
OPERATING INSTRUCTIONS
for

WUKO PITTSBURGH-
SEAM CLOSER

1 0 0 4

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SAFETY INSTRUCTIONS

WARNING! When using electric machines basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following.

Read all these instructions before attempting to operate this product and save these instructions.

For safe operation:

1. Keep work area clean

Cluttered areas and benches invite injuries.

2. Consider work area environment

Don't expose machine to rain. Don't use machine in damp or wet locations. Keep work area well lit. Don't use machine in presence of flammable liquids or gases.

3. Guard against electric shock

Avoid body contact with grounded surfaces (e.g. pipes, radiators, refrigerators).

4. Keep children and visitors away

Do not let children contact machine or extension cable. All visitors should be kept away from work area.

5. Store idle tools

When not in use, tools should be stored in dry place, out of the reach of children.

6. Don't force tool

It will do the job better and safer at the rate for which it was designed.

7. Use right tool

Don't use tool for purposes not intended.

8. Dress properly

Sheets are very sharp-edged - wear protective gloves! Do not wear loose clothing or jewelry. They can be caught in moving parts. Gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.

9. Don't abuse cable

Never carry tool by cable or yank it to disconnect it from socket. Keep cable from heat, oil and sharp edges.

10. Secure work

Use clamps or a vice to hold work. It's safer than using your hand and it frees both hands to operate the tool.

11. Don't overreach

Keep proper footing and balance at all times.

12. Maintain tools with care

Keep tools clean for better and safer performance. Follow instructions for changing accessories. Inspect cable periodically and, if damaged, have repaired by authorized service facility. Inspect extension cables periodically and replace if damaged. Keep handles dry, clean and free from oil and grease.

13. Disconnect tools

When not in use, before servicing, and when changing accessories.

14. Remove adjusting keys and wrenches

Form the habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

15. Avoid unintentional starting

Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.

16. Outdoor use extension cords

When tool is used outdoors, use only extension cords intended for use outdoors and so marked.

17. Stay alert

Watch what you are doing. Use common sense. Do not operate machine when you are tired.

18. Check damaged parts

Before further use of the tool that is damaged it should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A machine part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by an authorized service center. Do not use machine if it cannot be turned on and off by the switch.

19. Warning

The use of any other accessory or attachment other than recommended in this operating instruction may present a risk of personal injury, and could invalidate any guarantee.

20. Machine repairing by expert only

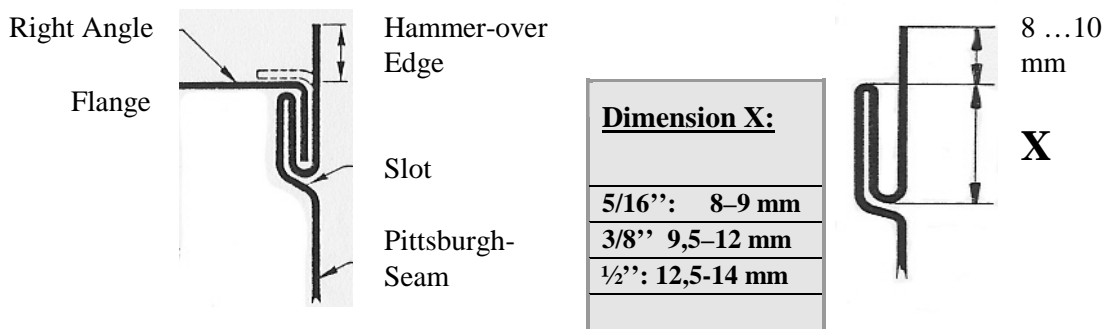
This electric machine is in accordance with the relevant safety rules. Repairing of electric machines may be carried out only by experts, otherwise it may cause considerable danger for the user.

Please read the operating instructions carefully in order to learn the operation and the use of your WUKO Pittsburgh Seam Closer. Note the safety advices and retain the operating instructions.

I. GENERAL

1. PRE-FABRICATION OF THE PITTSBURGH SEAM

The Pittsburgh seam (produced on a Roll Forming Machine, mainly in pocket heights 5/16", 3/8" and 1/2") and the right angle flange are assembled as shown on sketch N°1.



Sketch 1

Sketch 2

2. WUKO PITTSBURGH SEAM CLOSER MODEL 1004

WUKO Pittsburgh Seam Closer consists of an electric drive and of a mechanical machine head. The tool closes the hammer-over edge of a Pittsburgh Lock on straight, as well as on curved working sections (e.g. elbows). The maximal sheet metal thickness is 1,2 mm at 370 N/mm². Pittsburgh pocket depths of 5/16", 3/8" and 1/2" can be closed using the respective jaws (see Sketch N°2).

3. TECHNICAL DATA:

• Electric drive (standard)	230V/50Hz/2,1A/420W
• Max. sheet metal thickness	1,2mm bei 370 N/mm ²
<u>VIBRATION / NOISE LEVEL</u>	
Vibration/Acceleration according to EN 28662-1 und EN 50144:	$a_{vhw} = 9,9 \text{ m/s}^2$
Typical noise level according to EN50144:	$L_{pA} = 97 \text{ dB}$ $L_{pCpeak} = 110 \text{ dB}$ $L_{WA} = 110 \text{ dB}$
ATTENTION! The noise level when working may exceed 85 dB. Wear ear protection!	
• Weight:	4,5 kg

4. ASSEMBLY OF THE PITTSBURGH SEAM

- Make sure that the right angle flange sits tightly in the pocket
- Close the hammer-over edge of the Pittsburgh pocket with a hammer on both ends
- Further joints between the two ends, if required, should be made at an angle of approximately 60° (see sketch N°3) in order to guarantee the free advance of the seam closer



Sketch N°3

II. OPERATING:

Before operating please check the following points:

- Height of the Pittsburgh pocket (see dimension X, sketch N°2)
- Is the seam closer equipped with the correct guide nose
- Maximum sheet metal thickness
- Voltage

1. CLOSING ON STRAIGHT SECTIONS AND ON OUTER RADIUS OF CURVED SECTIONS:

- Place the seam closer on the seam end.
- Turn the lever [94] in order to bring the guide nose into the slot of the Pittsburgh pocket.

If the guide nose cannot be positioned correctly, switch the tool briefly on and off, which brings the tool automatically into the right starting position (the guide nose in the slot and the hammer head [57] on the closed hammer-over edge (see Photo N°1 and 2).

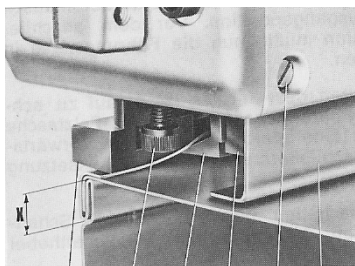


Photo 1

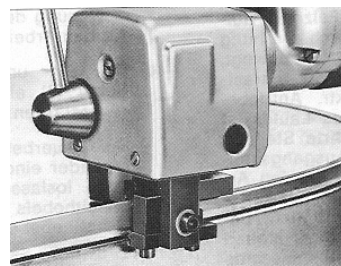


Photo 2

Put the right hand on the handle and the left one on the machine head and press the switch.

For continuous operation press switch and switch locking button one after the other and release both in the same order. To stop tool, press switch and release again.

- Move the tool forward at a steady, moderate speed, parallel to the seam, not lifting from the handle.

Ensure that the guide nose is positioned in the slot of the pocket!

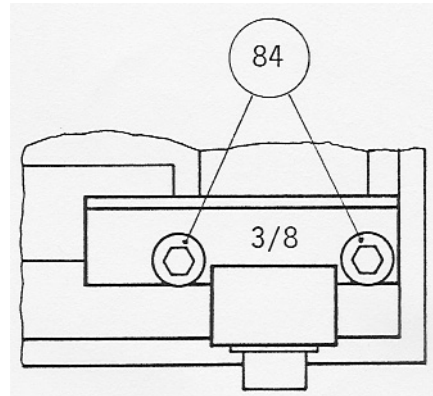
- Switch off the tool by releasing the switch.

2. CLOSING INSIDE RADIUS ON CURVED SECTIONS:

For closing inside radius (min. 150 mm) the straight guide nose has to be changed against the round one:

- Remove the screws [84]
- Replace the guide nose with the round one (the seam height punched on the nose must be visible)
- Tighten the screws [84]

Go on like in II/1.



Sketch N°4

III. ADJUSTING

The WUKO Pittsburgh Seam Closer is delivered according to the specifications, for a certain seam height. If it is necessary the tool can be equipped/adjusted for another height. The required accessories (guide noses and working jaws) are available in different heights (standard ones: 5/16", 3/8" and 1/2").

1. CHANGING GUIDE NOSE AND WORKING JAW

a) Retooling from 1/2" to 3/8" and vice versa:

- In this case only the guide nose has to be changed:
 - Remove the screws [84]
 - Remove the guide nose
 - Install the required guide nose (the seam height punched on the guide nose must be visible)
 - Tighten the screws [84] and check the dimension A (see III/2)

b) Retooling from 1/2" or 3/8" to 5/16" and vice versa:

- The guide nose and the working jaw have to be changed:
 - Fix the required guide nose with screws [84] on the corresponding working jaw (1/2" and 3/8" on Item N° 86, 5/16" on Item N° 109)
 - Remove the screw [89] and the working jaw with the guide nose
 - Install the new working jaw with the guide nose and tighten the screw [89]
 - Check the dimension A (see III/2)

2. ADJUSTING THE DIMENSION A

(see Sketch N°5)

- Turn the lever [94] in order to bring the shaping jaw [82] towards the working jaw [86/109] so that the two jaws touch each other - if not, then twist the eccentric [60] with a screwdriver until the jaws come into contact

The adjustment shall not be so tight that it is not possible to twist the eccentric by 360°.

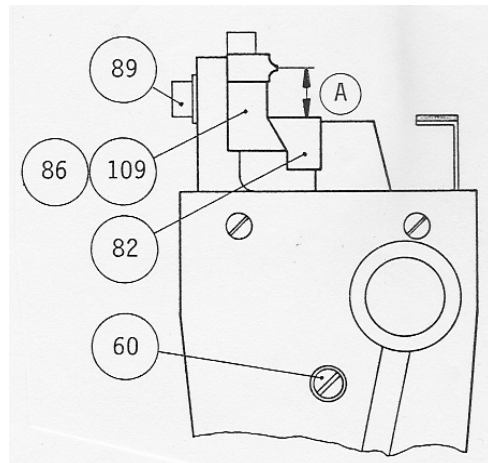
- Check the dimension A

Dimension A = Dimension X + 0,5 mm

Example: Dimension X = 12 mm
⇒ Dimension A = 12,5 mm

and adjust if necessary:

- Loosen the screw [89] and bring the working jaw [86/109] in right position.
- Tighten the screw [89] → Dimension A is fixed



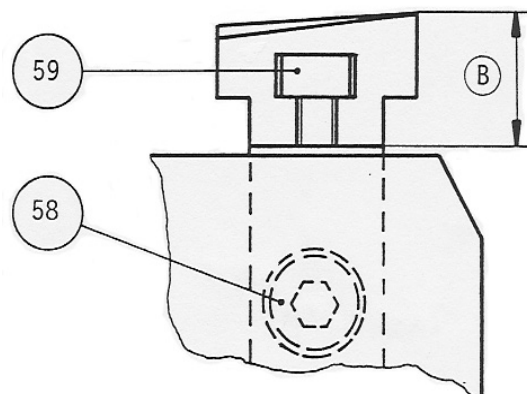
Sketch N°5

3. SETTING THE HAMMER HEAD (DIMENSION B)

(see Sketch N°6)

The dimension B is set at 19,5 mm at the factory, corresponding to a sheet metal thickness of 1 mm (galvanized steel). By adjusting this dimension the hammering power can be changed as follows:

- Loosen the screw [58] and adjust the dimension B by twisting the screw [59]
 - Rough hammering traces on the hammer- over edge
⇒ Reduce the dimension B slightly (0,5 mm)
 - The hammer-over edge not tightly closed
⇒ Increase the dimension B slightly (0,5 mm)
- Tighten the screw [58] → Dimension B is fixed



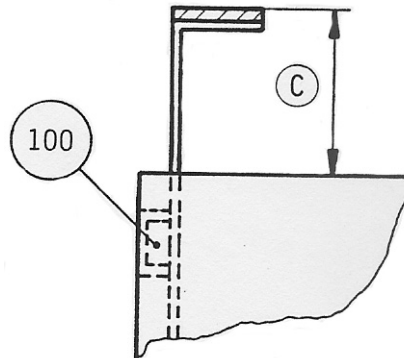
Sketch N°6

4. ADJUSTING THE HEIGHT OF THE GUIDE PLATE (DIMENSION C)

(see sketch N°7)

The dimension C should generally be 22 mm so that the tool can be moved smoothly.

- Loosen the screws [100]
- Adjust the dimension C, e.g. with a slide gange
- Tighten the screws [100]



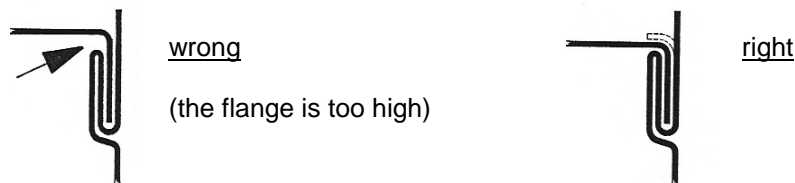
Sketch N°7

IMPORTANT! The screws must be tightened carefully after every retooling or adjustment, otherwise the tool can be damaged when taking into operation.

IV. TROUBLE SHOOTING

The tool cannot be moved forwards (without extreme power) or it jumps out of the seam

1. The dimension A is not correct
 ⇒ Check the height of the Pittsburgh Lock and compare with the guide nose/working jaw and their adjustment
2. The maximum sheet metal thickness (1,2 mm) is exceeded.
3. The height of the right angle flange is not correct



4. The hammer-over edge is too high (> 10 mm)
 ⇒ Adjust the width of the hammer-over edge on the roll forming machine
5. The dimension B is too high
 ⇒ Adjust (see III/3)
6. The hammer-over edge has been closed more than 60° during the assembly
 (see Sketch N°3)

The tool does not close the seam

1. Check the dimension B (see III/3, Sketch N°6)
2. Do not lift the tool from the handle (the tool must be moved parallel to the seam)
3. Check the dimension C (see III/4)
4. The sheet metal thickness is too thin
⇒ Insert compensating plates between the working jaw and the working jaw holder

ATTENTION: The shaping jaw and the working jaw must touch each other (see III/2)

5. Wear of guide nose/working jaw/shaping jaw

The Pittsburgh pocket is pressed sideways

1. Check the Pittsburgh Lock after production on a roll forming machine



wrong



right

2. Check the dimension A (III/2)
3. Dimension B is too high (III/3)

V. MAINTENANCE

The tool has to be handled carefully and protected against excessive dirt.

Always keep air venting slots clean!

If the tool is in continual use, annual inspection by an authorised service station is recommended.

Repairs must be performed by an authorised service station.

VI. GUARANTEE

Products of WUKO Maschinenbau GMBH are warranted to be free from defects in material and workmanship for the valid period according to the national prescriptions (to be confirmed by invoice or other shipping documents).

This warranty applies only to products purchased new from the manufacturer or its authorised distributors. Of course, this warranty does not apply to products which have been abused, misused, modified or repaired without using genuine WUKO parts or repaired by someone other than the manufacturer or its authorised services representatives.

If a WUKO product proves defective in material or workmanship within the warranty period after purchase, return it to the manufacturer or your local WUKO dealer, transportation prepaid, enclosing your name and address, adequate proof of date of purchase and a short description of the defect. WUKO Maschinenbau GMBH will, at its option, repair or replace defective products free of charge. Repairs or replacement are warranted as described above for the remainder of the original warranty period. WUKO Maschinenbau GmbH's sole liability and your exclusive remedy under this warranty is limited to repair or replacement of the defective product.

This warranty is in lieu of and supersedes all other warranties or conditions, expressed or implied, and all other warranties whether for merchantability or fitness or otherwise are hereby disclaimed. Repair or replacement shall be the only liability of WUKO Maschinenbau GMBH under this warranty. No alteration, amendment or extensions of this warranty shall be effective unless authorized in writing by an officer of WUKO Maschinenbau GmbH.

Neither WUKO MASCHINENBAU nor any of its affiliates shall be liable for consequential, incidental or special damages or any other damages, costs or expenses incurred irrespective of how they occur. WUKO MASCHINENBAU's liability on any claim shall never exceed the purchase price of the product or part thereof which gives rise to the claim.

**Do not dispose of power tools in household waste**

According to the European Guide Lines 2002/96/EG for waste electric and electronic equipment and its implementation into national law, power tools that are no longer useable must be collected separately and recycled in an environmentally friendly manner.

EC-DECLARATION OF CONFORMITY

We, the manufacturer

WUKO Maschinenbau GmbH
Dr. Maleta-Str. 1
A-4664 Oberweis

declare under our sole responsibility that this product,

WUKO Pittsburgh Seam Closer 1004

Fabrication Number:

is in conformity with the following standards or standardized documents:
MSV, BGBL. No. 306/1994, 89/392/EWG and 89/336/EWG.
EN 50144, EN 55014, EN 28662-1, EN 60555, HD 400, EN 292-1:1991,
EN 292-2:1991.

Oberweis, March 2005

Place / Date

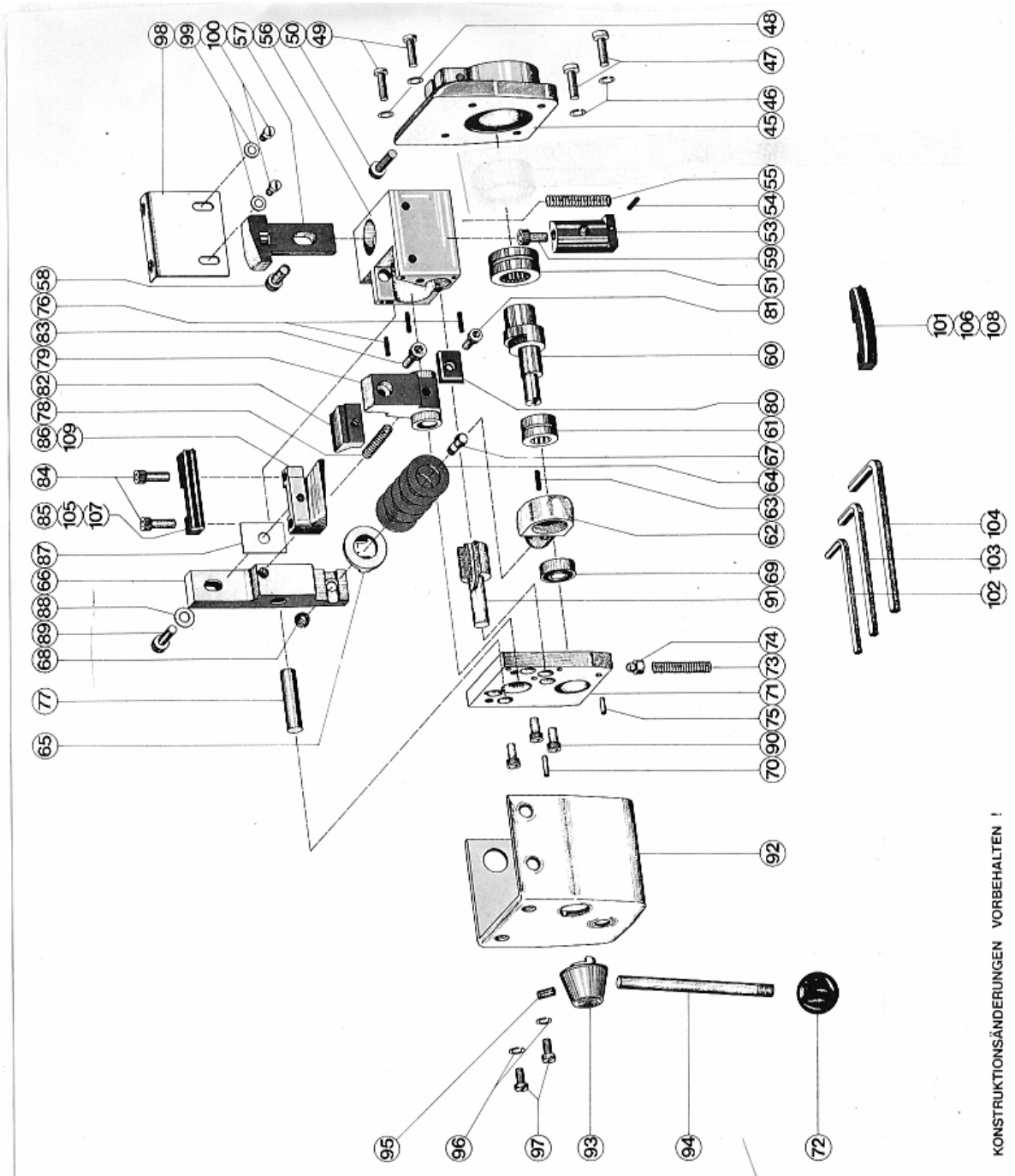
Pertti Hakala

Signature / Name

SPARE PARTS FOR THE HEAD OF THE WUKO PITTSBURGH SEAM CLOSER

Pos.	Pcs.	Description
45	1	housing
46	2	spring washers
47	2	rearward casing cap fixing screws
48	2	washers
49	2	casing fixing screws
50	1	baseplate fixing screws
51	1	piston bearing
52	1	rearward thrust collar
53	1	piston
54	1	piston pin
55	1	piston spring
56	1	housing
57	1	hammer head
58	1	hammer head fixing screw
59	1	hammer head adjusting screw
60	1	exentric shaft
61	1	thrust bearing
62	1	front thrust collar
63	1	thrust collar pin
64	5	plate springs
65	1	slide ring
66	1	working jaw holder
67	1	return screw
68	1	return nut
69	1	excentric bearing
70	1	stop pin
71	1	bearing plate
72	1	locking cone 25 mm diameter
73	1	locking spring
74	1	locking spring pin
75	1	locking pin
76	3	cylindrical pins
77	1	bearing pin
78	1	jaw spring
79	1	shaping jaw holder

Pos.	Pcs.	Description
80	1	shaping jaw holder plate
81	1	fixing screw f. locking jaw holder plate
82	1	locking jaw
83	1	locking fixing screw
84	2	guide nose fixing screw
85	1	guide nose 3/8"
86	1	working jaw 3/8" or 1/2"
87	1	compensating plate
88	1	washer
89	1	working jaw fixing screw
90	3	bearing plate fixing screw
91	1	locking pin
92	1	housing cap
93	1	locking cap
94	1	locking arm
95	1	locking fixing screw
96	2	spring washers
97	2	front housing cap fixing screw
98	1	spacing guide plate
99	2	washers
100	2	fixing screws for spacing guide plate
101	1	round guide nose 3/8"
102	1	pin wrench, size 4
103	1	pin wrench, size 5
104	1	pin wrench, size 6
105	1	guide nose 1/2"
106	1	round guide nose 1/2"
107	1	guide nose 5/16"
108	1	round guide nose 5/16"
109	1	working jaw 5/16"



KONSTRUKTIONSÄNDERUNGEN VORBEHALTEN !

SPARE PARTS for the electrical drive of the WUKO Pittsburgh Seam Closer
(from Fabrication N°994304)

Pos.	Pcs.	Description
2	1	Spindle
3	1	Bearing
4	1	Circlip
5	1	Spindle gear
6	1	Spindle set
7	1	Bearing shield
8	1	Gasket
9	6	Screw
10	1	Cover
11	1	Rear Panel
12	2	Brush holder
13	2	Carbon brush
15	1	Bearing
16	1	Fan

Pos.	Pcs.	Description
17	1	Bearing
18	1	Armature set
19	1	Choke
20	1	Choke
21	1	Capacitor
22	1	Switch
23	1	Stator set
24	1	Guide pin
25	1	Housing
26	2	Screw
27	1	Cable clamp
28	1	Cable
29	1	Cable protector

