

# Owner's Manual

## Crimping Machine CM 25-3.4



## Table of Contents

1.	Preface	3
2.	Intended Use	3
3.	Technical Data	3
3.1.	General	3
3.2.	Setup / Construction	4
3.2.1.	Front	4
3.2.2.	Back	5
3.2.3.	Crimping Units	6
4.	Transportation of Machine	7
5.	Limitations of Liability	7
6.	Requirements for Site Set-up	7
7.	Set-up of the Crimping Machine	7
8.	Start-up / Provisions	8
8.1.	Operational Safety	8
8.2.	Exchange of Crimping Units	8
8.2.1.	Disassembly and Assembly 4/8 Indent Crimping Units	8
8.2.2.	Disassembly and Assembly Ferrule Crimping Units	9
9.	Set-up of Crimping Parameters / Ferrule Crimping Unit	10
9.1.	General Information	10
9.2.	Functional Operation	10
10.	Set-up of Crimp Parameters / 4/8 Indent Crimping Uni	10
10.1.	General Information	10
10.2.	Functional Operation	11
10.3.	Crimping Process	12
10.4.	Exchange of Locator	12
10.5.	Exchange of Batteries	12
10.6.	Process Safety during Operation	13
10.7.	Testing with Plug Gauge	13
10.8.	Recalibration (REC) of Crimping Unit Wear Monitoring Function	14
10.9.	Calibration (CAL) of Crimping Unit after Battery Replacement	15
10.10.	Request E 1 after Calibration/Recalibration	15
10.11.	Wear Monitoring – General Information	16
11.	Maintenance and Repair	16
11.1.	Maintenance of the Crimping Machine	16
11.2.	Electronic Counter Mechanism	16
11.3.	Maintenance of the 4/8 Indent Crimping Unit	17
11.4.	Maintenance of the Ferrule Crimping Unit	17
12.	Warranty	17
13.	Troubleshooting	18
14.	Technical Documentation	19
15.	EU-Declaration of Conformity	20

### Rennsteig Werkzeuge

An der Koppel 1  
 98587 Steinbach-Hallenberg, Germany  
 Telefon +49 3 68 47 / 4 41-0  
 Fax +49 3 68 47 / 4 41-14  
 E-Mail info@rennsteig.com

www.rennsteig.com

## 1. Preface

This owner's manual is designed to get to know the crimping machine CM 25-3.4 and to properly operate the unit. The owner's manual contains important instructions to operate the crimping machine safely and efficiently. Follow the instructions carefully to avoid risks and injuries, decrease repair costs, downtime and increase the life of the machine. The pneumatic crimping machine CM 25-3.4 is manufactured by using the latest technology and the generally accepted safety regulations. The machine may only be used in proper working condition, as well as with safety and risk awareness. Unauthorized modifications to the machine, including the safety device, will exclude the manufacturer from any liability.

Attention

**Never process any connected electrical connections; they are subject to dangerous voltage!**

## 2. Intended Use

The Crimping Machine CM 25-3.4 is used for crimping turned contacts with the specified cross sections in the designated crimping units and are constructed in such a way. The machine is also used for the crimping of insulated and non-insulated ferrules as well, with the proper crimping insert.

Model	Item No.	Capacity
8.72-3	636 0723 3 01	0,08–2,5 mm <sup>2</sup>
8.72-6 (according to M22520 / 7-01)	636 0726 3 0	0,08–2,5 mm <sup>2</sup>
8.73-3	636 0733 3 01	0,03–0,5 mm <sup>2</sup>
8.73-6 (according to M22520 / 2-01)	636 0736 3 0	0,03–0,5 mm <sup>2</sup>
8.75-3	636 0753 3 01	0,14–6,0 mm <sup>2</sup>
8.75-6 (according to M22520 / 1-01)	636 0756 3 0	0,14–6,0 mm <sup>2</sup>
8.76-3	636 0763 3 01	1,50–10,0 mm <sup>2</sup>

Model	Item No.	Capacity
Ferrules (square)	636 084 3 0	0,08–10,0 mm <sup>2</sup>
Ferrules (hexagon-shaped)	636 086 3 0	0,08–6,0 mm <sup>2</sup>

## 3. Technical Data

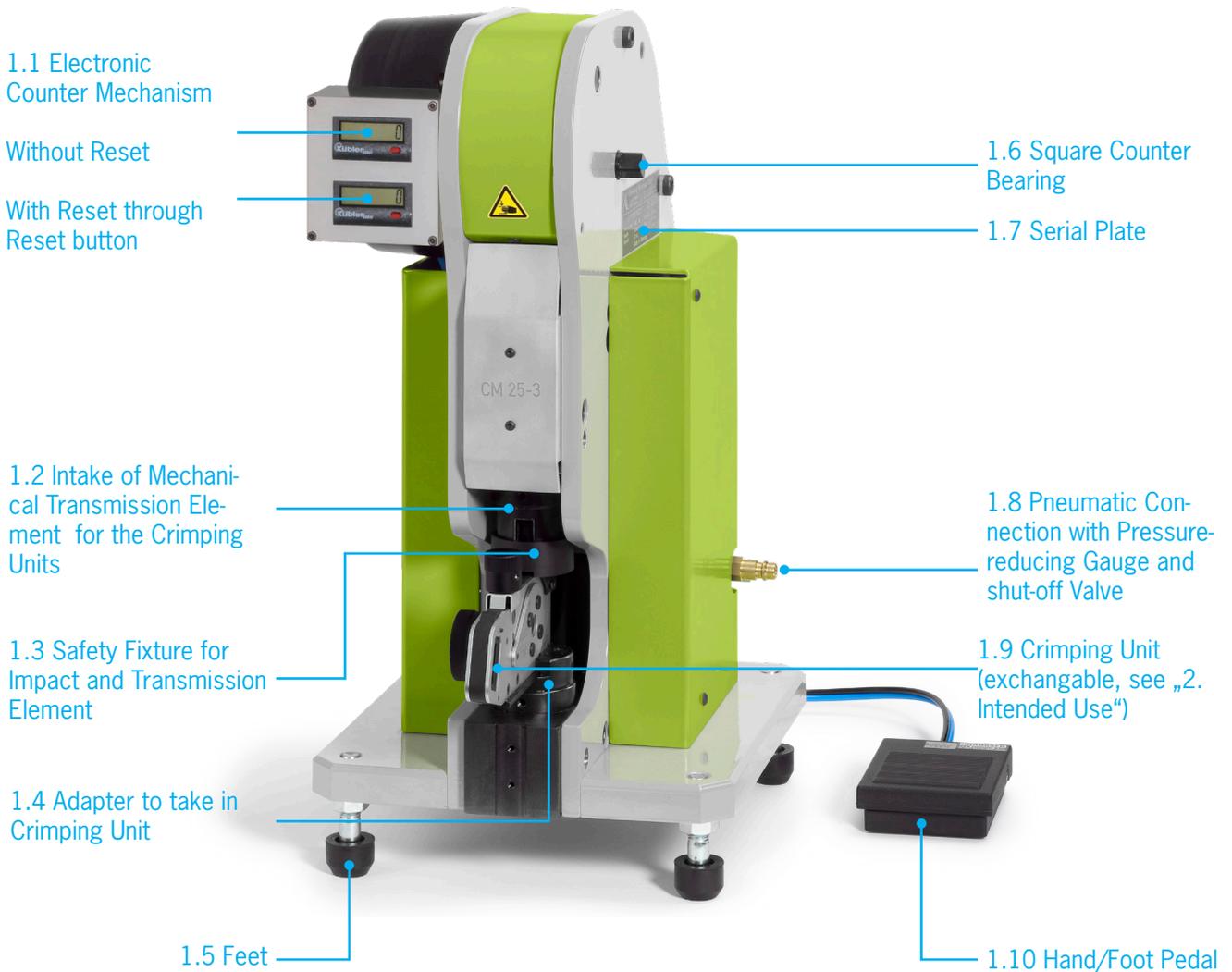
### 3.1. General

Type:	CM 25-3.4
W x H x D:	230 x 480 x 340 mm
Weight:	30 kg
Crimp Force:	25 kN (2,5 t) at 5 - 6 bar
Crimp Time:	< 1 s
Continues Sound Pressure Level:	< 70 dB (A)
Pneumatic Pressure needed:	0,75 l / Work Stroke at 6 bar Operating Pressure
Operating Pressure:	5 - 6 bar (compressed dry air, oiled and filtered)
Working Temperature:	-10 ... +55 °C, rel. humidity < 85 %, not condensed
Operating Temperature:	-10 ... +60 °C
Storage Temperature:	-20 ... +70 °C
Battery (Crimp Unit):	CR 2025

### 3.2. Set-up / Construction

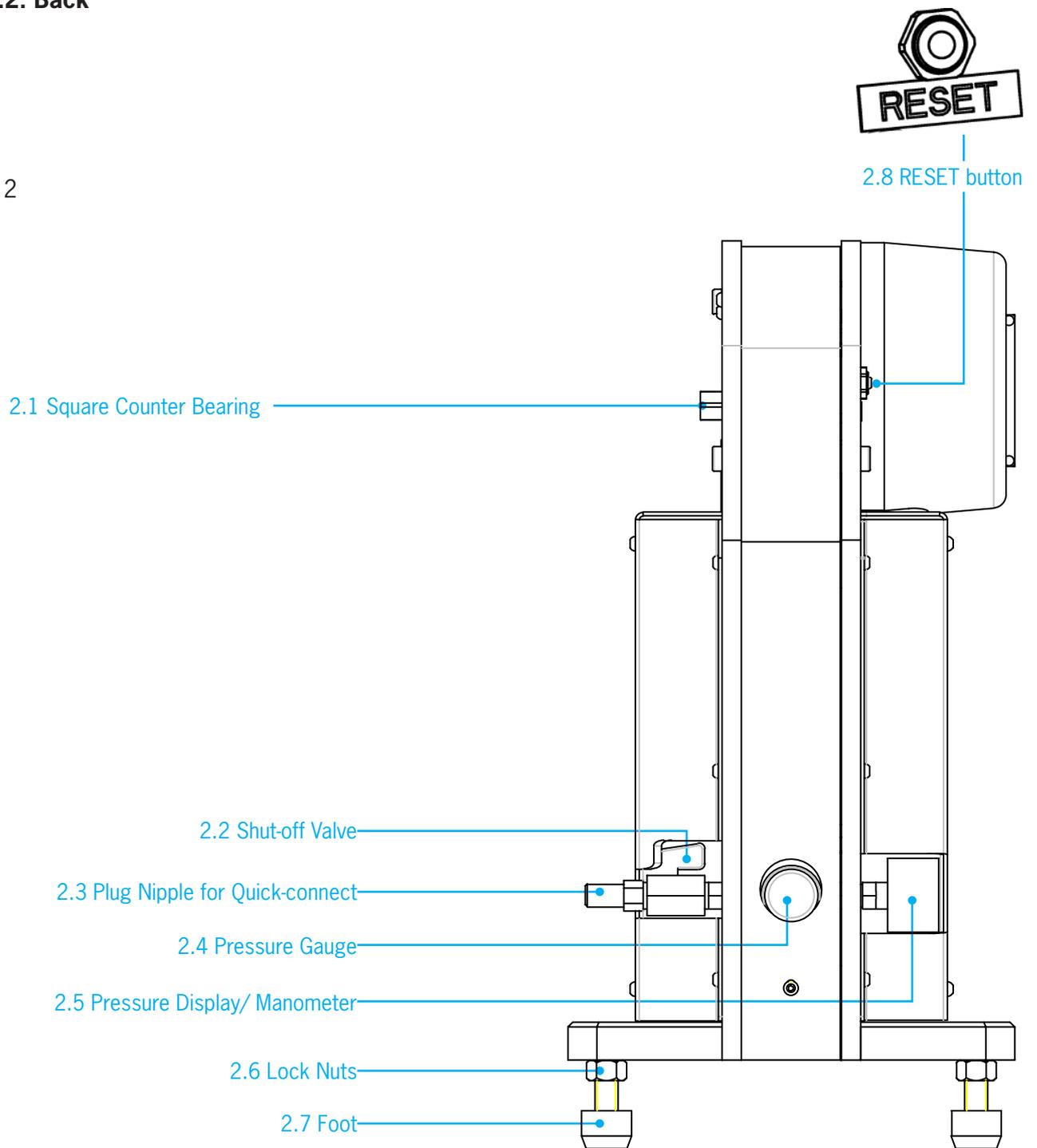
#### 3.2.1. Front

Fig. 1

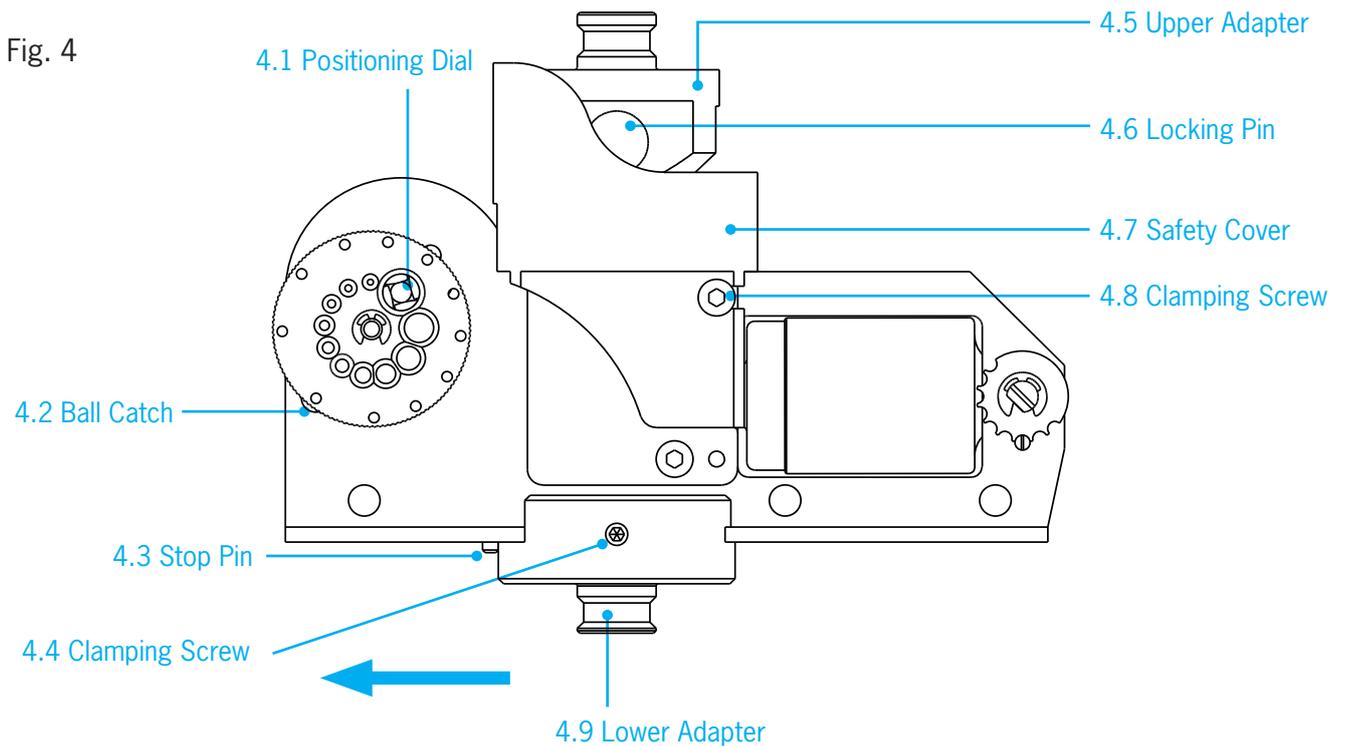
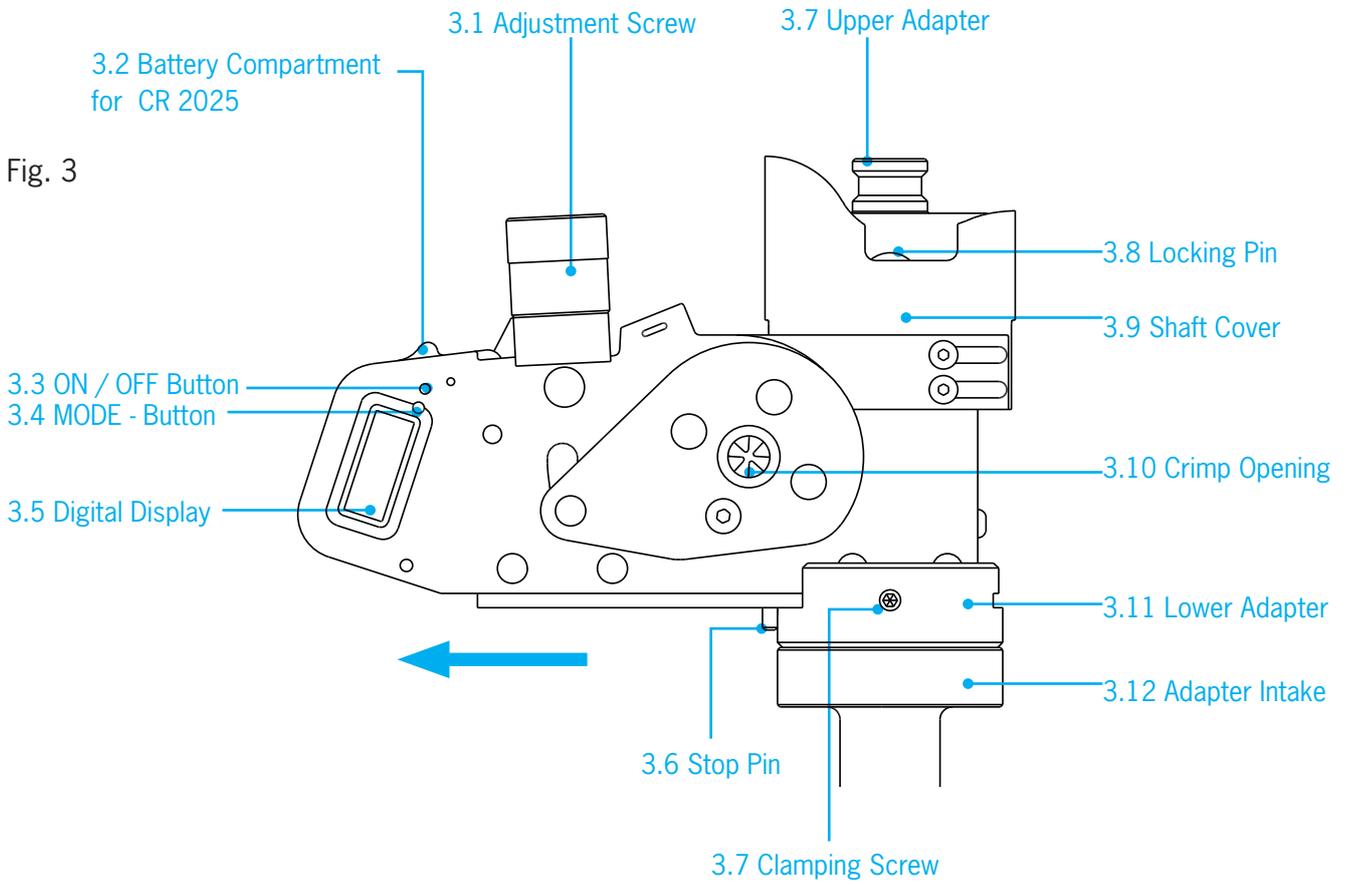


### 3.2.2. Back

Fig. 2



### 3.2.3. Crimping Units



## 4. Transportation of Crimping Machine

Always avoid damages when loading and unloading the machine. All damages, which occur during transport, are the responsibility of the carrier.

### Attention

**After carefully removing the packaging, the machine must be inspected for possible damages. Any discovered damages must be reported to the manufacturer RENNSTEIG WERKZEUGE GmbH. Please note that certain settings will be carried out later at the job site.**

## 5. Limitations of Liability

The manufacturer will not assume any responsibility for the following damages occurring because of:

- Failure to follow the operating instructions
- Improper Use
- Use by non-trained or non-skilled personnel
- Unauthorized modifications of the machine
- Technical modifications
- Usage of spare parts, which are not approved by the manufacturer

## 6. Requirements for Site Set-up

- Minimum load capacity of work bench: 45 kg
- Total space requirement for the machine (H x W x D): 500 x 500 x 400 mm
- Area for optimal operator performance: 1,5 m<sup>2</sup>
- Work bench height should be adjusted to the height of the operator.
- Sufficient lighting needs to be provided.

## 7. Set-up of the Crimping Machine

1. Place the machine at the final work location. The adjustable feet are used to place the machine firmly onto the work surface and is secured in place with the lock nuts. A secure setup of the machine is of utmost importance.
2. Connect the supply hose for the compressed air. The built-in pressure gauge is set at the factory and limits the air pressure to a max. of 6 bar. Please ensure the proper connection of air supply hose. In order to operate the machine safely, the air pressure needs to be between 5-6 bars.
3. After connecting the supply lines, the machine needs to be inspected for leaks and for the correct operating pressure.

## 8. Start-up/ Provisions

### 8.1. Safe Operation

Before starting to use the crimping machine, some important rules need to be followed:

- The machine may only be used by trained personnel to avoid injuries to persons and/or damages to the machine.
- The operator needs to ensure that all safety devices are in proper working condition before starting any job. Furthermore, all the relevant safety and accident prevention regulations must be observed.
- Only after a thorough inspection, the machine may be used.

### 8.2. Exchange of Crimping Units

Attention

All adjustments, like settings, maintenance and exchanging of any units must be conducted in an unpressurized state of the machine. Close the shutoff valve, disconnect the air pressure; afterwards open the valve and release the remaining air by pressing the RESET switch.

#### 8.2.1. Disassembly and Assembly 4/8 Indent Crimping Units

Due to the vast array of turned contacts on the market, a cross section- optimized assortment of crimping units is necessary. The exchange of crimping units is done as follows:

##### Disassembly:

- The machine is in the starting position; the opening of the crimp unit (3.10) faces the operator.
- Close the shut-off valve (2.2), disconnect the air supply, and then open the shut-off valve (2.2) (Note: When the shut-off valve is in the open position, the hand lever is in a horizontal position!).
- Push the RESET button (2.8) to release the remaining air.
- Loosen the shaft cover on both sides with an Allen wrench SW (size of wrench) 2,0 (3.9); the shaft cover must be movable.
- Remove the locking pin (3.8) from the shaft with an appropriate tool, i.e. a pin punch.
- Loosen the lower adapter intake (3.12) with an Allen wrench SW 2,5 and swivel the 4/8-indent crimping unit by 90° to the front (adjustment screw of the crimping unit (3.1) faces the operator).
- Loosen the clamping screws of the lower adapter (3.13) with an Allen wrench SW 2,5 and pull the 4/8-indent crimping unit out of the adapter intake in the direction of the arrow.

##### Assembly:

- Loosen the shaft cover on both sides with an Allen wrench SW (size of wrench) 2,0 (3.9); the shaft cover must be movable.
- Push 4/8-indent crimping unit into the lower adapter up to the stop pin (3.6).

- Place a wrench SW 12 onto the square counter bearing (2.1) to move the shaft of the machine down till the holes of the upper adapter (3.7) line up with the connecting rod of the crimping unit.
- Connect the adapter intake and the connecting rod with the locking pin (3.8).
- Secure crimping unit with the clamping screw 2,5 mm (3.13) in the lower adapter.
- Fasten the shaft cover on both sides with an Allen wrench SW (size of wrench) 2,0 (3.9).
- Connect the air supply and open the shut-off valve (2.2). The machine is now ready to use.

## 8.2.2 Disassembly and Assembly Ferrule Crimping Units

The ferrule crimping unit will adjust automatically to the appropriate ferrule size. For an optimal crimping result the ferrule must be matched with the correct cable cross section. The exchange of ferrule crimping units is done as follows:

### Disassembly:

- The machine is in the base position.
- Close the shut-off valve (2.2), disconnect the air supply, and then open the shut-off valve (2.2) (Note: When the shut-off valve is in the open position, the hand lever is in a horizontal position!).
- Release the remaining air by pressing the RESET button (2.8).
- Loosen the clamping screws (4.8) of the shaft cover with an Allen wrench SW 3,0 and lift the shaft cover (4.7) to the front to remove it.
- Remove the locking pin (4.6) from the shaft with an appropriate tool, i.e. a pin punch.
- Loosen the clamping screw (4.4) with an Allen wrench SW 2,5 and pull the ferrule crimping unit out of the adapter intake in the direction of the arrow.

### Assembly:

- Push the ferrule crimping unit into the lower adapter up to the stop pin (4.3).
- Place a wrench SW 12 onto the square counter bearing (2.1) to move the shaft of the machine down till the holes of the upper adapter (4.5) line up with the connecting rod of the crimping unit.
- Connect the adapter intake and the connecting rod with the locking pin (4.6).
- Secure crimping unit with the clamping screw 2,5 mm (4.4) in the lower adapter
- Place a wrench SW 12 onto the square counter bearing (2.1) and move the wrench all the way up to the stop.
- Place shaft cover (4.7) back onto the machine and fasten the clamping screw 3,0 mm (4.8) lightly.
- Move the wrench on the counter bearing (2.1) all the way down until the crimping dies of the crimp unit are completely closed.
- Fasten the shaft cover (4.7) with clamping screw 3,0 mm (4.8).
- Reconnect the air supply and open the shut-off valve (2.2). The machine is now ready to use.

#### Attention

Before connecting the crimp machine CM 25-3.4 to the air supply line, be sure to remove the wrench from the square counter bearing.

## 9. Set-up of Crimping Parameters / Operation with the Ferrule Crimping Unit

### 9.1. General Information

- Used for crimping ferrules with/ without PVC collar (insulated/uninsulated) according to DIN 46 228 part 1 and part 4
  - Use for applications only as described in the owner's manual
  - The manufacturer will not assume any liability
    - for any damages resulting from any use, which the tool was not intended for
    - for any modifications performed to the crimping units.
- 

### 9.2. Functional Operation

- selection of an appropriate ferrule and the matching cable cross section
  - choose the correct cross section on the positioning disk
  - insert the stripped cable into the ferrule
  - place ferrule with inserted cable in between the crimping jaws of the crimping unit, positioning disk is used as a stop
  - activate the hand or foot switch to trigger the working stroke
  - after the crimping process is completed, release the hand or foot switch in order for the machine to go back to the starting position
  - remove the crimped cable
  - check if the connection of the ferrule has a tight fit
- 

## 10. Set-up of Crimping Parameters/ Operation with the 4/8 Indent Crimping unit

### 10.1. General Information

The 4/8 Indent Crimping Unit may only be used in technically sound condition. The crimping unit is designed to crimp turned male and female contacts in the respective cross section indicated and may only be used for the purpose, which the crimping unit is intended for as described in the owner's manual.

The user is able to check the crimping unit in certain testing intervals himself and to recalibrate the unit if necessary.

In order to increase process liability, the crimping unit has an integrated wear and tear monitoring function. The user is alerted when the tool wear and tear of a defined range is exceeded. In addition to that, the 4/8 indent crimping unit is equipped with a wear and tear forecast function. This function will prompt the user to recalibrate the tool depending on the number of activations and the preset values of the crimping dimensions.

Any unauthorized modifications or a use, which is not specified in the owner's manual, will exclude the manufacturer from any liability claims for damages resulting from the misuse.

## 10.2. Functional Operation

### ON/OFF Switching

Push the “ON/OFF” button to turn the machine on or off.

### Select Display

The crimping unit carries a wide range of display functions, which can be selected by pushing the recessed “MODE” button. This enables the user to adjust the depth of the crimping indenters and to choose the value to be shown in mm or inch, or alternatively the relevant selector positions from 1-8 according to the applicable standard MIL22520 (does not apply to tool 8.76).

In order to change the display mode, take the gauge, which comes with the tool, and insert the gauge into the recessed button „MODE“ and push it quickly until the desired display is shown. The display will show the values in the following order:



### Adjusting to the appropriate Crimp parameter

#### 1. Industrial Turned Contacts

- Select standard or mm on the display
- Obtain the crimp indenter setting for the particular contact from the setting matrix provided with the tool, from the crimp processing guidelines of the contact manufacturer or directly from Rennsteig Werkzeuge
- Change the crimp indenter setting (depth of indenters) by turning the adjustment wheel until the display shows the desired value (in mm or inches)
- Lock in settings by fastening the clamping screw on the back of the unit
- Position the locator by lifting and turning into the correct slot

#### 2. MIL Contacts

- Select MIL Selector position mode on the display
- Obtain the crimp indenter setting for the particular contact from the crimp processing guidelines of the contact manufacturer
- Change the crimp indenter setting (depth of indenters) by turning the adjustment wheel until the display shows the desired selector position (F1 - F8)
- Crimping unit set-up can be locked in by tightening the clamping screw
- Position the MIL- Locator by lifting and turning into the correct slot

#### Attention

Please ensure that the selected value needs to be set by always dialing down from a larger value to the desired value, for example, to set the tool to crimp value 2,0 mm, dial up to 2,05 mm first and then down to 2 mm.

### 10.3. Crimping Process

- Adjust 4/8 indent crimping unit to the work requirements; loosen the adapter with an Allen wrench SW 3, turn the crimping unit to the desired position and then tighten the adapter again.
- Open shut-off valve (2. 2)
- 4/8 indent crimping unit moves to the starting position; the machine is now ready to be used.
- Place stripped cable into the contact
- Place the contact with the inserted cable into the crimp area to the stop (the locator will position the contact perfectly)
- Push the hand/foot pedal (1.10) to activate the working stroke.
- After the crimping process is completed, release the hand/foot pedal in order to have the machine move into the starting position.
- Remove the crimped contact.

Attention

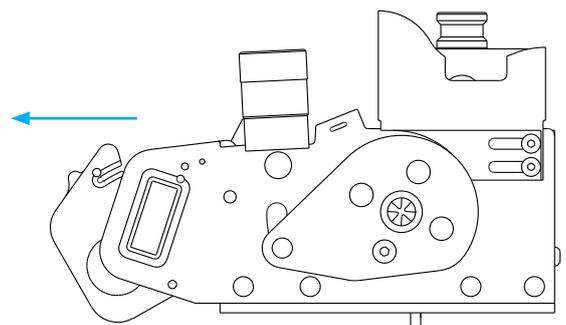
**NEVER crimp onto the gauge or any similar objects to avoid damage to the crimping unit! NEVER crimp onto the gauge or any similar objects to avoid damage to the crimping unit! Avoid crimping solid materials, such as steel with a hardness of more than 35 HRC!**

### 10.4. Exchanging the locator

- Loosen the center screw of the locator with an Allen wrench (SW 2,5), possibly use a second Allen wrench on the opposite side for better stability.
- Remove the locator.
- Place optional locator onto the unit by following the steps in reverse order.

### 10.5. Exchange of Batteries

The life span of the battery (Type CR 2025) for the digital display averages at about one year depending on usage. After such time has passed, the battery must be exchanged. Flip the battery compartment upwards in the direction of the arrow in order to remove the battery with ease.



Information

**Before placing the new battery into the crimping unit turn the adjustment knob to the lowest reference value. A battery exchange will prompt the user to conduct a calibration of the crimping unit (CAL).**

Any further steps are described in chapter 10.9 “Calibration of the Crimping Unit after Battery Exchange”. Used batteries are to be disposed off only at authorized recycling locations.

### 10.6. Process Safety during Operation

All crimping units are subject to mechanical wear and tear, depending upon the load that the crimping unit needs to handle (cable cross sections, material usage, ...), which also effects the life time of the crimping unit. The wear and tear can be compensated for through recalibrating of the unit within certain limits. The wear limit is reached at about 50,000 to 200,000 cycles depending upon the intensity of use.

The prompt to calibrate or recalibrate will be visible on the digital display as follows:

- After the battery exchange (CAL) a calibration is inevitable to restore the original function of the crimping unit.
- Crimping unit will prompt the user after a certain number of crimps indicated by the crimping unit on the display (REC)

If after several recalibrations are conducted according to the steps in the owner’s manual, and a message/ code E1 appears in the display of the crimping unit, the wear and tear maximum is reached and the crimping unit needs to be repaired.

### 10.7. Testing with Plug Gauge

The following plug gauges are to be used:

Model	Item No.	Plug Gauge Size
8.72-3	636 0723 3 01	1 mm
8.72-6 (according to M22520 / 7-01)	636 0726 3 0	1 mm
8.73-3	636 0733 3 01	1 mm
8.73-6 (according to M22520 / 2-01)	636 0736 3 0	1 mm
8.75-3	636 0753 3 01	2 mm
8.75-6 (according to M22520 / 1-01)	636 0756 3 0	2 mm
8.76-3	636 0763 3 01	2 mm

Before starting any job, the base setting of the crimping unit (crimping dimensions) needs to be tested.

- Turn crimping unit on by using the “ON/OFF” switch
- Turn the adjustment wheel to the basic setting of the crimping unit (1 or 2 mm depending on the model). Please ensure that the selected value needs to be set by always dialing down from a larger value to the desired value, for example, to set the tool to crimp value 2,0 mm, dial up to 2,05 mm first and then down to 2 mm.
- Push the hand or foot switch to engage the trigger mechanism for the working stroke, keep foot pedal pushed down (crimping indenters will stop at base setting) now insert the plug gauge between the indenters. Please note the following:
  - The plug gauge is movable in between the indenters without any play – conclusion: There is no measurement deviation; the crimping unit can be used right away.
  - The plug gauge has too much play between the indenters or cannot even be inserted in between the indenters - There is a measurement deviation; the crimping unit needs to be recalibrated.

## 10.8. Recalibration of Crimping Unit / Wear and Tear Forecasting Function

The wear and tear forecast function serves the purpose to have the crimping unit, depending upon the quantity of crimps and the preset crimping measurement, prompting the user to recalibrate the unit (REC in display).

Attention

**The recalibration should only be executed by authorized personnel, because an improper calibration can lead to faulty crimping results.**

- Push the “MODE” button and select mm shown in the display ( see chapter 1. 2 “Operational Functionality”)
- Turn the adjustment wheel until the crimping indenters have a value of 2 mm (or 1 mm depending on crimping unit) and then use the plug gauge to test for the proper fit (plug gauge must fit tight without any play)
- Start the machine by pressing the hand or foot pedal and keep the button or pedal pushed down (Crimping indenters will stay in the base position until the proper fit is determined)
- Repeat procedure until the plug gauge value is reached
- Please note that the selected value needs to be set by always dialing down from a larger value to the desired value, for example, to set the tool to crimp value 2,0 mm, dial up to 2,05 mm first and then down to 2 mm.
- Keep “ON/OFF” button pressed and at the same time use the plug gauge to push the recessed “MODE” button for at least 5 seconds
- After 5 seconds release the “MODE” button and afterwards the “ON/OFF” button
- The digital display will jump automatically to the plug gauge measurement of 2 mm (or 1 mm depending on the crimping unit)
- The crimping unit is now recalibrated and ready for the entering of crimping parameters

## 10.9. Calibration (CAL) of the crimping unit after battery replacement

### Information

The mechanical stop at the lowest point of the adjustment wheel serves as a reference value of the actual wear and tear values. This value is stored permanently in the tools memory and cannot be changed. Every time a battery is replaced, it will be compared to the reference value. The following process must be adhered to.

- Open battery compartment upwards
- Remove used battery
- Turn adjusting wheel all the way down (in the direction of minus) and leave there
- Place in new battery; the display will show "CAL" as a request to calibrate
- Adjust the crimping indenters to the plug gauge value by turning the adjustment wheel until the plug gauge fits tightly, without play, in between the indenters as described in chapter 10.7
- Press the hand or foot pedal and keep the button/pedal pressed down (crimping indenters will stay in this position until the plug gauge value is reached)
- If necessary repeat the procedure until plug gauge value is reached
- Please note that the selected value needs to be set by always dialing down from a larger value to the desired value, for example, to set the tool to crimp value 2,0 mm, dial up to 2,05 mm first and then down to 2 mm; that means when finding the proper value, the plug gauge may have more play in the beginning in order to come down to a lower value
- Keep "ON/OFF" button pressed and use the plug gauge to push the "MODE" button for 5 seconds, after the 5 seconds release the "MODE" button and then the "ON/OFF" button
- The display will jump automatically to the plug gauge value
- The crimping unit is now calibrated and ready for the entering of crimping parameters.

### Attention

If the display shows an error code of E1 instead of the plug gauge value, then the lowest reference value was not correctly adjusted. The process of calibration must be repeated.

## 10.10. Request E 1 after Calibration/Recalibration

If the error message E1 appears after several attempts to calibrate or recalibrate (the error code will appear cyclical first and then switch to permanent), the indenters of the crimping unit are so worn out that a recalibration is not possible anymore. The crimping unit needs to be repaired and send to the manufacturer or an authorized repair center.

### 10.11. Wear monitoring – General information

Every tool, even if used for the purpose intended for, will show signs of wear and tear. When pushing and holding down the “MODE” button for 8-15 seconds, the information about the current state and numeric figures of the tool are displayed.

The information is displayed in the following order:

- Serial number (8 consecutive numbers)
- Remaining life in % (remaining utilization capacity)
- Reference value – lowest adjustment value as defined by the manufacturer
- Quantity of crimps performed

---

## 11. Maintenance and Repair

### 11.1. Maintenance of crimping machine

- The Crimping Machine CM 25-3.4 is maintenance-free.
- Any necessary repairs may only be performed by qualified personnel or certified technicians at the manufacturer; only original equipment parts from the manufacturer may be used.
- The electronic counter mechanism has an estimated life of about 8 years. A replacement of the battery is not possible. After such time has passed, the entire counter mechanism needs to be exchanged (ATTENTION: Loss of data for the permanent counter, number of cycles will not be stored).

---

### 11.2. Electronic Counter Mechanism

The Crimping machine CM 25-3.4 has two electronic counting mechanisms. The upper counter mechanism is a permanent counter, which cannot be set back by the operator. The lower counter can be reset.

Attention

**The counter should not be used in explosion-proof areas and/ or areas, which are excluded in standard EN 61010 part 1.**

### **11.3. Maintenance of the 4/8 Indent Crimping Unit**

The 4/8 indent crimping units are maintenance –free. If necessary (certain environmental conditions) the crimping units can be lubricated with grease. Please use the following grease:

#### **Sumidera 76-3 (Item number: 636 025 0 08)**

The grease can be ordered from the manufacturer of the crimping units.

---

### **11.4. Maintenance of the ferrule crimping unit**

The ferrule crimping unit is maintenance – free. Before starting any job, dirt and debris needs to be cleaned off the crimping unit.

---

## **12. Warranty**

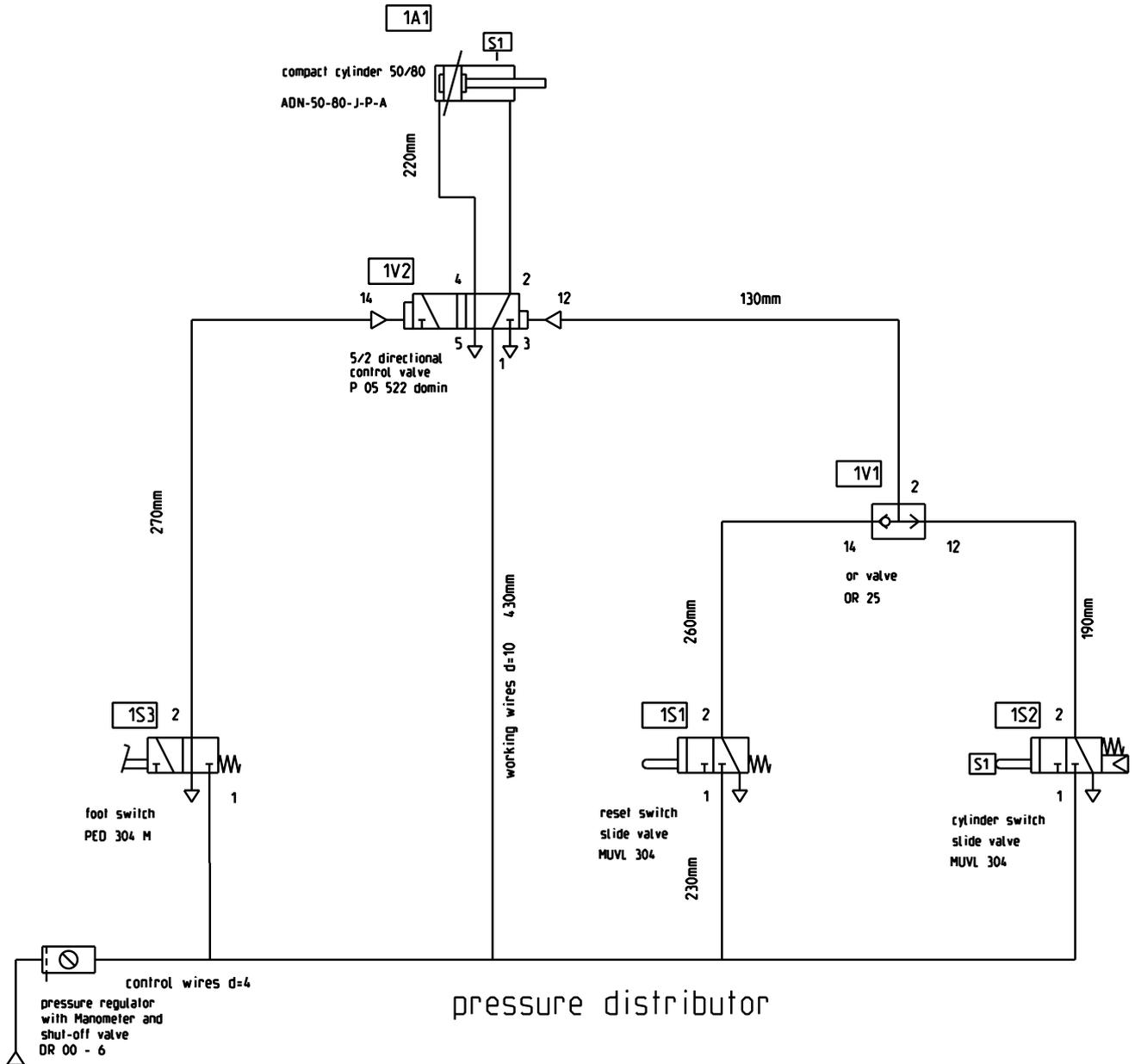
The delivered product is subject to the statutory warranty period. The warranty does not cover any wear or spare parts, especially possible 4/8 indent crimping units and locators (positioners), which may have been ordered. Spare or wear parts are those, which are all movable parts, like bearings, bearing pins/bolts and gasket (seals) kits in all pneumatic components.

---

### 13. Troubleshooting

	Error	Possible Cause	Solution
General Information	Crimp process is not completed	Pressure in the pneumatic system is not functioning	Pull out pressure regulator and adjust by turning. Check pressure in the system (set-up to be 6 bar).
		Foreign object in the 4/8 indent crimping unit	Close shut-off valve, pull off air supply hose. Press RESET; if necessary, remove 4/8 indent crimping unit and clean it and check crimp parameters.
		Use of the wrong contact, which is not approved to be crimped on 4/8 indent crimping unit	Close shut-off valve, pull off air supply hose. Press RESET, remove contact, select approved contact, check crimp parameters.
Ferrules	Pull-out Force values according to DIN are not achieved	Cable cross section and size of ferrule do not match	Check cross section. Find the correct match-up. Proceed to crimp again.
		Ferrule and cable are not conforming to DIN requirements.	Only crimp conform components.
	Crimping profile is dirty or displaced.	A Ferrule was crimped without the cable inserted, pieces of the crimped contact can be found between the crimp indenters.	Remove debris of the contact from the unit with an appropriate tool. Proceed to crimp again.
		The crimp profile of the crimp jaws is damaged. .	Send crimp unit to the manufacturer for repair.
4/8 Indent	Crimp parameter deviates from inspection with gauge	Wear of indenters, for example, wrong 4/8 indent crimping unit was used	Readjustment of the basic setting  Send 4/8 indent crimping unit to the manufacturer for inspection
		Display shows „E1	When the battery was changed, the crimp unit's adjustment wheel was not set back to the lowest reference value.  Wear-and-tear limit of the tool is reached
	Display shows „E2“	Calibration was performed at a higher value, than the base value set at the manufacturer at initial delivery	Repeat calibration with the appropriate gauge.

### 14. Technical Documentation



## 15. EU- Declaration of Conformity according to EU Guidelines for Machines 2006/42/EG, Appendix II

The construction of the Crimping Machine

Type: CM 25-3.4

No.:

Year of Construction:

Was developed, constructed and manufactured in compliance with the EU- Guidelines for Machines 2006/42/EG with sole responsibility:

Company: Rennsteig Werkzeuge GmbH  
An der Koppel 1  
98587 Steinbach-Hallenberg

Responsible person in charge of documentation: Klaus Bamberger

The following EU-Guidelines and harmonized standards were used:

- Machine Guideline 2006/42/EG
- RoHS-Guideline 2011/65/EU
- DIN EN 12100:2010 Safety of Machines – General Principles of Design– Risk Assessment and Risk Reduction
- DIN EN ISO 13857:2008 Safety of Machines – Safety distances to prevent upper and lower extremities from entering hazardous zones
- EN ISO 13849-1:2008/AC: 2009 Safety of Machines – Safety-related Parts of the Control System- Part 1: General Principles of Design
- EN ISO 13849-2:2012 Safety of Machines – Safety-related Parts of the Control System - Part 2: Validation
- DIN EN ISO 4414:2011-04 Fluid Technology - General Rules and Safety-related Regulations concerning Pneumatic Systems and Parts thereof (ISO 4414:2010); German Version EN ISO 4414:2010

Hereby we declare that this delivery includes the entire above described machine.

Steinbach-Hallenberg, the



CEO Mr. Sascha Zmiskol