EXACT-PLUS

Semiautomatic
booklet wire
stitching machine

CE

Hohner Maschinenbau GmbH
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Customer Details

Inventory no.:	.....
Location	.....

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Operating Manual

Document:	Translation of the german original Operating Instructions
Document number:	EXACT-PLUS, Volume 1/2
Version:	10/2010

Spare Parts Lists

Document number:	EXACT-PLUS, Volume 2/2

Table of Contents

1 Basic safety precautions

1.1 Purpose of this document

This document is to inform the operator of the ***Wire Stitching Machine EXACT-PLUS*** 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 EXACT-PLUS*** 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.

1.4 Duty and liability

The ***Wire Stitching Machine EXACT-PLUS*** 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 EXACT-PLUS 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

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.

1.11 Servicing and repair work, elimination of faults

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.

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 *stitching machine EXACT-PLUS*

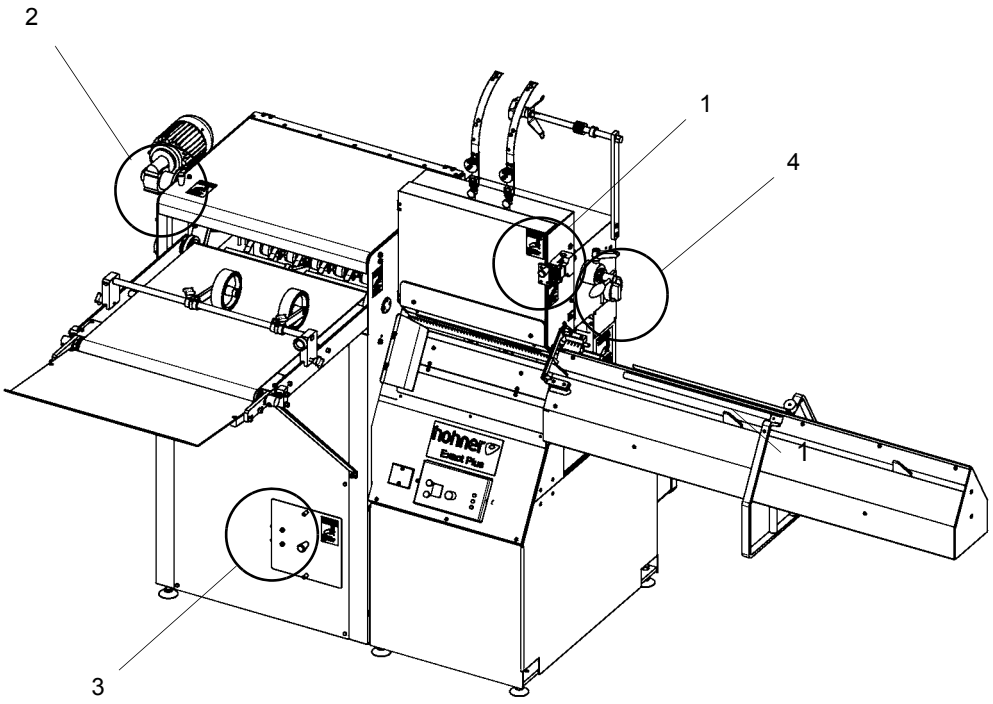


Fig. 2.1

2.1 Safety-related components

- Fig. 2.4 -

2.1.1 Position of the cut-out switch / emergency switch

The operator of the machine EXACT-PLUS is extensively protected by covers and shells from any danger. The main danger sources are additionally guarded against by special danger signs and appliances (cut-out switches).

2.1.2 Stitching aggregate

When installing or adjusting stitching heads the front cover has to be open. The front cover is electrically locked with the cut-out switch -1-, i.e. the machine **cannot** be operated with open front cover.

2.1.3 Delivery

Adjustment of paper stop (see 3.10) or installation at the delivery has to be done when plastic cover is open. The plastic cover is electrically locked with the cut-out switch -2-, i.e. the machine **cannot** be operated with open plastic cover.

2.1.4 Staggered stitch

To change-over from standard to "staggered stitching" remove the protecting cover. The protecting cover is electrically locked with the cut-out switch -3-, i.e. the machine **cannot** be operated with open protecting cover.

2.1.5 Main switch and emergency switch

Before all repairs and adjustments on the machine **cut out** the main switch -4-.


1
2
Allen-Bradley
EA
Man
Trip
TRIPPED
TEST
OVM
PUSH TO RESET
95
N.C.
96
97
N.O.
98

Fig. 2.2


3
4
5
EXACT PLUS
F 5A
F 5A
NETZ
DREHZAHL
Bereit
Überlast
Störung

Fig. 2.3

2.2 Electrical connections

DANGER

Voltage

Danger of electrical shock!

➢ Only qualified skilled workers may carry out work in the vicinity of the mains power supply.

- Employ a specialist to connect the machine to the mains supply. The local connection regulations must be adhered to. The cable should not lie loosely on the ground after it has been laid.

NOTICE Specifically observe the direction of rotation of the motor shaft (visible at the vane marked by the red arrow, see Fig. 3.9). Direction can be reversed by exchanging 2 phases in the mains supply cable.

2.3 Motor protective relay

- Fig. 2.2 -

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. 2.2 -.
  While doing so, ensure that all protective systems are installed on the machine and all tools have been removed from the machine.

2.4 Block mode for drive motor sliding connecting rods

- Fig. 2.3 -

Disconnection of the three-coil regulation of the DC motor occurs when the motor has been blocked for 10 sec.
The block mode is set back by switching off the mains voltage.

- -3-, Green
  Illuminated when the mains voltage is adjusted and released (ready).
- -4-, Red
  Illuminated when the current limit has been reached (overload).
- -5-, Red
  Illuminated once the block protection has switched off the controller (fault)

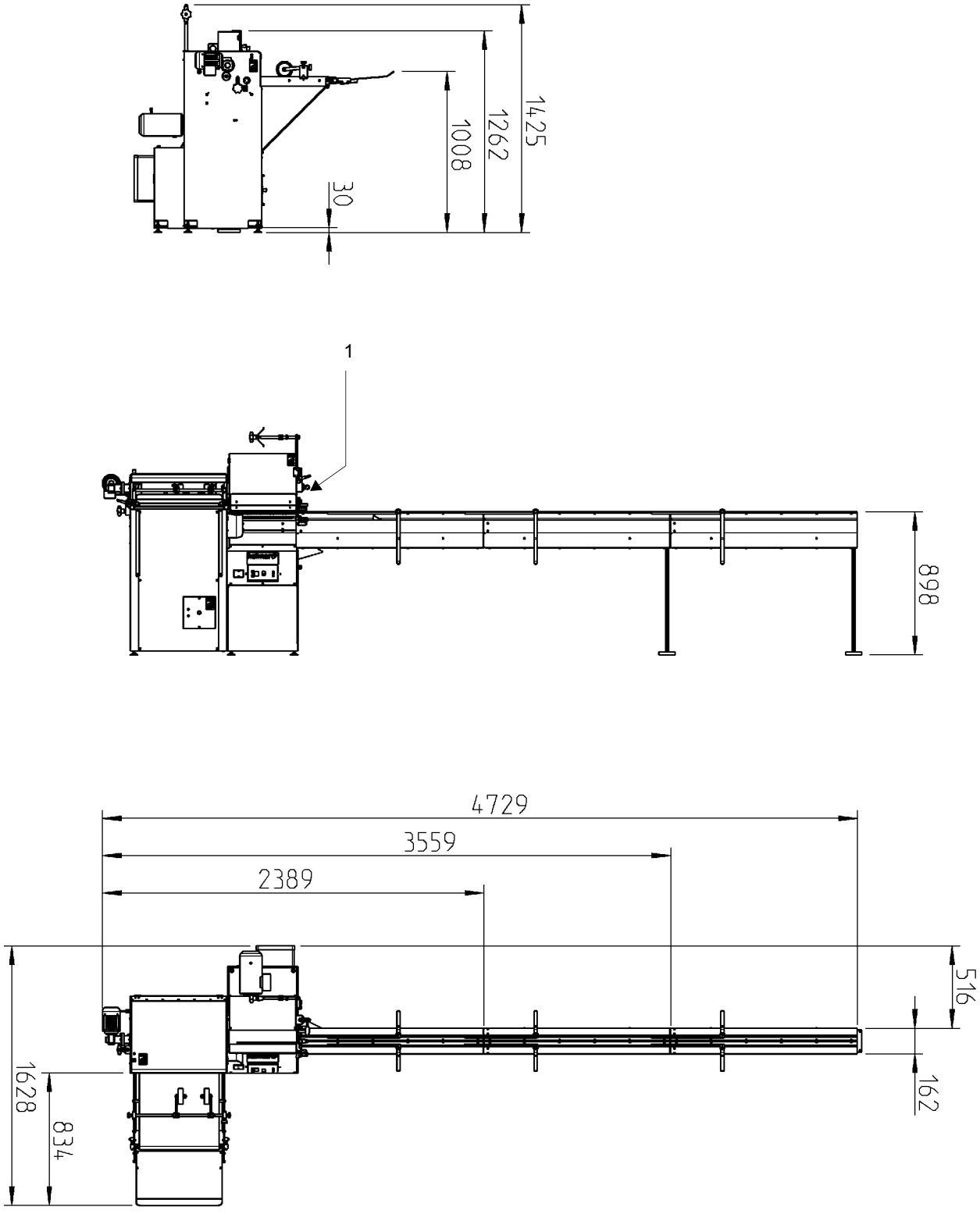


Fig. 2.4

2.5 Dimensions

- Fig. 2.4 -

2.6 Conformity

Please observe the document attached:
„**EC Declaration of Conformity according to the EC Machinery Directive 2006 / 42 / EC**“

2.7 Marking and type plate

The type plate and the CE labelling are fitted below the main switch - Fig. 2.4 -, Pos. 1.

2.8 Technical data

Smallest brochure size	110 x 80 mm*
Largest brochure size	430 x 340 mm*
Max. setting dimension for narrow stitching heads, approx	330 mm
Stitching capacity, staples per hour, approx:	4,000*, continuously variable
Staple displacement by "staggered stitch", from staple middle to staple middle:	18 mm
crown width of a staple	See stitching head operating instructions
Gross weight, machine with 2-station	511 kg
Net weight, machine with 2-station	315 kg
Kind of current, motor standard execution	Geared motor Three-phase A.C. 230/400 V 50-60 Hz
Total wattage of the motor, approx	1 kW
Noise emission	under 81 dB(A)
STITCHING AGGREGATE	
Max. 4 hohner - narrow stitching heads can be mounted for standard stitching, for loop-stitching or mixed	
Stroke-Narrow Stitching Head:	50 mm
Stroke-clincher back pressure:	5,5 mm
Stitching thickness-standard stitching, max	See stitching head operating instructions
Stitching thickness-loop stitching, max	See stitching head operating instructions
Stitching wire for standard stitching	See stitching head operating instructions
Stitching wire for loop-stitching	See stitching head operating instructions

* depending on nature and quality of the paper

2.9 Accessories

2.9.1 Equipment

Art.-no. 99 46 592	2 centering devices
Art.-no. 99 64 083	2 centering devices

2.9.2 Tools

Art.-no. 46 00 002	1 screwdriver, SB 2,3
Art.-no. 46 00 003	1 screwdriver, SB 4,5
Art.-no. 46 00 004	1 screwdriver, SB 7
Art.-no. 46 00 014	1 diagonal nipper
Art.-no. 46 00 033	1 hexagon socket screw key no. 4 x 150 (T-handle)
Art.-no. 46 00 039	1 Torx screwdriver T20 (T-handle)
Art.-no. 46 00 042	1 Torx screwdriver T10 (T-handle)

3 Installation and commissioning of the machine

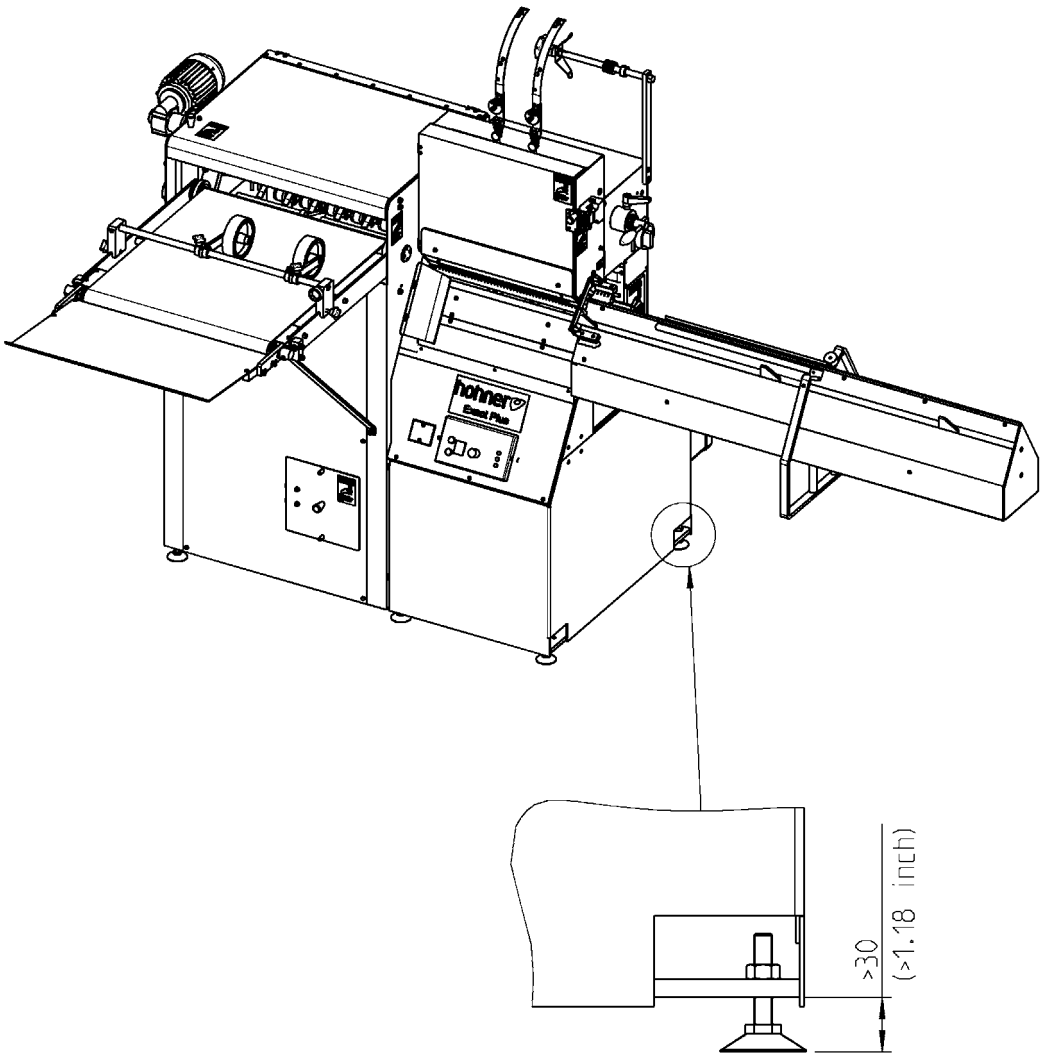


Fig. 3.1

3.1 Installation

- Fig. 3.1 -

The machine must stand on even floor, the table should be positioned horizontally.

3.2 Mounting - stitching head

See stitching head operating instructions.

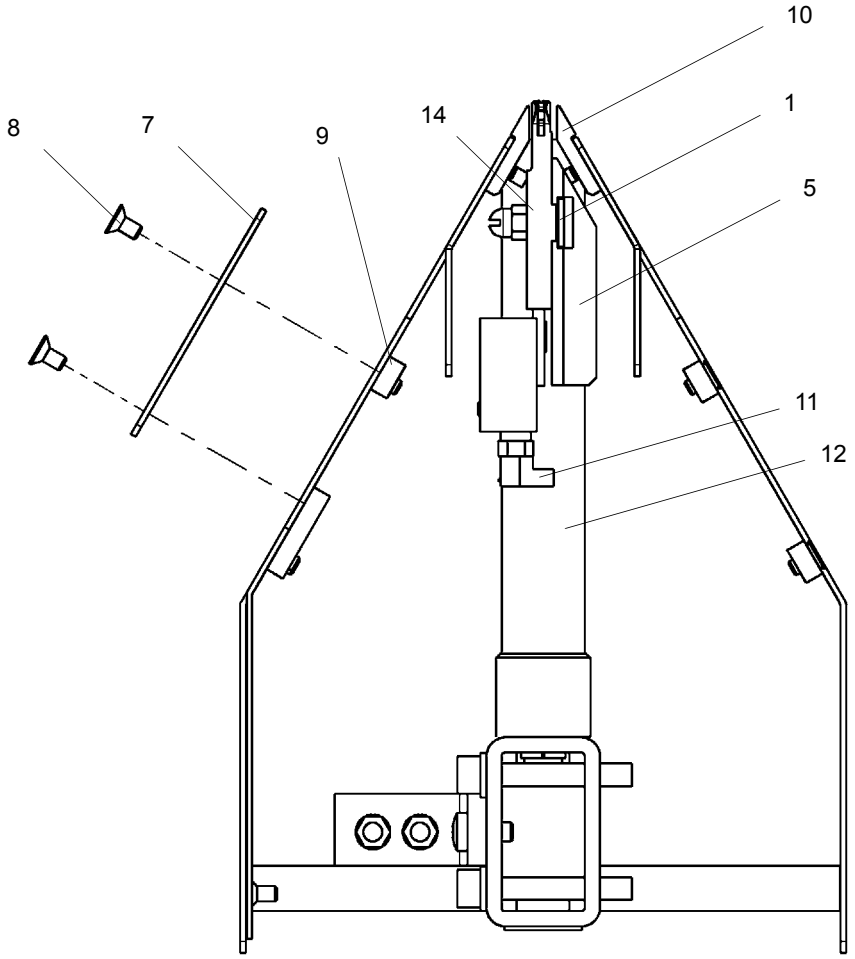


Fig. 3.2

3.3 Mounting - clincher box

- Fig. 3.2 -

- Take away the mounting plate -7-. Unscrew the four slotted countersunk head screws -8-.
- Install by turning slightly the clincher box -14- with pusher, behind the intermediate ledge -9-. Turn the clincher box again and place it on the top between the both supporting ledges -10-.
- Place the shaft of the hexagon socket set screw on the rear side of the clincher box in the groove provided in the receiver girder -5-.
- At the same time make sure that the pusher block -11- fits into the groove of the main drive bar -12-.
- Put the hexagon socket screws -13- through the oblong hole in the gliding strip into the mounting block -1- (push the mounting block first into the fixing groove of the receiver girder -5-).
- Tighten both hexagon socket screws -13- slightly by using the delivered hexagon socket screw key SW 4 (with T-handle) and move the clincher box laterally under the corresponding stitching head.

After this, the fine adjustment has to be done (see 3.4).

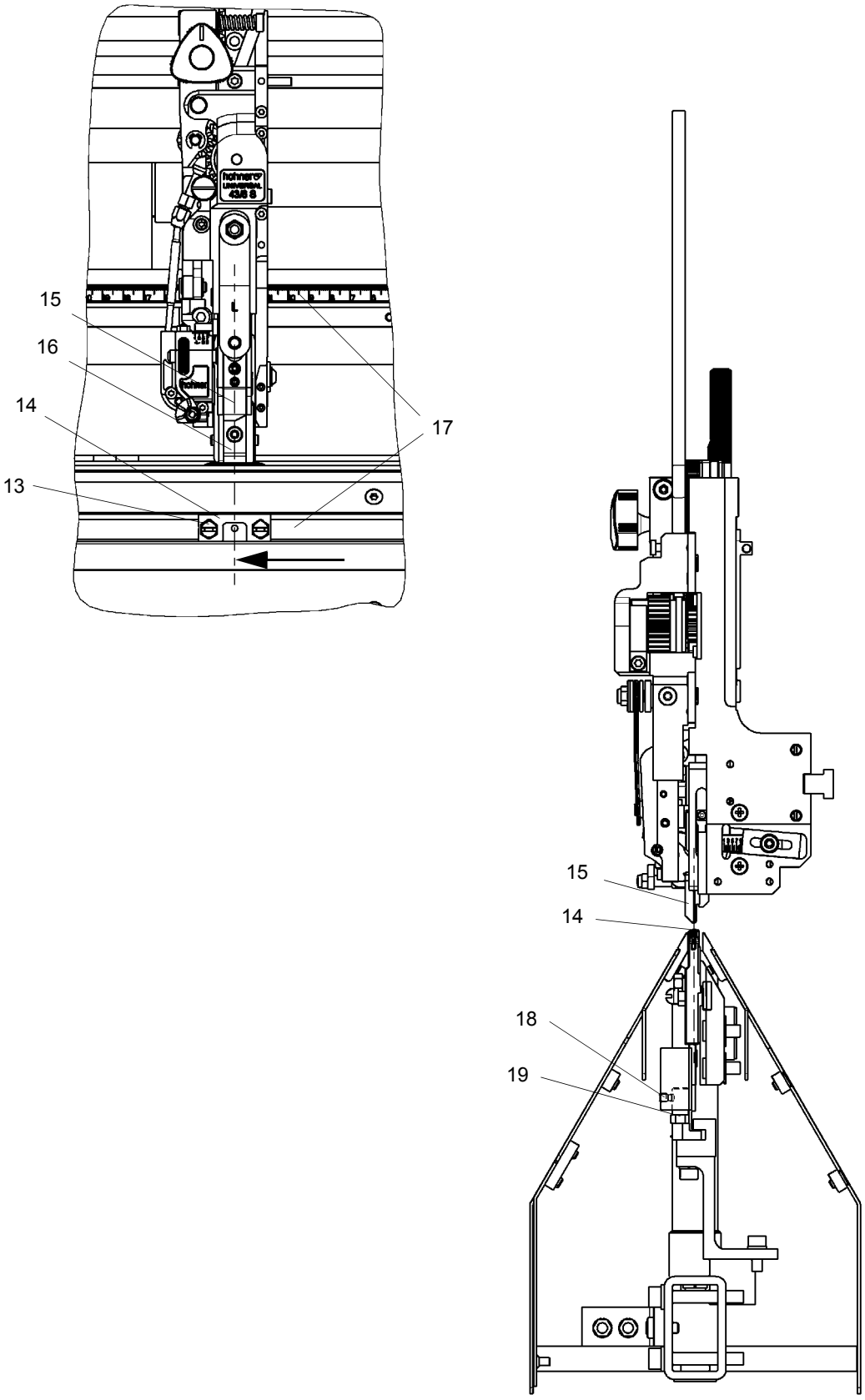


Fig. 3.3

3.4 Fine adjustment - clincher box

- Fig. 3.3 -
The middle of the driver -15- and bender -16- must be exactly in the middle of the clincher box -14- (see arrows)!

- Now, rotate the unit by hand (see 3.12), until the driver and the bender are just over the clincher box. Adjust the middle of the clincher box of the driver and tighten both hexagon socket screws -13-.

TIP Additional assistance by scales -17-

The right edges of stitching head and clincher box must be adjusted on the same scale setting -17-.

3.5 Pressure adjustment - clincher back press

- Fig. 3.3 -
- Loosen the hexagon socket set screw -18-, turn the hexagon head screw -19-
  counter clockwise to increase pressure or
  clockwise to decrease pressure.
- Then re-secure the hexagon socket set screw -18-.

ACHTUNG The groove-middle of the driver -15- and the middle of the clincher box -14- must coincide absolutely

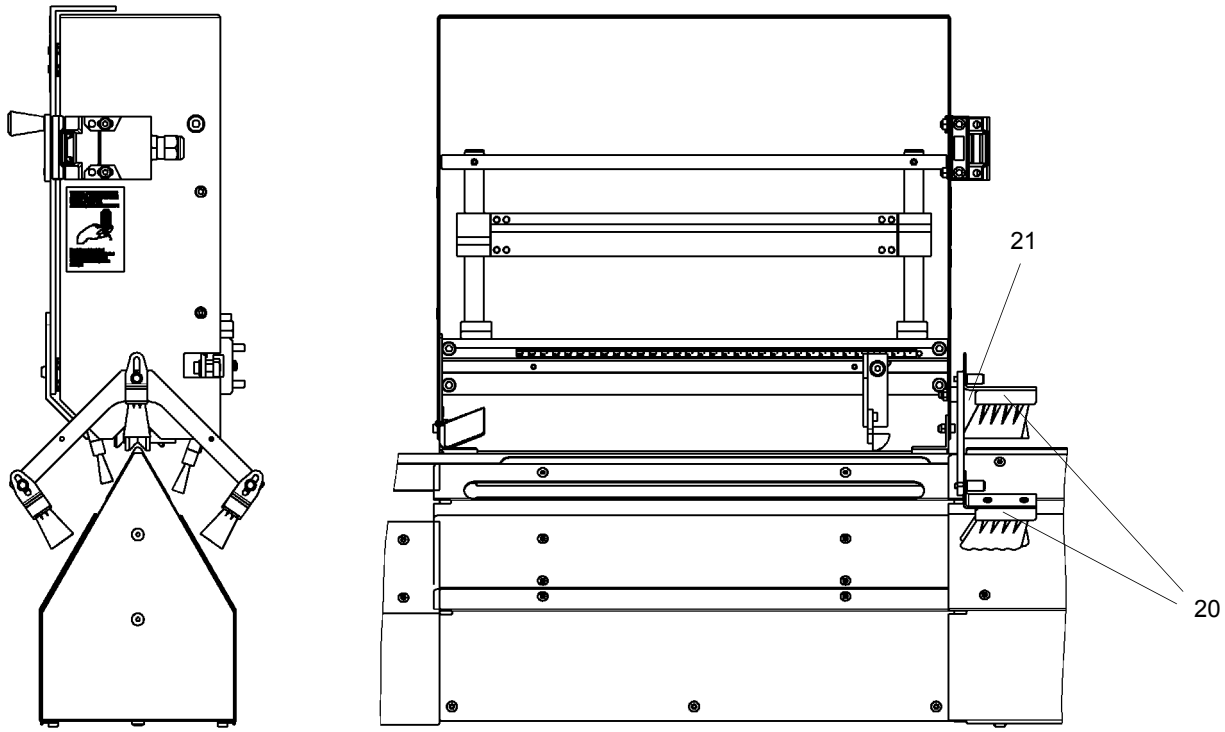


Fig. 3.4

3.6 Mounting and adjustment - guiding brushes / guiding angle

- Fig. 3.4 -
To insert brochures under stitching heads use guiding brushes -20- and guiding angle-21-.

They are destined to stop every brochure at the same position and to ensure that projecting sheets are made flush.
The guiding angle -21- effects that sheets or brochures not will be jammed during feeding into the stitching unit.

Installation and adjustment has to be effected when stitching head covering is open. The machine can not be operated at the same time (see 2.1.2).

3.7 Mounting - centering device and guiding cam

See stitching head operating instructions.

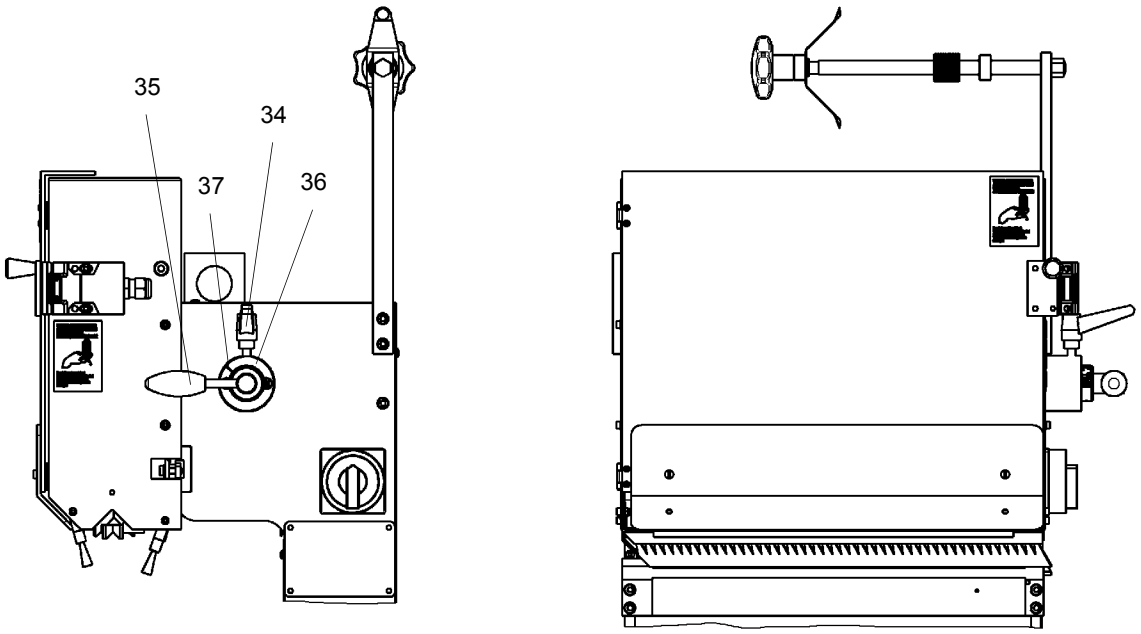


Fig. 3.5

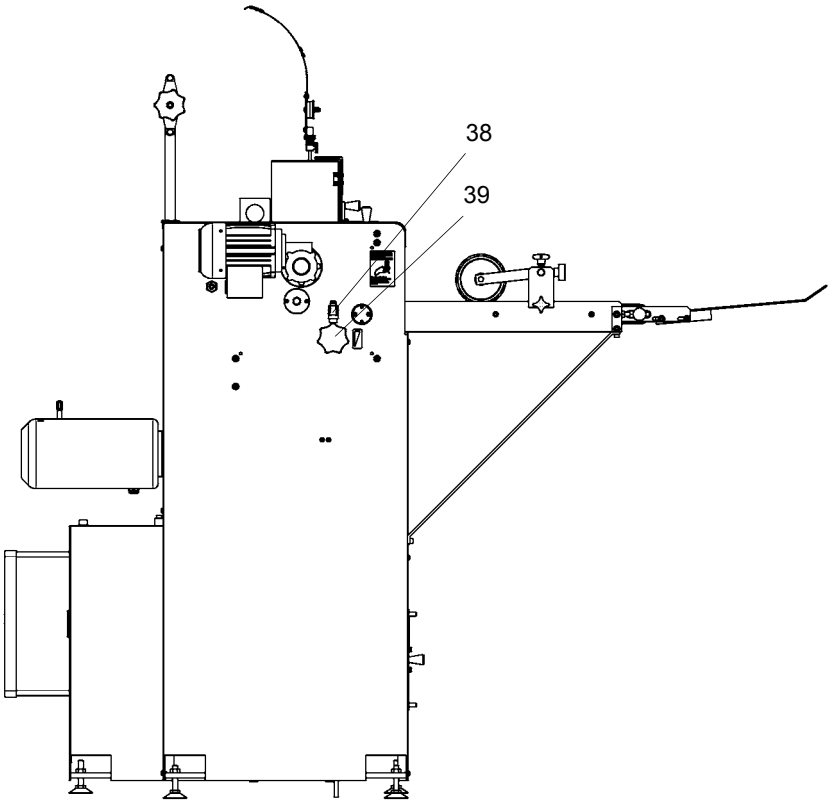


Fig. 3.6

3.8 Adjustment - stitching thickness at the stitching aggregate

- Fig. 3.5 -

- Loosen clamping lever -34-, now the needed stitching thickness can be adjusted with the adjusting lever -35- by means of the graduated dial -36- and the graduation mark -37-.
- Retighten the clamping lever -34-. When working with special paper material a correction will be necessary.

3.9 Adjustment - stitching thickness on the delivery

- Fig. 3.6 -

In addition to the stitching aggregate the corresponding stitching thickness is also to be adjusted at the delivery.

- Loose the clamping lever -38-, adjust the pressure of the rolls in the delivery according to the brochure by turning the star handle -39- (visible through plastic cover on the top).

Adjustment control
Pressure of rolls too low = brochure is not ejected
Pressure of rolls too high = knocking noise in the delivery

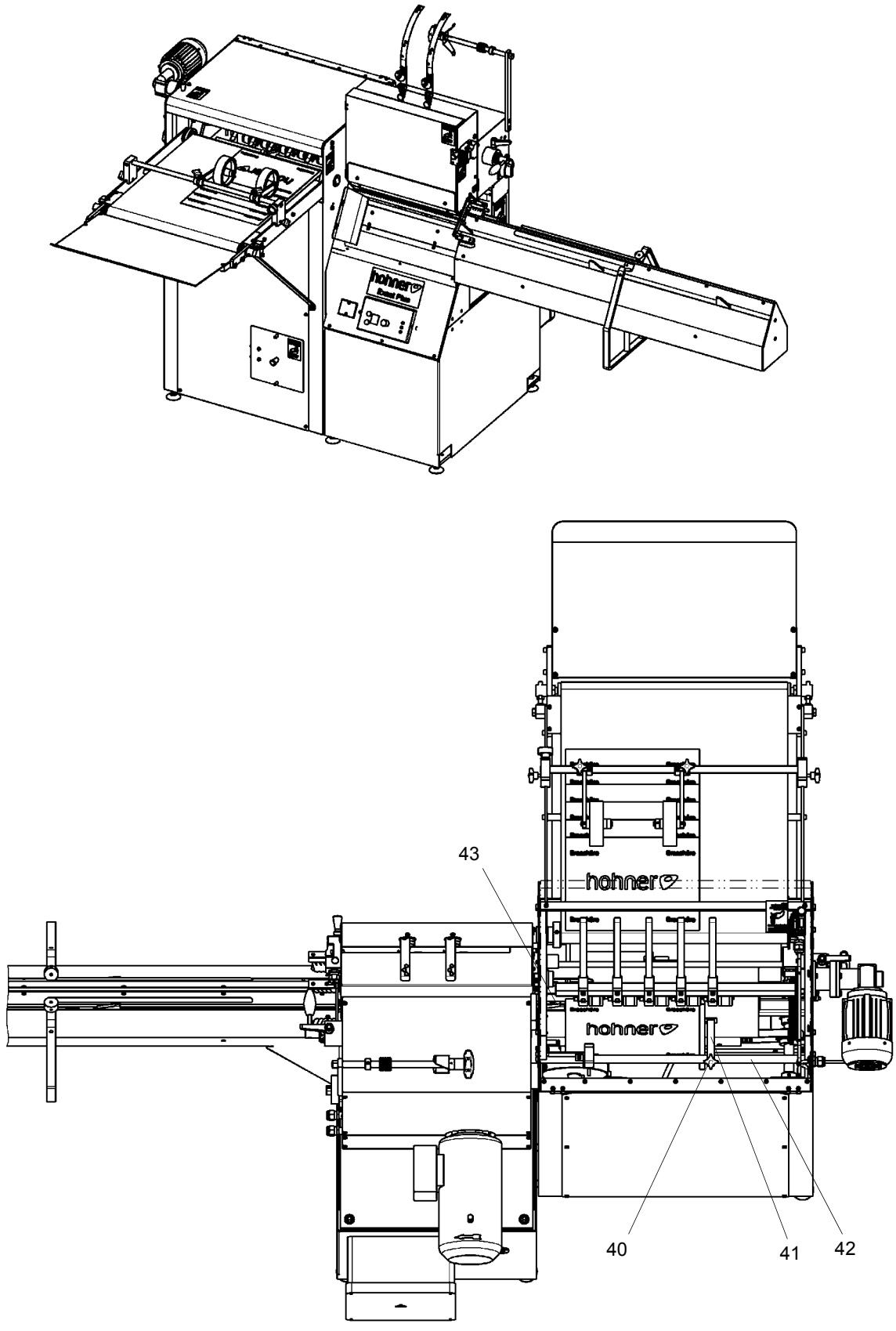


Fig. 3.7

3.10 Adjustment - paper stop in the delivery

- Fig. 3.7 -
To obtain an exact scale tile delivery the paper stop in the scale tile delivery has to be adjusted to the corresponding brochure thickness.
- First open the plastic sight glass.
It is electrically locked and prevents the machine from operating during the adjustment of the paper stop.
As you can see on the illustration, the adjustment can be effected from the top.

- By loosening the star handle screw -40- and the adjusting ring -41- the complete paper stop can be moved on the guiding rod -42-.
- Adjustment has to be effected in this way that the brochure, between carrier -43- and the paper stop has some free motion (danger of jolt).
- Re-tighten star handle screw -40-.

NOTICE When changing brochures from small to big the paper stop has **first** to be adjusted
- danger of jolt -

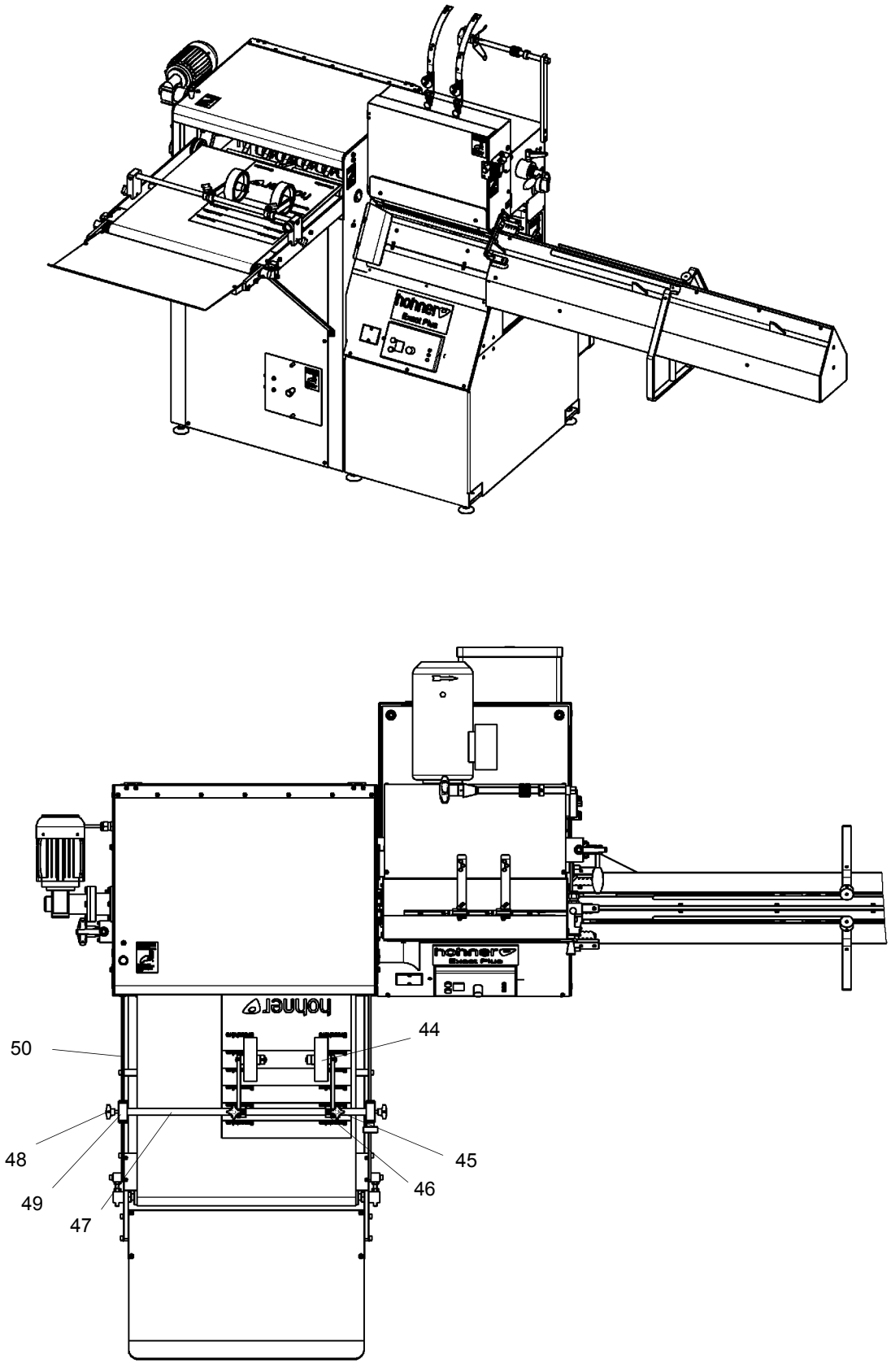


Fig. 3.8

3.11 Adjustment - guiding rollers on the delivery table

- Fig. 3.8 -

In order to obtain an exact sit-close scale tile delivery on the delivery table both guiding rollers -44- have to be adjusted to the size of brochure (see illustration, top view).

- Loose the upper star handle screws -45- and move roll holders -46- on the axe -47- sidewards until both guiding rollers -44- are approximately centrical to the thickness of the brochure.
- Retighten upper star handle screws -45-.
- Loosen star handle screws -48- at the side, move both supports -49- at the same time on the guide bars -50- so far, that the brochure is falling exactly between conveying belt and guiding rollers.
- Re-tighten star handle screws -48- at the side.

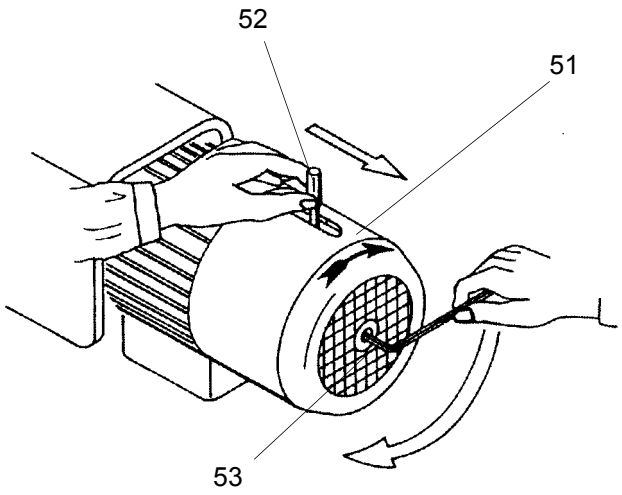


Fig. 3.9

3.12 Adjust by hand - stitching head actuation

- Fig. 3.9 -

WARNING Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally.

For any adjustment or installation work at the stitching aggregate the stitching head driving elements can be adjusted by hand. For this step use the enclosed long hexagon socket screw key no. 5.
Put the hexagon socket screw key -53- in the cylindrical screw at the back of the drive motor -51- in the ventilator shaft. Now you can use it as a crank. Press ventilator lever -52- for brake. Turn with the screw key in direction of arrow.

NOTICE Before resumption of work the hexagon socket screw key -53- has to be removed.

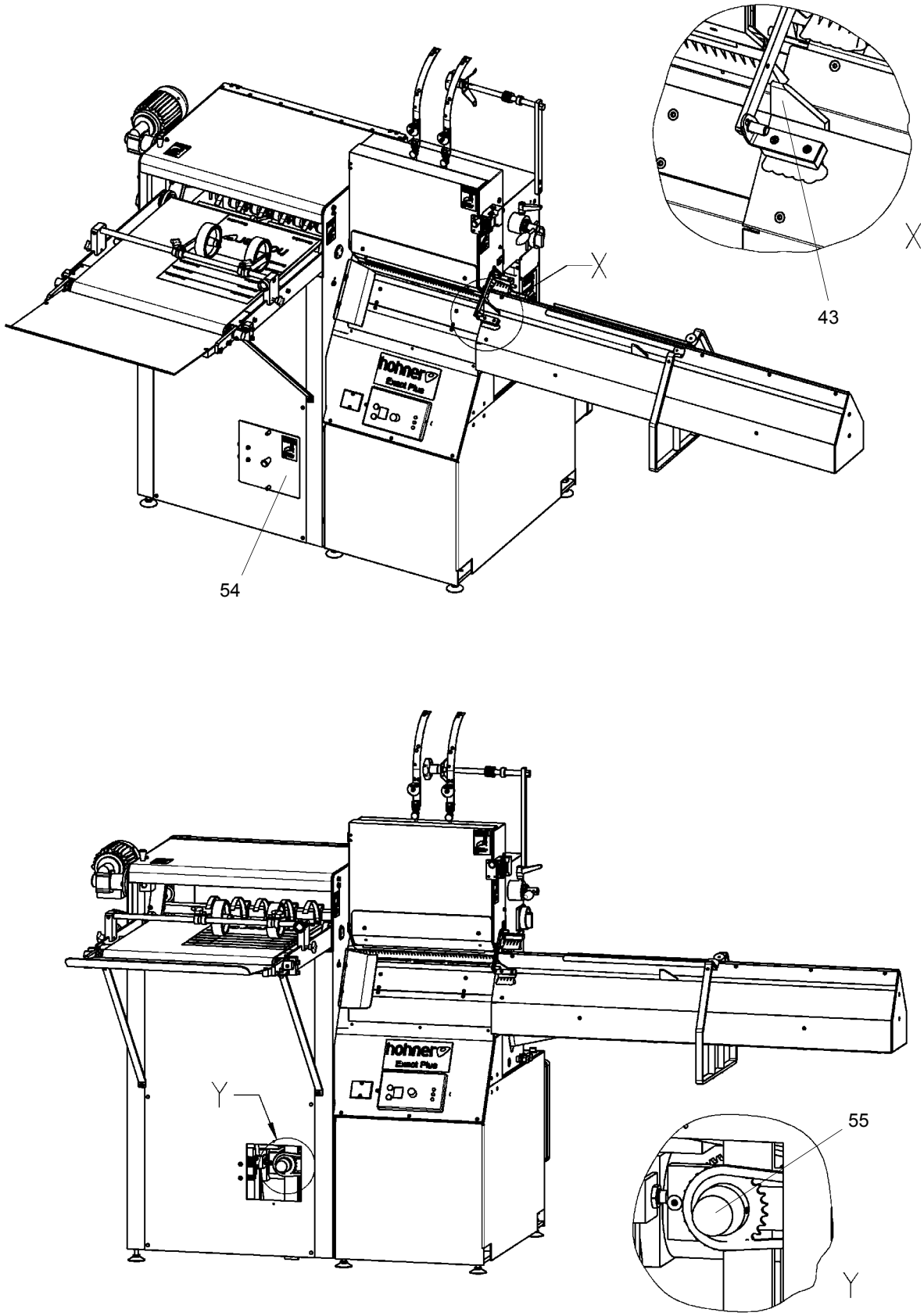


Fig. 3.10

3.13 Adjustment - "staggered stitch"

- Fig. 3.10 -

In order to avoid a one-sided thickening on the side of the staple when stacking or cutting, the machine can be adjusted on "staggered stitch"

TIP

During the adjustment the machine can not be operated (see 2.1.4).

Adjustment:

- The brackets -43- should be placed in about the left final position.
- Switch off the machine, resp. interrupt the current supply.

WARNING

Before carrying out maintenance or repairs, take care that the power supply is switched off and prevented from being switched on again accidentally.

- Open the protection cap -54- in the front plate under the delivery.
- Pull the visible red adjusting knob -55- by hand and release it in this way.
- If you turn it a fourth (90°) to the left or to the right, the machine is adjusted from "staggered stitching" to standard stitching and vice versa.
- Make sure that the red adjusting knob -55- locks after adjustment or releasing.
- Shut the protecting cap -54-.

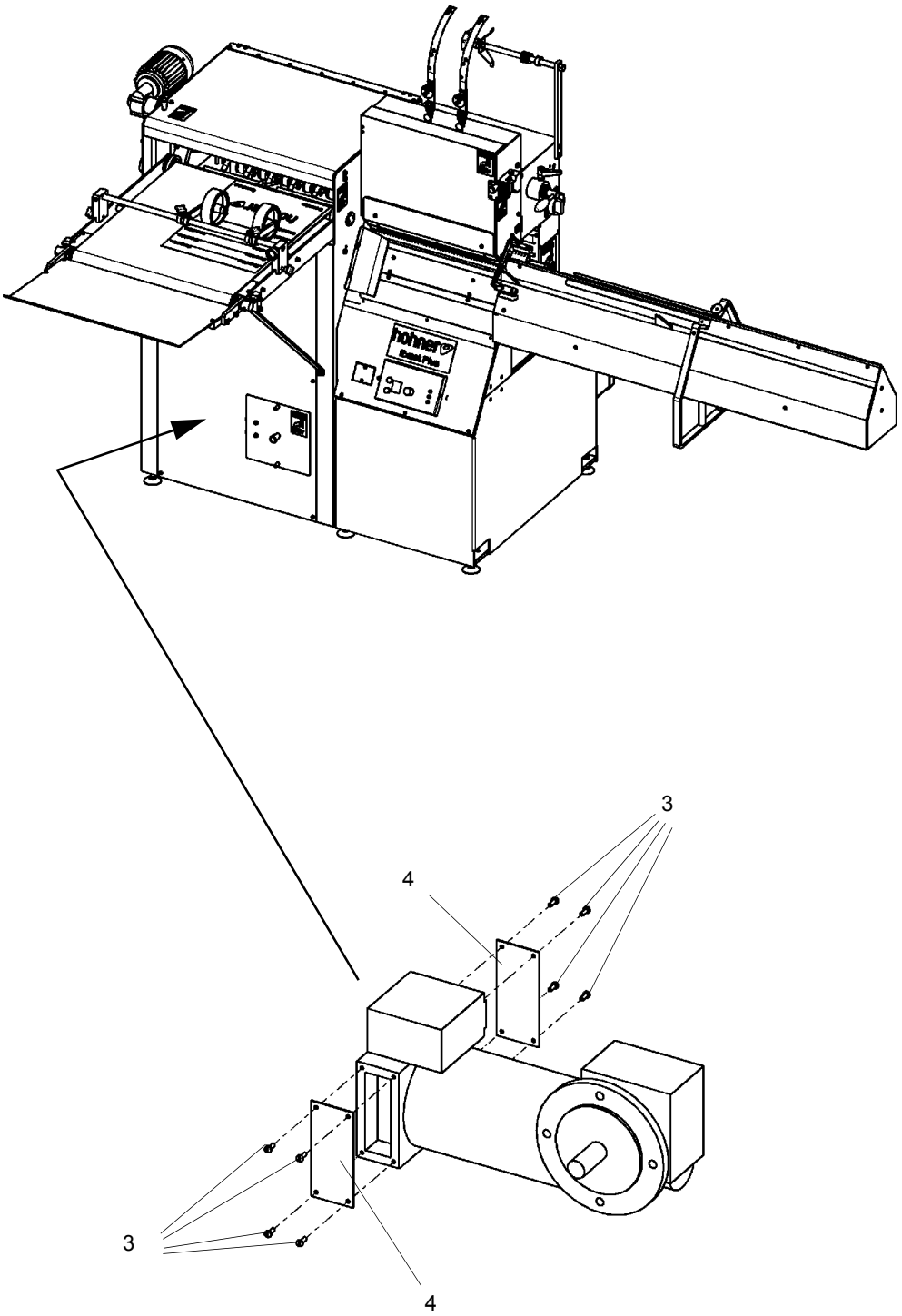


Fig. 3.11

3.14 Carbon brushes and switch-off brushes

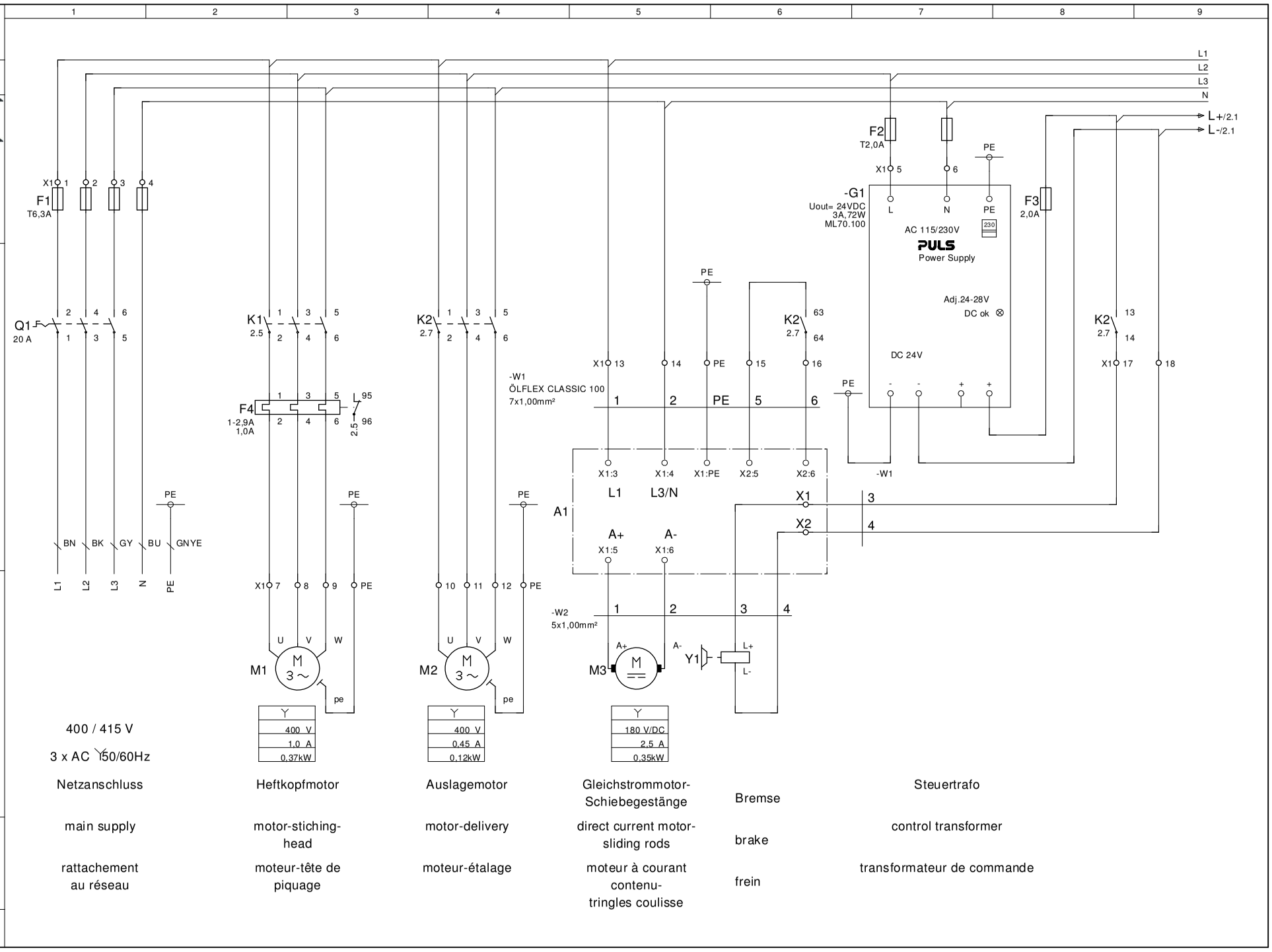
- Fig. 3.11 -

- After remove clamping strap -3- by loosening screws -4- from the end housing on the B side. The carbon brushes can be easily replaced and adjusted.

The brushes must always be replaced with the same brush type supplied with the motor.

The quality of the carbon brushes is designed in each case to meet the specific requirements for normal voltages and closed-loop control or small voltages. Creepage current is prevented through the use of collector-cleaning carbon brushes and brush yokes with plastic rings. In the case of good commutation, brush service lives of approx. 3000-5000 operating hours can be achieved for continuous duty S 1.

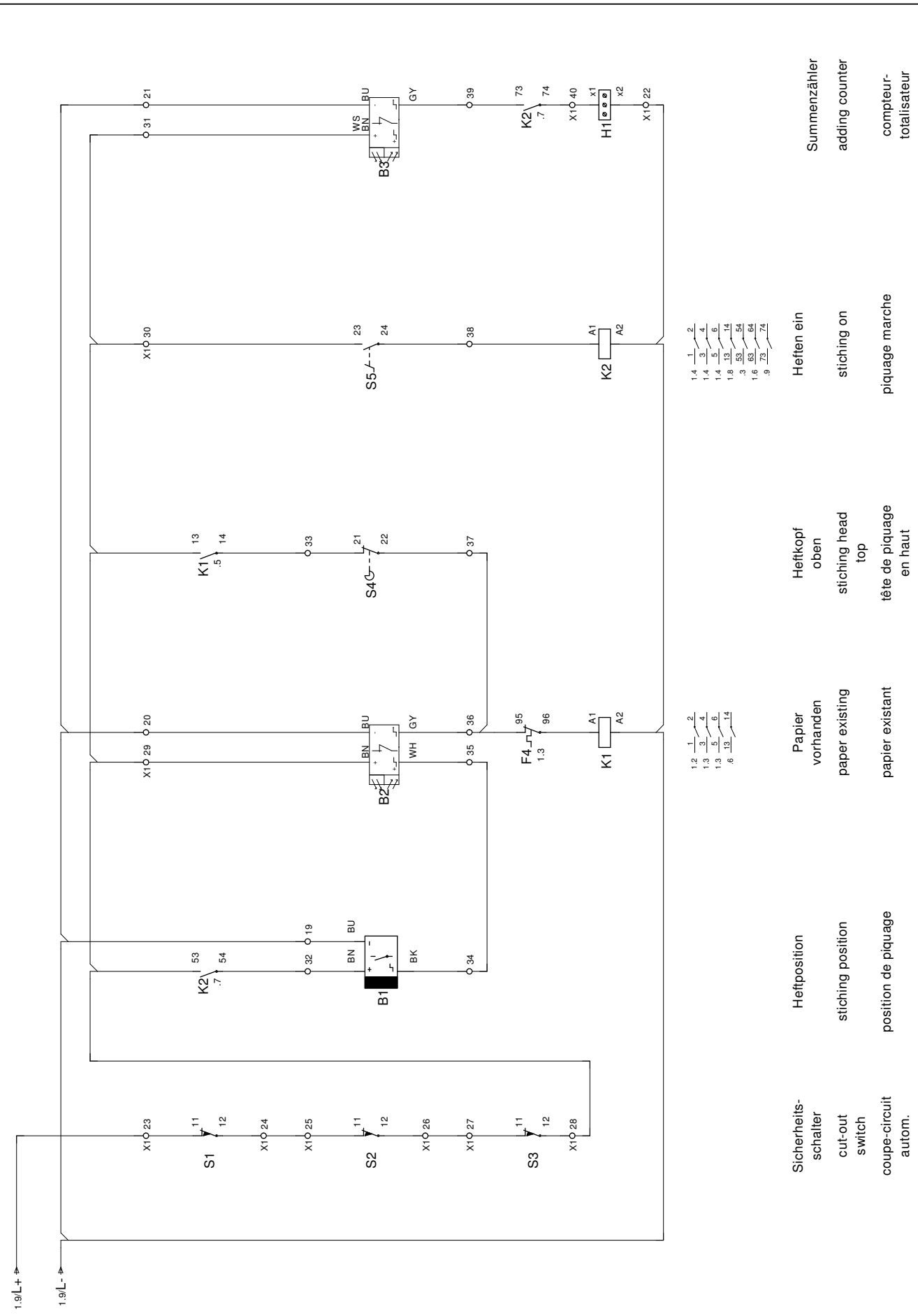
4 Flow diagrams



400 / 415 V

3 x AC Y 50/60Hz

Netzanschluss	Heftkopfmotor	Auslagemotor	Gleichstrommotor-Schiebegestänge	Bremse	Steuertrafo
main supply	motor-stiching-head	motor-delivery	direct current motor-sliding rods	brake	control transformer
rattachement au réseau	moteur-tête de piquage	moteur-étalage	moteur à courant contenu-tringles coulisse	frein	transformateur de commande



19.05.08	SC1	hohner	Maschine / Machine / Machine EXACT-PLUS 400/415V 3xAC Y 50/60Hz	Zeichnungs-Nr. / Drawing-Nr. / Dessin-No. 43 40 935	Index d
			Bennenung / Title / Dénomination Schaltplan - flow diagram -schéma des circuites		Seite Sheet Page
Änderung	Name	©Hohner Maschinenbau GmbH			2

X1

Ziel / dest. / fin.	Gerät / appliance / unité	Anschluß / supply / reccordement	Klemmennummer / binder number / numero borne	Brücken / brigde / pont	Klemmenname / binder name / nom de la borne	Gerät / appliance / unité	Anschluß / supply / reccordement	
Q1: BK	Q1	2	1	•	F1	K1	1	1/1
Q1: BN	Q1	4	2	•	F1	K1	3	1/1
Q1: BK	Q1	6	3	•	F1	K1	6	1/1
Q1: BU	N		4	•	F1			1/2
			5	•	F2	G1	0	1/7
			6	•	F2	G1	400	1/8
Q1: GN YE; M1: GN YE	PE / M1	PE	PE	•	PE	G1	PE	1/3
M2: GN YE; S5: GN YE	M2 / S5	PE	PE	•	PE			1/4
A1: GN YE	A1	PE	PE	•	PE			1/6
M1: 1	M1	U	7			F4	2	1/3
M1: 2	M1	V	8			F4	4	1/3
M1: 3	M1	W	9			F4	6	1/3
M2: 1	M2	U	10			K2	2	1/4
M2: 2	M2	V	11			K2	4	1/4
M2: 3	M2	W	12			K2	6	1/4
A1: 1	A1	3	13	•				1/5
A1: 2	A1	4	14	•				1/5
A1: 5	A1	5	15			K2	63	1/6
A1: 6	A1	6	16			K2	64	1/6
A1: 3	A1/Y1	L+	17			K2	14	1/9
A1: 4	A1/Y1	L-	18	•		G1	-	1/9
B1: BU	B1	BU	19	•		K2	A2	2/3
B2: BU	B2	BU	20	•				2/5
B3: BU	B3	BU	21	•				2/9
H1: 2	H1	X2	22	•				2/9
S1: 1	S1	11	23			K2	13	2/2
S1: 2	S1	12	24	•				2/2
S2: 1	S2	11	25	•				2/2
S2: 2	S2	12	26	•				2/2
S3: 1	S3	11	27	•				2/2
S3: 2	S3	12	28	•		K2	53	2/2
B2: BN	B2	BN	29	•				2/4
S5: BN	S5	23	30	•				2/7
B3: WH BN	B3	WHBN	31	•		K1	13	2/9
B1: BN	B1	BN	32			K2	54	2/3
S4: 1	S4	21	33			K1	14	2/6
B1: BK	B1	BK	34	•				2/3
B2: WH	B2	WH	35	•				2/4
B2: GY	B2	GY	36	•		F4	95	2/5
S4: 2	S4	22	37	•				2/6
S5: BU	S5	24	38			K2	A1	2/7
B3: GY	B3	GY	39			K2	73	2/9
H1: 1	H1	X1	40			K2	74	2/9

Nr.	Ziel / dest. / fin.
1	Q1
2	M1
3	M2
4	A1
5	S1
6	S2
7	S3
8	B1
9	B2
10	S4
11	S5
12	B3
13	H1

BK = schwarz	black	noir
BN = braun	brown	brun
BU = blau	blue	bleu
GY = grau	gray	gris
WH = weiß	white	blanc
GNGE = grün/gelb	green/Yellow	vert/jaune

Änderung	Name				
19.05.08	SC1	hohner	Maschine / Machine / Machine: EXACT-PLUS 400/415V 3xAC Y 50/60Hz	Zeichnungs-Nr. / Drawing-Nr. / Dessin-No.: 43 40 935	Index: d

Bennenung / Title / Dénomination: Klemmleiste - connector block -réglette de bornes

Änderung | Name | ©Hohner Maschinenbau GmbH

26.11.08 SC1

Bennenung / Title / Dénomination
Ersatzteile - spare parts - pièces de recange

hohner

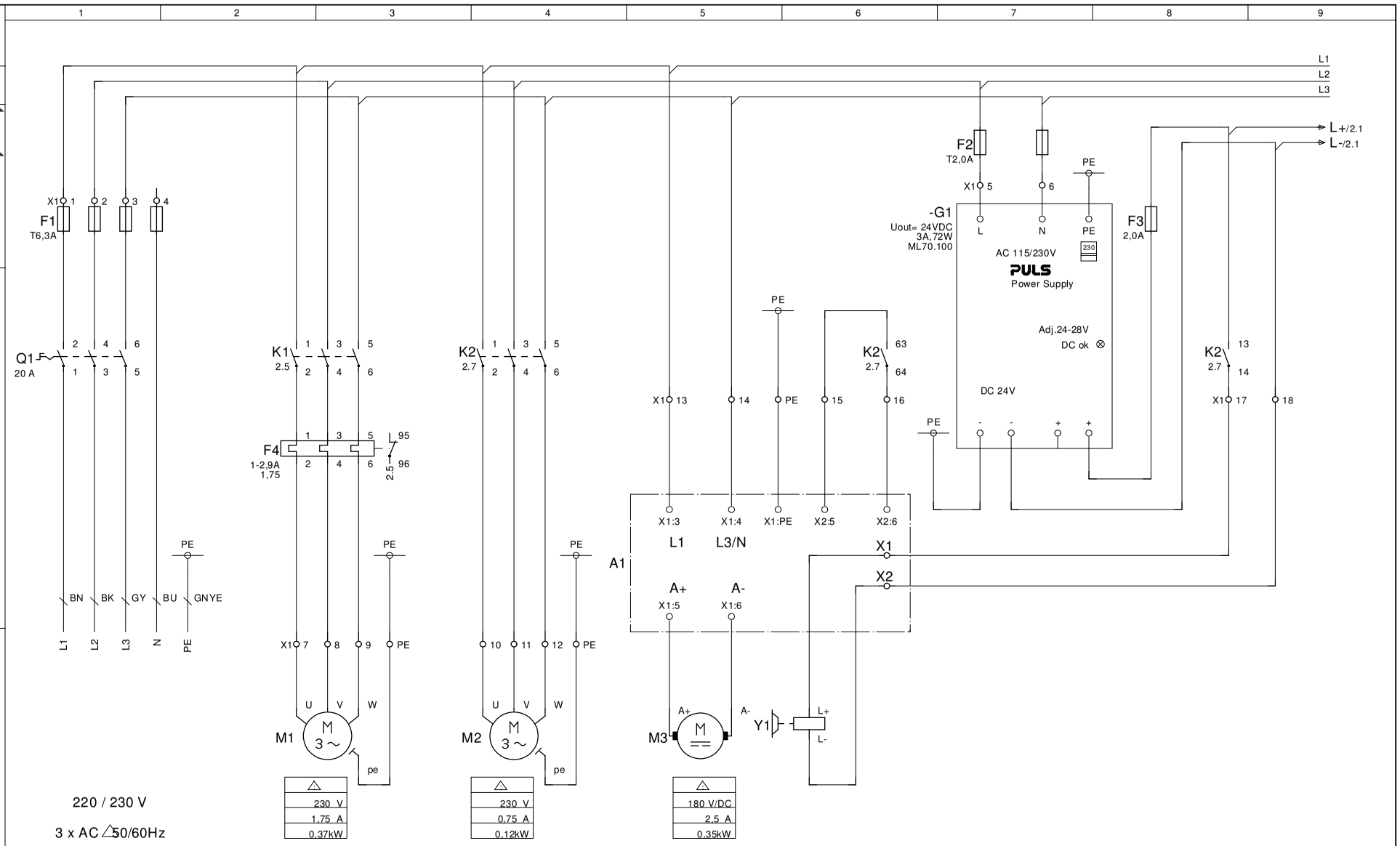
Maschine / Machine / Machine
EXACT-PLUS
400/415V 3xAC Y 50/60Hz

Zeichnungs-Nr. / Drawing-Nr. / Dessin-No.
43 40 935

Index
d

1	2	3	4	5	6	7	8	9

Pos.	Bez.	Art. Nr.	Bezeichnung	Description	Description
1.1	Q1	43 00 770	Hauptschalter (Not-Aus)	main switch (emergency switch)	interrupteur principal (interr. dúrgence)
2.2	S1	43 00 004	Sicherheitsschalter Türe	cut-out, autom. switch door	coupe - circuit autom. porte
2.2	S2	43 00 004	Sicherheitsschalter Schutzhaube/Auslage	cut-out, autom. switch prot. cover	coupe - circuit autom. couvercle / étalange
				delivery	
2.2	S3	43 00 004	Sicherheitsschalter Abdeckblech/Auslage	cut-out, autom. switch cover plate/	coupe - circuit autom. couver de étalage
				delivery	tôle de protection/étalage
2.6	S4	43 00 271	Endschalter Heftkopf	micro-switch stiching head	interrupteur f. de course, tête de piquage
2.7	S5	43 00 068	Fußschalter	pedal switch	commande par pédale
2.3	B1	43 00 771	Näherungsschalter Schiebegestänge	proximity switch-sliding rods	détecteur de proximeté
					tringles coulisse
2.4	B2	43 00 381	Reflexlichtschranke	fluidic light barrier	reflet barrage photoélectrique
2.9	B3	43 00 381	Reflexlichtschranke	fluidic light barrier	reflet barrage photoélectrique
1.5	A1	43 00 512	Stromrichter M3	power converter M3	convertisseur M3
1.6	Y1		Bremse M3	brake M3	frein M3
1.7	G1	43 00 820	Steuertrafo mit Gleichrichter	control transformer with rectifier	transf. de commande avec redesseur courant
2.9	H1	43 00 396	Summenzähler (Sonder)	adding counter (special)	compeur totalisateur (spécial)
1.1	F1	43 00 268	Sicherung Hauptstromkreis T6,3 A	saftey fuses-main circuit T6,3 A	fusibles de sécurité-cir. principal T6,3 A
1.7	F2	43 00 274	Sicherung Trafo primär T2,0 A	saftey fuses-transformer	fusibles de sécurité-transformateur
				primary T2,0 A	primaire T2,0 A
1.8	F3	43 00 274	Sicherung Steuerstromkreis T2,0 A	saftey fuss-electic circuit	fusibles de sécurité-commande T2,0 A
				control T2,0 A	
2.5	K1	43 00 805	Schütz Heftkopfmotor	contactor stiching head	contacteur tête de piquage
2.7	K2	43 00 805	Schütz Auslagemotor	contactor motor-delivery	contacteur moteur-étalage
2.7	K2	43 00 806	Hilfskontaktblock 40DILE	auxiliary contact-block 40DILE	bloc contact de secours 40DILE
1.3	M1	42 00 135	Heftkopfmotor	motor-stiching head	moteur-tête de piquage
1.4	M2	42 00 159	Auslagemotor	motor-delivery	moteur-étalage
1.5	M3	42 00 158	Gleichstrommotor-Schiebegestänge	direct current motor-sliding rods	moteur à courant contenu-tringles coulisse
1.3	F4	43 00 743	Motorschutzrelais	overload relay	relais de surchargé
		43 00 749	Adapter	adapter	adaptateur
	X1		Klemmleiste	connector block	réglette de bornes


1 2 3 4 5 6 7 8 9
L1
L2
L3
L+/2.1
L-/2.1
F1
T6,3A
F2
T2,0A
F3
2,0A
-G1
Uout= 24VDC
3A,72W
ML70.100
AC 115/230V
PULS
Power Supply
Adj.24-28V
DC ok
DC 24V
Q1
20 A
K1
2.5
K2
2.7
F4
1-2,9A
1,75
2,5
A1
L1
L3/N
A+
A-
X1
X2
M1
M2
M3
Y1
L+
L-
BN
BK
GY
BU
GNYE
PE
pe
220 / 230 V
3 x AC △ 50/60Hz
230 V
1,75 A
0,37kW
230 V
0,75 A
0,12kW
180 V/DC
2,5 A
0,35kW
Netzanschluss
main supply
rattachement au réseau
Heftkopfmotor
motor-stiching-head
moteur-tête de piquage
Auslagemotor
motor-delivery
moteur-étalage
Gleichstrommotor-Schiebegestänge
direct current motor-sliding rods
moteur à courant contenu-tringles coulisse
Bremse
brake
frein
Steuertrafo
control transformer
transformateur de commande

Bennenung / Title / Dénomination
Schaltplan - flow diagram -schéma des circuites

Maschine / Machine / Machine
EXACT-PLUS
220/230V 3xAC △ 50/60HZ

Zeichnungs-Nr. / Drawing-No.
43 40 936

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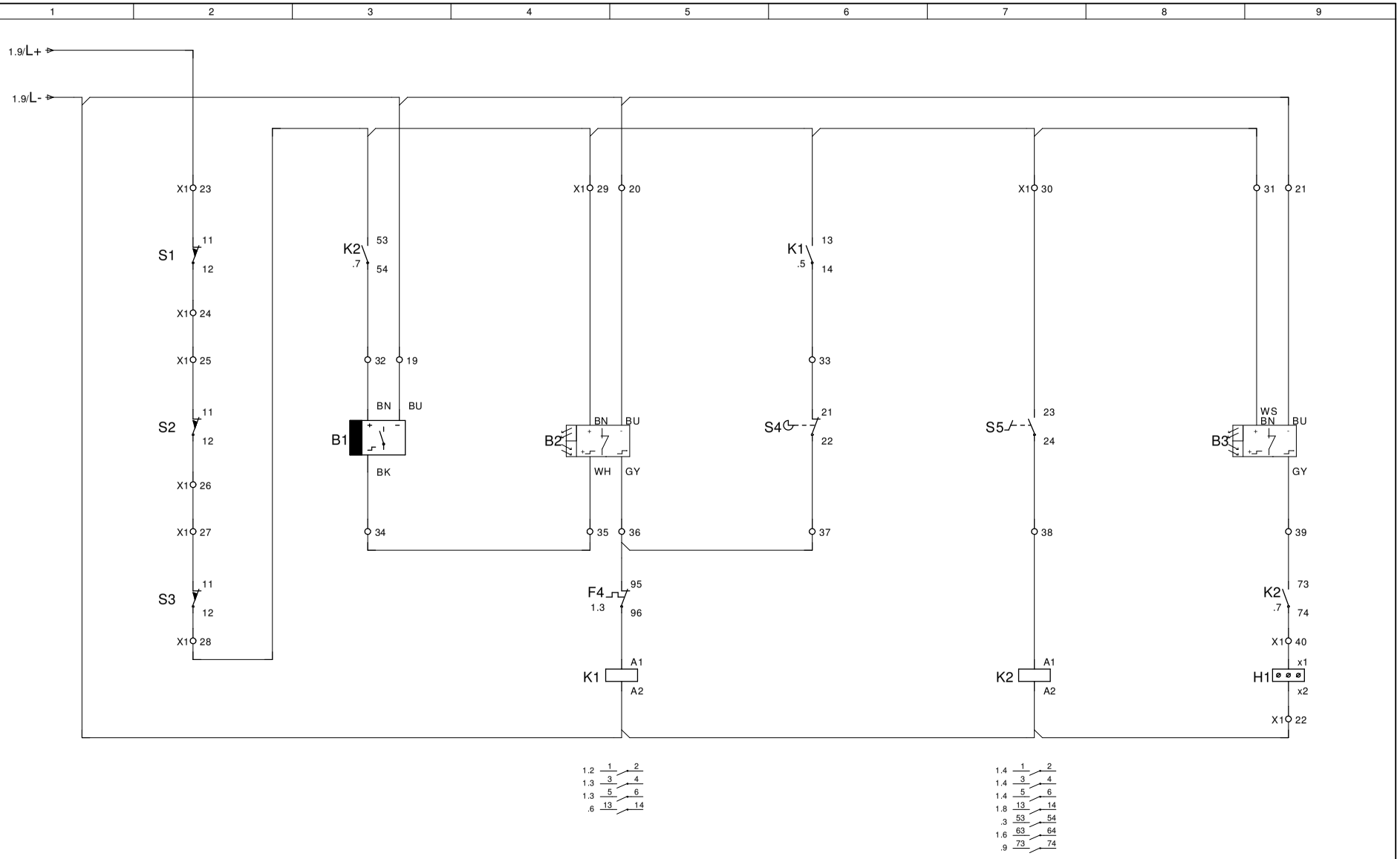

Sicherheits-schalter	Heftposition	Papier vorhanden	Heftkopf oben	Heften ein	Summenzähler
cut-out switch	stiching position	paper existing	stiching head top	stiching on	adding counter
coupe-circuit autom.	position de piquage	papier existant	tête de piquage en haut	piquage marche	compteur-totalisateur

X1

Nr.	Ziel / dest. / fin.
1	Q1
2	M1
3	M2
4	A1
5	S1
6	S2
7	S3
8	B1
9	B2
10	S4
11	S5
12	B3
13	H1

Ziel / dest. / fin.	Gerät appliance unité	Anschluß supply reccordement	Klemmennummer binder number numero borne	Klemmenname binder name nom de la borne	Gerät appliance unité	Anschluß supply reccordement	
Q1: BK	Q1	2	1	F1	K1	1	1/1
Q1: BN	Q1	4	2	F1	K1	3	1/1
Q1: BK	Q1	6	3	F1	K1	6	1/1
Q1: BU	N		4	F1			1/2
			5	F2	G1	0	1/7
			6	F2	G1	230	1/8
Q1: GN YE; M1: GN YE	PE / M1	PE	PE	PE	G1	PE	1/3
M2: GN YE; S5: GN YE	M2 / S5	PE	PE	PE			1/4
A1: GN YE	A1	PE	PE	PE			1/6
M1: 1	M1	U	7		F4	2	1/3
M1: 2	M1	V	8		F4	4	1/3
M1: 3	M1	W	9		F4	6	1/3
M2: 1	M2	U	10		K2	2	1/4
M2: 2	M2	V	11		K2	4	1/4
M2: 3	M2	W	12		K2	6	1/4
A1: 1	A1	3	13				1/5
A1: 2	A1	4	14				1/5
A1: 5	A1	5	15		K2	63	1/6
A1: 6	A1	6	16		K2	64	1/6
A1: 3	A1/Y1	L+	17		K2	14	1/9
A1: 4	A1/Y1	L-	18		G1	-	1/9
B1: BU	B1	BU	19		K2	A2	2/3
B2: BU	B2	BU	20				2/5
B3: BU	B3	BU	21				2/9
H1: 2	H1	X2	22				2/9
S1: 1	S1	11	23		K2	13	2/2
S1: 2	S1	12	24				2/2
S2: 1	S2	11	25				2/2
S2: 2	S2	12	26				2/2
S3: 1	S3	11	27				2/2
S3: 2	S3	12	28		K2	53	2/2
B2: BN	B2	BN	29				2/4
S5: BN	S5	23	30				2/7
B3: WH BN	B3	WHBN	31		K1	13	2/9
B1: BN	B1	BN	32		K2	54	2/3
S4: 1	S4	21	33		K1	14	2/6
B1: BK	B1	BK	34				2/3
B2: WH	B2	WH	35				2/4
B2: GY	B2	GY	36		F4	95	2/5
S4: 2	S4	22	37				2/6
S5: BU	S5	24	38		K2	A1	2/7
B3: GY	B3	GY	39		K2	73	2/9
H1: 1	H1	X1	40		K2	74	2/9

Brücken / brigde / pont

BK = schwarz	black	noir	
BN = braun	brown	brun	
BU = blau	blue	bleu	
GY = grau	gray	gris	
WH = weiß	white	blanc	
GNGE = grün/gelb	green/Yellow	vert/jaune	

19.05.08	SC1	hohner
Maschine / Machine / Machine	EXACT-PLUS	220/230V 3xAC △ 50/60HZ
Zeichnungs-Nr. / Drawing-Nr. / Dessin-No.	43 40 936	Index: d
Benennung / Title / Dénomination	Klemmleiste - connector block -réglette de bornes	
Änderung	Name	Seite Sheet Page: 3

Änderung | Name | ©Hohner Maschinenbau GmbH

Bennenung / Title / Dénomination
Ersatzteile - spare parts - pièces de recange

26.11.08 SC1

hohner

Maschine / Machine / Machine
EXACT-PLUS
220/230V 3xAC △ 50/60HZ

Zeichnungs-Nr. / Drawing-Nr. / Dessin-No.
43 40 936

Index
d

1	2	3	4	5	6	7	8	9

Pos.	Bez.	Art. Nr.	Bezeichnung	Description	Description
1.1	Q1	43 00 770	Hauptschalter (Not-Aus)	main switch (emergency switch)	interrupteur principal (interr. dúrgence)
2.2	S1	43 00 004	Sicherheitsschalter Türe	cut-out, autom. switch door	coupe - circuit autom. porte
2.2	S2	43 00 004	Sicherheitsschalter Schutzhaube/Auslage	cut-out, autom. switch prot. cover	coupe - circuit autom. couvercle / étalange
				delivery	
2.2	S3	43 00 004	Sicherheitsschalter Abdeckblech/Auslage	cut-out, autom. switch cover plate/	coupe - circuit autom. couver de étalage
				delivery	tôle de protection/étalage
2.6	S4	43 00 271	Endschalter Heftkopf	micro-switch stiching head	interrupteur f. de course, tête de piquage
2.7	S5	43 00 068	Fußschalter	pedal switch	commande par pédale
2.3	B1	43 00 771	Näherungsschalter Schiebegestänge	proximity switch-sliding rods	détecteur de proximeté
					tringles coulisse
2.4	B2	43 00 381	Reflexlichtschranke	fluidic light barrier	reflet barrage photoélectrique
2.9	B3	43 00 381	Reflexlichtschranke	fluidic light barrier	reflet barrage photoélectrique
1.5	A1	43 00 512	Stromrichter M3	power converter M3	convertisseur M3
1.6	Y1		Bremse M3	brake M3	frein M3
1.7	G1	43 00 820	Steuertrafo mit Gleichrichter	control transformer with rectifier	transf. de commande avec redesseur courant
2.9	H1	43 00 396	Summenzähler (Sonder)	adding counter (special)	compeur totalisateur (spécial)
1.1	F1	43 00 268	Sicherung Hauptstromkreis T6,3 A	saftey fuses-main circuit T6,3 A	fusibles de sécurité-cir. principal T6,3 A
1.7	F2	43 00 274	Sicherung Trafo primär T2,0 A	saftey fuses-transformer	fusibles de sécurité-transformateur
				primary T2,0 A	primaire T2,0 A
1.8	F3	43 00 274	Sicherung Steuerstromkreis T2,0 A	saftey fuss-electric circuit	fusibles de sécurité-commande T2,0 A
				control T2,0 A	
2.5	K1	43 00 805	Schütz Heftkopfmotor	contactor stiching head	contacteur tête de piquage
2.7	K2	43 00 805	Schütz Auslagemotor	contactor motor-delivery	contacteur moteur-étalage
2.7	K2	43 00 806	Hilfskontaktblock 40DILE	auxiliary contact-block 40DILE	bloc contact de secours 40DILE
1.3	M1	42 00 135	Heftkopfmotor	motor-stiching head	moteur-tête de piquage
1.4	M2	42 00 159	Auslagemotor	motor-delivery	moteur-étalage
1.5	M3	42 00 158	Gleichstrommotor-Schiebegestänge	direct current motor-sliding rods	moteur à courant contenu-tringles coulisse
1.3	F4	43 00 743	Motorschutzrelais	overload relay	relais de surchargé
		43 00 749	Adapter	adapter	adaptateur
	X1		Klemmleiste	connector block	réglette de bornes