SPINDLE MOULDER MACHINE
MODEL: CWS150S

USER'S OPERATING MANUAL & SERVICE INSTRUCTIONS

CAUTION: Read the instruction manual before using the appliance

Foreword

These instructions have been created by the device manufacturer and are an integral part of the machine delivery. They contain basic information for qualified operating staff and describe the environment and manners of the machine use for which it has been designed, and also contain any information necessary for the correct and safe operation.
The machine is equipped with various safety devices protecting both the operator and the machine for its common technological use. Nevertheless these measures cannot cover all safety aspects and therefore it is necessary that the operator should read and understand these instructions before starting to use the machine. Errors made in the course of installation as well as during operation itself will thus be avoided.
Do not try therefore to put the machine into operation before you have read all instructions for use supplied together with the machine and before you have understood all its functions and working procedures.

Certain information or drawings may not be intended directly for the machine purchased by you as these instructions contain any information for various variants of this type made by our company. By comparing the respective part of the instructions with a particular machine you will find out whether or not they correspond to each other.

The manufacturer reserves the right to make partial alterations within continuous technical machine development.

Use of the machine

Purpose of the machine
The machine enabling lengthwise as well as crosswise moulding with a vertical spindle of semi-finished products made of wood or of materials based on wood
The machine is designed for operation performed by one worker only.
The machine is not intended nor designed for curved work and must not be used for curved work. There is no tenoning function. The machine is designed solely for straight work.
The machine may not be handled by children and youngsters in any manner.

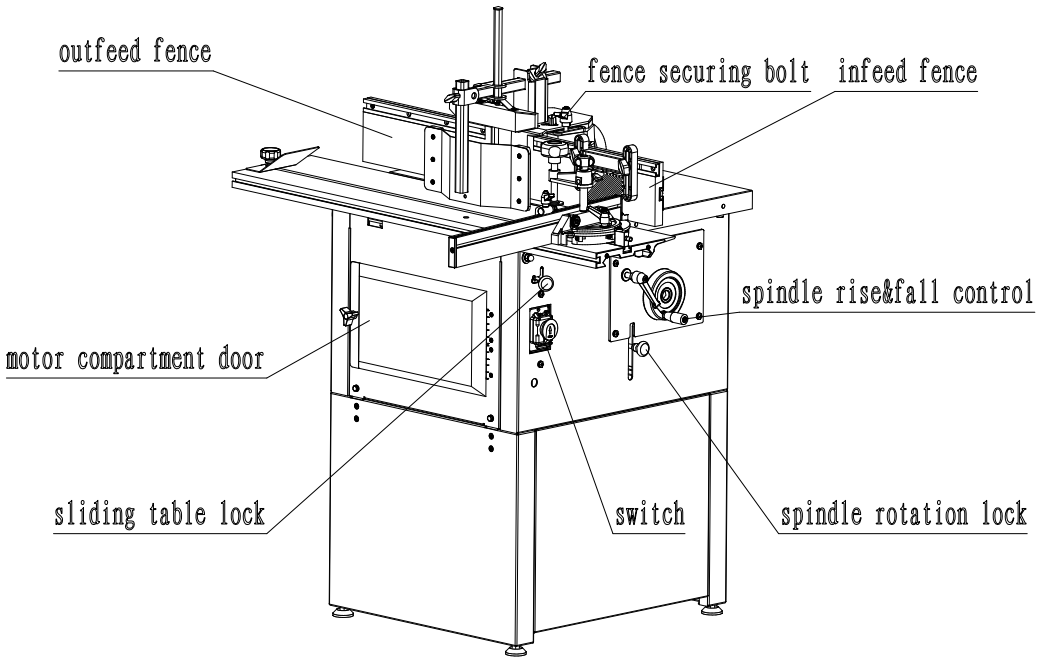
Workers' qualifications

Only an expert skilled in the field of wood-machining or a worker instructed and trained by such expert may operate the machine, regardless of the sex. While working on the machine the operator must get familiar with these instructions and comply with any safety rules, regulations and provisions in force in the respective country.

Working environment

The machine must be operated in a workshop environment the temperature of which does not exceed +40℃ and does not drop below +5℃. The relative humidity of ambient is from 30% to 95%, non-condensing. The height above the sea level is up to 1000 m. Storage and transportation temperature: -25~55℃; The environment classification
danger of inflammable dust fire.

Know your machines



Technical specifications

The motors are capable to run at HVF of 0.02. The limiting value for the peak voltage and the voltage gradient in continuous operation is respectively 358V and 1.12×10^5V/s.

Table height	mm	870
Machine weight	kg	93
Table size	mm	600X400
Rated voltage	V	230(±10%)
Rated frequency	Hz	50(±1)
Moulding machine		
spindle Ø	mm	30
Spindle rotation speed	min^{-1}	1500; 4500；6500；8500
Clamping length of spindle	mm	105
Max. lift of the spindle	mm	110
Max. hole in the table	mm	165
Motor power output	kW	1.5

Specifications concerning noise of the device

Level of noise A in the place of operation (LpAeq)	No-load	L_pA_{eq} =81.7 dB(A)
	Load	L_pA_{eq} =89.5 dB(A)
Level of acoustic power A (LWA)	No-load	L_{WA} = 94.5 dB(A)
	Load	L_{WA} = 103 dB(A)

Operating conditions for noise measurement comply with annex B of ISO 7960.

The figures quoted are emission levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of the workforce include the characteristics of the work room, the other sources of noise etc., i.e. the number of machines and other adjacent processes. Also the permissible

exposure level can vary from country to country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk.

Safety instructions

General

This machine is equipped with various safety devices protecting both the operator and the machine. Nevertheless, this cannot cover all safety aspects and therefore the operator, before putting the machine into operation, must read this chapter and understand it fully. Furthermore the operator must also take into account other aspects of danger relating to the surrounding conditions and material.

Basic safety requirements

- Before connecting the machine to the mains make sure that all safety items are in their active positions and check their functioning. If it is necessary to remove the doors or protective covers, turn off the switch and disconnect the plug from its socket.
- Kick-back catchers must be freely movable and their functioning must be checked regularly, maybe several times a day.
- Do not connect the machine to the mains while the door or protective cover is removed.
- In order to avoid improper operation get acquainted with the location of switches before switching the machine on.
- Remember the position (location) of the switch with emergency stop function so that you can use it promptly at any time.
- Be careful and do not touch any switches while the machine is being operated.
- Do not touch any rotating tool by hands or with any other object under any circumstances.
- In the case that you are not going to work on the machine, turn off the machine by the switch and disconnect the plug from the supply socket.
- Before cleaning the machine, switch off the machine and disconnect the plug of the machine.
- Before doing any maintenance work inside the machine, switch off the machine and disconnect the plug of the machine.
- If the machine is used by more workers, do not proceed to other work without informing the other worker about what procedure you want to use.
- Do not alter the machine in any manner which might cause any risk to its safe operation.
- If you have any doubts on correctness of your procedure, contact a responsible person.
- Do not neglect performance of regular inspections in accordance with the instructions for use.
- Check and make sure that no disturbances occur on the machine caused by the user.
- After the work is finished, adjust the machine so that it is ready for another series of operations.
- Should a failure in power supply occur, switch off the machine immediately.
- Do not paint, make dirty, cause any damage to, alter or remove safety plates. If they become illegible or lost, contact the manufacturing plant and renew the plates.
- Keep work area clear. Cluttered areas and benches cause injuries.
- Consider work area’s environment. Do not expose tools to rain. Do not use tools in damp or wet location. Keep work area well lighted .Do not use tools in the presence of flammable liquids or gases.
- **The moulding machine must not be used for curved work.**

Clothes and personal safety

- Experience shows that injuries are caused by various personal articles, e.g. rings, watches, bracelets, necktie etc. Therefore take them off before starting the work, button the sleeves, take off a tie, which may be caught with various parts of the working machine. Wear hair protection and fasten hair properly to avoid catching by moving part. Wear suitable tight cloth, shoes recommended or prescribed by labour-safety regulations of all countries.
- Wear safety outfit (goggles, apron, safety shoes, hearing protection etc.).
- In the case of any obstacles above your head – in the working area - wear a helmet.
- Always wear a protective mask while machining any material that produces dust while being machined.
- Never wear any loose working clothes.
- Do not work on the machine under influence of drugs or alcohol, and when you are tired.

Safety regulations for operators

Do not put the machine into operation before you get acquainted with the contents of the instructions for use.

- Make sure that electric cables are not damaged so that injuries caused by electric current leaking (electric shocks) are avoided.
- Check regularly that safety covers are mounted properly and that they are not damaged. Repair damaged covers immediately or replace with other ones by a qualified person.
- Do not put the machine into operation with the cover removed.
- Never use any tools that are distorted, broken or blunt.
- Always use the tool suitable for the work given, which corresponds to the machine specifications. The tools must be in accordance with EN 847-1:2005.
- Replace blunt tools as soon as possible, as blunt tools may cause injuries or damage.
- Never use the tools at speeds higher than their recommended rated speeds by the respective manufacturer.
- Stop all functions of the machines before replacing tools and pull out the plug from the supply socket.
- Do not remove or interfere otherwise in safety devices such as covers, limit switches.
- While handling parts above your possibilities, ask for helps from a qualified person.
- It is not recommended to work on the machine during a storm.

Safety regulations for maintenance

Maintenance and repair must be performed by a qualified person. Do not do maintenance work before you get acquainted with the instructions for maintenance thoroughly.

- Before you start to perform any maintenance work, always turn off the switch and pull out the plug from supply socket. A possibility of accidental putting the machine into operation by another person is thus avoided.
- Any maintenance work on electric parts of the equipment may be done by a qualified person only.
- Even if the machine is stopped, the power supply is not disconnected. Always disconnect the plug from supply socket.
- Do not clean the machine or its peripheral devices even if the machine is completely out of operation, unless the plug has been disconnected from supply socket. Keep your fingers in a

distance from belts and belt pulleys.

- While replacing electrical parts of the equipment, turn off the witch and disconnect the plug from supply socket. Faulty parts should be replaced only with products having the same specifications as the original ones.
- Do not remove or interfere otherwise in safety devices such as covers, limit switches, and do not block them mutually.
- Do not switch the machine on before all covers removed for the purposes of maintenance are put in their places again.
- Always keep the maintenance area including the working place clean.
- Any maintenance work must be done by a qualified staff in accordance with the instructions issued by the machine manufacturer.
- Read the instruction manual for maintenance men carefully and completely.
- For replacement of parts and necessary things, get in advance those being identical with the original type and complying with standards.

- Use only specified kinds or lubricating oils and grease or those equivalent to them.
- If any belt in the set of belts used gets longer than the limit prescribed, replace the whole set completely.
- Do not use compressed air to clean the machine or to remove chips.
- Always check the results while a responsible person is present.

Safety regulations for place of work

- Always ensure a sufficient working area and free access to the machine and peripheral devices.
- Put tools and any other obstacles in the place designed for this purpose, in a distance from the machine.
- Ensure sufficient lighting in the working area which will not create shadows or cause the stroboscopic effect. For safe and quality work the hygienic standards specify the minimum intensity 500 lx.
- Never put any tools or any other objects on working tables or covers.
- Always keep the working area clean and tidy.

Transport and storage

Transport and storage

While transporting or handling the machine, be most careful and let this activity be done by qualified personnel especially trained for this kind of activity.

While the machine is being loaded or unloaded, make sure that no person or subject gets pressed by the machine!

Do not enter the area under the machine lifted by a crane or a high-lift trolley!

During transporting or storing the machine, means must be taken to protect the machine against excessive vibrations and humidity.

It should be stored in a shelter at temperatures ranging from -25°C to 55°C.

As standard, the machine is wrapped up in a plastic tray and is transported this way. Upon request the machine may also be packed in a robust wooden box.

Lifting of the machine

The machine or its individual parts may only be lifted by means of an approved lifting device with verified lifting capacity.

Prepare a high-lift truck (D) or a manual lifting carriage (F) with sufficient lifting capacity,

- put the forks (G) below the machine, as shown in the picture.

Should you use a crane (E) or a similar hoisting equipment, proceed as follows:

- prepare four lifting belts (H) or steel ropes at least 2 m long with sufficient lifting capacity,
- fix the ropes to the hook of the crane with the required capacity,
- place the other end of the ropes on the lifting rods put under the machine (rods are not part of delivery),
- after lifting the machine slightly, check the stability of the machine hanging on the ropes.
- lift the machine carefully and slowly and then move it without any rapid changes of the movement to the selected place. Fig.2 （Weight :93Kg）

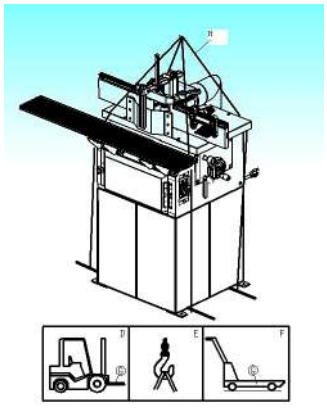


Fig.2

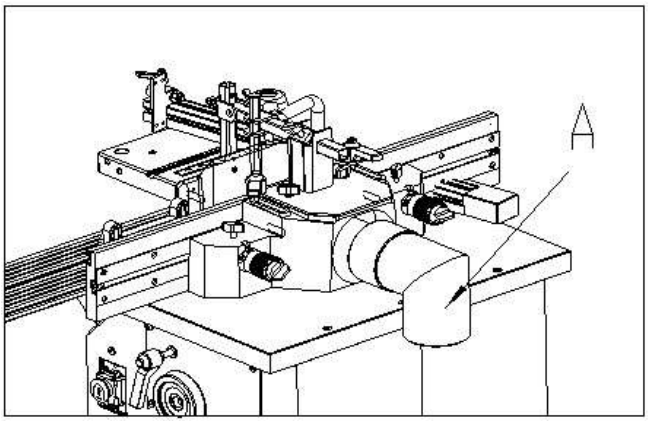


Fig.3

Machine installation

Remove the protective coating from the working tables and other parts of the machine either with paraffin oil or any similar solvent, do not use petrol or similar solvents for this activity –they might cause reduced corrosion resistance of certain parts of the machine.

The working area size depends on the type of the machine, assumed working operations and size of material machined.

Do not forget about the space for location of a sufficiently effective exhausting system or connecting hoses for the central exhaustion.

Working area

It is important to maintain free area of 0.8 m around the machine, which is required for the working place. If any long material is machined, it is necessary to have a sufficient room in front of the machine as well behind it in the places of material input and output.

Connection of the exhaustion system

Work on the machine only with the exhaustion system connected and running !

For the proper functioning of the machine, exhaustion equipment with minimum exhaustion capacity of 570 m^3/hour and minimum speed of air in the pipes equal to 20m/s for dry particles

and 790 m^3/hour and minimum speed of air in the pipes equal to 28m/s for wet particles is necessary.
Switch on the machine drive and exhaustion system at the same time!
Use flexible exhausting hoses with diameters equal to 100 mm The exhausting hose is connected to exhausting outlet whose location on machine is as follows:
For the moulding machine the exhausting hose is fitted onto the outlet from the moulding tool cover which also forms the exhausting connector (A). The hose diameter is 100 mm.

Connection to the mains

- Damaged power supply cables must be replaced by the competent specialist immediately. Operation with damaged cables is dangerous to life and is therefore forbidden!
- Before putting the machine into operation make sure that the voltage and frequency specified on the machine type plate comply with the values of the mains to which it is connected.
-Over voltage protection shall be provided by the end user.
- Before adjustment and replacement of tools and before any adjustment work, alterations and maintenance work, always turn off the switch and disconnect the plug from supply socket.
- This machine must be connected to the protection earth. Inspect and be sure that the socket is reliably earthed.

Direction of rotation

If you are standing on the side of the machine and viewing from upper of the table, the moulder spindle rotates anticlockwise if you look down.

Operation and adjustment of the machine

Set the height of the moulding spindle by means of the hand wheel located on the rear right side of the stand and secure it with the arresting screw. Select the suitable filler of the table（table ring）according to the tool used. Fig.4

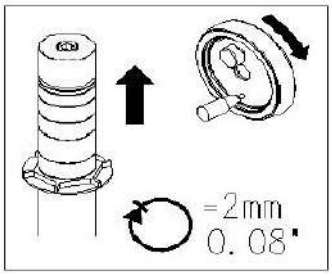


Fig.4

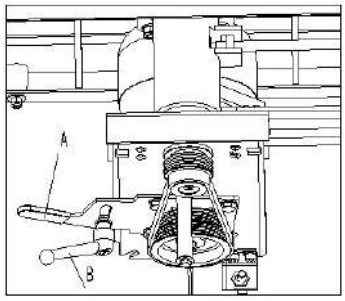


Fig.5

Speed change

The machine may be operated at 6,500 RPM (lower pulleys) or 4,500 RPM (upper pulleys). To change the spindle speed, loosen the lock handle (A) and pivot the motor assembly toward the spindle. Reposition the belt to the desired speed and tension the knob(B). Fig.5

Lengthwise moulding

Tool: use suitable tools with a defined thickness of the chip for manual feeding.Fig.6

Working cycle: while test moulding is being performed, start working with a workpiece with sufficient length, width and height. It is necessary to prevent blocking of the machine, or to use a security against kick-back adapted to the workpiece dimensions. In order to prevent kickback it is necessary to use back and/or front end stops fixed to the fence, table or fixed to and extension table.
Never set the rulers while the machine is being operated!
While working, perform the lateral adjustment of the fence plates, keep the opening for the tool to be reduced to a minimum, lock the fence plates and adjust the fine adjusting handle to set the required chip (wood removal) and lock the station by the locking knob.
Keep the pressure pads in contact with the table and the fence plates firmly
and evenly along the guide ruler.
The cutting speed shall exceed 40 m s^{-1} in order to lessen the risk of kickback but shall not exceed 70 m s^{-1} in order to lessen the risk of tool damage.
Adequate general or localised lighting shall be provided.

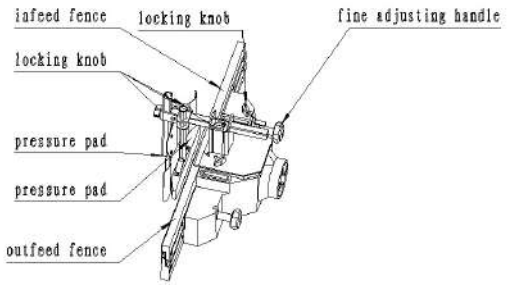


Fig.6

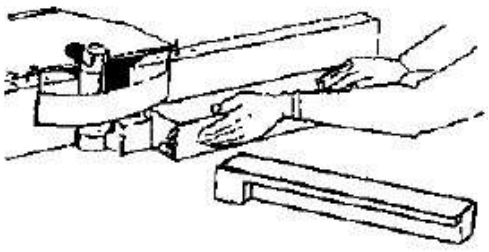


Fig.7

Moulding of workpieces with small cross-section

Tool: Choose the tool suitable for manual feeding.
Working cycle: Adjust the moulding machine and put both halves of the ruler close to the tool. Machine the material only by means of a pusher! Choose the size of the pusher so that the hand may be put on it comfortably.

Protective aids

For work on the machine eye protection are prescribed. It is advisable to use appropriate ear protection and commended working shoes. Working overall coats are not allowed to use. Handlings NOT allowed
- touch the tool or its close surrounding places and other moving parts
- machine any materials other than wood or those based on wood
- overload the machine while machining large semi-finished products
- remove chips from the place near the tools by hand or with any object while the machine is being operated
- use other tools than those delivered or recommended by the machine manufacturer

Using the Fence as a Guide
Shaping with the fence is the safest and most satisfactory method of working. This method should always be used when work permits. Almost all-straight work can be used with the fence.

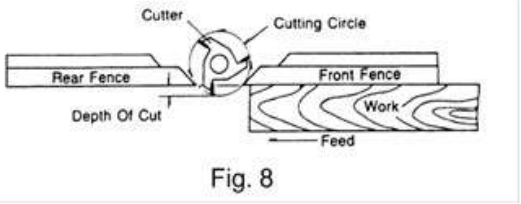


Fig. 8

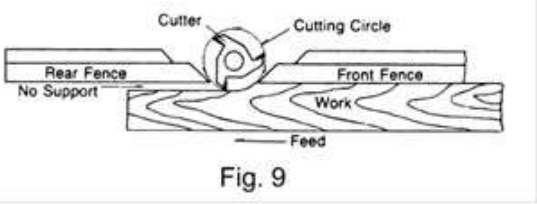


Fig. 9

1. For most work, where a portion of the edge of the work is not touched by the cutter, both the front and rear fences are in a straight line, as shown in figure 8.
2. When the shaping operation removes the entire edge of the work (i.e. jointing or making a full bead), the shaped edge will not be supported by the rear fence when both fences are in line as shown in Figure 9. In this case, the workpiece should be advanced to the position shown in figure 9 and stopped.
3. The front fence should be advanced to contact the work as shown in figure 10. The rear fence will then be in line with the cutting circle.

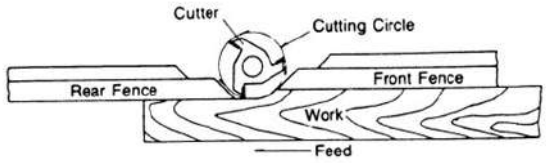


Fig. 10

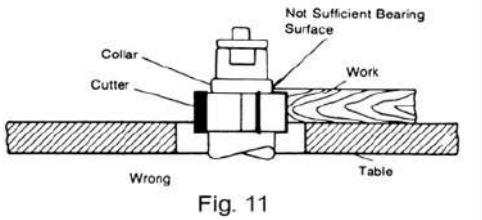


Fig. 11

Shaping with Collars

Follow these rules when shaping with collars for safest operation and best results:
1. Collars must be smooth and free from all gum or other substances.
2. The edge of the work must be smooth. Any irregularity in the surface, which rides against the collar, will be duplicated on the shaped surface.
3. A portion of the work's edge must remain untouched by the cutter so that the collar will have sufficient bearing surface. See figure 11 for an example of insufficient bearing surface.

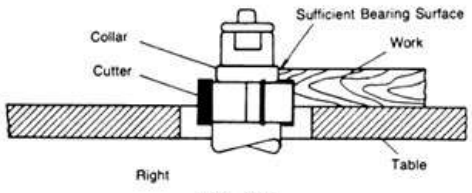


Fig. 12

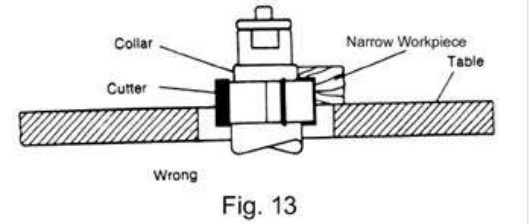


Fig. 13

4. Figure 12 illustrates sufficient bearing surface.
5. Under no circumstances should a small workpiece be shaped against the collars as shown in Figure 13.

Collar Positioning

Collars may be positioned above, below, or between two cutters:
1. When using the collar below the cutter, figure 14, the progress of the cut can be observed at all times. A disadvantage of this method is any accidental lifting of the work will gouge the wood and ruin the workpiece.

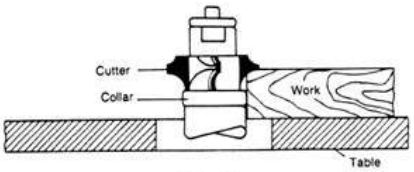


Fig. 14

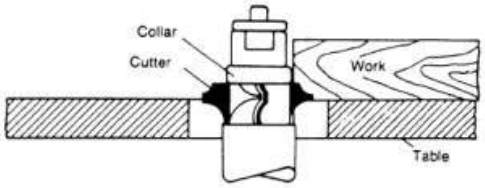


Fig. 15

2. Using the collar above the cutter, figure 15, offers the advantage of the cut not being affected by slight variations in the stock's thickness. However, the cut is not visible during the operation. Another advantage is accidental lifting of the work piece will not gouge the work piece. Simply correct the mistake by repeating the operation.

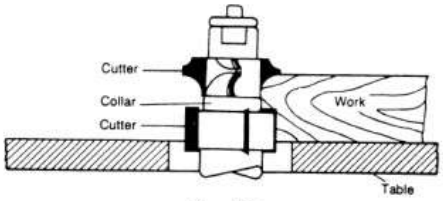


Fig. 16

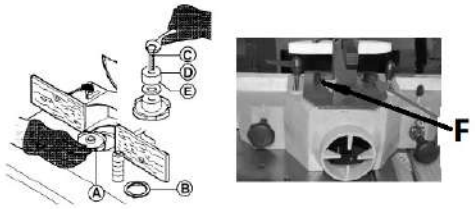


Fig.17

3. The collar between cutters method, shown in figure 16, has both the advantages and disadvantages of the first two methods. This method is used primarily where both edges of the work are to be shaped.

The machine can not be used for tenoning !

Tools-- Replacement of moulding tools (Fig.17)

Only use moulding tools that are designed for manual feeding and may be clamped firmly and safely. Only tools conforming to EN847-1:2005 and marked MAN shall be used.

Before mounting tool (A) make sure that spacing rings (E) are clean and not damaged. Make sure that the fastening method is proper. The moulding tool is fixed and clamped by bolt (nut) (C), through spindle ring (D) and spacing rings (E) on the moulding spindle! Adjust the hole in the table according to the diameter of moulding tool (A) by table rings (B).

When installing the moulding tools, the cover of guard needs to be opened. Loose the two locking knobs (F) to open the cover. After installation, close the cover and lock it through the locking knobs.

Warning: Always close the cover of guard and lock it securely after tools installed.

Maintenance

Before starting maintenance or repair work always disconnect the machine from the mains! Turn off the machine and remove the plug from the supply socket!

Always keep the V-belts (transmission belt for spindle) tight is necessary.

The machine should be cleaned. The rods, pins, threads and other parts liable to be rusty should be lubricated with suitable oil. The interval for such activities will depend on the manner of work but it should be performed at least once a month.

The bearings of the electrical motors and moulding spindle have permanent grease filling, are closed on both sides and do not require any lubrication.

Avoid contamination of belts with oil or grease. If this occurs, clean the belt with paper only or dry it.

Removing the dust is best to be done with a vacuum cleaner. Perform this activity regularly, at east once a week.

Troubleshooting

No faults should occur while the machine is used correctly and maintained duly. If the exhausting hose is blocked with chips, the machine should be switched off before handling. If a workpiece becomes jammed, turn off the machine immediately!
A blunt knife often causes that the electric motor becomes heated excessively. If the machine vibrates excessively, check its setting and anchoring, possibly also clamping and balancing of the tools used.

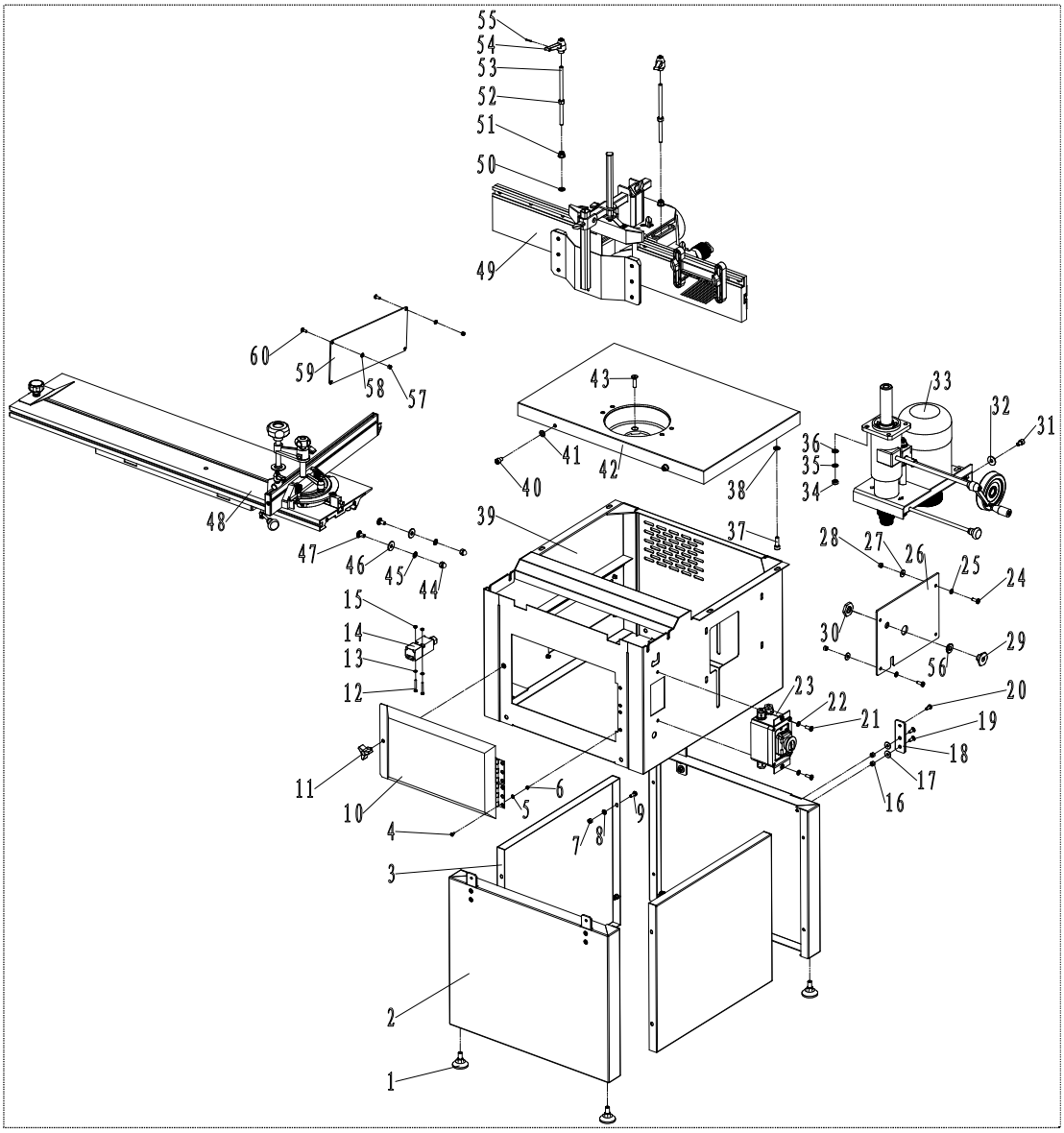
Problem	Possible Causes and Solutions
Shaper will not start	*Fuse blown or circuit breaker tripped Replace fuse or reset circuit breaker
	*Cord damaged Replace cord
	*Cord unplgged from the power source Plug in power cord
	*Reversing switch is in the OFF position Turn switch to forward or reverse
Overload kicks out frequently	*Extension cord or wiring inadequate size Replace cord wiring with proper gauge wiring
	*Feeding stock too fast Reduce stock feed rate
	*Cutter head is dull Use only sharp cutters
Cutter does not come up to full speed	*Shop wire gauge is too small Replace cord or wiring with proper gauge wire
	*Extension cord too light or too long Replace with adequate size cord
	*Power source is not adequate Contact local electrical utility
Cuts are unsatis facctory	*Dull cutter Replace cutter
	*Gym or pitch on cutter Remove cutter and clean with solvent
	*Cutterhead rotating in the wrong direction Check for proper rotation at start up
	*Feeding work in the wrong dirction Feed work against the cutter rotation

Problem	Possible Causes and Solutions
Machine Vibrates	*Cutterhead damaged Replace cutterhead
	*Stand on uneven surface Stand must rest solidly on level surface,bolt floor if necessary
	*Defective V-Belt Replace V-Belt
	*V-Belt incorrectly tensioned Apply proper tension
	*Bent pulley Replace pulley
	*Motor mounted improperly Motor must be properly mounted with snug nuts and bolts
Edge splits on cross grain cut	*Characteristic of this type of cut Make cross grain cuts first, then finish cut with the grain Use scrap block to support end of cut
Raised areas on shaped edge	*Variation of pressure holding work against cutter Hold work firmly against table and fence Use holddowns
Work pulled from hand	*Feeding work in the wrong dirction Always feed work against the rotation of the cutterhead
Depth of cut not uniform	*Fence misalignment Align outfeed fence
	*Slide pressure not uniform Use holddowns; keep constant pressure against fence
Work burns	*Cutting too deep on one pass On hardwoods take light cuts; attain full depth several passes
	*Forcing work Feed work slowly and steadily
Cut height not uniform	*Variation in pressureholding work to table Keep pressure firm throughout pass Use holddowns Make pass slowly and steadily Keep work under cutter whenever possible
Cutsnot smooth	*Wrong RPM Use faster speed
	*working against the grain Work with the grain whenever possible
	*Cutting too deep on one pass Take several passes on very deep cuts
Spindle does not raise freely	*Sawdust or dirt in raising mechanism Brush or blow out dirt and saw dust

Spare parts

While ordering spare it is advisable to specify numbers and names of the required spare parts according to this appendix、

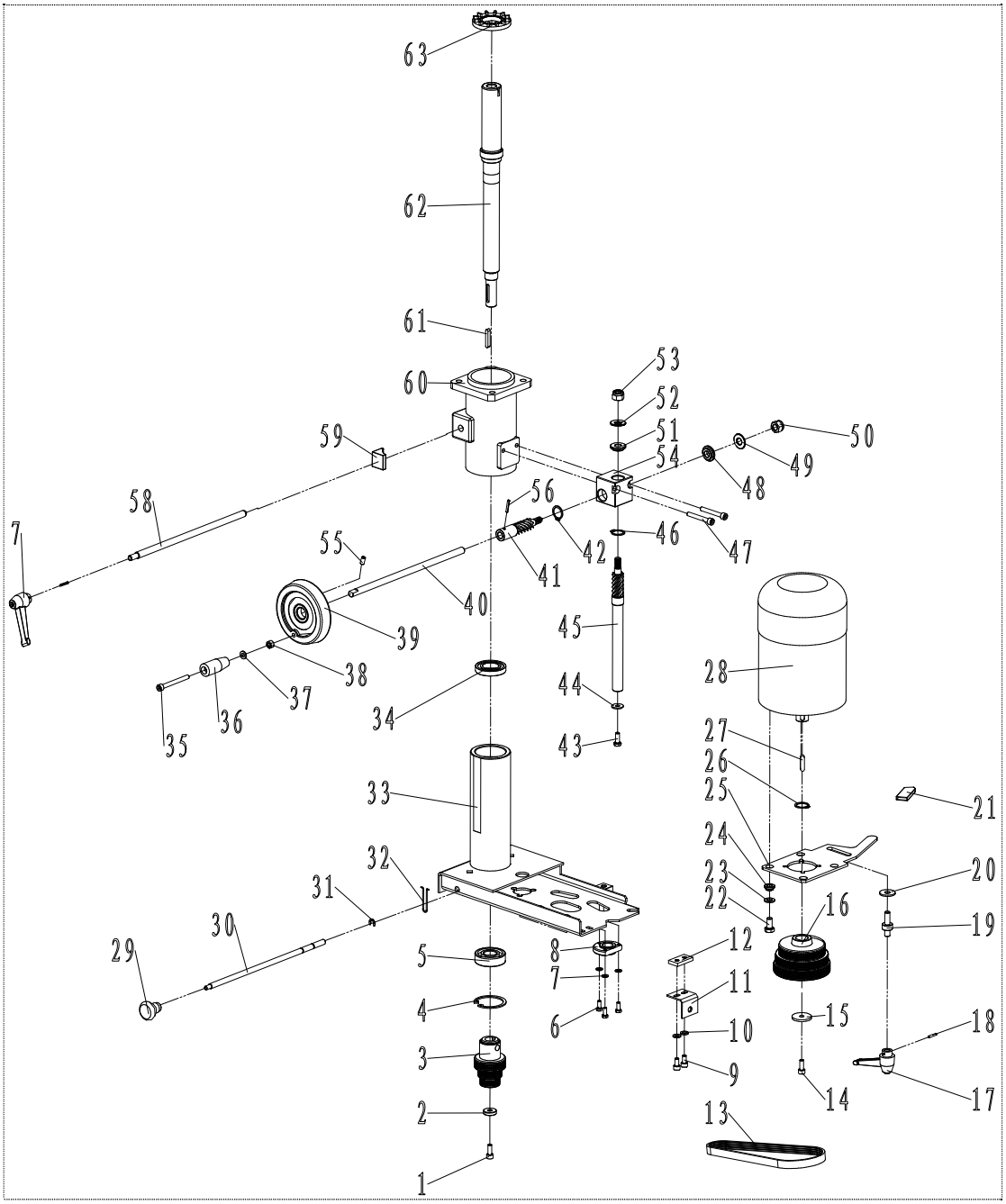
FINAL ASSEMBLY



PARTS LIST FOR FINAL ASSEMBLY

NO.	CODE	DESCRIPTION	QTY	NO.	CODE	DESCRIPTION	QTY
1	TS2000814	Underprop	4	2	TS2000801	Lower leg	2
3	MX160701	Cover board	2	4		Screw M4X10	4
5		Washer 4	4	6		Hex nut M4	4
7		Hex nut M6	8	8		Washer 6	8
9		Hex bolt M6X16	8	10	MX1613	Protective cover	1
11	MX1612	Door knob	1	12		Screw M4X30	2
13		Washer 4	2	14		Interlocking switch	1
15		Hex nut M4	2	16		Hex nut M6	8
17		Large washer 6	8	18	TS2000806	Linking plate	4
19		Screw M6X16	8	20		Hex bolt M6X12	4
21		Screw M6X16	2	22		Washer 6	2
23		Switch assembly	1	24		Screw M6X16	4
25		Washer 6	4	26	MX1604	Moulding faceplate	1
27		Large washer 6	4	28		Hex nut M6	4
29	MX1608	Bush	1	30	MX1609	Hex nut	1
31		Screw M8X25	1	32		Large washer 8	1
33	MX1610	Moulder assembly	1	34		Hex nut M8	4
35		Spring washer 8	4	36		Washer 8	4
37		Screw M8X25	4	38		Washer 8	4
39	MX1606	Box assembly	1	40		Screw M8X12	2
41		Washer 8	2	42	MX1601	Table	1
43		Screw M8X30	4	44		Dome hex nut M8	4
45		Dentiform washer 8	4	46		Large washer 8	4
47		Square bolt M8X16	4	48	MX1605	Sliding table assembly	1
49	MX1603	Exhaustion socket assembly	1	50		Washer 8	2
51		Hex flange nut M8	2	52		Hex nut M8	2
53	MX1611	Locking shaft	2	54	MX161016	Locking handle	2
55		Spring pin 3X16	2	56	M1605	bush	1
57		Hex nut M5	4	58		Washer 8	4
59	MX160608	Window plate	1	60		Screw M5X12	4

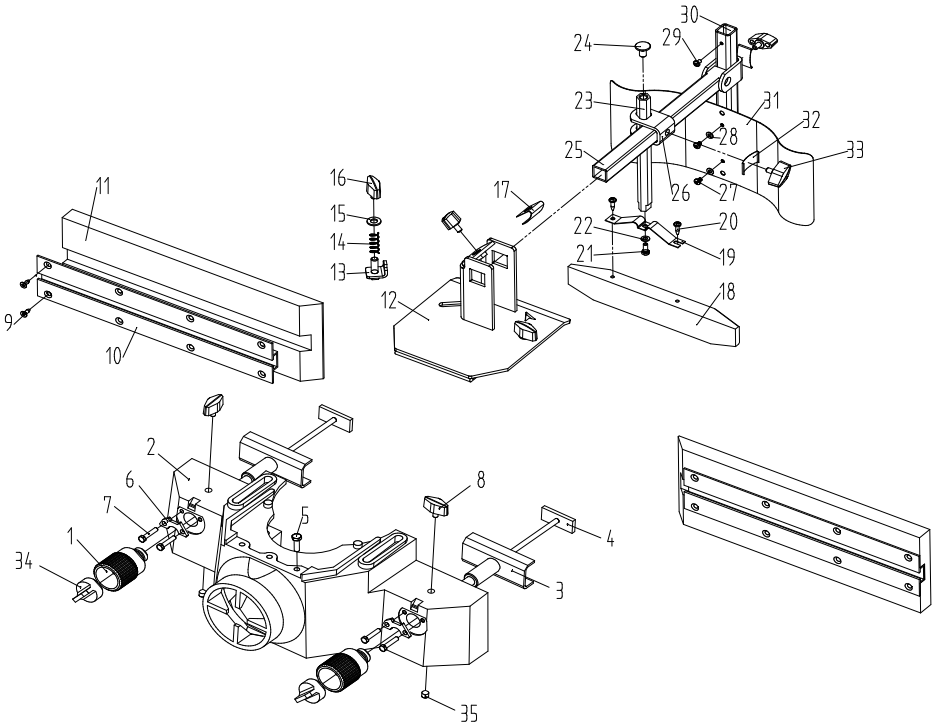
Moulding spindle unit assembly



PARTS LIST FOR MOULDING SPINDLE UNIT ASSEMBLY

NO.	CODE	DESCRIPTION	QTY	NO.	CODE	DESCRIPTION	QTY
1		Screw M6X16	1	2	MX161007	Circular washer	1
3	MX161007	Driven pulley	1	4		“C”ringφ47	1
5		Bearing	1	6		Hex bolt M5X12	3
7		Washer 5	3	8	MX161010	Nut bush	1
9		Screw M6X14	3	10		Washer 6	2
11	MX161014	Angle plate	1	12	MX161015	Plate	1
13		Cuneal bel	1	14		Screw M6X16	1
15	K4390617	Large washer	1	16	MX161008	Motor pulley	1
17	MX161016	Locking handle	1	18		Spring pin 3X16	1
19	MX161021	Locking bolt	1	20		Large washer 8	1
21	MX161027	Handle coat	1	22		Hex bolt M8X16	4
23		Washer 8	4	24	MX161022	Space bush	4
25	MX161020	Rotation plate	1	26		“C”ringφ19	1
27		Key 6X25	1	28	MX161006	Motor	1
29	TS2000731	handgrip	1	30	MX161012	Locking pole	1
31		“E”ringφ6	1	32	MX161004	Spring clip	1
33	MX161003	Motor rack	1	34		Bearing	1
35		Screw M6X60	1	36		Handle bush	1
37		Washer 6	1	38		Hex nut M6	1
39	K41923	Hand wheel	1	40	MX161025	Rotation pole	1
41	MX161026	Gear shaft	1	42		“C”ringφ18	1
43		Hex bolt M6X16	1	44		Large washer 6	1
45	MX161005	Gear shaft	1	46		“C”ringφ18	1
47		Screw M6X45	2	48	MX161023	Gear bush	1
49		Bearing	1	50		Locking nut M10	1
51	MX161023	Gear bush	1	52		Bearing	1
53		Locking nut M10	1	54	MX161024	Gear box	1
55		Set screw M6X12	1	56		Spring pin 3X20	1
57	MX161016	Locking handle	1	58	MX161009	Locking pole	1
59	MX1018	Locking block	1	60	MX161002	Oriented stand	1
61		Key 5X30	1	62	MX161001	Spindle	1
63	MX161002	Fan cap	1				

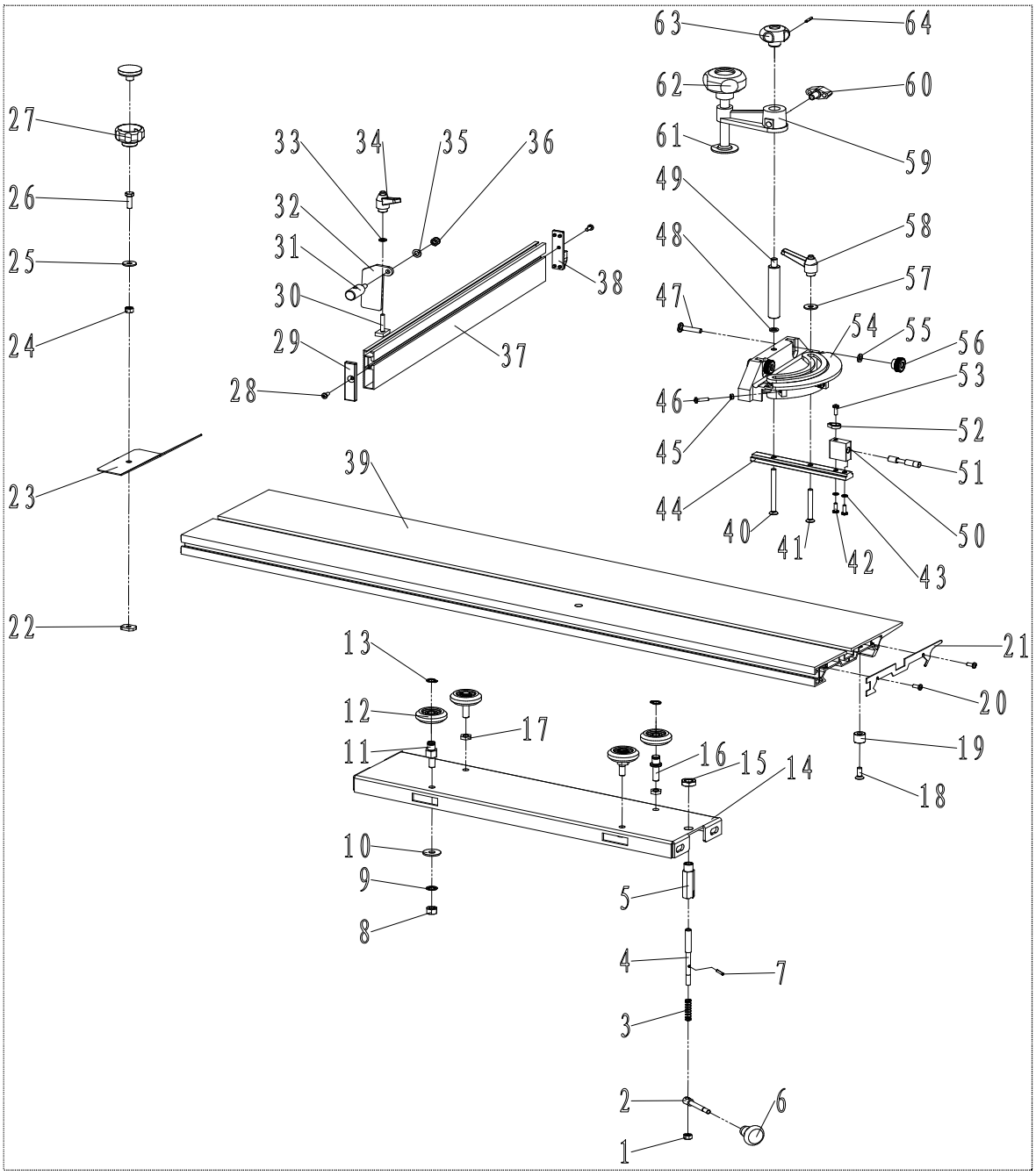
MOULDING EXHAUSTION SOCKET ASSEMBLY



PARTS LIST FOR MOULDING EXHAUSTION SOCKET ASSEMBLY

NO.	CODE	DESCRIPTION	QTY	NO.	CODE	DESCRIPTION	QTY
1	MX160324	Adjusting wheel	2	2	MX160316	Exhaustion socket	1
3	MX160321	Guide rack	2	4	MX160320	T-shaped bolt	2
5		Screw M6X10	4	6	MX160323	Metal plate	2
7		Hex bolt M5X12	4	8	MX160313	Rhombic handgrip	3
9		Screw M4X12	16	10	MX160309	T-shaped rail	2
11	MX160308	Horizontal wood broad	2	12	MX160315	Turing rack	1
13	MX160318	Locking sheet metal	2	14	MX160319	Spring	2
15		Washer φ8	2	16	MX160317	Rhombic handgrip	2
17	MX160314	Saucer	2	18	MX160307	Horrent wood broad	1
19	MX160312	M-shaped plate	1	20		Screw M4X16	2
21		Hex bolt M5X12	1	22		Washer φ5	1
23	MX160305	Hexangular leader	1	24		Bolt M8X10	1
25	MX160310	Square leader assembly	1	26	MX160306	Capstan	1
27		Screw M4X6	2	28		Washer φ4	2
29		Screw M4X6	1	30	MX160302	Standpipe	1
31	MX160304	Spring protective broad	1	32	MX160311	Locking patch	2
33	MX160301	Rhombic handgrip	2	34	MX160322	Locking knob	2
35		Set screw M8X10	2				

SLIDING TALBE ASSEMBLY



PARTS LIST FOR SLIDING TABLE ASSEMBLY

NO.	CODE	DESCRIPTION	QTY	NO.	CODE	DESCRIPTION	QTY
1		Hex nut M6	1	2	TS2000741	Pin pole	1
3	TS2000735	Spring	1	4	TS2000734	Locking pole	1
5	TS2000742	Pole bush	1	6	TS2000720	Locking handle	1
7		Spring pin 3X16	1	8		Hex nut M8	1
9		Dentiform washer 8	2	10		Large washer 8	2
11	TS2000728	Eccentric pole	2	12	K4190117	Trolley	4
13		“C” ringφ10	4	14	TS2000714	Table support	1
15		Hex thin nut M12	1	16	TS2000737	Homocentric pole	2
17		Hex thin nut M8	2	18		Screw M6X16	2
19	TS2000511	Nylon bush	2	20		Screw M4X10	4
21	TS2000510	Guide rail insert	2	22	TS2000613	Square nut	1
23	TS2000612	Stopping plate	1	24		Hex nut M6	1
25		Large washer 6	1	26		Hex bolt M6X20	1
27	TS2000614	Handle assembly	1	28		Screw M4X10	2
29	TS2000507	Fence insert	1	30	TS2000514	T-shaped bolt	1
31	TS2000513	Stopping bolt	1	32	TS20-00515	Locking plate	1
33		Washer 5	1	34	TS2000517	Small handle	1
35		Washer 6	1	36		Locking hex nut M6	1
37	TS2000505	Fence	1	38	TS2000506	Fence insert	1
39	TS2000509	Guide rail	1	40		Screw M6X70	1
41		Screw M6X50	1	42		Screw M4X12	2
43		Spring washer 4	2	44	TS2000501	T-shaped plate	1
45		Hex nut M4	3	46		Screw M4X16	3
47		Square bolt M6X30	2	48		Washer 6	1
49	TS2000512	Erection shaft	1	50	TS2000503	Fixed support	1
51	TS2000502	Stopping pole	1	52	TS2000508	pointer	1
53		Screw M4X12	1	54	TS2000504	Miter gauge	1
55		Washer 6	2	56	TS2000607	Locking button	2
57		Large washer 6	1	58	K4190102	Small handle	2
59	K4391304	Rocker	1	60	K4391305	Rhombic handgrip	1
61	K4190116	Press plate	1	62	K4391302	Press handle	1
63	TS2000517	Handle	1	64		Spring pin 3X16	1