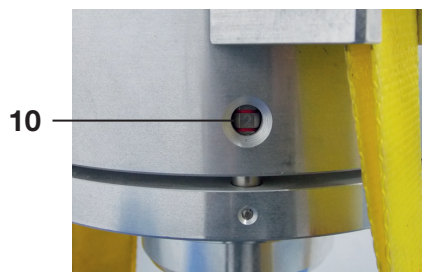
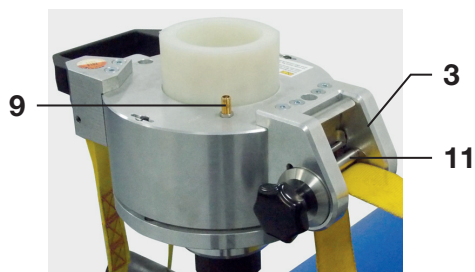
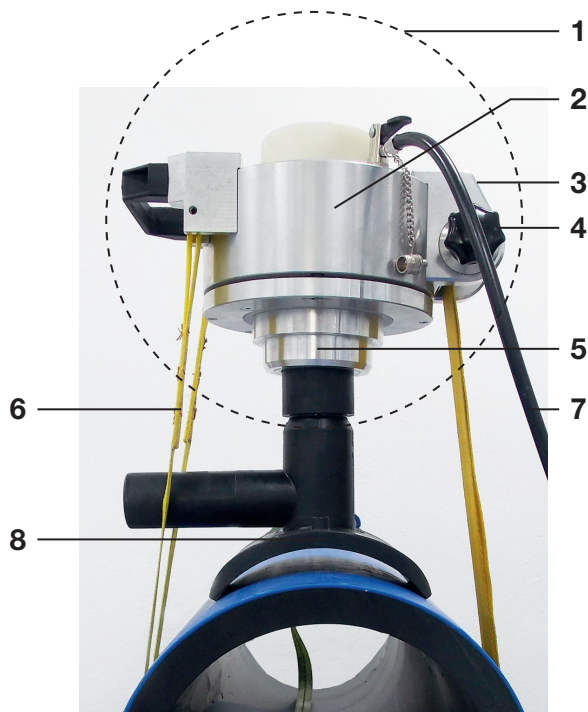


**DE**

**Bedienungsanleitung
FRIATOP Aufspannvorrichtung**

EN

**Operating instructions
FRIATOP clamping unit**



- 1 FRIATOP clamping unit
- 2 Housing
- 3 Recessed handle
- 4 Twist grip
- 5 Adapter
- 6 Tensioning belt
- 7 Hose (compressed air pump)
- 8 Saddle fitting TL
- 9 Valve
- 10 Inspection glass for clamping figures
- 11 Rollers

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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 people. Failure to comply can result in minor or moderate injury.
NOTICE	Danger to objects. Failure to comply can result in objects damage.
INFORMATION	Application hints and other useful information. Failure to comply can not result in personal injury or objects damage.

1.2 Designated use

The FRIATOP clamping unit is suitable for securing FRIALEN XL and FRIAFIT saddle fittings as top loading (TL) designs for electrofusion welding on PE-HD pipes.

These operating instructions apply in connection with the assembly instruction FRIALEN XL large pipe technique and FRIAFIT sewage system.

2. Safety

2.1 Functional safety

The FRIATOP clamping unit is subject to the quality management pursuant to DIN EN ISO 9001:2008 and is checked for its functional safety before any delivery.

To avoid personal injury and property damage, the following basic points should be considered:

- Before using the equipment check the correct status of the equipment.
- Care must be taken to ensure that the compressed air connections work properly.

2.2 Obligations of the operator

All persons involved in commissioning, operation, maintenance and repair of the FRIATOP clamping unit 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.

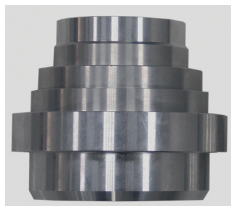
2.3 Structural changes

No modifications, attachments or alterations on the unit may be performed without approval by FRIATEC AG.

3. Scope of delivery

The FRIATOP clamping unit consists of:

- Pneumatic clamping unit **(1)** with tensioning belt **(6)**
- Component adapters (2 pieces) **(5)**:
 - a) Universal adapter for SA-TL spigot saddles with outlet d 63 to d 110



- b) VSC adapter for VSC-TL repair saddles and DAV-TL pressure tapping valves (only in combination with universal adapter)



- Air pump
- Operating instruction
- Transport box

4. Preparation of the scraping

NOTICE

Please observe the applicable FRIALEN XL or FRIAFIT assembly instructions before processing.

- Make sure that the pipe surface exhibits a uniform roundness. There must be no flattening. If necessary, choose another, suitable site on the pipe.
- Remove any contaminations such as sand and soil from the pipe surface to be scraped (e.g. using a clean, fat-free cloth).
- Measure fusion zone on the PE pipe, mark and remove oxide layer with a suitable scraper tool or hand scraper.

NOTICE

Scraping must be performed before fusion in any case.

If the oxide layer is not removed completely, leaking fusion joints may result.

- Clean the saddle area as well as the interior of the saddle with a suitable PE cleaning agent and exclusively with absorbent, lint-free and non-dyed paper.
- Position the FRIALEN XL or FRIAFIT Top-Loading saddle fitting on the PE pipe.

5. Assembly of FRIATOP clamping unit

- Select the appropriate adapter **(5)** for the saddle fitting to be processed. The adapter has to surround the dome or spigot end of the fitting (the opposite end of the saddle) securely.
- Place the matching adapter **(5)** (as depicted on the example DAA-TL and SA-TL in Figs. 1 and 2) on the FRIALEN TL saddle fitting.

DAV-TL only – Mount adapter **b** with central curvature on the component's saddle surface.

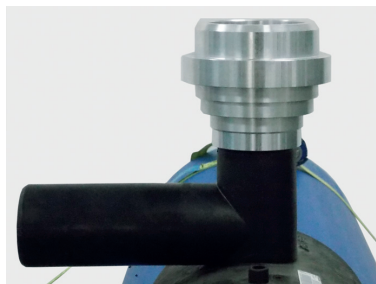


Fig. 1

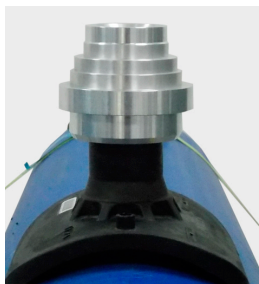


Fig. 2

- As depicted in Fig. 3, mount the FRIATOP clamping unit's housing **(2)** on the adapter and fitting. When the FRIALEN TL saddle fitting features an outlet socket, this must be positioned between the split ends of the tensioning belt (see Fig. 4).

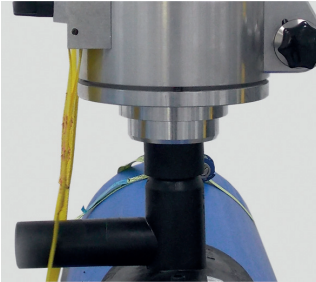


Fig. 3



Fig. 4

- Check that the FRIATOP clamping unit is unpressurised (no air pressure at the valve). If necessary, squeeze the housing **(2)** until you can see the clamping figures $\frac{1}{2}$ in the inspection glass **(10)** (see Fig. 5).

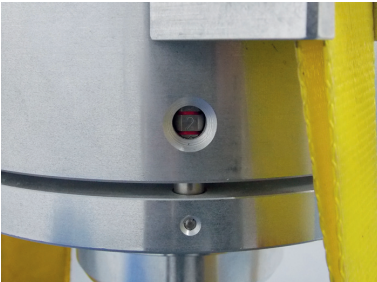


Fig. 5

- Lay the tensioning belt **(6)** around the pipe.
- Thread the loose end of the tensioning belt **(6)** into the rollers **(11)** on the twist grip **(4)** (see Fig. 6) and tighten the belt by turning the star wheel **(4)** clockwise.

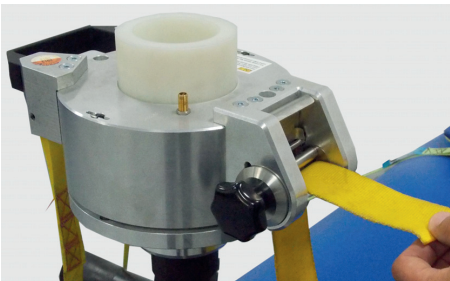


Fig. 6

- Referring to Fig. 7, align the FRIALEN TL saddle fitting **(8)** with the FRIATOP clamping device to the site on the pipe prepared for fusion.



Fig. 7

NOTICE

Do not twist the tensioning belt!

- Pull the belt taut (see Fig. 9) by turning the twist grip **(4)** clockwise (see Fig. 8).

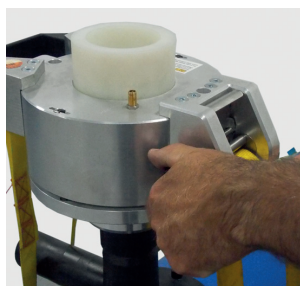


Fig. 8



Fig. 9

- Connect the compressed air pump to the valve **(9)**, and use the clamping lever to secure the pump's connector in place (see Fig. 10).

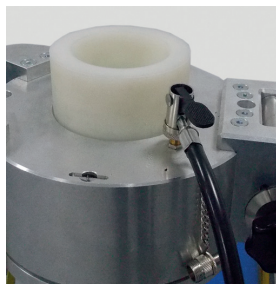


Fig. 10

CAUTION

The component and device are still unsecured and may tip. Secure the position!

- Make sure that the clamping unit, the saddle fitting, and the tensioning belt are aligned vertically and are straight. If necessary, correct the saddle's seat, and align all components free of tension.
- Let the compressed air pump run until its pressure gauge reads the following:

Component	FRIALEN-TL	FRIAFIT ASA-TL
Clamping pressure	3 to max 4 bar	max 2 bar

NOTICE

Please observe the applicable FRIALEN or FRIAFIT installation instructions and, if necessary, the details on the product's instruction leaflet before starting work.

- Expanding the housing **(2)** (see Fig. 11) adjusts the saddle surface to the pipe contour.

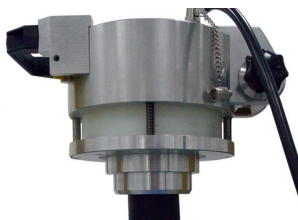


Fig. 11

- The saddle should lie flush on the pipe without any gaps (see Fig. 13).

INFORMATION

At low temperatures or on large pipe diameters, you may have to pressurise, depressurise, and repressurise the saddle fitting for a few minutes until it lies flush on the pipe without any gaps.

NOTICE

Pressure loss!

Detach air pump after pressurisation and before fusion mandatory from the valve of the FRIATOP clamping unit.

- Make sure that there is an adequate clamping path remaining at the clamping unit, before the stroke reaches the stop. Once the FRIALEN TL saddle fitting has been clamped free of gaps, a maximum clamping figure of 9 (of 10) must be visible in the housing's inspection glass **(10)** (see Fig. 12). If necessary, stop the process, and retighten at the star wheel **(4)**.

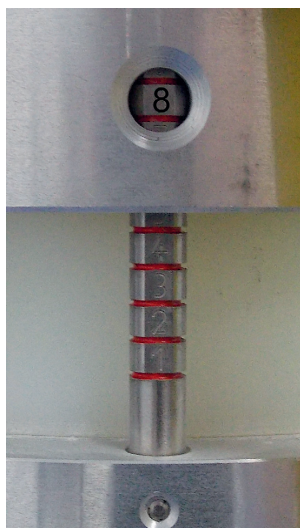


Fig. 12

- Disengage the clamping lever on the compressed air pump's air hose **(7)**, and detach the air hose **(7)** from the valve **(9)**.
- Again check that the saddle lies on the pipe without any gaps (see Fig. 13)!



Fig. 13

- Note the clamping figure in the inspection glass **(10)**, and check this before and during fusion. The indicated figure may change by one line at the most. In the event of larger changes, abort fusion, and remedy the pressure leak on the unit. Please consult our application engineering department, phone: +49 (0)621 486 1486.

6. Carrying out of fusion

- Start the fusion. Observe the operating instruction of the FRIAMAT fusion unit.



For the sake of general safety always stay at a distance of one meter from the point of fusion during the fusion process.

- After the end of the fusion times switch off the fusion unit and remove the fusion cable.
- After the end of the fusion time a cooling time of ten minutes has to be observed, in accordance to the assembly instruction, after this cooling time you can dismantle the clamping unit FRIATOP.

NOTICE

This cooling period prior to tapping is specified next to “CT” on the barcode affixed to the FRIALEN XL / FRIAFIT saddle component. The FRIALEN XL or FRIAFIT assembly instructions specify the shorter cooling periods that must be observed before the unit is removed or a pressure test conducted.

NOTICE

Failing to observe this clamping or cooling period can cause the fusion to leak!

7. Removing the FRIATOP clamping unit

- Open the valve (9) to release the pressure, and squeeze the unit back to its original shape. Pull on the recessed handle (3) to loosen the tensioning belt (6) (see Fig. 14).



Fig. 14

NOTICE

When releasing the tensioning belt secure the FRIATOP clamping unit!

- Place the dry and clean unit in its transport box.

8. Tapping and commissioning

- Observe the processing notes of the FRIALEN XL und FRIAFIT assembly instructions.

NOTICE

Keep the cooling down time!

If the cooling down time is not adhered to the saddle can come away from the pipe in the area of the fused joint. A permanently safe fused joint cannot be guaranteed.

- Conduct a pressure test on the saddle before tapping the main pipe.

9. Notes on care and maintenance

The FRIATOP clamping unit has been checked for safe operation before being shipped. The unit should be protected from dirt.

The FRIATOP clamping unit and accessories are to be stored in a dry and clean place. After use, the tool is always to be stored in the dry transport box. The temperature range for storing is -20°C to +70°C.

NOTICE

Your costs!

Careful handling of the FRIATOP clamping unit prevents unnecessary repairs and downtimes. A regular annual check for functional safety by the service of FRIATEC AG or our service stations is recommended.

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 the FRIATOP not according to its intended use,
- structural modifications not approved by FRIATEC AG 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 FRIATOP.

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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