

Operating-Instructions
Spare parts list

hohner

ORION 4

05/2008

Pad and Folder Wire Stitching Machine



Hohner Maschinenbau GmbH
Gänsäcker 19, 78532 Tuttlingen, Telephone 07462 / 9468-0, Fax 07462 / 9468-20

Contents

1.	Safety notices.....	4
2.	Technical Data	5
3.	Measures plan of the ORION 4	6
4.	Installation of the stitching table.....	7
5.	Installation of the narrow stitching heads 70/20	8
6.	Installation of the clincher box	9
7.	Basic adjustment of clinchers	10
8.	Pressure adjustment for clincher back pressure	11
9.	Adjustment of the stitching thickness.....	12
10.	Adjustment by hand of the ORION 4	13
11.	Accessories	14
12.	Flow diagrams	15

1. Safety notices

ATTENTION

1. Only trained and instructed specialised staff may operate, maintain and repair the machine.
2. Before working on the machine, please read the Hohner operating instructions and heed all warnings on the machine.
3. Do not operate the machine until all safety devices, locking mechanisms and other safety precautions are functioning and fitted to the machine.
4. Electrical work on the machine may only be carried out by a qualified electrician.
5. For safety reasons, before performing maintenance or repairs, always shut off the current supply and set the main switch to "0".
6. Before sample stitching and production, remove all tools from the stitching head and from the machine
7. Residual risks: if there is no stitching material beneath the stitching head, there is a risk that your hand or fingers may slip beneath the finger guard.

The user is responsible for the safe function of the machine at any time as well as for the observance of all prescriptions of these instructions for use by the operating person. For all questions regarding the safe operation of this machine, please, contact your senior officer or Hohner sales representative or directly to:

Hohner Maschinenbau GmbH

Street:	Gänsäcker 19
Town:	D-78532 Tuttlingen
Telephone:	07462 / 94 68 - 0
Fax:	07462 / 94 68 - 20
Email:	info@hohner-postpress.com
Internet:	www.hohner-postpress.com

Spare Parts / Customer Service

Fax: 07462 / 9468-20

- modifications reserved -

2. Technical Data

Stroke length - driver:		66 mm
Stroke length - bender:		55 mm
Stroke length - clincher:		5,5 mm
Size of stitching table:		1000 x 330 mm
Max. depth from staple, towards the back up to stand:		230 mm
Staple distance		min. 70 mm max. 550 mm
Max. stitching thickness	standard stitching:	20 mm
Max. stitching thickness	loop stitching:	4 mm
Crown width of the staple:		14 mm
Stitching capacity per minute and stitching head:		192
Max. number of usable stitching heads:		4
Stitching wire, round:	No. 20 - 28	(0,90 - 0,40 mm Ø*)
Stitching wire, flat:	No I - VI	(0,70 - 0,35 mm *) up to (0,96 - 0,78 mm *)
Machine net weight:		around 512,0 kg
Net weight per narrow stitching head UNIVERSAL 70/20		around 8,5 kg

This version of the wire stitching machine **ORION 4** affords room for four (4) narrow stitching heads UNIVERSAL 70/20.

The stitching table is placed in a horizontal position for block stitching and in a saddle position for brochure stitching. Positioning occurs via stops. The machine has a three-phase-motor (1,10 kW) 230/400 volt, 50 Hz - 3 phases with clutch-brake combination. Tripping occurs via a pedal switch.

Wire dimensions according to German standards!

IMPORTANT!

Danger due to electric current!

Electrical works on the machine may only be performed by a trained electrical engineer.

When installing the machine, please observe the local connection instructions. The machine power supply cable must be secured accordingly.

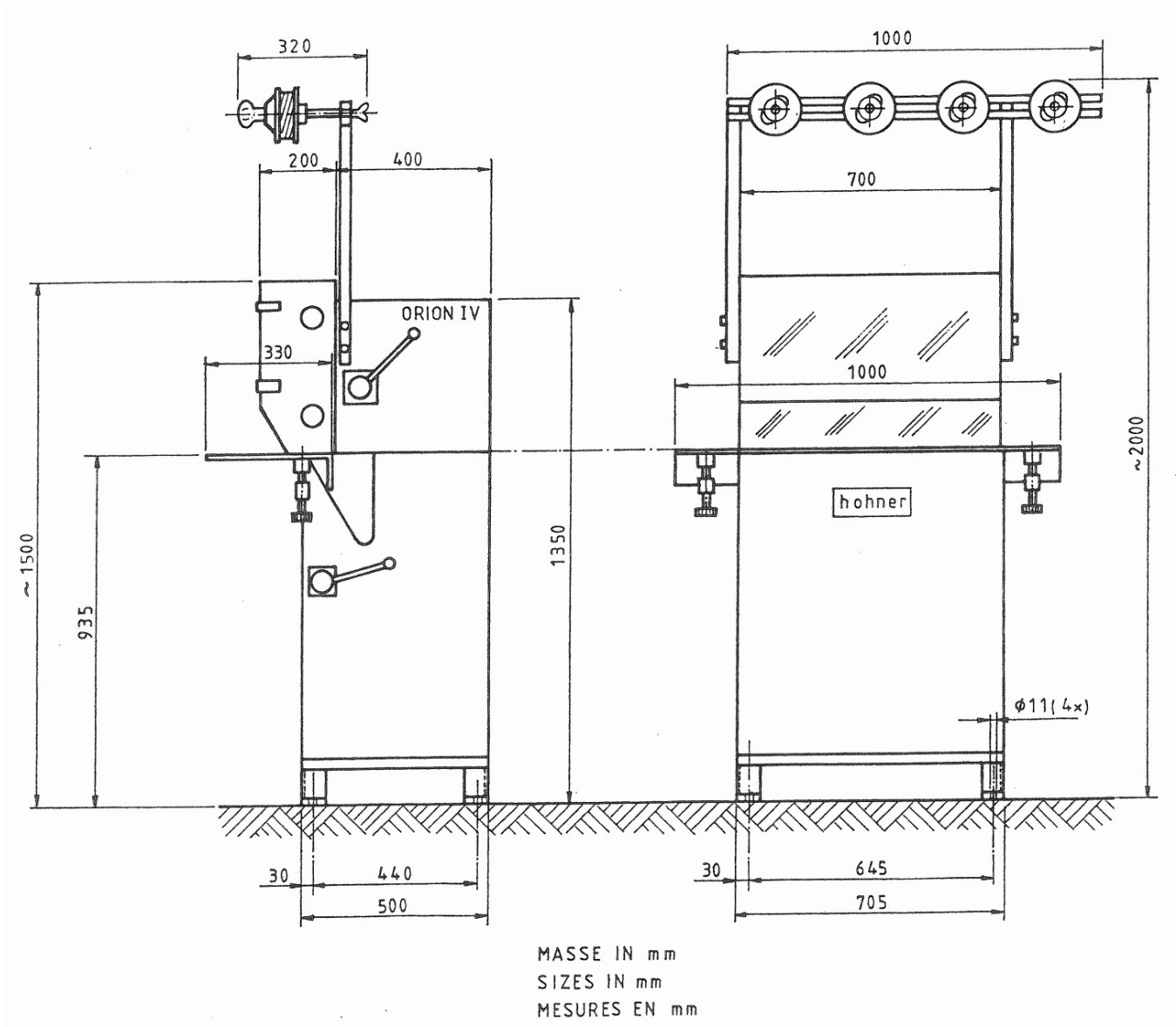
According to the latest regulations for electrical installations (VDE regulations), the safety conductor is coded yellow-green.

Should the engine protective switch have been tripped, first switch off the machine at the main switch. Then determine and eliminate the cause. Once the cause has been eliminated, the engine protective switch can be set to pos.1 by turning (see figure).

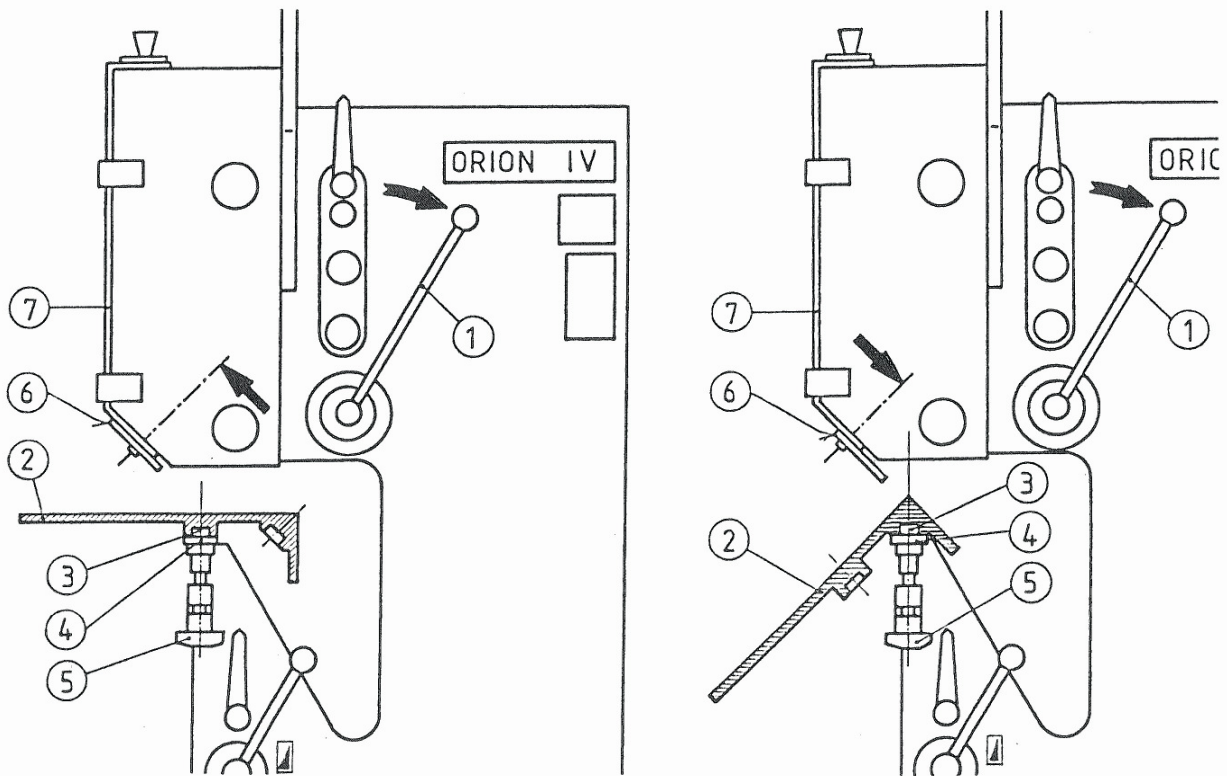
While doing so, ensure that all protective systems are installed on the machine and all tools have been removed from the machine. Switch on machine at the main switch.



3. Measures plan of the ORION 4



4. Installation of the stitching table

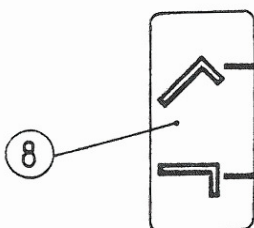


Installation of stitching table: flat stitching

With the lever **1** lift all stitching heads to the highest position. Slide the stitching table **2** with the small side into the machine. Move it with both handles **3** right and left over the centering discs **4**. Put down the stitching table until it will be supported. Push the triangle-handles **5** upwards and tighten them.

Installation of the stitching table: for brochure stitching

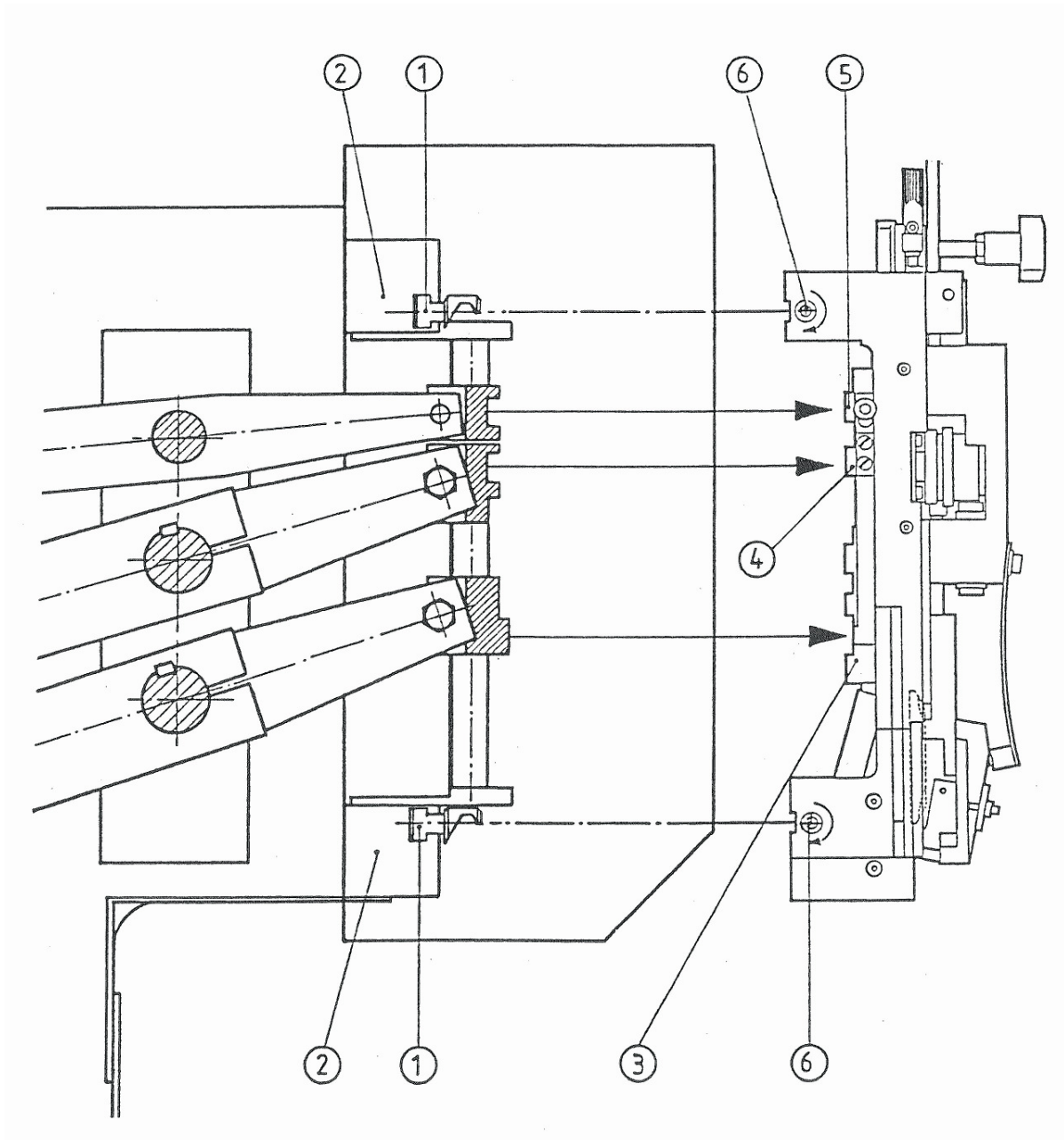
With the lever **1** lift all stitching heads to the highest position. Slide the stitching table **2** with the small side into the machine. Tilt the stitching table downwards to 45 degrees. Move the stitching table with both fixed angle-supports over the centering discs **4**. Put down the stitching table until it will be supported. Push the triangle handles **5** upwards and tighten them.



Important!

The „stick-on-level“ **8** on the front panel **7** shows, how to fix the safety guard **6** in the two way position of the stitching table.

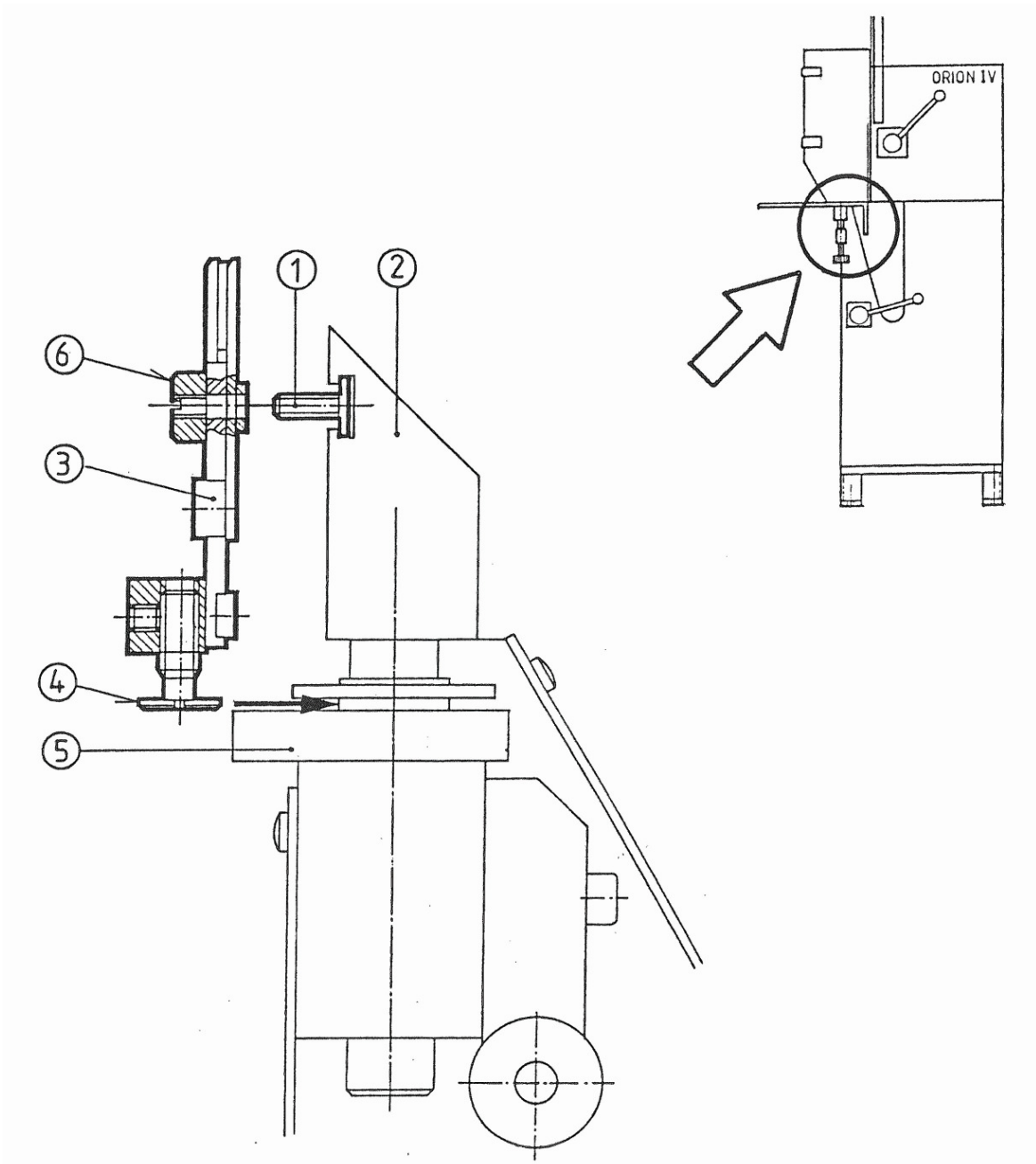
5. Installation of the narrow stitching heads 70/20



Insert key blocks **1** into the traverses **2** . Milled part must point downwards.

Install the stitching head with the boring over the peg of the key blocks **1** , at the same time also align the driving block **3** , the pusher **4** and adjusting block **5** with the corresponding rails. Clamp the stitching head to the machine by turning down the hex sockets **6** of the eccentric until it is tight.

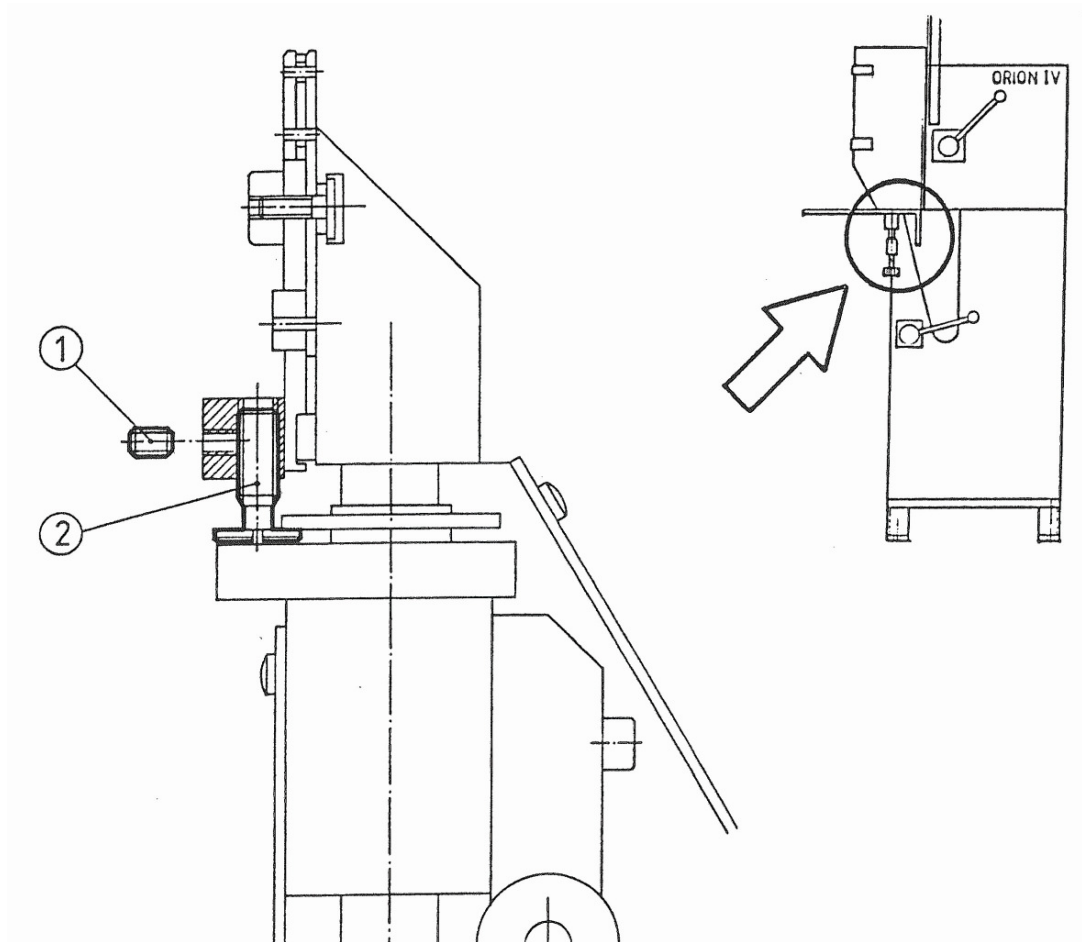
6. Installation of the clincher box



Slide both clincher box mounting studs **1** in the T-slot of the clincher box receiver **2** .

Install the clincher box **3** on with the mounting studs **1** and make certain that the adjustment screw **4** is aligned with the driving slot as shown. Tighten both clamp nuts **6**. Be sure the clincher box is correctly aligned with the stitching head.

7. Basic adjustment of clinchers



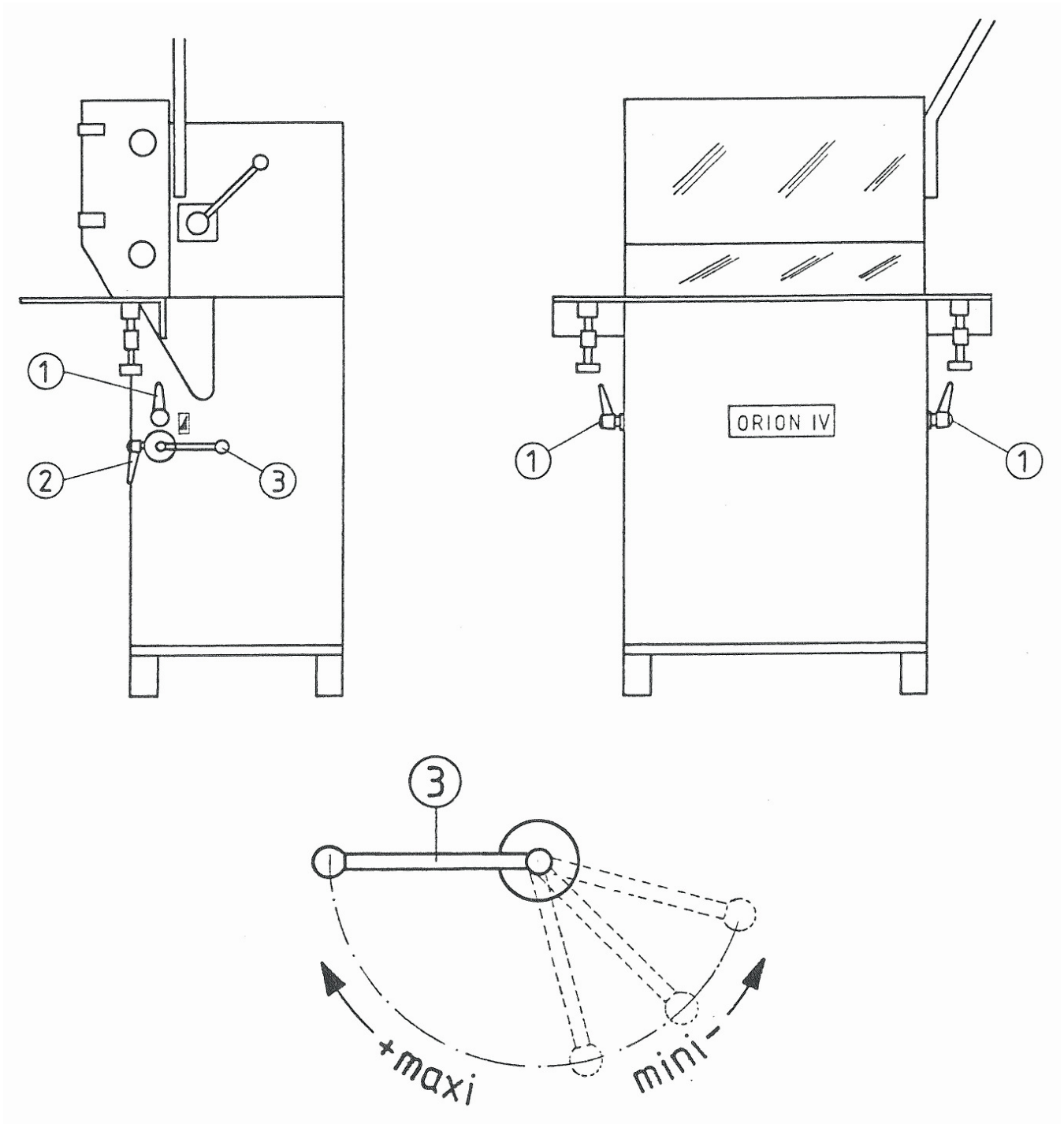
In case of replacement or retrofit of the stitching heads UNIVERSAL 70/20 and the clincher boxes a basic adjustment will be necessary.

The pressure of the clincher spine pressure must be adjusted at minimal pressure (correspond to 2-sheet-stitching). See page 8.

Adjustement:

Loosen the allen set screw **1** . Cycle the machine by hand (see page 10) until the clincher points reach their highest position. Adjust the clincher pusher screw **2** until the center of the clincher points are approx. 1 mm above the clincher box surface. Tighten the allen set screw **1** .

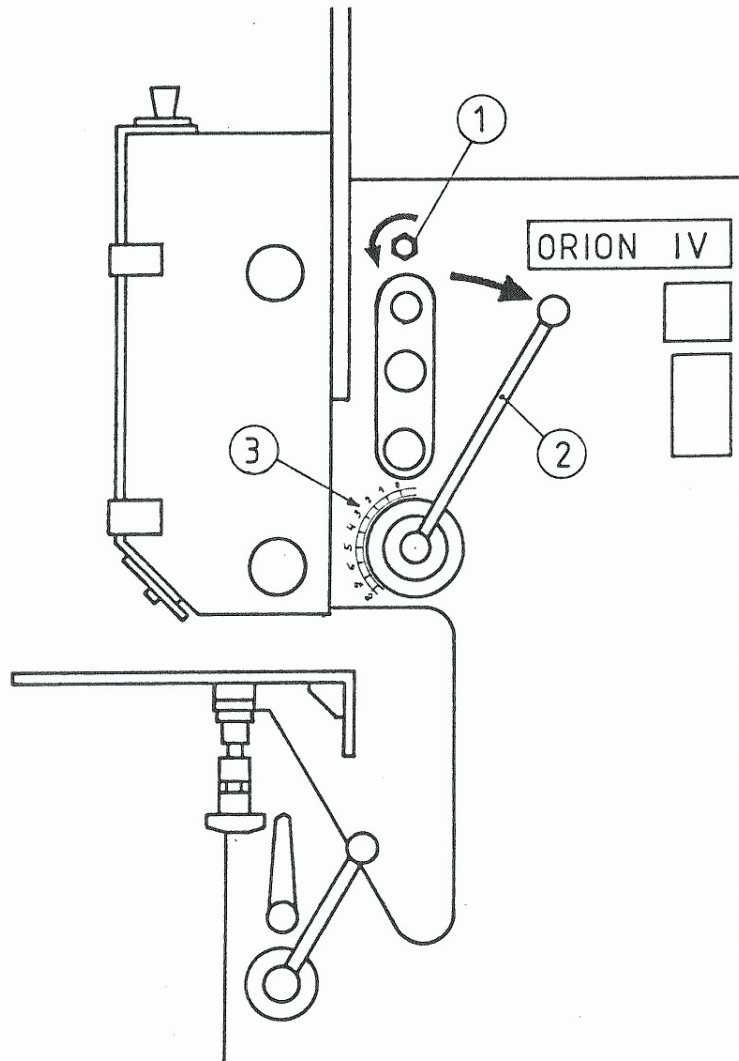
8. Pressure adjustment for clincher back pressure



The clincher back pressure can be adjusted, it depends on the stitching thickness and the kind of paper. First loosen clamp levers **1** on the right and left side of the machine, then loosen the clamp lever **2** and adjust the clincher back pressure with the adjusting lever **3**.

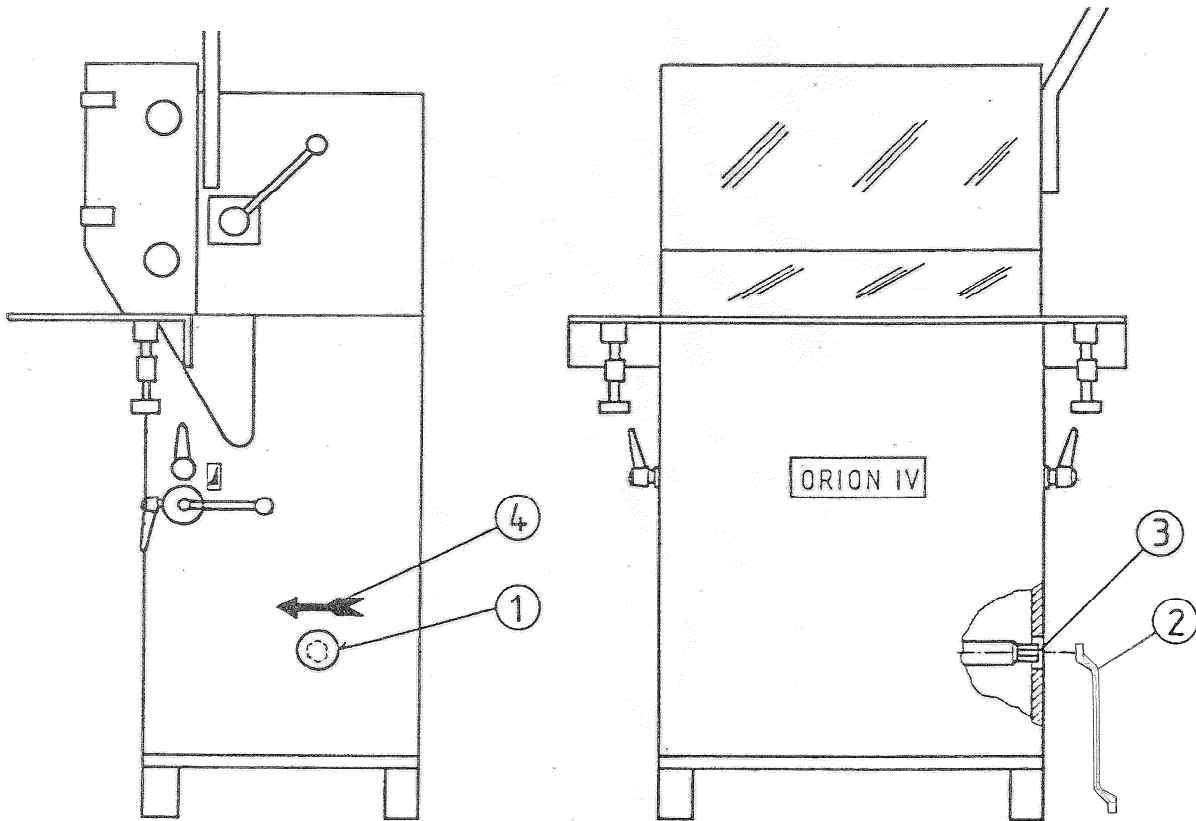
After the pressure adjustment tighten again clamp lever **2** and both clamp levers **1**. If an individual pressure adjustment is required, please revert to page 7.

9. Adjustment of the stitching thickness



Turn the stitching head wire transport (orange knob) to the off position. Cycle the machine once to remove the stitching currently loaded in the former. These wire pieces can also be removed by hand. Loosen the hexagon head screws **1** on both sides of the machine. Measure the book thickness in millimeters. Move adjusting lever **2** to the proper thickness indicated on the scale **3**. Tighten the hexagon head screws **1**. (Be sure they are extremely tight. If they are not tightened securely, your machine could go out of adjustment during operation.) Turn the stitching head wire transport knob back to the engaged position. Cycle the machine once, this will load the stitching heads with the new proper stitch length. You may begin production. Be sure all safety guards are in place!

10. Adjustment by hand of the ORION 4



For any adjustment or installation work at the wire stitching machine **ORION 4** , the drive unit can be moved by hand. For this step use the pipe spanner 19 mm **2**

Attention!

Before all repairs, disconnect the power supply and set safety switch (main switch) to „0“.

First remove the plug **1** . Put the double offset ring wrench **2** on the hexagon **3** of the motor shaft and turn the pipe spanner **2** in direction of arrow **4** .

Important!

Before resumption of work the pipe spanner **2** has to be removed from the hexagon of the motor shaft.

11. Accessories

Every **ORION 4 WIRE STITCHING MACHINE** is supplied with:

Art.-No. 31 44 030	setting gauge
Art.-No. 46 00 003	1 screw driver SB 4,5
Art.-No. 46 00 004	1 screw driver SB 7,0
Art.-No. 46 00 008	1 hexagon socket screw key SW 3
Art.-No. 46 00 014	1 diagonal cutting nipper
Art.-No. 46 00 019	1 hexagon socket screw key SW 5
Art.-No. 46 00 038	1 double offset ring wrench
Art.-No. 46 00 044	1 Torx angle screwdriver T10
Art.-No. 46 00 045	1 Torx angle screwdriver T20
Art.-No. 94 36 340	1 setting gauge for clincher box
Art.-No. 99 67 700	2 centering device, cpl.

12. Flow diagrams

Orion 4 Nr. 43 44 360

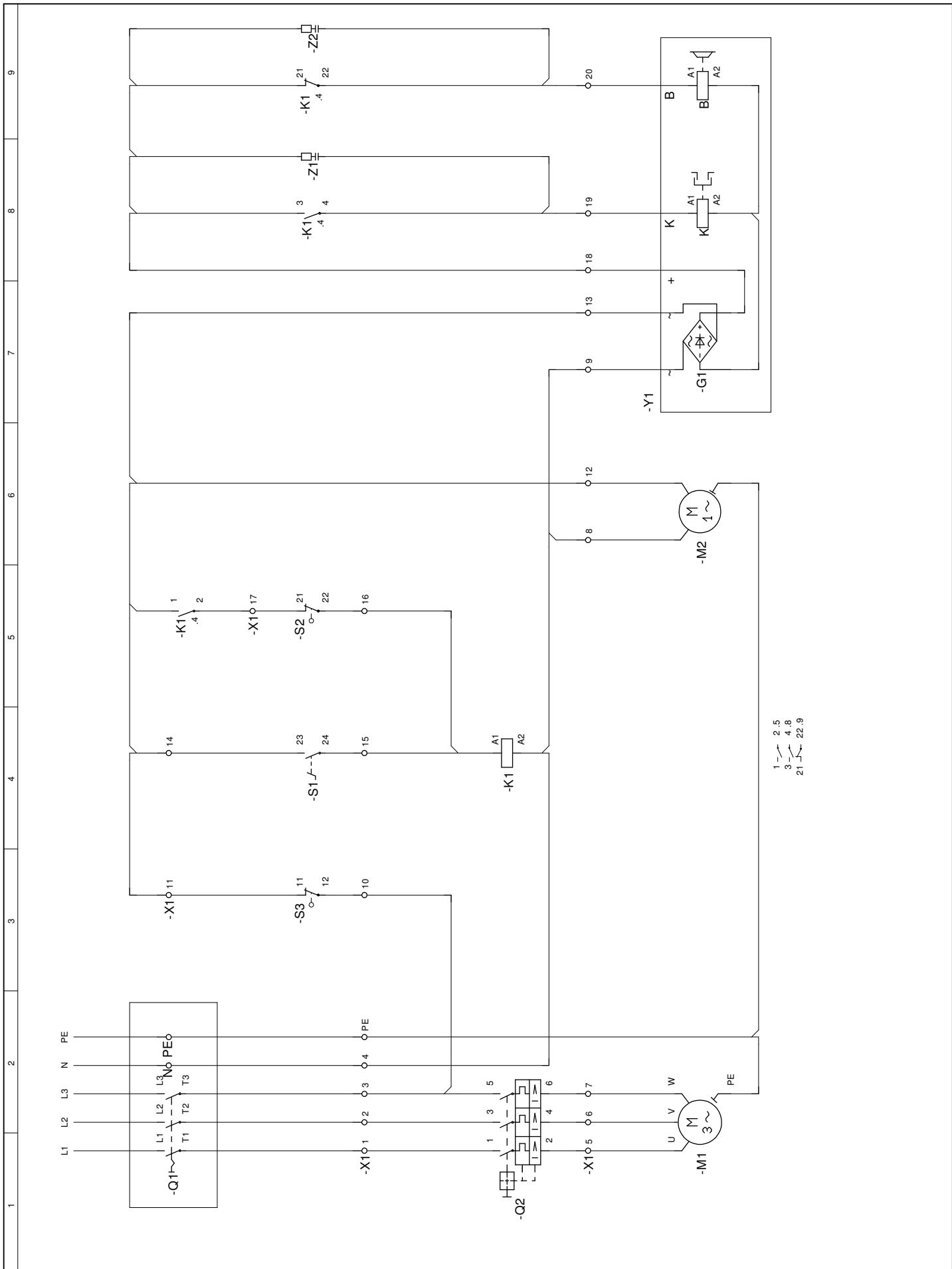
P. 1-3

400 V 3 Phase AC / Y 50/60 Hz

Orion 4 Nr. 43 44 362

P. 1-3

230 V 3 Phase AC / Δ 50/60 Hz



29.03.05	VEK	hohner Maschinenbau GmbH	Maschine / Machine / Machine Orion IV	Zeichnungs-Nr. / Drawing-Nr. / Dessin-No. 43 44 360
Benennung / Title / Dénomination Schaltplan / flow diagrams / schéma des circuits 400V 3 Phase AC / Y 50 / 60 Hz				
Änderung	Name	© Hohner Maschinenbau GmbH		Seite Sheet Page 1

Seite/Pfad page/path bord/sentier	Bezeichnung description designation	Anschiuß supply reecordement	Zielpunkt destination destination	Brücken bridge pont	Klemmennummer binder number numero borne	Anschiuß supply reecordement	Zielpunkt destination destination	Bezeichnung description designation	
/1.2			-PE		PE	PE	-M1		
/1.9		22	-K1		20	A1	-B		
/1.8		4	-K1		19	A1	-K		
/1.8		3	-K1		18		-G1		
/1.5		2	-K1		17	21	-S2		
/1.5		A1	-K1		16	22	-S2		
/1.4		A1	-K1		15	24	-S1		
/1.4				•	14	23	-S1		
/1.7				•	13		-G1		
/1.6		1	-K1	•	12		-M2		
/1.3				•	11	11	-S3		
/1.3				•	10	12	-S3		
/1.7		A2	-K1	•	9		-G1		
/1.6				•	8		-M2		
/1.2		6	-Q2		7	W	-M1		
/1.2		4	-Q2		6	V	-M1		
/1.1		2	-Q2		5	U	-M1		
/1.2			-N		4	A2	-K1		
/1.2		T3	-Q1	•	3	5	-Q2		
/1.2		T2	-Q1		2	3	-Q2		
/1.1		T1	-Q1		1	1	-Q2		
		=ORION4+400V-X1							
		Klemmleiste / connector block / borne plate							

21.05.08 VEK



Maschine / Machine / Machine

Orion IV

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

43 44 360

Index


Benennung / Title / Dénomination
Klemmleiste

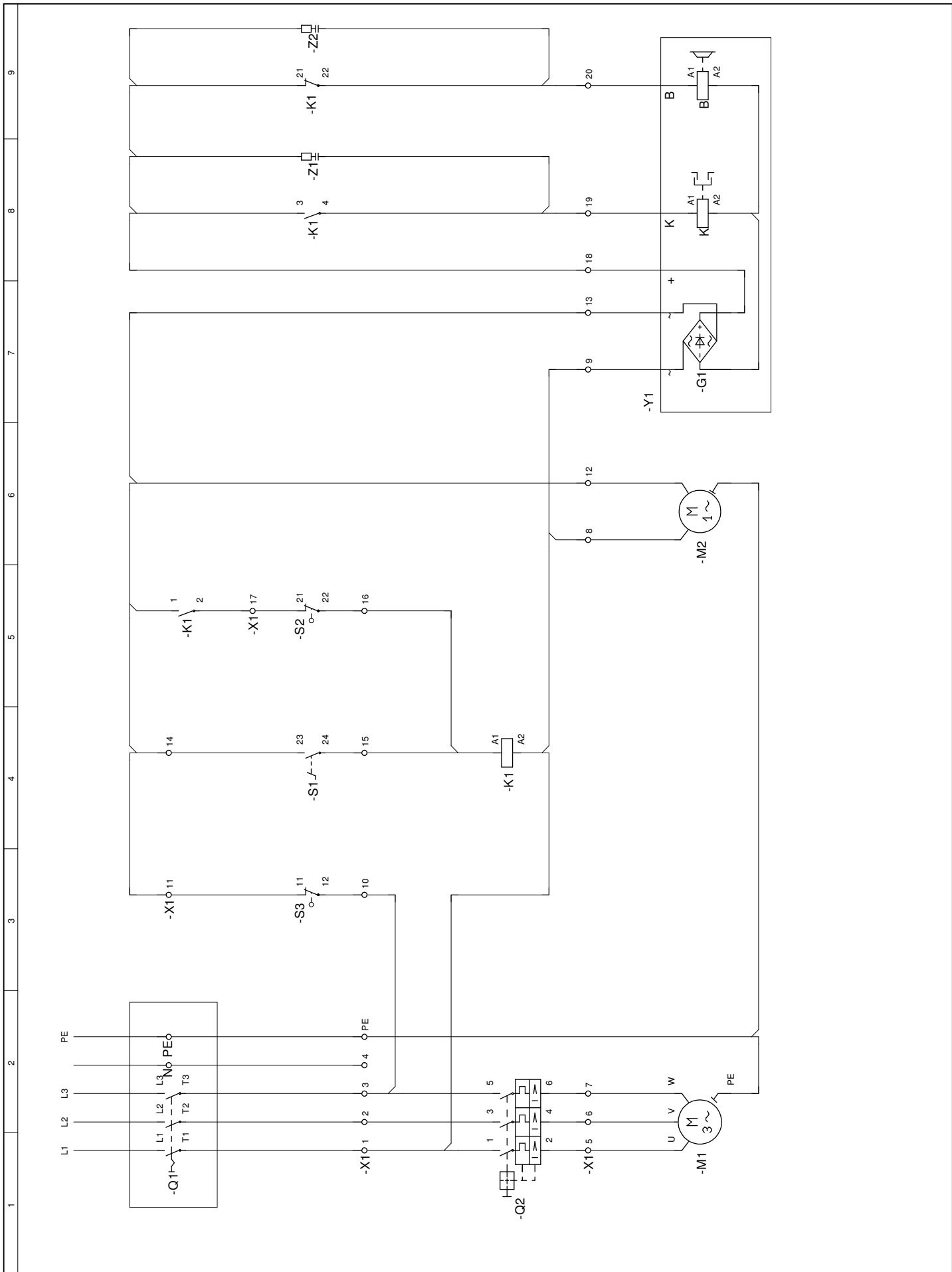
Änderung Name ©Hohner Maschinenbau GmbH

Seite
Sheet
Page

2

					1	2	3	4	5	6	7	8	9
Bez.	Art.Nr	Bezeichnung	Description	Description									
-K1	4300076	Schütz	contactor	contacteur									
-M1	4200142	Motor	motor	moteur									
-M2	4200165	Lüfter-Motor	ventilator-motor	ventilateur-moteur									
-Q1	4300007	Hauptschalter	main switch	interrupteur principal									
-Q2	4300223	Motorschutzschalet	protective motor switch	coffret de protect. disjoncteur-protecteur									
-S1	4300068	Fußschalter	pedal switch	commande par pédale									
-S2	4300003	Endschalter	stop switch	déclenchem. fin du course									
-S3	4300004	Sicherheitsschalter	safety switch	interrupteur fin de course									
-Y1		Kupplungs-Brems-Kombination	clutch brake-combination	combinaison, frein d'embrayage									
-Z1	4300237	Funkenlöschglied	spark absorber	absorbeur d'ondes									
-Z2	4300237	Funkenlöschglied	spark absorber	absorbeur d'ondes									

Änderung									
Name									
19.05.08	VEK								
		Maschine / Machine / Machine Orion IV	Zeichnungs-Nr. / Drawing-Nr. / Dessin-No. 43 44 360	Index	Benennung / Titre / Dénomination Ersatzteilleiste / spare parts list / liste des pièces de rechange				
		©Hohner Maschinenbau GmbH							
3	Seite Sheet Page								



21.05.08 VEK



Maschine / Machine / Machine

Orion IV

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

43 44 362

Index

Benennung / Title / Dénomination
 Schaltplan / flow diagrams / schéma des circuits 230V 3 Phase AC / Δ 50 / 60 Hz

Änderung Name ©Hohner Maschinenbau GmbH

Seite
 Sheet
 Page

1

Seite/Pfad page/path bord/sentier	Kabelbezeichnung cable marker câble	ÖLFLEX CLASSIC 110CY-G Bezeichnung description désignation	Anschiuß supply raccordement	Zielpunkt destination destination	Brücken bridge pont	Klemmennummer binder number numero borne	Anschiuß supply raccordement	Zielpunkt destination destination	Bezeichnung description désignation
+230V/1.1		T1	-Q1			1		1	-Q2
+230V/1.2		T2	-Q1			2		3	-Q2
+230V/1.2		T3	-Q1			3		5	-Q2
+230V/1.2			-N			4			
+230V/1.1			-Q2			5		U	-M1
+230V/1.2			-Q2			6		V	-M1
+230V/1.2			-Q2			7		W	-M1
+230V/1.6			-Q2			8			-M2
+230V/1.7			-K1			9			-G1
+230V/1.3			-S3			10			
+230V/1.3			-K1			11		11	-S3
+230V/1.6			-K1			12			-M2
+230V/1.7						13			-G1
+230V/1.4						14		23	-S1
+230V/1.4			-K1			15		24	-S1
+230V/1.5			-K1			16		22	-S2
+230V/1.5			-K1			17		21	-S2
+230V/1.8			-K1			18			-G1
+230V/1.8			-K1			19		A1	-K
+230V/1.9			-K1			20		A1	-B
+230V/1.2			-PE			PE		PE	-M1

=ORION4+230V-X1

Klemmleiste / connector block / borne plate

19.05.08 VEK



Maschine / Machine / Machine

Orion IV

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

43 44 362

Index

Benennung / Title / Dénomination
Klemmleiste

Änderung Name ©Hohner Maschinenbau GmbH

Bez.	Art.Nr	Bezeichnung	Description	Description
-K1	4300076	Schütz	contactor	contacteur
-M1	4200142	Motor	motor	moteur
-M2	4200165	Lüfter-Motor	ventilator-motor	ventilateur-moteur
-Q1	4300007	Hauptschalter	main switch	interrupteur principal
-Q2	4300224	Motorschutzschalter	protective motor switch	coffret de protect. disjoncteur-protecteur
-S1	4300068	Fußschalter	pedal switch	commande par pédale
-S2	4300003	Endschalter	stop switch	déclenchem. fin du course
-S3	4300004	Sicherheitsschalter	safety switch	interrupteur fin de course
-Y1		Kupplungs-Brems-Kombination	clutch brake-combination	combinaison, frein d'embrayage
-Z1	4300237	Funkenlöschglied	spark absorber	absorbeur d'ondes
-Z2	4300237	Funkenlöschglied	spark absorber	absorbeur d'ondes

19.05.08 VEK **hohner** Maschine / Machine / Machine Orion IV
 Zeichnungs-Nr. / Drawing-Nr. / Dessin-No. 43 44 362 Index

Benennung / Title / Dénomination
 Ersatzteilliste / spare parts list / liste des pièces de rechange

Änderung Name ©Hohner Maschinenbau GmbH