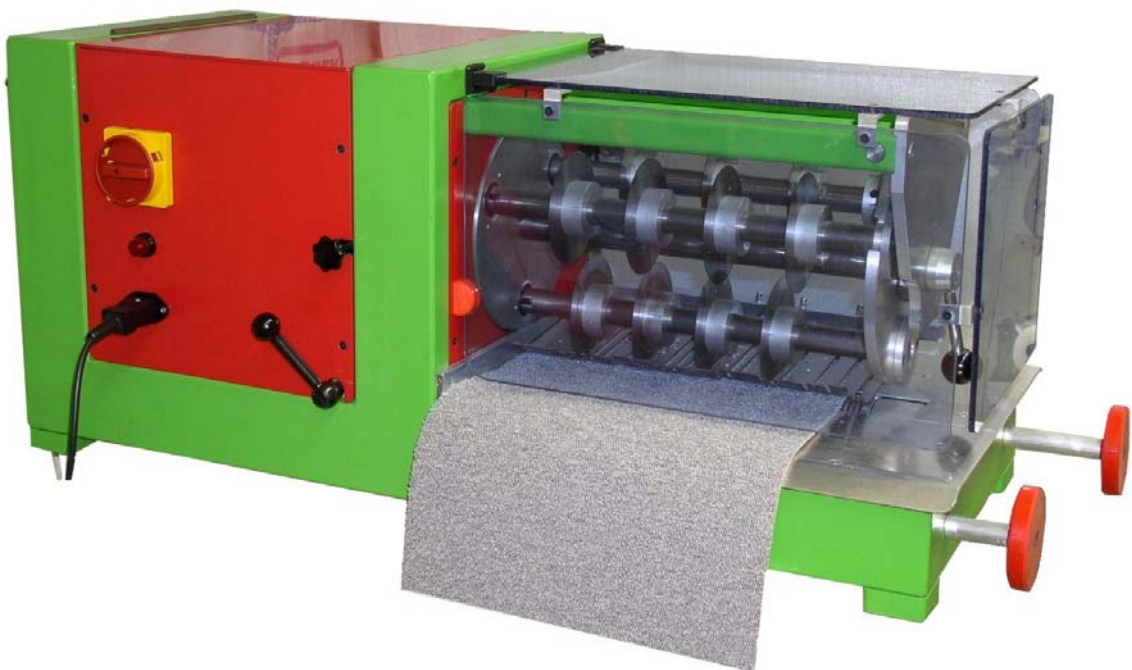




ORIGINAL INSTRUCTIONS, ENGINEER'S AND
ILLUSTRATED PARTS MANUAL



FOR CARPET STRIP CUTTING MACHINE M312G, A
FOR CARPET BORDER EDGING

MANUAL NO. 306EN

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Printed in Germany
Subject to change without notice.

UNION SPECIAL CARPET STRIP CUTTING MACHINE M312G FOR CARPET BORDER EDGING

The machine has a **rotating carrier** for 3 cutting blade drive shafts. Each drive shaft is equipped with 4 revolving cutting blades. The machine comes factory adjusted with a distance of the blades on each of the drive shafts of 60, 70 and 80 mm (different dimensions on request). The lower shaft has clearance cuts for the knives which are spaced 5 mm apart.

Equipped with a maintenance free motor 230/400V / 3 ph / 50 c/s, 0.37 kW. Safety switch if Plexiglas cover is opened. Foot switch, control lamp indicating „ready for operation“.

Dimensions: approx. 900 x 400 x 400 mm. Weight: 79 kg.

Packing: carton 118 x 65 x 75 mm. Weight: 89 kg gross.

Emission value relating to the work place:

- Change of cutting width of the 3 knife drive shafts without any tools.
- Knife drive shafts can be easily removed for re-sharpening or for changing the distances between the blades for different cutting width.
- Cutting blades made out of high quality steel, dia 102 mm. Increase of knife life due to cutting without a counter shear blade. Suitable for all known carpet types.
- High cutting productivity of up to 26 m/min (depending on carpet material).
- Start/Stop by foot switch.
- Two pull-out support arms, approx. 400 mm long, allow easier handling of wider carpet pieces.

Cutting Machine M312A

Same as M312G, but single phase motor 230V / 50 c/s, 0.37 kW.

SAFETY RULES

Maintenance, repair and conversion work must be done only by trained technicians or special skilled personnel under consideration of the instructions.

Any work on the electrical equipment must be done by an electrician or under direction and supervision of special skilled personnel.

Work on parts and equipment under electrical power is not permitted. Permissible exceptions are described in the applicable section of standard sheet EN 50 110 / VDE 0105.

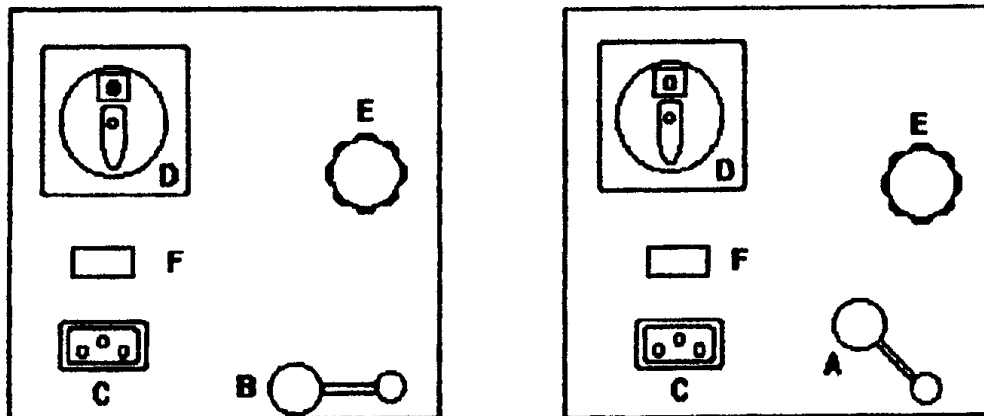
ATTENTION!



Before doing maintenance and repair work the carpet strip cutting machine has to be disconnected by turning off the main switch or pulling the power supply plug from the mains.

INSTRUCTIONS CARPET STRIP CUTTING MACHINE M312G, A

Switchboard



Putting into service

A = Clutch lever (Position: Motor shifted)	999-272NA68
B = Clutch lever (Position: Motor neutral)	999-272NA68
C = Plug for foot switch	998-94K
D = Switch on (1) Switch off (0)	998-224E
E = Notch	999-271-14
F = Control lamp	999-272NA60

Put power supply plug into the socket and turn on machine.

The cutting blade drive shaft has to turn in direction towards the operator. If not, polarity has to be reversed.

If switch is set to 0 power and control lamp are off.

If switch is set to 1 control lamp is on, machine is turned on. By actuating the foot switch carpet strip cutting machine can be started.

Machine can only be started by actuating the foot switch.

The carrier is equipped with 3 cutting blade drive shafts containing 4 revolving cutting blades. These come adjusted with a different distance of the blades on each of the drive shafts (6, 7 and 8 cm).

To interchange a cutting blade drive shaft against one of the two others you have to proceed as follows:

1. Switch off carpet strip cutting machine.
2. Move clutch lever down to touch position (B).
3. Open cover.
4. Loosen tommy screw on the right hand of the carrier by hand until resistance is noticeable.
5. Pull notch (E), turn tommy screw counterclockwise, release notch (E) and continue turning until desired cutting blade drive shaft faces the countershaft and noticeable clicks into place.
6. Tighten tommy screw by turning it clockwise.
7. Replace clutch lever to position (A).
8. Close cover.

Changing the cutting blade drive shaft

1. Turn off carpet strip cutting machine.
2. Move clutch lever down to touch position (B) .
3. Open cover.
4. Loosen tommy screw by hand until resistance is noticeable.
5. Pull notch (E), turn tommy screw in counterclockwise direction, release notch (E) and continue turning until cutting blade drive shaft slightly clicks into place and the cutting blade drive shaft flange is located at the right bulging of the bracket plate.
6. Remove two allen screws with the wrench (delivered with the accessories) out of the bearing housing and remove cutting blade drive shaft. Put in new cutting blade drive shaft, screw in allen screws, fasten them lightly and turn tommy screw in counterclockwise direction until cutting blade drive shaft faces the counter shaft and noticeable clicks into place.
7. Fasten tommy screw by turning clockwise.
8. Move clutch lever in position (A) upwards.
9. Close cover.

The press pads are designed to fit cutting widths of 60, 70 or 80 mm. Press pads are resilient and their height do not have to be adjusted when cutting different rug thicknesses.

When using cutting widths differing from these sizes a complete press pad with the required strip width has to be ordered.

Installation of press pad is relatively simple. Push in press pad traverse bar to the stop in the drilled hole, after that adjust the press pads to be just in contact with the counter shaft and tighten with two allen screws at the backside of the frame.

Make sure that the ground cut edge always points to the left.

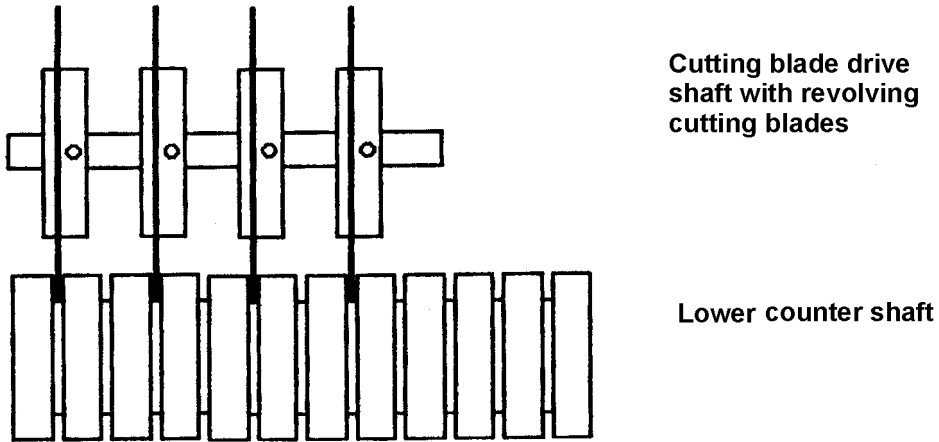
Caution:

Carpet glue residues have to be removed from the grooves of the lower counter shaft daily. Plugged up grooves can cause breakage of driving mechanism.

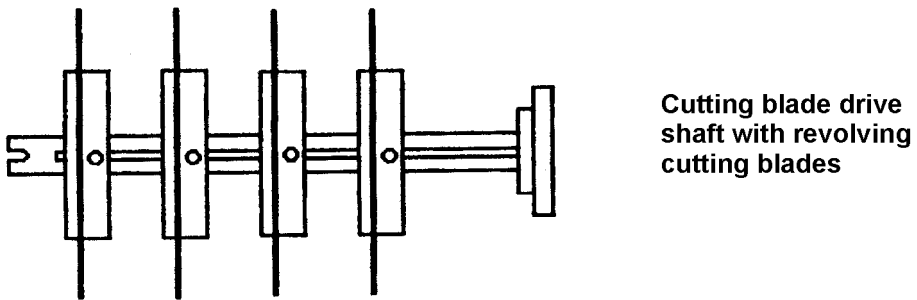
Cleaning of the lower counter shaft:

1. **Bring shaft carrier in intermediate position (shaft change position).**
2. **Loosen two allen screws on backside of frame.**
3. **Remove rod with press pads completely (pull out).**
4. **Close cover, start carpet strip cutting machine and remove carpet and glue residue with the cleaning hook (in accessories) completely from the grooves.**

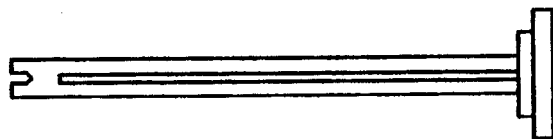
CARPET STRIP CUTTING MACHINE M312G



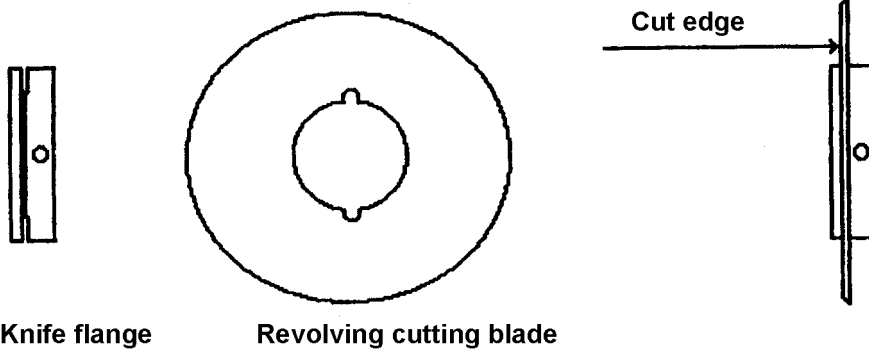
Adjustment of the revolving cutting blades to the lower counter shaft



A cutting blade drive shaft with 4 revolving cutting blades ready for built in.
Knives are roughly adjusted and may need readjustment to fit the grooves in the shaft. Carefully move the cutting blade drive shaft towards the lower counter shaft to check the position of the cutting blades.

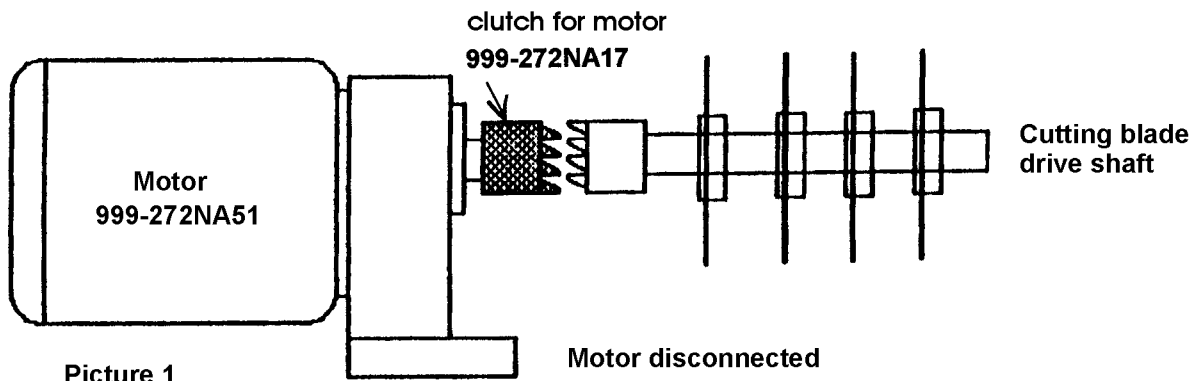


Cutting blade drive shaft with bearing housing



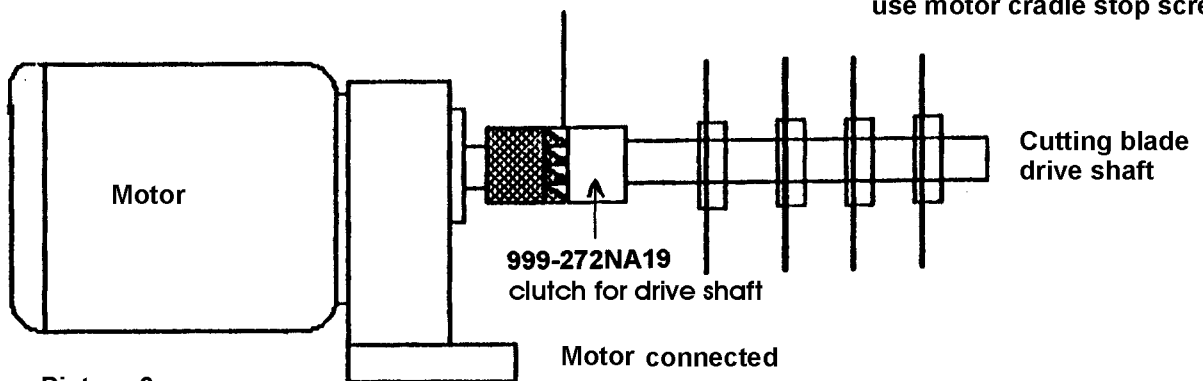
CARPET STRIP CUTTING MACHINE M312G

Instruction: Adjustment motor clutch to cutting blade drive shaft

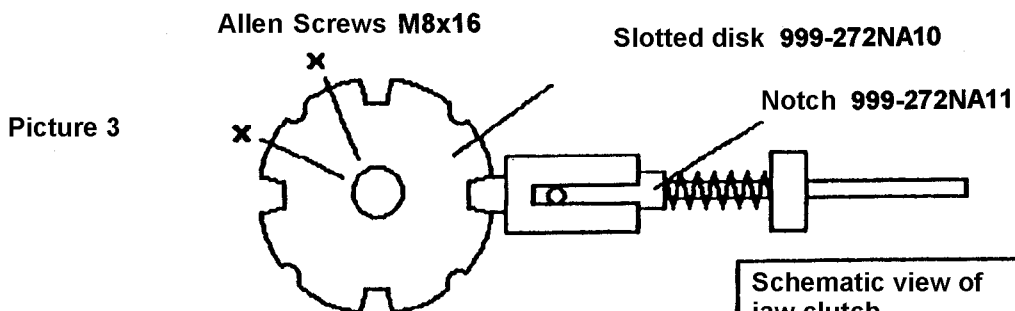


Picture 1

Clutch play 0,5 - 1 mm : For adjustment use motor cradle stop screw



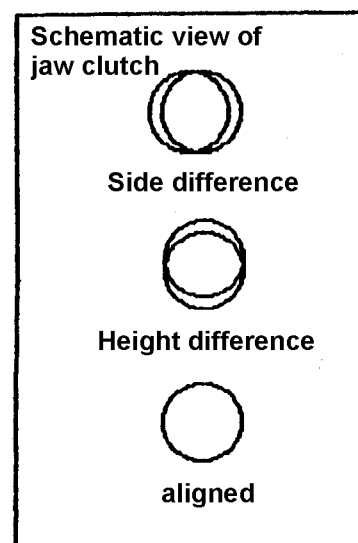
Picture 2



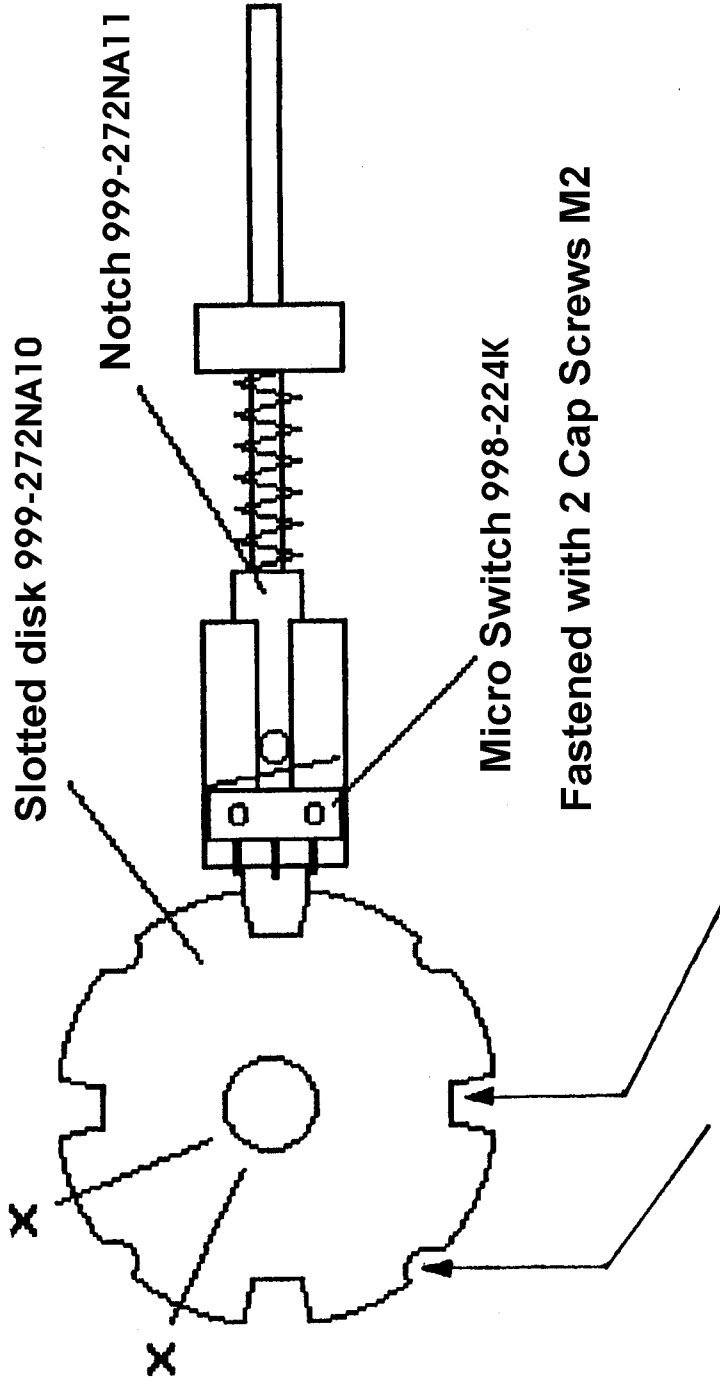
Alignment of motor to cutting blade drive shaft:

- Pull electric plug from socket.
- Remove upper and rear cover.
- Disconnect motor (Picture 1) by clutch lever.
- Loosen allen screws (Picture 3).
- Cutting blade drive shaft is in cutting position and the notch rests in the deep slot of the slotted disk.
- Connect motor by clutch lever and make sure coupling clutches of motor and shaft are aligned in both directions (Picture 2).
- Tighten allen screws in index plate (Picture 3).

Remedy: Side difference as described in instructions.
Height difference, lateral at motor support carrier.



Allen Screws M8x16

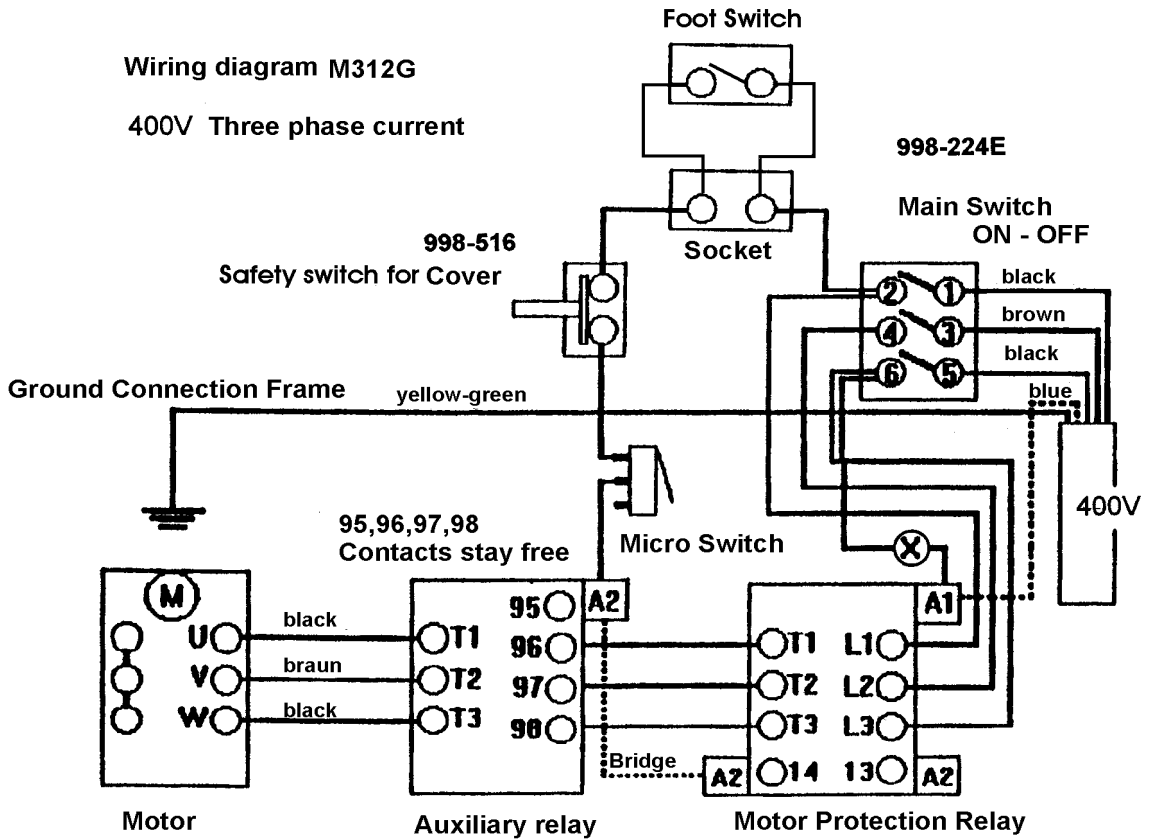


Micro Switch has to be pushed in both the rest and cutting position.

CARPET STRIP CUTTING MACHINE M312

Wiring diagram M312G

400V Three phase current

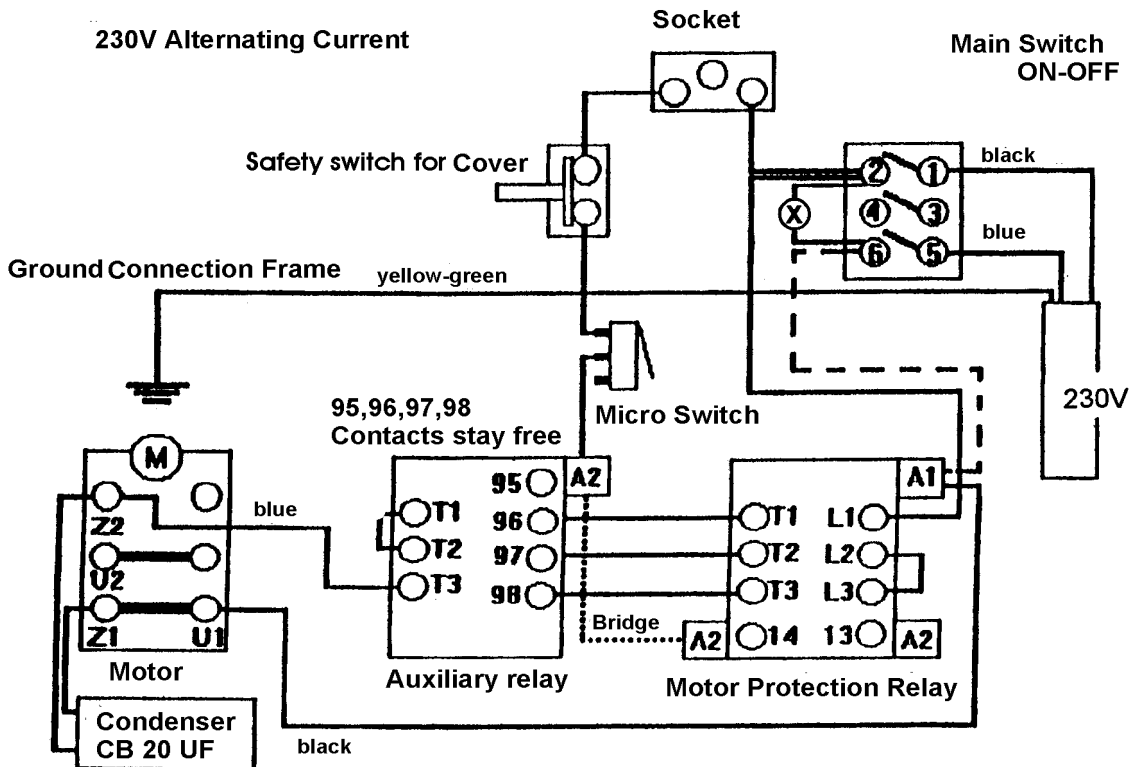


Foot Switch
Main Switch
Safety Switch for Cover
Auxiliary Relay
Motor Protection Relay
Motor Protection Switch

Order No. 999-272NA35
Order No. 998-224E
Order No. 998-516
Order No. 998YY104
Order No. 998-321
Order No. 998-224H (Auxiliary Relay + Motor Protection Relay)

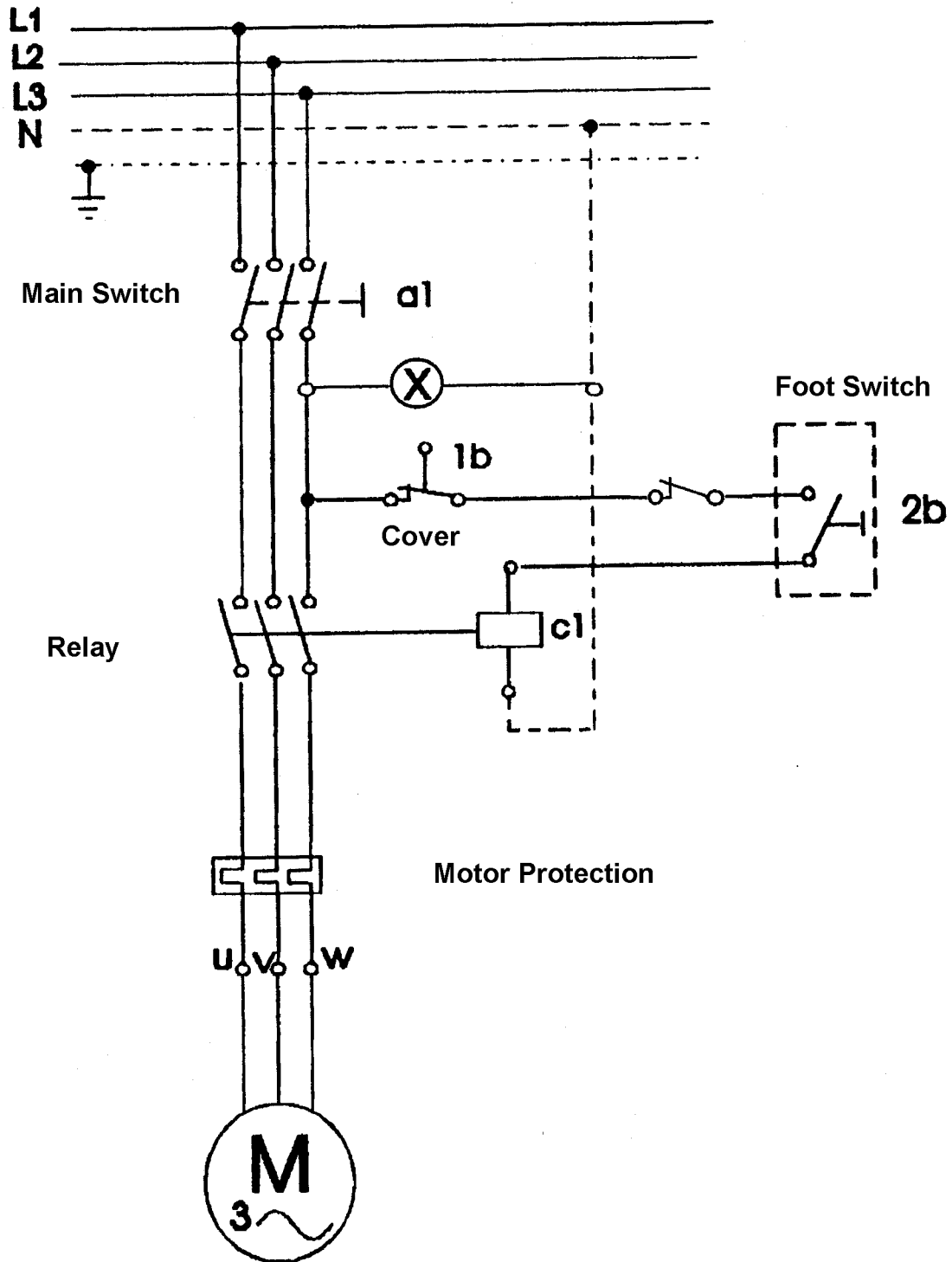
Wiring Diagram M312A

230V Alternating Current



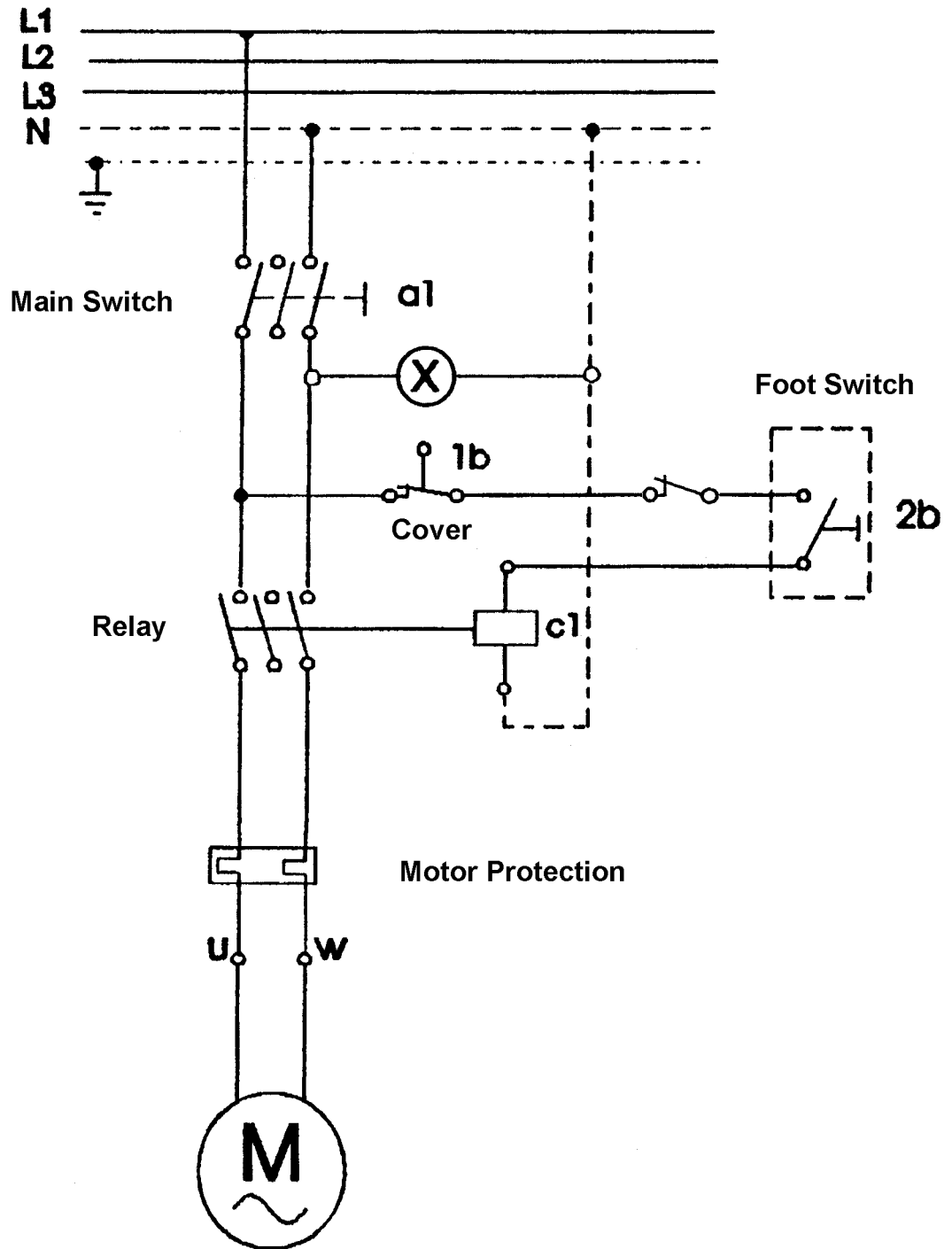
CIRCUIT DIAGRAM M312G

400V Three Phase Current

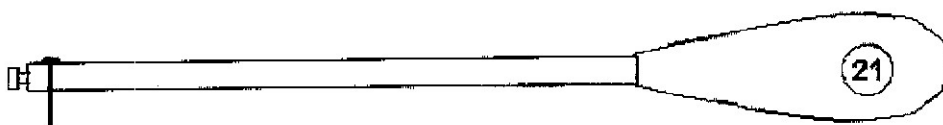
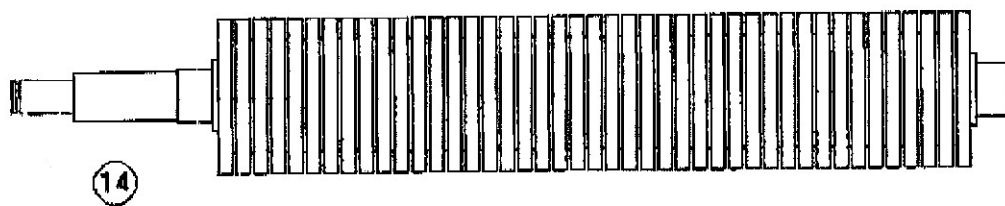
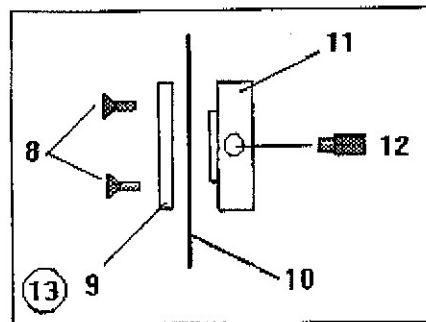
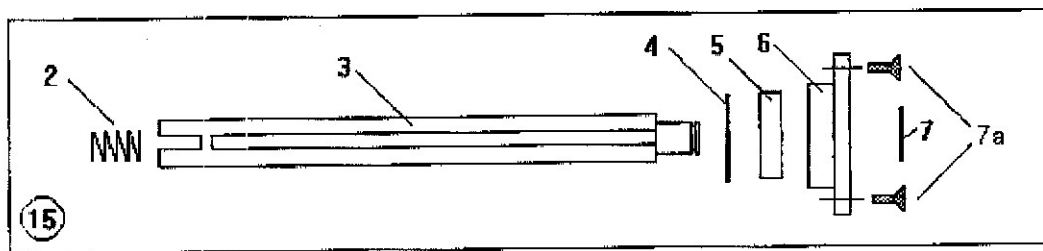
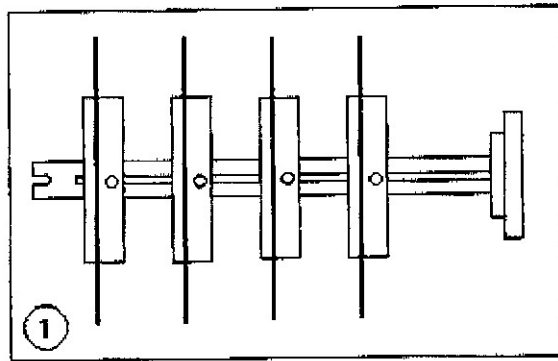


CIRCUIT DIAGRAM M312A

230V Alternating Current



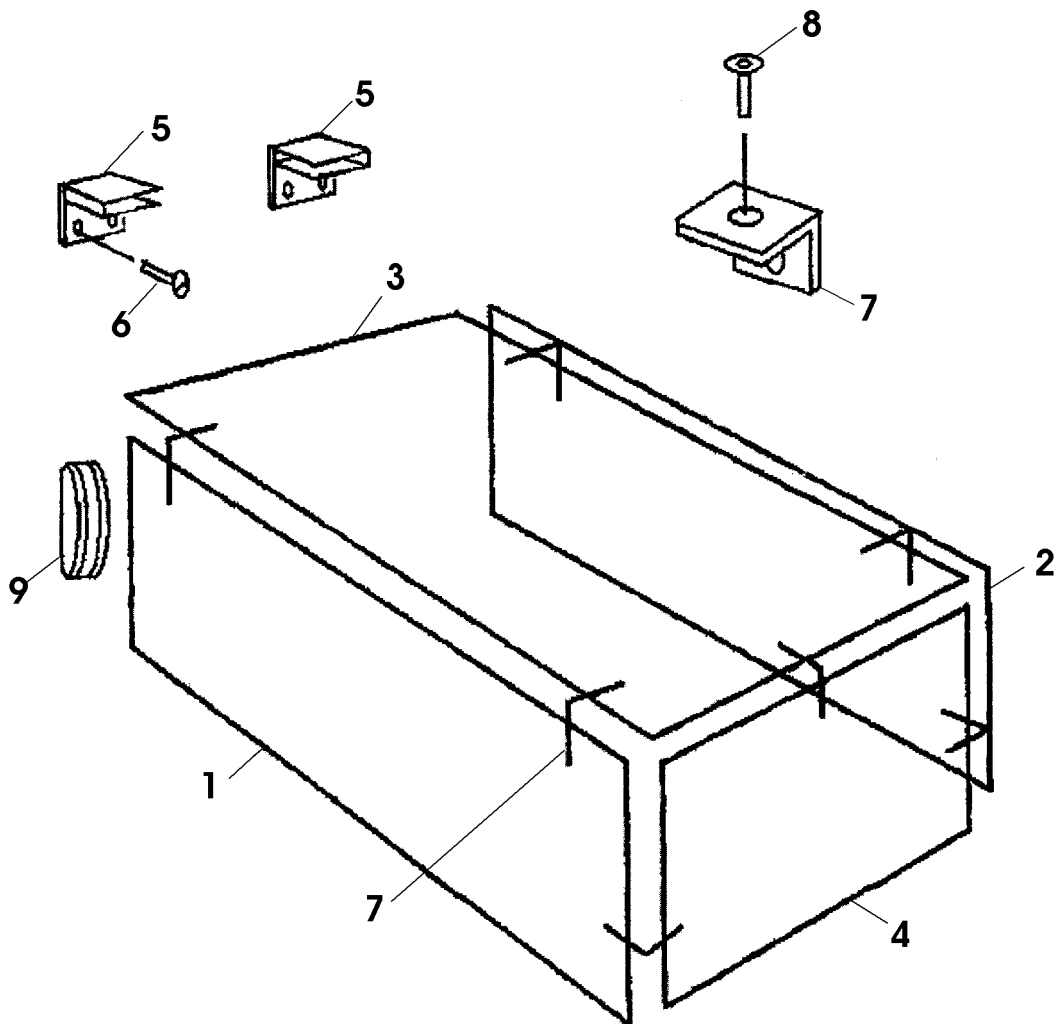
Replacement Parts Cutting Blade Drive Shaft



REPLACEMENT PARTS

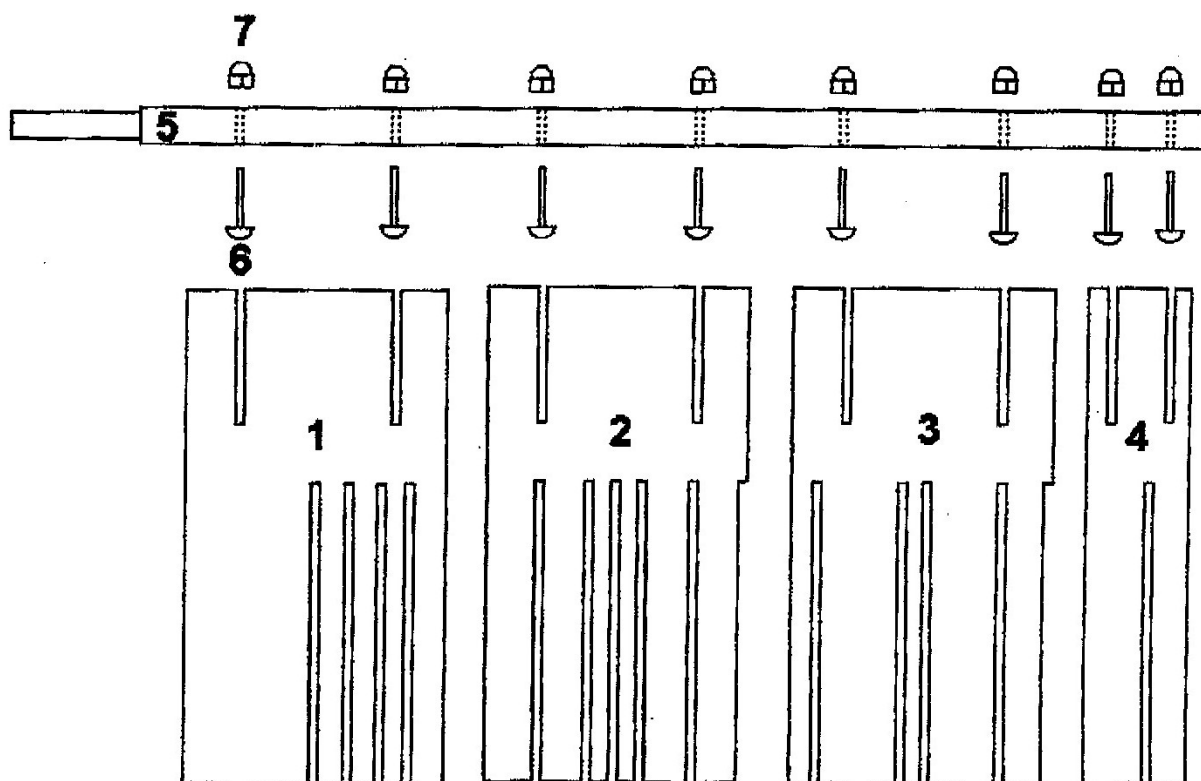
<u>Pos. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Amt. req.</u>
1	999-272NH	Knife Shaft Assembly with 4 Knives	1
2	999-272NA22	Presser Spring	1
3	999-272NA3	Shaft	1
4	999-272NA-23	Ring Seeger	1
5	999-106N	Ball Bearing	1
6	999-272NA5	Bearing	1
7	999-272NA24	Ring Seeger	1
7a	3444002	Screw M5x16	2
8	95437	Screw M4x12	2
9	999-272NA2	Ring	1
10	999-272NA20	Ring Seeger	1
11	999-272NA1	Flange	1
12	95477A	Screw M8x16	1
13	999-272NA32	Flange with Knife Assembly	1
14	999-272NA12	Lower Shaft	1
15	999-272NA31	same as Pos. 1, Knife Shaft Assembly, but without knife (not shown)	1
16	999-272NA30-4Z	same as Pos. 1, Knife Shaft Assembly, but with 4 serrated knives (not shown)	1
17	999-272NA33	same as Pos. 10, Ring Seeger but HSS (not shown)	1
18	999-272NA25	same as Pos. 10, Ring Seeger but serrated (not shown)	1
19	999-272NA32Z	same as Pos. 13, Flange with Knife Assembly, but knife serrated (not shown)	1
20	999-272NAO	same as Pos. 13, Flange complete, but without knife (not shown)	1
21	999-272NA27	Cleaner for Roller	1

Protection Cover



Pos. No.	Part No.	Description	Amount
	999-272NE	Protection cover complete	
1	999-272NA40	Panel front	1
2	999-272NA41	Panel rear	1
3	999-272NA42	Panel top	1
4	999-272NA43	Panel right	1
5	999-272NA44	Hinge	2
6	99316B	Screw M3x12,5	4
7	999-272NA45	Mounting Bracket	7
8	95437	Screw M4x12	14
9	999-272NA46	Cover Guide	2

Carpet Hold Down Device: Cutting widths 5 / 6 / 7 / 8 cm



Pos. No.	Part-No.	Description	Amount
	999-272NG	Carpet Hold Down Device complete	
1	999-272NA21L	Hold Down Plate left	1
2	999-272NA21ML	Hold Down Plate middle-left	1
3	999-272NA21MR	Hold Down Plate middle-right	1
4	999-272NA21R	Hold Down Plate right	1
5	999-272NA28	Hold Down Rod	1
6	95760	Screw M4x22	8
7	95453	Nut M4	8

**EC Declaration of Conformity
in accordance with the EC Machinery Directive 2006/42/EC, Annex II, No. 1 A**

We hereby declare that the below described machine as designed and delivered by us is in conformity with the essential safety and health requirements, Annex I of the Machinery Directive and with the provisions of the further listed EC Directives.

Machine description: Carpet Strip Cutting Machine

Machine type: M312

Applied EC Directives:

- EC Machinery Directive 2006/42/EC
- EC EMC Machinery Directive 2004/108/EC
- EC Low Voltage Directive 2006/95/EC

Applied harmonized standards:

EN ISO 12100-1,
EN ISO 12100-2
EN 60204-1

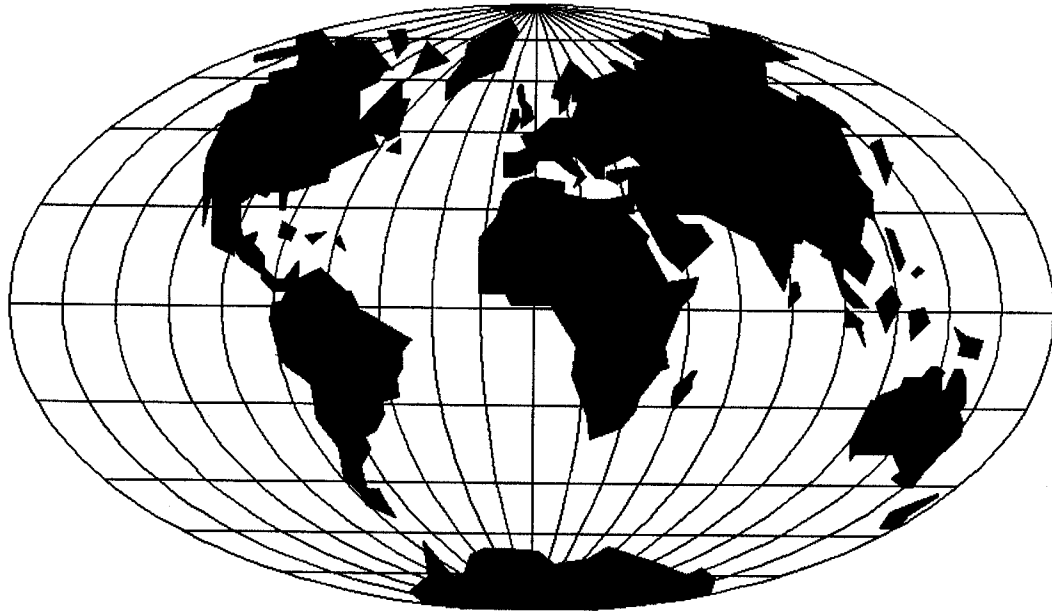
This declaration is not valid anymore if modifications have been made without our permission.

Union Special GmbH
Raiffeisenstr. 3
D-71696 Möglingen



Rolf Iseler
Managing Director, authorized person for technical file

Möglingen, 29.12.2009



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