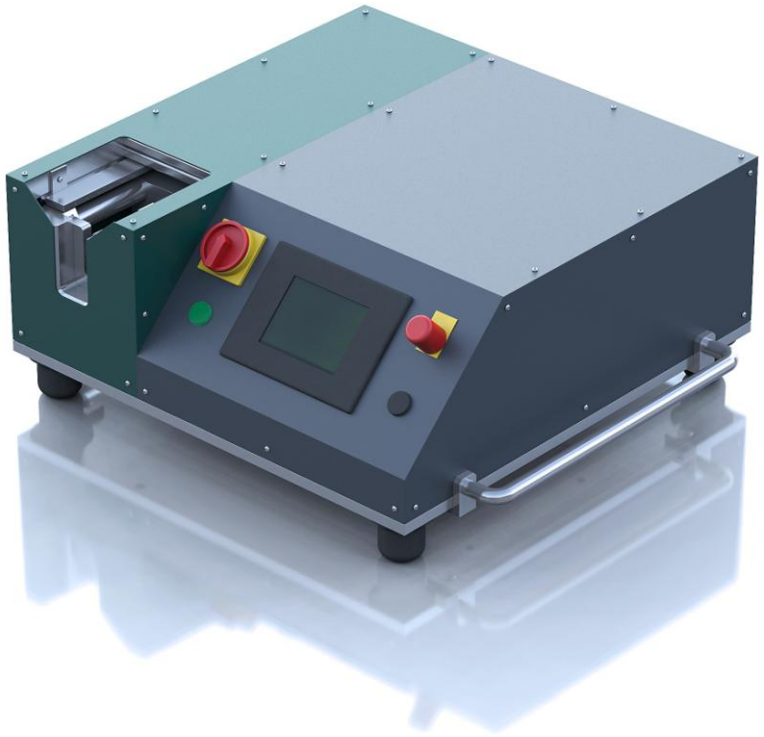
Translation of the original

Operating Manual



Cutting Ring Pre- and Final Assembly Machine

SPR-PRC-POC

To avoid injuries and damage read through this operating manual thoroughly and attentively. Keep it for further reference purposes.

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1 Information on the Manual

This manual includes important instructions and information on the intended use. Keep the operating manual where it can be accessed by the operating personnel.

1.1 Targeted group of the operating manual

The operating personnel charged with the following work must read and take notice of this operating manual:

- Installation
- Operation
- Fault
- Servicing

See personnel qualifications ► Section 2.4, Page 9.

1.2 Warnings structure

Coloured signal word boxes emphasise the warnings. Always read the full warning text for effective protection from hazards!

The various colours and signal words of the following boxes designate various danger levels:

⚠ DANGER

Ignoring this warning results in serious or lethal injuries.

⚠ WARNING

Ignoring this warning can result in serious or lethal injuries.

⚠ CAUTION

Ignoring this warning can result in minor or moderately severe injuries.

IMPORTANT

Ignoring this warning can result in damage.

Warnings are always structured in the same manner. They include the signal word, hazard type and source, consequences of ignoring them and steps to ward off/avoid hazards.

Example:

⚠ WARNING

Risks from fingers shearing off and being crushed

► Ensure before start-up that all safety equipment is properly installed and in working order!

► Make sure your fingers are not in the assembly area when carrying out the machine functions!

1.3 Instructions structure

Instructions request you to undertake an immediate operation. They are structured in line with the operation involved. Always carry out the operating steps in the prescribed sequence.

The instructions are structured as follows and marked with the appropriate symbols:

► Aim of the instruction

1. Operating step

   ✓ Effect of the operating step in checking if the step has been properly executed.

2. Additional operating step

☑ Outcome of the overall instruction

1.4 Additional information structure

Texts with an info symbol provide you with additional information and tips.

1.5 References structure

References are shown in this manual as follows:

Example:

"… only operate the machine as intended ► Chapter 2.2, Page 8."

2 For Your Safety

To avoid accidents and injuries, …

- Pay attention to all the general and specific safety instructions and the warnings in this manual.
- Pay attention to danger and prohibitory signs.
- Follow the accident prevention regulations and directives applying to where the operation is taking place.
- Keep to all the inspection and maintenance intervals.
- Only operate the machine as intended.

2.1 General safety instructions

Safety instructions help you in avoiding injuries and in avoiding damage. Ensure that you have read and understood all the safety instructions in this operating manual.

Safe working entails doing more that just reading the general safety instructions in this chapter. Also read and follow the specific safety instructions in every chapter affecting your work. Follow as well the information in the associated product documents in force.

The following general safety instructions hold good for all work undertaken on the machine:

- Keep to the valid national and international job safety provisions.
- Only operate the machine …
  - In a technically satisfactory condition
  - In a safety and danger-conscious manner
  - As intended
  - With attention paid to this operating manual and
  - With a complete number of unchanged, properly installed and functional protective appliances.
- Wear the appropriate personal protective gear for all work undertake on the machine ► Chapter 2.5, Page 9.
- Pay attention to all the safety labels attached to the machine ► Chapter 2.6, Page 10.
- Only alter Stauffenberg GmbH&Co.KG is to carry out work on the electrical equipment.
- Immediately rectify faults which affect your safety and a reliable operation of the machine. Place the machine out of service until the fault is rectified.
- Except for tools, only alter Walter Stauffenberg GmbH&Co.KG is to replace components.

- Keep away from moving component parts. Wear close fitting clothes. Bundle long hair to prevent it from being drawn into the machine. Take off rings and necklaces before the work.
- Be aware of the presence of residual energies in mechanical, hydraulic and electrical components.

2.2 Intended use

The cutting edge pre and final assembly machine is solely for mechanical pre-assembly and final assembly of cutting rings on light and heavy series tube ends for 6 mm to 42 mm tube external diameters.

The machine is used together with assembly studs and counter-retaining plates specially designed for mechanical mounting.

The assembling parameters saved in the machine apply solely to the use of an original STAUFF cutting ring FI-DS-.. in combination with the selected tube material and the original STAUFF union nut FI-M-.. .

The machine may only be used within the specifications prescribed in the Technical Data chapter ► Chapter 3.2, Page 15 and with due consideration given to the maintenance requirements and instructions in this manual and in the associated documents in force.

No changes, attachments or conversions are to be carried out without consultations had with the manufacturer. Theses kinds of modifications could limit the fail-safeness of the machine and are deemed to be at variance to the intended use.

Any use other than that indicated in the use as intended is not allowed.

2.3 Tasks and obligations of the company operator

No only the instructions and information in this operating manual are to be followed but also the general, statutory and other mandatory regulations on accident prevention and environmental protection.

To ensure fail-safe machine operation, the company operator must at least …

- Ensure that the machine is only run as intended, is in a proper state, has the full complement of safety appliances and reveals no signs of damage.
- Establish the operative range and prepare the corresponding operating instructions.
- Always keep the safety labels attached to the machined complete and legible.
- Always have available the operating manual in a complete and legible form where the machine is deployed.
- Instruct those operating the machine as to the work involved with it.

- Acquire the specifications applicable to the machine in their most recent version and to familiarize personnel working on the machine with them.
- Provide the personnel operating the machine with the required personal protective gear.
- Carry out a safety briefing at the machine itself.
- Ensure that ventilation and lighting of the working area is adequate.

2.4 Personnel eligibility

Whatever the work on the machine, it is only to be carried out by personnel qualified and authorised to do just that. Personnel instructed, trained or briefed in the work involved is judged to be qualified. This is to be backed up by appropriate certificates and supporting records.

A distinction is made in this manual between:

- **Operating personnel** - those who have been demonstrably briefed in both operating the machine and in its mode of operation. They input the data required for the operation and carry out the requisite operating steps to operate the machine. They are also responsible for simple servicing work and fault rectification as specified in the inspection and maintenance plan and in fault rectification.
- **Personnel learning on the job** may only work on the machine under the constant supervision of personnel eligible to perform this work.

2.5 Personal protective gear

The following personal protective gear is prescribed for those working on the machine:

	Wear close-fitting working clothes!
	Wear safety boots!

2.6 Safety labels

Attach the following safety labels to the machine in a clearly visible and legible manner:

	Warning of dangerous electrical voltage!

	Warning of hand injuries!

2.7 Protective safeguards

Protective safeguards protect the operating personnel from hazards.

Before each switch-on of the machine, all protective safeguards must be properly fitted and in working order.

Protective safeguards may only be removed when the machine has stopped and when it is protected from being accidentally switched on back again by a padlock or a similarly suitable measure.

The following protective safeguards are attached to the machine or are to be fitted by the company operator:

Electrical main switch	The electrical main switch is at the front on the machine. The electrical main switch de-energizes the entire machine (Position: 0). The electrical main switch is secured from being accidentally switched on again ► Chapter 2.8, Page 13.
Light curtain	Light curtains stop contact being made with the danger areas of the machine. The light curtain activates an emergency stop should contact be made with a danger area during the operation. Al machine movements are stopped.
Emergency stop button	Pressing the emergency stop button activates an emergency stop resulting in all machine movements being held up. To place the machine back into service, the activated emergency stop must be released ► Chapter 6.3, Page 24.



1 Light curtain
2 Electrical main switch
3 Emergency stop button

1: Protective safeguards

2.8 Securing machine from being inadvertently switched on

► Secure the machine from being inadvertently switched back on:

1. Ensure that …

   ✓ a lock is available for securing the machine from being inadvertently switched back on again (not in the scope of delivery).

2. Switch off the machine as described in ► Chapter 6.9, Page 41 .
3. Protect the electrical main switch with a lock.

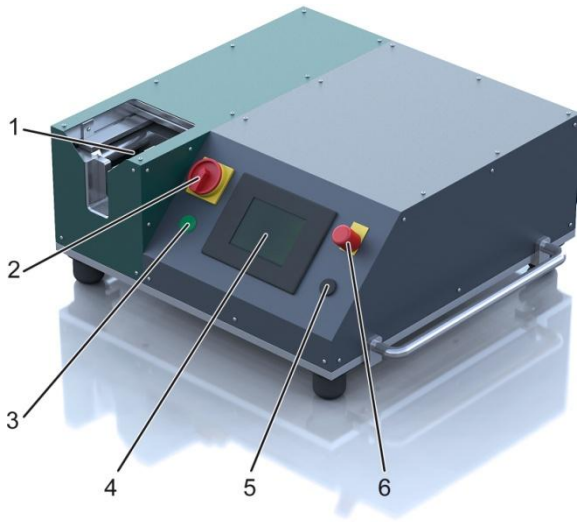


2: Electrical main switch protected with lock

☑ The machine is secured from being inadvertently switched back on again.

3 Machine Description

3.1 Overview of machine



3: Operating elements overview

Pos.	Designation	Description
1	Assembling area	Processing workpiece
2	Electrical main switch	Switching on the machine
3	Ready/Process runs lamp	Machine ready for operation, machine operates
4	Control panel	Setting the machine
5	Release	Releasing the machine
6	Emergency stop button	Stops machine in an emergency
	Interface RJ45	PC connection; on the back of the machine
	Power supply	On the back of the machine

3.2 Technical Data

General data	
Dimensions (B x D x H)	780 mm x 650 mm x 305 mm
Weight incl. oil:	95 kg

Electrical energy	
Electrical connection:	400 V / AC3 / 50Hz 460 V / AC3 / 60Hz
Current consumption:	2.7A

Hydraulic energy	
Oil capacity volume:	4 litres
Max. operating pressure:	450bar

Installation requirements	
Ambient temperature:	Dry between 15 °C and 35 °C
Position	Horizontal

Noise pressure level	
in acc. with EN ISO 11202:2009:	68 dB(A)

3.3 Function

The machine mechanically mounts cutting rings onto tube ends. Use can be made of light and heavy series tubes for tube diameters between 6 mm and 42 mm. Pre-assembling and final assembling are involved.

For more information on choosing either pre-assembling or final assembling, please follow the detailed assembling manual instructions in the STAUFF Connect Product Catalogue.

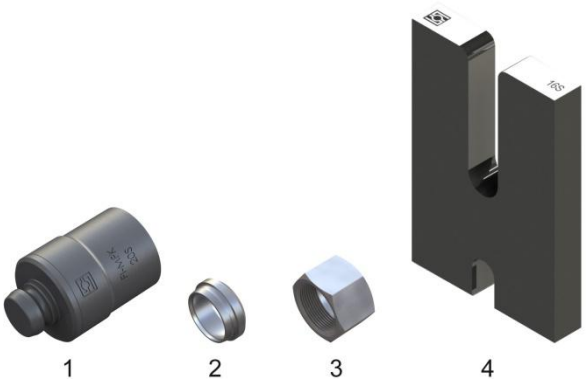
The machine is used together with assembly studs and counter-retaining plates specially designed for mechanical mounting.

3.4 Tools and Product

The cutting ring pre- and final assembling machine mounts cutting rings onto tube ends. They for the basis for cutting ring fittings.



4: Product



1 Assembly stud
2 Cutting ring
3 Union nut
4 Support plate

5: Parts

Labelled on the assembly stud and support plate is the construction size:

- The number corresponds to the tube external diameter
- LL stands for the Extra-Light Series
- L stands for the Light Series
- S stands for the Heavy Series

Please refer to the STAUFF Connect Product Catalogue for additional information on selection of the construction size.

3.5 Type plate

The type plate is on the side of the machine.



6: Type plate

3.6 Spares and wear parts

IMPORTANT

Replacing components

Machine damage, malfunctions, faults

- ► Only Walter Stauffenberg GmbH&Co.KG is to carry out work involving opening up the machine!
- ► Only authorized rigging and maintenance personnel are to carry out servicing work!
- ► Only use appropriate tools which are in a good condition!
- ► Only replace components with genuine spares or those authorized by the manufacturer!

Lists of authorized spares and wear parts can be had from Walter Stauffenberg GmbH&Co.KG.

4 Transport and Storage

4.1 Safety

⚠ WARNING

Lifting loads

Serious or lethal injuries can come from falling/swaying loads

- ► Before raising the load, fix all its moving components!
- ► Only use undamaged lifting equipment as permitted for the weight of the load to be raised!
- ► Only attach lifting tackle at the envisaged attachment points!
- ► Never leave loads hanging in the hoists when no supervision is present!
- ► Never remain under suspended loads!

⚠ WARNING

Transferring the machine

Serious or lethal injuries can come from tilting or slipping loads

- ► Before transferring the machine, fix all its moving components!
- ► Secure the machine during transfer from overturning or slipping out of position!
- ► Only use materials handling vehicles authorised for the weight of the machine!

4.2 Handling

Information on dimensions and weight is available in
► Chapter 3.2, Page 15.

Note the following in materials handling:

- The attachment points are the side bars/grips of the machine.
- Keep the machine horizontal during any transfer. Note that the centre of gravity is in the assembling area.
- Materials handling may only be undertaken by an authorized specialist company or by competent personnel.
- Dispose of all packaging material in a proper and environmentally compatible manner following materials handling.

5 Installation

5.1 Safety

⚠ WARNING

Lifting loads

Serious or lethal injuries can come from falling/swaying loads

- ► Before raising the load, fix all its moving components!
- ► Only use undamaged lifting equipment as permitted for the weight of the load to be raised!
- ► Only attach lifting tackle at the envisaged attachment points!
- ► Never leave loads hanging in the hoists when no supervision is present!
- ► Never remain under suspended loads!

⚠ WARNING

Carrying out assembling work

Incorrect assembling leads to serious/lethal injuries or machine damage

- ► Only authorized specialist personnel is to carry out assembling work!
- ► Only use appropriate tools which are in a good condition!
- ► Wear your personal protective gear for all work!

⚠ WARNING

Connecting the machine to the power supply

Serious or lethal injuries from dangerous electrical voltage

- ► Only electrical specialists are to carry out work on electrical appliances!
- ► Only under supervision of a second person is work allowed on energized parts!

⚠ WARNING

Risks from fingers shearing off and being crushed

► Ensure before start-up that all safety equipment is properly installed and in working order!

► Make sure your fingers are not in the assembly area when carrying out the machine functions!

5.2 Installing the machine

The machine is assembled in a ready-to-operate state by the manufacturer and supplied with the control unit set up.

Control unit updates can be enquired into from the manufacturer.

Note the following before the installation:

- Install the machine on a stable base.
- Install the machine such that there is a room to work around it.
- Inspect the machine for any signs of damage.

5.3 Attaching supply connections

Attach the machine to the following supply connections:

- Power supply

5.4 Establishing readiness for operation

The machine is visually checked on and tested as to function before start-up. In so doing, ensure that …

- All parts are correctly mounted, display no damage and are in full working order
- All the outer connectors are on hand, fully tightened and that
- all the protective safeguards function ► Chapter 8.3, Page 50 and ► Chapter 8.4, Page 50.

6 Operation

To ensure fail-safe operations, the machine is only to be operated as intended.

6.1 Safety

⚠ WARNING

Risks from fingers shearing off and being crushed

- ► Ensure before start-up that all safety equipment is properly installed and in working order!
- ► Make sure your fingers are not in the assembly area when carrying out the machine functions!

⚠ CAUTION

Danger from incorrect operating and the operator not working as he should

- ► Those operating the machine must have read and understood the operating manual!
- ► Those operating the machine must be trained and instructed in handling it!

⚠ CAUTION

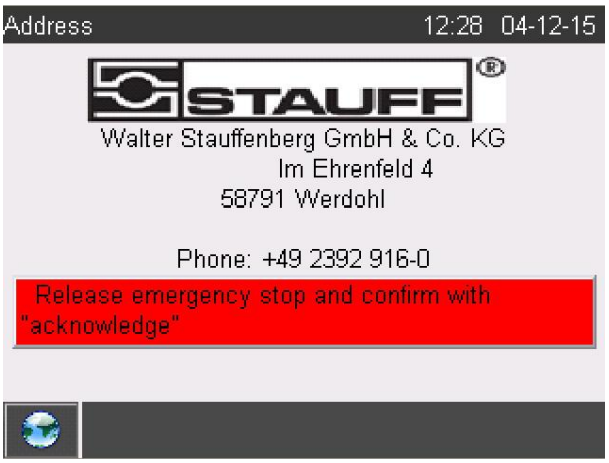
Danger from the operator meddling with the safety equipment

- ► Ensure before start-up of the machine that all safety equipment is properly installed and operable!

6.2 Switching on the machine

► The machine is switched on as follows:

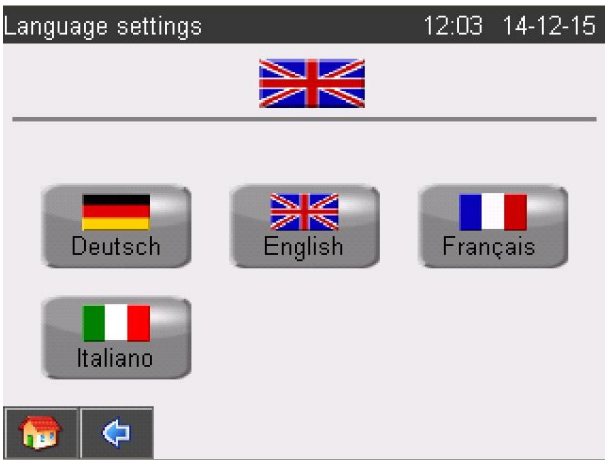
1. Turn the electrical main switch to "“I / ON”.
   - ✓ The **Unlocking** menu appears after a few seconds.
   - ✓ The **Ready/Process runs** lamp flashes.
   - ✓ The **EMERGENCY STOP unlock and confirm with “Acknowledge”** notification appears.



7: Start screen

   - ✓ The English start screen appears at the first start-up after machine delivery.

2. Press the **Globe** key to set the language.
   - ✓ The **Settings Languages** menu opens.

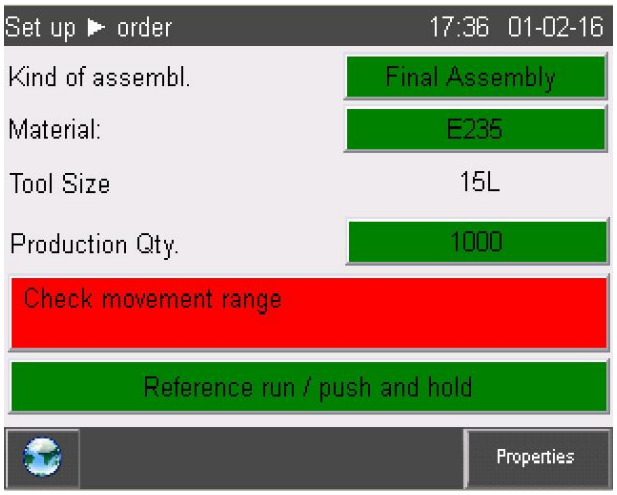


8: Menu Settings languages

3. Press the touch button of the language to be set.
   - ✓ The language set appears at the top of the menu; the language is thus set.
4. Press the **Arrow** key to exit the menu.

5. Pull out the **EMERGENCY STOP** button.
6. Press the **Confirm** key.
   ✓ The **Job Set-up** main menu is opened.

☑ The machine is ready to be operated.

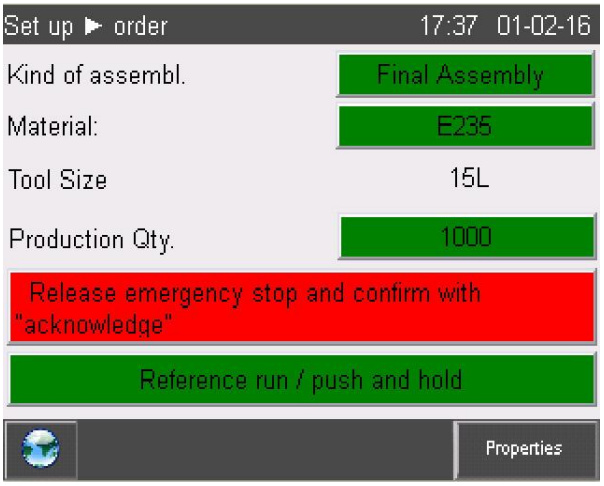


9: Main menu - Job set-up

6.3 Establishing Readiness for Operation after Emergency Stop

► This is the way to establish readiness for operation after the emergency stop:

1. Rectify the fault as described in ► Chapter 7, Page 42 .



10: Emergency stop notification

2. Pull out the **EMERGENCY STOP** button.
3. Press the **Confirm** key.

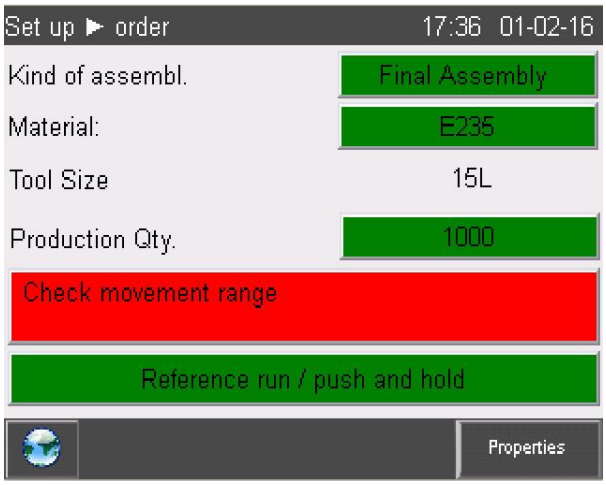
☑ The machine is ready to be operated.

6.4 Setting the machine

6.4.1 Setting the language

► This is the way to set the language:

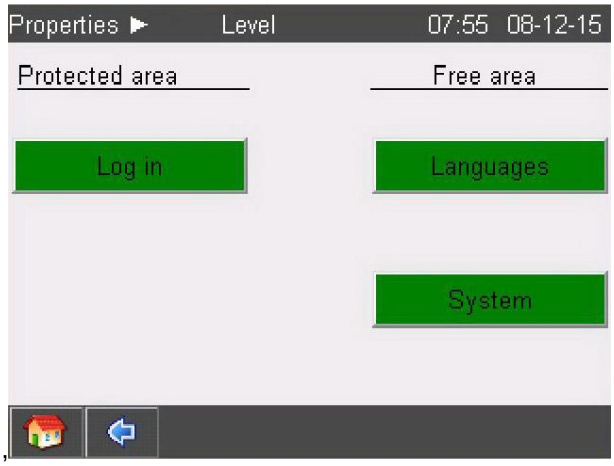
1. In menu **Set up order** press on the **Properties** touch button.



11: Menu - Set-up Order

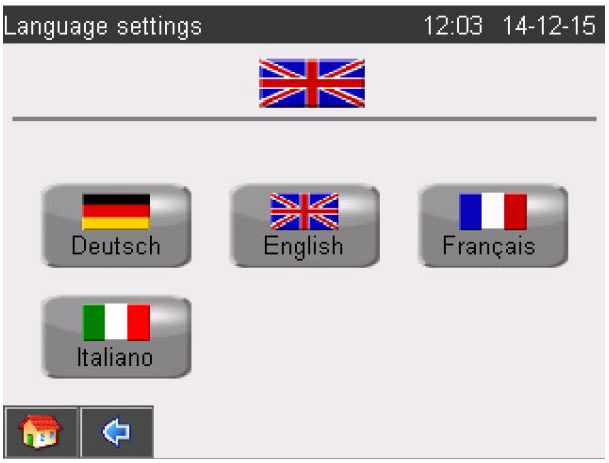
✓ The **Properties Level** menu opens.

2. In menu **Properties Level** press on the **Languages** touch button.



12: Menu - Settings Level

✓ The **Language Settings** menu opens.



13: Menu language Settings

3. Press the touch button of the language to be set.

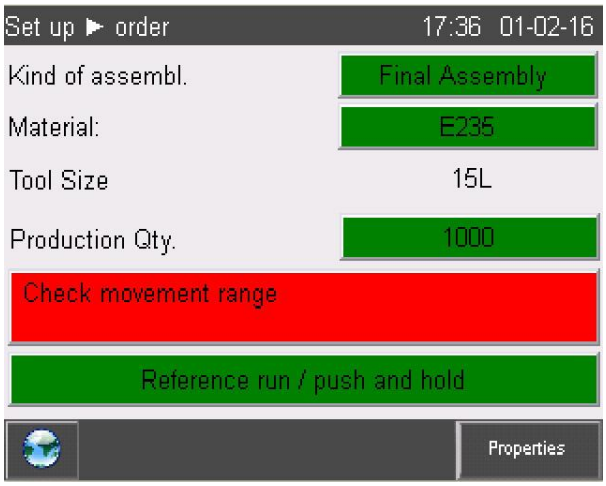
☑ The language set appears at the top of the menu. As a result, the language is set.

Press the **Arrow** key to exit the menu.

6.4.2 Setting the System Properties

► This is the way to set the system properties:

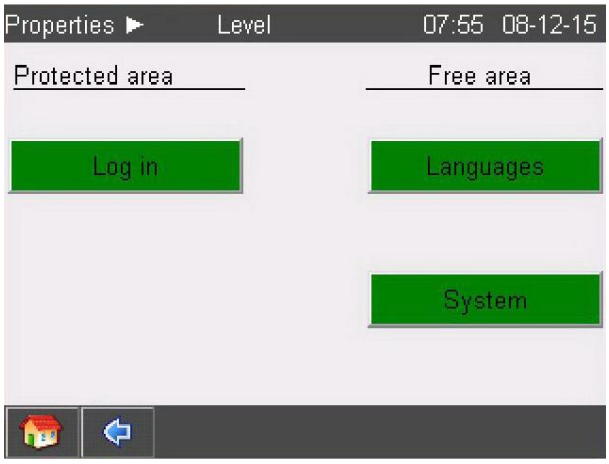
1. In menu **Set up order** press on the **Properties** touch button.



14: Menu – Set up order

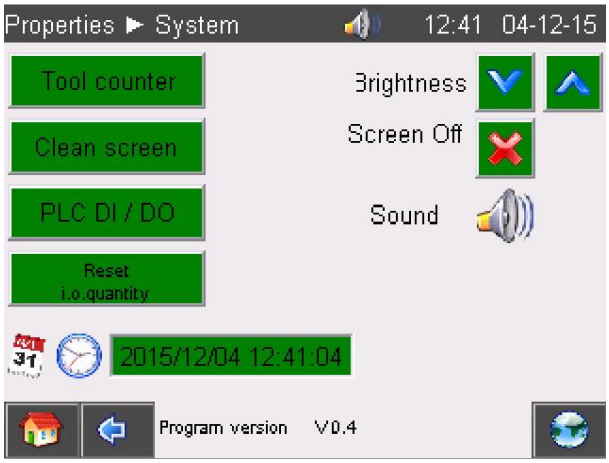
✓ The **Settings Level** menu opens.

2. In menu **Properties Level** press on the touch button **System.**



15: Menu - Properties Level

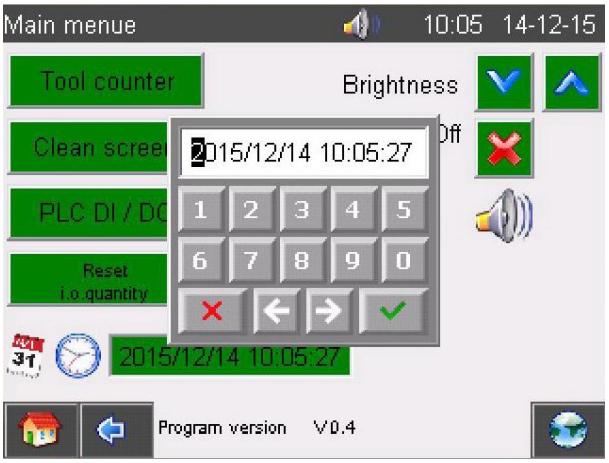
☑ The menu **Properties System** appears.



16: Menu - Properties System

► This is the way to set the time:

Press the date/time display and enter the desired data.



17: Set the time

► This is the way to receive information on the number of pieces per tool size: Press the **Tool counter** touch button.

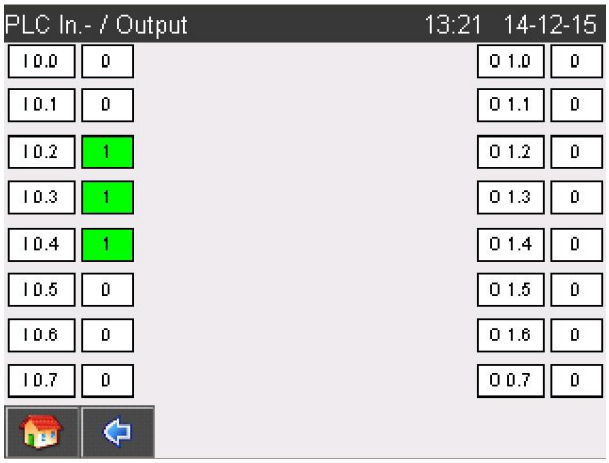


18: Tool counter

► This is the way to switch off the cleaning control panel: Press the **Cleaning screen** touch button.

✓ The control panel switches itself off for 20 seconds.

► This is the way to receive information on the function of the inputs and outputs: Press the **PLC In.- / Output** touch button.



19: Overview - Function of the inputs and outputs

☑ The function of the inputs and outputs is displayed.

► This is the way to reset the actual production quantity number:

1. To reset the actual production quantity number, in menu **Number of pieces** press the **Reset i.O. quantity** touch button.

   ✓ The **i.O. quantity** opens.



20: Menu - Reset quantity counter

2. Press the **Reset** touch button.

☑ The actual production quantity number is reset.

6.5 Setting the Job

► This is the way to set the job:

1. Ensure that …

   ✓ the machine is switched on ► Chapter 6.2, Page 22.

2. In menu **Processing order** press on the **Set-up** touch button.



21: Menu - Job processing

   ✓ The **Set up job** menu opens.

3. Carry out the following steps in the order as indicated:
4. Setting assembling type ► Chapter 6.5.1, Page 31
5. Setting the material ► Chapter 6.5.2, Page 32
6. Setting the production quantity ► Chapter 6.5.3, Page 32
7. Setting up the tool ► Chapter 6.5.4, Page 33

6.5.1 Setting the assembling type

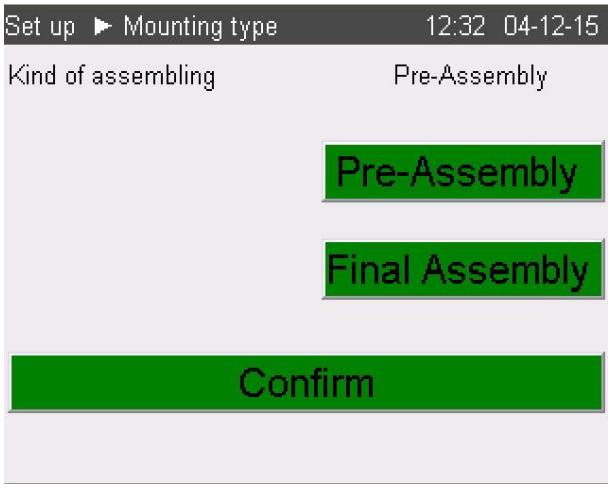
With regard to selecting pre-assembling or final assembling, please follow the detailed assembling manual instructions in the STAUFF Connect Product Catalogue.

► This is the way to set the assembling type:



22: Menu – Set up order

1. In menu **Set up order** press the assembling type touch button.
   ✓ The **Set up Mounting type** menu opens.



23: Menu - Setting up the assembling type

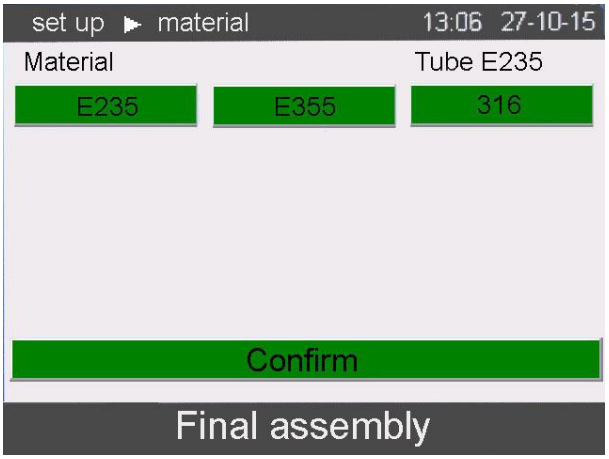
2. Press the **Pre-assembly** or **Final assembly** touch button.
3. Confirm the assembling type selection with the **Confirm** touch button.
   ✓ The **Set up order** menu opens.

☑ The selected assembling type is displayed.

6.5.2 Setting the material

► This is the way to set the material:

1. In menu **Set up order** press the **Material** touch button.
   ✓ The **Set up material** menu opens.



24: Menu - Set up material

2. Select the material and press the touch button.
3. Confirm the assembling type with the **Confirm** touch button.
   ✓ The **Set up order** menu opens.

☑ The selected material and related construction size are displayed.

6.5.3 Setting the production quantity

► This is the way to set the production quantity:

1. In menu **Set up order** press the production quantity touch button.
   ✓ The input pad for entering 5the number of pieces opens.



25: Menu - Input pad number of pieces

2. Select the number of pieces.
3. Confirm the number of pieces with the **Enter** touch button.
   ✓ The **Set up order** menu opens.

☑ The selected production quantity is displayed.

6.5.4 Setting up the tool

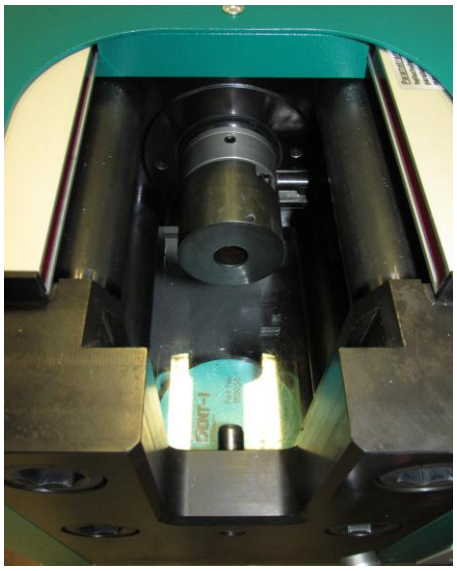
IMPORTANT

Objects in the assembling area causing damage at the machine

► Inspect the assembling area before assembling and remove any tools and other objects which are not required for mounting!

► This is the way to set tool:

1. Check the assembling area and remove any dirt contamination or objects.



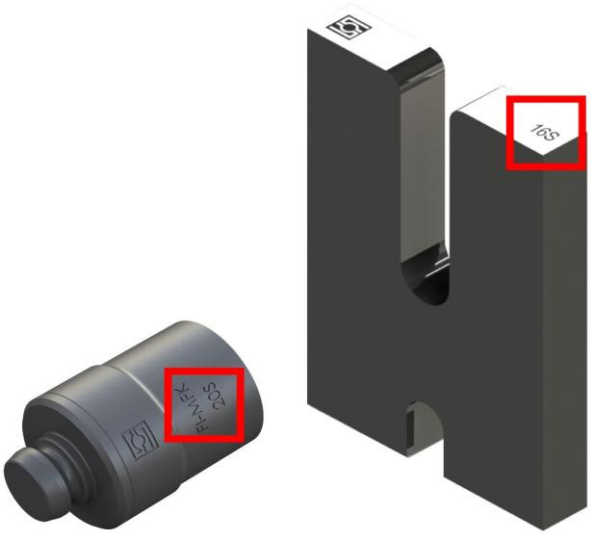
26: Assembling area not equipped

2. In menu **Set up order** on the control panel, check the material and, if necessary, set it ► Chapter 6.5.2, Page 32.
3. Select the assembly stud and support plate in keeping with the desired construction size.

IMPORTANT

Damage to the machine from different overall assembly stud and support plate sizes

► Ensure that the same tool sizes are used. Using different tool sizes may result in damage to the tools! Correct cutting ring assembling is not possible.



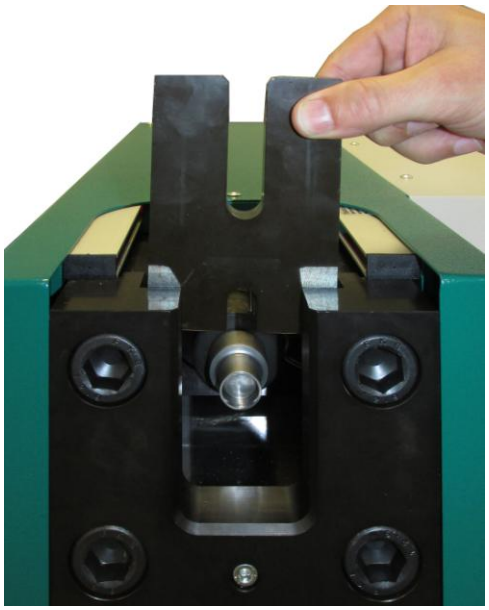
27: Checking the construction size

4. Fit the assembly stud into the fixture nozzle and fix with the lock clamp.



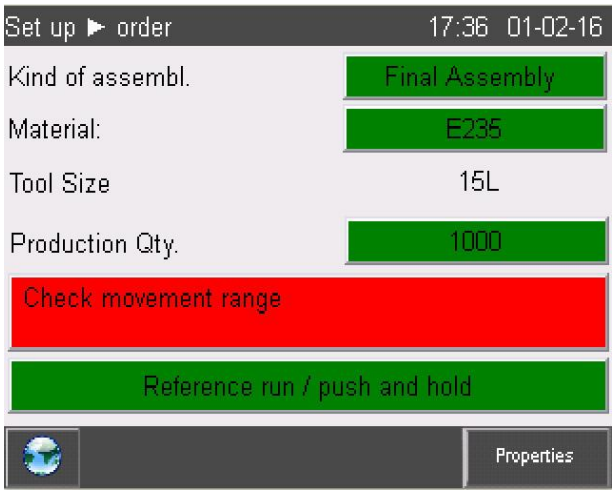
28: Fix the assembly stud

5. Fit the support plate with the construction size detail upwards.



29: Fitting the support plates

6. Align tool size with the display in the **Set up Order** menu.
7. Press and hold the **Reference run** touch button (until image changes!).



30: Reference run touch button

✓ The reference run is started.

☑ The machine is ready to be operated.

6.6 Assembling cutting rings

⚠ WARNING

Risks from fingers shearing off and being crushed

- ► Ensure before start-up that all safety equipment is properly installed and in working order!
- ► Make sure your fingers are not in the assembly area when carrying out the machine functions!

The assembling parameters saved in the machine apply solely to the use of an original STAUFF cutting ring FI-DS-.. in combination with the selected tube material and the original STAUFF union nut FI-M-.. .

This is the way to fit the cutting rings:

Ensure that …

- ✓ The tubes are prepared in keeping with tube and assembling preparation of the assembling instructions of the STAUFF Connect Product Catalogue. Refer on this to Chapter **Machine-Assisted Pre-Assembly / Final assembly of cutting ring tube fittings** in the STAUFF Connect Product Catalogue.
- ✓ The job is set as described in ► Chapter 6.5, Page 30 .

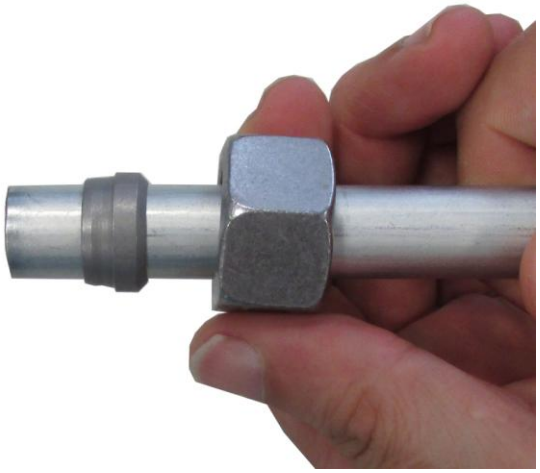
☑ The **Insert and press on tube** touch button is displayed in the **Processing order** menu.



31: Processing order

Fit support sleeves for thin-walled tubes in keeping with the STAUFF Connect Product Catalogue!

1. Slip the union nut and cutting ring one after the other onto the tube end.



32: Cutting ring alignment

2. Note the correct alignment:

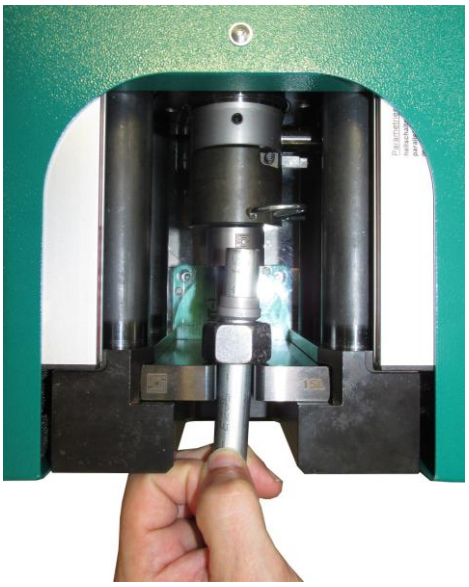
✓ The union nut thread must point towards the tube end and cutting ring.

✓ The cutting edges of the cutting ring must point towards the tube end.



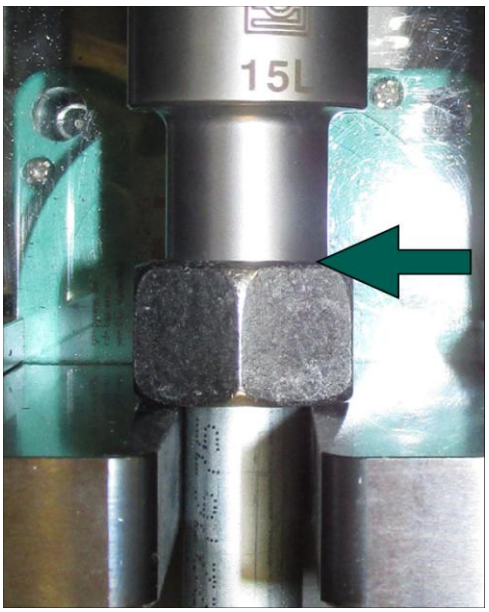
33: Processing order

3. Fit the tube from above into the support plate.
4. Note the correct position of the union nut: Cutting ring and union nut are located between assembly stud and support plate.



34: Fitting the workpiece

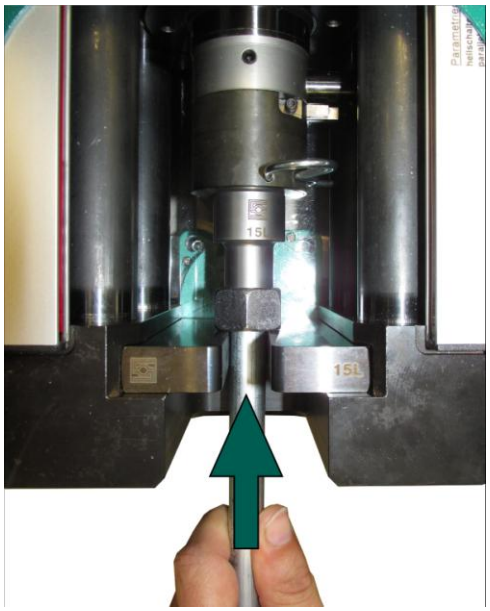
5. Insert the tube end into the assembly stud and ensure that the union nut is slipped onto the assembly stud. This stops any tilting of the union nut at the assembling process.



35: Union nut is slipped onto the assembly stud

6. **WARNING! Risks from fingers shearing off and being crushed: Make sure your fingers are not where mounting is undertaken when operating the machine!**

   Mounting is started by pressing on and holding the tube.



36: Pressing on the workpiece

   ✓ The **Ready/Process** lamp flashes continuously.

   ✓ The machine presses the assembly stud against the support plate and thus the cutting ring is mounted. The cutting ring is assembled in line with the kind of assembling selected.

The machine operative must check that the cutting ring is correctly seated following assembly!

---

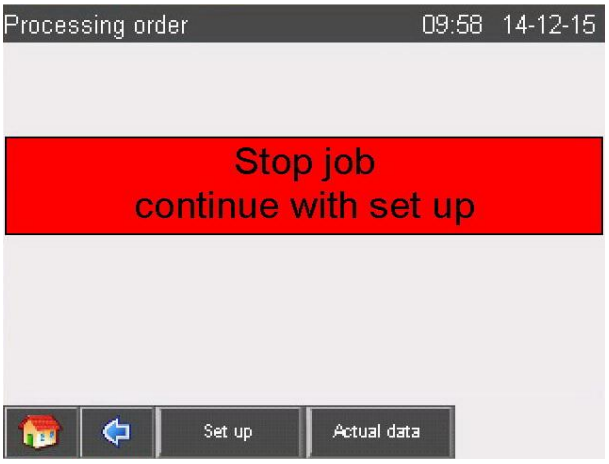
7. Check the cutting ring for correct seating and cutting edge overlap.



37: Overlap when final assembly is selected as assembly type

Use a cone gauge for regular examination of the assembly stud!

8. After every 20 assembling operations clean the assembly stud with a cloth and lightly lubricate it with machine oil.
9. Keep assembling until **Production quantity** is 0.



38: Job stopped

☑ The order is processed.

6.7 Final assembling in fitting body

For final assembly in the fitting body, do follow the detailed instructions - depending on the kind of assembly chosen - in the assembly instructions in the STAUFF Connect Product Catalogue.

6.8 Cleaning the machine

The machine and its components must be cleaned after use each time.

► This is the way to clean the machine:

1. Use a cotton cloth to clean the surfaces.
2. Switch off the control panel before cleaning it ► Chapter 6.4.2, Page 27.
3. Employ water with a grease-dissolving, non-caustic cleaning agent. No wetness is to get into the cylinders.
4. Remove stubborn dirt with a suitable cleaning agent and apply an anti-corrosive coating.

Anti-corrosive coating

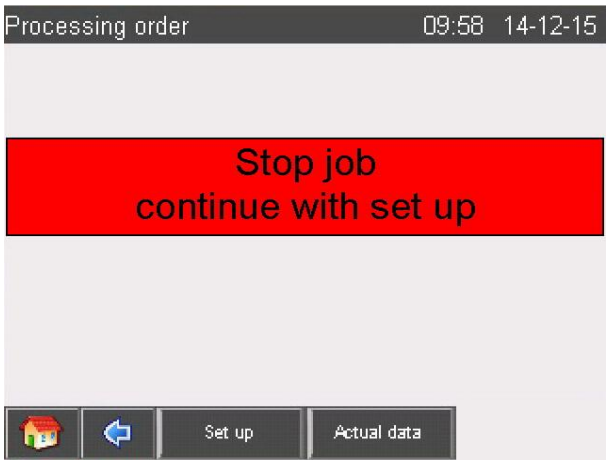
Apply a light oil film as corrosion protection to the moving machine parts after removing any stubborn dirt or after a lengthy stoppage.

6.9 Switching off the machine

► The machine is switched off as follows:

1. Ensure that …

   ✓ The job is stopped.



39: Job stopped

2. Turn the main switch to “0 / OFF”.

☑ The machine is switched off and de-energized

7 Trouble-Shooting

7.1 Safety

⚠ WARNING

Correcting faults

Serious injuries or machine damage

- ► Only Walter Stauffenberg GmbH&Co.KG is to carry out work involving opening up the machine!
- ► Only have the faults described in ► Chapter 7, Page 42 put right by skilled personnel authorized to do just that!
- ► Wear the appropriate personal protective gear for all work undertaken on the machine.

⚠ WARNING

Work on electrical appliances

Serious or lethal injuries from dangerous electrical voltage

- ► Only Walter Stauffenberg GmbH&Co.KG is to carry out work involving opening up the machine!
- ► Only electrical specialists are to carry out work on electrical appliances!
- ► Switch off the machine and secure it from being inadvertently switched back on again!
- ► Only under supervision of a second person is work allowed on energized parts!
- ► Check electrical components for any residual charges!

⚠ CAUTION

Work on the hydraulic system

Eye injuries possible from hydraulic oil being squirted out

- ► Depressurize the machine!
- ► Only Walter Stauffenberg GmbH&Co.KG is to carry out work involving opening up the machine!
- ► Wear your personal protective gear incl. goggles for all work undertaken on the hydraulic system!

► This is the way to proceed given a fault:

1. Find out the reason for the fault.
2. Look for the cause of the fault at the corresponding display element.
3. Eliminate the cause of the fault and replace the defective components, if necessary.
4. If you cannot find out the reason for the fault, then contact the manufacturer.

7.2 Trouble-Shooting

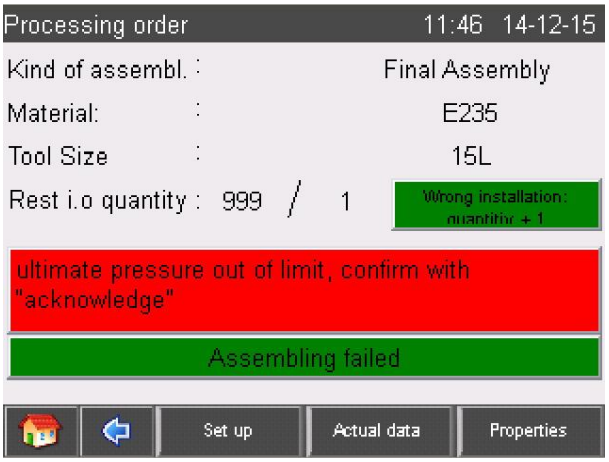
Note when trouble-shooting that …

- Only the set-up and maintenance personnel are allowed to correct the faults ► Chapter 2.4, Page 9.
- The appropriate personnel protective gear is worn for all trouble-shooting work ► Chapter 2.5, Page 9.

Listed below are the faults which can be corrected by the operating personnel.

7.3 Faults / Fault notifications

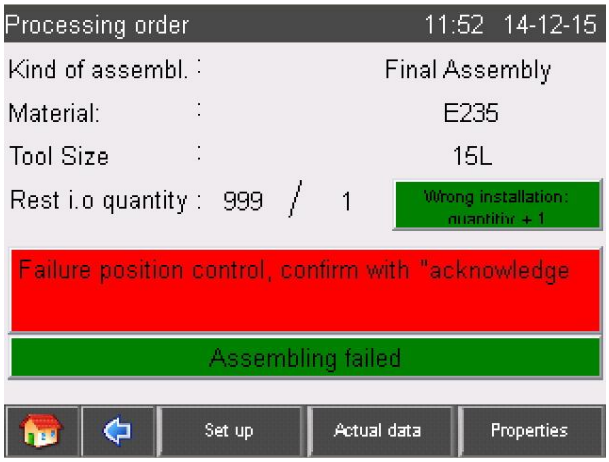
7.3.1 Pressure



40: Ultimate pressure out of limit

Fault notification in the machine display:	Possible cause
Ultimate pressure out of limit Press “Acknowledge” button and remove fault	**Tube end** • Not de-burred • Over much de-burring • Sawn off at a slant **Tube** • Pressed in slanted • Cross-section oval • Diameter not large enough • Diameter too large • Wall not thick enough, use reinforcement sleeve • Contaminated (e.g. chippings) • Wrong diameter • The tube material and the inputted parameters do not tally • Strength too high • Strength not high enough **Cutting ring** • Cross-section oval • Damaged • Strength (over hard/too soft)

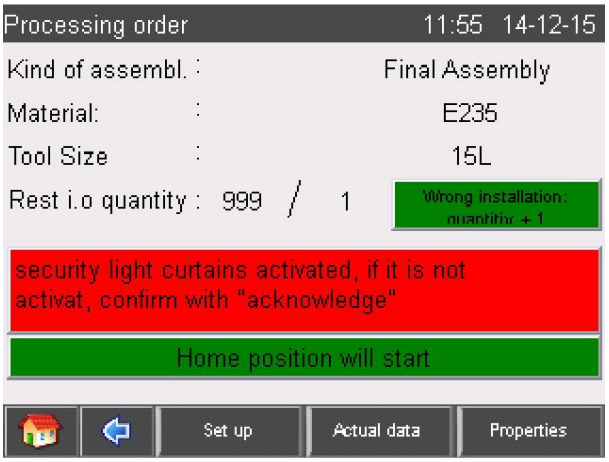
7.3.2 Position



41: Position detection false

Fault notification in the machine display:	Cause
Position detection Press “Acknowledge” button and remove fault	**Cutting ring** • Wrong size • Wrong alignment • Oval • Incorrect geometry **Nut** • Wrong size • Dirt-contaminated surface • Wrong alignment • Tilted

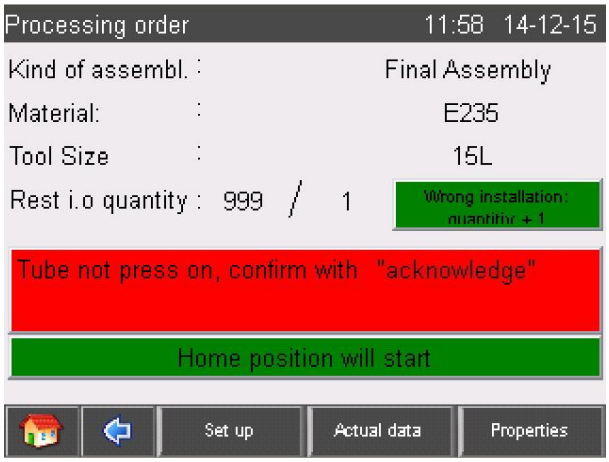
7.3.3 Light curtain



42: Light curtain activated

Fault notification in the machine display:	Cause
Light curtain Press “Acknowledge” button and remove fault	**Light curtain** • Is activated

7.3.4 Tube not pressed on



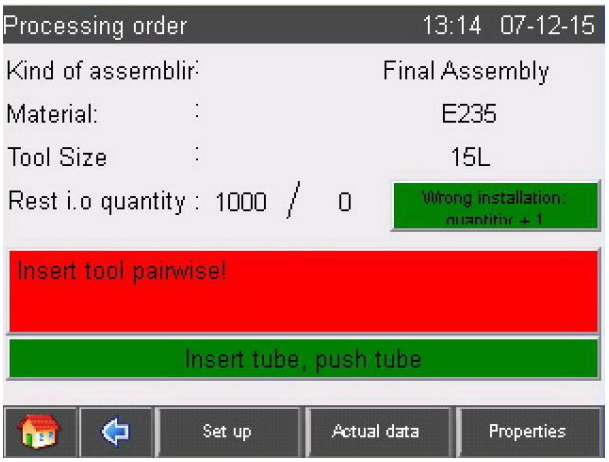
43: Tube not pressed on

Fault notification in the machine display:	Cause
Tube not pressed on Press “Acknowledge” button and remove fault	**Control** • Tube not pressed on to the assembling end after process start. • Control faults probably the reason for this occurring again despite the tube being firmly pressed on. Contact the

7.3.5 Piston not retracting

Fault notification in the machine display:	Cause
Control faults Press “Acknowledge” button and remove fault	**Control** • Control faults. Contact the manufacturer.

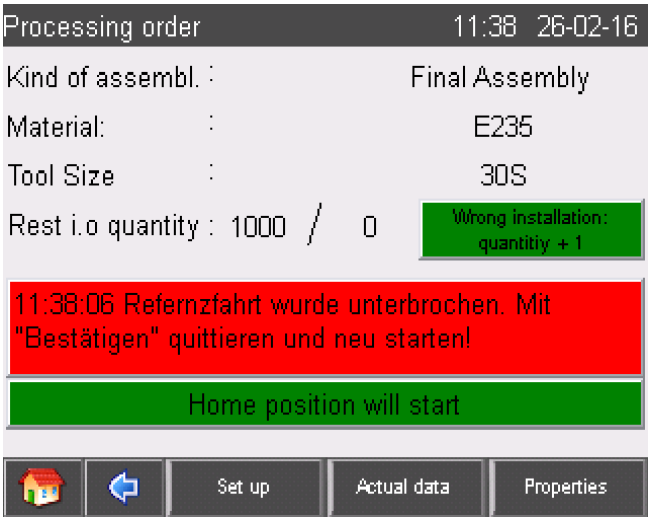
7.3.6 Tool not detected



44: Insert tool pairwise!

Fault notification in the machine display:	Cause
Insert tool pairwise!	**Tool** • Insert tool (no fault)
Insert tool pairwise, although tool has already been inserted	**Tool** • Tool sensor • RFID chip missing at the counter plate • Tool sensor defective • RFID chip not programmed

7.3.7 Reference run interrupted



45: Reference run interrupted!

Fault notification in the machine display:	Cause
Reference run interrupted. Press "Acknowledge" and restart!	**Handling** • Hold Reference run-Button until display changes

7.3.8 Other faults

Other faults (cannot be integrated in machine)	Possible cause
Cutting ring not cutting in Fault: Visual check not indicating enough bulging ahead of cutting ring	**Tool** • Tool wear **Tube** • Tube over resilient due either to material or dimension ratio
Tube is stuck in the socket after assembly Fault: Tube end expands during pressing	**Tube** • Tube over resilient due either to material or dimension ratio
Pressing does not start Fault: No reaction from the machine	**Machine** • Light curtain interrupted (at start) **Control** • Contact sensor defective/out of adjustment **Operating** • Machine not at the right menu item • Production quantity reached
Oil loss Fault: Oil seeping out	**Hydraulic equipment** • Seals defective • Machine tipped too far from horizontal position • Hose/tubing not seal-tight. Contact the manufacturer.
Machine does not start Fault: Machine does not start	**Power supply** • Appliance not attached to the power supply • Power supply not switched on • Cable or plug damage • Screen defective

8 Servicing

8.1 Safety

⚠ WARNING

Carrying out servicing work

Serious or lethal injuries or machine damage

► Only Walter Stauffenberg GmbH&Co.KG is to carry out servicing work► Chapter 8.2, Page 50!

8.2 Inspection and maintenance

Every two years or after 200,000 assembling operations, the machine is to be sent to Walter Stauffenberg GmbH&Co.KG for maintenance and an oil change.

8.3 Checking the emergency stop

All emergency stop buttons must be checked for proper functioning.

► This is the way to check the emergency stop:

1. Switch on and start the machine.
2. Actuate the emergency stop and check whether the machine stops.
3. Pull out the **EMERGENCY STOP** button.
4. Reset the emergency stop circuit with **Release** button.

✓ The machine can be re-started.

8.4 Checking the light curtain

The light curtain must be regularly checked for proper functioning.

► This is the way to check the light curtain:

1. Switch on and start the machine.
2. Actuate the light curtain and check whether the machine stops.
3. Reset the emergency stop circuit with the **Acknowledge** key ► Chapter 6.3, Page 24.

✓ The machine can be re-started.

9 Shut-down

9.1 Safety

⚠ WARNING

Carrying out dismantling

Serious or lethal injuries

- ► Only authorized specialist personnel is to carry out dismantling work!
- ► Only use appropriate tools which are in a good condition!
- ► Wear your personal protective gear for all work!

⚠ WARNING

Lifting loads

Serious or lethal injuries can come from falling/swaying loads

- ► Before raising the load, fix all its moving components!
- ► Only use undamaged lifting equipment as permitted for the weight of the load to be raised!
- ► Only attach lifting tackle at the envisaged attachment points!
- ► Never leave loads hanging in the hoists when no supervision is present!
- ► Never remain under suspended loads!

⚠ CAUTION

Work on the hydraulic system

Eye injuries possible from hydraulic oil being squirted out

- ► Depressurize the machine!
- ► Only Walter Stauffenberg GmbH&Co.KG is to carry out work involving opening up the machine!
- ► Wear your personal protective gear incl. goggles for all work undertaken on the hydraulic system!

9.2 Dismantling

► Dismantle the machine as follows:

1. Place machine out of service and disconnect from the energy supply.
2. Dismantle protective cladding and housing.
3. Remove all operating materials.
4. Dismantle cables and power leads.
5. Remove seals from the bearings.
6. Clean machine parts of the lubricants used.
7. Sort out the plastic, electrical and metal parts.

IMPORTANT

Solvents and lubricants

Environmental damaging contamination of water and ground

► When dismantling collect lubricants and cleaning fluids containing solvents and oils in suitable receptacles!

► When undertaking disposal, note the safety data sheets of the emulsions, cleaning agents and lubricants used.

Collect operating fluids and cleaning fluids containing solvents in appropriate receptacles to stop water-hazardous substances getting into the ground or the sewage system!

9.3 Disposal

Following final machine dismantling, the company operator must dispose of all the used materials and components in keeping with the provisions in force in the country where the company operator resides.

Particular care is needed in disposing of materials placing a burden on the environment such as:

- Plastic parts
- Rubber parts
- Electrical parts
- Metal parts
- Operating fluids and additives

► This is the way to proceed with substances placing a burden on the environment:

1. Use appropriate receptacles to collect, store, transfer and dispose of water-hazardous substances.
2. Dispose of all parts by materials at the places envisaged for this.
3. Ensure when recycling that the materials are sorted.

10 Annex

11 EC Statement of Conformity

EC Statement of Conformity

As envisaged under EC Machinery Directive 2006/42/EC, Annex .II 1.A

Manufacturer	**Those located in the Community with due entitlement to compile the technical documents**
Walter Stauffenberg GmbH & Co.KG Im Ehrenfeld 4 DE-58791 Werdohl	Walter Stauffenberg GmbH & Co.KG Im Ehrenfeld 4 DE-58791 Werdohl

Machine description and identification

Product/Manufactured item	Cutting ring machine SPR-PRC-POC
Type	StauffPress
Serial number	001
Commercial designation	StauffPress
Order	1891239452
Function	Pre- and final assembling of cutting rings

It is expressly stated that the machine complies with all the relevant requirements of the following EC directives

2006/42/EG	Directive 2006/42/EC of the European Parliament and Council of 17 May 2006 on machinery and amending Directive 95/16/EG (recast)

Where the applied harmonised standards are found corresponding to Section 7 Sub-section 2

EN ISO 12100:2010-11	Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)
EN 953:1997 + A1:2009	Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards
EN 60204-1:2006/AC:2010	Safety of machinery – Electrical equipment of machines – Part 1: General requirements
EN ISO 13849-1:2008	Safety of machinery – Safety-related parts of control systems – Part 1 General principles of design (ISO 13849-1:2006)

Werdohl, 23.09.2015

Locality, Date

Signature
Carsten Krenz
General Manager

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Feedback

Let us know about any questions, suggestions or criticism you might have about your machine or this documentation:

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Many thanks for your support:

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