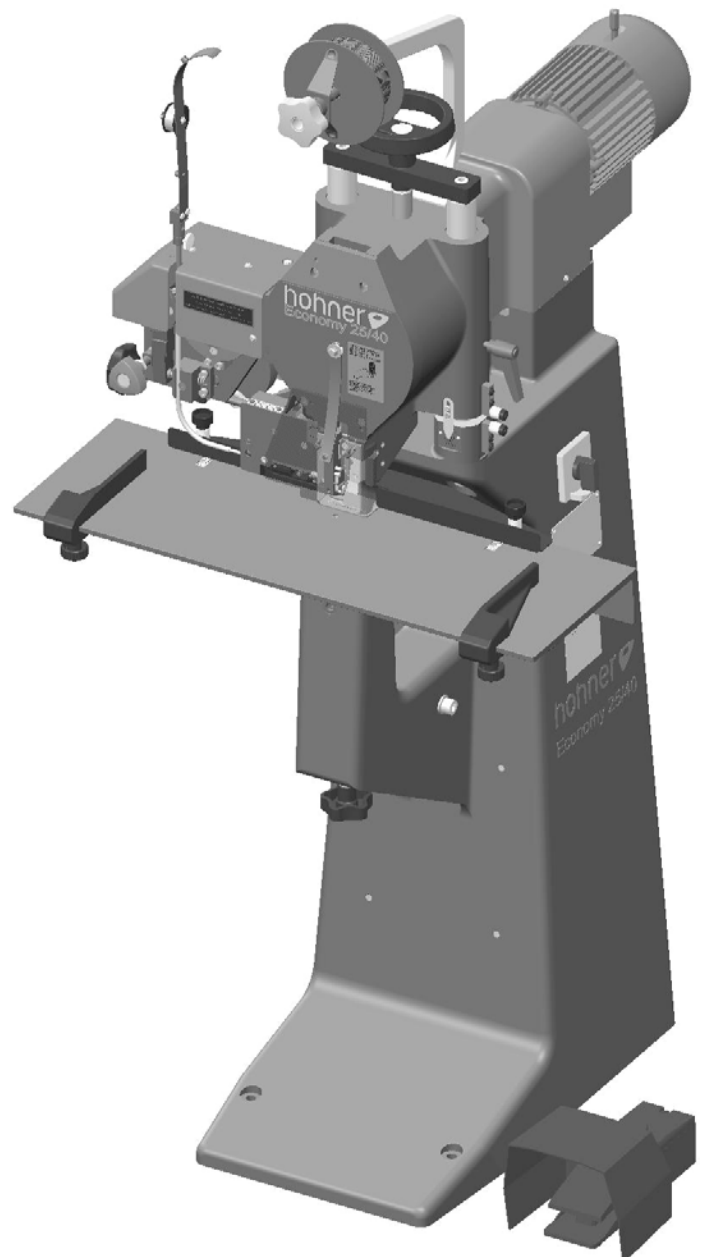


hohner

ECONOMY 25/40

**Pad and Folder
Wire Stitching Machine**



Customer Details

Inventory no.:

Location

Manufacturer's Address

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Operating Manual

Document: Translation of the german original Operating Instructions

Document number: ECONOMY 25/40, Volume 1/2

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Spare Parts Lists

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1 Basic safety precautions

1.1 Purpose of this document

This document is to inform the operator of the **Wire Stitching Machine ECONOMY 25/40** about the following matters:

- the safety symbols and signs
- the installation and commissioning
- the adjustment and operation

Familiarity with this Operating Manual is a prerequisite for the safe and correct running of the machine. It **must** be read carefully by the operator before the machine is commissioned. Keep the manual safely in a place where it is readily available and which is close to hand for persons working on the machine.

1.2 The operator

The **Wire Stitching Machine ECONOMY 25/40** must only be operated by trained personnel. Training will be undertaken by the manufacturer or by persons who have been authorised by the manufacturer to undertake such training.

1.3 Safety symbols and the displays in use



DANGER

This symbol displays immediate danger to the life or health of persons in the immediate vicinity of the machine.

Non-observance of the warnings indicated can **have immediate**, grave consequences and can cause extensive damage to health or may even lead to death.



WARNING

This symbol displays possible danger to the life or health of persons in the immediate vicinity of the machine.

Non-observance of the warnings indicated **can** have grave consequences, and can cause extensive damage to health, or may even lead to death.



CAUTION

This symbol displays the existence of a potentially dangerous situation.

Non-observance of the warnings indicated can lead to minor injuries to persons.



NOTICE

This symbol displays the existence of the risk of damage to equipment.

Non-observance of the warnings indicated can lead to slight damage to equipment.



TIP

This symbol indicates the availability of tips on how to use the machine or particularly useful information.

These tips will help you to use all of the functions of the machine to best advantage.

-

This sign requires you to take action.

•

This sign serves as a symbol for listing items.

Basic safety precautions

1.4 Duty and liability

The **Wire Stitching Machine ECONOMY 25/40** has been built according to state-of-the-art technology under the observance of all the recognised safety regulations. It is, nevertheless, still possible when using this machine to cause danger to life and limb of the user or a third party or to cause damage to the machine or other property.

The machine should only be used,

- for the purpose for which it was designed
- when it is in a perfect technical condition

Faults that could reduce the levels of safety in using the machine must be removed immediately. Warranties and liability on the part of the manufacturer are fundamentally covered by the regulations laid down in our "General sales and delivery conditions".

1.5 Correct use of the machine

The Wire Stitching Machine ECONOMY 25/40 is designed exclusively stitching of brochures and leaflets or similar items. Any use of the machine contrary to that described above is forbidden since incorrect use of the machine can present a danger.

1.6 User requirements

The user of the machine is required to provide the required personal safety equipment. All existing safety systems should be checked regularly.

1.7 Safety and protective systems

All safety and protective systems must be attached to the machine and should be in full working order before every start-up of the machine.

Safety and protective systems may only be removed:

- when the machine is stationary **and**
- after it has been secured against being started up again.

1.8 Informal safety measures

The Operating Manual should be stored in such a way as to be permanently to hand at the machine. There are also generally valid local regulations concerning accident prevention and environmental protection measures that should be made available and observed, in addition to those described in the Operating Instructions.

All safety and danger signs on the machine should be maintained in a legible condition and should be renewed where necessary.


1.9 Personnel training

Only skilled and trained personnel are allowed to work on the machine.


The responsibility of the various parties involved is laid out in the following table:

	Trained persons	Specialists
Transportation		A haulage company
Installation and commissioning		The Hohner company, Customer Service
Operation	x	
Locating faults	x	
Removing the fault		The Hohner company, Customer Service
Setting up, equipping	x	
Servicing	x	

1.10 Parts of the machine that are particularly dangerous

	<p>! WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <p>➤ Never operate the system without properly mounted finger guard.</p>
---	--

1.11 Servicing and repair work, elimination of faults

	<p>! WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <p>➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally.</p> <p>➤ Never operate the system without properly mounted finger guard.</p>
---	--

Mount the finger guard again after adjustment-, maintenance- and inspection work.

1.12 Structural modifications to the machine

Changes to the machine, additions or modifications may only be undertaken with the permission of the manufacturer.

1.13 Cleaning the machine and the removal of waste products

The functionality of the machine and clean processing of the products can only be guaranteed over a prolonged period of time, if the machine is regularly cleaned in accordance with the normal methods used in mechanical engineering.

Clean with mild, non-abrasive and non-scratch cleaners. Never use aggressive cleaning agents such as e.g. solvents.

NOTICE

While doing this, **it is particularly important** to remove trimmed paper remnants and paper dust regularly, as these can result in jamming of the machine and in increased wear of its parts.

The machine contains bare metal parts. These should be cleaned regularly with a protective cleaning agent, especially when using the machine in rooms of high air humidity.

All substances and materials used (e.g. solvents and lubricants) must be handled appropriately and removed in an environmentally friendly way.

1.14 Noise levels produced by the machine

The noise emitted by the machine when it is running does **not** exceed a value of 81 dB(A) as measured in accordance with DIN 45635, Part 27.

2 Description of the *ECONOMY 25/40*

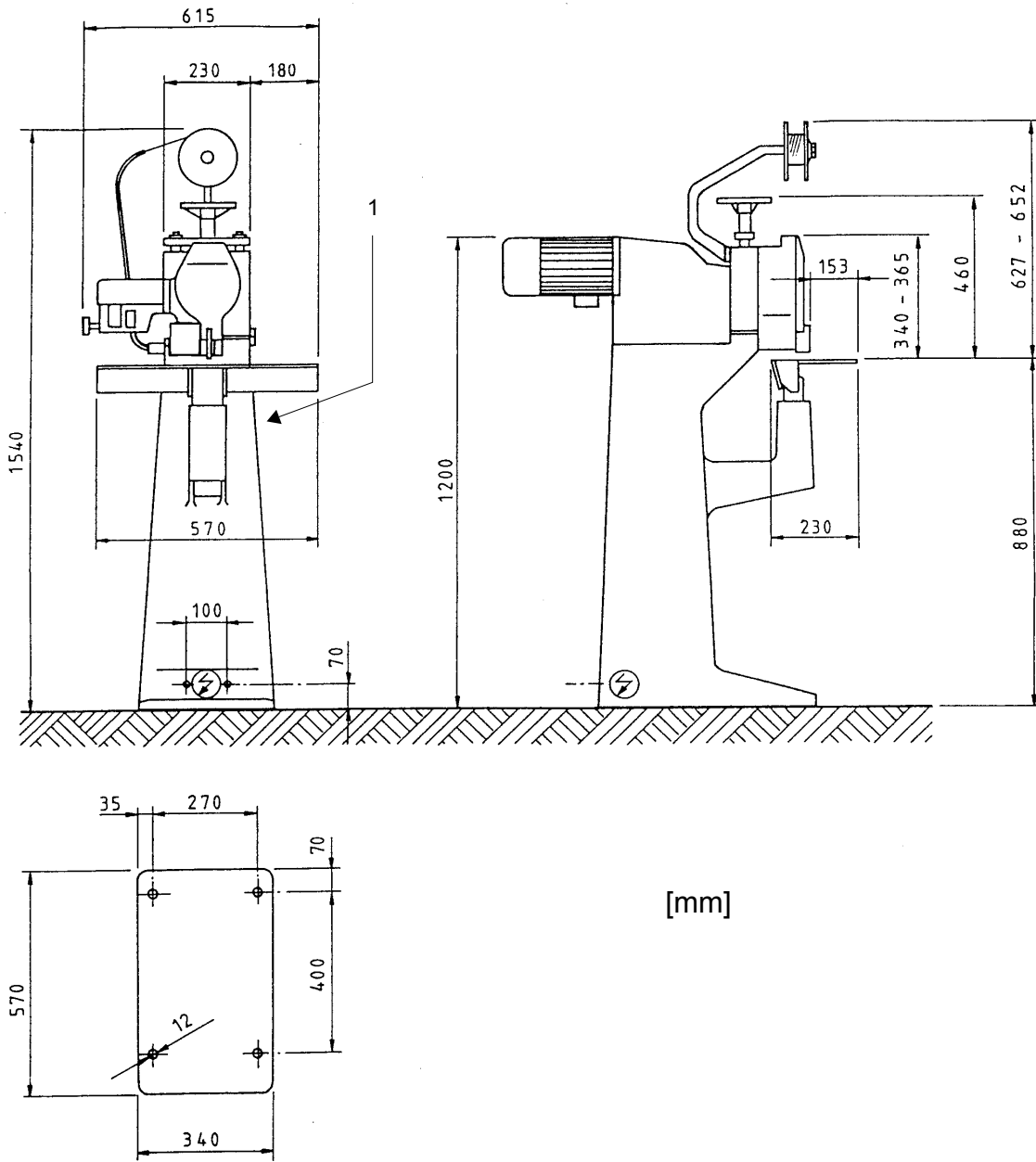


Fig. 2.1

2.1 Dimensions

- Fig. 2.1 -

2.2 Conformity

Please observe the document attached:

„EC Declaration of Conformity according to the EC Machinery Directive 2006 / 42 / EC“

2.3 Marking and type plate

The type plate and the CE labelling are fitted below the main switch- Fig. 2.1 -, Pos. 1.

2.4 Technical data

Max. stitching thickness	- clenched - stubbed	25 mm / 1.000 in. 40 mm / 1.575 in.
Crown width		14 mm / 0.550 in.
Stitching wire, round		No. 21 - 30 (0.80 - 0.35 mm Ø / diametric)
Stitching wire, flat		No. I - VI (0.70 x 0.35 mm / 0.028 x 0.014 in. up to 0.96 x 0.78 mm / 0.038 x 0.031 in.)
Exchange parts for loop stitching		up to 3 mm / 0.12 in.
Stitching per minute		206 stitches
Size of stitching table		700 x 240 cm / 27.5 x 9.4 in.
Working height		880 mm / 34.64 in.
Area of the machine		840 x 570 mm / 33.0 x 22.45 in.
Total height of the machine		1540 mm / 60.60 in.
Space required without the operator		920 x 620 mm / 36.20 x 24.40 in.
Insertion depth from clincher box	Pad stitching Saddle stitching	approx. 95 mm / 3.75 in. approx. 290 mm / 11.02 in.
Packing dimensions		approx. 1030 x 800 x 1540 mm approx. 40.6 x 31.5 x 60.6 in.
Net weight		approx. 200 kg / 440 lbs
Gross weight		approx. 240 kg / 530 lbs
Motor		Geared motor 0.55 kW 230/400 Volt 50 Hz (3-phase)
Noise emission, not exceeding		81 dB(A)

2.5 Accessories

Every new ECONOMY 25/40 is supplied with:

Art. no. 43 00 068	1 pedal switch
1 KIT coarse consisting of	already mounted on the machine
Art. no. 31 35 536	1 driver
Art. no. 31 35 538	1 bender, left
Art. no. 31 35 539	1 bender, right
for round wire No. 21 - 25 and flat wire No. I - VI	
1 KIT fine consisting of	
Art. no. 31 35 547	1 driver
Art. no. 31 35 548	1 bender, left
Art. no. 31 35 549	1 bender, right
for round wire No. 24 - 30	
Art. no. 94 03 650	2 clinchers, coarse
from round wire No. 23 and flat wire No. VI	
Art. no. 37 34 323	1 inserting block
SPARE PARTS	
Art. no. 31 03 412	1 clincher pusher
Art. no. 39 34 556	1 compression spring / gripper
Art. no. 39 35 620	1 compression spring / wire feed
TOOLS	
Art. no. 46 00 009	1 hexagon socket screw key, size 5
Art. no. 46 00 014	1 diagonal cutting nipper
Art. no. 46 00 044	1 Torx angle screwdriver T 10
Art. no. 46 00 045	1 Torx angle screwdriver T 20

3 Installation and commissioning of the machine

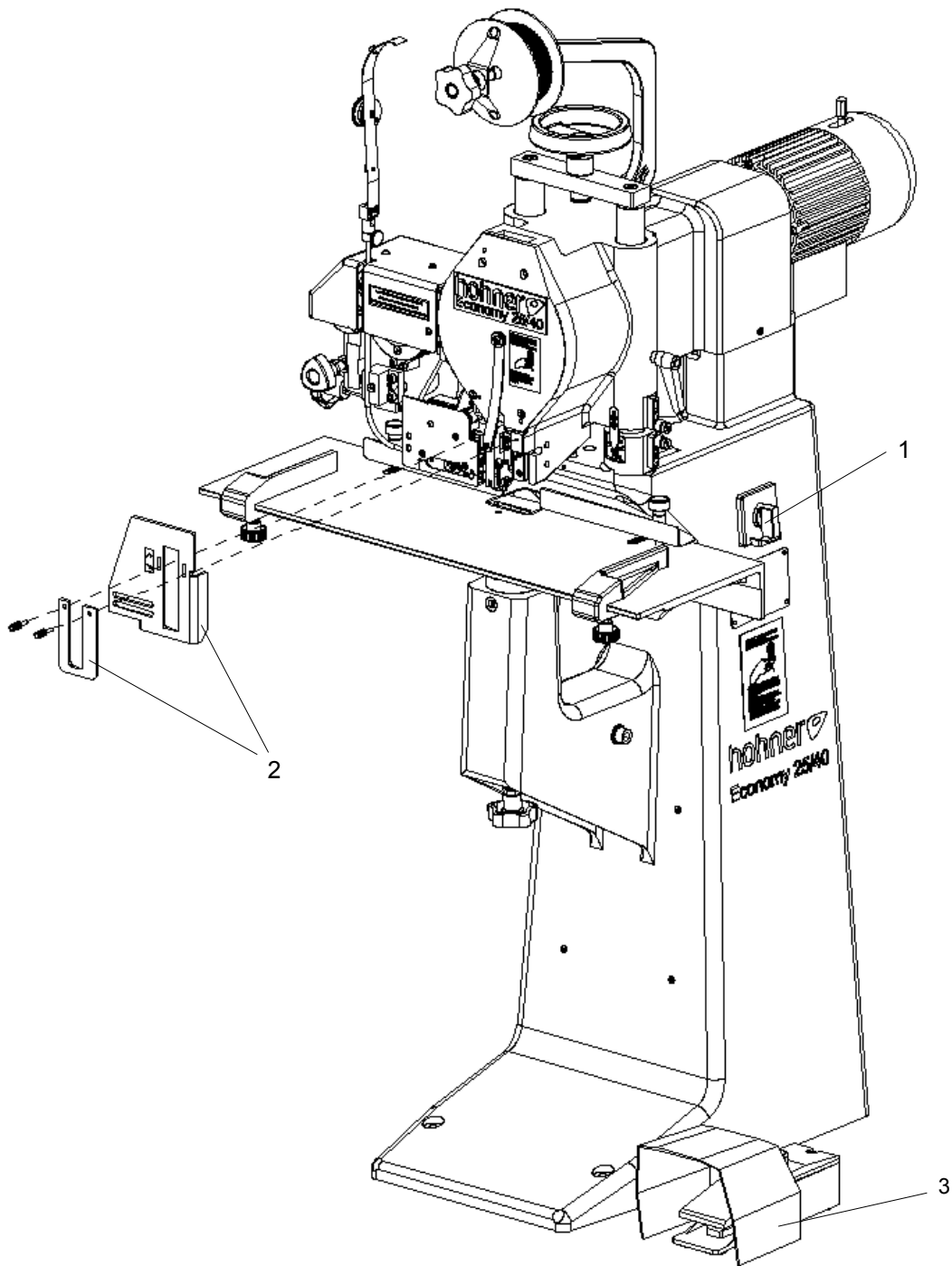



Fig. 3.1

3.1 Safety-related components

- Fig. 3.1 -

The combined ON/EMERGENCY-STOP button -1-, the door safety switch -2- and the finger guard -3- are essential for the safe function of the machine.

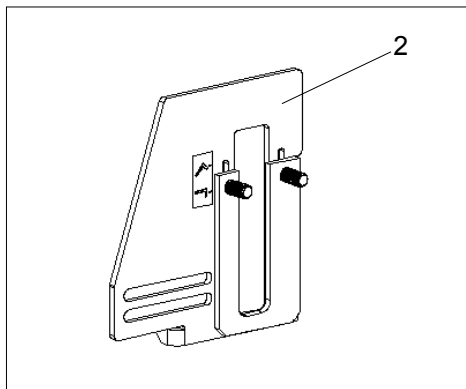
3.2 Mounting of the finger guard

	! WARNING
Quick stroke movements of the stitching heads!	
Danger of crushing!	
➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally.	
➤ Never operate the system without properly mounted finger guard.	

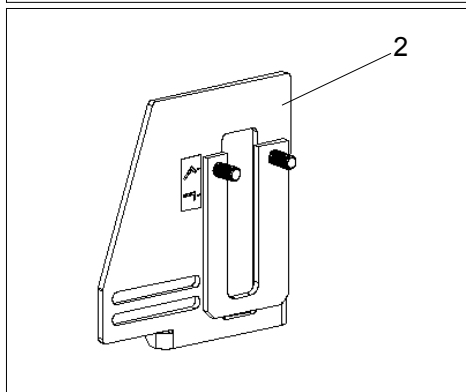
- Fig. 3.1 -

The finger guard must be mounted and adapted to the block- and brochure stitching. Mounting is simplified by corresponding symbols which are stuck on the finger guard.

Fit the finger guard -2- for block- and brochure stitching as shown below.



Block stitching



Brochure stitching

3.3 Motor drive

- Fig. 3.1 -

The machine is switched on by means of the main switch -1- on the right of the machine stand. When the pedal switch -3- is depressed, the motor is started; the stitching head is activated and completes one cycle.

Installation and commissioning of the machine



Fig. 3.2

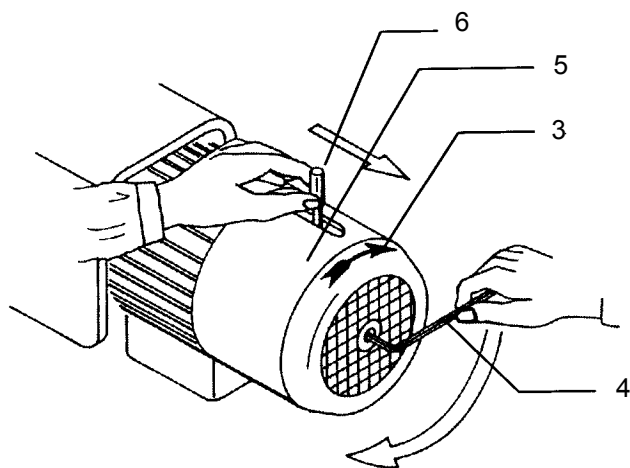



Fig. 3.3

3.4 Electrical connection

Unless a different motor is ordered, the ECONOMY 25/40 is supplied with a three-phase gear motor for connection to 230/400 volt, 3 phase, 50 Hz. Motors for other current types, voltages, frequencies and motors with tropical protection are available on request (at an extra charge).

The type plate specifies for which mains voltage and mains frequency the machine has been designed.

	<p>⚠ DANGER</p> <p>Voltage</p> <p>Danger of electrical shock!</p> <p>➤ Only qualified skilled workers may carry out work in the vicinity of the mains power supply.</p>
---	---

- When installing the machine, the local connection regulations must be observed. The supply line to the machine must be appropriately protected. In accordance with the valid VDE regulations, the protective conductor is yellow-green.

- Fig. 3.3 -

NOTICE

Special attention must be paid to the direction of rotation of the motor shaft (visible on the fan blade), marked by a arrow -3-. The direction of rotation is changed by swapping 2 phases of the mains supply line.

3.5 Motor protective relay


- Fig. 3.2 -

The motor protective relay is triggered upon overload of the motor and switches off the power supply of the motor. This is indicated on the trigger display window -2-.

- Yellow display, invisible: relay not triggered
 - Yellow display, visible: relay triggered
- Should the motor protective relay have triggered, the machine must first be switched off with the ON/EMERGENCY-STOP button. Then determine and eliminate the cause.
 - Once the cause has been eliminated, the motor protective relay can be reset by pressing the reset key -1-, - Fig. 3.2 -.

While doing so, ensure that all protective systems are installed on the machine and all tools have been removed from the machine.

3.6 Turning the machine by hand

	<p>⚠ WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <p>➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally.</p> <p>➤ Never operate the system without properly mounted finger guard.</p>
---	--

- Fig. 3.3 -

In the event of faults, for setting and functional testing, the machine can be turned by hand. Use hexagon key SW 5 -4- from the tool set for this purpose.

Insert hexagon key -4- into the hexagon mounting (on the back of the drive motor -5- in the fan shaft) like a crank, move fan lever -7- for brake in the direction of the arrow and turn fan shaft in the direction of the arrow -3-.

NOTICE

Before switching on the machine, make sure that all protective devices are fitted to the machine and all tools have been removed from the machine!

Installation and commissioning of the machine

4 Operation

4.1 Stitching wire

The ECONOMY 25/40 processes stitching wire of standard quality

Round wire No. 21 - 30 (diameter 0.80 - 0.35 mm)

Flat wire No. I - VI (0.70 x 0.35 to 0.96 x 0.78 mm)

Thumb rule

The thicker the material to be stitched, the thicker the wire, but it should be not thicker than necessary. A wire that is too thick is not aesthetically pleasing, but a wire that is too thin will result in mistakes!

Stitching wire - round or flat?

Very thin folders of just a few sheets are usually stitched with round wire no. 30 or 28. The selection of round or flat wire is dictated by experience and economy (round wire is cheaper). Blocks of 18 mm thickness can be stitched with either round or flat wire. For thicknesses over 18 mm, we recommend flat wire in principle.

Stitching wire index

Stitching thickness from approx.	to approx.	Round wire no.	Flat wire no.	Occasionally you might need a stronger type of wire, e.g. when working with very hard paper or in case of blunt cutters, which weaken the driving power of the staples.
2 sheets	1 mm	30	-	
2 sheets	2 mm	28	-	
2 sheets	4 mm	26	-	
2 mm	6 mm	25	-	
6 mm	10 mm	23	III	
10 mm	14 mm	22	IV	
14 mm	18 mm	21	V	
18 mm	25 mm	-	VI	

Operation

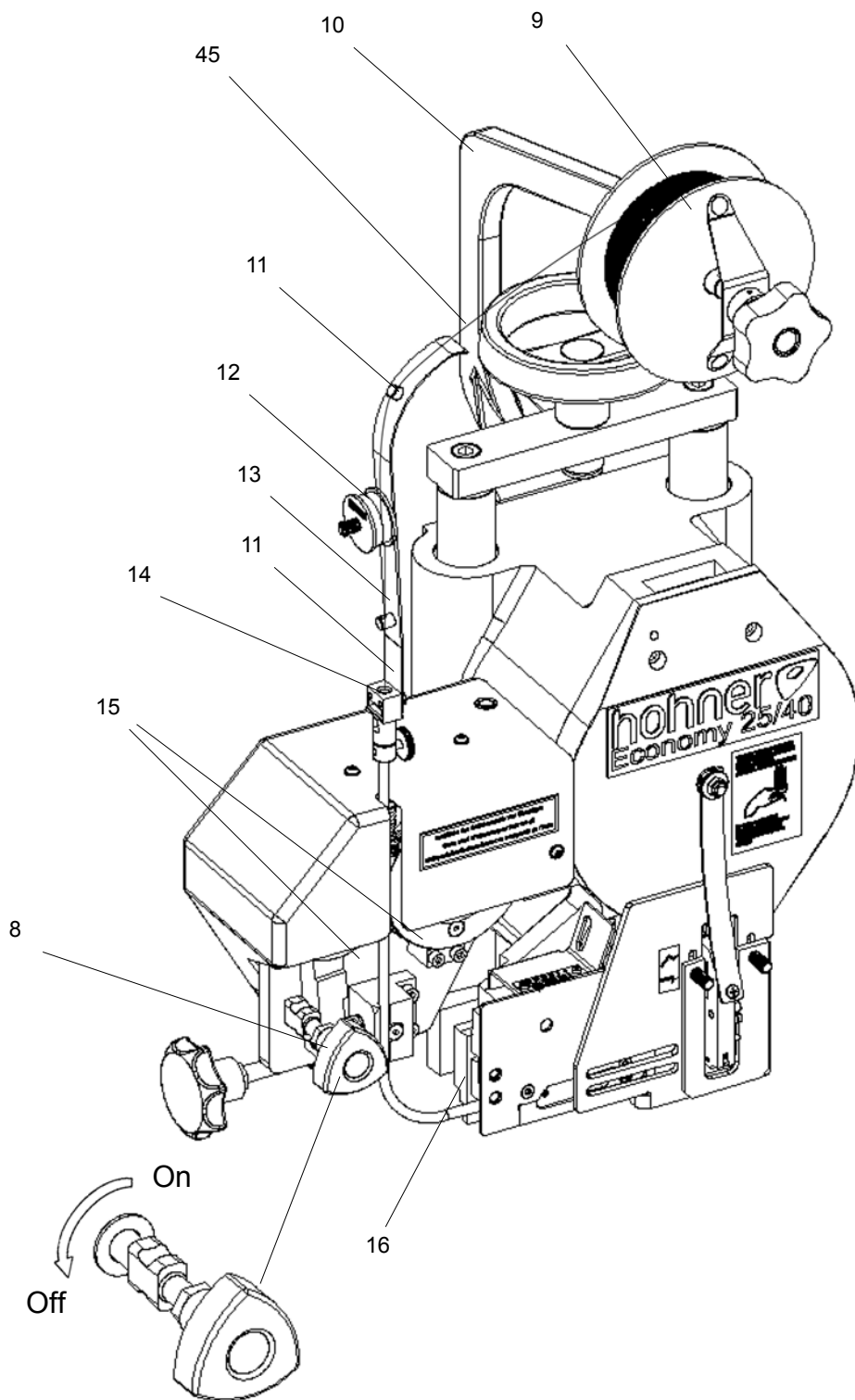



Fig. 4.1

4.2 Inserting the stitching wire

	<p>! WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <ul style="list-style-type: none"> ➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally. ➤ Never operate the system without properly mounted finger guard.
---	---

- Fig. 4.1 -
- Shut off the wire feed by turning the triangular handle -8- 90 degrees to the left or to the right. Place wire coil -9- on the wire coil carrier -10- and pull stitching wire -45- through from above.

The detailed procedure is as follows:

- Pull through the two rings -11- and the felt disks -12- of the wire guide -13-, through the upper wire guidance tube -14- between the two transport wheels -15- and a little further into the curved wire guidance tube -16-.
- Turn the wire feed on again by turning the triangular handle -8- to the right.

NOTICE

Before switching on the machine, make sure that all protective devices are fitted to the machine and all tools have been removed from the machine!

- Place paper beneath stitching head to catch wire pieces and staples.
- Connect current feed to machine, switch on main switch and operate the foot switch several times in succession. The wire feed automatically pushes the wire forward.
- Operate the foot switch again, several times in succession, until the first complete staple appears.



In the case of a wire jam at the wire straightening eccentric -17- (see - Fig. 4.2 -), remove the stitching wire and repeat the process, making sure that the wire straightening roller in the wire straightening eccentric -17- is "turned down" as far as possible. The wire must then be straightened again (see 4.3 Wire coil and straightening the wire).

Operation

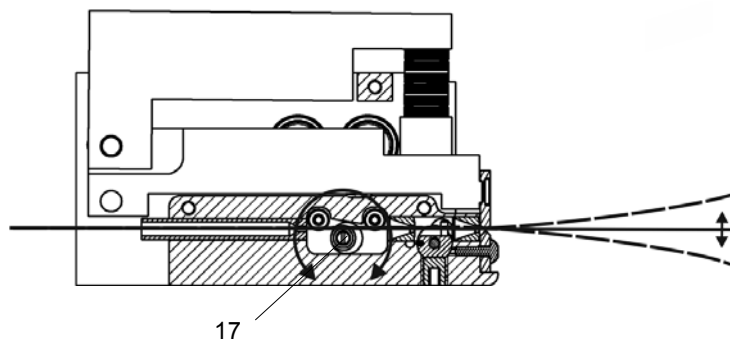
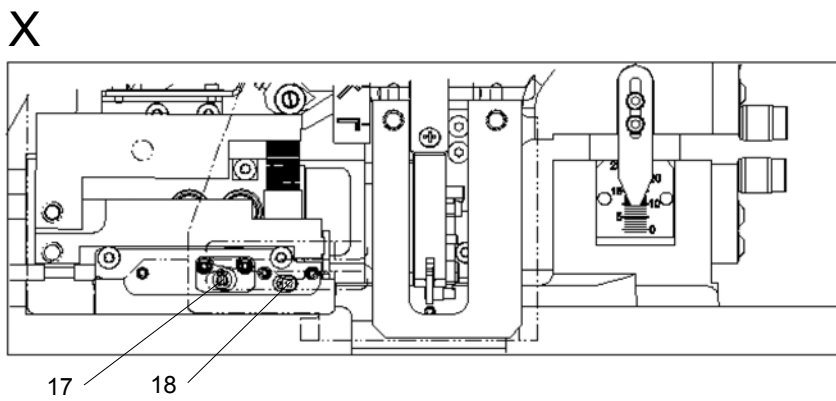
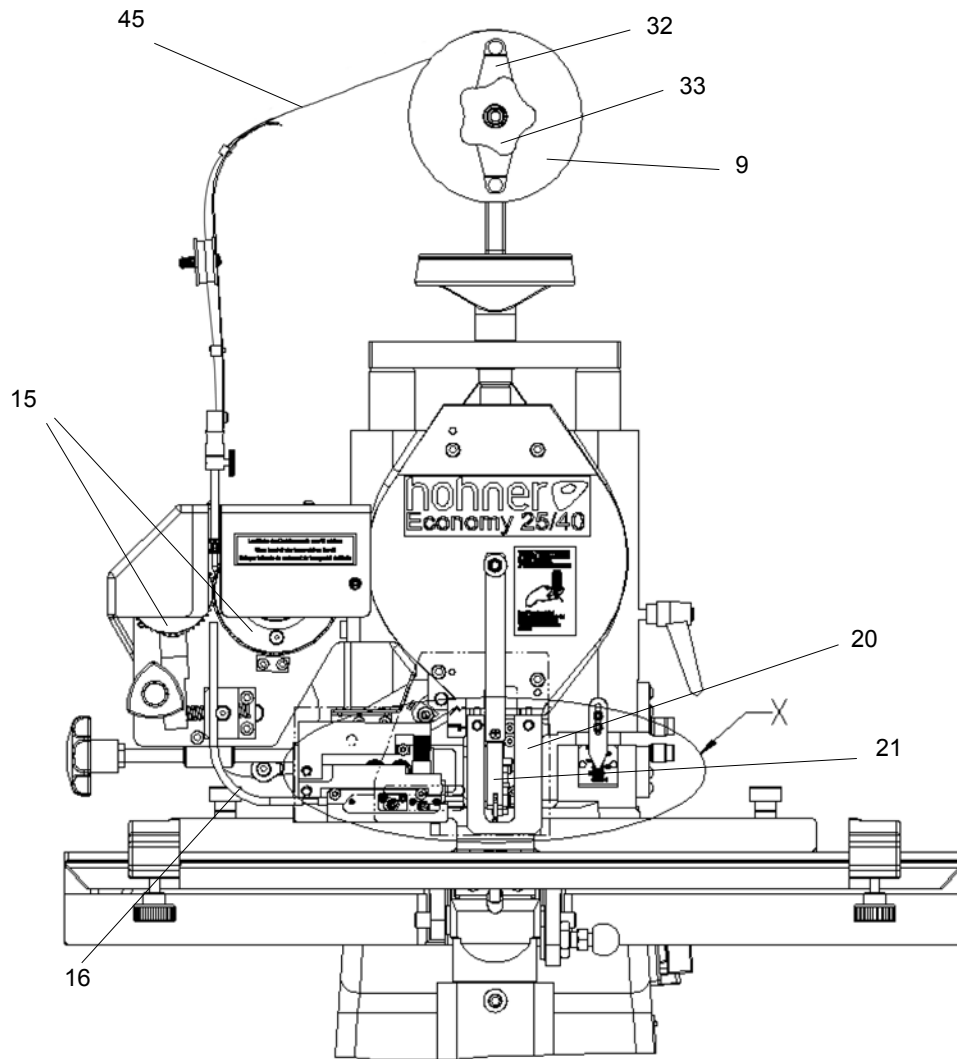



Fig. 4.2

4.3 Wire coil and straightening the wire

	<p>! WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <ul style="list-style-type: none"> ➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally. ➤ Never operate the system without properly mounted finger guard.
---	---

- Fig. 4.2 -, - Fig. 4.3 -

- Brake the wire coil -9- by means of the leaf spring -32-, turning the star handle -33- so that the stitching wire -45- has free play (the wire coil must not continue running, as otherwise the coil will be loosened and be spoiled).

The wire is strongly bent due to winding on the wire coil, but it must be straight for processing.

- The straightening of the wire is set at the wire straightening eccentric -17- and at the wire straightening screw -18-. The wire straightening eccentric -17- determines the curvature of the wire upwards and downwards and the wire straightening screws -18- determine the curvature at the front and back.

If the machine stitches perfectly, no adjustments need to be made to these two parts.

The settings must be changed if:

- loops form between the transport wheels -15- and the lower, curved wire tube -16-, so that the wire impacts and does not pass through cleanly,
 - only wire pieces are stitched instead of complete staples, resulting in the wire falling short of the former,
 - the staple shanks converge or diverge when stitching thicker pads.
- First of all, you should endeavour to correct the wire feed by slightly turning the wire straightening eccentric -17- or the wire straightening screw -18-.
 - If this does not suffice, the former -21- must be removed to allow better visibility of the curvature of the stitching wire.
 - First of all remove the finger guard -20-.

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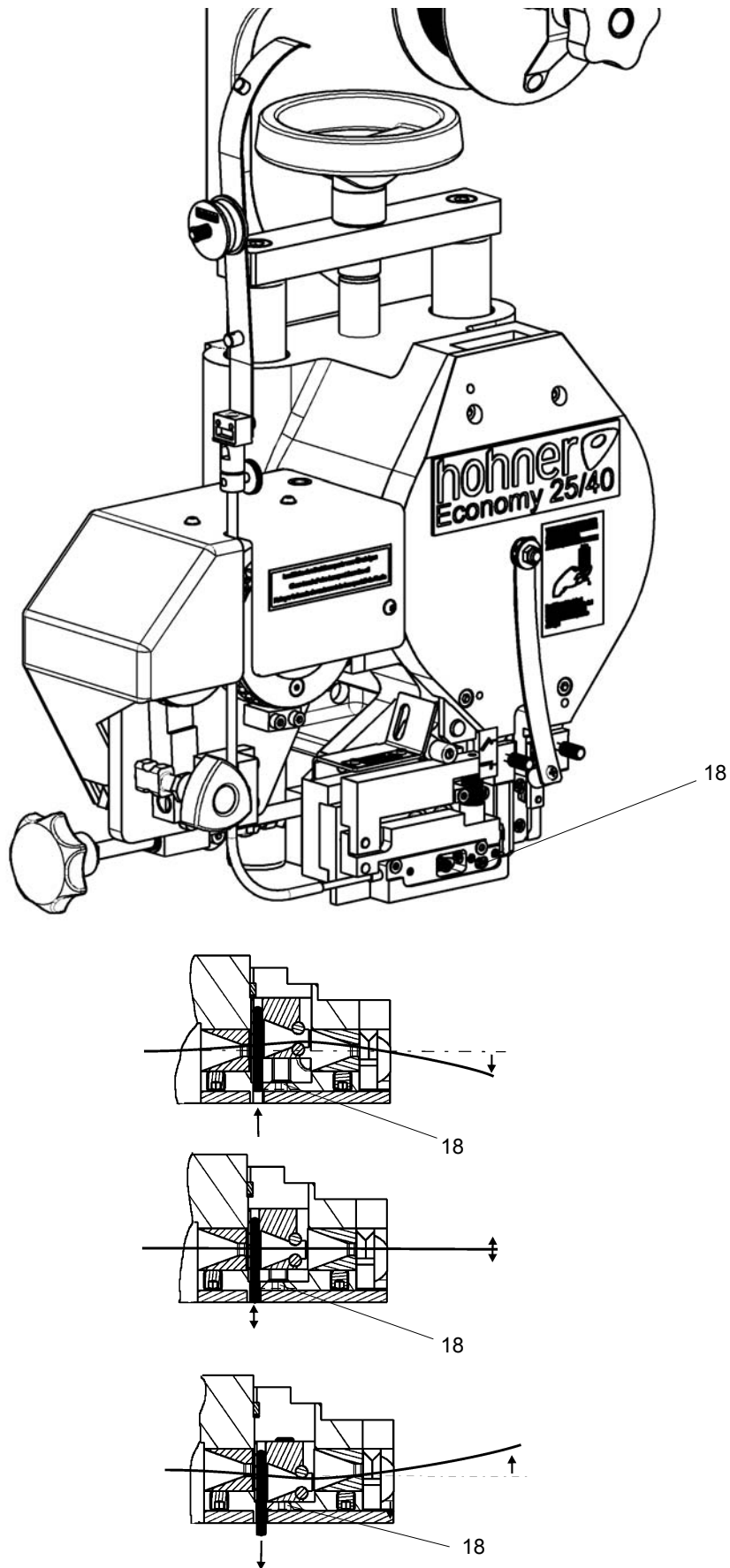


Fig. 4.3

- Fig. 4.2 -, - Fig. 4.3 -

- Mount the finger guard in the correct position and **note the markings** (see 3.2).
- Connect current feed to machine, switch on main switch and transport wire onwards by operating the foot switch repeatedly. You can now see whether the wire is transported straight or bent.
- If the wire does not emerge exactly horizontally, it can be corrected at the wire straightening eccentric -17-.
- If the wire emerges bent at the front or the back, this can be corrected at the wire straightening screw -18-.
- When altering the setting, remove the finger guard -20-.
- Replace former -21- and finger guard -20-.
- Mount the finger guard in the correct position and **note the markings** (see 3.2).

NOTICE

Before switching on the machine, make sure that all protective devices are fitted to the machine and all tools have been removed from the machine!

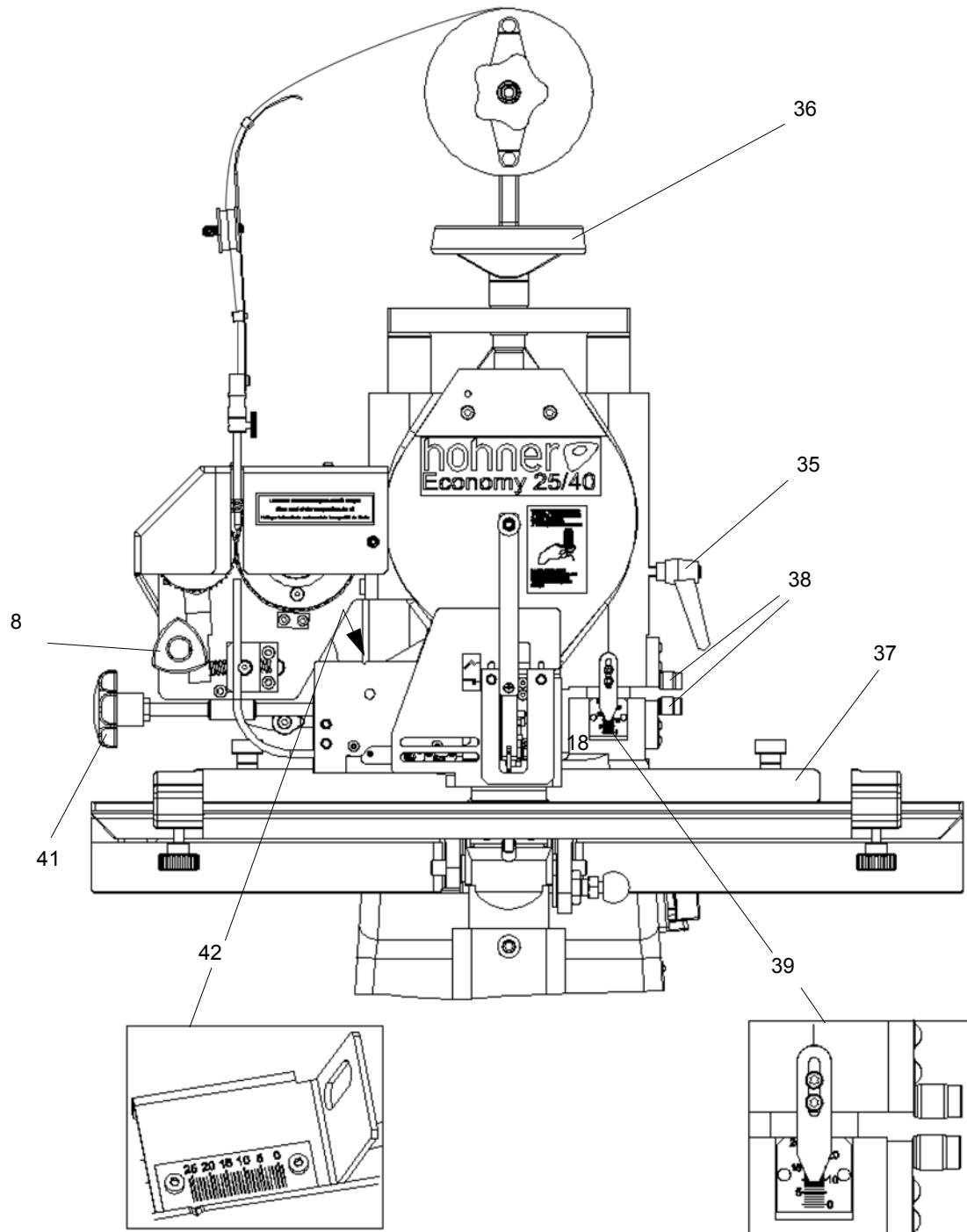



Fig. 4.4

4.4 Adjusting the stitching thickness and wire length

	<p>! WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <ul style="list-style-type: none"> ➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally. ➤ Never operate the system without properly mounted finger guard.
---	---

4.4.1 Setting the stitching thickness

- Fig. 4.4 -
- First loosen the clamping lever -35-. The handwheel -36- can then be used to move the stitching head downwards or, if turned to the left, upwards.

Downwards means thinner, upwards means thicker material to be stitched.

- The material to be stitched -37- is guided between the dancing rollers -38- on the right of the stitching head. The thickness of the material to be stitched can be identified by turning the handwheel.

The setting is reached when the material to be stitched can only be pulled out of the dancing rollers stiffly.

- The stitching head is now locked again with the clamping lever -35-.

4.4.2 Setting the length of the stitching wire

- Fig. 4.4 -
- The wire length (staple length) can be infinitely adjusted to the stitching thickness.

- Read off the set range (e.g. 10) on the stitching thickness scale -39-. After switching off the wire feed with the triangular handle -8-, transfer the set value on the stitching thickness scale -39- roughly to the wire length scale -42-, with the help of the adjusting handle -41-.

After the first presetting, the wire length must be precisely adjusted by means of test stitchings. The wire length must be corrected as described above, until the desired staple prong length is reached.

Note: Lower settings on the wire length scale -42- give a shorter wire for shorter staple shanks, higher settings on the wire length scale -42- give a longer wire for longer staple shanks.

NOTICE

Before switching on the machine, make sure that all protective devices are fitted to the machine and all tools have been removed from the machine!

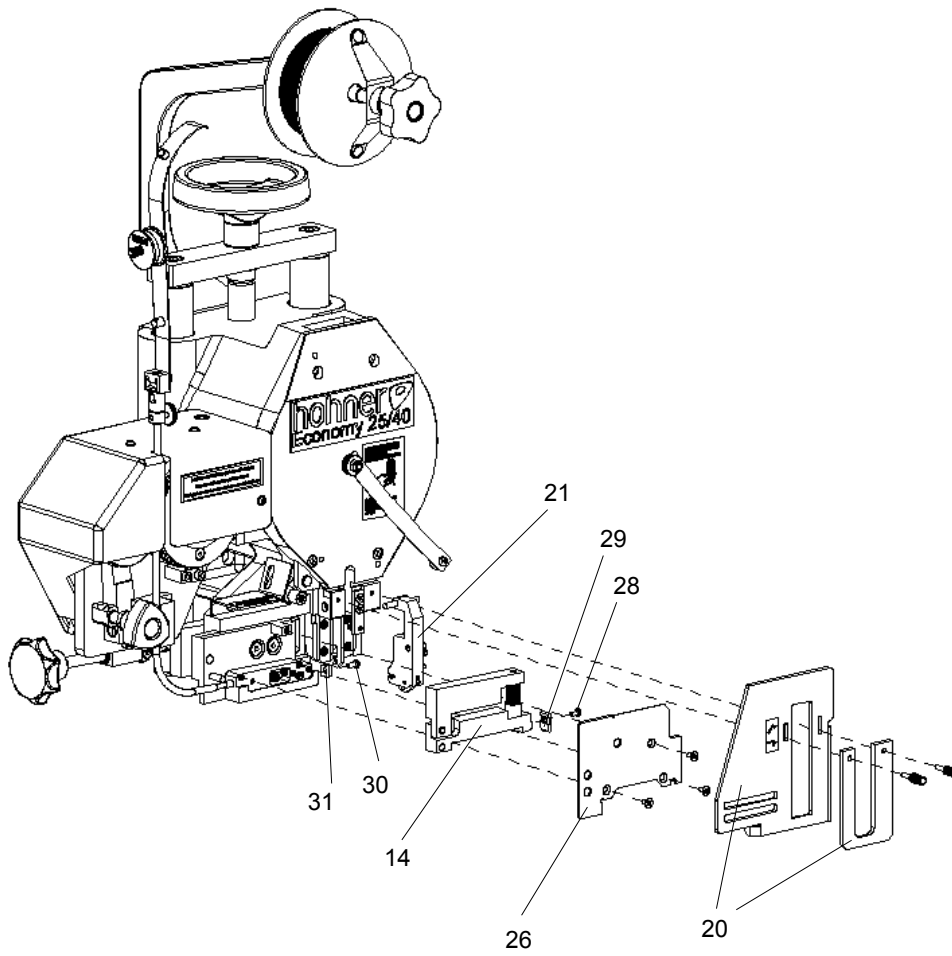



Fig. 4.5

4.5 Exchanging the upper and lower knife

	<p>WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <ul style="list-style-type: none"> ➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally. ➤ Never operate the system without properly mounted finger guard.
---	---



The upper and lower knives are subject to the heaviest stress and therefore wear most quickly. The quality of the stitching depends to a large extent on the condition of these knives.

Blunt knives pinch the wire off obliquely and form burrs. This results in poor staple penetration and, in the case of pad stitching, the staples do not penetrate the paper parallelly, but run untrue in the paper.

- Fig. 4.5 -
- Remove finger guard -20- and former -21-.
- Turn the machine by hand, until the knives open.
- Unscrew cover -26-, remove knife holder with pressure slide -14- and unscrew fastening screws -28- on upper knife -29- and fastening screws -30- on lower knife -31-.

Fitting the new knife is executed in the reverse order, ensuring correct seating of upper and lower knives (cutting edges must converge exactly parallel).

- Mount the finger guard in the correct position and **note the markings** (see 3.2).

NOTICE

Before switching on the machine, make sure that all protective devices are fitted to the machine and all tools have been removed from the machine!

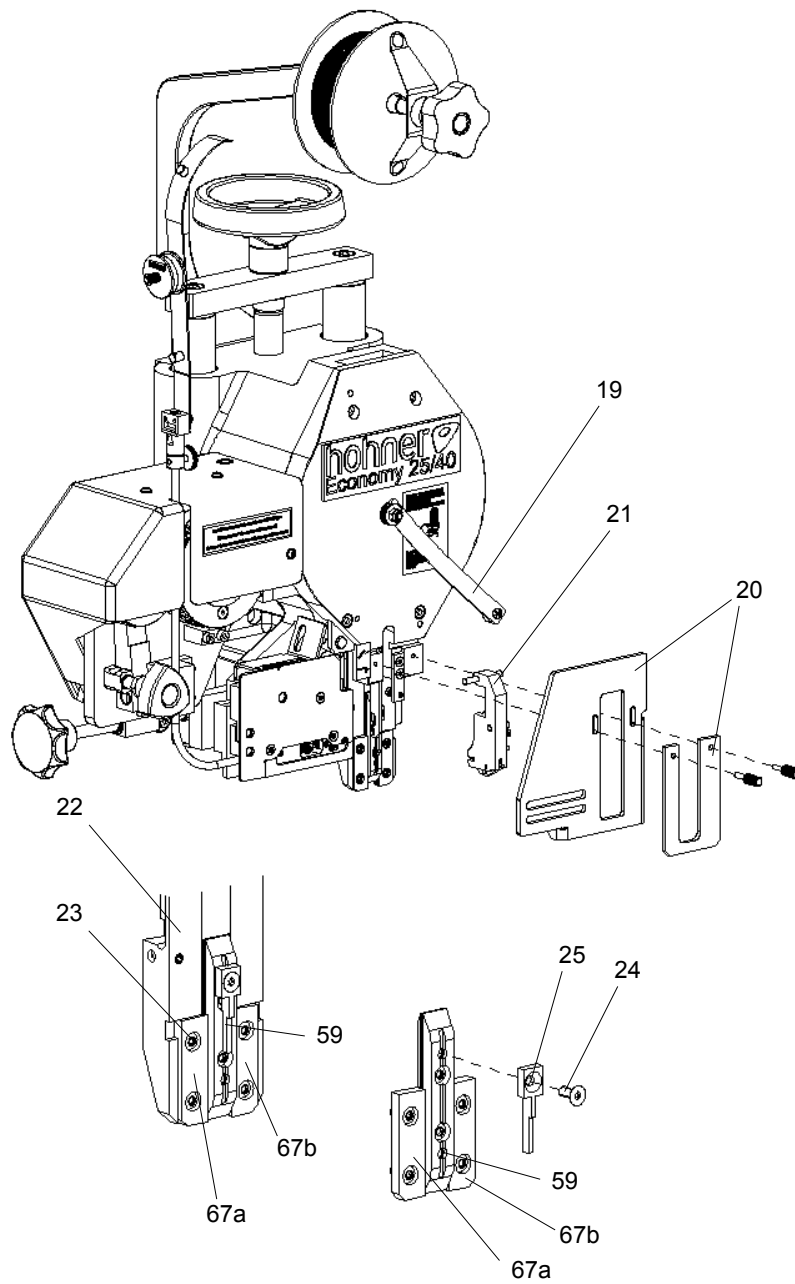


Fig. 4.6

4.6 Exchanging the driver and bender

- Fig. 4.6 -

The **ECONOMY 25/40** processes stitching wire of standard quality:

KIT coarse

Round wire no. 21 - 25 and

Flat wire no. I - VI

KIT fine

Round wire no. 24 - 30


The machine is delivered with an integrated **KIT coarse**, consisting of:

- Art. no. 31 35 536 Driver -59-
- Art. no. 31 35 538 Bender, left -67a-
- Art. no. 31 35 539 Bender, right -67b-

To produce a very fine stitching, integrate **KIT fine**, consisting of:

- Art. no. 31 35 547 Driver -59-
- Art. no. 31 35 548 Bender, left -67a-
- Art. no. 31 35 549 Bender, right -67b-

4.6.1 Exchanging the two KITS

	<p>WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <ul style="list-style-type: none"> ➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally. ➤ Never operate the system without properly mounted finger guard.
---	---

- Fig. 4.6 -

- Pivot the leaf spring -19-, remove finger guard -20- and former -21-. Turn down the main slide bar -22- until the above slotted cheese head screw -23- of the right bender is visible.
- Loosen the slotted countersunk head screw -24- of the switch finger -25- and all screws from the driver and the benders, and exchange the kit.
- Mount the finger guard in the correct position and **note the markings** (see 3.2).

NOTICE

Before switching on the machine, make sure that all protective devices are fitted to the machine and all tools have been removed from the machine!

Operation

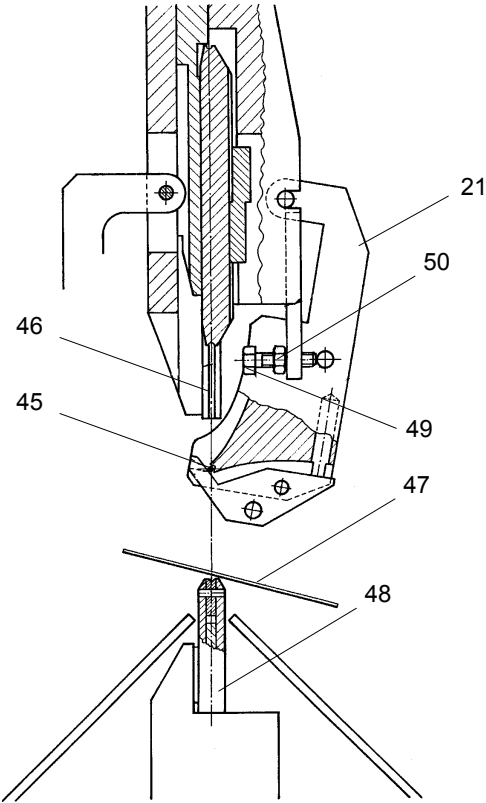



Fig. 4.7

4.7 Aligning the former

	<p>! WARNING</p> <p>Quick stroke movements of the stitching heads!</p> <p>Danger of crushing!</p> <ul style="list-style-type: none"> ➤ Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally. ➤ Never operate the system without properly mounted finger guard.
---	---

- Fig. 4.7 -

The stitching is correct when the former -21- swings in so far that the stitching wire -45- is located exactly beneath the middle of the groove of the bender -46-.

- This can be precisely checked by placing a mirror -47- on the clincher box -48-, so that the position of the former and the wire can be seen clearly in relation to the grooves of the benders.

- Any correction required can be carried out by adjusting the adjusting screw -49-.

- It is important to tighten lock nut -50- securely after adjustment.

NOTICE

Before switching on the machine, make sure that all protective devices are fitted to the machine and all tools have been removed from the machine!

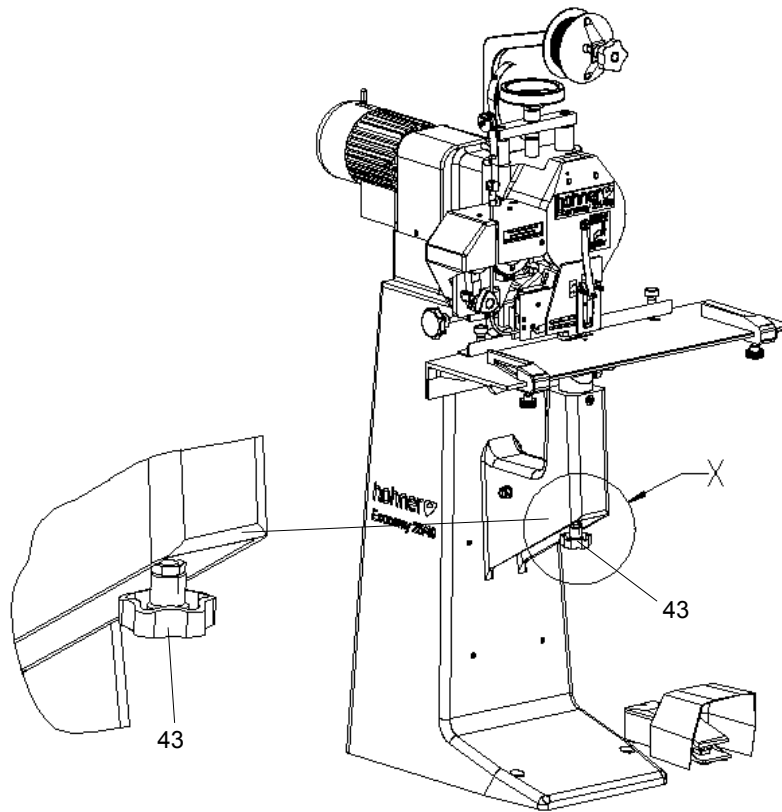


Fig. 4.8

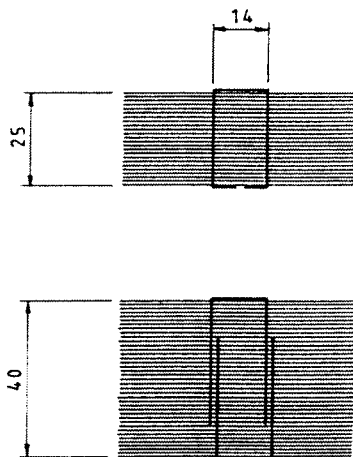


Fig. 4.9

4.8 Stitching very thick stitching material

- Fig. 4.8 -

To achieve better bending of the staples when stitching thick material and / or a heavy sort of paper, turn the red star handle -43- located on the front of the machine stand, in the direction of the arrow.

4.9 Pad stitching 25/40 mm

- Fig. 4.9 -

The machine stitches by clenching up to a thickness of 25 mm (1 inch.),

and up to 40 mm (1 ½ inch.) by stabbing;

when staples are inserted from both sides, the staples must not penetrate the pad.

Operation

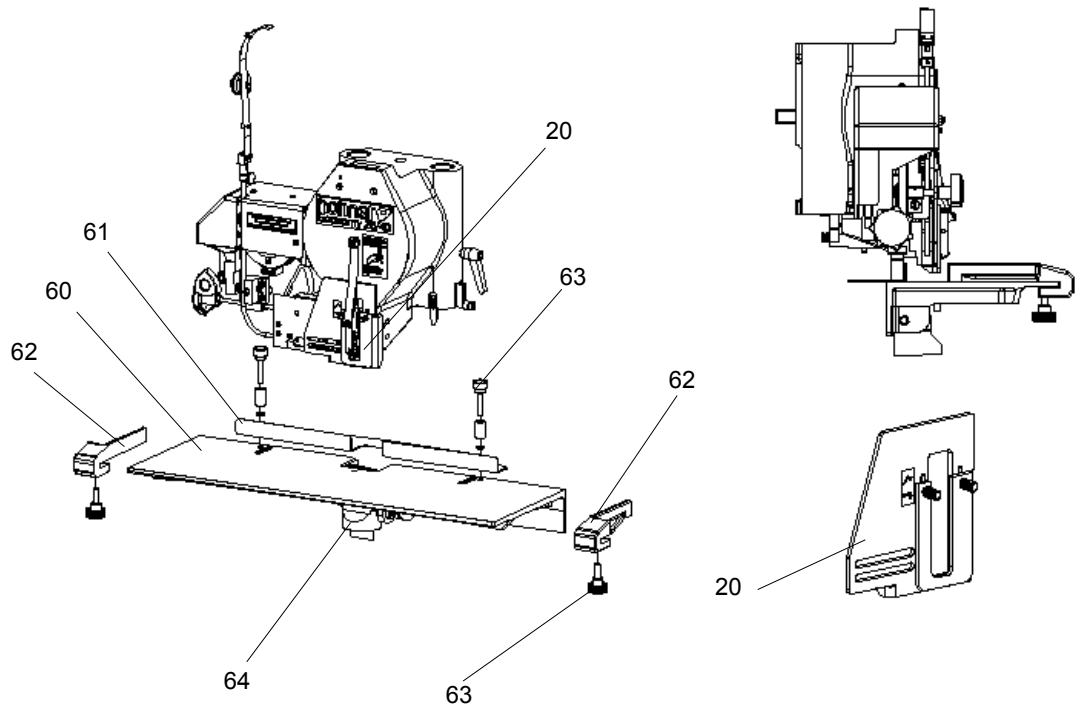


Fig. 4.10

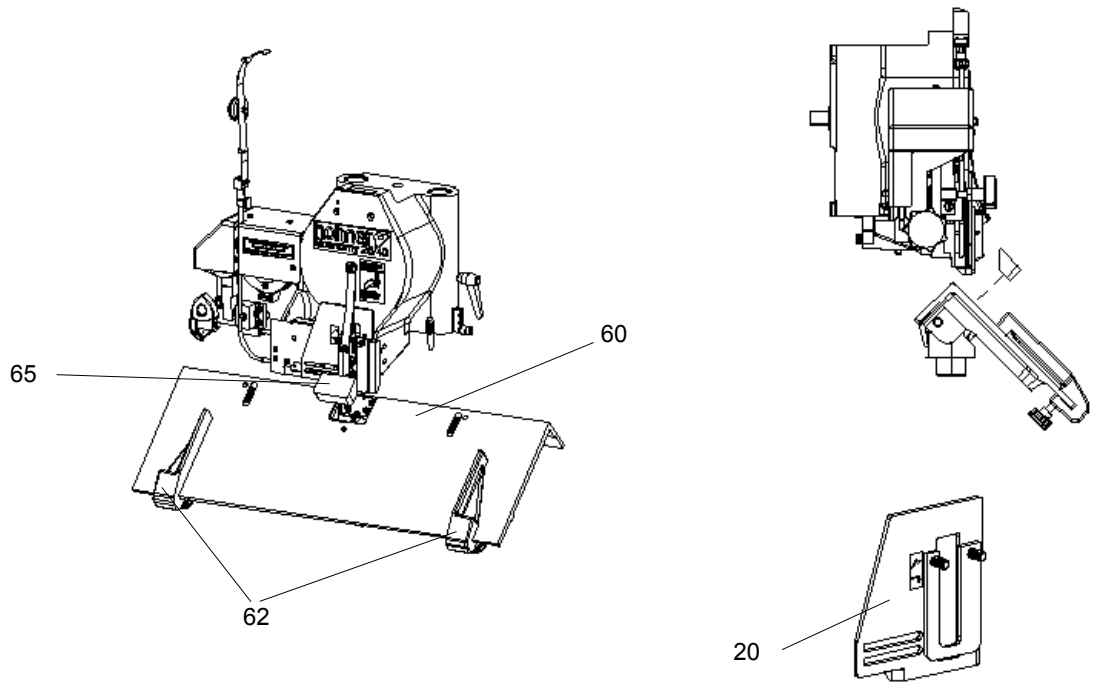


Fig. 4.11

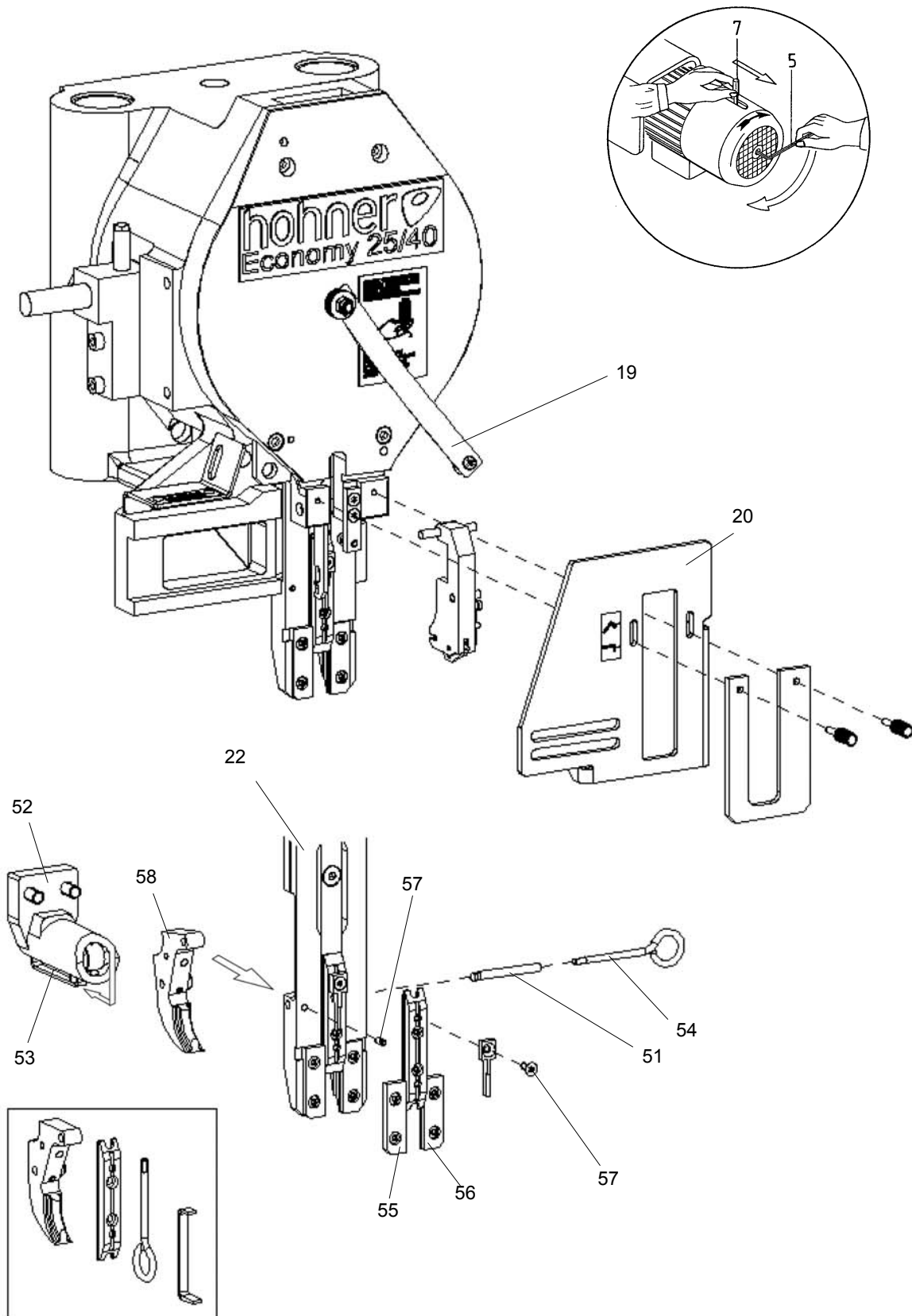
4.10 Table adjustment for pads and folders

4.10.1 Pad stitching

- Fig. 4.10 -
- For pad stitching, the stitching table -60- must be level, the guiding ruler -61- and both limit stops -62-, right and left, are screwed on by means of the knurled screws -63-.
- Mount the finger guard in the "**pad stitching**" position and note the markings (see - Fig. 4.10 -).

4.10.2 Folder stitching

- Fig. 4.11 -
- For folder stitching, the stitching table -60- must be set oblique (saddle-like).
- Unscrew the guiding ruler -61- and both limit stops -62- on the right and left, otherwise the plexi-glass finger guard -20- will break. Hold the stitching table with your left hand, whilst your right hand is pulling the cylinder stop lever -64-.
- Now move the table forward into saddle position.
- The guiding ruler -61- is not used if you are working in saddle-like position.
- Insert the round ended sunk key -65- in synthetic-resin-compressed wood into the stitching table as a protection.
- Mount the finger guard in the "**folder stitching**" position and note the markings (see - Fig. 4.11 -).



KIT for loop - stitching
Art. no. 01 00 100

Fig. 4.12

4.11 Loop stitching with economy 25/40

- Fig. 4.12 -

- Move the main slide bar -22- so that the axle -51- on the right side of the stitching head is accessible. Do this using the hexagon socket screw key -5-, size 5 from the tool-set. Insert it in the cylindrical screw at the back of the drive motor and turn in the direction of the arrow, pushing the fan lever -7- simultaneously.
- Relieve the roller tappet -52- with the holding clip -53-.



TIP

When changing the benders for "loop-stitching", it is essential to replace coarse.

- Pivot the leaf spring -19- and remove the finger guard -20-.
- Fine benders are required for loop-stitching. Remove coarse benders, right and left, and replace them with fine benders, left -55- and right -56-. Loosen the hexagon socket set screw -57- in front of the main slide bar using the round screw hook -54-, then pull out the axle -51- laterally.
- Now remove the shoe tongue backwards.
- Introduce shoe tongue -58- for loop-stitching from behind, push the axle -51- in again and retighten the hexagon socket set screw -57-.
- Insert the driver -59- for loop-stitching and the switch finger -25-. **Ensure that** the switch finger is screwed into the upper thread by the driver.
- Tighten both benders, left -55- and right -56-, securely. Both benders are now located close to the lateral surfaces of the main slide bar -22-.
- Before switching the machine on, please turn the motor once by hand for a final check, then relieve the roller tappet -52- with the holding clip-53-.

Operation

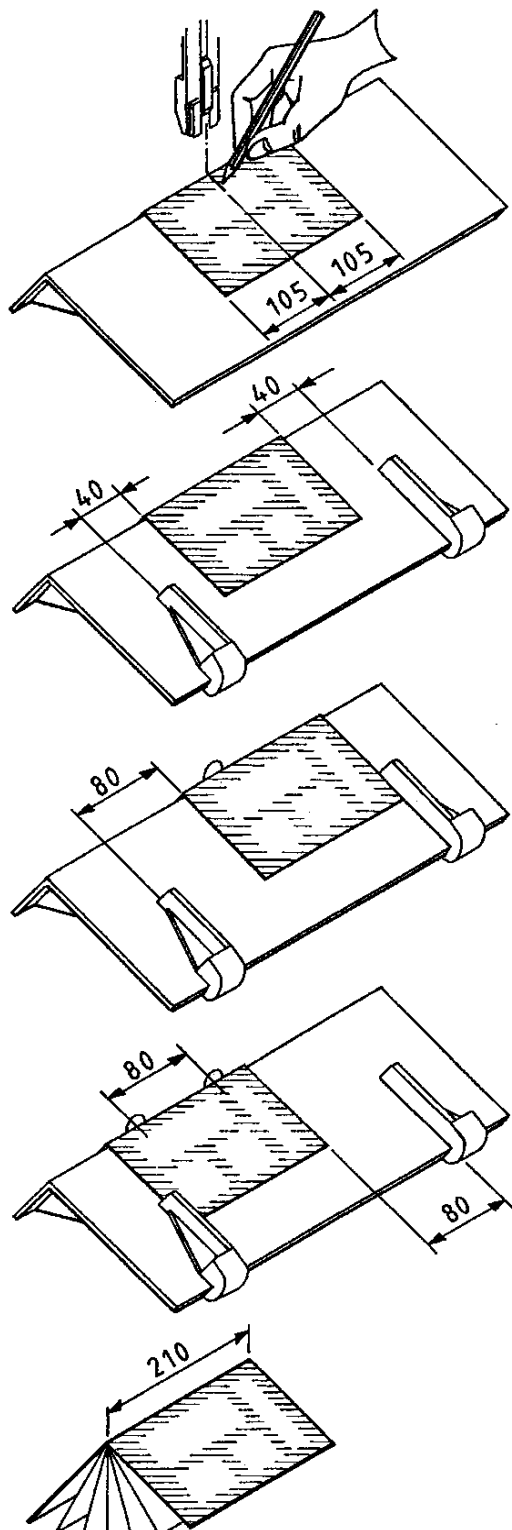


Fig. 4.13

4.12 Adjustment for loop-stitching, wire length stitching thickness - stitching table

4.12.1 Adjusting the wire length

According to Chapter 4.4 with the following setting:

- The number determined from the material to be stitched -37- is read off on the right stitching thickness scale -39-, and set on the left wire length scale -42-, increased by a value of 5 mm.

Example: Reading on stitching thickness scale 39 = 2 mm

Setting on the wire length scale 42 = 2 mm + 5 mm = 7 mm

After the first presetting, the wire length must be precisely adjusted by means of test stitchings.

4.12.2 Adjustment of the stitching thickness

Equal to standard folder stitching

4.12.3 Adjustment of the stitching table and limit stops

- Fig. 4.13 -

The procedure is explained by means of an example:

- A folder has to be stitched with two loops, distance 80 mm (measured from middle) to the middle of the loops.
- The length of the folder is 210 mm; locate the middle of the back edge with a division mark, i.e. at 105 mm.
- The folder is placed on the tilted table, so that the middle of the driver and the division mark of the folder exactly coincide.
- Set the right and left limit stops on either side of the folder to a distance of 40 mm.
- The folder is stitched, pushing first to the right, then to the left limit stop. The distance of 80 mm measured from the upper and lower edge of the folder corresponds to the distance between the two loops (middle to middle).



Hinweis

Check equal length of folders before stitching!

Note:

Check distance and execution by means of a specimen folder! Tighten the knurled screws of both limit stops carefully, to avoid differences in stitching distance.

Operation

4.13 Lubrication specification

Apply a first-rate oil only, not a viscous mineral oil or a light oil.

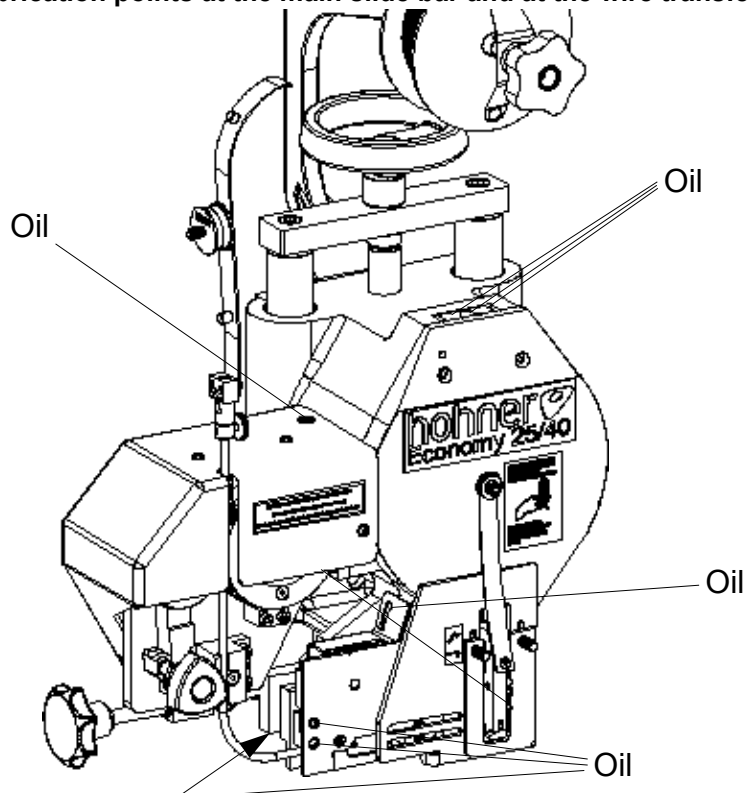
Factory recommendation:

Slideway oil with viscosity class 65 - 70 (ISO viscosity class to DIN 51519).

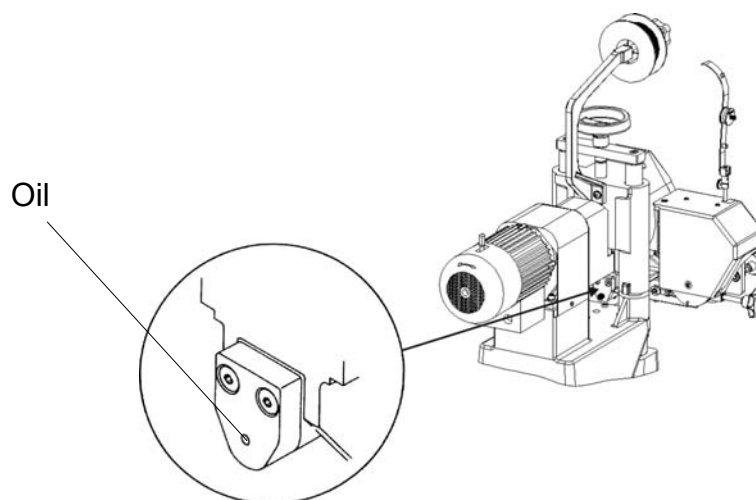
Oiling frequency?

After every 24th working hour.

Lubrication points at the main slide bar and at the wire transfer



Oil lubrication point at the roller tappet

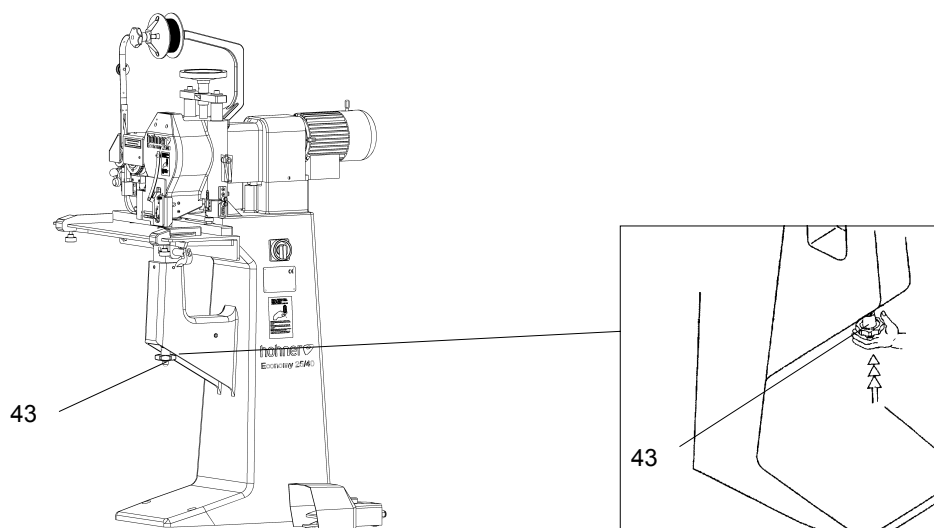


5 Trouble shooting

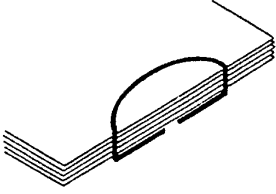
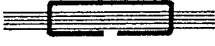



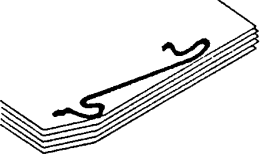
5.1 Causes and elimination of faults




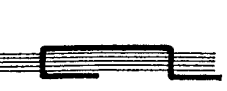
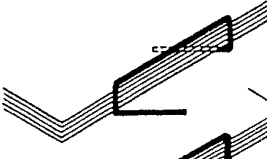
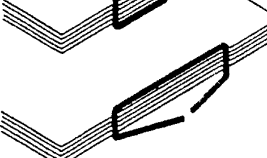

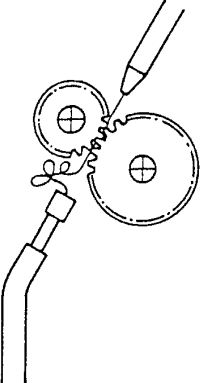

In the instructions below you will find some examples of faults, their causes and their correction. There are often different causes, which must be investigated step by step. Do not apply all suggestions simultaneously, but one after another, carrying out tests in between.

- Worn parts:
Replace in good time. Repairs are more expensive and less reliable.
- Defects in the electrical equipment:
These may only be repaired by a qualified electrician.
- Motor protection relay has tripped:
Check whether machine is locked (see below) or the stitching thickness is incorrectly set. Reset the motor protection relay by pressing the reset button (see 3.5).
- The machine suddenly locks during stitching or wire-straightening:
Check whether a piece of wire or a staple has jammed between or behind the movable parts of the stitching head. Unscrew finger-guard, former, bender and driver.
- Clinchers are jamming, have no or insufficient upward stroke:
Give the red star handle -43- a sharp, vigorous upward press, and repeat several times.
- Staple shanks are insufficiently bent:
Turn the red star handle -43- slightly to the right.
- Ejecting the staples from the clincher box:
The red star handle -43- can be used to eject staples or wire bits jammed in the clincher box: give the red star handle -43- a sharp, vigorous pull upwards to overcome the pressure of the spring.

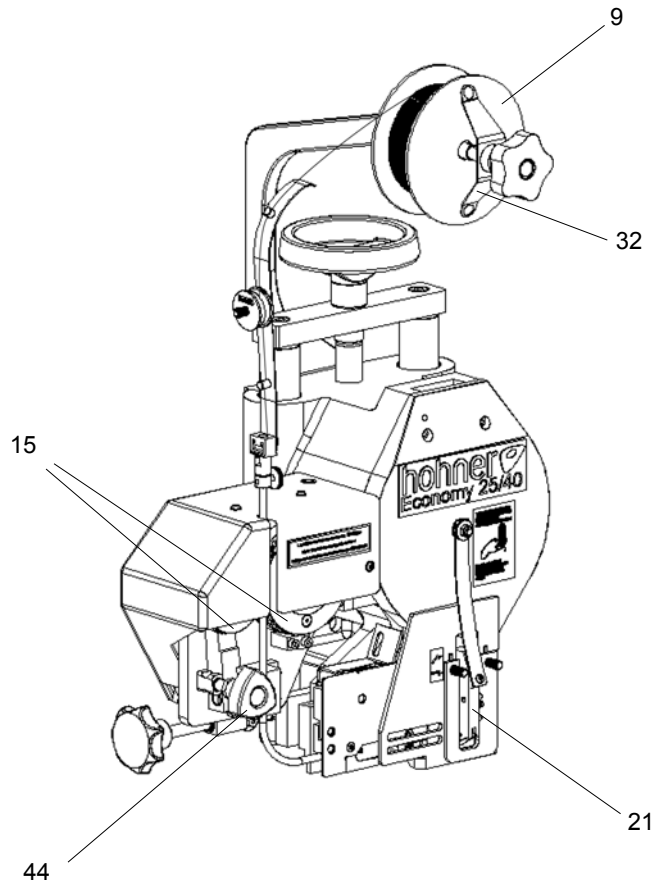


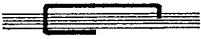

Trouble shooting

Stitch	Fault	Potential cause and elimination of the fault
	Back of stitch is bent in a banana shape:	<ul style="list-style-type: none"> - Weak or soft wire. - Wire not aligned. - Circular or flat knife worn. - Shoe tongue pressure too weak: remove obstructing wire pieces or replace pressure spring in shoe tongue. - Wire groove in driver soiled, worn or damaged: remove driver. Clean driver groove or replace driver.
	Back of stitch not securely positioned:	<ul style="list-style-type: none"> - Stitching not pressed sufficiently: set stitching unit to stitch thickness.
	Stitch legs are not sufficiently clinched:	<ul style="list-style-type: none"> - Stitching not pressed sufficiently: set stitching unit to stitch thickness. - Clincher is not coming up far enough: adjust clincher lift pressure on stitching unit. - Time from clincher activation to lift movement is incorrect: stitching unit must be reset by the manufacturer.
	Back of stitch is not securely positioned and is sagging in a saddle shape:	<ul style="list-style-type: none"> - Stitching not sufficiently pressed: set stitching unit to stitch thickness. - Weak or soft wire. - Shoe tongue pressure too weak: remove obstructing wire pieces or replace pressure spring in shoe tongue.
	Stitch legs are buckled and are not properly clinched:	<ul style="list-style-type: none"> - Weak or soft wire. - Wire not aligned. - Align clincher box. - Different leg lengths. - Overall wire piece too short. - Circular or flat knife worn.
	Wire not penetrating, resulting in loop formation:	<ul style="list-style-type: none"> - Weak or soft wire. - Bender groove blocked by wire pieces. - Circular or flat knife worn. - Wire groove in driver soiled, worn or damaged: remove driver: clean driver groove or replace driver. - Shoe tongue pressure too weak: remove obstructing pieces of wire or replace pressure spring in shoe tongue. - Align clincher box.

	<p>Stitch legs break off:</p>	<ul style="list-style-type: none"> - Wire too brittle: use a different wire quality. - Former blocked by pieces of wire: remove wire pieces, remove former if necessary. - Gripper spring or gripper in former defective. - Wire thickness not suitable for the wire guiding parts (bender and driver). - Adjust former to bender groove.
	<p>Hump at a stitch corner:</p>	<ul style="list-style-type: none"> - Weak or soft wire. - Driver damaged. - Circular or flat knife worn. - Wire not aligned.
	<p>Stitch legs contract or diverge:</p>	<ul style="list-style-type: none"> - Circular or flat knife worn. - Wire not aligned. - Align clincher box.
	<p>Leg ends clinched the wrong way round:</p>	<ul style="list-style-type: none"> - Weak or soft wire. - Wire not aligned. - Circular or flat knife worn.
	<p>One or both legs are clinched obliquely:</p>	<ul style="list-style-type: none"> - Clincher damaged. - Adjustment of clincher box mounting to stitching head mounting. - Wire not aligned.
	<p>Stitch legs are clinched obliquely to the same side:</p>	<ul style="list-style-type: none"> - Adjustment of clincher box mounting to stitching head mounting. - Wire not aligned. - Bender worn.
	<p>Lightly bent wire pieces fall out:</p>	<ul style="list-style-type: none"> - Wire not aligned. - Cutting slider jammed: circular knife set too tightly to flat knife. - Cutting rocker locked, pressure spring in cutting block defective.
	<p>Wire loop between conveyor wheels and wire guidance tube:</p>	<ul style="list-style-type: none"> - Former incorrectly set. - Cutting pusher gets caught: <ul style="list-style-type: none"> - compression spring faulty - knife set too strong - bottom wire guides clogged
	<p>Straight wire pieces fall out:</p>	<ul style="list-style-type: none"> - Weak spring pressure on former. - Wire not aligned. - Former set incorrectly.
	<p>Remedy for faults: loop stitching</p>	<p>You will find most faults and their causes in the preceding section</p>

Trouble shooting

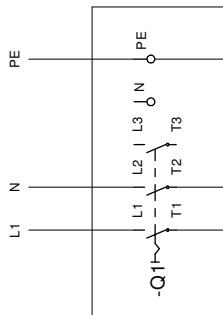


 	<p>Staples are not complete:</p> <p>One prong is shorter</p> <p>Wire is not cut off</p>	<ul style="list-style-type: none"> - Wire coil -9- too strongly braked or wire entangled; caught. - Wire transport wheels -15- are not sufficiently pressed together. Adjust with adjusting screw -44-. Turning to the right produces more pressure, turning to the left produces less pressure. - Knives are blunt, the wire is only slightly cut and tears off during bending in the former -21-. - In the case of round wire no. 30: the wire must be properly guided, i.e. adequately tensioned. Tighten leaf spring -32- on the wire coil -9- a little. <ul style="list-style-type: none"> - Upper or lower knife worn. - Replace pressure slide and spring assembly.
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6 Flow diagrams

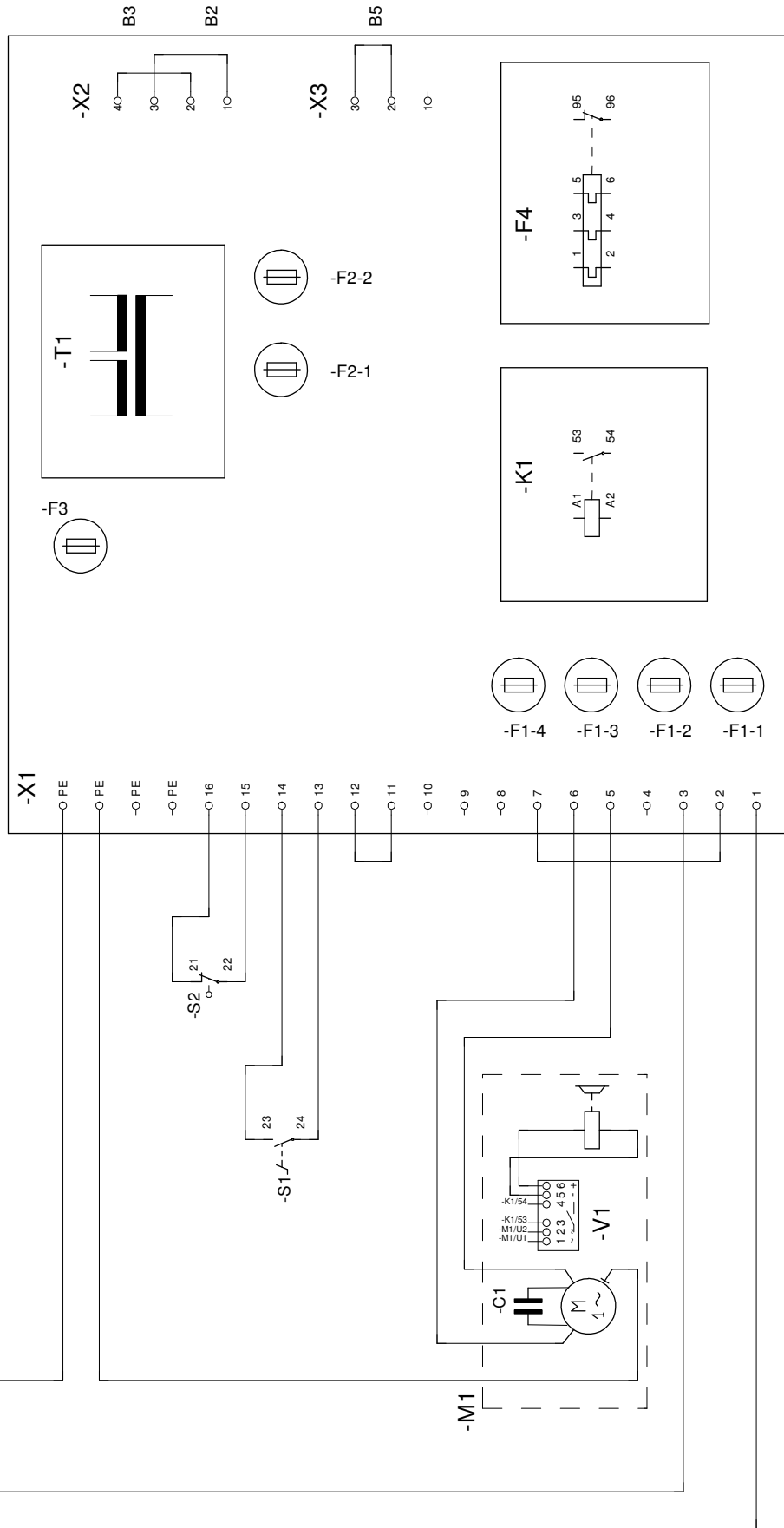
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ECONOMY 25/40 Nr. 43 35 014 230-240V 1 Phase AC 50/60Hz 24V DC	P. 1 - 2
ECONOMY 25/40 Nr. 43 35 015 400-440V 3 Phase AC / Y 50/60Hz 24V DC	P. 1 - 2
ECONOMY 25/40 Nr. 43 35 016 200-240V 3 Phase AC / Δ 50/60Hz 24V DC	P. 1 - 2
ECONOMY 25/40 Nr. 43 35 020 (Horizon) 200V 3 Phase AC / Δ 50/60Hz 24V DC	P. 1 - 2
ECONOMY 25/40 Nr. 43 35 023 (Horizon) 100V 1 Phase AC 50/60Hz 24V DC	P. 1 - 3
ECONOMY 25/40 Nr. 43 35 024 400-440V 3 Phase AC / Y 50/60Hz 24V DC	P. 1 - 2

1 2 3 4 5 6 7 8 9



B1	X2	2 + 3	230V
B2	X2	1 + 3	115V
B3	X2	2 + 4	115V
B4	X3	1 + 2	Y
B5	X3	2 + 3	△

-A1



15.05.08 VEK



Maschine / Machine / Machine
ECONOMY 25/40

Zeichnungs-Nr. / Drawing-Nr. / Dessin-No.

43 35 013

Index

b


Benennung / Title / Dénomination
Schaltplan / flow diagrams / schéma des circuits
110-115V 1 Phase AC 50/60Hz 24V DC

Änderung Name ©Hohner Maschinenbau GmbH

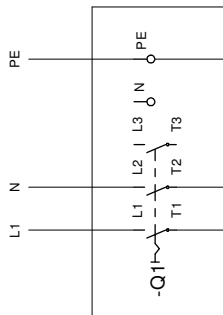
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-A1	4300322	Platine	printed circuit board			platine		
-A1-F1-4	4300279	Sicherung T10A Hauptstromkreis	safety fuse T10A main current			fusible de sécurité T10A circuit principal		
-A1-F1-3	4300279	Sicherung T10A Hauptstromkreis	safety fuse T10A main current			fusible de sécurité T10A circuit principal		
-A1-F1-2	4300279	Sicherung T10A Hauptstromkreis	safety fuse T10A main current			fusible de sécurité T10A circuit principal		
-A1-F1-1	4300279	Sicherung T10A Hauptstromkreis	safety fuse T10A main current			fusible de sécurité T10A circuit principal		
-A1-F2-1		Sicherung T100mA Trafo prim.	safety fuse T100mA transformer prim.			fusible de sécurité T100mA transform. prim		
-A1-F2-2		Sicherung T100mA Trafo prim.	safety fuse T100mA transformer prim.			fusible de sécurité T100mA transform. prim		
-A1-F3		Sicherung T1,0A Trafo sek.	safety fuse T1,0A transformer sec.			fusible de sécurité T1,0A transformateur sec.		
-A1-F4	4300744	Motorschutzrelais	overload relay			relais de surchargé		
-C1		Kondensator	condenser			condensateur		
-K1		Schütz	control circuit			contacteur		
-K1	4300537	Hilfsschalterblock	control switch block			bloc interrupteur auxiliaire		
-M1	4200131	Motor	motor			moteur		
-Q1	4300007	Hauptschalter	main switch			interrupteur principal		
-S1	4300068	Fußschalter	pedal switch			commande par pédale		
-S2	4300271	Endschalter	stop switch			déclenchem. fin du course		
-T1		Trafo	transformer			transformateur		
-V1	4300106	Brückengleichrichter Bremse M1	bridge rectifier brake M1			redresseur à pont frein M1		
-X1		Klemmleiste	connector block			réglette de bornes		
-X2		Klemmleiste - Trafo	connector block - trafo			réglette de bornes - transformateur		
-X3		Klemmleiste - Y / Δ	connector block - Y / Δ			réglette de bornes - Y / Δ		

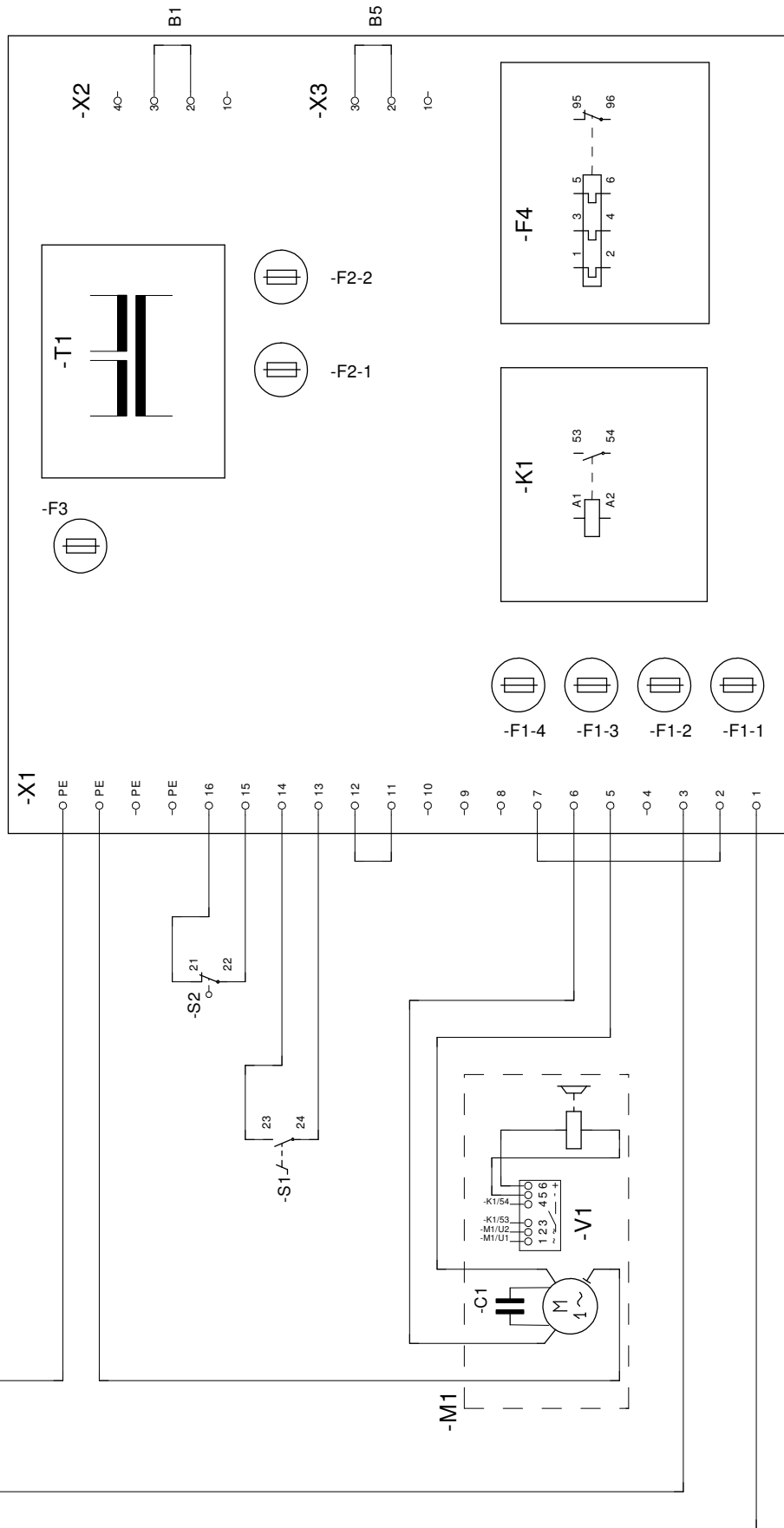
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			ECONOMY 25/40	43 35 013	b
		Benennung / Title / Dénomination			
		Ersatzteilleiste / spare parts list / liste des pièces de rechange			
Änderung	Name	©Hohner Maschinenbau GmbH			
					Seite Sheet Page 2

1 2 3 4 5 6 7 8 9



B1	X2	2 + 3	230V	X
B2	X2	1 + 3	115V	
B3	X2	2 + 4	115V	
B4	X3	1 + 2	Y	
B5	X3	2 + 3	△	X

-A1



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Benennung / Title / Dénomination
Schaltplan / flow diagrams / schéma des circuits
230-240V 1 Phase AC 50/60Hz 24V DC

Änderung Name ©Hohner Maschinenbau GmbH

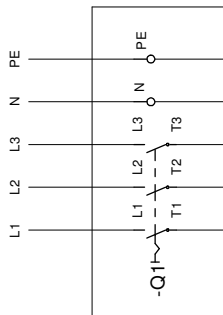
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1	2	3	4	5	6	7	8	9
Bez.	Art.Nr	Bezeichnung	Description	Description	Description			
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-A1-F1-3	4300279	Sicherung T10A Hauptstromkreis	safety fuse T10A main current	fusible de sécurité T10A circuit principal				
-A1-F1-2	4300279	Sicherung T10A Hauptstromkreis	safety fuse T10A main current	fusible de sécurité T10A circuit principal				
-A1-F1-1	4300279	Sicherung T10A Hauptstromkreis	safety fuse T10A main current	fusible de sécurité T10A circuit principal				
-A1-F2-1		Sicherung T100mA Trafo prim.	safety fuse T100mA transformer prim.	fusible de sécurité T100mA transform. prim				
-A1-F2-2		Sicherung T100mA Trafo prim.	safety fuse T100mA transformer prim.	fusible de sécurité T100mA transform. prim				
-A1-F3		Sicherung T1,0A Trafo sek.	safety fuse T1,0A transformer sec.	fusible de sécurité T1,0A transformateur sec.				
-A1-F4	4300744	Motorschutzrelais	overload relay	relais de surchargé				
-C1		Kondensator	condenser	condensateur				
-K1		Schütz	control circuit	contacteur				
-K1	4300537	Hilfsschalterblock	control switch block	bloc interrupteur auxiliaire				
-M1	4200132	Motor	motor	moteur				
-Q1	4300007	Hauptschalter	main switch	interrupteur principal				
-S1	4300068	Fußschalter	pedal switch	commande par pédale				
-S2	4300271	Endschalter	stop switch	déclenchem. fin du course				
-T1		Trafo	transformer	transformateur				
-V1	4300106	Brückengleichrichter Bremse M1	bridge rectifier brake M1	redresseur à pont frein M1				
-X1		Klemmleiste	connector block	réglette de bornes				
-X2		Klemmleiste - Trafo	connector block - trafo	réglette de bornes - transformateur				
-X3		Klemmleiste - Y / Δ	connector block - Y / Δ	réglette de bornes - Y / Δ				

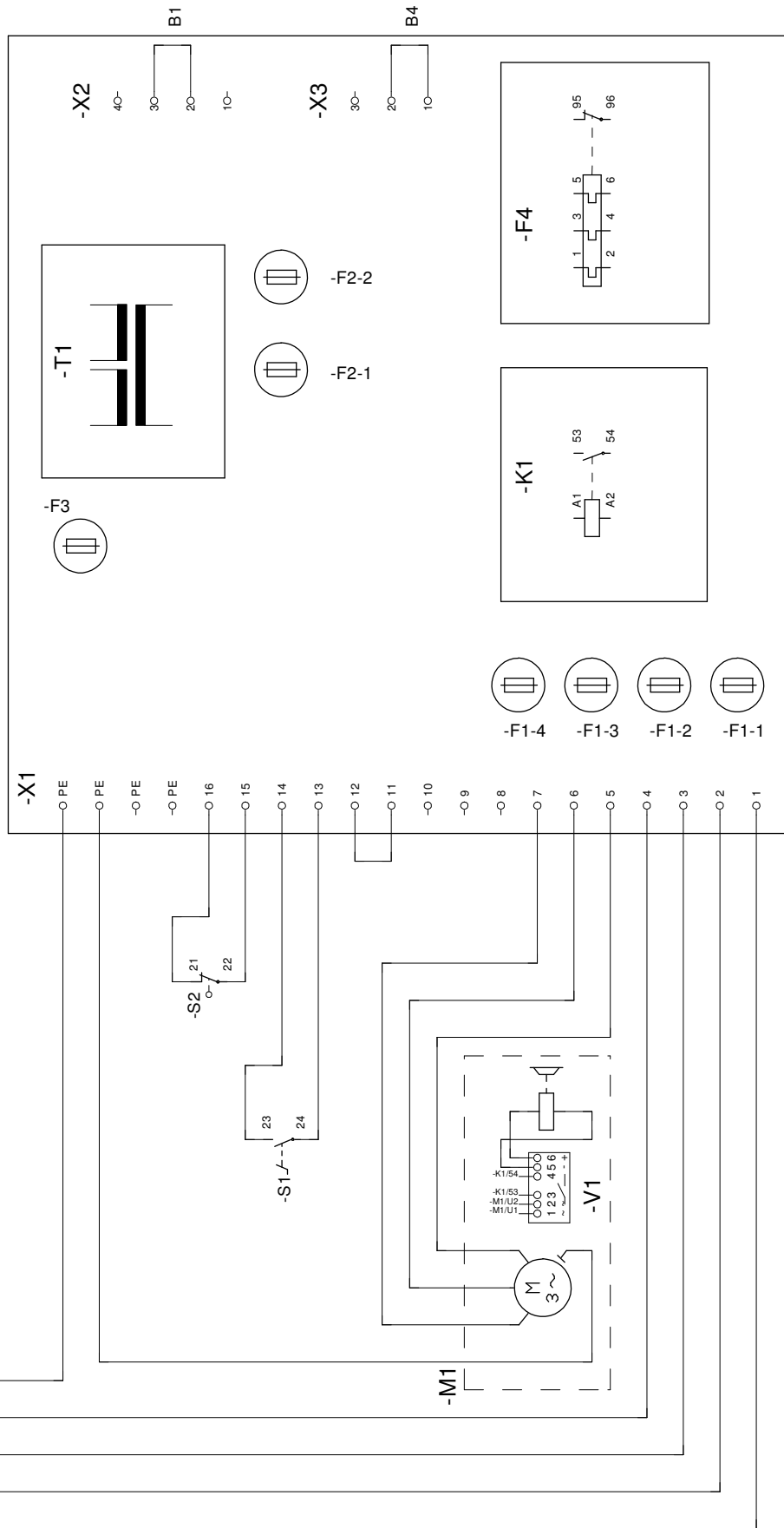
26.05.08	VEK	 Maschine / Machine / Machine ECONOMY 25/40	Zeichnungs-Nr. / Drawing-Nr. / Dessin-No.	Index
			43 35 014	b
Änderung	Name	©Hohner Maschinenbau GmbH		
		Benennung / Title / Dénomination Ersatzteilleiste / spare parts list / liste des pièces de rechange		
				Seite Sheet Page 2

1 2 3 4 5 6 7 8 9



B1	X2	2 + 3	230V	X
B2	X2	1 + 3	115V	
B3	X2	2 + 4	115V	
B4	X3	1 + 2	Y	X
B5	X3	2 + 3	△	

-A1



15.05.08 VEK



Maschine / Machine / Machine
ECONOMY 25/40

Zeichnungs-Nr. / Drawing-Nr. / Dessin-No.

43 35 015

Index

b

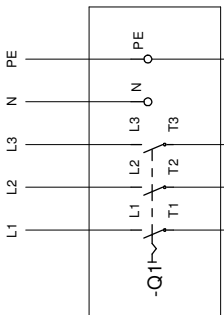
Benennung / Title / Dénomination
Schaltplan / flow diagrams / schéma des circuits
400-440V 3 Phase AC / Y 50/60Hz 24V DC

Änderung Name ©Hohner Maschinenbau GmbH

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Sheet
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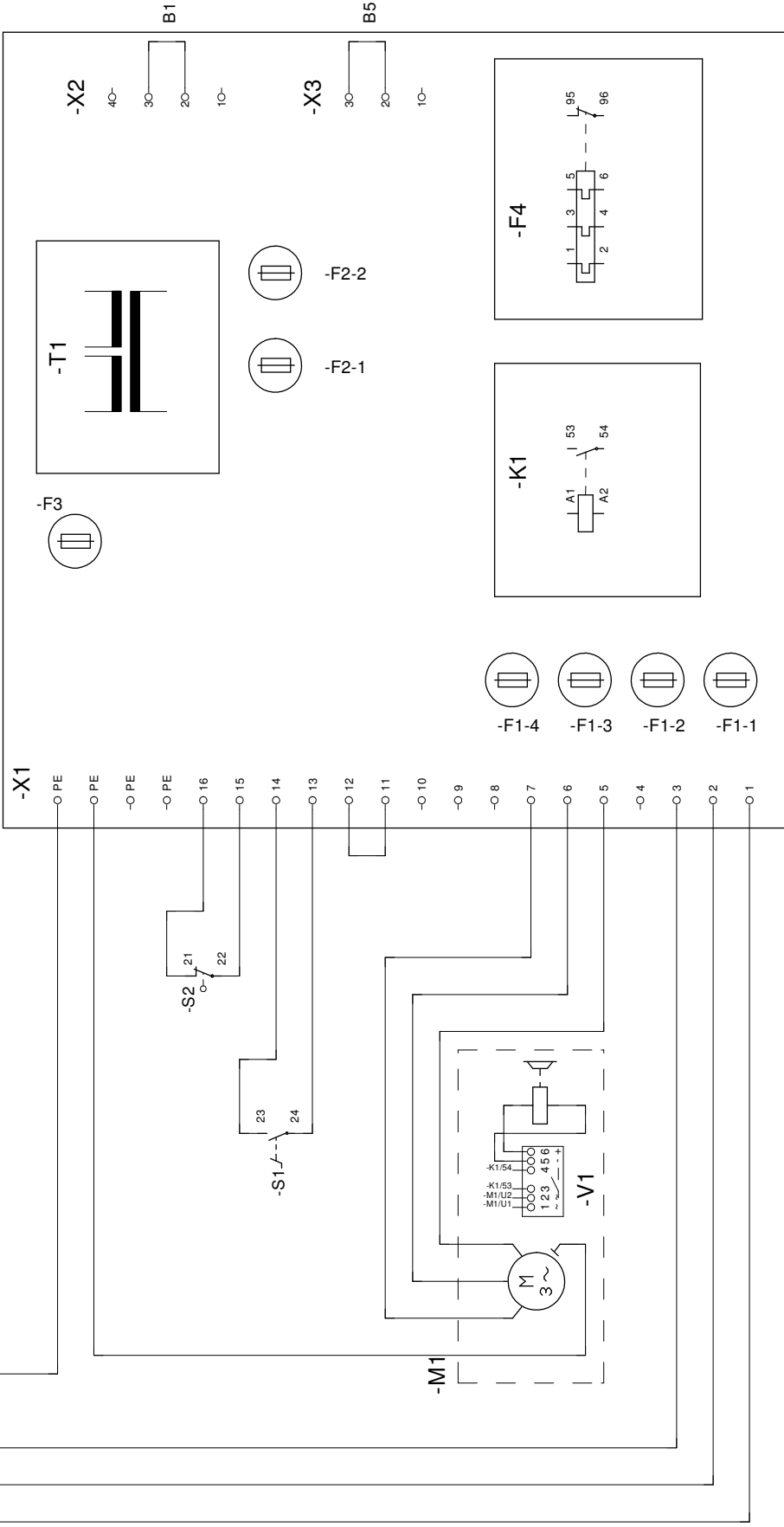
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1 2 3 4 5 6 7 8 9

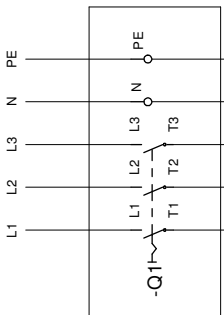


B1	X2	2 + 3	230V	X
B2	X2	1 + 3	115V	
B3	X2	2 + 4	115V	
B4	X3	1 + 2	Y	
B5	X3	2 + 3	△	X

-A1



1 2 3 4 5 6 7 8 9



B1	X2	2 + 3	230V	X
B2	X2	1 + 3	115V	
B3	X2	2 + 4	115V	
B4	X3	1 + 2	Y	X
B5	X3	2 + 3	△	

-A1

