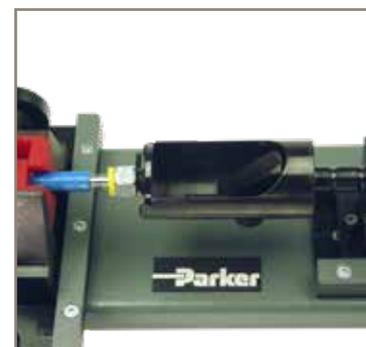


# Hose Fitting Insertion Device TH1E-5

Operating Manual



ENGINEERING YOUR SUCCESS.

**Translation of original Operating Manual**

Hose Fitting Insertion device TH1E-5

**Manufacturer**

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## **1 Introduction, intended use**

### **1.1 Principles**

In this operating manual, the Hose Fitting Insertion device TH1E-5 is consistently referred to as the “machine”.

This operating manual contains important instructions on how to operate your machine

- **safely**
- **properly and**
- **in a cost-efficient manner.**

Observing these instructions

- **reduces hazards**
- **minimises repair costs and downtimes, and**
- **increases the reliability and service life of the machine.**

The machine has been designed according to the state of the art.

Improper use may result in danger for the operator’s life and limb and/or damage to the machine.

Therefore operate the machine

- **in perfect condition only**
- **for its intended use only**
- **paying attention to safety and potential hazards**
- **in full compliance with the instructions of this operating manual.**

This operating manual contains the rules and guidelines relating to the proper use of your machine for its intended purpose. Only compliance with these instructions will be considered use as intended. The owner is responsible for any risks resulting from any other use of the machine.

Read this operating manual before you

- **operate**
- **service**
- **repair the machine.**

Only personnel that has read and understood the operating manual and has been fully instructed is permitted to operate the machine. The operating manual must be readily accessible at all times.

## 1.2 Target groups

This operating manual has the following target groups:

- the owner
- the operator
- the safety representative.

## 1.3 Intended use

This machine has been designed for industrial use. It is suitable for the insertion of Push-Lok fittings into Push-Lok hoses.

- The hoses to be processed must be dry and clean.
- You are not allowed to change the design of the machine.
- The operating temperature range is between 15 °C and 35 °C.

Any other use of the machine will be considered improper use.

The owner will be solely responsible for any consequences of improper use.

Please note

**Intended use includes compliance with the prescribed**

- operating instructions
- maintenance and repair work
- disposal of the machine.

Anyone who performs maintenance or other work on the machine must have read and understood the relevant sections of this operating manual and in particular Chapter 2 “Safe operation, pollution control”.

The owner of machine must inform its personnel about any potential hazards that may occur.

National regulations apply without restrictions.

The owner has to make sure that this operating manual has been understood. Always keep a copy of this operating manual at the place of use of the machine in a place specially designated for this purpose.

The manufacturer does not assume any liability for any errors in this operating manual or for any indirect, direct or accidental damage including loss of profit or any other damage resulting in connection with the delivery, performance or use/operation of these products.

The instructions contained in this operating manual and in the other leaflets supplied must be complied with. Furthermore, only original spare parts or equivalent spare parts / materials approved by the manufacturer must be used.

## **2 Safe operation, pollution control**

### **2.1 General instructions**

The machine has been designed according to the state of the art. If it is used improperly or not used as intended, this machine may pose risks.

This operating manual serves for proper use and safe work with the machine.

Anyone working with the machine must have read and understood the operating manual and in particular this chapter: "Safe operation, pollution control".

Safety instructions are intended to ensure safety at the workplace and to prevent accidents. They must be complied with.

Therefore please keep this operating manual in a specially designated place close to the machine at all times to ensure it is always readily available. Your cooperation is required to protect you and your fellow workers from injuries.

Always exercise caution and pay attention to safety when working with the machine – dangers are often not obvious.

The following signs draw your attention to passages which are of particular importance.



Danger

You can find this sign next to all safety instructions in this manual. It indicates that there is a danger to life and limb. Observe these instructions and proceed with particular caution. Forward all safety instructions to other users as well. The generally applicable safety and accident prevention regulations need to be complied with in addition to the instructions contained in this operating manual.



Warning

You can find this sign next to passages of this manual to which special attention needs to be paid. This ensures that guidelines, regulations, instructions and the proper operations sequence are complied with and that damage and destruction of the machine are prevented.



Danger of  
crushing  
your hands

In this operating manual, this sign indicates the danger of crushing your hands.



Working and operating steps to be performed in the sequence described.



General bulleted lists.

## 2.2 Definitions

### **Residual risks**

Residual risks are risks associated with the use of the machine and they are not obvious. Although the machine has been developed, designed and built according to the state of the art and according to the generally accepted safety rules, residual risks cannot be completely excluded – even when the machine is used as intended.

### **Owner**

The owner is any natural or legal person that uses the machine itself or by whose order the machine is used. The owner can appoint a representative who exercises the owner's rights and fulfils the owner's duties on the owner's behalf.

### **Supervisor**

The supervisor is an individual commissioned by the owner to instruct the operator to operate the machine properly and as intended. Unless otherwise provided, the supervisor has to arrange for maintenance and repair work as well as regular inspections.

### **Competent and qualified staff**

Competent and qualified staff refers to those individuals who, due to their professional training and experience, have adequate knowledge in a special field and are familiar with the relevant industrial safety and accident prevention regulations and the generally accepted technical rules and standards.

### **Trained and instructed staff**

Trained and instructed staff refers to those individuals who have been trained and instructed by a competent individual as regards the tasks such trained and instructed staff is entrusted with as well as the potential risks of improper behaviour and who have been briefed about the necessary protective equipment and protective measures.

### **Operator**

Operator refers to an individual who has been entrusted with the intended use of the machine by the owner or any other contractually responsible person.

### **Protective apparel**

Protective apparel refers to personal protective equipment which protects the operator's body from residual risks associated with the operator's use of the machine. The owner is responsible for its operators wearing only such personal protective equipment that complies with the provisions of the Equipment Safety Act.

The accident prevention regulations applicable to the respective job or workplace prescribe when personal protective equipment must be worn.

## **2.3 Safety instructions for the workplace**

### **2.3.1 Safety signs at the workplace**

### **2.3.2 Recommendations for the working area**

- Keep the working area free from trip hazards.
- Ensure adequate lighting at the workplace.

The machine has a workplace with the following working area



Working area

## 2.4 Rules to observe

Ensure adequate lighting in the working area of the machine.

Machine operators need to know the location and operation of fire alarm and fire-fighting facilities.

These facilities must be freely accessible.

### 2.4.1 During operation

- Check each movement of your hands (motor activity) with your eyes (sensory activity). Controlled movements need to be monitored sensorily at all times.
- Before each use make sure that the machine and the rubber jaws are in proper condition, are properly fixed and undamaged.
- Wear snugly fitting clothes which cannot get caught in the machine.
- Do not process pieces of hose that are too short and keep your hands away from the danger area.
- Make sure that the hose piece to be processed is placed centrally in the rubber jaws.
- Make sure that your work does not endanger anyone. Remember that you may be held liable.
- Keep children away from the machine; unauthorised people should keep a safe distance from the machine.
- Keep your workplace neat and tidy as dirty areas are often the cause of accidents. A neat and tidy workplace can contribute to the prevention of accidents.
- Always avoid any impact and blows on parts of the machine; work with concentration and feeling.
- Before each use check the rubber jaws for cracks and breaks. Only work with a machine that is in proper condition.
- Perform the prescribed inspection, cleaning and maintenance work.
- Make sure that no other person is within the working area.
- Do not eat, drink or smoke at your workplace.



After completing your work

- Thoroughly clean your hands after completing your work.

### 2.4.3 Danger of fire



Remove the particles of material and hose residues having settled on the machine on a regular basis.

### 2.4.4 Fire behaviour

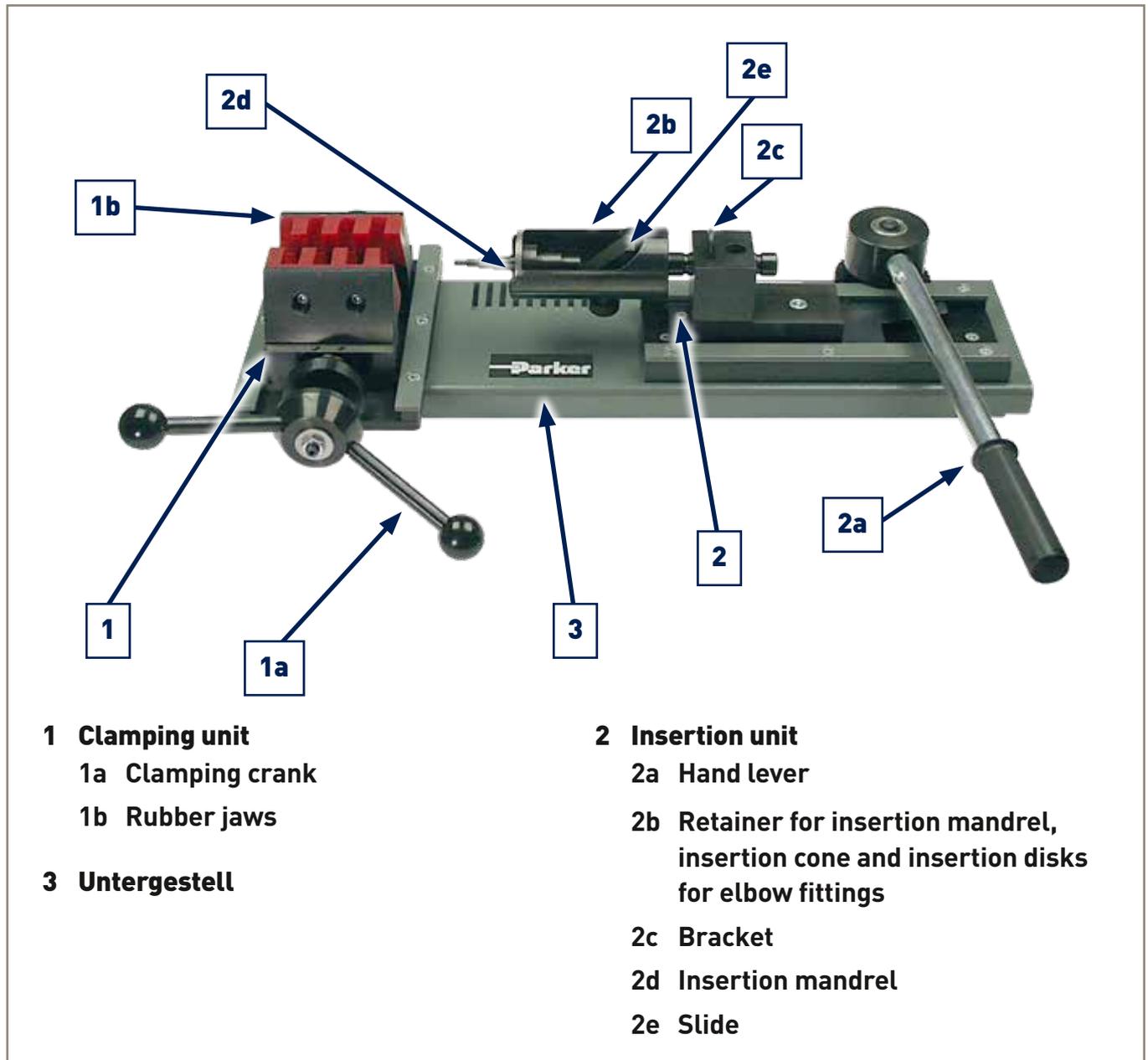
The machine has not been designed for use in potentially explosive atmospheres or in environments exposed to a fire hazard. No materials, auxiliary agents etc. must be used, which may generate conditions with a risk of fire or explosion themselves or in combination with other materials.

## 2.5 Operating supplies and waste materials

- The owner of the machine is obliged to comply with the environmental and waste disposal regulations applying to the region where the owner's company is based.
- The owner of the machine is obliged to disclose any applicable statutory provisions to the operating staff and to inform the staff about any necessary supplements resulting from the function of the machine.
- The owner of the machine is obliged to inform its employees about any improper use of operating supplies and waste materials.
- Ensure that appropriate measures are taken in the event of accidents and fires.

### 3 Design and operation

#### 3.1 Design

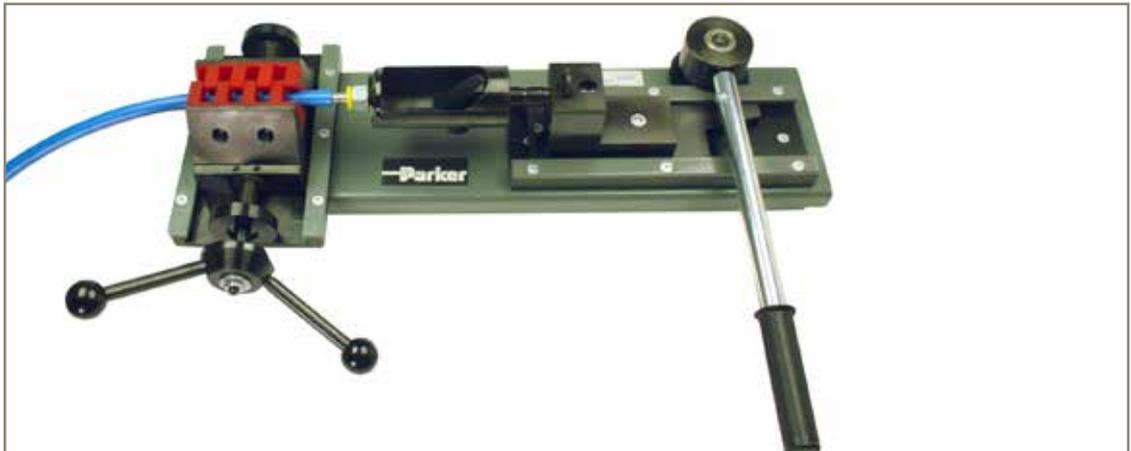


Insertion mandrel  
Insertion cone  
Insertion disks  
(from left to right)



### 3.2 Insertion of straight fittings

- ▶ Place the insertion mandrel or the insertion cone into the retainer to insert straight fittings.
- ▶ Open the clamping unit, place the hose into it and fix the hose with the clamping crank.
- ▶ The end of the hose must protrude from the clamping unit far enough to the right to ensure that the nipple can be pushed into the hose up to its full insertion depth.
- ▶ Push the fitting a bit into the hose end with your hand.
- ▶ Using the hand lever, now move the insertion unit with the insertion mandrel or alternatively with the insertion cone to the left towards the hose.
- ▶ Make sure that the nipple enters the hose end precisely in its centre and use the hand lever to push in the fitting up to its full insertion depth.
- ▶ Now move the insertion unit back to the right, open the clamping unit and remove the assembled hose.



**Insertion of a straight fitting with the insertion cone**



### 3.3 Insertion of elbow fittings

- ▶ Place the insertion disk matching the size of the fitting into the retainer to insert elbow fittings. The opening of the insertion disk must face upwards. The insertion disk selected must ensure that it presses against the collar of the nipple.
- ▶ Place the fitting with the elbow facing upward into the insertion disk and stabilise the fitting with the slide.
- ▶ Open the clamping unit, place the hose into it and fix the hose with the clamping crank.
- ▶ To the right, the end of the hose must protrude from the clamping unit far enough to ensure that the nipple can be pushed into the hose up to its full insertion depth.
- ▶ Using the hand lever, now move the insertion unit to the left towards the hose.
- ▶ Make sure that the nipple enters the hose end precisely in its centre and use the hand lever to push in the fitting up to its full insertion depth.
- ▶ Now move the insertion unit back to the right, open the clamping unit and remove the assembled hose.



Insertion of  
an elbow fitting



### 3.4 Rules to observe



Make sure not to crush or damage the hose in the clamping unit.  
Pay attention so as not to press on the swivel nut of the fitting with the insertion mandrel, the insertion cone or the insertion disk and not to damage its sealing face or seal.

## 4 Selection of the place of installation

The machine must be operated and stored in a closed building which adequately protects the machine from atmospheric influences, temperature fluctuations and humidity.

The machine has not been designed for use in potentially explosive atmospheres.

Furthermore, the place of installation should be provided with appropriate lighting and there should be enough room to allow safe working.

The machine requires a stable workbench as a base.

Please ensure that the workplace is ergonomically designed. Observe the statutory provisions including but not limited to workplace design, such as the health and safety at work act, insurers' requirements etc. For information about ambient conditions for operation and storage and energy supply, please refer to chapter "Specifications".

### 4.1 Structural requirements

Permanent floor load	about 0,07 kg/mm <sup>2</sup>
Floor bearing capacity	2500 kg/m <sup>2</sup> min.
Floor quality	concrete grade B25 to DIN 1045
Evenness	waviness of max. 5 mm/m
Slope	max. 5 mm/m

**Table**  
**Floor quality**

#### 4.1.1 Ambient conditions

**Table**  
**Ambient conditions**

Ambient temperature	+ 15 °C to + 35 °C
Air humidity	90 % max

#### 4.2 Intermediate storage



If the machine cannot be installed immediately after delivery, it must be protected against the following conditions:

- Dirt
- Atmospheric influences
- Mechanical damage

Further instructions

- Store the machine and its parts in closed rooms only.
- The temperature must be between +15 °C und +35 °C.
- The relative humidity must not exceed 90 % (no condensation).
- Never clean the machine or its parts with a steam jet cleaner or spray water. This may cause dirt and water to enter the machine and may result in considerable damage.

## 5 Putting the machine into operation

- Place the machine on a stable workbench and ensure its secure footing.
- Fix the machine on the workbench with four M8 screws (not included in the delivery) inserted through the machine base from above (distances between boreholes: 630 × 144 mm).
- Install the hand lever and fix it with the button-head screw.
- Remove the transport locking screw of the insertion unit.

### 5.1 Check

Check whether

- the machine has been properly fixed
- there is enough room for the movement of the hand lever
- and whether all parts of the machine are undamaged and have been properly fixed.

## 6 Maintenance

To keep the machine in proper operating condition, it needs to be cleaned and maintained as described below.

Daily, before starting work	<ul style="list-style-type: none"><li>• Check the condition of the machine</li><li>• Visually inspect the rubber jaws for damage</li></ul>
Daily, after finishing work	<ul style="list-style-type: none"><li>• Clean the machine and the workplace; use a brush to remove processing residues from the machine. Do not use compressed air to remove residues.</li></ul>
Weekly	<ul style="list-style-type: none"><li>• Clean and grease the sliding surfaces.</li></ul>

### 6.1 What you should know about rubber jaws

Heavy strain may lead to cracks and/or wear of the rubber jaws. This is why you should check their condition daily.

Cracked or damaged rubber jaws have to be replaced.

To replace the jaws, unscrew their M8 x 20 fixing screws. Remove the damaged rubber jaws, replace them by new ones and fix them again with the screws.

## 7 Maintenance / repair

Should your machine need repair, we kindly request you to have the repair done in our company. We will not assume any liability for direct or indirect damage resulting from repair work not performed by us.

## 8 Malfunctions during operation

If you have properly performed the condition check and the prescribed cleaning and maintenance works, you have already made a substantial contribution to the trouble-free operation of the machine.

Problem	Cause / remedial action
Hose slips after clamping	Clean the rubber jaws (The use of grease is not permitted)
Hose kinks when fitting is inserted	Move the hose in the clamping unit to the left
Fitting is hard to insert	Lubricate the profile of the nipple of the fitting with Push-Lok® assembly oil (Order no.: H896137)

We kindly request you to inform us should any malfunctions occur that are not described here or if malfunctions occur unusually frequently.

**9 Disposal**

The machine and its packaging materials must be disposed of in compliance with the latest standards and in an environmentally safe manner.

Observe the applicable environmental regulations as well as the provisions of the employer’s liability insurance association(s), the relevant safety data sheets and the safety and accident prevention instructions provided in this operating manual.

Material	Disposal method
Steel components	EWC-Code: 35103
	LAGA-Code: 120101 (LAGA: Working Group of the Federal States on Waste)

**10 Specifications**

Machine type	TH1E-5
Approved hoses and fittings	Parker hoses and fittings size -4 to -20, DN 06 to 31
Ambient conditions for operation and storage	
Admissible ambient temperature	+ 15 °C to +35 °C
Maximum air humidity	Max. 90 % (no condensation)
Dimensions and weight	
Height x width x depth	650 mm x 250 mm x 140 mm
Weight	25 kg
Footprint of the machine	1050 mm x 475 mm



## 12 EC Declaration of conformity

as defined by the EC Machinery Directive 2006/42/EC

We hereby declare that due to its design and construction as well as the type circulated by us, the machine designated below complies with the relevant fundamental safety and health requirements of the EC Machinery Directive.

If any alteration to the machine is made without our approval, this declaration will become invalid.

Designation of the machine	Nipple inserter
Machine type	
Make no.	

### EC Directives applied

2006/42/EC            EC Machinery Directive  
2004/108/EC        EMC Directive

### Harmonised standards applied, including but not limited to

EN ISO 12100-1/-2    Safety of Machinery, Devices and Equipment

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Date 29. November 2017

### Documentation representative

Marian Tone

  
Signature

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