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DOUBLE MITER CUT OFF

MACHINE

mod.

PRISMA

INSTRUCTION BOOKLET

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GRUPPO MOTTABREVETTI GROUP

MITER CUT-OFF MACHINE MOD. PRISMA

INSTRUCTIONS FOR USE

1 - INTRODUCTIONS:

Prisma in a manual double mitering machine from 45°+45° degrees cuts, at both ends, in mouldings of any shape and kind (all woods-aluminium covered etc.) by means of 2 circular saw blades of 250 mm. (9 13/16")(size bore 32 mm.) (1 1/4"). Automatic clamps. Precise graduated scale to gage at the rabbet of the mitered mouldings. Arranged to be connected to saw dust exhaust. Maximum operator safety. Low noise.

2 - TECHNICAL CHARACTERISTICS:

Max cutting capacity: ..... Width 125 mm. (5") Height 80 mm. (3 1/4")

Production rate: ..... About 200 cuts per hour (it varies with operator and moulding dimensions)

Electric equipment: ..... 2 motors of 1 Hp each; 2800 RPM; Voltage 220 single phase; 50 or 60 Hz;

Sawdust exhaust outlet: ..... N° 1, diameter 100mm. (4")

Weight: ..... 136 Kg. (300 Lbs)

Overall dimensions: ..... Width 1000 mm. (3' 3 1/2"), Length 600 mm. (1' 11 1/2) Height 1000 mm. (3' 3 1/2")

Compressed Air: ..... 6 bars; consumption 6 Nl/cycle; about 50 Nl/min.

3 - ASSEMBLY INSTRUCTIONS:

3.1 - Fix the moulding supporting arms (pict. 1-2 and 1-12) to the left and the right side of the machine by means of their own hexagonal headed bolts, then adjust their heights by raising or lowering the supporting legs. (pict. 1-32).

3.2 - Fix the right aluminium guide (pict. 1-13) and sliding stop (pict. 1-14);

3.3 - Connect the machine to the electrical source (check machine voltage and cycles of motors before doing that);

3.4 - Put blades on, follow the instructions of "Mechanical adjustments";

3.5 - In case connect the saw-dust remover to the saw-dust exhaust out let on the back side of the machine.

4 - HOW THE MACHINE WORKS:

4.1 - Turn main switch of pict. 1-8;

4.2 - Set left and right clamps (pict. 1-4 and 1-11) about 2 cm. (3/4") from the base of the moulding to be cut and fix them in this position with each quick lock;

4.3 - Press left manual switch (pict. 1-25) on now left blade start turning;

4.4 - Pull with right hand the black left handle (pict. 1-23), now the machine performs following operations:

- left clamp blocks the moulding and

- Left blade cuts it at 45°;

4.5 - Release slowly the black left handle (pict. 1-23) and at the same time the left switch (pict. 1-25).

4.6 - Repeat operation at point 2, 3, 4 and 5 with right blade.

5 - BLADES REPLACEMENT:

Prisma uses 250 mm. (9 3/16") carbide saw blades size bore 32 mm. (1 1/4").

To change them follow this procedure:

a) - Switch line off.

b) - Raise protective shield (pict. 1-20).

c) - Pull left black handle till blade reaches the aluminium guide and, in this position, fix a screw driver in the hole situated on the arm (pict. 2.16) by the black handle (pict. 1-23).

d) - Unscrew the blade blocking nut turning the proper tool in the rotation sense of the blade.

e) - Put a new blade on and repeat same operations for changing right blade.

6 - MECHANICAL ADJUSTMENT:

If there are any defects in the cut it's possible to reach the finest adjustment:

a) - Switch line off;

b) - Raise protective shield;

c) - Pull left black handle till blade reaches the aluminium guide and, in this position, fix a screw driver in the hole situated on the arm (pict. 2.16) by the black handle (pict. 1-23).

d) - Push 45° gauge (standard with the machine) against saw blades and aluminium guide e compare 45° gauge saw with saw blade.

To modify the right blade's angle follow this procedure:

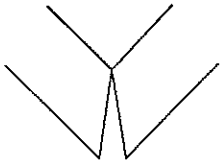
e) - Take off front metal cover (pict. 1-29);

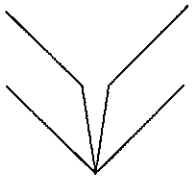
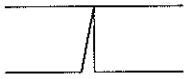
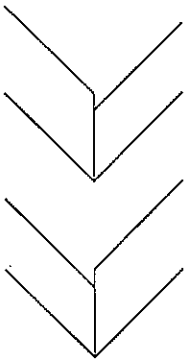
f) - Loosen the four bolts of pict. 4-6 and 4-8;

g) - Turn in or out the horizontal screws of pict. 4-1 an d 4-10, performing this operation blade moves es pict. 4-A;

h) - Tighten the four bolts of pict. 4-6 and 4-8;

N.B.: Performing this operation it can happen that the blade, in it's horizontal movement, touches working aluminium plane or the aluminium guide. In this case you must adjust, following the same operations over described, the horizontal screws situated on the back side of the machine.

1) Corner is open in the front:		Loose grain of pict. 4-1 and turn clockwise grain of pict. 4-10.

2) Corner is open in the back:		Loose grain of pict. 4-10 and turn clockwise grain of pict. 4-1.
3) Corner is open on the top or on the bottom (cut not perpendicular):		Loose grain of pict. 4-9 and turn clockwise grain of pict. 4-2 both on the front column support and on the back column support.
		Loose grain of pict. 4-2 and turn clockwise grain of pict. 4-9 both on the front column support and on the back column support.
4) Left and right cut pieces are not of the same lenght:		Adjust cut angle of saw blades in this way. a) Right cut pieces shorter than left one. Follow point 1 for right saw and point 2 for left saw. b) Left cut pieces shorter than left one. Follow point 1 for left saw and point 2 for right saw.

P.S.: The vertical screws (pict.4-2 and 4-9) adjust the perpendicularity of the cut. Adjust them only in case of defects on the verticality of the cut. Performing this operation blade moves as pict. 4-B.

7 - SAFETY DEVICES:

Prisma has been studied to assure operator safety even in case of non correct use of the machine.

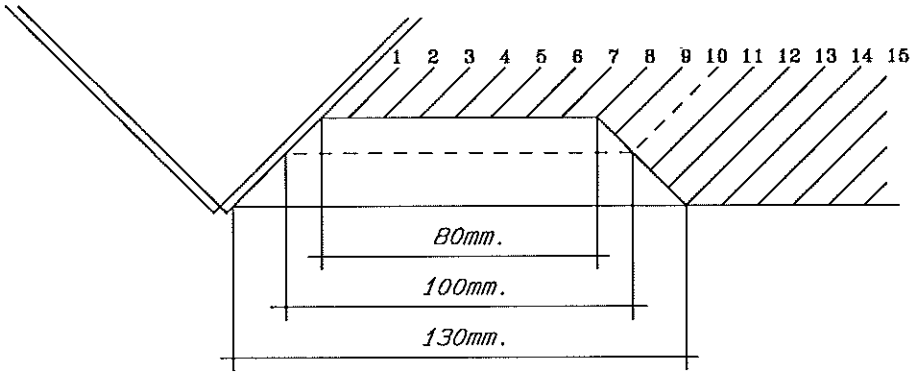
a) - Raising the protective shield blades (pict. 1-17) don't run even if their switches are on. To make them start lower the shield.

b) - Pulling both black handles a mechanic stop prevents the forward movement of the blades.

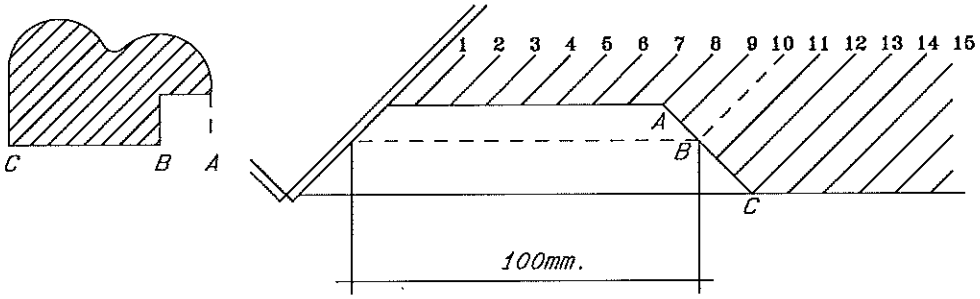
8 - MOULDING MEASURING SYSTEM:

The new measuring system is simple to use and permits to mesure the lenght along the edge of any size of moulding.

The lines on the measuring tape are parallel to the right blade. The intersection of each line with the right edge of the moulding, meets the measure read on the line, at the same widht.



In case you are cutting a moulding with passepartout (for picture - photo frames) at 100 mm., you must slide the moulding on the guide, until point "B" reaches the 10 line.



9 - MAINTENANCE:

Open often the front lid of the metal base (pict. 7-6) and remove the waste of mouldings (an excessive quantity of wastes may come in contact with saw blades).

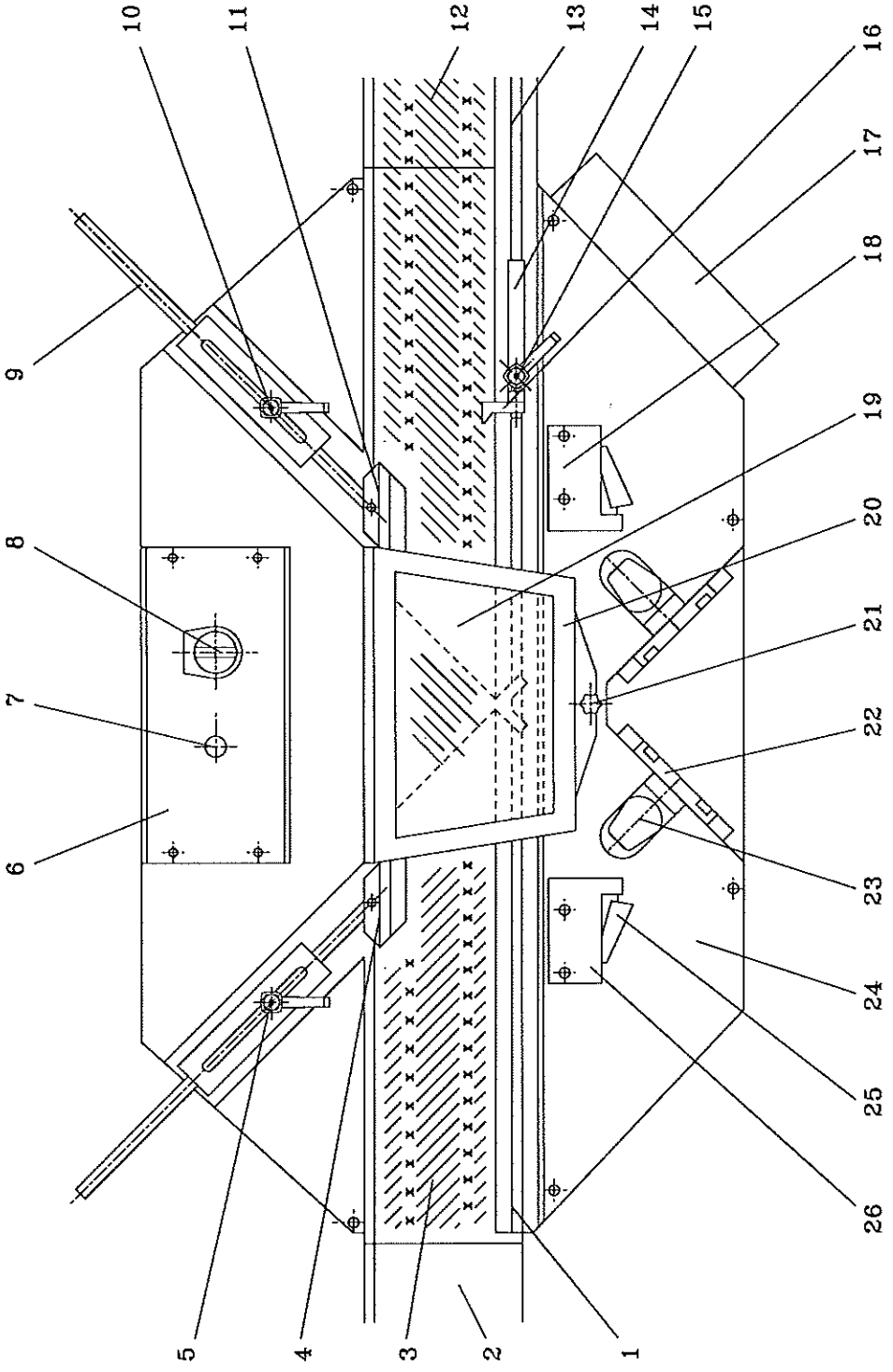
Clean, at least once a day, the saw dust that covers the machine.

N.B.: Do not put grease on the columns of the pict. 2-6 on which motors slide. In case clean them with gasoil.

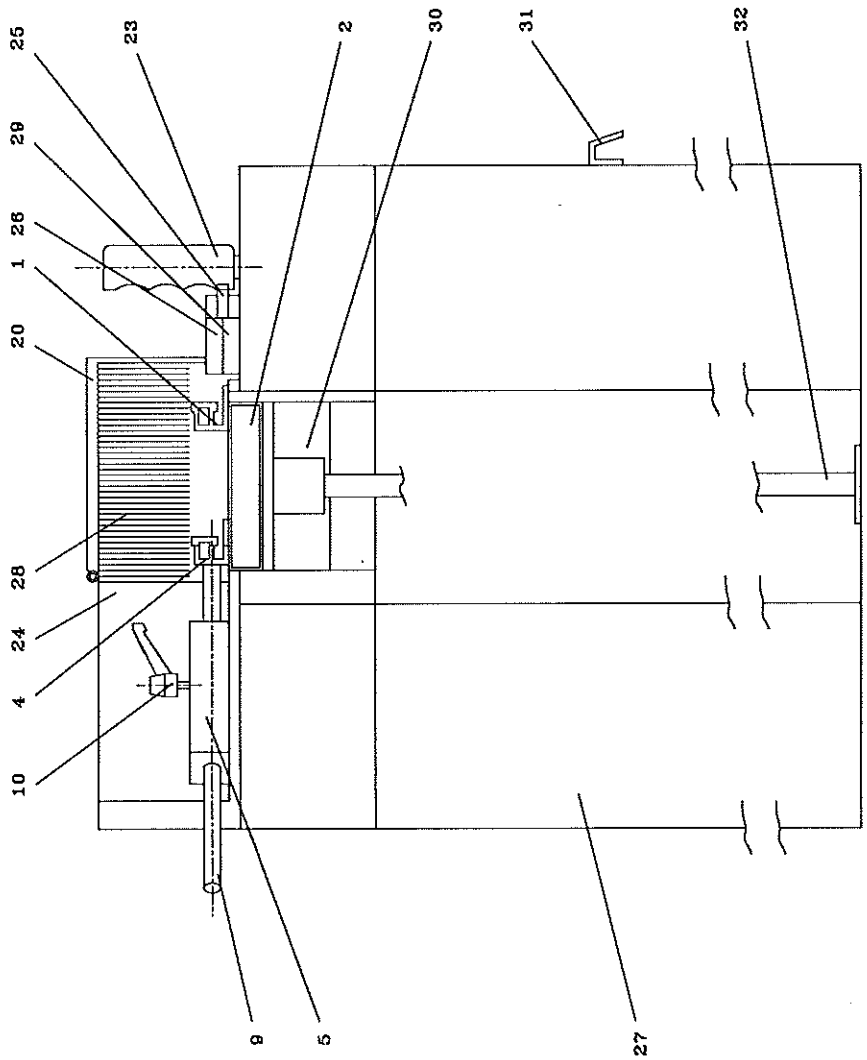
Picture 1:

Pos.	Description	Code		
1	Left guide	TP109	❑	
2	Left arm	TP123	○	
3	Left side measuring tape	RM101	○	
4	Left clamp	TP113	○	
5	Clamp's cover	TP111	○	☆
6	Complete electric box	QEPR	○	
7	Light	SL380	○	☆
8	Main switch	A1702	○	☆
9	Clamp's bar	TP110	○	
10	Quick lock	QL06	○	☆
11	Right clamp	TP121	○	
12	Right arm	TP123	○	
	Right side measuring tape	RM102	○	
13	Right guide	TP129	○	
14	Complete sliding stop support	TP126	○	
15	Quick-lock	QL06	○	☆
16	Sliding stop	T005a	❑	
17	Tools box	TP170	○	
18	Right higher cover	TP171	○	
19	Makrolon window	TP116	○	
20	Safety shield	TP117	○	
21	Knob	PM06	○	☆
22	Column supporting plate	TP104	○	
23	Handle	TP107	○	
24	Main body	TP114	■	
25	Electric switch	M424NO	○	☆
26	Left higher cover	TP172	○	
27	Metal base	TP135	■	
28	Saw dust blocking brush	TP132	○	
29	Left lower cover	TP173	○	
	Right lower cover	TP174	○	
30	Aluminium supporting arm base	TP124	○	
31	Waste part collecting door	TP133	○	
32	Aluminium supporting arm leg	TP125	○	

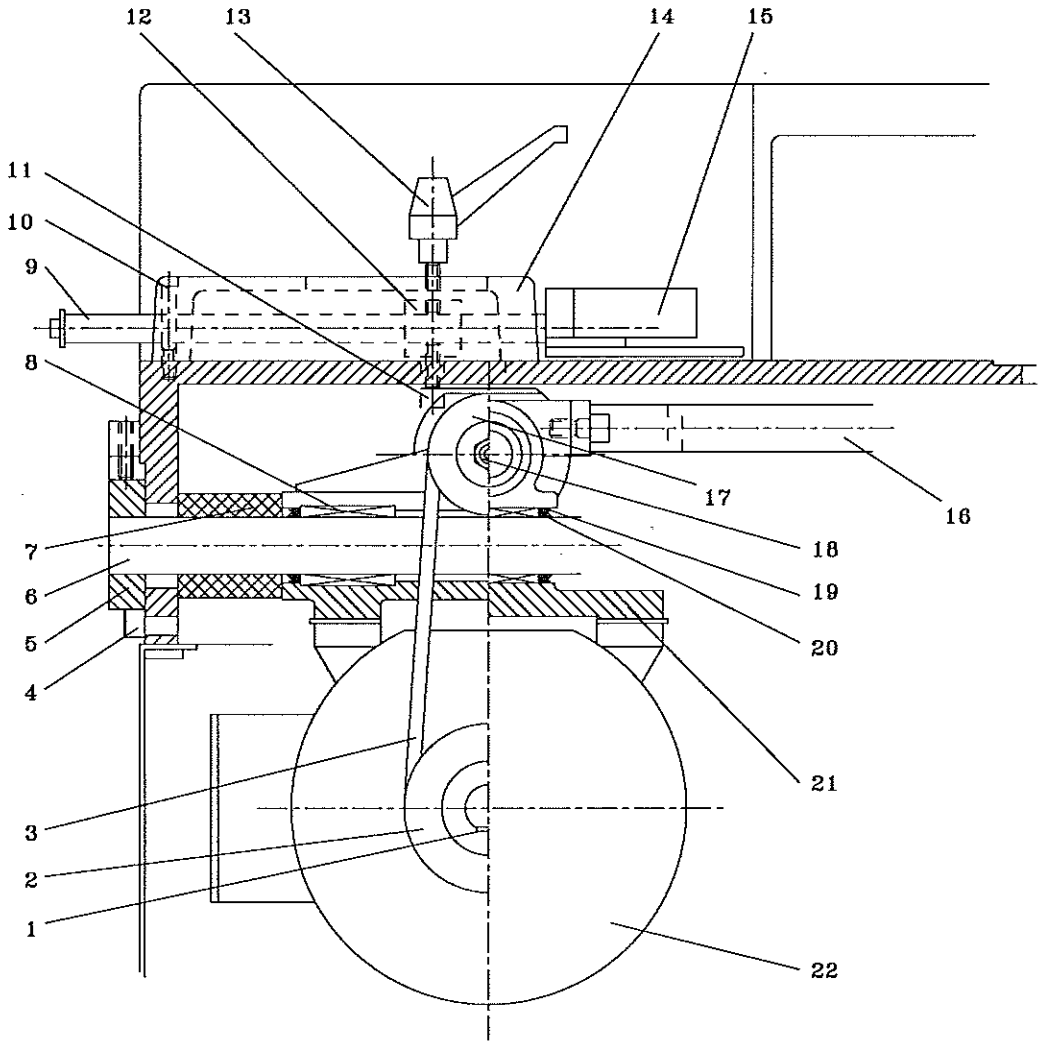
○ interchangeable ● to adapt ❐ not supplied alone ■ not supplied ☆ available on the market



Picture 1A



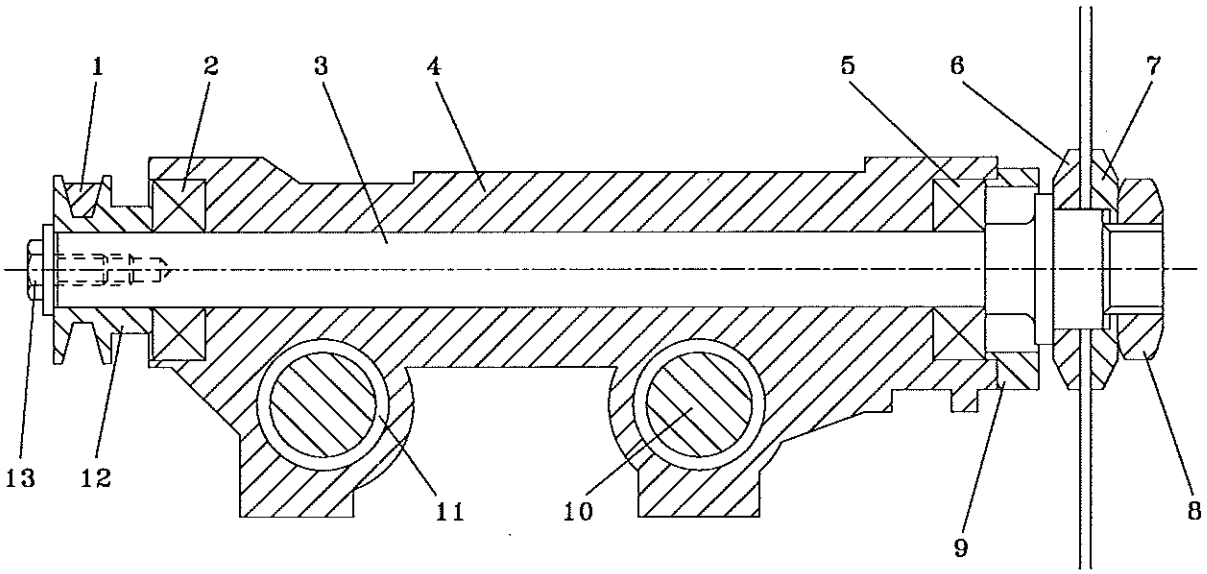
Picture 1B



Picture 2

Pos.	Description	Code		
2 -	Motor pulley	TP216	○	☆
3 -	Transmission belt	Z16,7	○	☆
5 -	Column supporting plate	TP104	○	
6 -	Column	TP214	○	
7 -	Back stop	TP211	○	
8 -	Bearing	INAKH2540	○	☆
9 -	Clamp's bar	TP110	○	
12 -	Quick lock support	TP205	○	
13 -	Quick lock	QL06	○	☆
14 -	Clamp's cover	TP111	○	
15 -	Left clamp	TP113	○	
16 -	Blade movement lever	TP210	○	
17 -	Pulley on blade shaft	TP206	○	
19 -	Seeger ring bore Ø 35	TP201	○	☆
20 -	Saw dust scraper	TP202	○	☆
21 -	Electric motor aluminium support		❑	
22 -	Electric motor	see pict. 7	○	
	Complete left electric motor aluminium support	TP220S	○	
	Complete right electric motor aluminium support	TP220D	○	

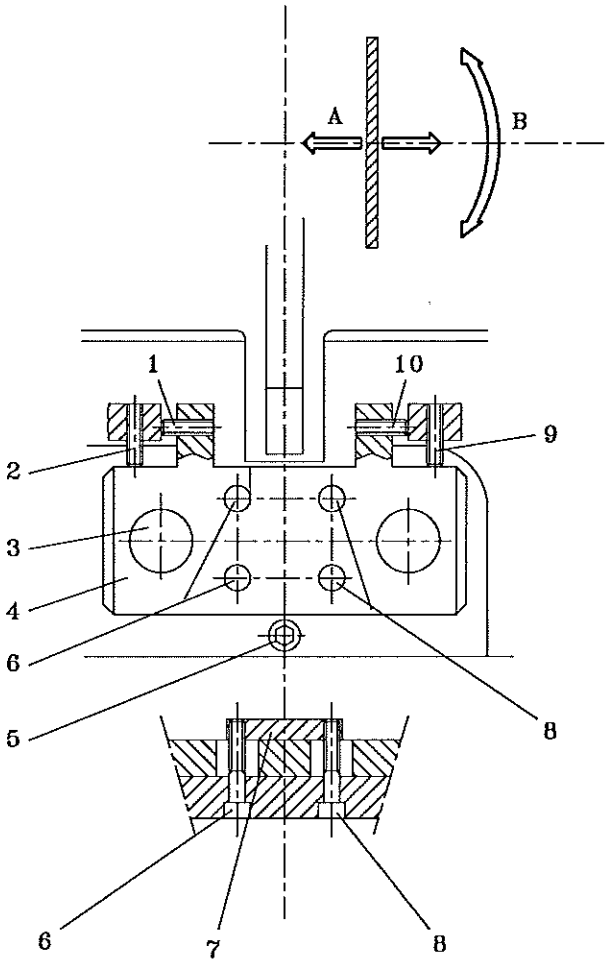
○ interchangeable ● to adapt ❐ not supplied alone ■ not supplied ☆ available on the market



Picture 3: Blade holder shaft

Pos.	Description	Code		
1 -	Transmission belt	Z16,7	○	☆
2 -	Blade holder shaft bearing	62042RS	○	☆
3 -	Left blade holder shaft	TP301S	○	
	Right blade holder shaft	TP301D	○	
4 -	Electric motor aluminium support	see pict. 2	❑	
5 -	Blade holder shaft bearing	62042RS	○	☆
6 -	Internal blocking blade's plate	TP303	○	
7 -	External blocking blade's plate	TP304	○	
8 -	Left blade blocking nut	TP305S	○	
	Right blade blocking nut	TP305D	○	
9 -	Blade holder shaft bearing blocking plate	see # 4	❑	
10 -	Column	TP214	○	
11 -	Bearing	INAKH2540	○	☆
12 -	Blade shaft pulley	TP206	○	☆
13 -	Left blade holder shaft blocking nut	TP308S	○	☆
	Right blade holder shaft blocking nut	TP308D	○	☆

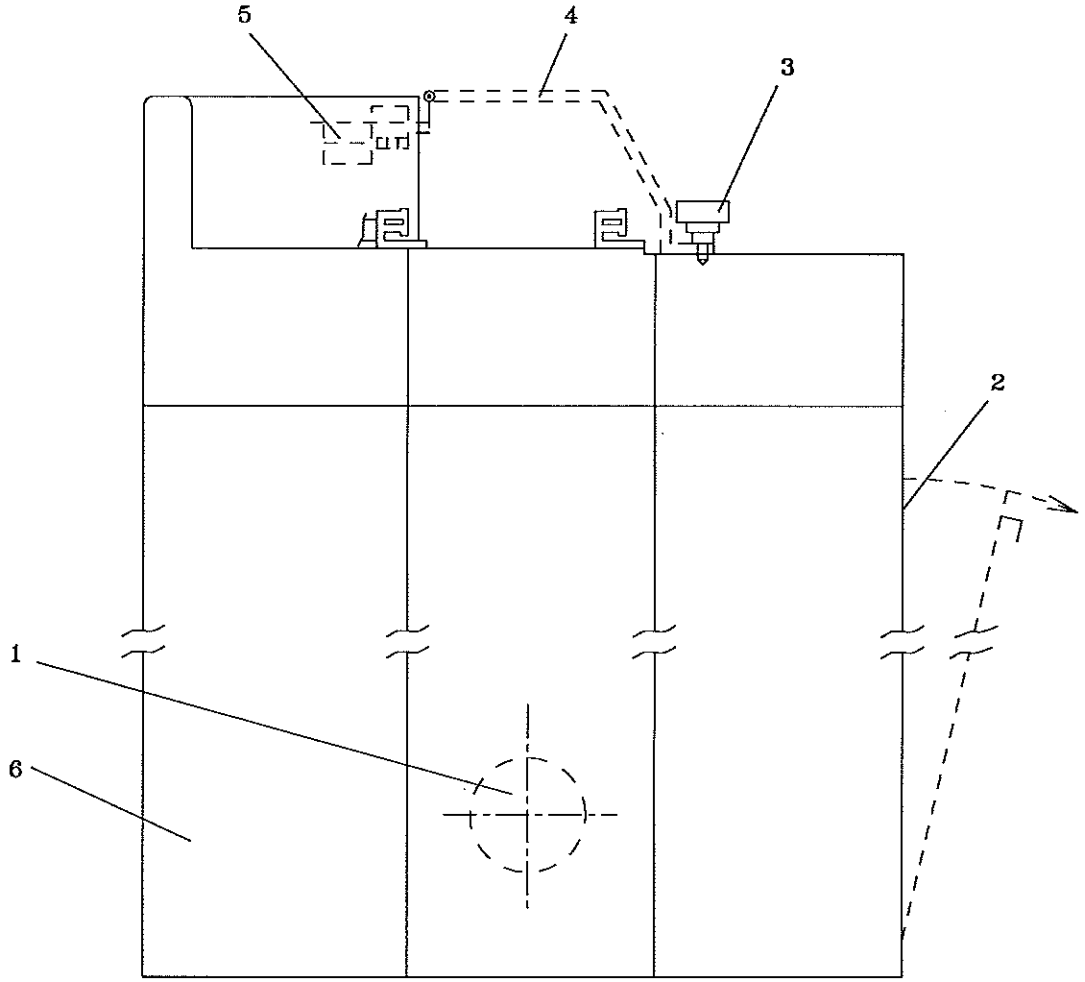
○ interchangeable ● to adapt ❑ not supplied alone ■ not supplied ☆ available on the market



Picture 4: Horizontal and Vertical cutting adjustment

Pos.	Description	Code		
1 - 10	- Horizontal cutting adjustment screw	TP106	○	☆
2 - 9	- Vertical cutting adjustment screw	TP105	○	☆
3	- Column	TP214	○	
4	- Column supporting plate	TP104	○	
7	- Column supporting internal plate	TP407	○	

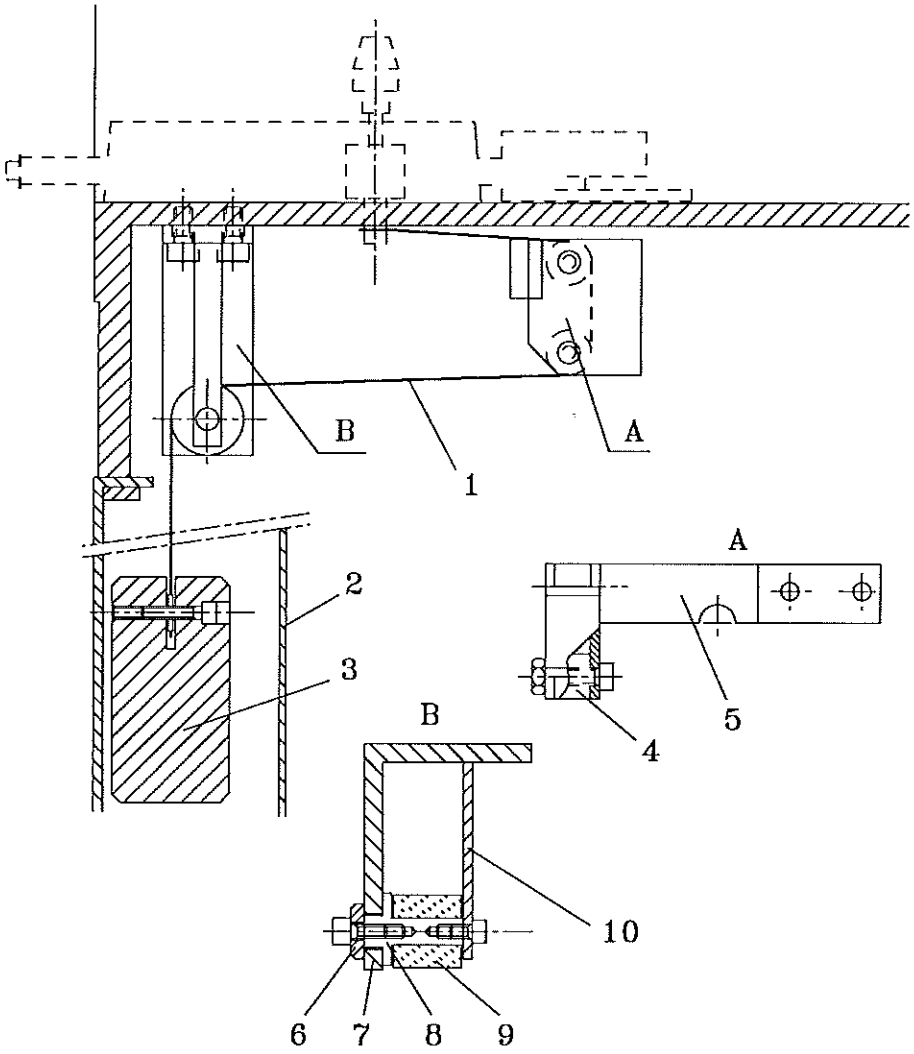
○ interchangeable ● to adapt ❐ not supplied alone ■ not supplied ☆ available on the market



Picture 5:

Pos.	Description	Code		
1 -	Exhaust outlet	TP701	○	
2 -	Waste part collecting door	TP133	○	
3 -	Knob	PM06	○	☆
4 -	Safety shield	TP117	○	
5 -	Electric switch	M424NO	○	☆
6 -	Metal base	TP135	■	

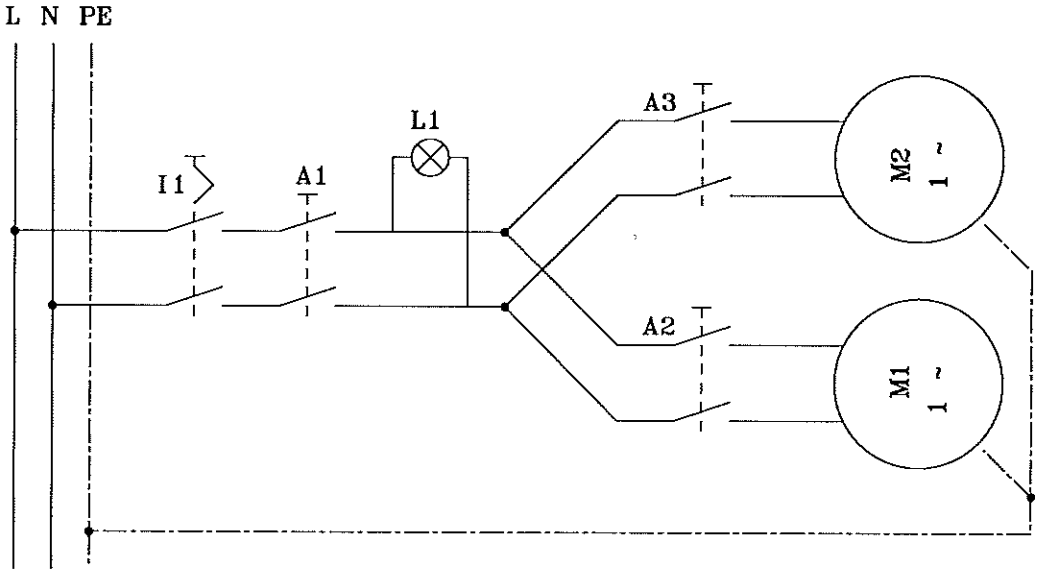
○ interchangeable ● to adapt ❒ not supplied alone ■ not supplied ☆ available on the market



Picture 6: Blades and clamp return mechanism

Pos.	Description	Code		
1 -	Flat band	TP516	○	☆
2 -	Counterweight	TP518	○	
3 -	Counterweight guide	TP519	○	
4 -	Roller Ø 20	TP520	❑	
5 -	Left roller support	TP521D	○	
	Right roller support	TP521S	○	
6 -	Ring	TP512	❑	
7 -	Roller support	TP522	○	
8 -	Pivot	TP523	❑	
9 -	Roller Ø 30	TP524	❑	
10 -	Flat band guide	TP525	❑	
	Left complete blades and clamp return mechanism	TP701D	○	
	Right complete blades and clamp return mechanism	TP701S	○	

○ interchangeable ● to adapt ❐ not supplied alone ■ not supplied ☆ available on the market



Picture 7: Electric system

Pos.	Description	Code		
M1 -	Electric motor (*)	MEM10	○	
M2 -	Electric motor (*)	MEM10	○	
I1 -	Main switch	A1702	○	☆
L1 -	Light	SL380	○	☆
A -	Electric switch	M424NO	○	☆
A2-A3 -	Electric switch	M424NO	○	☆

(*) Other voltages on request

Complete electric box ..... QEPR ○

○ interchangeable ● to adapt ❒ not supplied alone ■ not supplied ☆ available on the market