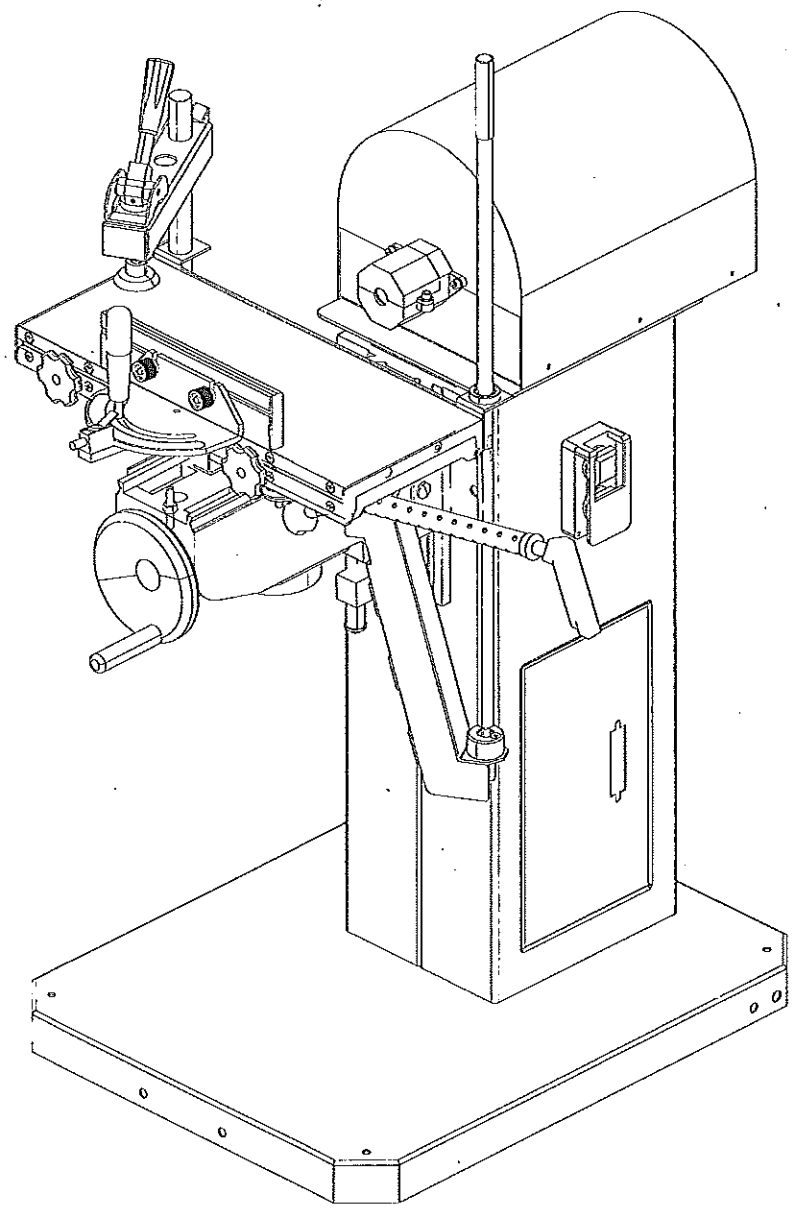
Manual

Mortising Machine



Mortising Machine

For your safety, please read this manual carefully before operation

WARNING; When using electric tools, basic safety precautions should be followed to reduce risk of fire, electric shock, and personal injury, including the following:

SAFETY INSTRUCTIONS

1) KEEP WORK AREA CLEAN - Cluttered areas and benches invite injuries.

2) CONSIDER WORK AREA ENVIRONMENT - Do not expose power tools to rain. Do not use power tools in damp or wet locations. Keep work area well lit. Do not use tools in the presence of flammable liquids or gases.

3) KEEP CHILDREN AWAY - All visitors should be kept away from work areas.

4) STORE IDLE TOOLS - When not in use, tools should be stored in dry, and high or locked-up places out of reach of children.

5) DO NOT FORCE THE TOOL - It will do the job better and safer at the rate for which it was intended.

6) USE THE RIGHT TOOL - Do not force DIY chisels to do the job of professional chisels. Always use a chisel for its intended use only.

7) DRESS PROPERLY - Do not wear loose clothing or jewellry as they can be caught in moving parts. Wear protective hair covering to contain long hair.

8) USE SAFETY GLASSES - Also use face or dust mask when operations are dusty. A vacuum cleaner or dust extractor is strongly recommended.

9) SECURE THE MACHINE - The machine should be bolted down to the floorstand on a level and stable floor.

10) DO NOT OVERREACH - Keep proper footing and balance at all times.

11) MAINTAIN CUTTERS WITH CARE - Keep cutters sharp and clean for better and safer performance.

12) DISCONNECT FROM MAINS - When not in use and before changing or adjusting chisels.

13) CHECK DAMAGED PARTS - Always inspect chisels before use for signs of wear or damage. Do not use cracked or broken chisels.

14) STAY ALERT - Use common sense. Do not operate power tools when you are tired or under the influence of drugs, alcohol or medication.

Machine safety

Whenever you want to provide maintenance or adjustment of the machine, do not forget to switch off the main switch and lock it up !

Before any repair, switch the machine off and wait until it stops.

It is necessary to exchange damaged cables and plugs immediately. Do not switch on the machine without active safety components ! Damaged safety equipment has to be exchanged immediately. People younger than 16 years are not allowed to work with the combined machine.

MANIPULATION, INSTALLATION OF MACHINE

Working Conditions

Machine must operate in workshop surroundings within temperature range +5°C - +40°C, relative air humidity 30% - 90% non condensing and altitude 1000 m above the sea in, surrounding classified : fire danger of combusitve dusts (BE2N2).

The machine does not pollute or negatively influence the environment.

Transport and Stocking

During the transport and stocking it is necessary to protect the machine from excessive vibrations and excessive humidity. The machine can be stocked under roof at temperature range between □25°C and + 55°C.

Manipulation with the Machine

To facilitate the transport, the machine is delivered in a wooden crating completely assembled. When handling with the machine, use the certified lifting equipment and safe instruments. The best handling can be done with a transport pallet and a self proppeling lift truck. For lifting you can use the steel wire rope SEAL of a min. diameter 5 mm.

Before you switch on the machine, remove protecting film by using kerosene.

THE POWER SUPPLY

Connection of the machine to the electric network can be done only by a specialist with electrotechnical qualification. Before you start with connecting--make sure that the there is no voltage in the supply lead.

Connect the protective conductor (yellow-green) to the clamp PE and the central conductor (pale blue) to the clamp N, if it is required. Cross - sections of the phase conductors and that of the protective conductor have to be conformable with the legal standards.

A competent specialist has to exchange the defective electrical line at once.

Operation of machine with damaged supply cables is very dangerous and therefore it is forbidden.

Operating at the machine is forbidden for youngsters. Make sure that the voltage and the frequence mentioned in the type card of the motor agrees with the value of the used network.

A five-ply cable with a socket CEE 16 amp. and the plug CEE 16 amp. Are used for the power supply. The socket for the power supply of the machine has to be grounded (or neutralized) according to the instructions and ensured by at least 16 ampere fuse or the L type safety-fuse.

WARNING !
Disconnect the line connector from network by the main switch before adjusting or exchanging the mortising drill and before maintenance or repair. It is possible to change the rotation direction by exchanging (switch-over) the wires (black and/ or brown) for three phase motors.

ATTENTION !
Avoid of exchanging the yellow-green wire with the phase ! Entirely a qualified electrician is allowed to plug it in.

The protection against the dangerous contact of inanimate parts is carried out by a selfacting disconnection from the supply, according to the article 6.3.1 of the norm EN 60 204-1.

Switch

The switch cannot be turned on until the machine is connected to network. The switch is turned off automatically by way of neutral protection with outage, it means that it is necessary to switch on the machine again after restoring of the current.

If the motor is overloaded, the inbuilt safety fuse of the motor will switch off the machine. If the machine is switched off frequently in a sequence (twice or threefold), check up the machine (motor functions, tool sharpness etc.). A socket with a plug serves as the main switch.

OPERATION AND ADJUSTMENT

Machine intention

The machine is intended to drilling and mortising works in a small-series production, eventually to works of maintenance purpose or that of technical education.

Description of the machine

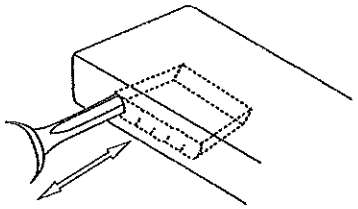
Main parts of mortiser, i. e. table, support and console of lifting are made of iron casting.

Horizontal and vertical movement of mortising table is operated by a hand wheel placed on the front side of mortiser.

The processed workpiece is clamped by an eccentric fixture on the adjustable arm. The mortising tool is clamped into a special chuck, which is screwed at the end of the motor spindle.

Operation

1



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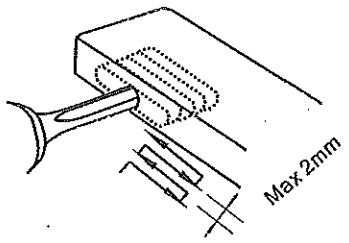

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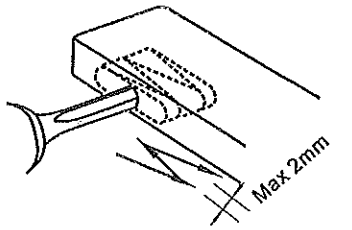


Working area

The working place of the machine is situated at the side from which the mortising drill table is operated.

Safety instruments

When working with the mortiser, you have to wear short strengthened cloths and safety goggles. It is suitable to use adequate protection of hearing and recommended working footwear. It is forbidden to use any working mantle.

Workers qualification

Only an authorized worker, specialized in woodworking branche (or worker instructed by this specialist) is allowed to work with machine. The operator is liable to abide with all safety instructions and regulations, valid in the country in question.

TOOLS

For this accessory there are suitable : mortising bits (left ang right) and countersinking bits with cylindrical shank from materials HSS. Used chuck enables clamping of tools with shank diameter from 1 mm to 16 mm.

Process of clamping--tool WESTCOT

Loosen the hexagonal screw by spanner from accessory and open jaws on rtequired dimension according to the dimension of the tool . Intromit the tool and tighten the jaws by rotating with hexagonal screw.

Take care so as the tool would be clamped and sharpened well. You will increase the safety of operating and the quality of processed surface.

MAINTENANCE

The acccessory has a very simple construction and does not require a special maintenance.

CLEANING AND LUBRICATING

It is necessary to switch off the machine and wait until it stops--before beginning with cleaning or oiling.

The machine requires only a minimal maintenance. We recommend to protect it from humidity. Wipe at times all accessible beddings and worms with an oiled clout. Leading screw of the height adjusting requires to be cleaned with kerosene regularly. Wipe the spindle and its bedding firmly with suitable oil.

Clean regularly cooling ribs of the electric motor once a week because otherwise an effective cooling could not work.

It is needy to clean the machine regularly, to grease bars, hinges, windings and other parts liable to rust with available oil. The interval of this activity depends on the way of working, but do it minimally once a month.

The bearings of the electric motor have permanent grease filling, are hermetically closed and need no lubricating.

Clean the table from resin with proper solvent e. g. turpentine or kerosene, eventually with another proper medium according to the need.

Using of a vacuum cleaner is the best for cleaning the machine from dust. Do it regularly once a week.

FAULTS, REMEDY

NO defect should arise if you operate the machine in the right way and make suitable maintenance regularly. In case that the saw dust sticks on the mortiser drill or the exhausting hose is filled up - switch off the electric motor before you start any repair, otherwise it could be damaged. Also switch off the electric motor immediately, if the workpiece is getting to be jammed.

A blunt mortising drill can bring about a hang of the electric motor of the machine. If the drill is blunt, the seared blacks start to appear on the cut of the workpiece !

Exchange them immediately in such a case ! If the machine embodies increased vibrations, check its placing, fixing, or fixing and balance of tools.

The machine does not work.
Check the electrical installation and connection to the network.

The output of the machine is insufficient.
Too thick chip -You have to work according to the depth of mortise and hardness of the wood.

The electric motor does not have a sufficient output □ it is necessary to call a qualified electrician.

The machine vibrates.
The machine was installed on an uneven surface.

SPARE PARTS

Spare parts are supplied and the service provided by the seller. When ordering spare parts or asking for a repair - do not forget to mention the production number and production year, stated at the rating plate of mortiser.

SPECIAL ACCESSORIES

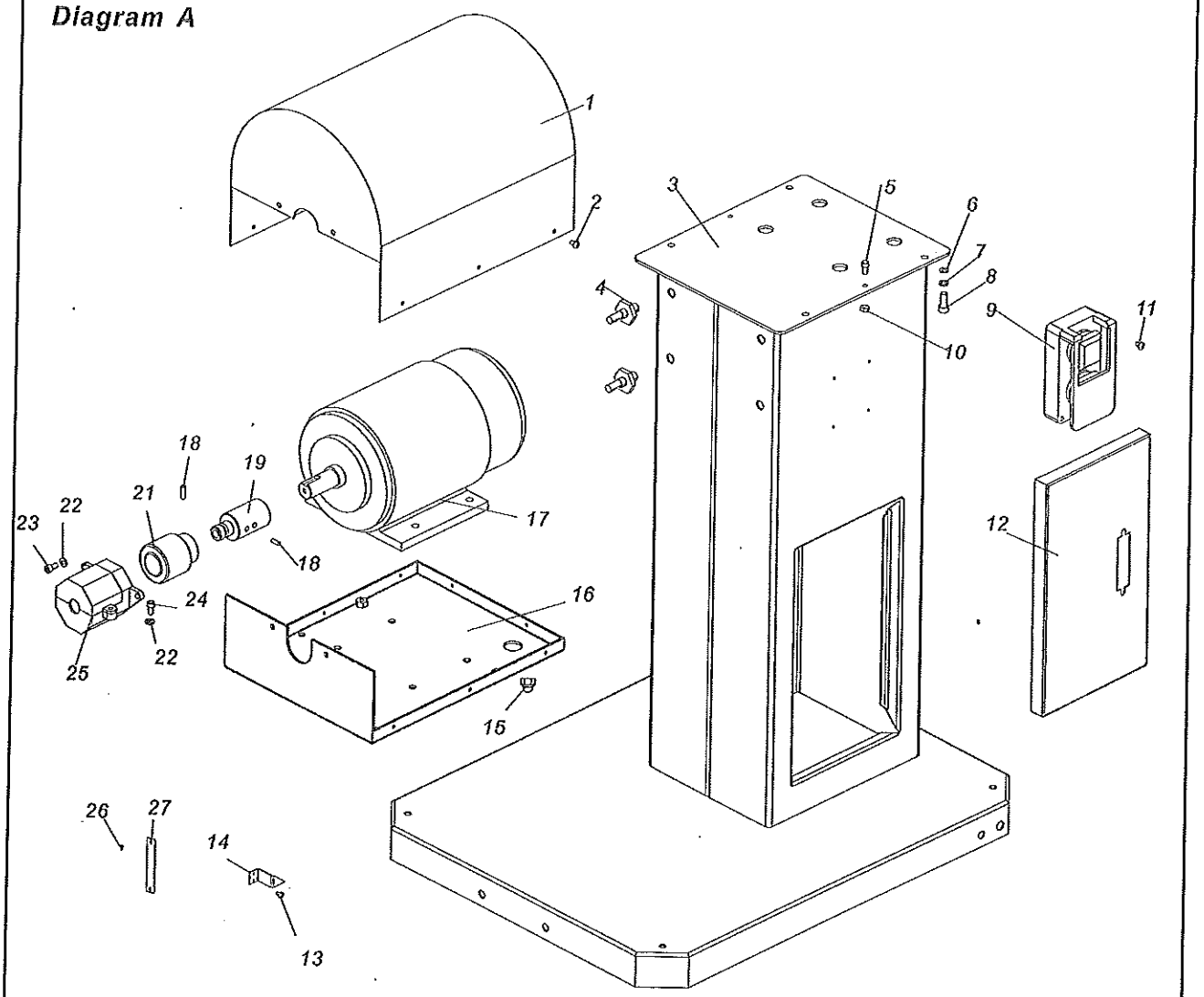
Pin-point adapter,
Angular ruler

SPECIFICATIONS

Motor power	240V~,50HZ,2200W; 400V,3~,50Hz, 2200W
Max. tool diameter	16mm
Max. height of mortising above the table	240mm
Max. vertical travel of the table	140mm
Max. latitudinal travel of the table	290mm
Max. cross travel of the table	140mm
Table size	500x210mm
Packing size	1060x550x525mm
Weight	117/97kg

Above stated values are those of emissions and need not represent the safe working values. Although there exists a correlation between emissions values and levels of exposition, these values cannot be used for a reliable statement whether other precautions are necessary or not. Agents, influencing a real exposure of workers, include other working space attributes, other sources of noise, etc., e.g. the number of machines and other from neighbourhood influencing processes. The most permissible exposition levels can differ according to country in question, too. This information will serve for machine user to a better astimation of risks.

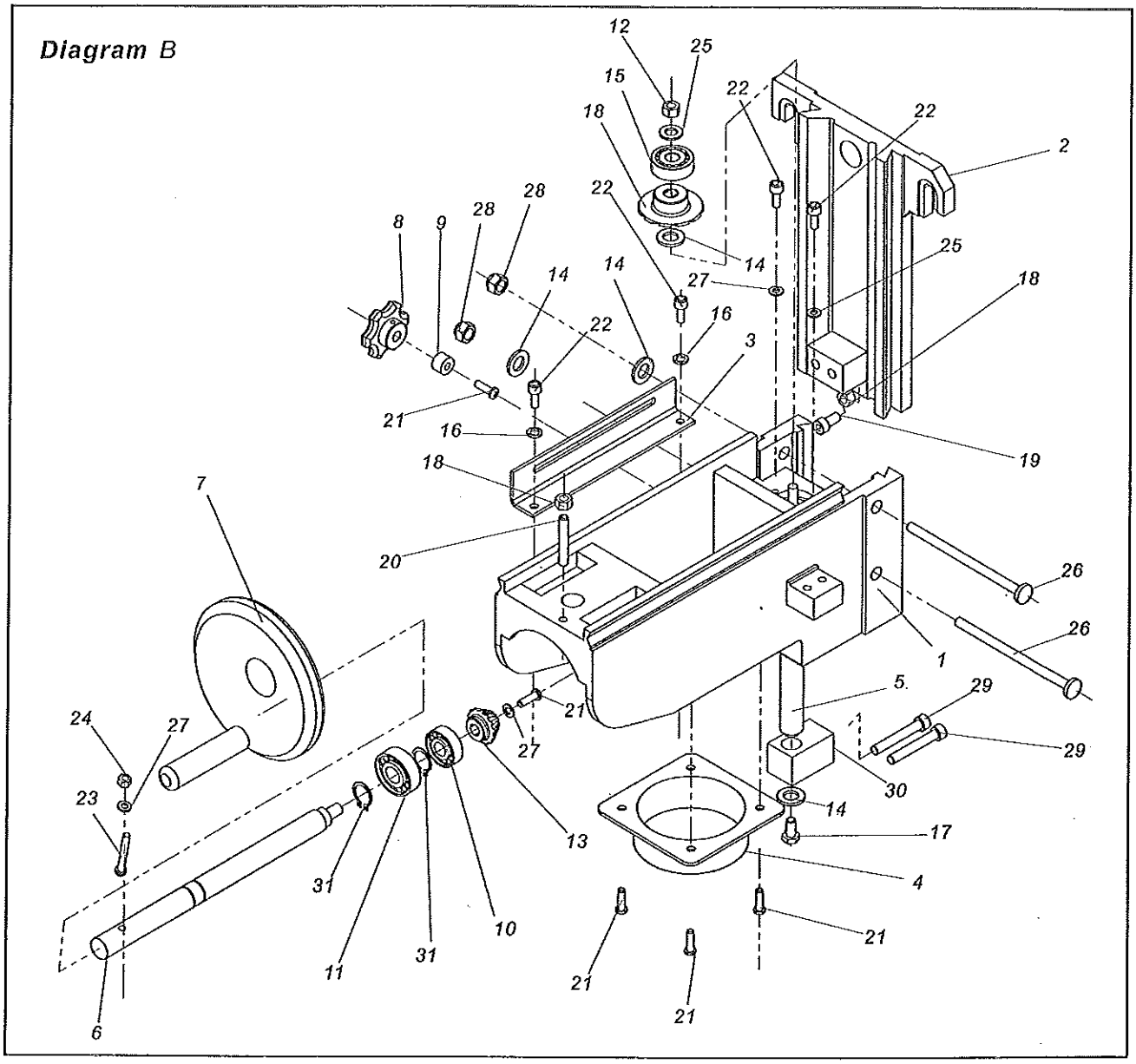
Diagram A



Parts List Diagram A

No	Description	Qty	No	Description	Qty
1	Motor cover	1	14	Pointer	1
2	Pan head screw M5x8	6	15	Strain relief	1
3	Cabinet stand	1	16	Motor support	1
4	Mortising kit support	2	17	Motor	1
5	Thread stop	2	18	Set screw M8x10	2
6	Washer 8mm	4	19	Clamp chuck	1
7	Spring washer 8mm	4	21	Chuck	1
8	Allen screw M8x20	4	22	Washer 6 mm	3
9	Power switch	1	23	Allen screw M6x16	2
10	Lock nut M6	2	24	Allen screw M6x10	1
11	Taping screw ST3.5x16	4	25	Chuck guard	1
12	Door w/lock	1	26	Rivet 3x6	2
13	Pan head screw M4x8	2	27	Height indicator	1

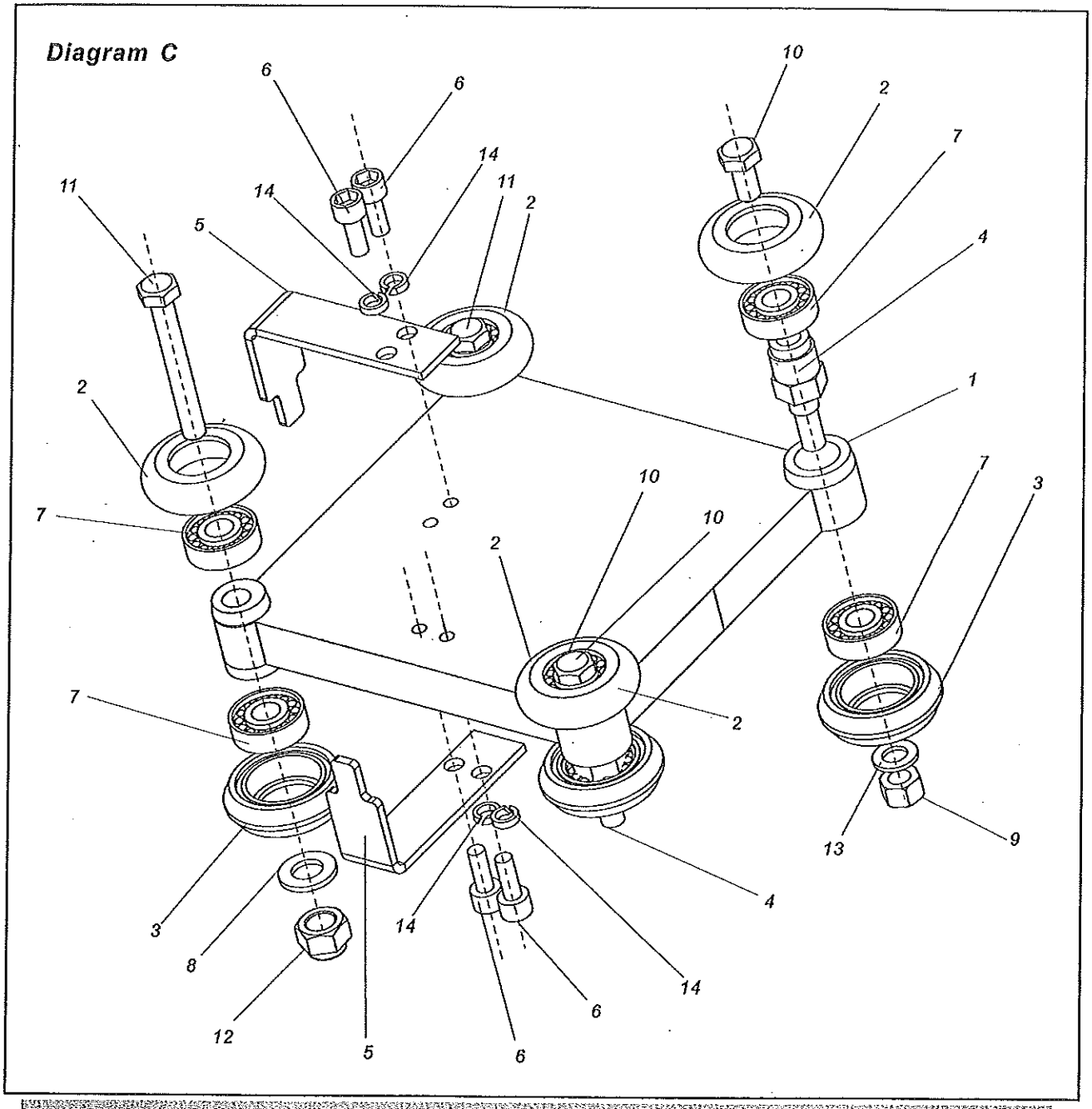
Diagram B



Parts List Diagram B

No	Description	Qty	No	Description	Qty
1	Table base	1	17	Hex head screw M8x16	1
2	Mount base	1	18	Hex nut M8	3
3	"L" bracket	1	19	Allen screw M8x35	1
4	Dust port	1	20	Set screw M8x40	1
5	Thread rod	1	21	Pan head screw M6x10	6
6	Control shaft	1	22	Allen screw M6x16	6
7	Hand wheel	1	23	Carriage bolt M6x45	1
8	Star-type knob M6	1	24	Hex nut M6	1
9	Bush	1	25	Washer 10mm	1
10	Ball bearing 16003	1	26	Carriage Bolt M10x140	2
11	Ball bearing 6004	1	27	Washer 6mm	6
12	Ball bearing 6301	1	28	Hex lock nut M10	2
13	Cone gear	1	29	Allen screw M8x55	2
14	washer 12mm	4	30	Special nut	1
15	Gear	1	31	Circle ring	2
16	Spring washer 8mm	3			

Diagram C



Parts List Diagram C

No	Description	Qty
1	Frame, control roller	1
2	Annulus	4
3	Annulus	4
4	Eccentric shaft	2
5	Stop plate	2
6	Allen screw M6x10	4
7	ball bearing 6000	8

No	Description	Qty
8	Washer 10mm	2
9	Hex lock nut M8	2
10	Hex head screw M8x20	2
11	Hex head screw M10x65	2
12	Hex lock nut M19	2
13	Washer 8mm	2
14	Spring washer 6mm	4

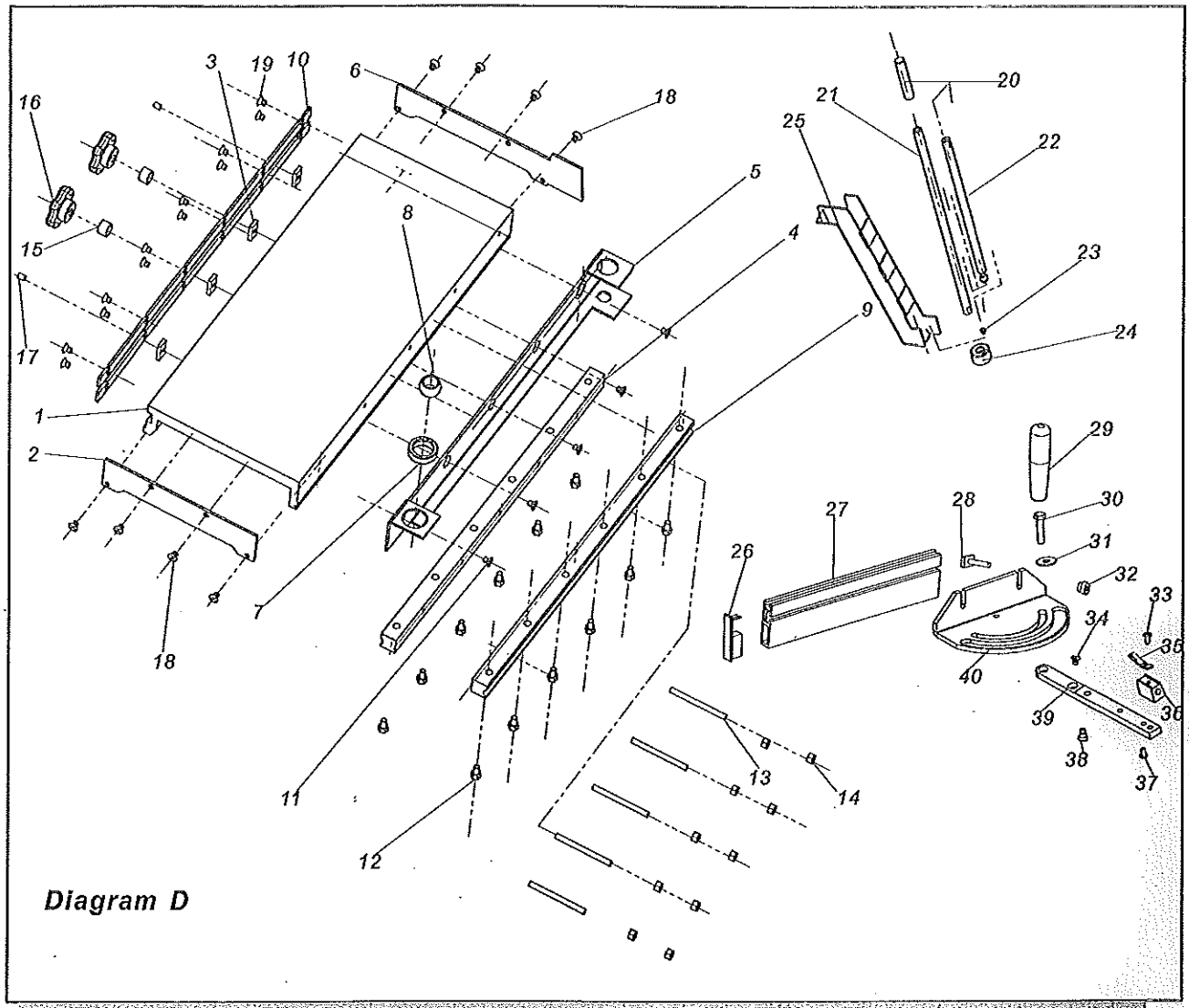


Diagram D

Parts List Diagram D

No	Description	Qty	No	Description	Qty
1	Work table	1	21	Control lever	1
2	End plate	1	22	Control lever	1
3	Square nut	4	23	Sunk head screw M6x12	1
4	Moveable rail	1	24	House, control lever	1
5	Control plate	1	25	Bracket, control lever	1
6	End plate	1	26	End cap, gauge fence	2
7	Ball socket	1	27	Gauge fence	1
8	Ball sphere	1	28	Carriage bolt M6x35	2
9	Fixed rail	1	29	Miter gauge knob	1
10	Segment, table	2	30	Hex head screw M8x15	1
11	Sunk head screw M6x10	5	31	Flat washer 8mm	1
12	Hex head screw M6x30	12	32	Knurled nut M6	2
13	Thread rod M6x75	5	33	Pan head screw M5x10	1
14	hex nut M6	10	34	Pan head screw M6x8	1
15	Bush	2	35	Indicator	1
16	Star-type knob M6x20	2	36	Block indicator	1
17	Set screw M6x10	2	37	Pan head screw M5x10	2
18	Pan head screw M5x8	8	38	Guide pin	1
19	Sunk head screw M5x10	12	39	Gauge rod	1
20	Bush	1	40	Miter gauge base	1

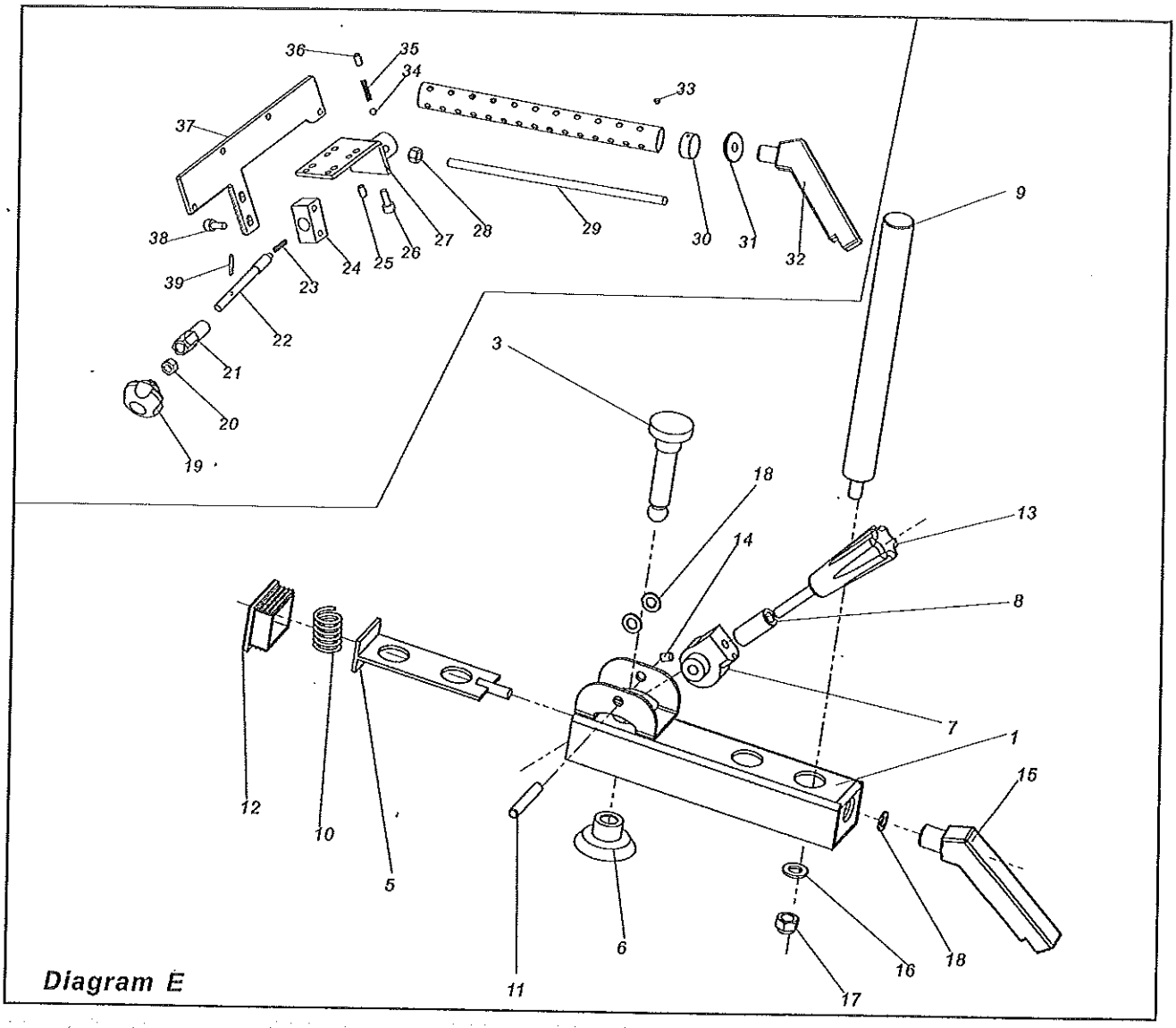


Diagram E

Parts List Diagram E

No	Description	Qty
1	Holder assembly	1
3	Press rod	1
5	Segment, holder	1
6	Disc holder	1
7	Eccentric	1
8	Bush	1
9	Holder rod	1
10	Spring	1
11	roll pin C8x50	1
12	End cap	1
13	handle, holder	1
14	Set screw M6x8	1
15	ratchet lever	1
16	washer 10mm	1
17	Hex lock nut M10	1
18	Washer 8mm	1
19	Knurled nut M8	1
20	Hex nut M8	1
21	Thread rod	1

No	Description	Qty
22	Rod	1
23	Spring	1
24	Block	1
25	Set screw M5x8	1
26	Allen screw M6x8	4
27	Graduator base	1
28	Hex nut M8	1
29	Long rod	1
30	Spacer	1
31	Locker	1
32	Ratchet lever	1
33	Graduator body	1
34	Ball 6mm	1
35	Spring	1
36	Set screw M5x6	1
37	Stop plate	1
38	Allen screw M6x20	1
39	Roll pin 3x20	1