scraping has to be performed in any case!
Leaking fusion joints may result if the oxide layer is not removed completely.

2. Safety

2.1 Functional safety

The scraper tool FWSG SE is subject to the quality management pursuant to DIN EN ISO 9001:2008 and is checked for its functional safety before any delivery.

2.2 Obligations of the operator

All persons involved in commissioning, operation, maintenance and repair of the scraper tool FWSG SE must:

- be correspondingly qualified, and
- strictly observe these operating instructions.

The operating instructions must always be kept at the place of use of the tool (transport box recommended). The instructions must be available to the operator any time.

With regard to the intended use, please observe the accident prevention regulations, environmental regulations and statutory rules, as well as the relevant safety regulations and all local standards, laws and regulations.

2.3 Structural changes

No modifications, attachments or alterations on the scraper tool FWSG SE may be performed without approval by Aliaxis Deutschland GmbH.

3. Preparation of scraping

- Remove any dirt such as sand and soil from the pipe surface to be scraped (e.g. using a clean, fat-free cloth).

NOTICE
If the pipe surface to be scraped is not cleaned, the scraper blade wears prematurely!

- Determine the area on the saddle parts to be scraped. Place FRIALEN saddle part onto pipe and mark the outline using a FRIALEN-marker pen).
- If a fitting is to be fused, mark the insertion depth on the pipe end (use the FRIALEN marker pen).
- Mark area to be scraped using wavy lines (this is for you determine on scraping whether pipe has been scraped evenly).

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4. Assembly of the scraper tool

- Hold scraper tool by central ball handhold **(4)** and clamping lever **(3)** and place onto pipe at the point to be scraped (see fig. 2).

fig. 2

- When scraping is to take place at the pipe end, place scraper blade **(5)** in such a way that approx. 1/3 of the scraper blade **(5)** sits on the pipe (see fig. 3).

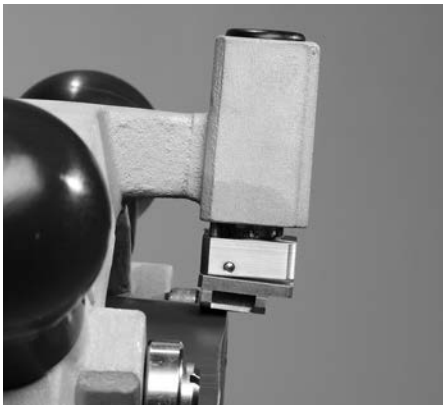

fig. 3

- Close clamping lever **(3)** (see fig. 4).

fig. 4

⚠ CAUTION

Risk of crushing!
The clamping lever snaps abruptly!
At higher preload forces the clamping lever can snap abruptly. Therefore make sure that your fingers are outside the clamping area between lower part **(2)** and clamping lever **(3)**.

5. Scraping of pipe surface

- Evenly rotate scraper tool by ball handholds **(4)** in direction shown (note arrow **(10)**) around the pipe (see fig. 5).

- Continue scraping until the pipe area marked has been completely scraped.

fig. 5

INFORMATION

Scraping the outlet spigot of saddle fittings!
Should the scraped length be too short, the scraper tool must be turned and again clamped to the outlet spigot. Scraping is then performed in the opposite direction towards the face side. Scraping must stop as soon as it overlaps the previously scraped spigot area – at most by one turn. At this position, the scraper tool's front guide wheels may not function properly.

⚠ CAUTION

Risk of injury during scraping process!
Keep hands off the pipe.

NOTICE

Do not push the tool in the direction of the axis of the pipe whilst scraping!

- The swarf is to be removed manually.

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6. Disassembly of the scraper tool

- For disassembling hold scraper tool by gripping the central ball handhold **(4)** with one hand and using the other hand to release the clamping lever **(3)** (see fig. 6).

fig. 6

- Pull the scraper tool off the pipe (see fig. 7).
- After use, store the tool in the transport box.

fig. 7

7. Inspection of the scraping result

Inspect the scraping result, i.e. the swarf must be completely removed and the markings applied before with the FRIALEN marker may no longer be visible.

For bundled coil pipes control the scraping result with regard to the swarf thickness or remained marks on the pipe very carefully.

If the marker lines are not completely removed, the scraping process should be repeated.

The scraper tool's nominal swarf thickness and wear limit have been defined in their test records as max processing limits for FRIALEN safety fittings. When processing fittings of other manufactures, note the minimum pipe diameter for fusion.

An abrasion of the blade can enlarge the swarf thickness inadmissibly. This abrasion occurs because of multiple usage and outside influences (sand, soil etc.). Therefore the strength of the swarf must be measured regularly - e.g. with a calliper gauge. Scraper blades are worn parts and have to be replaced (see chapter 8).

NOTICE
An incomplete scraping or a differing swarf thickness may result in a leaking fusion joint.

8. Replacement of blade

The scraper blade **(5)** of your scraper tool is made up of two blades. The blade **(5)** has been assembled by the factory in such a way that the blade with the number "1" is in use (see fig. 8).

⚠ **CAUTION**
Risk of injury at the blade!

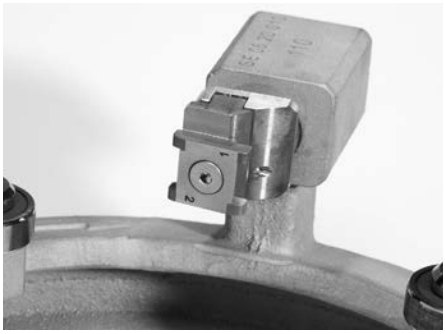

fig. 8

8.1 Change blade 1 to blade 2

- Loosen hexagon screw by using SW 2,5 hexagon spanner by one rotation.
- Rotate scraper blade by 180° (see fig. 9).
- Tighten hexagon screw by using SW 2.5 hexagon spanner.

fig. 9

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8.2 Replace scraper blade

- Loosen hexagon screw using 2.5 hexagon spanner (see fig.10).
- Remove scraper blade.
- Clean supporting area if necessary.
- Apply new scraper blade.
- Tighten hexagon screw using SW 2.5 hexagon.

fig. 10

Replacement blade set	Order no.
FWSGE 8	613 327

9. Notes on care and maintenance

Your scraper tool FWSG SE is a precision tool. Please thus observe the notes on care and maintenance. All component parts are to be regularly cleaned of dirt and deposits.

NOTICE

Your expense!
Careful handling of the equipment will prevent unnecessary repairs and downtimes. Regular annual safety checks by Aliaxis Deutschland GmbH or authorized service stations are recommended.

The scraper tool FWSG SE must be kept clean and dry. After use, the tool is always to be stored in the dry transport box. The FWSG SE must be treated **regularly** using FRIATEC maintenance spray. Spray FRIATEC maintenance spray onto a clean cloth and rub carefully on the tool. Those parts of the tool which come into contact with the pipe, e.g. the scraper blade **(5)** or the grooves for the rollers **(8)** may not be treated using the maintenance spray. If this happens accidentally, these parts must be cleaned by using standard cold cleaning agents. Service and maintenance tasks should be carried out in a workroom.

NOTICE

Oil or oil-based maintenance spray may not come into contact with the pipe surface to be scraped!

Article	Order no.
FRIATEC maintenance spray*	613 301

*Please observe safety and application instructions on agent container.

10. Warranty

The warranty is granted for 1 year.
Excluded from this are parts which prematurely wear because of the environment (sand, earth, corrosion-promoting materials and similar).
Warranty and liability claims in the event of injuries to persons and damages to property shall be excluded if they are the result of one or several of the following causes:

- use of scraper tool FWSG SE and the plunger not according to its intended use,
- structural modifications not approved by Aliaxis Deutschland GmbH accord. to item 2.3.,
- improper handling and improper transport,
- improperly performed maintenance and repair work,
- non-observance of notes in these operating instructions, and/or
- use of worn work functional parts or of a damaged scraper tool FWSG SE.

11. Update of these operating instructions

These technical statements are regularly checked for their up-to-dateness. The date of the last revision is stated on each page. For an updated version of the operating instructions, please visit our website www.friatools.com on the Internet. You will find the “Download” page on the navigation bar. This page contains our updated operating instructions as pdf documents. We would also be pleased to mail them to you on request.

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