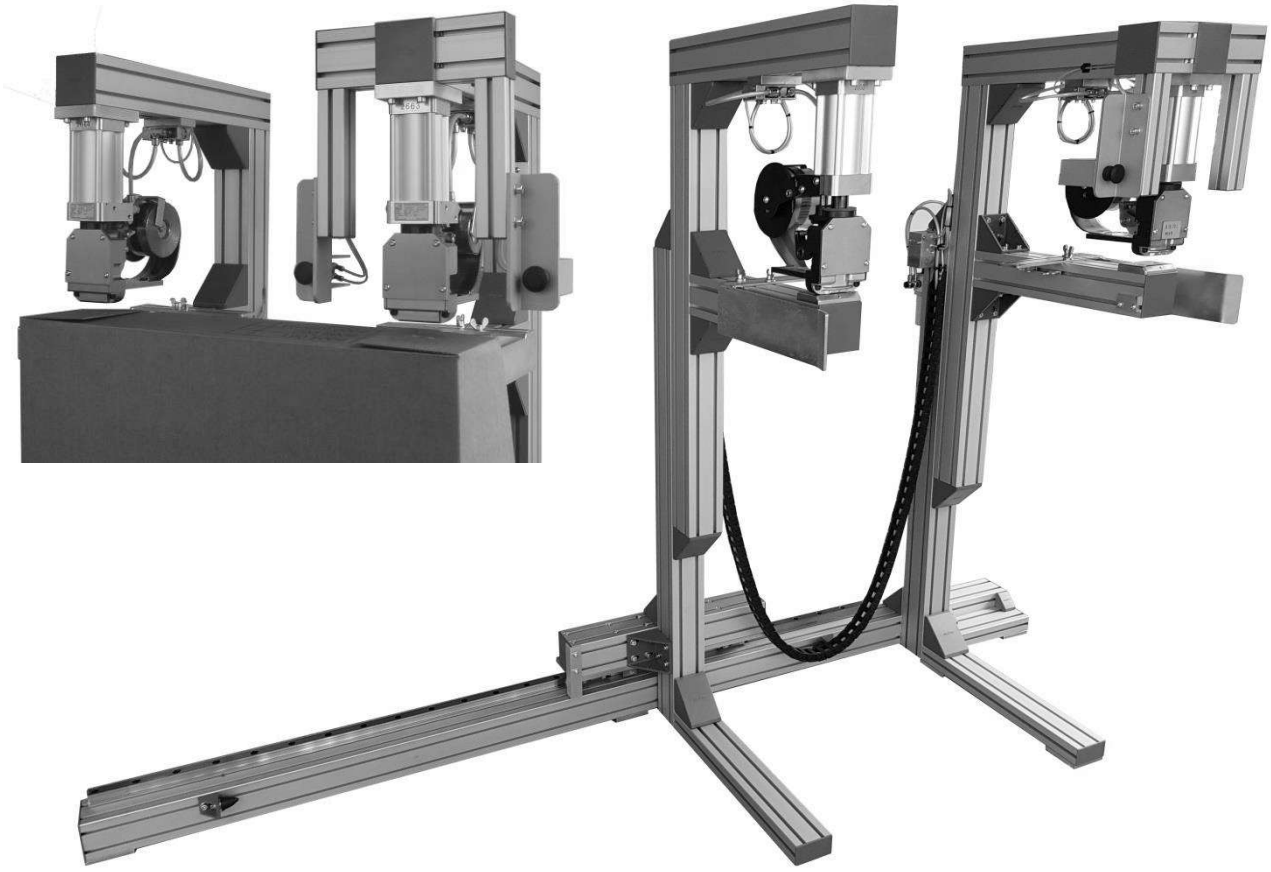
Operating instructions



Stapling device

SGR 2 /QE SGR 2 /LE
with two roller staple stapling heads, pneumatic

IMPORTANT

Before using the device for the first time, please read these instructions thoroughly and completely and keep them in a safe place.
Observe and follow the safety instructions and only use the device after you are sure you have understood all instructions.
Failure to follow these instructions may result in injury!

If you have any questions, please contact the manufacturer,

MEZGER Heftsysteme.
Saganer Straße 24
90475 Nuremberg
Germany

SGR model

Type/Designation/ Serial number:/Type of stapling head/Matching coil staple/Year of manufacture:

See machine number plate

Foreword

Safe operation of the stapling device requires the knowledge provided in this **ORIGINAL OPERATING INSTRUCTIONS .** The information is presented in a concise, clear format**.** The chapters are arranged numerically**.**

copyright

The copyright to this operating manual remains with **MEZGER Heftsysteme**

Table of Contents

Table of Contents 2
1 Safety instructions 3
2 Warranty and Liability 4
3 Intended use 4
3.1 Scope of application/purpose 5
3.2 Environmental conditions/Emissions 5
3.3 Operating personnel 5
4 Transport and assembly 5
5 stitching heads 6
6 Technical data/ variants 6
6.1 Compressed air connection 7
7 Basics of working technique and handling 7
7.1 Setting 8
7.1.1 Distance between staples (cardboard/center of staple) 8
7.1.2 Distance between clamp and outer edge of carton 8
7.1.3 Kratontray height/insertion depth 9
7.1.4 Anvil/working height 10
7.2 Handling 11
7.3 Maintenance plan 12
8 Decommissioning 13
9 Reference to residual risks 13
10 Maintenance and Care 14
11 Error detection 15
12 Reference to residual risks 15
13 Technical documents 17
13.1 Pneumatic circuit diagram 18
13.2 Spare parts list SGR2 19
14 Appendix 19

1 Safety instructions

Safety instructions and important explanations are marked with the following pictograms. The symbols used in this manual and on the stapling device have the following meaning:

symbol	Signal word	Meaning
	Warning	Warning of possible injury to persons or possible property damage Warning of possible defects or destruction of the device
	ban	Knows on general prohibitions there !
	Warning	Danger of crushing fingers!
	ban	Protect from moisture!

Read all these instructions before using the stapler and keep the safety instructions in a safe place.
The operating personnel must be adequately trained in the handling of the stapling device and must have read and understood the operating instructions in full.
To avoid injuries or damage, the operator must also observe the company's internal safety regulations!
In addition, we would like to refer to the further national regulations and accident prevention regulations, which are not affected by these operating instructions.

	Keep untrained persons, especially children, away from the system and your work area!

If the operator discovers damage to the stapling device during production, the device must no longer be used and must be repaired by a specialist!

The necessary personal protective equipment must be provided by the operator.

Only original parts may be used as spare parts!

2 Warranty and liability

General Terms and Conditions of Sale and Delivery

In principle, our "General Terms and Conditions of Sale and Delivery" apply. These are available to the operator at the latest upon conclusion of the contract.

Reasons for exclusion of warranty and liability

Warranty and liability claims for personal injury and property damage are excluded if they are due to one or more of the following causes:

- Improper use of the machine.
- Failure to observe the instructions in the operating manual regarding transport, storage, assembly, commissioning , operation, maintenance and setup of the system.
- Operating the machine with defective safety devices or with improperly installed or non-functional safety and protective devices.
- Inadequate monitoring of machine parts subject to wear and improperly performed repairs.
- Manipulation of the machine in any way.

3 Intended use

The *stapling device* is intended for its intended use **only** . It must be used, operated, and maintained in accordance with the information in this manual.

The stapling device is a pneumatic precision stapling machine. U-shaped staples are formed from wire coils in the stapling heads, which are then used to staple primarily cardboard, but also other materials, or to nail these materials to wood.

Any other use is improper and may result in personal injury or property damage. The operator alone is liable for any resulting damage.

The operator must ensure that the machine is operated only as intended and that all types of danger to the life and health of the user or third parties are avoided. Furthermore, compliance with accident prevention regulations and other safety rules and laws must be ensured.

If the stapling device is misused for a purpose other than the specified application, this can lead to accidents

3.1 Area of application/purpose

The roller staple heads may only be used for stapling or nailing solid, single, double corrugated cardboard, thin sheet metal and other thin, soft materials.

The stapling machine is especially designed for cardboard cuts.

Do not nail onto hard (e.g. metal plates, nails, etc.) or brittle materials.
This can damage the stapling head.

3.2 Environmental conditions / emissions

The device should be operated at room temperature, protected from environmental influences.
Use in potentially explosive atmospheres is only permitted with the prior consent and written approval of the manufacturer.
The noise emission is less than 70 dB(A).
Atmosphere foreign gases are not released during stapling

3.3 Operating personnel

Only trained, qualified personnel are permitted to operate the device.

Note : A person is considered to be competent if, due to their training and experience, they have sufficient knowledge in the field of staplers and are familiar with the relevant state occupational health and safety regulations, accident prevention regulations, guidelines and generally accepted rules of technology (e.g. DIN standards, VDE regulations) to such an extent that they can assess the safe condition of machines, in particular staplers.

4 transport and assembly

The stapling device is delivered fully assembled and can be transported as a whole.

Transport equipment can also be used for transport.

During transport, the staple roll, including any staples in the device, must be completely removed .
The machine is delivered ready for installation.

To make the stapling device ready for operation after delivery, the following activities must be carried out:

- Check equipment for completeness
- Check the installation location for suitability
- Load stapling head with staples
- Connect compressed air

Before operating the stapler, please read all instructions in this manual. This stapler may only be operated by **trained personnel.**

	When the stapling device is in operation, do not reach into the stapling area, the staple exit opening, or the moving stapling head! Risk OF INJURY !
	Oxygen or flammable gases must not be used as an energy source for compressed air-operated devices.

The machine must be secured in such a way that it stands securely. This may require anchoring the machine to the floor, as otherwise there is a risk of injury from falling parts.

The roll staples must be used in accordance with the operating instructions for roll staple heads.

The device should be operated at room temperature, protected from environmental influences.
Use in potentially explosive atmospheres is only permitted with the prior consent and written approval of the manufacturer.

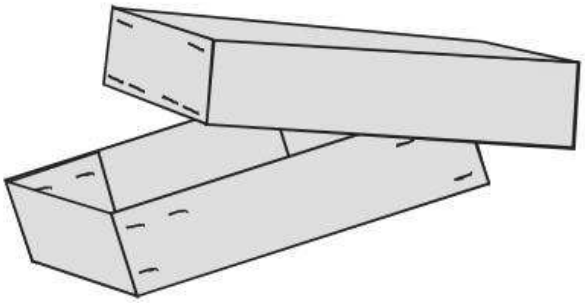
5 Stitching heads

See stapling head operating instructions.

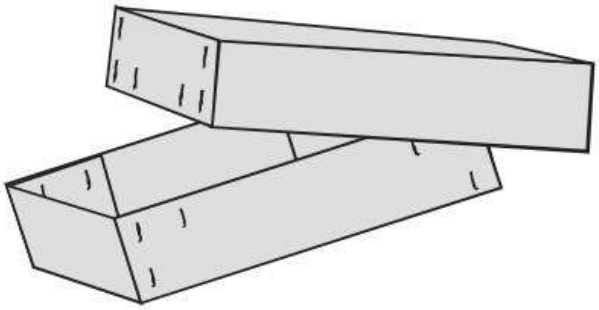
6 Technical data/ variants

Layout drawing see appendix

SGR/QE/ for **cross stitching**



SGR/LE/ for **longitudinal stitching –**
Stitching head mounted rotated 90°



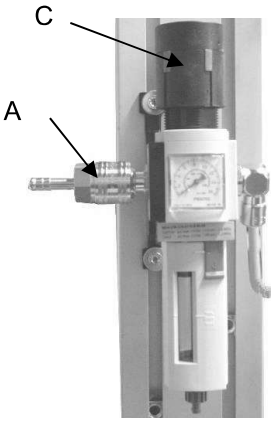
Technical data:	**SGR2/QE and SGR2/LE**
Air consumption:	1.7 NL / stapling/stapling head/Per stapling per head
Air pressure:	4 - 6 bar overpressure
Stapling speed:	max.: 40 stitches/minute/staples per minute
On -floor space: W x D	2600 x 1000 mm
Total amount height:	approx. 1750 mm
Weight:	approx. 140 kilos
Anvil / working height	approx. 1000 - 1700 mm
Insertion depth/stapling arm length Slide-in unit depth	approx. 400 mm
Adjustment range/stapling width: Adjustment range width:	approx. 400 - 1750 mm
Adjustment range/stapling height: Adjustment range height:	approx. 1000 - 1700 mm
Staple distance from the edge: Stapling distance from the edge:	Min. 45 mm
Staple distance from the edge: Stapling distance from the edge:	Approx. 45 – 160 mm

6.1 Compressed air connection

A filter regulator (already included in delivery) must be installed, which consists of a filter and a pressure regulator (see filter regulator operating instructions).

A hose with a clear diameter of 6 mm is required for the connection. A self-closing hose coupling is included as standard on the filter regulator. For long hose lines, we recommend using a hose with a clear diameter of 9 mm. The hose nozzle will, of course, need to be replaced in this case.

	ATTENTION! When the compressed air is switched on, the stapling head moves to the home position



The filter regulator is factory-set to an air pressure of approximately 5 bar overpressure.

The stapler should be operated with an air pressure between 4 – 6 bar overpressure.

Threaded connection ***A*** = supply line (inlet pressure)

To adjust, turn control knob ***C*** clockwise until the desired pressure is displayed on the pressure gauge at the inlet pressure and the outlet pressure at zero flow. Pressing the control knob locks the setting, preventing accidental adjustment.

7 Basics of working technique and handling

Before using the stapling device, the operator must familiarize themselves with the specific application and check that the machine and tools are correctly positioned. Strictly follow all safety instructions!

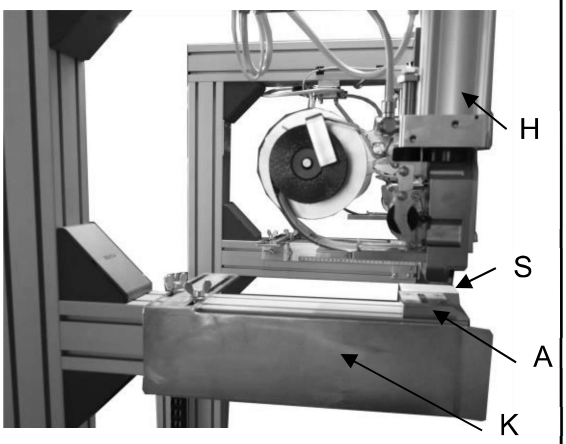
	Make sure that the stapler is not damaged and can be operated safely.

The safe operational condition of the stapling device must be checked before starting work!

Safety devices must not be bypassed or rendered ineffective!

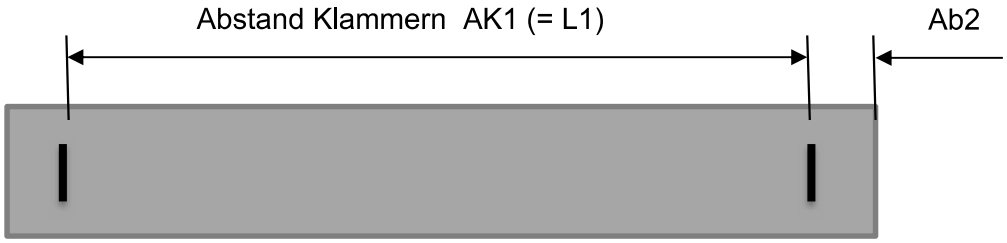
Keep your work area tidy.
Clutter in the work area can lead to accidents.

The opening (S) between the stapling head (H) and the stapling anvil (A) is optimally adjusted at the factory.



7.1 Attitude

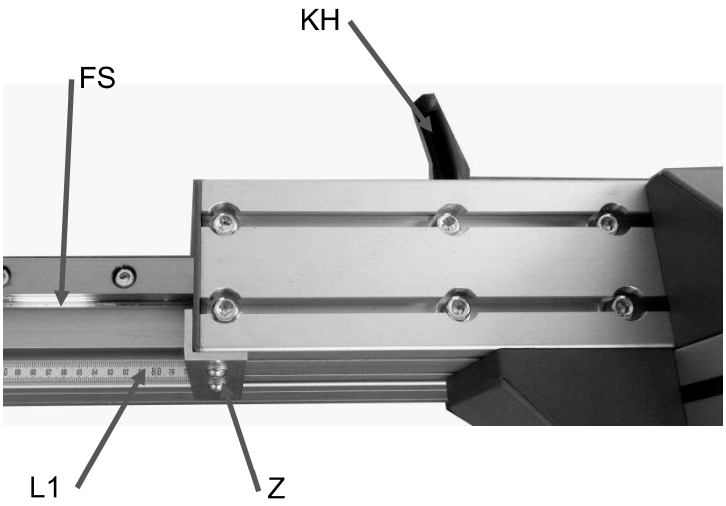
Mass

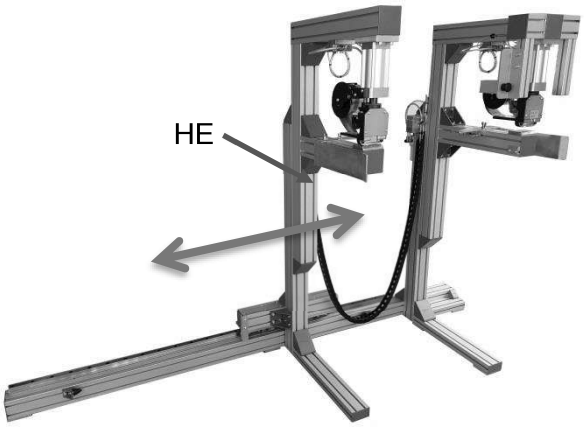


7.1.1 Distance between staples (cardboard/center of staple)

To adjust the stapler to a different size, open the lever (KH), move the stapling unit (HE) over the guide rail (FS) to the desired width (Ak1) (see ruler (L1) and pointer (Z)) and fix the lever (KH) again.

Display/Measured distance from bracket center to bracket center.

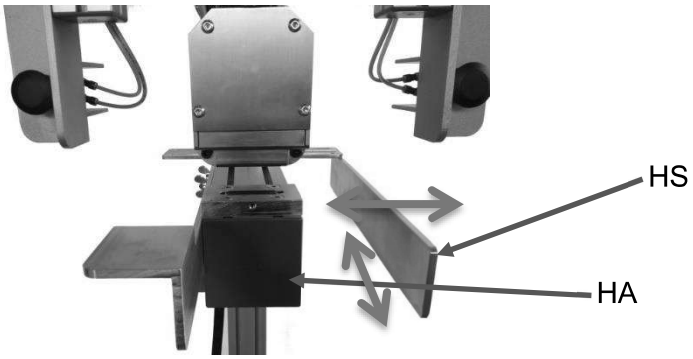




7.1.2 Distance between staple and outer edge of carton

The holder side (HS) can be adjusted separately on the left and right to the desired distance of the clamps to the outer edge of the box.

To aid insertion, let the holder side (HS) protrude slightly beyond the stapling arm (HA).

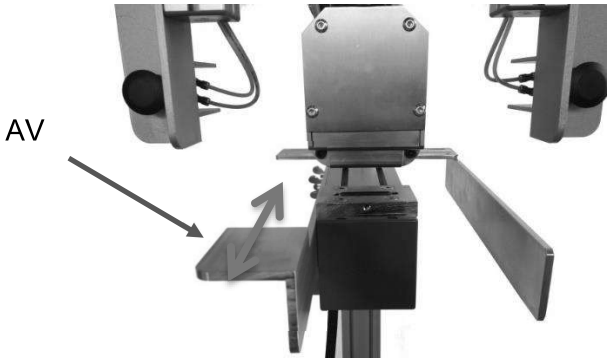


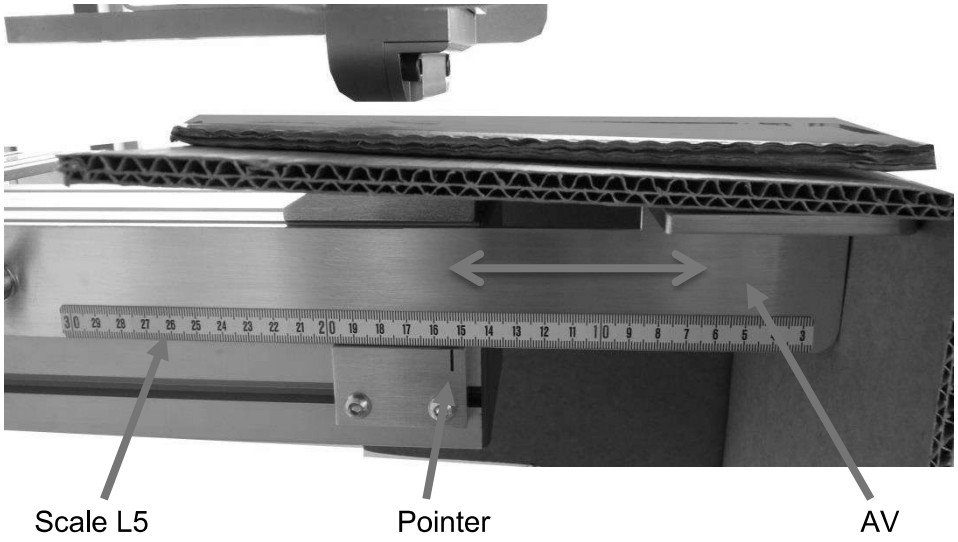
7.1.3 Kratontray height/insertion depth

The insertion depth/clamp position can be adjusted using the front stop (AV).

To do this, slide the front stop (AV) to the desired position using the ruler L5 (=stapling distance from the cardboard base).

Push the box all the way to the stop at the front (AV) and fix the stop.



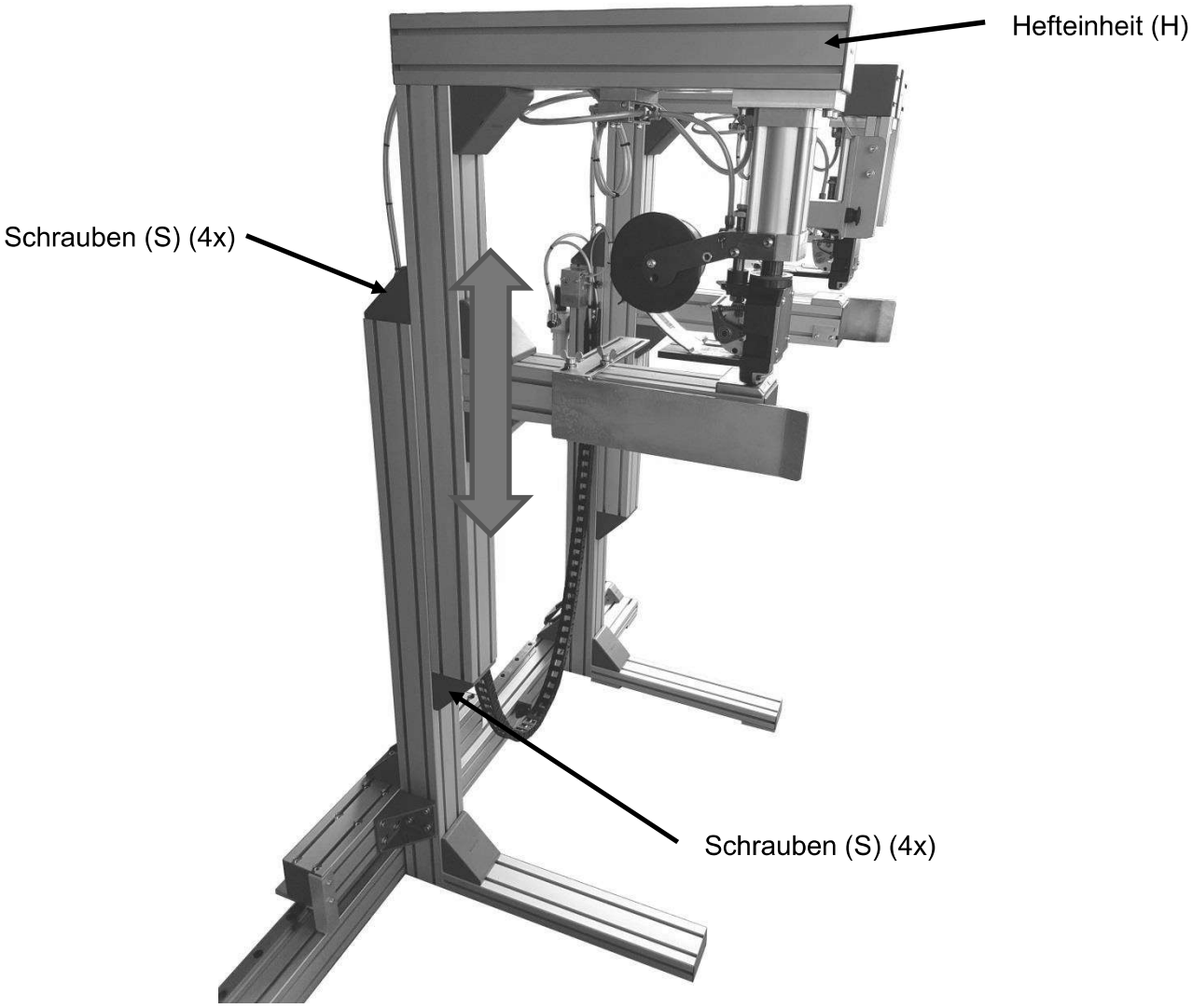


7.1.4 Anvil/working height

CAUTION! Disconnect the compressed air supply.
Before removing the screws, secure the stapler unit against falling.
Place the stapler horizontally.

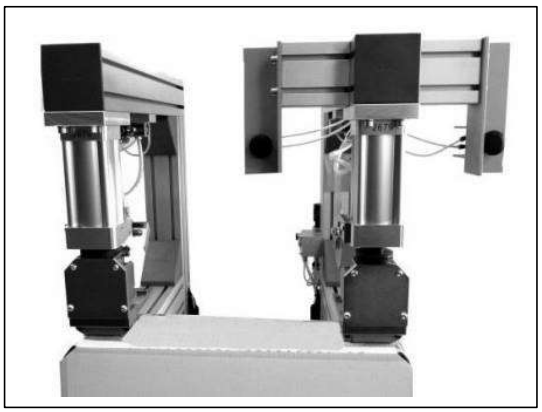
RISK OF INJURY!

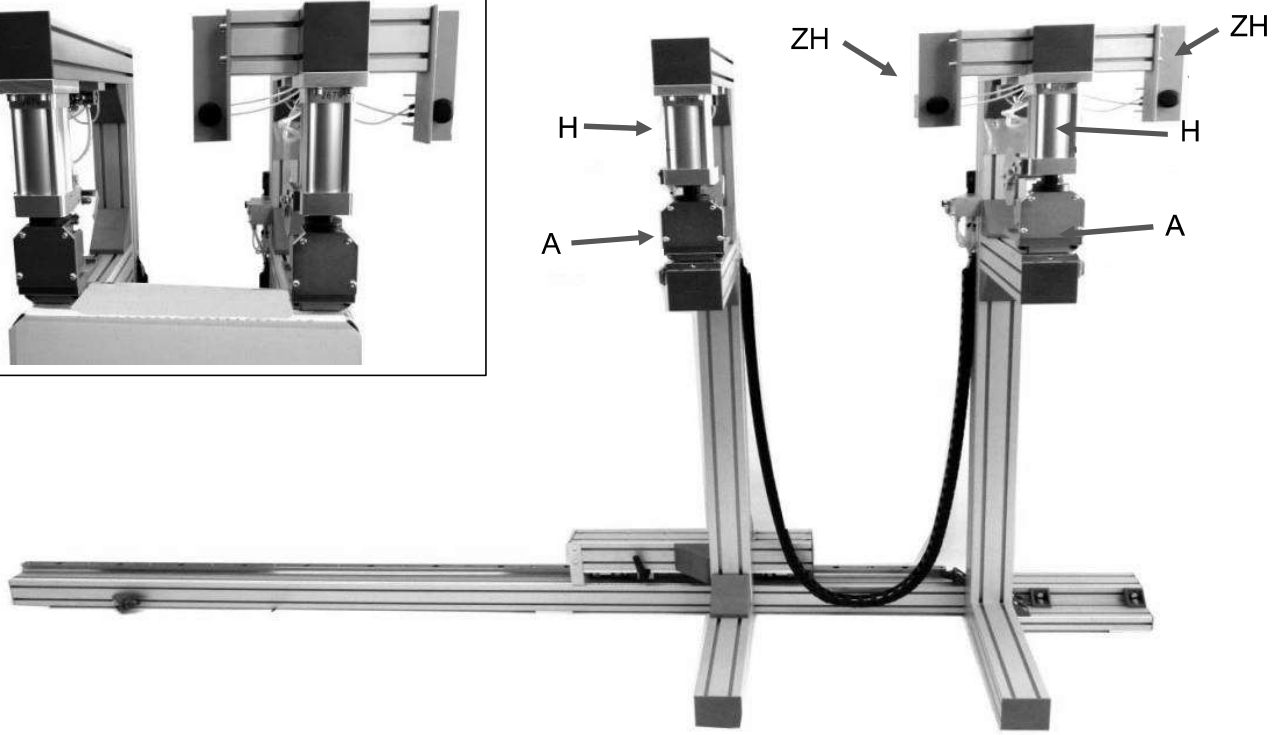
Loosen the screws (S) (4x each), move the stapling unit (H) to the desired working height, and retighten the screws (S).



7.2 handling

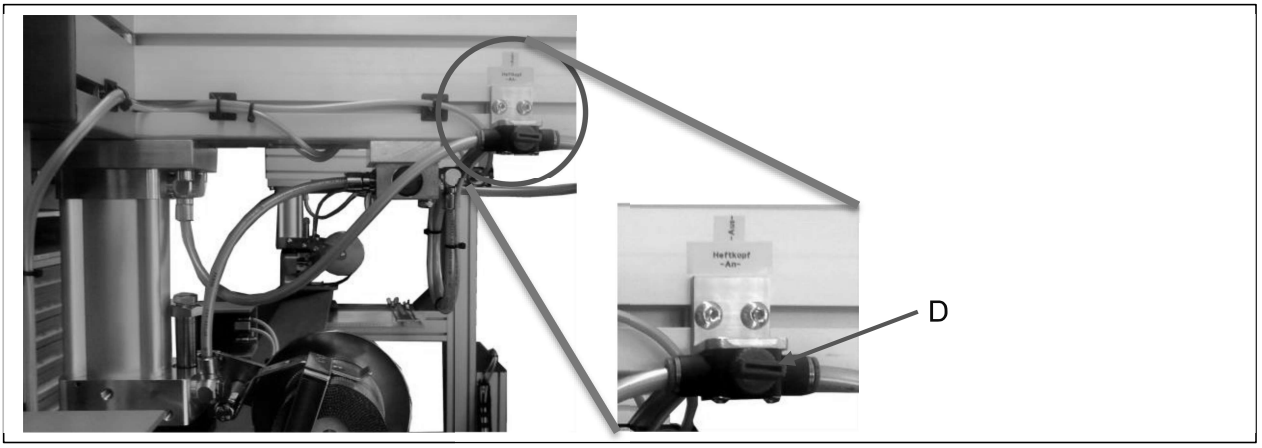
The stapled material is pre-assembled and pushed over the stapling anvil (A), where it is secured in the clamping plate (K). When the two-hand control (ZH) is activated (press both push buttons simultaneously), the two stapling heads (H) are triggered and apply both staples simultaneously. After the trigger is released, the two stapling heads return to their original position. The stapled material can be removed.





	For protection, a pneumatic two-hand switch is integrated, which prevents unintentional intervention in the stapling area . **This two-hand control must not be tampered with, removed or blocked!**

Each stapling head can be switched on and off individually using a rotary valve (D).



7.3 Maintenance plan

CAUTION! The compressed air supply must be disconnected before any maintenance.
Only original spare parts
from the manufacturer may be used (see appendix "Spare Parts List").

In order to maintain the operational readiness and function of the machine, these must usually be checked by the operator or by qualified personnel.

Test area	Activity / Examination	T	W	M	J	Area
Machine area and environment	clean		●			**Entire machine**
All protective measures in place/closed	check	●				**Safety devices**
Stitching head	clean / check		●			**Staple area**
Stitching head moving parts	maintenance				J	
Insertion area	clean / check		●			
Pneumatic hoses, leaks, damage	check		●			**Pneumatics**
Filter regulator, condensate	check			●		
Screw connections for tight fit	check			●		
Sintered filter filter regulator, replace (if dirty)	change				●	
Stitching head moving parts (driver, spring guide)	Clean and lightly oil		●			**lubrication**
Other moving parts	Clean and lightly oil		●			

D = daily / W = weekly / M = monthly (6M = every 6 months) / Y = annually

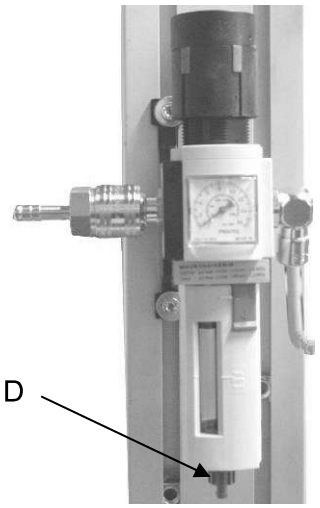
Appropriate care helps to keep the machine in good working order over time. Machine should be cleaned thoroughly at least once a week.

- No aggressive cleaning agents or solvents (which will damage seals) or even sandpaper may be used for cleaning.
- Cleaning with compressed air should also be avoided, as this will cause dirt particles to enter the sealing areas and damage them.
- Do not use fluffy cleaning wool for cleaning.

Cleaning agents	Areas of application
Cold cleaner	All machine parts

Check the filter regulator for condensate. The condensate may need to be removed. To do this, open the drain valve ***D by turning it counterclockwise. The condensate collected in the container will drain out. Then close it again by turning it clockwise.***

See also the filter regulator operating instructions



8 Decommissioning

If the device is not used or dismantled for a longer period of time, the compressed air supply must be disconnected and all staples must be removed from the device/magazine.

9 Reference to residual risks

	Protect the machine from moisture! **Do not operate in wet or humid environments! Operate only indoors!**

Compressed air connections must be checked regularly.

	When working on the compressed air connections and hoses as well as on the units, the entire system must be depressurized.

10 Maintenance and care

The stapling device, or rather the roller staple stapling head, is easy to maintain, but should be cleaned and maintained regularly.
Contamination must be removed directly by the operator after machining operations.
Contamination on the workpieces can be blown off.

	Any modifications to the stapling device, especially the safety devices, are prohibited!

Before starting any major maintenance work or cleaning work, all safety measures must be taken, i.e. the compressed air supply must be switched off or removed.

The following work/inspections should be carried out regularly by qualified personnel:

- Clean the stapling head regularly
- Regularly oil the moving parts (no graphite oil!) (weekly)
- Check the filter regulator for condensation. If necessary, remove the condensation.
- Cleaning cardboard dust

Any modifications to the device (e.g. drilling) are only permitted with the prior consent and written approval of the manufacturer.
Only genuine spare parts may be used. (See "Spare Parts List")
Failure to comply will result in the exclusion of any warranty claim or liability!

Only original spare parts are subject to our quality controls. To ensure safe and reliable operation, only manufacturer's spare parts may be used.

All technical equipment, especially safety equipment, must be checked by qualified personnel after modification or repair.

11 Error detection

In the event of any malfunction, the device must be shut down and disconnected from the compressed air supply until proper operation is restored. Please do not attempt to disassemble or repair the device.

No stapling or staple not fully bent or remains in the stapling head
see also operating instructions for stapling heads

No.	Cause:	Fix:
1.	Air pressure too low. Feed movement not guaranteed.	For stapling 4 - 6 bar, for nailing 6 bar overpressure. Check hoses and valves to ensure the stapling head has sufficient air supply.
2.	Air purity inadequate	Install a filter regulator consisting of a pressure reducer and water separator.
3.	Staple is jammed in the stapling head and is not pre-formed.	Air pressure too low (see point 5). Stitching head resets too quickly. Increase time accordingly (1-2 seconds).
4.	Drawstring torn	Remove a piece of staples from the drawstring and glue it back on.

Remove **all** staples in the roll staple head and clean the device of any deposits and dirt.

Reconnect the supply air.

Now you can use the stapling device again without restrictions.

If the problem goes beyond jammed staples, please contact us. Our specialists will carefully examine the device and resolve the issue.

12 Reference to residual risks

When the stapler is in operation, do not reach into the stapling area or the staple exit opening! Danger OF INJURY !

Protect the stapler from moisture!
Do not operate in wet or humid environments! Operate only indoors!

- **Always check the device for defective, incorrectly connected or worn parts before use.**
- **Compressed air connections must be checked regularly.**
- **When working on the compressed air connections and hoses, the stapler must be depressurized.**
- **When working on the device, wear protective equipment:**
  + cut-resistant gloves that provide a suitable feel and safe operation of the trigger and all adjustment devices

+ appropriate safety goggles
- Never point the stapler at yourself or other people
- Keep your fingers away from the trigger when not using this device and when moving from one working position to another.
- Keep all body parts such as hands, legs, etc. away from the staple exit opening and ensure that the driving object cannot penetrate any part of the body.
- When using the tool, be aware that the driving object may ricochet and cause injury.
- Hold the tool firmly and prepare for the driving process.
- Be careful when handling driving tools, especially when loading and unloading, as the driving tools have sharp points that could cause injury.
- Do not lean too far forward. Use only in a safe work area. Always maintain a firm footing and balance.
- Keep third parties away (if you're working in an area where people are likely to pass through). Clearly mark your work area.
- Wear cut-resistant gloves that provide a suitable feel and safe operation of the trigger and all adjustment devices, and appropriate safety goggles.
- During operation, ensure that the driving tools always penetrate the material correctly and are not deflected or misplaced towards the user and/or third parties.
- During operation, fragments may be ejected from the workpiece or from the fastening or magazine system.
- The risk to others must be assessed by the user.
- Be careful with devices that do not contact the workpiece, as they may accidentally trigger and injure the user and/or third parties.
- Make sure that the device is always securely seated on the workpiece and cannot slip away
- Take a firm stance and always keep your balance.
- Slips, trips, and falls are the main causes of workplace accidents. Attention must be paid to slippery surfaces caused by the use of the equipment, as well as tripping hazards caused by the air hose.
- Extra caution should be exercised in unfamiliar surroundings. There may be hidden hazards, such as electrical wires or other utility lines.
- This device is not intended for use in potentially explosive atmospheres and is not insulated against contact with electrical energy.
- It must be ensured that there are no electrical cables, gas pipes, etc. that could cause a hazard if they are damaged by the device
- Compressed air can cause serious injuries.
- Always close the air supply and disconnect the device from the air supply when not in use.
- Always disconnect the tool from the compressed air supply before changing accessories, making adjustments and/or repairs, and when moving from one work area to another.
- Whipping hoses can cause serious injury. Always check for damaged or

	loose hoses or connections. **- Never carry an air-powered device by its hose.** **- Never pull an air-powered device by its hose.** **- Do not exceed the maximum operating pressure when using compressed air-powered devices.** **- Compressed air-powered devices should only be operated with compressed air at the lowest possible pressure for the work process in order to reduce noise and vibration and to minimize wear.** **- Hold the device with a light and secure grip, as the risk of vibration is greater when the gripping force is higher.**

13 Technical documents

Repairs by:
MEZGER HeftsystemeGmbH
or
authorized specialist companies

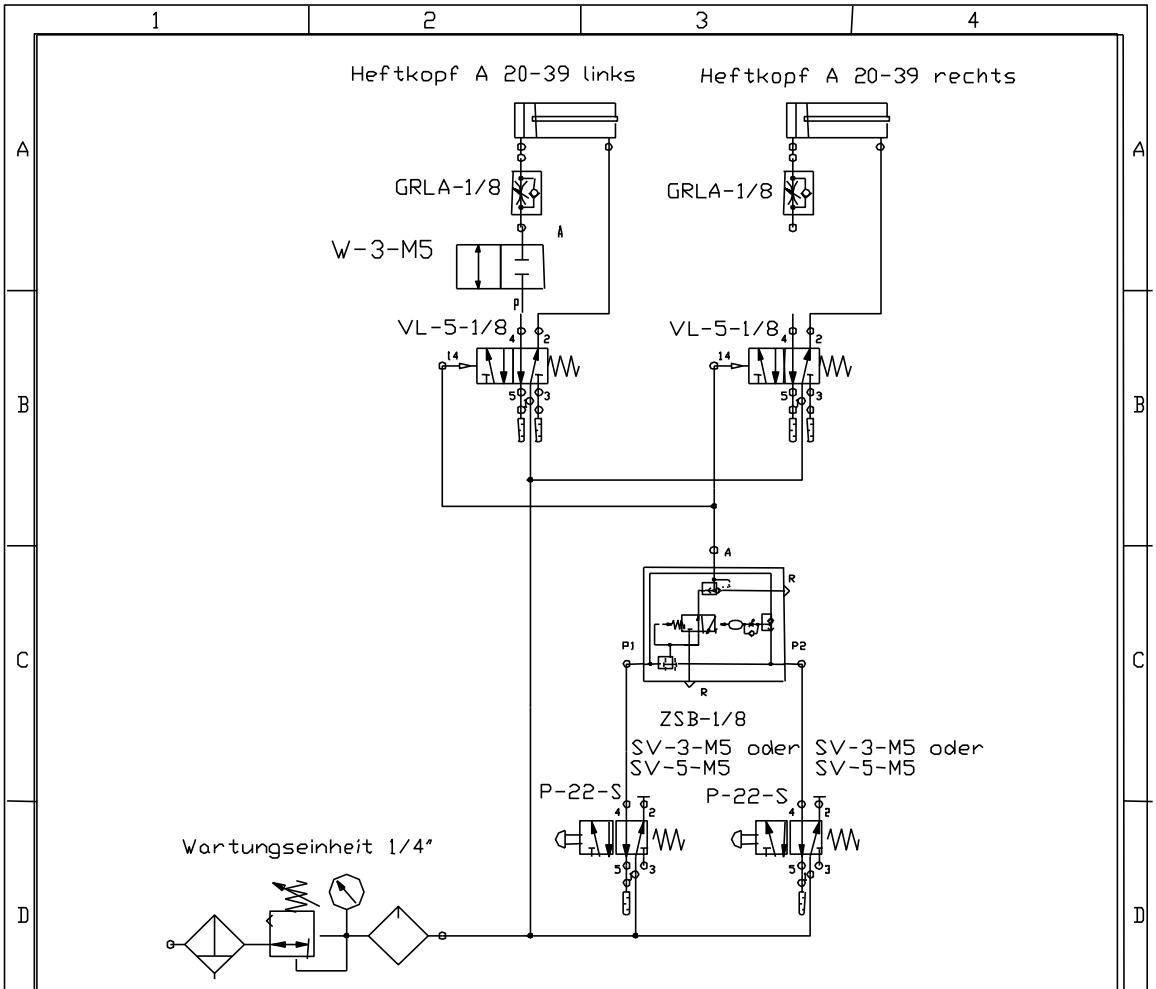
Damage resulting in particular from natural wear and tear, overloading, improper handling or damage caused by the user or other use contrary to the operating instructions are excluded from the warranty. Keep the operating instructions, safety instructions, spare parts list and receipt in a safe place.

Order form for spare and wear parts

MEZGER Heftsysteme GmbH
Staples, staplers and stapling machines

Saganer Straße 24, 90475 Nuremberg
Phone: 0049 (0)911 / 984 94 0 Email:
info@mezger.eu

13.1 *Pneumatic circuit diagram*



Anzahl	Match-Code	Artikelbenennung	Typ	
1	05.1-00-000.00	Rollenheftkopf	B 36-60 li	Bemerkung
1	05.1-00-001.00	Rollenheftkopf	B 36-60 re	
1	PV.1-00-300.00 oder PV.1-00-301.00	Wartungseinheit 1/4"		
1	PV.6-00-211.00	Zweihand - Steuerblock	ZSB-1/8	
2	MB.3-00-001.00	Pilztaste	P-22-S	
2	PV.1-32-103.00 oder PV.1-52-101.00	Schalttafelventil	SV-3-M5B oder SV-5-M5B	
1	PV.1-32-104.00	Handschieberventil	W-3-M5	
2	PV.4-00-201.11	Drossel-Rückschlagventil	GRLA-1/8-B	
2	PV.2-52-202.00	Pneumatikventil	VL-5-1/8	

Projekt		Material / / /	Oberfläche 3,2	Maßstab 1:1	technik/sgr/sgr2// sgr2.dwg
				Freimaßtoleranz nach: DIN ISO 2768m	
			Datum	Name	Name
		Bearb	05.09.00	Zinngrebe	Zweihandsteuerung Schaltplan
		Gepr.			
		Norm			
		Fa. MEZGER Heftsysteme GmbH & Co Saganer Straße 24 Postfach 55 11 70 D-90475 Nürnberg D-90218 Nürnberg Tel.: 0911/98494-0 Fax.: 0911/98494-30		Zeichnungsnummer 20.234-00-000.00	Blatt 1 / 1 Bl.
A	0250	14.03.01	Gu		
Zust.	Änderung	Datum	Name		

13.2 Spare parts list SGR2

In the L version, the stapling heads are rotated by 90°.
Spare parts list SGR 2: See appendix
Spare parts list for stapling heads: see operating instructions for stapling heads

14 Attachment