

Betriebsanleitung

Elektrische Crimpmaschine AT-300

TE P/N 539630-2

Operation Manual

Electric Crimping Machine AT-300



TE P/N 539630-2

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We reserve the right to make technical changes necessary to improve the machine that could diverge from figures and information in these instructions.

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1 Introduction

1.1 **Product Specification**

The electric Crimping Machine AT-300 is an electric crimping machine for TE interchangeable crimping system designed as a complete table top unit. With the electric Crimping Machine AT-300 the most common terminals on the market can be crimped with the TE interchangeable crimping systems.

According to the type of terminal an interchangeable suitable crimping die or tool head is selected and installed with the respective adapter on the electric Crimping Machine AT-300.

By pressing the electric foot pedal and simultaneously activating one of the safety buttons (right or left side of the machine), the crimping cycle is started and the contact is crimped.

In case of blocked jaws caused by operation or handling errors or wrongly placed contacts, press the release button to open the die set or the tool head.

All other applications of the electric Crimping Machine AT-300 are only permitted with a written permission of the manufacturer. For all unauthorised applications of the electric Crimping Machine AT-300 the manufacturer cannot be held liable for any resultant damage or injury.

1.2 Conformity



The machine may only be used for the purpose specified in the operating instruction. The manufacturers and suppliers will not be liable for any damages which may result due to the machine being used for a purpose other than that for which it was intended. This is done entirely at the user's own risk.

RoHS Information

The electric Crimping Machine AT-300 complies with the EU-Guideline 2011/65/EU (RoHS2).

EMV

The electric Crimping Machine AT-300 complies with the European norm EN55014-1:2006 + A1:2001 + A2:2008.

CE

The electric Crimping Machine AT-300 together with the adapters shown in chapter 7.1, is CE compliant.

The original declaration of conformity was supplied together with the operating instruction of the electric Crimping Machine AT-300.

1.3 Dealing with the Operating Instruction

The operating instruction contains all information concerning operating elements, operation, commissioning and maintenance work as well as technical data.

The operating instruction must be constantly within reach of the electric Crimping Machine AT-300. Every machine operator must read and understand the operating instruction in order to have safe and efficient production with this piece of equipment.

The producer as well as the distributor decline to accept any liability for damages that are incurred due to the fact that the instructions on the machine or in the operating instruction have been disregarded.

The user is responsible for supplementing the operating instruction with any instructions resulting from current national regulations for accident prevention and protection of the environment.

The German original version is legally binding.

This operating instruction has to be guarded for later use.



2 Safety

2.1 Warning & Safety Precautions in this Operating Instruction

The following warnings and safety related cautionary notices in the individual chapters alert you to various levels of danger:



DANGER

+ Identifies **dangerous voltage and live parts**, which will lead to serious injuries or even death when touching it.



DANGER

+ Identifies an **imminent, serious danger**, which, if it is not avoided, will lead to serious injuries or even to death.



CAUTION

+ Identifies a **possible danger**, which, if it is not avoided, will lead to serious injuries or even to death.



ATTENTION

+ Identifies a **potential dangerous situation**, which, if it is not avoided, can lead to medium or minor injuries or material damages.

INFORMATION

If this information is not followed, it can lead to a deterioration of the operating procedure.

2.2 Safety Precautions

The electric Crimping Machine AT-300 has been constructed according to state-of-the-art technology and the acknowledged technical safety regulations.

When carrying out jobs such as installation, putting the machine into operation or setting it up, operation, changing the conditions of use and the mode of operation or carrying out maintenance and service jobs, it is important to observe the procedures for switching off the machine described in the operation instruction.

Please observe the national regulations according to the minimum age of the personnel operating the electric Crimping Machine AT-300. Allowing younger persons access to the machine is strictly prohibited.

- + Do not operate the electric Crimping Machine AT-300 before having read and understood all operating instructions.
- + The operating instruction must be constantly within reach of the electric Crimping Machine AT-300. Every machine operator must have read and understood this operating instruction. The safety instructions, warnings and precautions contained in the individual chapters must be strictly observed by all users and operators when working on or with the electric Crimping Machine AT-300.
- + To lift the crimping machine use the handle recesses on the machine.
- + Wear suitable safety shoes when transporting machine.
- Position the electric Crimping Machine AT-300 on a flat surface and assure the stability of the machine. Ensure that the table or bench is stable enough to support the machine in normal use.
- + Assure an appropriate table height. The table height is dependent on the position of the operator, (work in sitting or standing position) according to prEN 894-4:2004, Table A.1.



- The crimping machine AT-300 has no own light source. Assure appropriate illumination of the working place. (EN 1837:1999 – chapter 4.2: "The general value of illumination has to be 500 lx [...]").
- + Place the cables on the floor or out of the way so that they do not cause a trip hazard!
- + Cables must not be damaged.
- + Place the foot pedal on the floor. No other place is allowed. The foot pedal must be movable, so that the operator has the possibility to change his position for ergonomic and production needs.
- + Do not lay the foot pedal in aisles or walkways.
- + Assure free access to the operating elements of the machine, especially the foot pedal and the release button (latching). In the case of imminent danger immediately press the release button. The release button must be within the direct reach of the operator. It must not be covered.
- + To ensure fatigue-proof use, the user has to take a working position where the machine is at the right height and the foot pedal is accessible. The foot pedal has to be installed in a stable position.
- + Before starting maintenance, disassembly or repair work, the crimping machine must be disconnected from power supply by pulling the main switch. Secure the machine to prevent unintentional restart. Touching live parts can cause danger of electrocution with fatal consequences!
- + Maintenance work may be performed only by authorized and properly trained staff. The housing and the covers in particular may only be removed by specially trained staff.
- + Due to the risk of hand or finger injury, never try to reach into the electric Crimping Machine AT-300 before having assured that the machine is disconnected from the power supply.
- + The electric Crimping Machine AT-300 is only allowed to be operated with properly mounted TE approved adapters, crimp heads and crimp die sets.
- + The electric Crimping Machine AT-300 may only be set up and operated in perfect technical condition, observing all the safety regulations and considering any possible dangers.
- + In cases of a malfunction of the machine or adapter incl. tool head or die sets, production must be stopped and the malfunction must be fixed before continuing work.
- + Before starting to handle/solve the problem, the machine has to be disconnected from power supply by pulling out the main plug. Secure the machine to prevent unintentional restart.
- + Maintenance work and problem handling may be performed only by authorized and properly trained staff.
- + The electric Crimping Machine AT-300 is not operable, until the problem has been solved.
- + Work with caution.
- + Only one person is allowed to work on or with the machine at a time.
- + Only trained personal are allowed to work on or with the machine.
- + When working with the electric Crimping Machine AT-300, do not wear loose clothing, jewelry or long, loose hair that can get caught in the mechanism.
- + Wear protective gloves and safety glasses during maintenance work. Please pay attention to the safety instructions in the "safety data sheet" of the grease.
- + Observe the maintenance intervals strictly.
- + Dispose of the battery according to environmental standards of your country.
- + For the disposal of the electric Crimping Machine AT-300, send it back to TE.



2.3 Responsibilities

The electric Crimping Machine AT-300 may only be operated by suitably trained and authorized personnel. The user must clearly define and observe the responsibilities of the personnel for operation, set-up, maintenance and service. It is particularly important to define who is responsible for work on the pneumatic equipment. Such work should only be carried out by specially trained staff.

Should the user make any changes to the machine without consulting the manufacturers or the suppliers, the latter will not be liable for any damage that may result.

The user of the electric Crimping Machine AT-300 is responsible for making sure that all persons involved in any way, either in the installation or in maintenance of the machine, have been thoroughly trained on the system using the this operating instruction.

The user is also responsible for the training of operators and the instruction must include the following aspects:

- + Purpose of the machine
- + Hazard zones
- + Safety rules and regulations
- + Functionality of the various components of the machine
- + Proper operation of the machine

To assure full familiarization with the system, the training must be conducted in the native language of the operators involved.

Staff qualifications required in conjunction with the use of the electric Crimping Machine AT-300:		
Installation Set-up Instruction	Technical personnel with language proficiency in either English or German, in addition to the native language of the operator.	
Operation	Through qualified personnel trained as indicated above.	
Maintenance Technical personnel with proficiency in English or German.		

The safety instructions, warnings and precautions contained in the individual chapters must be strictly observed by all users and operators.

2.4 Designed Use

+ Realization of crimp connections up to a cable Ø of 6 mm²/10AWG (wire end ferrules up to 50 mm²/1AWG) depending on the terminal design.

The electric Crimping Machine AT-300 is designed for usage with TE approved adapters. The adapter should only be used with the tool heads/dies specified by TE. It is only allowed to use the electric Crimping Machine AT-300 together with the adapter, tool head and die set for the preparation of crimp connections!



INFORMATION

The electric Crimping Machine AT-300 only complies with the CE guideline, when using the adapters shown in chapter 7.1!

2.5 **Predictable Misuse**

+ Every application which is not mentioned in chapter 2.4 "Designed Use".



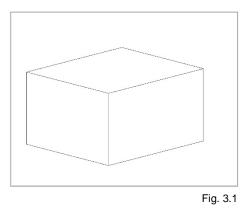
2.6 Hazardous Areas

- Hazardous Area: Area of interchangeable crimping dies/tool heads Person at risk: Operator Type of Hazard: Hand Injuries
- Hazardous Area: Opened machine
 Person at risk: Type of Hazard: Direct or indirect contact with movable parts of the machine, Hand injuries (cuts from sharp edges)
 Hand injuries (risk of crushing)

3 Shipment

3.1 Packing

Upon receipt, unpack the electric Crimping Machine AT-300 carefully and check that you have received all components against the packing slip, declaration of conformity and operation manual. We recommend that you retain the packing for further dispatch and for storage.



Dimension:

Length:	800 mm (31,5")
Width:	600 mm (23,5")
Height:	570 mm (22,5")

Gross-Weight: approx. 29 kg (64 lbs)



DANGER

Use a chain hoist for the transport of the crimping machine.

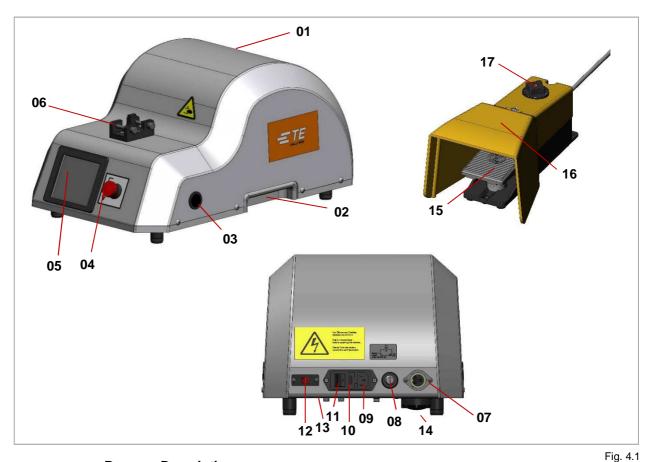
3.2 Packing Contents

Pieces	Description
1	Electric Crimping Machine AT-300 with touch display, integrated piece counter and operating instruction (without adapter, tool head and die set)
2	Key for key switch
4	1,5 V baby cells type C (for emergency power supply)
1	Electric foot pedal with cover and connecting cable
1	Power cable EU (with protective contact)
1	Power cable US (with protective contact)



4 Technical Description

4.1 Overview Electric Crimping Machine AT-300



Pos. Description

- 01 Electric Crimping Machine AT-300
- 02 Handle recess (right & left)
- 03 Safety Button (right & left)
- 04 Release button
- 05 Touch display
- 06 Holding devise for the adapter
- 07 Socket for foot pedal
- 08 Key switch (ON/OFF/Supervisor Mode)
- 09 3-pole main plug connection
- 10 Fuse 6,3 A
- 11 ON/OFF switch
- 12 Voltage selector 115V/230V
- 13 Identification plate with serial number (underneath the machine)
- 14 Battery compartments for the emergency power supply of the release button (underneath the machine)
- 15 Electric foot pedal
- 16 Safety cover for foot pedal
- 17 Safety lock for foot pedal

4.2 Machine Identification

Identification Plate:

	/PE
TE Part list	
Order P/N	
SAP Order No.	
Serial No.	
Manufacturing date	
Power supply	V Hz
Power consumption	A
Compressed air suppl	bly bar
Weight	kg CE
	TE Connectivity Germany GmbH Ampèrestraße 12-14 D- 64625 Bensheim



4.3 Technical Data

<u>Dimension:</u> Length: Width: Height:	495 mm (19,5") 320 mm (12,6") 240 mm (9,5")
Weight with foot pedal:	approx. 17 kg (37 lbs)
Operational Voltage: Crimp speed: Crimp Force:	115V/230V 10 mm (0,4")/sec max. 15 kN (3372 lbf)
Stroke:	approx. 12 mm (0,5")
Noise level:	62 dB (A)







4.4 Operating Elements

4.4.1 Touch Display

The touch display **1** (Fig. 4.3) is activated, deactivated or shifted to the set-up menu by the key switch. The operation of the touch display is intuitively by self-explanatory icons, which can partly be selected.

Symbol	Explanation	Selectable
C	On	NO
C	Off	NO
×	Set-up Mode	YES
U	Normal Operation 360°, press once = complete cycle	YES
Ø	Double Step Mode Step 01-10, press twice = complete cycle	YES
Û	Reset Counter	YES
->	Manual Motor Movement forwards	YES
~	Manual Motor Movement backwards	YES
4	Calibration Touch Display	YES
~	Confirm Button	YES
X	Cancel Button	YES
	Error Prompt Indication	NO
G	Insert Wire	NO
Service	Service	YES PIN lock



4.4.2 Key Switch

The key switch **1** allows supervisors or authorized personnel to adjust different operating modes.

The meaning of the different key positions is as follows:



Fig. 4.4

Key position I:

Set-Up Mode. The safety function of safety buttons is deactivated. The machine can be operated by pressing the foot pedal (only for supervisors or authorized personnel!).

The display shows the following symbol: Kig. 4.6).

Touch the icon to enter the set-up menu (see chapter 7.3).



INFORMATION

+ Key position I is only allowed to be used by supervisors or authorized personnel!

After the machine setup, the supervisor should turn the key switch to key position II and removed it, so that the operator cannot change the settings.

Key position II (Fig. 4.7):

On. All safety adjustments according to CE are activated. To operate the machine one of the safety buttons and the foot pedal have to be pressed.

The display (Fig. 4.8) shows the following icon:











Fig. 4.7





Key position III:

Off. The machine is inoperable, however there is still voltage. Any operation is impossible.

The display (Fig. 4.10) shows the following icon:



Fig. 4.9



Fig. 4.10

4.4.3 Release Button

In case of jammed jaws caused by operation or handling errors or wrongly placed terminals the electrical crimping machine AT-300 can be opened as follows:

- + Press the release button (Fig. 4.11) The tool opens the jaws.
- + Remove the damaged contact and dispose it.

After having pressed the released button, the

following icon appears: **L** (Fig. 4.12).

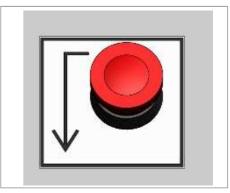


Fig. 4.11



4.4.4 Battery Compartment

The battery compartments **1** are for the emergency supply of the release button.

In the case of jammed jaws because of a power outage the electrical crimping machine AT-300 can be opened by pressing the release button.

4.4.5 Integrated Piece Counter

The piece counter is integrated within the display.

By touching the icon the piece counter can be reset to **0**.

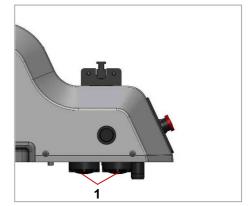


Fig. 4.13



Fig. 4.14

4.4.6 Tool Holding Device

The holding device **1** is turnable through 360°. It has an engagement point every 45°.

Thus the operator has the possibility to turn the holding device in the best suitable working position.

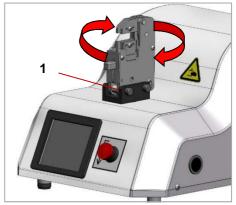
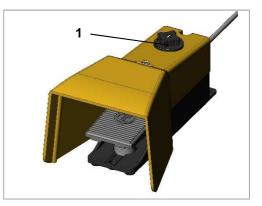
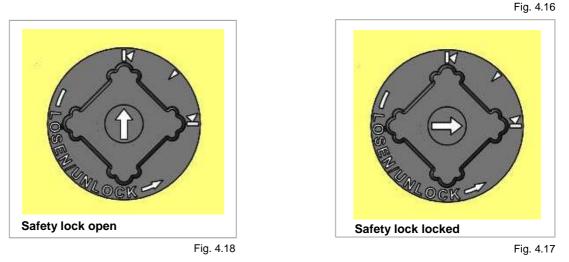


Fig. 4.15

4.4.7 Foot Pedal

The foot pedal is equipped with a safety lock **1**, which prevents operation of the machine when the foot pedal has been completely floored. The arrow of the safety lock will rotate to the 3 o' clock position (Fig. 4.17) and the machine will not function. To reset the safety lock, rotate it counter-clockwise to the 12 o'clock position (Fig. 4.18). Now the machine is ready for operation again!







INFORMATION

- + Over-pressing the foot pedal will trip the safety lock. It will rotate to the 3 o' clock position and the machine will not function. To reset the safety lock, rotate it counter-clockwise to the 12 o' clock position.
- + Please note, that the foot pedal must be held-down constantly to ensure a complete working cycle!
- + If you release the safety button on the machine or the foot pedal, the crimping process will be interrupted. If you press the safety button of the machine and the foot pedal again simultaneously, the crimping process will be continued until its completion.



5 Transport and Installation

5.1 Transport

The weight of the electric Crimping Machine AT-300 is approx. 33 lbs.



CAUTION

+ To lift the crimping machine use the handle recesses on the machine.



ATTENTION

Wear suitable safety shoes when transporting the machine.

5.2 Installation



ATTENTION

- + Position the electric Crimping Machine AT-300 on a flat surface and assure the stability of the machine. Ensure that the table or bench is stable enough to support the machine in normal use.
- + Assure an appropriate table height. The table height is dependent on the position of the operator, (work in sitting or standing position) according to prEN 894-4:2004, Table A.1.
- + The crimping machine has no own light source. Assure appropriate illumination of the working place. (EN 1837:1999 chapter 4.2: "The general value of illumination has to be 500 lx [...]").

Place the foot pedal on the floor. No other place is allowed. The foot pedal must be movable, so that the operator has the possibility to change his position for ergonomic and production needs.



ATTENTION

- + Place the cables on the floor so that they do not cause a trip hazard.
- + Do not lay the foot pedal in aisles or walkways.
- + During transport and installation of the machine wear suitable safety shoes.



INFORMATION

+ To ensure fatigue-proof use, the user has to take a working position where the machine is at the right height and the foot pedal is accessible. The foot pedal has to be installed in a stable position. The position of the foot pedal should be chosen in that way, that a free access will be possible.



6 Commissioning

DANGER



Due to the risk of hand or finger injury, never try to reach into the electric Crimping Machine AT-300 before having assured that the machine is disconnected from the power supply.

CAUTION



- + Do not operate the electric Crimping Machine AT-300 before having read and understood all operating instructions.
- + The operating instruction must be constantly within reach of the electric Crimping Machine AT-300. Every machine operator must have read and understood this operating instruction. The safety instructions, warnings and precautions contained in the individual chapters must be strictly observed by all users and operators when working on or with the electric Crimping Machine AT-300.
- + The electric Crimping Machine AT-300 may only be set up and operated in perfect technical condition, observing all the safety regulations and considering any possible dangers.
- + The crimp machine is only allowed to be used with mounted TE approved adapter with tool head or die set.
- Assure free access to the operating elements of the machine, especially the foot pedal and the release button (latching). In the case of imminent danger immediately press the release button. The release button must be within the direct reach of the operator. It must not be covered.
- + When working with the electric Crimping Machine AT-300, do not wear loose clothing, jewellery or long, loose hair that can get caught in the mechanism.
- + Work with caution.
- + In cases of a malfunction of the machine or adapter incl. tool head or die sets, production must be stopped and the malfunction must be fixed before continuing work.
- + Only one person is allowed to work on or with the machine at a time.
- + Only trained personal are allowed to work on or with the machine.



ATTENTION

- + Position the electric Crimping Machine AT-300 on a flat surface and assure the stability of the machine. Ensure that the table or bench is stable enough to support the machine in normal use.
- + Assure an appropriate table height. The table height is depending on the position of the operator, (work in sitting or standing position) according to prEN 894-4:2004, Table A.1.
- + The crimping machine has no own light source. Assure an appropriate illumination of the working place. (EN 1837:1999 chapter 4.2: "The general value of illumination has to be 500 lx [...]").
- + Place the foot pedal on the floor. No other place is allowed. The foot pedal must be movable, so that the operator has the possibility to change his position for ergonomic and production needs.



INFORMATION

+ To ensure fatigue-proof use, the user has to take a working position where the machine is at the right height and the foot pedal is accessible. The foot pedal has to be installed in a stable position. The position of the foot pedal should be chosen in that way, that a free access will be possible.



6.1 Connecting to Power Supply

CAUTION



- Select the right voltage with voltage selector **6** (Fig. 6.1).
- The machine can only be made currentless by disconnecting the main plug connection 4 (Fig. 6.1) from the power supply.



INFORMATION

- Use a power supply cable with a main plug of your norm (with protective contact).

Connect the foot pedal connecting cable **1** with foot pedal socket **2** on the machine and secure it by slightly twisting it to the right (Fig. 6.1/6.2).

A power cable EU as well as a power cable US are included within the scope of delivery. Choose the power cable with a main plug of your norm and connect it with the 3 pole main plug connection **4** on the machine (Fig. 6.1).

Move the voltage selector **6** to the right voltage (115 V or 230 V).

If the supply voltage is too high, the following error prompt appears:

🔚 048111000x01

If the supply voltage is too low, the following error prompt appears:



Move ON/OFF switch **5** to position I (Fig. 6.1/6.3).

Move key switch **3** to position II "EIN/ON" (normal working condition) (Fig. 6.1).

The display shows the following icon:

The crimping machine is now ready for use.



Fig. 6.1

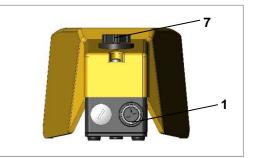
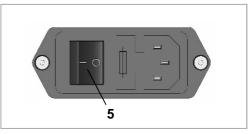


Fig. 6.2





+



6.2 Inserting the Batteries

INFORMATION

U

The electrical Crimping Machine AT-300 is not operable without inserted batteries or if the batteries are empty.

- + Disconnect power supply.
- + Turn the battery compartments **1** under the electric Crimping Machine AT-300 to open them.
- + Insert the batteries (2 x 2 x 1,5 V Baby Cells Type C) one after another with the negative pole pointing to the top.
- + Close battery compartments **1** by turning them.

If the wrong batteries are inserted or if they are inserted in the wrong way, the following

error prompt appears: **11000x03**

If the batteries are empty, the following error

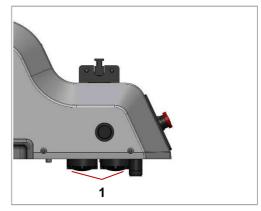


Fig. 6.4

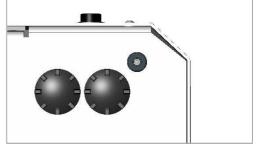


Fig. 6.5



7 Setup

DANGER



Due to the risk of hand or finger injury, never try to reach into the electric Crimping Machine AT-300 before having assured that the machine is disconnected from the power supply.

CAUTION

- + Do not operate the electric Crimping Machine AT-300 before having read and understood all operating instructions.
- + The operating instruction must be constantly within reach of the electric Crimping Machine AT-300. Every machine operator must have read and understood this operating instruction. The safety instructions, warnings and precautions contained in the individual chapters must be strictly observed by all users and operators when working on or with the electric Crimping Machine AT-300.
- + The electric Crimping Machine AT-300 may only be set up and operated in perfect technical condition, observing all the safety regulations and considering any possible dangers.
- + The crimp machine is only allowed to be used with mounted TE approved adapter with tool head or with die set.
- + Assure free access to the operating elements of the electric Crimping Machine AT-300, especially the foot pedal and the release button. In the case of imminent danger immediately press the release button. The release button must be within the direct reach of the operator. It must not be covered.
- + When working with the electric Crimping Machine AT-300, do not wear loose clothing, jewellery or long, loose hair that can get caught in the mechanism.
- + Work with caution.
- + In cases of a malfunction of the machine or adapter incl. tool head or die sets, production must be stopped and the malfunction must be fixed before continuing work.
- + Only one person is allowed to work on or with the machine at a time.
- + Only trained personal are allowed to work on or with the electric Crimping Machine AT-300.



ATTENTION

- Position the electric Crimping Machine AT-300 on a flat surface and assure the stability of the machine. Ensure that the table or bench is stable enough to support the machine in normal use.
- + Assure an appropriate table height. The table height is depending on the position of the operator, (work in sitting or standing position) according to prEN 894-4:2004, Table A.1.
- + The crimping machine has no own light source. Assure an appropriate illumination of the working place. (EN 1837:1999 – chapter 4.2: "The general value of illumination has to be 500 lx [...]").
- + Place the foot pedal on the floor. No other place is allowed. The foot pedal must be movable, so that the operator has the possibility to change his position for ergonomic and production needs.



INFORMATION

+ To ensure fatigue-proof use, the user has to take a working position where the machine is at the right height and the foot pedal is accessible. The foot pedal has to be installed in a stable position. The position of the foot pedal should be chosen in that way, that a free access will be possible.



7.1 Available Adapters



INFORMATION

- + Die sets are not included in delivery and have to be ordered separately.
- + Pay attention to the CE information in chapter 1.2 and 2.4!

SDE Adapter TE P/N 1673663-2

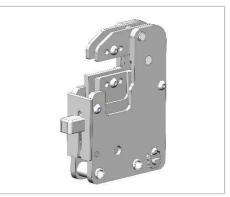
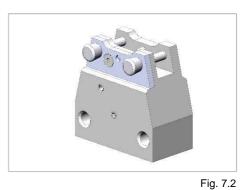


Fig. 7.1

HTV10 Adapter TE P/N 1579000-4



CSE30 Adapter TE P/N 3-1579000-3



Fig. 7.3

ERGOCRIMP Adapter TE P/N 1-1579000-8



7.2 Set the Lowest Ram Position

To be able to mount the adapter, the ram of the machine has to be in the lowest position.

- + Switch the machine on and turn the key switch to key position II.
- + Pay attention to the fact that the machine
 - is set for the full working cycle (Fig. 7.5).

If this is not the case, touch icon 2. After

step 10 the following icon appears 2. The

machine is now in the full working cycle.

+ Keep the foot pedal and simultaneously one of the safety buttons on the right or left side pressed until the full cycle is finished. The ram is now in the lowest position (Fig. 7.6).

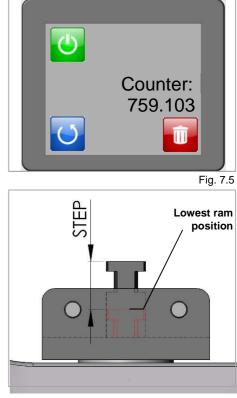


Fig. 7.6

7.3 Double Step Mode

The electric Crimping Machine AT-300 is set by the manufacturer for the full crimping cycle

. Alternatively it can be operated in

double step mode . In the double step mode, the contact is fixed in the first step and crimped in the second step. However, the double step mode does not make any sense in combination with the SDE, CSE 30 or ERGOCRIMP adapter, since these adapters close automatically.

After having touched the icon, the machine can be operated in two separate steps:

- + first step (Fig. 7.8) for holding the inserted contact,
- + second step (Fig. 7.9) for crimping and moving back into the final position.

The ram position can be adjusted to the respective contact material by touching the

icon². Adjustments of ram position 1 (min.) to 10 (max.) are possible.



INFORMATION

After ram position 10 the machine returns into the full crimping cycle mode.

Ram Position	Stroke of the Ram
Step 01	ca. 3 mm
Step 02	ca. 4 mm
Step 03	ca. 5 mm
Step 04	ca. 6 mm
Step 05	ca. 7 mm
Step 06	ca. 8 mm
Step 07	ca. 9 mm
Step 08	ca. 10 mm
Step 09	ca.11 mm
Step 10	ca. 12 mm (closed dies)

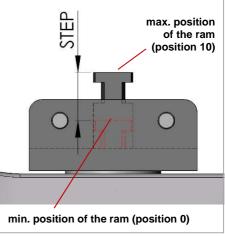














7.4 Set-up Menu Key Position I

The set-up menu is only allowed to be used by supervisors or authorized personnel. Settings to remedy mechanical errors or dysfunctions can be made in this menu.



INFORMATION

Key position I is only allowed to be used by supervisors or authorized personnel!

Key position I:

Set- Up Mode. The safety function of safety buttons is deactivated. The machine can be operated by pressing the foot pedal (only for supervisors or authorized personnel!).

The display shows the following symbol:

Touching the icon to enter the set-up menu (Fig. 7.12).

To quit the Set-Up Mode, touch icon



7.4.1 Display Calibration

If the icons react on another place on the display, the display has to be calibrated. Please proceed as follows:

- + Touch icon 🔛 to calibrate the display.
- + Follow the instructions on the display.

7.4.2 Manual Motor Movement

To move the electric Crimping Machine AT-300 in crawling speed forwards or backwards, please proceed as follows:

- + Touch icon **icon** to move the machine forwards stepwise/slowly (Fig. 7.12).
- + Touch icon bies to move the machine backwards stepwise/slowly (Fig. 7.12).

When releasing the icon, the electric Crimping Machine AT-300 stops in this position.

7.4.3 Service Button

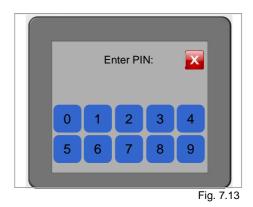
The service button (Fig. 7.12) is only accessible for the manufacturer of the electric Crimping Machine AT-300 and protected by a PIN (Fig. 7.13). This menu comprises settings, which are only destined for the assembly and adjustment of the motor control.







Fig. 7.12







Mounting an Adapter on the Machine

DANGER

Due to the risk of hand or finger injury, never try to reach into the electric Crimping Machine AT-300 before having assured that the machine is disconnected from the power supply by pulling out the main plug.



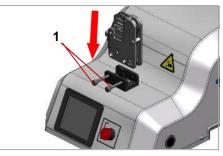
CAUTION

- + Do not operate the electric Crimping Machine AT-300 before having read and understood all operating instructions.
- The operating instruction must be constantly within reach of the electric Crimping Machine AT-300. Every machine operator must have read and understood this operating instruction. The safety instructions, warnings and precautions contained in the individual chapters must be strictly observed by all users and operators when working on or with the electric Crimping Machine AT-300.
- + The electric Crimping Machine AT-300 may only be set up and operated in perfect technical condition, observing all the safety regulations and considering any possible dangers.
- + The crimp machine is only allowed to be used with mounted TE approved adapter with tool head or with die set.
- + Assure free access to the operating elements of the electric Crimping Machine AT-300, especially the foot pedal and the release button. In the case of imminent danger immediately press the release button. The release button must be within the direct reach of the operator. It must not be covered.
- + When working with the electric Crimping Machine AT-300, do not wear loose clothing, jewellery or long, loose hair that can get caught in the mechanism.
- + Work with caution.
- + In cases of a malfunction of the machine or adapter incl. tool head or die sets, production must be stopped and the malfunction must be fixed before continuing work.
- + Only one person is allowed to work on or with the machine at a time.
- + Only trained personal are allowed to work on or with the electric Crimping Machine AT-300.
- + Before mounting the adapter, please pay attention that the ram of the machine is in the lowest position. If the ram is in another/wrong position, please follow the instructions of chapter 7.1.
- + Switch off the electric Crimping Machine AT-300.
- + Pull out the pins **1** of the holding device until stop.
- + Install the adapter on the machine from above (Fig. 8.1/8.2).
- + Lock pins 1 of the holding device again.

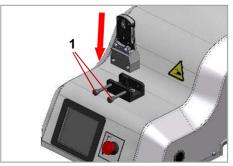


INFORMATION

 The SDE, CSE 30 and the ERGOCRIMP adapters are always closed. To be able to insert the contact, the lever on the adapter has to be pushed downwards (see chapter 9).



Example:Mounting of the SDE Fig. 8.1 adapter



Example: Mounting of the HTV 10 Fig. 8.2 adapter

9

Normal Operation, Production Cycle

DANGER

+ Before starting maintenance, assembly/disassembly or repair work, the crimping machine must be disconnected from power supply. Secure the machine to prevent unintentional restart. Touching live parts can cause danger of electrocution with fatal consequences!

DANGER

+ Due to the risk of hand or finger injury, never try to reach into the electric Crimping Machine AT-300 before having assured that the machine is disconnected from the power supply.



CAUTION

- + Do not operate the electric Crimping Machine AT-300 before having read and understood all operating instructions.
- The operating instruction must be constantly within reach of the electric Crimping Machine AT-300. Every machine operator must have read and understood this operating instruction. The safety instructions, warnings and precautions contained in the individual chapters must be strictly observed by all users and operators when working on or with the electric Crimping Machine AT-300.
- + The electric Crimping Machine AT-300 may only be operated in a complete and functional condition.
- + The electric Crimping Machine AT-300 may only be set up and operated in perfect technical condition, observing all the safety regulations and considering any possible dangers.
- + The crimp machine is only allowed to be used with mounted adapter with tool head or with die set.
- + Assure free access to the operating elements of the electric Crimping Machine AT-300, especially the foot pedal and the release button. In the case of imminent danger immediately press the release button. The release button must be within the direct reach of the operator. It must not be covered.
- + When working with the electric Crimping Machine AT-300, do not wear loose clothing, jewellery or long, loose hair that can get caught in the mechanism.
- + Work with caution.
- + In cases of a malfunction of the machine or adapter incl. tool head or die sets, production must be stopped and the malfunction must be fixed before continuing work.
- + Only one person is allowed to work on or with the machine at a time.
- + Only trained personal are allowed to work on or with the electric Crimping Machine AT-300.

ATTENTION



- + Position the electric Crimping Machine AT-300 on a flat surface and assure the stability of the machine. Ensure that the table or bench is stable enough to support the machine in normal use.
- + Assure an appropriate table height. The table height is depending on the position of the operator, (work in sitting or standing position) according to prEN 894-4:2004, Table A.1.
- + Place the foot pedal on the floor. No other place is allowed. The foot pedal must be movable, so that the operator has the possibility to change his position for ergonomic and production needs.
- + Do not lay the foot pedal in aisles or walkways.
- + Place the tubes on the floor so that they do not cause a trip hazard.





INFORMATION

+ To ensure fatigue-proof use, the user has to take a working position where the machine is at the right height and the foot pedal is accessible. The foot pedal has to be installed in a stable position. The position of the foot pedal should be chosen in that way, that a free access will be possible.



INFORMATION

- + Over pressing the foot pedal will trip the safety button. It will rotate to the 3 o'clock position and the machine will not function. To reset the safety button, rotate it counter-clockwise to the 12 o'clock position.
- + If you release the safety button on the machine or the foot pedal, the crimping process will be interrupted. If you press the safety button of the machine and the foot pedal again simultaneously, the crimping process will be continued until its completion.

9.1 Crimping Process with SDE, CSE 30 or ERGOCRIMP Adapter



INFORMATION

+ It is only possible to operate the machine in full crimping cycle mode when using the SDE, CSE 30 or ERGOCRIMP adapter!

Crimping Process in Full Crimping Cycle Mode

- 1. Open the dies by depressing the lever of the adapter.
- 2. Keep it depressed and insert the crimp contact in the die profile or locator. Please pay attention to the correct profile assignment and to the correct positioning within the crimp profile!
- 3. Release the lever. The dies close automatically and hold the contact.
- 4. Insert the wire/cable which is stripped acc. to the specifications and position it for crimping.
- 5. Press the foot pedal and simultaneously one of the safety buttons on the right or left side of the machine to start the crimp process.
- 6. Keep the foot pedal and the safety button pressed until the crimp cycle is finished.
- 7. Depress the lever of the adapter and remove crimped contact.

9.2 Crimping Process with HTV10 Adapter

Crimping Process in Full Crimping Cycle Mode 💟 :

- 1. Insert the crimp contact in the die profile or locator. Please pay attention to the correct profile assignment and to the correct positioning within the crimp profile!
- 2. Insert the wire/cable which is stripped acc. to the specifications and position it for crimping.
- 3. Press the foot pedal and simultaneously one of the safety buttons on the right or left side of the machine to start the crimp process.
- 4. Keep the foot pedal and the safety button pressed until the crimp cycle is finished.
- 5. Remove crimped contact.



Crimping Process in Double Step Mode 🔛

- 1. Insert the crimp contact in the die profile or locator. Please pay attention to the correct profile assignment and to the correct positioning within the crimp profile!
- 2. Press the foot pedal and simultaneously one of the safety buttons on the right or left side of the machine to start the crimp process. The ram stops at the position you set (see chapter 7.2) and holds the contact.
- 3. The display shows the following icon
- 4. Insert the wire/cable which is stripped acc. to the specifications and position it for crimping.
- 5. Press the foot pedal and simultaneously one of the safety buttons on the right or left side of the machine to start the crimp process.
- 6. Keep the foot pedal and the safety button pressed until the crimp cycle is finished.
- 7. Remove crimped contact.

10 Maintenance



DANGER

- Before starting maintenance, disassembly or repair work, the crimping machine must be disconnected from power supply by pulling out the main plug. Secure the machine to prevent unintentional restart.
- + Touching live parts can cause danger of electrocution with fatal consequences!

DANGER

Due to the risk of hand or finger injury, never try to reach into the electric Crimping Machine AT-300 before having assured that the machine is disconnected from the power supply.

CAUTION

- Observe the maintenance intervals strictly.
- + Maintenance work may be performed only by authorized and properly trained staff. The housing and the covers in particular may only be removed by specially trained staff.
- + Do not operate the electric Crimping Machine AT-300 before having read and understood all operating instructions.
- + The operating instruction must be constantly within reach of the electric Crimping Machine AT-300. Every machine operator must have read and understood this operating instruction. The safety instructions, warnings and precautions contained in the individual chapters must be strictly observed by all users and operators when working on or with the electric Crimping Machine AT-300.
- + The electric Crimping Machine AT-300 may only be set up and operated in perfect technical condition, observing all the safety regulations and considering any possible dangers.
- + Assure free access to the operating elements of the machine, especially the foot pedal and the release button (latching). In the case of imminent danger immediately press the release button. The release button must be within the direct reach of the operator. It must not be covered.
- + When working with the electric Crimping Machine AT-300, do not wear loose clothing, jewellery or long, loose hair that can get caught in the mechanism.
- + Wear protective gloves and safety glasses during maintenance work. Please pay attention to the safety instructions in the "safety data sheet" of the grease.
- + Work with caution.
- + In cases of a malfunction of the machine or adapter incl. tool head or die sets, production must be stopped and the malfunction must be fixed before continuing work.
- + Only one person is allowed to work on or with the machine at a time.
- + Only trained personal are allowed to work on or with the electric Crimping Machine AT-300.





ATTENTION

Position the electric Crimping Machine AT-300 on a flat surface and assure the stability of the machine. Ensure that the table or bench is stable enough to support the machine in normal use.

10.1 Maintenance Plan

Regular maintenance and cleaning of the parts which can be reached without opening the electric Crimping Machine AT-300 will prolong the life of the machine. Do not use rough materials to clean the machine such as steel wool. The electric Crimping Machine AT-300 and/or machine parts should not be cleaned with compressed air. The crimping machine as well as the machine parts must not be cleaned with hard objects like scrapers, steel wool or similar. Vacuum heavily soiled parts and wear.

10.1.1 Daily

- + Visual inspection of the electric Crimping Machine AT-300.
- + Die sets and tool heads should be cleaned in the profile area and checked for any damage before every use. Lightly lubricate the profiles.

10.1.2 Every 25,000 Cycles

- + Lubricate the crimping ram with the Blaser Swiss Lube, Art.-No. 00492-01 EP-Universal Grease.
- + Grease the driving rod and lubricate all movable levers and bolts.
- + Control the electrical equipment of the machine. Defects such as loose connections or scorched cables must be rectified immediately.

Procedure:

- + Disconnect power supply.
- + Remove holding device for the adapter.
- + Remove the cover carefully and ensure that no cables are damaged.
- + Disconnect the plugs from the display and the safety buttons left and right as well as from the control element of the release button.
- + Grease the driving rod with Blaser Swiss Lube Art.-No. 00492-01 EP-Universal Grease.
- + Lubricate all moving levers and bolts with Blasolube Fluid Art.-No. 00761-01.
- + Control the electrical equipment of the machine. Defects such as loose connections or scorched cables must be rectified immediately.
- + Connect the plugs to the display and the safety buttons left and right as well as to the control element of the release button.
- + Mount cover and holding device for the adapter.



10.2 Battery Exchange



The batteries have to be exchanged if the following error prompt appears:

048111000x04

Procedure:

- + Disconnect power supply.
- + Turn the battery compartments **1** under the electric Crimping Machine AT-300 to open them.
- + Insert the batteries (2 x 2 x 1,5V Baby Cells Type C) one after another with the negative pole pointing to the top.
- + Close battery compartments **1** by turning them.

Dispose of the battery according to environmental standards of your country.

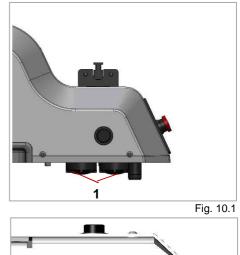




Fig. 10.2

10.3 Key Switch Exchange

INFORMATION



ATTENTION

+ Position the electric Crimping Machine AT-300 on a flat surface and assure the stability of the machine. Ensure that the table or bench is stable enough to support the machine in normal use.

If the keys for the key switch get lost, the key switch 1 (Fig. 10.3) has to be exchanged.

Procedure:

- + Disconnect power supply.
- + Remove holding device for the adapter.
- + Remove the cover carefully and ensure that no cables are damaged.
- + Disconnect the plugs from the display and the safety buttons left and right as well as from the control element of the release button.
- + Remove the control element of the key switch.
- + Exchange key switch.
- + Assemble the control element with the key switch.
- + Connect the plugs to the display and the safety buttons left and right as well as to the control element of the release button.
- + Mount cover and holding device for the adapter.



Fig. 10.3

+



11 Problem Handling and Service Information

DANGER



Due to the risk of hand or finger injury, never try to reach into the electric Crimping Machine AT-300.

+ Before starting to handle/solve the problem, the machine has to be disconnected from power supply by pulling out the main plug. Secure the machine to prevent unintentional restart.



CAUTION

- + Maintenance work and problem handling may be performed only by authorized and properly trained staff.
- + Do not operate the electric Crimping Machine AT-300 before having read and understood all operating instructions.
- + The operating instruction must be constantly within reach of the electric Crimping Machine AT-300. Every machine operator must have read and understood this operating instruction. The safety instructions, warnings and precautions contained in the individual chapters must be strictly observed by all users and operators when working on or with the electric Crimping Machine AT-300.
- + The electric Crimping Machine AT-300 is not operable, until the problem has been solved.
- + When working with the electric Crimping Machine AT-300, do not wear loose clothing, jewellery or long, loose hair that can get caught in the mechanism.
- + Work with caution.
- + In cases of a malfunction of the machine or adapter incl. tool head or die sets, production must be stopped and the malfunction must be fixed before continuing work.
- + Only one person is allowed to work on or with the machine at a time.



INFORMATION

+ In case of a blockade of the dies press the release button and disconnect the machine from power supply.



11.1 Mechanical Problems and Failure

Problem / Failure	Remedial Action and Explanation	
Machine cannot be operated	 + Is the machine connected to the power supply and the ON/OFF switch set to I? + Is the key switch turned to position II? + Is the foot pedal connected in the correct way? + Is the foot pedal locked? Release it by turning the release knob on the foot pedal. + Press foot pedal and safety button (right or left) simultaneously. 	
Machine works in double step mode.	+ Change Double Step Mode C (1-10) to full cycle mode , see chapter 7.2.	
Adapter cannot	Machine is not in final position!	 + Activate the machine again in full cycle mode . + Move machine ram to starting position (chapter 7.1).
be connected to the holding device on the machine.	Adapter is not in final position!	 Move crimp anvil in lowest position (see operation manual of the adapters/tool heads).
	Ram of the adapter does not engage correctly into the ram of the machine!	+ See chapter 8.
Adapter/Tool head does not open	 Hove adapter/tool head backwards (in set up mode, chapter 7.4.2); Remove adapter/tool head; Clean and lubricate the adapter/tool head in the profile area and check for any damage. Never mount damaged adapters/tool heads! 	
Adapter cannot be removed.	 + Is the adapter closed? + Move adapter backwards (see chapter 7.4.2) until it can be removed. 	
The icons react on another place on the display	+ Calibrate the display (see chapter 7.4.1)	

In the event of a problem, our customer service personnel will be able to help you.

Service-Address:

TE Connectivity Germany GmbH
a TE Connectivity Ltd. companySchenck Technologie- und Industriepark
Landwehrstr. 55/Gebäude 83DE-64293 Darmstadt
TE AT Customer Service - Hotline: +49(0)6151-607-1518E-Mail:
TEFE1@te.comEMEA Field Service Hotline
TEFE2@te.comTEFE2@te.comEMEA Hand Tool Repair
TEFE3@te.comTEFE4@te.comEMEA Wear & Spare Parts
TEFE4@te.comTEFE4@te.comEMEA Field Service Admin & Short Term Rental EquipmentPlease have the following information ready when you contact service:

+ Machine Type and Machine Serial Number



11.2 List of Error Prompts

If an error occurs, an error prompt appears on the display, like for example in Fig. 11.1.

Below you will find a list of the error prompts with the corresponding explanation:



Fig. 11.1

Error Prompt	Explanation	Fig. 11.1	
048111000x01	Supply voltage is too high	Move the voltage selector at the backside of the machine to the right voltage.	
048111000x02	Supply voltage is too low	Move the voltage selector at the backside of the machine to the right voltage.	
048111000x03	Wrong battery or battery wrongly inserted	Insert the battery correctly.	
048111000x04	Battery empty	Insert new batteries.	
048111000x05	Fuse 1 on control board has tripped	Send the machine back to TE	
048111000x06	Fuse 2 on control board has tripped	Send the machine back to TE	
048111000x07	Power frequency cannot be determined	Send the machine back to TE	
048111000x08	Error prompt not assigned	Send the machine back to TE	
048111000x09	Motor control error no. 1	Send the machine back to TE	
048111000x10	Motor control error no. 2	Send the machine back to TE	
048111000x11	Breaking error (Blackout of the electrical brakes)	Send the machine back to TE	
048111000x12	Display problems (if the display fails, this error prompt cannot be displayed)	Send the machine back to TE	
048111000x13	Memory error	Send the machine back to TE	
048111000x14	Motor is missing or defect	Send the machine back to TE	



Error Prompt	Explanation	Troubleshooting	
048111000x15	Rotating direction of the motor is wrong (wrong wire connection)	Send the machine back to TE	
048111000x16	Short circuit on the cable of the foot pedal	Send the machine back to TE	
048111000x17	Triggered release button	Reset the release button by turning it	
048111000x18	Maximum engine torque exceeded (crimp failed)	The crimp force required is too high or the crimp has failed.	
048111000x19	Warning! Deactivated speed limit (Jumper on the board)	x	
048111000x20	Temperature of the machine too high	Stop working with the machine and let it cool down.	
048111000x21	Error prompt not assigned	Send the machine back to TE	
048111000x22	Unknown error	Send the machine back to TE	
048111000x23	Weak sensor signal (too far away)	Send the machine back to TE	
048111000x24	Sensor board is missing / does not answer	Send the machine back to TE	
048111000x25	Sensor not calibrated	Send the machine back to TE	

After having remedied the error, blind out the error prompts by touching the display.



- INFORMATION
- + The electric Crimping Machine AT-300 can only be operated again, after having remedied the error.
- + If the error is not remedied, all other icons on the display are inactive (Fig. 11.2) Exception: Error prompt 048111000x19



Electric Crimping Machine AT-300

In the event of a problem, our customer service personnel will be able to help you.

Service-Adresse:

Adresse: TE Connectivity Germany GmbH a TE Connectivity Ltd. company Schenck Technologie- und Industriepark Landwehrstr. 55/Gebäude 83 DE-64293 Darmstadt TE AT Kundendienst-Hotline: +49(0)6151-607-1518

E-Mail:

TEFE1@te.comEMEA Field Service HotlineTEFE2@te.comEMEA Hand Tool RepairTEFE3@te.comEMEA Wear & Spare Parts



Fig. 11.2

TEFE4@te.com EMEA Field Service Admin & Short Term Rental Equipment

Please have the following information ready when you contact service:

+ Machine Type, Machine Serial Number and Error Prompt

11.3 **Product Information Center (PIC)**

For questions to the different applications, the technical product support will be pleased to assist you:

Homepage: http://www.te.com/support-center

Phone: +49(0)6151-607-1999



12 Removal from Service, Demounting, Disassembly,

DANGER



+ Before starting maintenance, disassembly or repair work, the crimping machine must be disconnected from power supply. Touching live parts can cause danger of electrocution with fatal consequences!



CAUTION

- + When working with the electric Crimping Machine AT-300, do not wear loose clothing, jewellery or long, loose hair that can get caught in the mechanism.
- + During transport and demounting of the machine, wear suitable safety shoes.
- + Work with caution.
- + Only one person is allowed to work on or with the machine at a time.

13 Storage

Store the machine in the original box at room temperature.

14 Disposal

For the disposal of the electric Crimping Machine AT-300, send it back to TE.



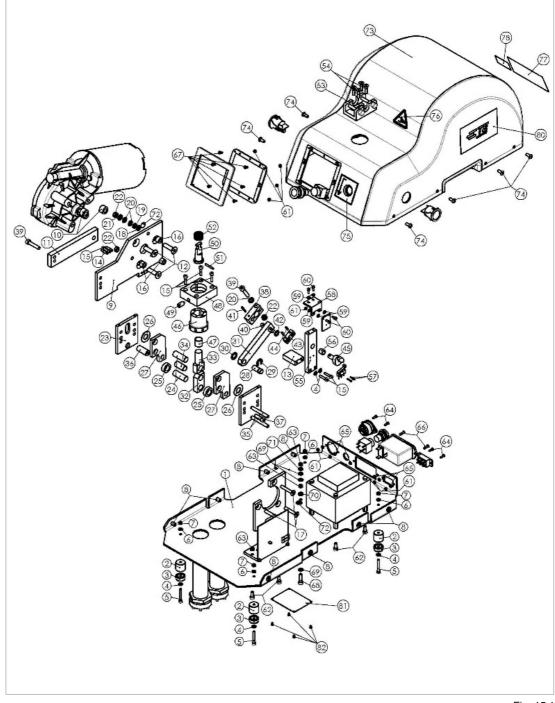
INFORMATION

Dispose of the battery according to environmental standards of your country.



15 Exploded View Drawing, Spare Part List, Circuit Diagram

15.1 Exploded View Drawing





15.2 Parts List Exploded View Drawing

POS.	Pcs	Spare Part	TE PN	TE Bezeichnung
1	1		523648-1	HOUSING
2	4	х	523648-2	FOOT 20/4,3X18 LG
3	4	х	523648-3	FOOT, MEASURING DEVICE A20 20X4X7,5 LG
4	6	х	523648-4	DISK A4,3
5	4	х	523648-5	HEX SOCKET SCREW M4X30
6	4	х	523648-6	SERRATED WASHER I 4,3
7	4	х	523648-7	HEX NUT M4
8	8		523648-8	BLIND RIVET NUT BN4575-M5
9	1		523648-9	MOTOR HOLDING PLATE
10	2		1-523648-0	DISTANCE BUSH 16/8,2X10
11	1		1-523648-1	REINFORCING BAR
12	3		1-523648-2	HEX SOCKET COUNTERSUNK HEAD SCREW M8X30
13	1		1-523648-3	BRIDGE
14	2		1-523648-4	CYLINDER PIN 4M6X18
15	7		1-523648-5	HEX SOCKET SCREW M4X18
16	3		1-523648-6	SOCKET 12,0/6,2X8,0
17	3		1-523648-7	HEX SOCKET COUNTERSUNK HEAD SCREW M6X35
18	1		1-523648-8	SERRATED WASHER A 6,4
19	1		1-523648-9	HEX NUT B M6
20	3		2-523648-0	DISK B6,4
21	1		2-523648-1	SPRING RING
22	4		2-523648-2	HEX NUT M6
23	2		2-523648-3	KNEE LEVER GUIDANCE
24	2		2-523648-4	JOINT BOLT 12X34
25	2		2-523648-5	DISTANCE BUSH
26	2		2-523648-6	DISTANCE PLATE 25,0/12,2X1,0
27	2		2-523648-7	ACTUATING LEVER
28	1		2-523648-8	CONNECTING ROD BOLT
29	1		2-523648-9	LOCK WASHER
30	1		3-523648-0	DISTANCE PLATE 16,0/10,2
31	1		3-523648-1	PRESSURE ROD
32	1		3-523648-2	KNEE LEVER
33	1		3-523648-3	PRESSURE ROD BASE
34	1		3-523648-4	PRESSURE ROD BOLT
35	2		3-523648-5	CYLINDER PIN 6M6X50
36	1		3-523648-6	DISTANCE BUSH D12/M6 X26,5
37	1		3-523648-7	HEX SOCKET SCREW M6X20



POS.	Pcs	Spare Part	TE PN	TE Bezeichnung
38	1		3-523648-8	CRANK
39	2		3-523648-9	HEX SOCKET SCREW M6X30
40	1		4-523648-0	CRANK BOLT 8X33,5
41	1		4-523648-1	CYLINDER PIN 3M6X20
42	1		4-523648-2	DISTANCE PLATE 12,5/8,2X1,0
43	1		4-523648-3	TRANSFER LEVER
44	2		4-523648-4	CYLINDER PIN 3M6X12
45	1		4-523648-5	SEGMENT AXIS
46	1		4-523648-6	PUSH ROD GUIDANCE
47	1		4-523648-7	DU-SOCKET MB 1415
48	1		4-523648-8	RECEIVING-DOWN HOLDER
49	1		4-523648-9	SPRINGY PRESSURE PIECE
50	1	х	5-523648-0	PRESSURE ROD TOP
51	1	х	5-523648-1	CYLINDER PIN 3M6X24
52	1	х	5-523648-2	PRESSURE PIN NO. 244
53	1	х	5-523648-3	TOOL HOLDING DEVICE, COMPLETE
54	4	х	5-523648-4	HEX SOCKET COUNTERSUNK HEAD SCREW M5X20
55	1		5-523648-5	BRIDGE
56	1		5-523648-6	DU-SOCKET MB 0810
57	2		5-523648-7	HEX SOCKET SCREW M2X10
58	1		5-523648-8	SEGMENT BOARD HOLDING PLATE
59	6		5-523648-9	DISK A3,2
60	4		6-523648-0	HEX SOCKET SCREW M3X8
61	14		6-523648-1	HEX NUT M3
62	6		6-523648-2	HEX SOCKET SCREW M5X12
63	4		6-523648-3	HEX NUT M5
64	4		6-523648-4	HEX. LENS HEAD SCREW M3X10
65	6		6-523648-5	SERRATED WASHER A 3,7
66	2		6-523648-6	HEX SOCKET COUNTERSUNK HEAD SCREW M3X12
67	6		6-523648-7	HEX SOCKET COUNTERSUNK HEAD SCREW M3X8
68	1		6-523648-8	HEX SOCKET SCREW M5X20
69	3		6-523648-9	SERRATED WASHER A5,3
70	1		7-523648-0	DISK B5,3
71	1		7-523648-1	
72	2		7-523648-2	ADHESIVE LABEL PROTECTIVE CONDUCTOR
73	1	x	7-523648-4	HOUSING COMPLETE
74	8	х	7-523648-5	HEX. LENS HEAD SCREW M5X12
75	1	х	7-523648-6	LABEL, RELEASE

POS.	Pcs	Spare Part	TE PN	TE Bezeichnung
76	1	х	7-523648-7	ADHESIVE LABEL, WARNING HAND INJURY
77	1	х	7-523648-8	ADHESIVE LABEL, WITHDRAW MAINS PLUG
78	1	х	7-523648-9	ADHESIVE LABEL, KEY SWITCH
80	2			TE LOGO
81	1			MACHINE IDENTIFICATION PALTE
82	4			BLIND RIVET NUT 2,4X8

All spare parts which are not marked with an "X", are safety related parts or in connection with safety related parts of the machine. This repair/assembly should be made from TE.

If the replacement of the safety related parts or parts, which are in connection with these safety related parts is done by the end-user, every guarantee- and warranty claim expires. The manufacturer excludes any kind of liability for accidents, which are caused by the incorrect replacement.



15.3 Circuit Diagram

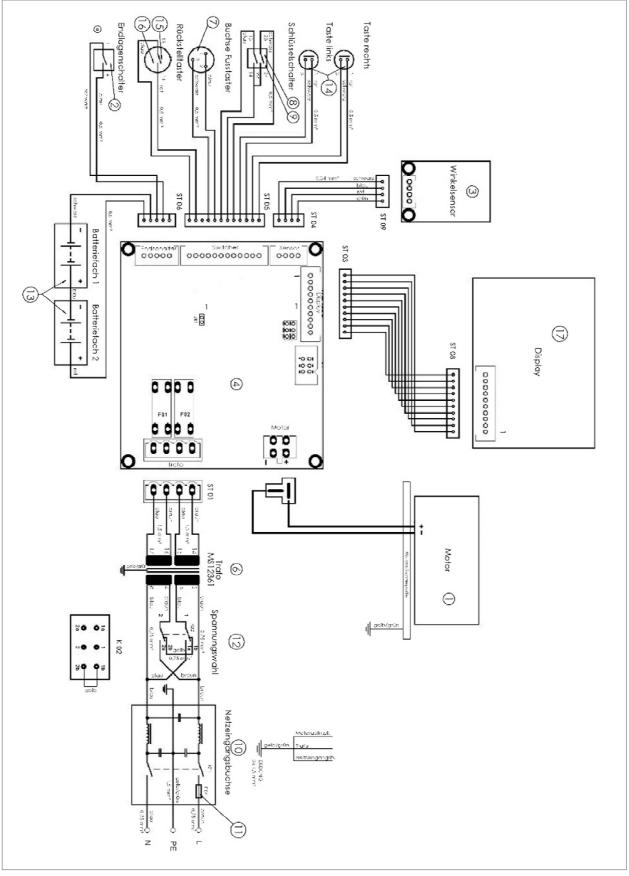


Fig. 15.2



15.4 Parts List Electrtic

PosNo.	Pcs	Spare Part	TE PN	TE Description
1	1	Х	8-523648-1	MOTOR DOGA 259
2	1		8-523648-2	LIMIT SWITCH
3	1		8-523648-3	POSITION BOARD
4	1	Х	8-523648-4	CONTROL BOARD, COMPLETE
6	1		8-523648-6	TRANSFORMER MSE 96LP_59,7
7	1		8-523648-7	SOCKET CONNECTOR TYPE 690
8	1	Х	8-523648-8	SET-UP KEY SWITCH
9	1		8-523648-9	SWITCHING ELEMENT, KEY SWITCH
10	1	Х	9-523648-0	MAIN FILTER, INCL. SWITCH
11	3		9-523648-1	FUSE 5X20 6,3A SLOW BLOW DIN41662
12	1		9-523648-2	VOLTAGE SELECTOR 2-POL.110_220V
13	2		9-523648-3	BATTERY COMPARTMENT 2X BABY TYPE C
14	2	Х	9-523648-4	MAIN PRESSURE BUTTON ROUND
15	1	Х	9-523648-5	RELEASE BUTTON
16	1		9-523648-6	SWITCHING ELEMENT-RELEASE BUTTON
17	1	Х	9-523648-7	DISPLAY FT800, INCL. FRAME

All spare parts which are not marked with an "X", are safety related parts or in connection with safety related parts of the machine. This repair/assembly should be made by TE.

If the replacement of the safety related parts or parts, which are in connection with these safety related parts is done by the end-user, every guarantee- and warranty claim expires. The manufacturer excludes any kind of liability for accidents, which are caused by the incorrect replacement.

15.5 Accessories Overview for Reorders

Electric foot pedal with safety cover and connecting cable	TE P/N 5-523159-8
Power cable EU (with protective contact)	TE P/N 9-523648-8
Power cable US (with protective contact)	TE P/N 9-523648-9