

## Operating Instructions for the FWSG 710 S scraper tool



The FWSG 710 S scraper tool serves to process HD-PE and PE-X pipes ranging from d 250 to max. d 630, and also to process FRIALEN/FRIAFIT nozzle fittings. It is particularly suited for the removal of the oxidic layer in preparation for a heating coil fusion process. Due to their construction, nozzle fittings by different manufacturers sometimes vary in structure from the tried and tested FRIALEN/FRIAFIT nozzle fittings. For this reason we are unable to offer warranty on processing nozzle fittings by different manufacturers. The design of the FWSG 710 S allows scraping of the pipe surface in preparation for a simple fusion process, as well as the processing of nozzle fittings (see illustration 1). For this, the pipe must be processed for half the length of the coupler (insertion depth). We recommend the FWSG 710 L scraper tool for the use of a slide-on coupler.

- 1 roller handle
- 2 scraper blade
- 3 front plate
- 4 clamping carriage
- 5 delta star handle
- 6 guide rollers
- 7 blade casing
- 8 blade mount
- 9 release button
- 10 end plate

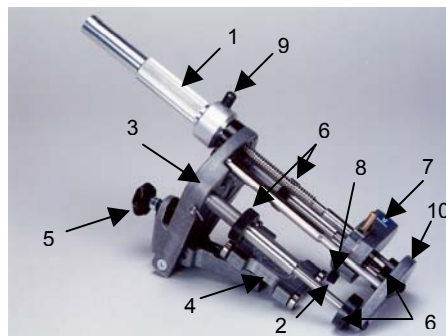


Abb. 1

Appropriate dimension ranges are marked on the guide rod of the scraper tool.

### NB!

Please note that markings apply only when rods are fully extended!

### 1. Preparation

Remove any coarse dirt from pipe surface to be scraped (using e.g. a clean non greasy cloth). Determine length (=insertion depth of coupler/moulded part + 5 mm) to be scraped, and mark area with a wavy line using a FRIALEN marker pen.

### 2. Settings of unit

Place blade in protective position: press release button on roller handle and bring blade casing close to the front plate (box) (see illustration 2).

Place clamping carriage into lower position: loosen delta star handle. Cancel lock by applying pressure on the delta star handle and drive clamping carriage down (see illustration 3).

Adjust blade casing to required length to be scraped: pull out telescopic rods up to the end position. Press the release button on roller handle and adjust blade casing roughly to the appropriate dimension marked (see illustration 2).

Final adjustments of the position of the blade casing takes place by rotating the roller handle until the red marked line on the blade casing is flush with the selected dimension range on the guide rod (see illustration 4).



Abb. 2



Abb. 3

### Attention!

Do not allow the scraper blade to touch the clamping carriage!

### NB!

When setting the dimension range, the rods must be fully extended!

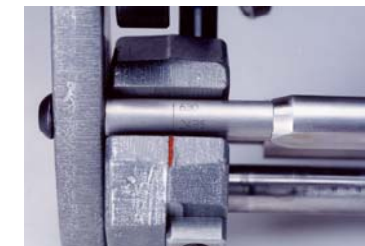


Abb.4

### Table for setting the various pipe dimensions:

Settings marked on scraper tool	d 315	d 450	d 630 or 710 (depending on year of manufacture)
Pipe dimensions*	d 250 d 280 d 315	d 355 d 400 d 450	d 500 d 560 d 630 d 710

\*max. authorised deviation from nominal wall thickness +/-3 mm.

### 3. Mounting the scraper tool

Scraper tool must be guided across the pipe in such a way that the clamping carriage is situated inside the pipe and the scraper blade is on the pipe surface (see illustration 5). The front plate must be flush with the front edge of the pipe.

#### Attention!

**Do not push the blade across the pipe surface.**

Locking of clamping: setting the clamping carriage to the correct place for the given wall thickness (see illustration 3). The load bearing part of the clamping carriage should be aligned parallel with the pipe wall. Tighten the delta star handle (see illustration 6) until all four guide rollers rest on the surface of the pipe or nozzle fitting.

### 4. Scraping the pipe surface

Turn the tool clockwise around the pipe end or nozzle fitting. The pipe/nozzle fitting is scraped to the end by continuous rotation (see illustration 7).

#### Attention!

**During the scraping process the scraper tool must be pressed against the pipe end in order to prevent axial tilting!**

### 5. Dismounting the unit

Loosen the delta star handle and remove scraper tool from the pipe. The blade casing must be brought up to the front plate on completion of the work, in order to prevent any injuries or damage to the scraper blade.



Abb. 5



Abb. 6



Abb. 7

### 6. Preparing the fusion process

Remove swarf. Check scraping result. Repeat scraping process if the markings have not been completely removed (from point 3). A bevel (2-3 mm) must be attached to the pipe end using a manual scraper. Before fusion the pipe must be cleaned using a PE cleaning agent and absorbent, non fibrous and non coloured paper. FRIALEN/FRIAFIT couplers and nozzle fittings are processed according to the assembly instructions.

#### Attention!

**The scraper tool always be stored in the transporting case, clean and dry.**

### 7. Replacing scraper blade

#### Attention!

#### Risk of injuries around scraper blade.

Loosen TORX screw using TORX spanner. Remove scraper blade. Insert new scraper blade. Fasten TORX screw using TORX spanner. When replacing scraper blade please ensure sole use of blue scraper blades (replacement blade FWSGE 5, order no 613324).

### 8. Warranty

Warranty period is 12 month. Wear and tear of blades or parts caused by their surroundings (e.g. sand, soil) is excluded. The unit must be protected from contamination.

### 9. Operational safety

The FWSG 710 S scraper tool is subject to DIN ISO 9001 quality management and undergoes safety checks before being supplied. Regular annual operational safety checks by a FRIATEC service point are recommended.

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