

# Original operating manual for stationary, compressed air-operated industrial staplers



Telephone: +49(0)6044 / 9601-0 Telefax: +49(0)6044 / 9601-820 Email: info@prebena.de www.prebena.de



## Introduction

This instruction manual will help you to use the pneumatic PREBENA Module 11-Z64 industrial stapler in a

- proper,
- safe and
- economic

manner.

In these operating manual, the PREBENA Module 11-Z64 industrial stapler is simply referred to as the stapler.

We assume that every user of the stapler has knowledge of the handling of compressed air-operated devices and the utilised materials. Persons without this knowledge must be instructed in the operation of the stapler by an experienced user.

This instruction manual is intended for use by the following persons:

- Persons operating this stapler,
- persons who clean or use this stapler, or
- persons disposing of this stapler.

Each of these persons must have read and understood the contents of this instruction manual.

This instruction manual is an integral component of the product. It must always be kept at the stapler. Hand over the instruction manual together with the stapler if you sell it or otherwise pass it on.



## Contents

Design features	6
General design features	6
Characteristics of the hazard warnings	6
Characteristics of the notes on damage to property or the environment.	6
Safety	7
Intended use	7
Improper use	7
Avoiding risk of fatal injuries	7
Avoiding risk of explosion	7
Avoiding damage to the stapler	7
Description	8
Information on the type plate	9
Preparing the stapler	10
Unpacking the stapler	10
Checking the condition	10
Assembly instructions	11
Assembling the stapler	11
Connecting the stapler to the compressed air supply	11
Connecting the stapler to the control line	13
Changing the magazine	14
Removing the magazine	14
Installing the magazine	15
Operating the stapler	16
Regulating the stapler with the operating pressure	16
Servicing the stapler	17
Cleaning the housing and outer surface	17
Oiling the stapler	18
Malfunctions	19
Malfunction overview	19
Other malfunctions	20



Ordering accessories	21
Fasteners	21
Disposing of the stapler	22
Technical details	23
Manufacturer's address	24
Warranty	25
Circuit diagrams	26
Pneumatics diagram	26
Electrical diagram	27
Spare parts list	29
Declaration of Incorporation in accordance with 2006/42/EC	43
Appendix to the Declaration of Incorporation	44



## **Design features**

#### **General design characteristics**

Various elements of the instruction manual are marked with defined design characteristics. These enable you to easily differentiate between normal text,

- lists or
- action steps.

Tips contain additional information such as specific details about using the stapler in an economic manner.

#### Characteristics of the hazard warnings

All the hazard warnings in this instruction manual have the same layout. On the left is a symbol indicating the type of danger. On the right, is another symbol and a signal word describing the source of the danger and notes on how to avoid it.





#### **DANGER**

Notes with the word DANGER warn about hazards that will directly result in serious or fatal injury.





#### WARNING

Notes with the word WARNING warn about hazards that could result in serious or fatal injury.





#### **CAUTION**

Warnings with the word CAUTION warn about hazards that could result in minor to moderate injury.

#### Characteristics of the notes on damage to property or the environment

#### **IMPORTANT**

These notes warn about hazards that could result in damage to property or the environment.



### Safety

When using the stapler, observe and follow all warnings and instructions in this instruction manual and on the stapler itself.

#### Intended use

When using the stapler, observe and follow all warnings and instructions in this instruction manual and on the stapler itself.

The PREBENA Module 11-Z64 stationary stapler is used for driving staples into wooden materials, insulating material and plasterboard. Use with other materials is only permitted after consultation with the manufacturer. Intended use also includes compliance with accident prevention regulations and the statutory regulations and standards applicable at the place of use. Any other use is considered improper use and may result in material damage or even personal injury.

#### Improper use

In particular, improper use is considered to be if the stapler is operated

- by persons who are not familiar with the use of staplers and the utilised materials,
- with a bridged circuit breaker,
- after it has been modified by the operator without authorisation,
- using fasteners that do not originate from PREBENA, see page 24.

PREBENA WILFRIED BORNEMANN GMBH & CO. KG will not accept any liability for damage caused as the result of improper use.

#### Avoiding risk of fatal injuries

- Connecting the stapler to the regulating and compressed air network is prohibited as long as the stapler is not connected to the production system in the intended direction of installation.
- Never point the stapler at people, animals or their body parts.
- Do not allow children to play with packaging film danger of suffocation.

#### Avoiding risk of explosion

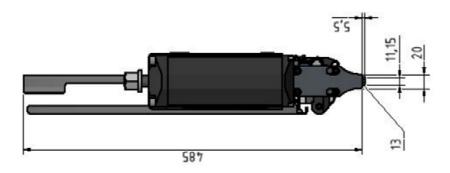
- Do not use the stapler in potentially explosive environments.
- Never operate the stapler with oxygen or with other ignitable gases or gas mixtures.
- Do not expose the compressor to temperatures above 100 °C.

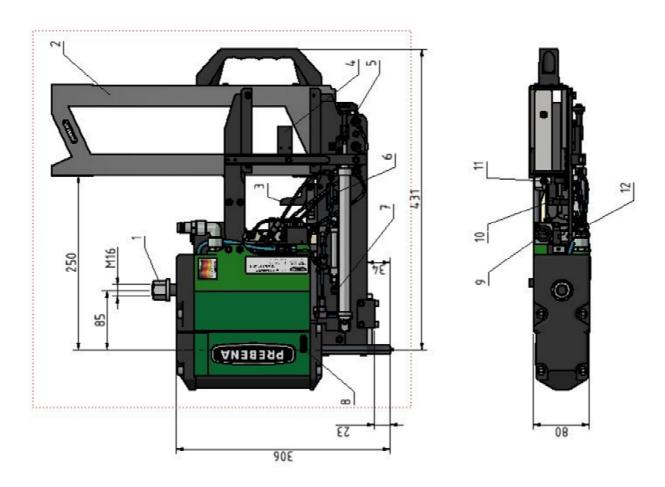
#### Avoiding damage to the stapler

- Never open the stapler housing. Always leave repair work to a qualified technician.
- Do not use the stapler if it has been dropped or damaged. Have the stapler checked by a qualified technician before putting it back into operation.



## Description







No.	Explanation
1	Fastening screw with nut
2	Interchangeable magazine
3	Retaining pawl
4	Sensor; magazine fill level
5	Sensor; feed monitoring
6	Barb; staple reloading channel
7	Barb; staple infeed
8	Venting hole
9	Regulator connection socket
10	Clamping nut
11	Bump stop
12	NW10 compressed air connection
13	Driver

#### Information on the type plate

The type plate is affixed to the left-hand side of the housing. It contains the following information:

- Company name and country of origin,
- type designation of the stapler,
- type designation of the fasteners to be used.



## Preparing the stapler

#### Unpacking the stapler

- Take the stapler out of its packaging.
- Remove all packaging material such as plastic film and padding material.





#### **WARNING**

Risk of suffocation for children when playing with packaging film.

- > Do not allow children to play with packaging film.
- > Keep packaging material out of the reach of children.
- Keep the packaging material for future use.
- Keep the transport case for transporting the stapler.



The stapler may only be transported in the transport case.

#### **Checking the condition**





#### **WARNING**

Risk of injury when operating a damaged stapler or if the accessories are not attached properly.

- > Check the condition of the stapler every time before using it.
- Make sure that the stapler is in a flawless condition.
- In particular, check the following points:
  - The hose line must be undamaged.
  - All parts of the stapler and all accessories must be securely fastened.
  - The safety mechanisms must not be blocked or otherwise impaired in their functionality.
  - No parts of the stapler or its accessories may display external damage such as scratches or dents.



Scratches in the paintwork of the housing or magazine are not considered to be damage.

- Do not connect a damaged stapler to a compressed air supply.
- Have a damaged stapler repaired by a qualified technician before putting it into operation.



## **Assembly Instructions**

#### Assembling the stapler



The assembly procedure can vary on account of the differences in production systems.

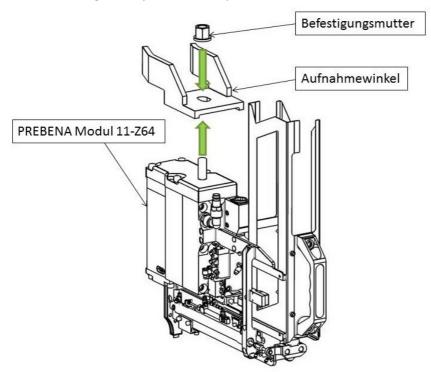




#### **CAUTION**

When assembling the drive stapler, body parts could get clamped and crushed between the stapler and the production plant.

- Have the installation tool ready at hand (ring/open-ended wrench SW24)
- Place the stapler in the designated assembly position and secure it with the fastening nut and tool.
- > Tighten the fastening nut to 210 Nm.
- > The height is adjusted on the plant.



#### Connecting the stapler to the compressed air supply



Only connect the stapler to the compressed air supply after it has been attached to the production system as described in the installation instructions.

The stapler can be connected to a compressor or a compressed air system.



The stapler may only be operated with a compressor or a compressed air system under the following conditions:

- The operating pressure of the compressor or compressed air system must not exceed the maximum operating pressure for the stapler by more than 10%. Information about the operating pressure for the stapler can be found in this chapter.
- In the case of compressed air systems with a higher pressure, a pressure control valve (pressure reducer) with a downstream pressure relief valve must be fitted in the compressed air line.
- The compressed air must be filtered, dry and oiled with PREBENA special nailer oil.
- A compressed air conditioner must be mounted on the coupling side at the outlets for the compressed air line to the stapler. This should comprise
  - a filter,
  - a water separator and
  - an oiler.
- If an oiler is not installed, the length of the air line to the stapler must not exceed 10m. Otherwise, two to five drops of PREBENA special nailer oil need to be poured directly into the air inlet of the stapler every day before putting it into operation.
- The compressed air system must be capable of maintaining the operating pressure even with the desired air extraction.
- The inside diameter of the air line must be at least 13 mm.
- The connection for the stapler must be fitted with a quick coupling with NW 10 and an inside diameter of at least 10 mm.





#### CAUTION

Operating the stapler with compressed air systems that do not meet the above requirements may cause damage to it.

- Only operate the stapler with suitable compressed air systems.
- > Only use the stapler if it is in a flawless condition.
- Check the condition of the stapler.
- > Check the compressed air hose connection for foreign bodies and dirt and clean as necessary.
- > Set the operating pressure at the compressor pressure regulator to 4.5 7.5 bar.





#### **WARNING**

Unintentionally activating the stapler when connecting it to the compressed air supply can result in serious or fatal injury.

- Do not point the stapler at people or animals.
- Empty the magazine before connecting the stapler.





#### CAUTION

Damaged hose lines can burst, and the escaping compressed air could cause material damage.

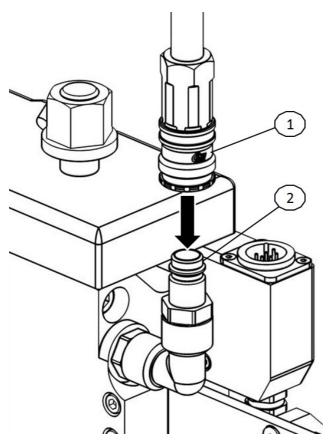
- Check the compressed air system and the stapler for material damage before connecting them.
- Only connect the stapler to a functioning compressed air system.



#### *Important*

Damaged hose lines can burst, and the escaping compressed air could cause material damage.

- ➤ Check the compressed air system and the stapler for damage before connecting them.
- Only connect the stapler to a functioning compressed air system.
- Push the quick-release lock (1) of the compressed air hose onto the connection (2) until it audibly engages.



> Check the operating pressure indicated on the compressor pressure gauge.

#### Connecting the stapler to the control line



Only connect the stapler to the compressed air supply after it has been attached to the production system as described in installation instruction 2.

A 6-pin XLR type connector plug must be used. The pin assignment is described in the chapter "Circuit diagrams".



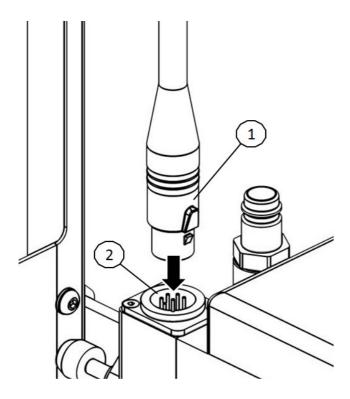


#### WARNING

Defective cable connections and exposed contacts can result in personal injury and material damage.

- Check the cable connection for possible damage.
- > Only attach the stapler to a flawless cable connection.
- > Push the connecting cable (1) onto the connection socket (2) until it audibly engages.





#### Changing the magazine

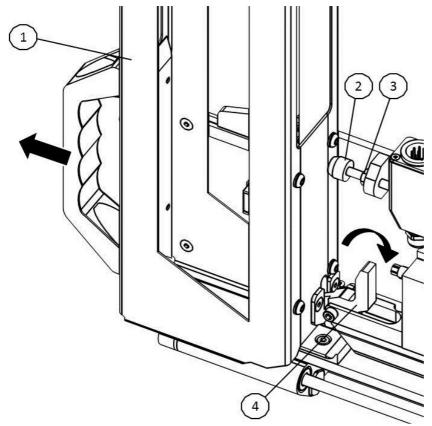
The magazine is designed as an interchangeable magazine and is not loaded when it is installed on the stapler. The magazine is detached from the device for reloading so that it can be conveniently filled with staples at an external station.

The staples are delivered in an industrial packaging for quick and easy charging of the magazines.

#### Removing the magazine

Turn the retaining pawl (4) in the direction of the arrow and pull the magazine (1) backwards off the stapler.





#### Installing the magazine

Attach the magazine in the reverse manner to removing it. Make sure that the guide rails do not twist when inserting the magazine. Also make sure that the retaining pawl (4) is fully engaged by the spring force. Push the magazine up to the stop buffer by exerting slight pressure on it. If this does not work, loosen the lock nut (3) and readjust the position of the stop buffer with the thread. Then tighten the nut again.

The procedure for changing the magazine is the same for all magazine types.

Which magazines can be used are shown in the overview below:

Magazine design	PREBENA staples
Type Z50	Z50
Type Z55	Z55
Type Z64	Z64



## Operating the stapler

#### Regulating the stapler with the operating pressure

You can set the penetration depth of the stapler into the material by regulating the operating pressure. At a higher operating pressure, the fasteners are driven deeper into the material; setting a lower operating pressure reduces the penetration depth.



Set the operating pressure to achieve the required penetration depth. This has the following benefits:

- You save energy (compressed air),
- you reduce the noise level, and
- you reduce the wear of the stapler.

Proceed as follows to set the operating pressure:

- Adjust the pressure at the pressure valve of the compressor or compressed air system.
- Observe the pressure reading.

Checking the penetration depth

- Shoot a staple into a sample workpiece with the same characteristics as the processing material.
- Repeat these steps until you have set the required penetration depth.



## Servicing the stapler

The stapler may only be serviced by persons who have the necessary knowledge, skills and experience. Any work not described here may only be performed by the manufacturer's customer service team or by the manufacturer.



During all servicing work, the compressed air connection and the control line between the stapler and the production system must be disconnected.





#### WARNING

Unintentionally activating the stapler when emptying the magazine can result in serious or fatal injury.

- Disconnect the stapler from the compressed air supply before cleaning it.
- Remove the magazine and all staples from the feed channel and on feed bridge.

#### Cleaning the housing and outer surface

#### *Important*

The stapler or accessories can be damaged by using unsuitable cleaning agents.

Only use a dry, slightly moistened cloth or a cloth moistened with mild soapy water for cleaning the stapler.

#### Light soiling

Wipe the stapler housing clean with a dry cloth.

#### Severe soiling

- Wipe the stapler housing clean with a cloth lightly moistened with mild soapy water.
- Then wipe the housing with a cloth slightly moistened with tap water.
- Rub down with a dry, soft cloth.

Soiling in the discharge channel/feed bridge



The discharge channel and feed bridge should be cleaned at regular intervals depending on the discharge intensity.

Use of the staples can cause adhesive residue to accumulate in the discharge channel and on the feed bridge.

Remove this residue using a compressed air gun and a fine cleaning brush.



#### Oiling the stapler

#### **Important**

Inadequate lubrication or using incorrect lubricants can cause damage to the stapler.

Only use PREBENA special nailer oil.



If an oiler is not fitted and the length of the air line to the stapler exceeds 10 m, adequate lubrication cannot be assured.

In this case, pour two to five drops of PREBENA special nailer oil directly into the connection for the compressed air source every day before putting the stapler into operation.



## **Malfunctions**





#### **WARNING**

Operating a damaged or malfunctioning stapler can result in serious or fatal injury.

- ➤ In the event of a malfunction, immediately disconnect the stapler from the compressed air supply.
- Remove the magazine and all staples from the feed channel and on feed bridge.
- ➤ Do not use the stapler until the malfunction has been remedied.

#### **Important**

The stapler can be damaged by repairs undertaken by unauthorised persons.

Make sure that the stapler is only repaired by the manufacturer.

#### **Malfunction overview**

Possible malfunctions and the necessary measures are listed in the overview below.

Symptom	Possible cause	Remedy	
Stapler is losing air.	Fastening screws have become loose.	Notify customer service.	
	A seal is defective.	Notify customer service.	
Operating pressure too high.	Valve defective.	Immediately disconnect the stapler from the compressed air supply. Notify customer service.	
	Operating pressure set too high or stapler damaged.	Reduce operating pressure.  If the problem persists: Immediately disconnect the stapler from the compressed air hose.  Notify customer service.	
Fasteners are not being fully driven in.	The operating pressure is too low.	Increase operating pressure.	
	The driver tip on the stapler is worn/broken	Notify customer service.	
Staples cannot be discharged.	The operating pressure is too low.	Increase the operating pressure of the compressed air system to the maximum permissible level.	
	The moving parts are stuck together with lubricant after long storage.	Clean stapler. Set maximum operating pressure. Perform test discharges. When staples are discharged, set the required operating pressure. Otherwise notify customer service.	
Discharge is	Feed bridge/channel is soiled.	Clean feed bridge/channel.	
triggered without	Incorrect fasteners have been	Remove fasteners.	
	loaded.	Fill stapler with PREBENA fasteners.	



a fastener being driven in.	The stapler is not adequately lubricated.	Fill PREBENA special nailer oil into the used compressed air connection. Fire a test discharge.		
	The operating pressure is too low.	Increase operating pressure.		
	The piston with the driver does not return to the home position after the driving-in action.	Notify customer service.		
	The triggering action is not completed.	Notify customer service.		
	The driver is bent.	Notify customer service.		
The reloading cycle is	Passage of the throttle valves has changed.	Notify customer service.		
interrupted.	Fastener has become wedged during reloading.	Disconnect stapler from the compressed air supply.  Remove fasteners from reloading opening.  Load new fasteners and fire a test discharge.		

#### Other malfunctions

If other malfunctions of the stapler have occurred which cannot be remedied by oiling and cleaning it, you must notify the PREBENA service team.

- > Do not carry out any repair work on the stapler.
- Make sure that all malfunctions of the stapler are remedied by the PREBENA service team.



## Ordering accessories

Accessories can be ordered from the manufacturer. Only use original PREBENA accessories, or accessories that have been approved by PREBENA, to operate the stapler.

Product no.	Accessories
Z200.10	Special oil for compressed air nailers 1/2 litre
Z200.00	Small mist oiler
62151102.Z50	Interchangeable magazine for HK type Z50
62151202.Z55	Interchangeable magazine for HK type Z55
62151402.Z64	Interchangeable magazine for HK type Z64

#### **Ordering additional fasteners**

The stapler may only be used with the respective PREBENA staples shown on the type plate.

Туре			Length	Wire size	Spine width
Z50 CNKHA	CSVHA-ETA	CRFHA-ETA	50 mm	1.4 x 1.65 mm	11.2 mm
Z55 CNKHA	CSVHA-ETA	CRFHA-ETA	55 mm	1.4 x 1.65 mm	11.2 mm
Z64 CNKHA	CSVHA-ETA	CRFHA-ETA	64 mm	1.4 x 1.65 mm	11.2 mm



## Disposing of the stapler

#### **Important**

Damaging to the environment if not disposed of in an eco-friendly manner.

- Clean the stapler before disposing of it.
- Observe the applicable regulations governing the disposal of oil.





Do not throw the stapler or any part of it into the regular household waste. If you want to dispose of the stapler, send it to PREBENA, who will disposed of it in a proper manner. See page 23 for contact details.



## Technical Details

Dimensions L x W x H	482(564) x 102 x 485 mm
Weight	9.75 kg
Working pressure	4.5 – 7.5 bar
Max. working pressure	8.3 bar
Fastener type	PREBENA staple type Z50-Z64
Air consumption	1.8 l/stapling at 6 bar
Triggering system	External triggering by PLC program
Magazine system	Top loader with interchangeable cassette
Control connection	XLR 6-pin connection (see electrical diagram)
Operating temperature	-5 °C to +45 °C



## Manufacturer's address

#### **PREBENA**

#### Wilfried Bornemann GmbH & Co. KG

Befestigungstechnik

Seestraße 20-26 D-63679 Schotten

Telephone: 0 60 44 / 96 01 - 100 Telefax: 0 60 44 / 96 01 - 820 Email: info@prebena.de

Website: www.prebena.de



## Warranty

PREBENA gives a 1-year warranty on the designated device from the date of purchase pursuant to the following warranty conditions. PREBENA guarantees the free repair of defects caused by material or manufacturing flaws. Malfunctions or damage caused by improper handling are not covered by the free warranty.

In addition, only original PREBENA fasteners may be used. Failure to observe this provision will void the product liability and consequently all warranty claims. The warranty does not cover wearing parts such as O-rings, etc. PREBENA may fulfil the warranty at its own discretion by either replacing the defective part or delivering a replacement device. Further claims shall not exist.

In order to claim on the warranty, the fully completed warranty certificate with the dealer's stamp and date of sale must be enclosed with the returned device, or a receipt must be enclosed from which the data and information to be given in accordance with the warranty certificate can be derived.

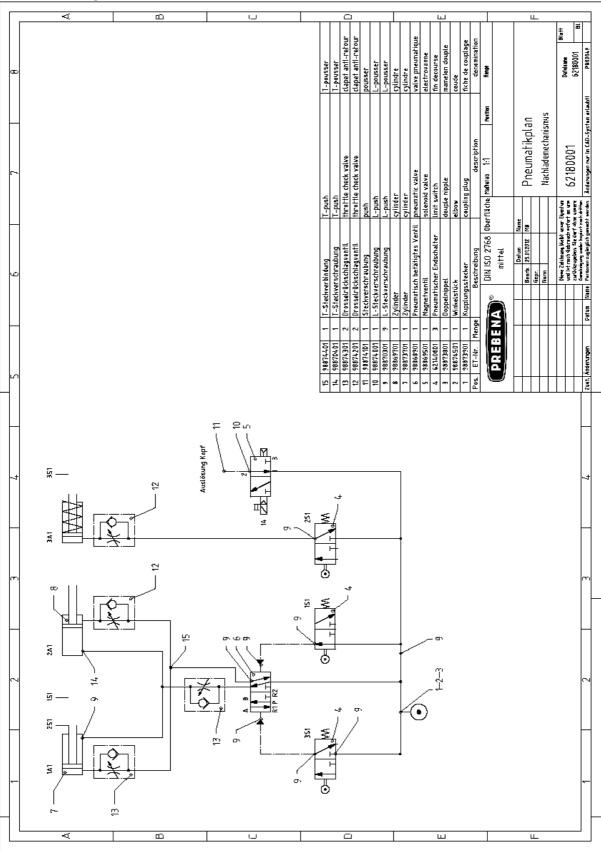
Shipping: The faulty device must be sent to PREBENA in a carefully packed, breakage-proof post-paid package.

han		
9/		
8		
Warranty card		
Model designation:	Date of purchase:	
Dealer:	(stamp)	



## **Circuit diagrams**

#### **Pneumatics diagram**





































## Declaration of Incorporation in accordance with 2006/42/EC

Declaration of Incorporation in accordance with Machinery Directive 2006/42/EC Annex II 1B Original Declaration of Incorporation

Manufacturer: PREBENA GmbH & Co. KG

Seestraße 20 – 26 63679 – Schotten, Germany

The manufacturer hereby declares that the following product is an incomplete machine in accordance with the Machinery Directive. The product is intended solely for installation in a machine or incomplete machine, and does not therefore fulfil all the requirements of the Machinery Directive.

A list of the essential requirements of the Machinery Directive applied and adhered to for this product can be found in the Annex to this Declaration.

The specific technical documentation as stated in Annex VII, Part B, has been drafted. The authorised person responsible for compiling the technical documentation is obliged to pass on the documentation upon reasonable request to the national bodies. The documentation shall be forwarded by post in paper form or on an electronic data carrier.

Commissioning of the product is prohibited until it has been established that the machine into which the product named below is installed complies with all the essential requirements of the Machinery Directive.

The product named below fulfils the requirements (or parts thereof) of the following relevant Directives, harmonised standards and other relevant technical standards:

Applied directives: 2006/42/EC, 2004/108/EC

Applied harmonised standards: EN ISO 12100 :2011-03, EN ISO 12100-2+A1:2009, EN 792-13+A1:2008, EN

12549+A1:2008,

EN ISO 8662-11+A1:2001, EN ISO 14121-1:2007

Designation of the machine: Stationary pneumatic stapler

Machine type: MODULE 11-Z64

Machine no.:

**Authorised person for compiling the technical documentation:**Authorised person for compiling the technical documentation:
Mandataire pour la composition de la documentation technique:

Mr. Garwe Seestraße 20 – 26 63679 – Schotten, Germany

Schotten, Germany

Place / Lieu Datum / Date / Date

Unterschrift / Signature / Signature PRODUCT MANAGER



## Appendix to the Declaration of Incorporation

List of the essential health and safety requirements for the design and construction of machines that have been applied and complied with for the product named above.

Number Appendix I	Designation	applicable	compliance	Comment
1.	Essential health and safety requirements			
1.1.2.	Principles of safety integration	$\boxtimes$	$\boxtimes$	
1.1.3.	Materials and products	$\boxtimes$	$\boxtimes$	
1.1.4.	Lighting	$\boxtimes$	$\boxtimes$	
1.1.5.	Design of machinery to facilitate its handling	$\boxtimes$	$\boxtimes$	
1.2.	Control systems and control devices	$\boxtimes$	$\boxtimes$	
1.2.1.	Safety and reliability of control systems	$\boxtimes$	$\boxtimes$	
1.2.2.	Actuators	$\boxtimes$	$\boxtimes$	
1.2.3.	Starting	$\boxtimes$	$\boxtimes$	
1.2.4.4.	Assembly of machinery	$\boxtimes$	$\boxtimes$	
1.2.6.	Failure of the power supply	$\boxtimes$	$\boxtimes$	
1.3.	Protection against mechanical hazards	$\boxtimes$	$\boxtimes$	
1.3.1.	Risk of loss of stability	$\boxtimes$	$\boxtimes$	
1.3.2.	Risk of break-up during operation	$\boxtimes$	$\boxtimes$	
1.3.3.	Risks due to falling or ejected objects	$\boxtimes$	$\boxtimes$	
1.3.4.	Risks due to surfaces, edges or corners	$\boxtimes$	$\boxtimes$	
1.3.9.	Risk of uncontrolled movements			
1.5.	Risks due to other hazards			
1.5.1.	Electricity supply			
1.5.2.	Static electricity			
1.5.3.	Energy supply other than electricity	$\overline{\boxtimes}$	$\overline{\boxtimes}$	
1.5.4.	Errors of fitting	$\overline{\boxtimes}$	$\overline{\boxtimes}$	
1.5.5.	Extreme temperatures		$\overline{\boxtimes}$	
1.5.6.	Fire	$\boxtimes$	$\overline{\boxtimes}$	
1.5.7.	Explosion	$\boxtimes$	$\boxtimes$	
1.5.8.	Noise			
1.5.9.	Vibrations	$\boxtimes$	$\overline{\boxtimes}$	
1.5.13.	Emissions of hazardous materials and substances			
1.5.14.	Risk of being trapped in a machine			
1.5.15.	Risk of slipping, tripping or falling			
1.6.	Maintenance			
1.6.1.	Servicing the machinery			
1.6.2.	Access to the operating positions and maintenance intervention points			
1.6.3.	Isolation of energy sources	$\boxtimes$	$\boxtimes$	
1.6.4.	Operator intervention			
1.6.5.	Cleaning of internal parts			
1.7.	Information			
1.7.1.	Information and warnings on the machinery	$\boxtimes$	$\boxtimes$	



Number Appendix I	Designation	applicable	compliance	Comment
1.7.1.1.	Information and information devices	$\boxtimes$	$\boxtimes$	
1.7.1.2.	Warning devices	$\boxtimes$	$\boxtimes$	
1.7.2.	Warning about residual risks	$\boxtimes$	$\boxtimes$	
1.7.3.	Marking of the machinery	$\boxtimes$	$\boxtimes$	
1.7.4.	Operating manual	$\boxtimes$	$\boxtimes$	
1.7.4.1.	General principles for the drafting of the operating manual	$\boxtimes$	$\boxtimes$	
1.7.4.2.	Contents of the operating manual	$\boxtimes$	$\boxtimes$	
1.7.4.3.	Sales literature	$\boxtimes$	$\boxtimes$	