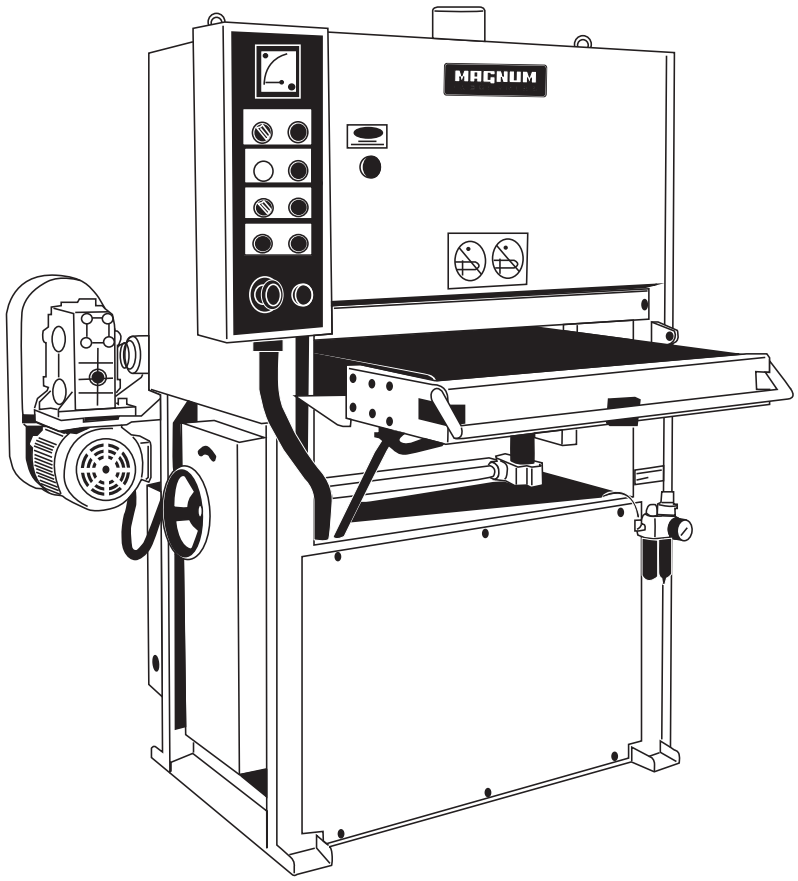
MAGNUM
INDUSTRIAL

MODEL NO.: MI-17203



OPERATING MANUAL

1. SAFETY RULES

1-1 GENERAL SAFETY RULES

1. Read the operation manual thoroughly, and understand all safety rules before attempting to operate the machine for avoiding danger.

2. Proper apparel should be noticed:
   - Do not wear loose clothing, neckties, bracelets whice may get caught in the moving parts of the machine.
   - Wear protective hair covering to contain long hair.
   - Do not wear gloves to prevent injury when operating the machine.

3. All guards are safty devices. Do not remove any guard.

4. Do not operate the machine while under the influence of alcohol.

5. All visitors should be kept at a safe distance from the running machine.

6. Make sure the power is turned off and the machine has come to a complete stop before serving as below:
   - Open machine cover or electrical control box cover.
   - Replace sanding belt.
   - Adjust or replace belt.
   - Load and unload workpiece.
   - Installation and maintenance.
   - Measure the workpiece.

7. While the sanding belt is just touching the workpiece, do not suddently start the machine to prevent danger.

8. Keep work area properly lighted, clean, safe, and well ventilated.

9. Do not store any dangerous object on the work area.

ADDITIONAL SAFETY RULES FOR THE WIDE BELT SANDER

1. As soon as the workpieces is placed on the conveyor table, it will be automatically fed into the machine. Remove hte hands from the workpiece immediately to avoid injury.

2. Always keep the sanding belt clean and sharp.

3. Make sure all switches are in “OFF” position before turning power on to avoid the danger of accidental starting.

4. Fully understand various function of the machine before operation.

5. Always disconnect the machine from the pwoer source before making maintenance or replacing parts.

6. Make sure the sanding belt has proper tension before starting the machine.

7. Keep all guards in place. Do not remove any guard before operation.

8. Do not place hands near the contact drum.

9. Make sure that there is no nails or other objects contained in the workpiece.

10. While the machine is in operation, always check if the sanding load shown on the Ampere meter is normal or not. This may avoid sanding belf breakage or machine damage due to a overload sanding.

    Sanding load can be adjusted by instructions:

    - Reduce the sanding belt speed.
    - Apply a coarser grit of sanding belt.
    - Raise the position of contact drum or sanding platen.

11. Thoroughly clean the machine interior after job is accomplished. Remove the sanding belt before cleaning the machine interior, and mount it in position after cleaning.

12. While workpieces thinness over 80m/m. Do not put your hand in to workpieces two side keep safety.

ADDITIONAL SAFETY RULES FOR THE WIDE BELT SANDER

13. Beware of your fingero. Do not put your finger under wooden plate during feeding.

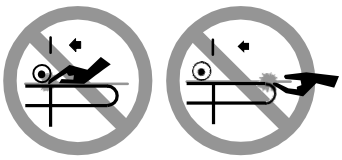
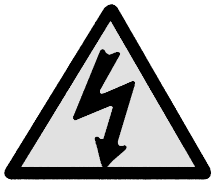
14. The doors may not be opened within 10 seconds after switching off.

15. The safety tip bar has to be pushed down each day for checking the functions.

16. This machine will shut off in case of pressure failure, Make sure of this machine no longer running before opening the doors.

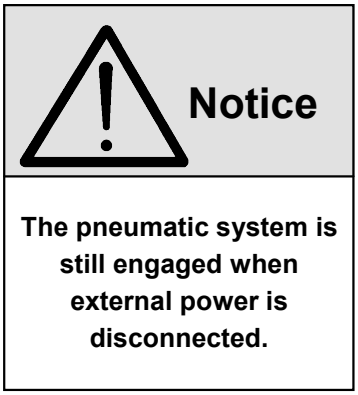
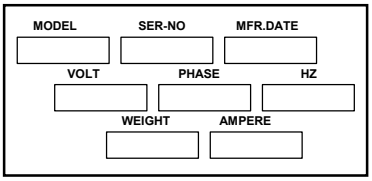
1-2 WARNING LABELS

WARNING LABEL LOCATIONS AND INSTRUCTIONS:

FIGURES	LABEL NAME	LOCATION AND INSTRUCTION
	**WARNING LABEL**	ATTACHED POSITION: The warning labels are attached on the stopper, located at front of machine. INSTRUCTIONS: While feeding the workpiece, the hands must not touch conveyor belt to prevent hands clamping into the machine. While feeding the workpiece, the hands must not place into the front guard to prevent clamping by the contact drum.
	**ELECTRICAL WARNING LABEL**	ATTACHED POSITION: This warning label is attached on the cover of electrical control box. INSTRUCTIONS: This warning label indicates the location of electrical control system. Do not open this cover unless making maintenance. Electrical maintenance shall be made by only qualified personnel. Do not open the cover until the power source has been turned off and machine has come to a complete stop.
	**NOTICE**	ATTACHED POSITION: The danger lables are attached on the right and left guards, electrical control box cover, and solenoid valve box. INSTRUCTIONS: Do not open the guards until the machine has come to a complete stop to prevent danger.

1-2 WARNING LABELS

WARNING LABEL LOCATIONS AND INSTRUCTIONS:

FIGURES	LABEL NAME	LOCATION AND INSTRUCTION
	NOTICE	ATTACHED POSITION: The notice label are at MAIN SWITCH & F.R.L. system. INSTRUCTIONS: The pneumatic system is still engaged when exernal power is disconnected.
		ATTACHED POSITION: The instructions label is attached on the machine construction, located at back of machine. INSTRUCTIONS: This label indicatedes machine model SER-NO MFR.DATE, VOLTAGE, PHASE, FREQUENCY, WEIGHT, AMPERE.

2. MACHINE SPECIFICATIONS

2-1 FEATURES OF THE MACHINE

RUGGED CONSTRUCTION

The main frams is fabricated of heavy duty steel plate and ribbed to minimize vibration and deflection.

CONVENIENT CONTROL

All operating controls are centralized in a convenient control panel. Large, clearly identified and color coded push buttons simplify set up and start-up.

LOAD METER

Maintains constant check during operation to indicate percentage of full load on sanding head. Conveniently mounted for immediate read-out.

EMERGENCY STOP BUTTON

Large mushroom push button on control panel provides immediate stop control of all operating systems.

MAIN MOTOR DRIVE

Heavy duty rugged support of sanding head drive motor. Horsepower of motor directly related to size and performance requirements of specific unit ordered.

HEAVY- DUTY RUBBER COVERED CONTACT DRUM

Carefully designed and balanced to insure precise, chatter- free sanding. Covered with proper durometer rubber for each application .

SPRING LOADED HOLD-DOWN ROLLS.

Spring loaded pinch rolls are mounted at the infeed and outfeed of the machine to insure positive feeding.

HOLD- DOWN PLATE

The hold- down plate is hard chrome treated for maximum wear resistance.

VARIABLE FEED SPEED

Sanders have variable feed speed as standard equipment.

AUTOMATIC ELEVATION
(MICRO COMPUTERIZED DIGITAL DISPLAY)

Clear and easy to read. It accurately indicates the position of conveyor table.

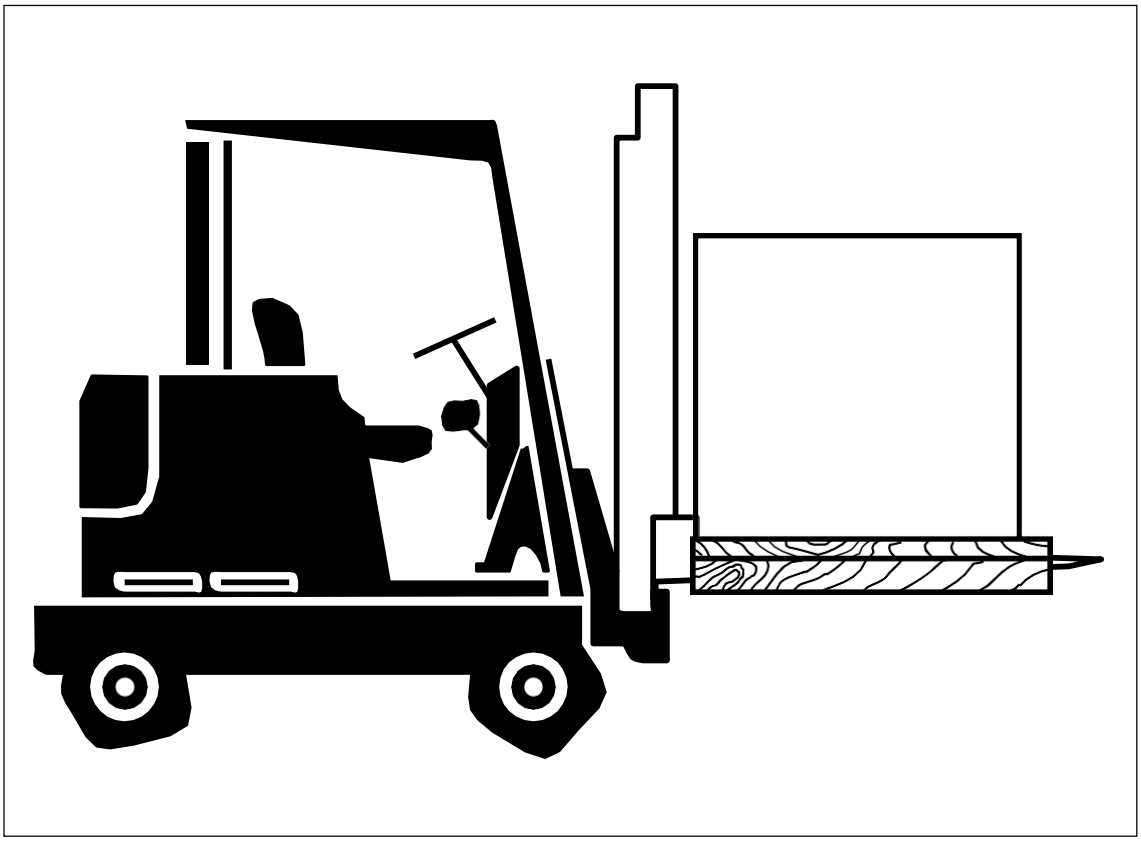
3. INSTALLATION

3-1 LIFTING THE MACHINE

The forklifter capacity is varied with the models of machine.
While lifting the machine, care should be taken to prevent bumping.
Make sure the forks have protruded over the machine bottom, and pay special attention to balance of machine.

SUITABLE FORKLIFTER CAPACITY:

2.5 Tons	4Tons	5Tons	8Tons
PR-25A . 37B	PR-900DA	PR-1100NDA	
PR-25D . 37D	PR-1100		PR-1300DD
PR-25B . 37B	PR-1300	PR-1100DDA	PR-1300D A
PR-25DA . 37DA	PR-1300A	PR-1100DDA	PR-1300DAA
PR-600A . 900A	PR-1100ND PRI1300NA		PR-1300NDA
PR-600DA			



3-2 CLEANING THE MACHINE

The machine has been coated with anti-rust oil before shipment. After unpacking the mooden case, throughly remove the anti-rust oil. Do not try to move any part until the anti-rust oil has been cleaned. Use a clean rag soaked in kerosene for cleaning anti- rust oil. Do not use gasoline or any volatile solvent for cleaning the anti- rust oil, because it may damage the painted surface on the machine.

3-3 CONNECT POWER WIRES

1. Before connecting the power wires, it is important to make sure taht the voltage, Hz, and phase of the factory power source must be complied with that of the machine. The voltage of the machine is marked on the electrical indication plate, attached on the machine.

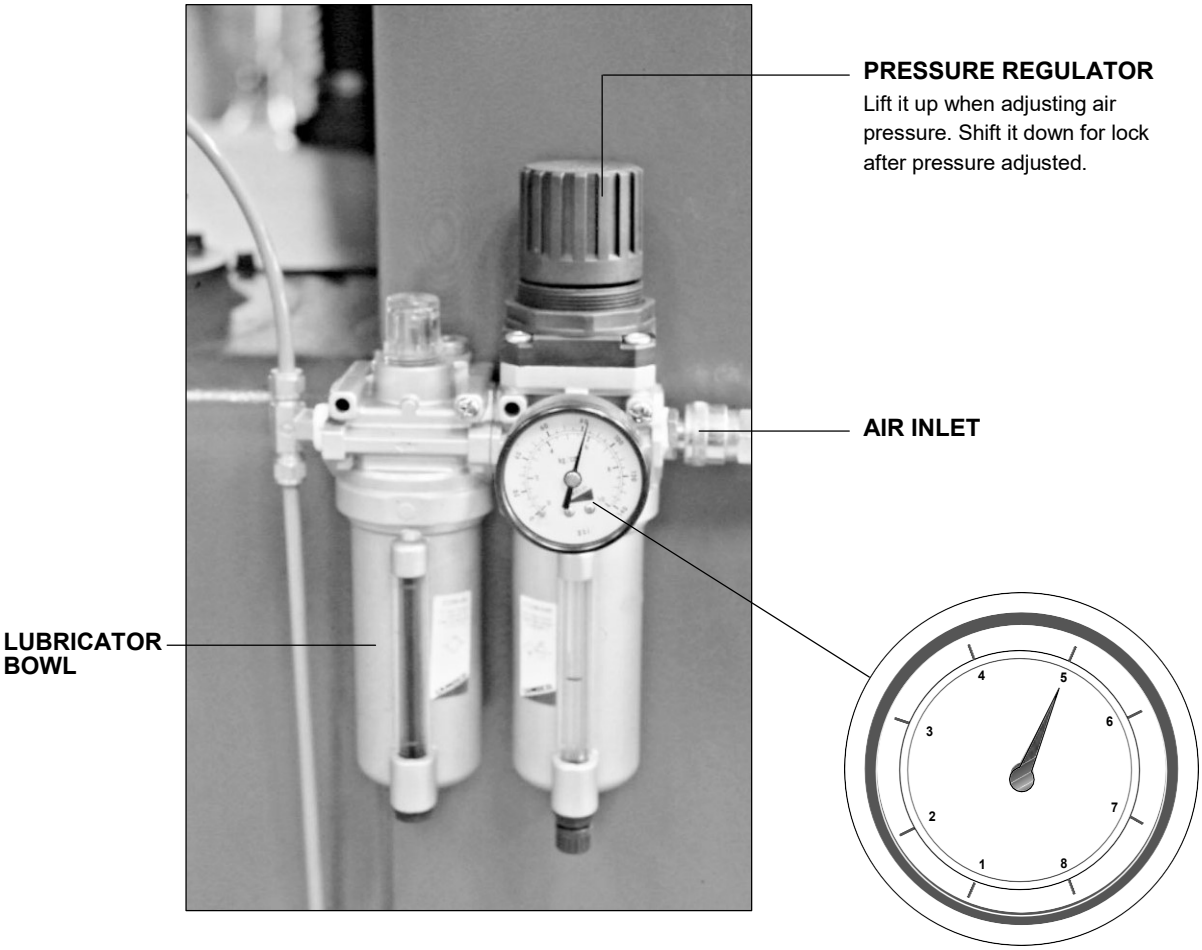
2. The connection points for power wires are provided on the electrical circuit board, located inside the electrical control box. Connection points marked " L1, L2, L3 " are used for power wires. "PE" point is used for ground wire.

3. After the power wires connection is accomplished, check if they have been connected to the correct points. Try to press the conveyor table raising switch, and check to see if it moves to the direction as instructed on the switch.

3-4 CONNECT AIR CIRCUIT

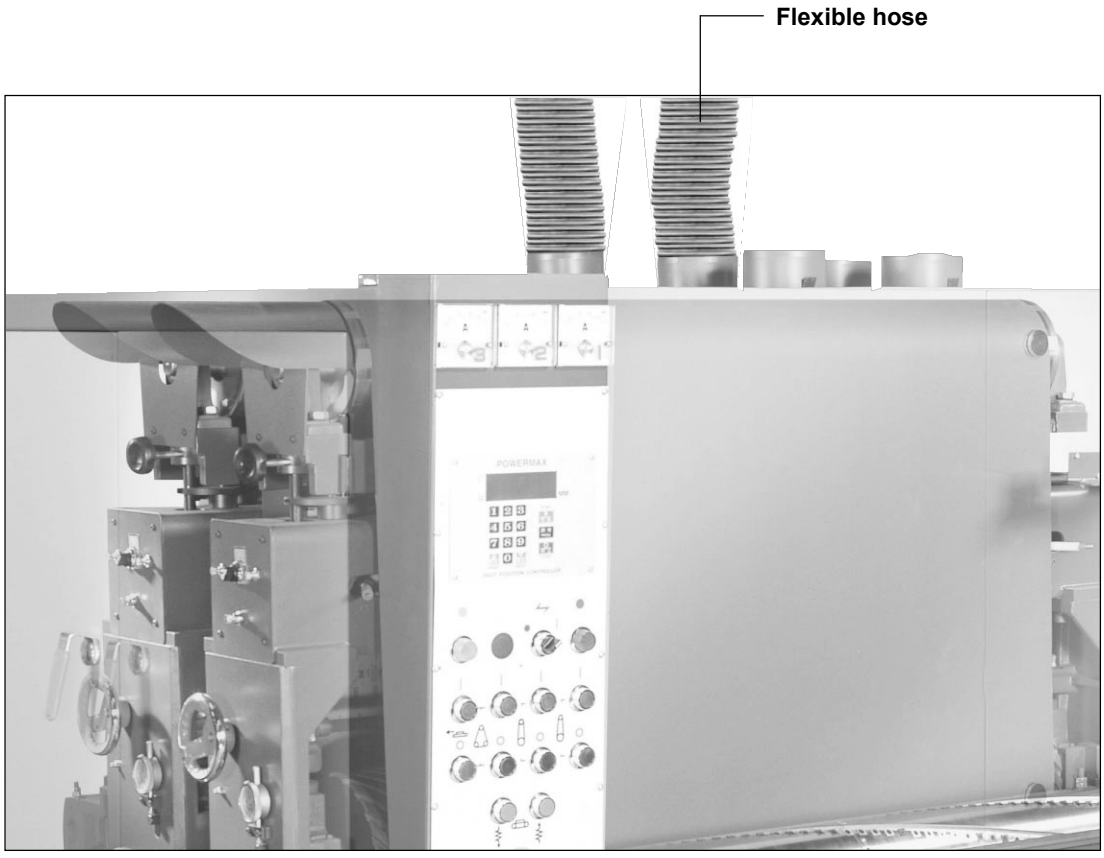
Connect the filter/ regulator/ lubricator combination unit to an air source.The pressure shown on the filter/ regulator/ lubricator combination unit should be at least 5 atm.

⚠ **WARNING:** Air pressure should not be lower than 4 atm,otherwise it may affect the control performance of the sanding belt.
Air pressure should not exceeds 7-8 atm.



3-5 CONNECT THE DUST COLLECTION SYSTEM

A dust hood is built on each sanding head. The dust hood outlet is 4" or 5" in diameter. Apply a proper size of flexible hose for connecting each dust hood to the dust collector. Donot try to perform sanding operation until the dust collector is started.



4. OPERATION INSTRUCTIONS

4-1 IDENTIFICATION BEFORE OPERATION

1. Never attempt to perform sanding operations until the dust collector is started.

2. Make sure that the sanding belt runs in the correct direction.

3. Make sure that the sanding belt tension is correct.

4. Check if all screws and handles are tightened securely.

5. Use only the correct specification of sanding belt as according to the job requirement.

6. Check to see if all air pressure shown are normal or not. The normal working air pressure should be set at about 5-6 kg/cm2.

7. Check if the sanding belt runs in the correct track.

8. Check if the conveyor belt runs in the correct track.

9. Make sure the thickness is correctly set.

10. Set the feed speed properly.

4-2 SWITCH FUNCTION DESCRIPTION

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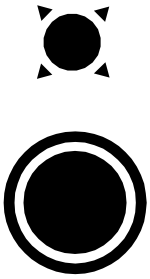
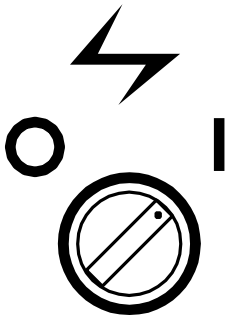
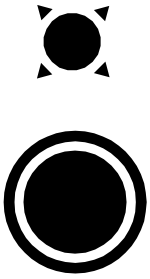
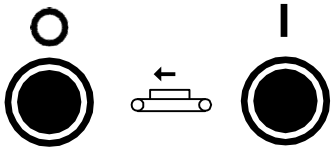
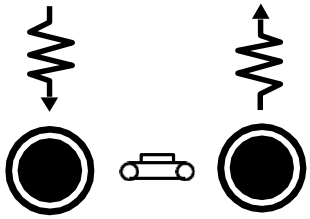
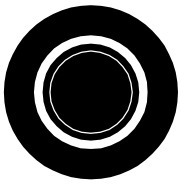
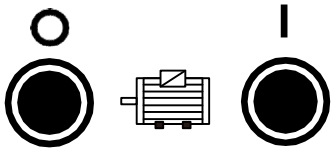
SWITCH FUNCTION DESCRIPTION

SWITCH FIG.	SWITCH NAME	FUNCTION
	POWER INDI. LAMP	When the power source switch is set at "I"(ON) position, this green lamp lights on which means the machine is under powered.
	POWER SWITCH	O Set this switch at "O" position for power I Set at "I" position for power on.
	OVERLOAD INDI. LAMP	In case overload occured, check the magnetic switch and reset it. Reduce sanding load per feed. off.

SWITCH FUNCTION DESCRIPTION

SWITCH FIG.	SWITCH NAME	FUNCTION
	POWER CONVEYOR BELT	Press green button for conveyor belt. Press red button for stopping it.
	CONVEYOR TABLE ELEVATION SWITCH	Once the button is pressed, the conveyor table will move. Release the button, conveyor table stops.
	EMERGENCY STOP SWITCH	When this switch is pressed, all motor stop.

SWITCH FUNCTION DESCRIPTION

SWITCH FIG.	SWITCH NAME	FUNCTION
	POWER SANDING BELT	Press green button for sanding belt. Press red button for stopping it.

4-3-1 MICRO COMPUTER ELEVATION CONTROLLER (OPTIONAL EQUIPMENT)

FEATURES:

1. This micro computer controller is constructed of single chip CPU, which features long service life, maximum stability and safety.

2. Eliminating the conventional battery-charging system with 2-3 years of service life, the size memory system on this controller employs battery free micro computerized memory device.

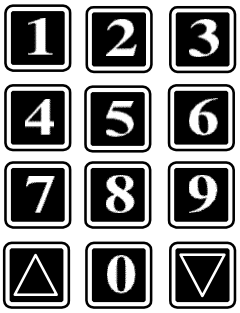
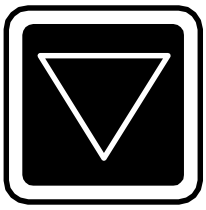
3. Easy to operate and learn.

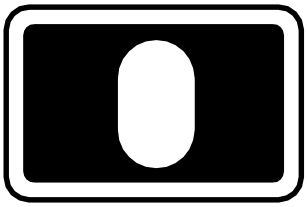
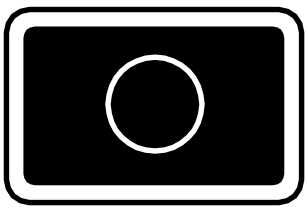
5. Designed with automatic tracing system circuit. It permits the machine to present outstanding operation performance at all times.

SPECIFICATIONS:

1.	**Input volt**	**AC (220V-110V-0V)**
2.	**Output signal**	**a.** Relay output conn. point. **b.** R1=Actuate when lowering. **c.** R2=Actuate when raising.
3.	**Input signal**	Proximity switch A,B phase signal.(NPN volt output).
4.	**Traverse**	000.1-999.9 mm
5.	**Power failure memory.**	Permanent battery free automatic memory circuit.
6.	**Tracing**	After 3-5 times of starting, the micro computer may automatically adjust to a optimum operation condition.
7.	**Unit**	MM

3. KEY FUNCTION DESCRIPTION

KEY FIG.	KEY NAME	FUNCTION
	NUMBERIC KEYS	0,1,2...9 For sizes entering.
	UP	Manually controlled raising key.
	DOWN	Manually controlled lowering key.

KEY FIG.	KEY NAME	FUNCTION
	**START**	Automatic running start once size has been set.
	**SET**	A size setting key.
	**STOP**	For stop running or stop size entering.

4. SIZE CALIBRATION

1. Measure thickness of a sanded workpiece by using a vernier caliper or any other measuring instrument. Suppose the thickness is 018.5mm.

2. Press numberic keys 0, 1, 8, 5.

3. At this time the numbers will flash, and ENTER indication lamp lights on.

4. Press SET key.

5. The LED displays 018.5mm, and ENTER indication lamp goes off.

6. Size calibration is finished.

5. JOG

APPLICATIONS: Continuously press "UP" or "DOWN" key several times for accomplishing jog motions. This function is especially suited for micrometric adjustment of sizes.

1. Suppose the current size is 18.5mm, and it needs to reach 18.7mm by adjusting 0.2mm. It needs only to press DOWN key two times. The size will change to 18.7mm automatically.

2. Press DOWN key two times, the ENTER indication lamp lights on 1 second then lights off. At this time the RUN indication lamp lights on, and the conveyor table will move from a 18.5mm position to a 18.7mm position.

3. Now the size setting is accomplished.

4. Make same size setting procedures for conveyor table raising.

5. Manually controlled continuous motion:

- **a.** Press the DOWN key and hold it, the conveyor table will lower continuously. The LED displays the current position value.
- **b.** once the conveyor table reaches to a desired position, release the DOWN key then the lowering motion stops immediately.
- **c.** Now the conveyor table lowering adjustment is accomplished.
- **d.** Make same procedures for conveyor table raising.

6. START

1. Enter the workpiece size:
For example: Current position of conveyor table is 18.7mm. Panel size is 12.3mm.

2. Press numberic keys 0,1,2,3.

3. Press START key. The conveyor table will move. At this time, the RUN indication lamp lights on. The LED flash stops, and displays the current position value of conveyor table.

4. When the RUN indication lamp lights off, it means running stopped.

5. While in entering value or running, press STOP key to stop the controller operation.

4-4-1 REMOVING AND MOUNTING A SANDING BELT

1. Turn off the power source.

2. Turn the sanding belt loosening switch to left position for completely releasing the sanding belt.

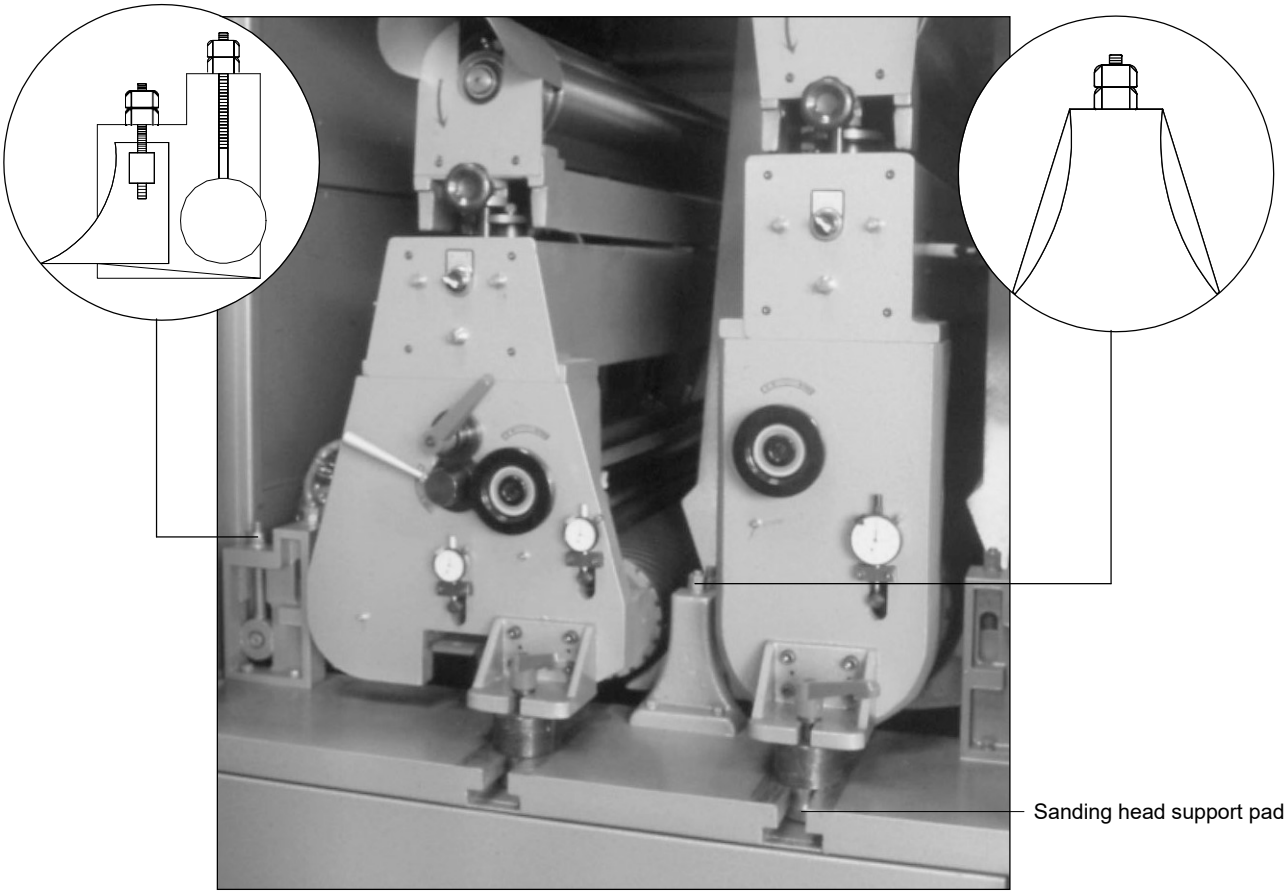
3. Loosen the lever that tighten the sanding head support pad. Take out the lever and support pad.

4. Take out the sanding belt or mount a new sanding belt.

5. Select a correct specification of sanding belt, and mount it. At this time note that the sanding belt is monted in the correct direction. Arrowheads are marked on the back of the sanding belt, which should comply with the running direction of rubber roller.

6. Mount the sanding belt on the center part of the rubber roller. If the sanding belt is located too approach to either right or left side, the machine can not be started.

7. After the sanding belt is mounted, reverse above procedures.



4-4-2 ADJUST SANDING BELT TENSION

(FOR SANDING LACQUERED PANEL OR WITH AIR PAD)

1. The sanding belt tension is controlled by the air cylinder. Turn the tension switch for loosening or tightening the sanding belt.

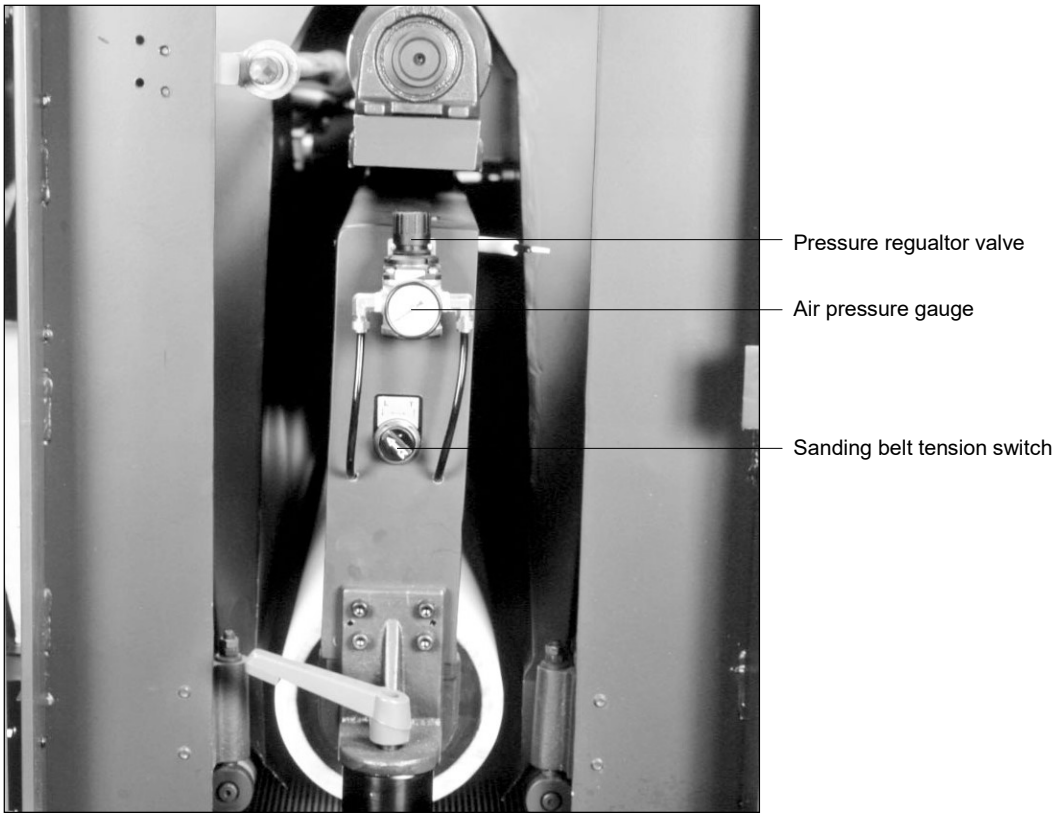
2. Turn the tension switch to right for tightening the sanding belt. Turn it to left for loosening the sanding belt.

3. The sanding belt tension is adjusted by turning the pressure regulator valve. Turn the pressure regulator valve clockwisely for increasing the pressure. Turn it counter-clockwisely for reducing the pressure. A pressure gauge indicates the pressure.

4. The pressure value for sanding belt tension as shown below are reference only.

- For hard rubber drum, pressure 3-3.5 kg/cm2.
- For soft rubber drum, pressure 2-2.5 kg/cm2.
- For platen sanding, pressure 2.5-3 kg/cm2.

5. When the machine is not in operation, it is suggested to release the sanding belt tension completely. Sanding belt tightening for a long time may cause loosening gradually.



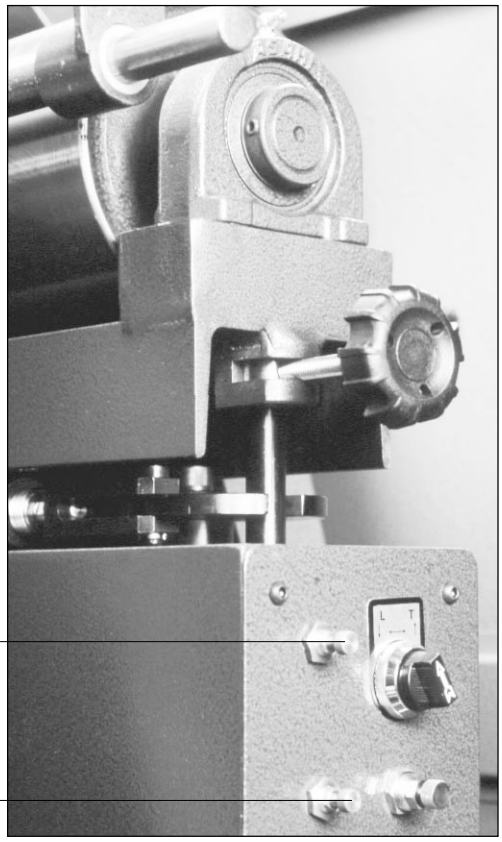
4-4-3 ADJUST OSCILLATION SPEED OF SANDING BELT

1. The oscillation motion of sanding belt is actuated by the air cylinder.

2. The oscillation speed of sanding belt can be adjusted by turning the speed regulator valve, located on the air cylinder.

3. Turn the speed regulator valve clockwisely for reducing the oscillation speed. Turn it counter-clockwisely for increasing oscillation speed.

4. Loosen the nut that fixing the speed regulator valve before adjustment. Tighten it securely after adjusted.



Heavy duty model

Light duty model

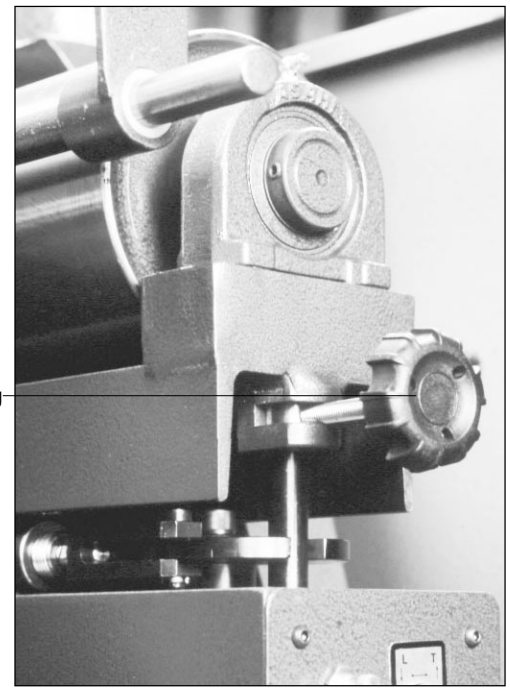
4-4-4 ADJUST TRACK OF SANDING BELT

When the sanding belt runs out of its normal track, the machine will brake automatically. When a new sanding belt is changed, probably there is a circumference error for right and left side on the sanding belt. If such two conditions occured, make track adjustment for the sanding belt. Tracking adjustment is made as according to below instructions:

1. The sanding belt oscillates to right and left siade should be consistent. Suppose the oscillation time to right side is 1 second, then the oscillation time to left side should be same as 1 second.

2. If belt oscillation time to right side is 1 second, but oscillation to left side takes a longer time. In this case, loosen the belt tracking adjustment lever. Adjust it leftward until proper track is obtained. Tighten securely the belt tracking adjustment lever after tracking adjustment is accomplished.

3. If belt oscillation time to left side is 1 second, but oscillation to right side takes a longer time. In this case, loosen the belt tracking adjustment lever. Adjust it rightward until proper track is obtained. Tighten securely the belt tracking adjustment lever after tracking adjustment is accomplished.



Heavy duty model

Light duty model

4-5 ADJUST THE V-BELT TENSION

1. After the machine has been operated for a long period, the V-belt will be gradually loosened. In this case, the motor start may cause an abnormal noise, which needs an adjustment for V-belt tension.

2. When making adjustment for V-belt tension, loosen the lock nut on the motor base. Turn the V-belt tension adjustment scew until a proper tension is obtained.

3. After the V-belt tension is adjusted, tighten the lock nut securely.

4-6 ADJUST FEED SPEED

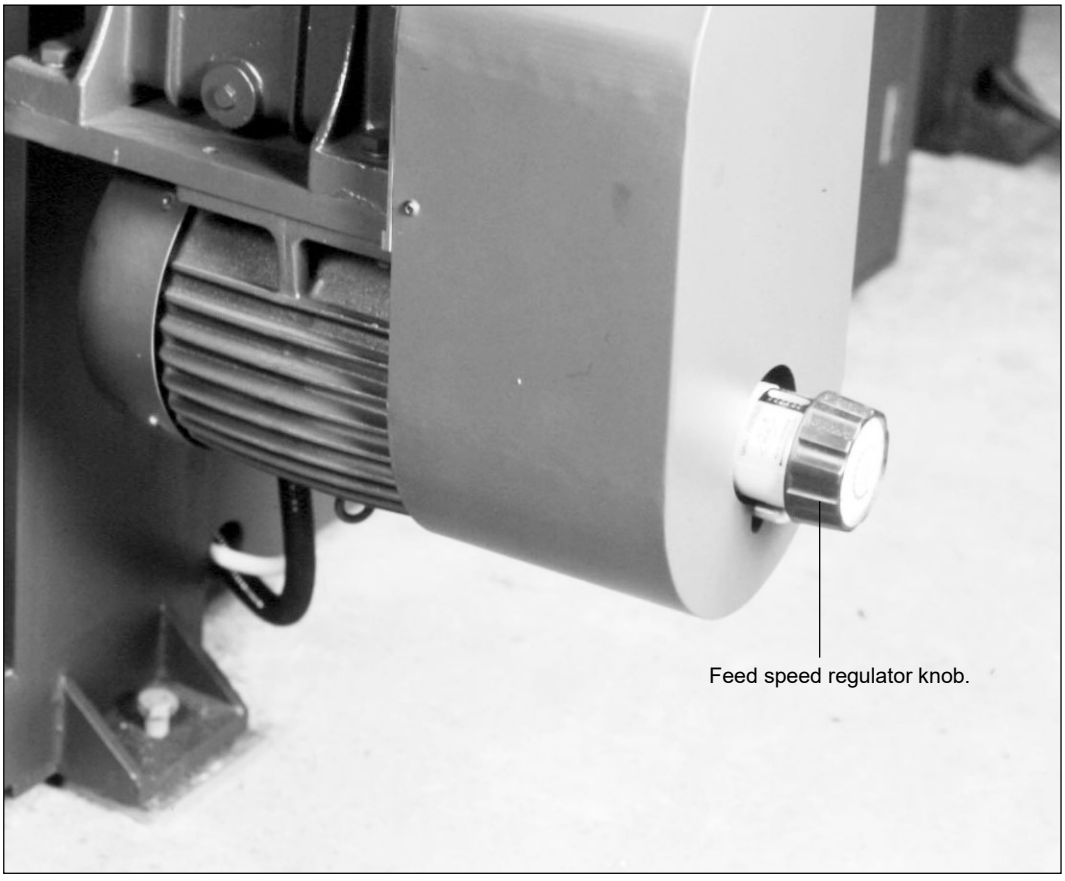
1. The machine provides variable feed speeds for sanding various wood materials.

2. Normally sanding of soft wood needs a faster feed speed, but the hard wood needs a lower feed speed. The correct selection of feed speed is dependent on the operator's experience.

3. The feed can be adjusted by turning the feed speed regulator located on the worm gear reducer.

4. Turn the feed speed regulator clockwisely for decreasing the feed speed. Turn it counter-clockwisely for increasing the feed speed.

⚠ WARNING : DO NOT CHANGE FEED SPEED WHILE THE MACHINE IS STOPPED.



4-8-1 ADJUST PLATEN HEAD POSITION

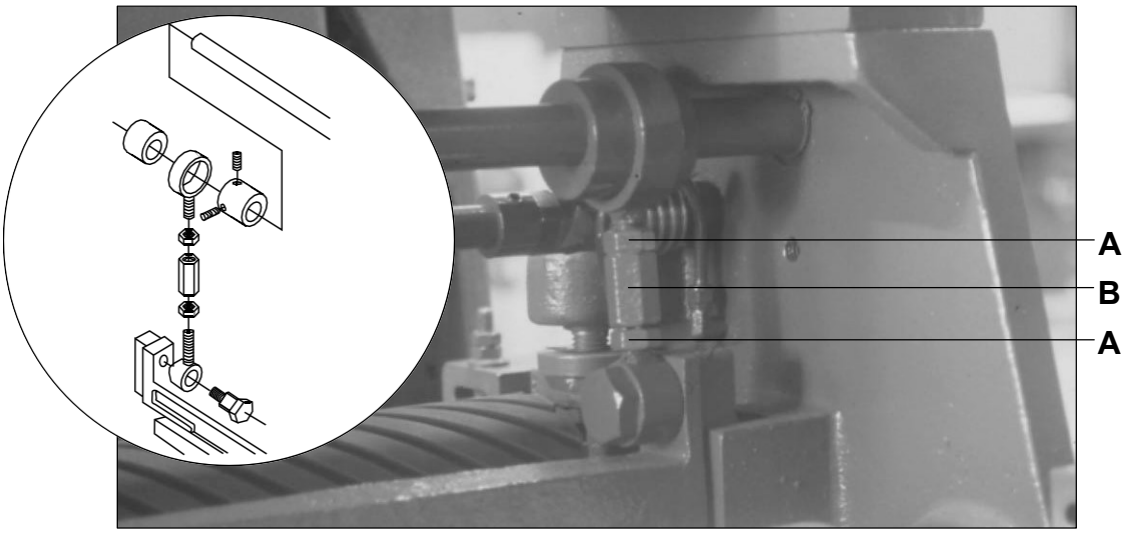
1. In general the platen head is suited for only polishing or final finishing operations. Sanding thickness capacity on platen head is about 0.1mm only, so that it is not suited for heavy sanding operations.

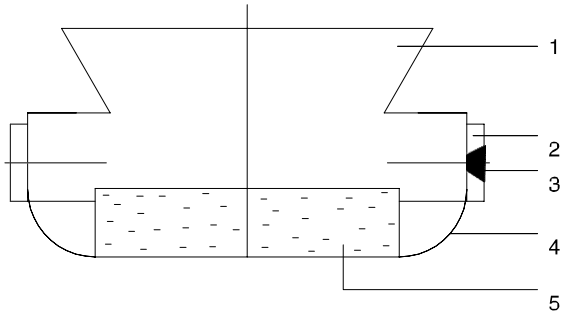
2. The position adjustment of sanding platen shall be dependent on the types of wood material.

3. The position adjustment of sanding platen is made by turning the platen adjustment knob.

4. The sanding platen is constructed of graphite cloth and felt. Always keep its interior clean without powder depositing. In case there is straight wave marks created on the sanded surface, it needs to check the platen surface. If platen surface is extremely rough, change the graphite cloth and felt.

5. In case the sanding platen is not properly levelled, make levelling adjustment as according to the following procedures. Loosen the nut (A) by using two 19 mm wrenches. Turn the long nut (B). Tighten the nut (A) securely after levelling adjustment is accomplished.





1	Sanding platen base.
2	Fix stripe
3	Lock screw
4	Graphite canvas
5	Felt

4-9-1 MAINTENANCE OF CONVEYOR BELT

1. ADJUST CONVEYOR BELT TENSION

(1). The automatic oscillation of conveyor belt is controlled by the micro switch and oscillation air cylinder.

(2). In case the conveyor belt tension become loose, adjust its tension by turning the adjustment screws located at both sides.

(3). Notice that too tight tension of conveyor belt may affect its service life.

2. RESHARPENING THE CONVEYOR BELT

If workpiece slippage occured due to too smooth surface of conveyor belt, or the conveyor belt surface is too rough, then it needs to be resharpened. Do resharpening job as below instructions:

(1). Apply a #60 grit coarse sanding belt.

(2). Turn off floating system. (If available).

(3). Raises the conveyor table until it is 2mm under the sanding belt.

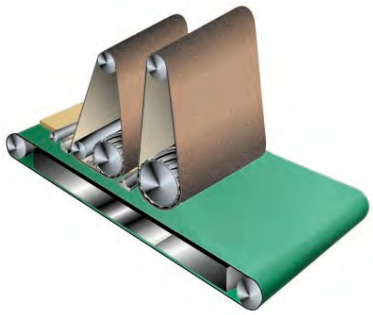
(4). Start main motor and conveyor belt drive motor.

(5). Slowly raise the conveyor table by hands.

(6). Slowly raise the conveyor table to slightly touch the sanding belt for resharpening.

(7). After resharpening is accomplished, lower the conveyor table. Turn off main motor and conveyor belt drive motor.

NOTE: Conveyor belt resharpening can be made only when it is properly parallel with contact drum and platen.



4-9-2 ADJUST TRACK OF CONVEYOR BELT

1. The conveyor belt should run at the center part on the roller. If it runs to approach either right or left side, adjust its running track immediately.

2. Check if the conveyor belt tension is normal or not before making tracking adjustment for the conveyor belt. When the conveyor belt tension is too loose or too tight, properly adjust tension before performing tracking adjustment.

3. Adjustment screws are provided at right and left side of the conveyor table infeed end. Turn either screw for adjusting conveyor belt track.

4. If the conveyor belt runs to right side, adjust the screw at right side. Turn the screw clockwisely will move the conveyor belt to left side.

5. If the conveyor belt runs to left side, adjust the screw at left side. Turn the screw clockwisely will move the conveyor belt to right side.

6. Make tracking adjustment for conveyor belt only when it is running. Proper adjustment for eash time is about 30 degree. After track is properly adjusted, have the conveyor belt run about 3-5 minutes, then check to see if the conveyor belt track is normal or not. Adjust track again if necessary until normal track is obtained.

7. There are two fixing wheels mounted at right and left side of the conveyor belt, The fixing wheels are positioned to just touch the edges of conveyor belt.

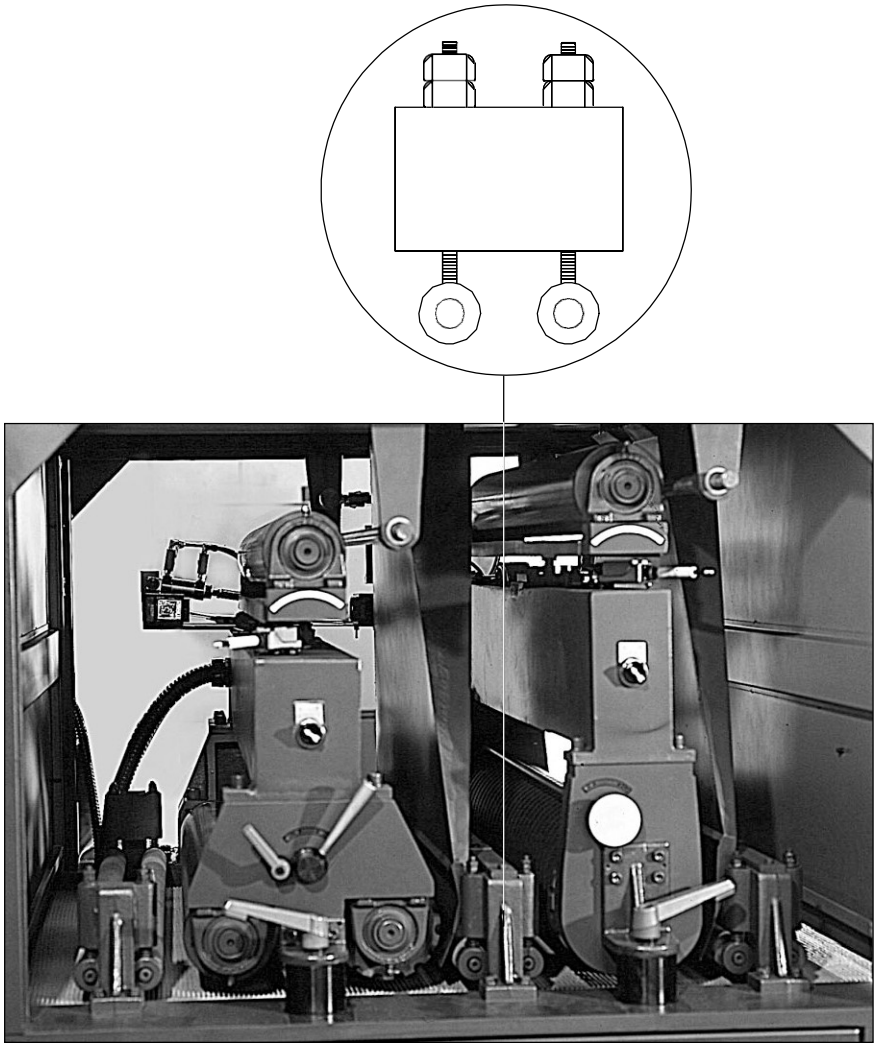
4-10-2 ADJUST PRESSURE FOR FEED ROLLERS

1. The feed rollers are covered by rubber for smooth feeding performance, and prevent workpiece from scratching.

2. The feed rollers adjustment is shown on the figure below.

3. The feed rollers are spring loaded for powerful and smooth feeding performance.

4. Turn nut clockwisely for raising the feed roller. Turn it counter-clockwisely for lowering the feed roller.



5. LUBRICATION AND MAINTENANCE

MACHINE LUBRICATION AND MAINTENANCE

1. Throughly clean the machine interior everyday after job is finished. Remove the sanding belt before cleaning the machine interior. Mount it to the position after cleaning.

2. Grease the bearings once per 150 working hours.

3. When the machine is fitted with hydraulic system, replace the hydraulic oil after 6000 working hours.

4. Replace the water accumulated in the filter cup (On the filter/ regulator/ lubricator combination unit).

5. Keep an oil film on the conveyor table elevation screw.

6. Replace the oil in the gear reducer after the initial 300 working hours, then replace oil every 2500 working hours. Suitable oil for gear reducer is 140# gear oil.

6. TROUBLE SHOOTING

TROUBLE SHOOTING
(MACHINE STARTING PROBLEMS)

TROUBLE 1:	**Machine cannot be started.**
CORRECTION	**1.** Fuse burnt out. Replace it. **2.** Sanding belt not properly tensioned. Turn sanding belt tension switch. **3.** Brake switch is locked. Press it again. **4.** Air pressure too low. Check pressure on filter/ regulator/ lubricator unit. **5.** Sanding belt touched protection device. Shift it to the normal track. **6.** Overload protection key tripped. Reset it. **7.** Check if sanding belt is mounted. **8.** Front emergency stop bar is pressed. (See instructions on safety switches.)
TROUBLE 2:	**Machine stops frequently.**
CORRECTION	**1.** Water enter into air circuit. Release water. **2.** Air circuit is abnormal. Check if F.R.L. unit is jammed by any object. **3.** Sanding overloaded. Reduce sanding load. **4.** Abnormal sound on sanding belt. Check if sanding belt damaged, or too much gap on protection device. Replace sanding belt or adjust gap.
TROUBLE 3:	**Conveyor belt slips.**
CORRECTION	**1.** Conveyor belt tension too loose. Adjust tension by screws located at both sides. (See instructions on conveyor belt tension adjustment.)

TROUBLE SHOOTING
(ABNORMAL OSCILLATION OF SADNING BELT)

TROUBLE:	**Sanding belt runs to one side or inconsistent oscillation speed. Big noise on oscillation controlled air cylinder.)**
CORRECTION:	**1.** Check air system. Air pressure should not lower than 4 atm. **2.** Check roller bearings at both sides. Check if the screws tightening elevation control air cylinder are securely or not. **3.** Make sure sanding belt length difference at both sides is within 1/4". If not, replace the sanding belt. **4.** Check photoelectric sensor: **a.** Apply a paper to check projector of photoelectric sensor. Once power on, the sensor on projector always keep lighting, but the sensor on receiver lights on only when receiving light source. If not, replace photoelectric sensor. **b.** Use a hand to shield photoelectric sensor, and try to heard if there is " cha cha " sound arised. **5.** Check solenoid valve: When photoelectric sensor and relay are normal, try to heard if there is air flow sound in solenoid valve. If not, replace solenoid valve. **6.** Check speed control valve: The speed control valves are used for adjusting air flow speed for air cylinders. If air flow adjustment failed, replace the speed control valve. **7.** Check oscillation control air cylinder: The speed control valve may vary the stroke of air cylinder. If not, replace air cylinder. **8.** Check if pressure shown on F.R.L. unit is too low. (Normal air pressure is 5 Kg/cm2). **9.** Check if sanding belt is too old. **10.** Check if sanding belt tension cylinders are stable. Lower air cylinders, then try to shake them by hands.

TROUBLE SHOOTING
(POOR SANDING EFFECT)

TROUBLE 1:	**Workpiece thining at front end.**
PROBABLE CAUSE:	Insufficient pressure at front pressure plate.
TROUBLE 2:	**Workpiece thining at rear end.**
PROBABLE CAUSE:	Insufficient pressure at rear end.
TROUBLE 3:	**Sanding belt running failed. (Jammed)**
PROBABLE CAUSES:	**1.** Sanding belt grit too fine. **2.** Sanding load too much. **3.** Workpiece contains too much oil or dust deposited causing quick wear of grit. **4.** Insufficient dust suction force. **5.** Too dirty or glue on workpiece. **6.** Workpiece contains too much moisture.
TROUBLE 4:	**Round markings on workpiece edge.**
PROBABLE CAUSES:	**1.** Too much pressure for rubber roller. **2.** Too much pressure for sanding plated.

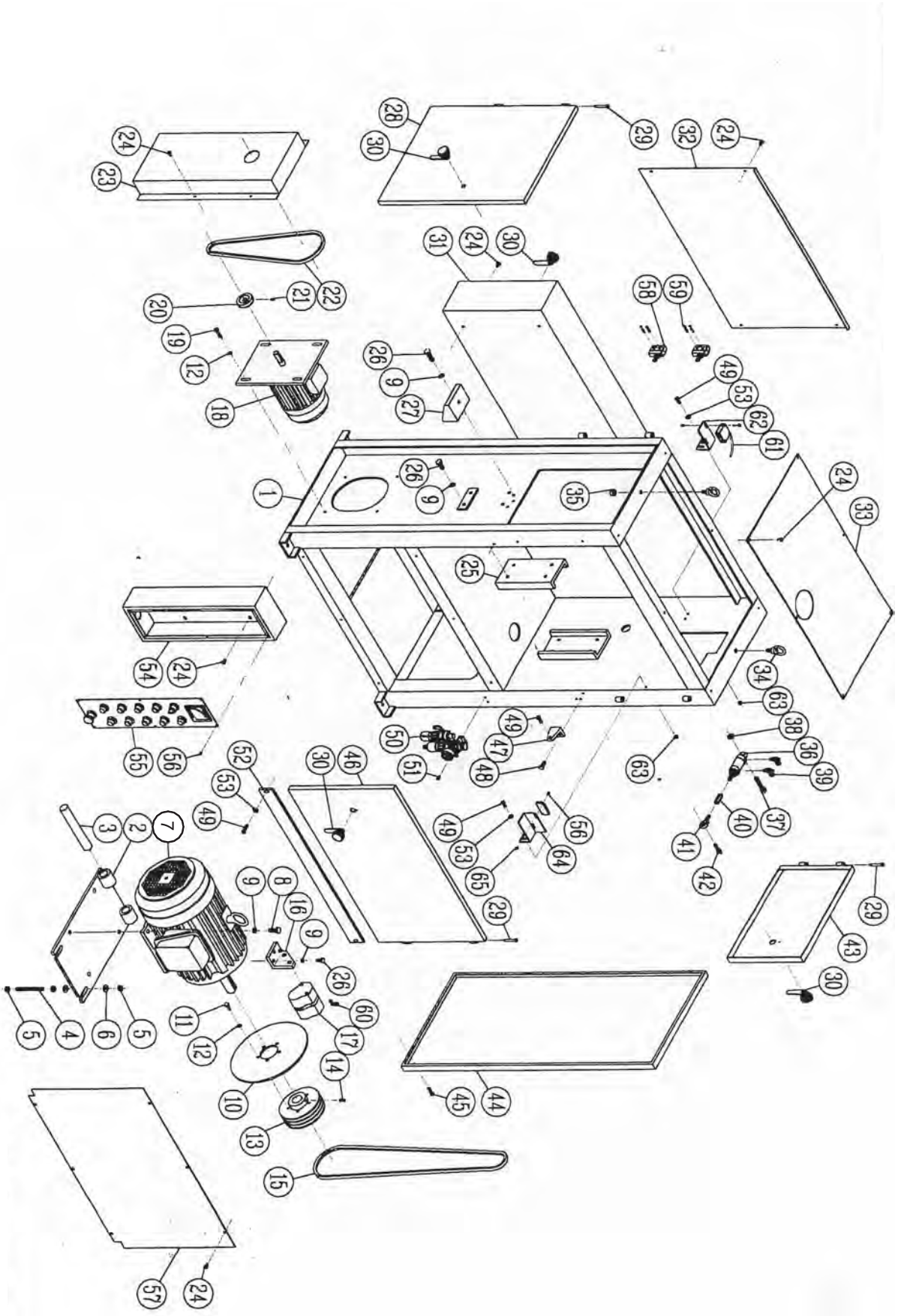
TROUBLE SHOOTING
(POOR SANDING EFFECT)

TROUBLE 5:	**Uneven thickness between right and left sides of workpiece. (Tolerance over ± 0.1mm).**
PROBABLE CAUSES:	**1.** Poor levelling on contact drum. **2.** Conveyor table is not properly levelled. Check the 4 elevation screws located under conveyor table. Loosen their lock screws.Turn elevation screws by using an wrench Turn it clockwisely about 20 degree for raising the conveyor table about 0.16mm. Turn it counter-clockwisely for lowering. Adjust front and rear elevation screws simultaneously. (Do not adjust the elevation screws if not necessary). **3.** Contact drum surface is damaged. **4.** Once sanding belt is mounted, if support pad is mounted or not? If handle is tighten securely or not? **5.** If sanding belt worn-out is uniform or not? Some part sharp? Some part worn out? **6.** Too much load on sanding platen. **7.** Dust existed under conveyor belt or on conveyor table.
TROUBLE 6:	**Uneven thickness between front and rear ends of workpiece.**
PROBABLE CAUSE:	Uneven pressure between pressure roller (or pressure plate) and contact drum.
TROUBLE 7:	**Workpiece slips on conveyor belt.**
PROBABLE CAUSES:	**1.** Pressure roller too low. **2.** Pressure plate too low when sanding veneer. **3.** Conveyor belt too smooth. **4.** Too many dust on dirty conveyor belt.

TROUBLE SHOOTING
(POOR SANDING EFFECT)

TROUBLE 1:	**Straight notches on workpiece surface.**
PROBABLE CAUSES:	**1.** Dust existed on pressure roller or pressure plate. **2.** Unsmooth running of pressure roller caused by bearing damage. **3.** Object sticked on contact drum.
TROUBLE 2:	**Snake markings on workpiece surface.**
PROBABLE CAUSES:	**1.** Sanding belt damaged partially. **2.** Sanding belt clogged.
TROUBLE 3:	**Cross parallel waves across entire width of workpiece.**
PROBABLE CAUSES:	**1.** Sanding belt joint is unsmooth or improper. **2.** Bearing damaged. **3.** Incorrect hardness of contact drum rubber.
TROUBLE 4:	**Shiness on workpiece surface.**
PROBABLE CAUSES:	**1.** Sanding belt worn out. **2.** Rear pressure plate too low. **3.** Contact drum too high.

PARTS LIST FOR MI - 17203 - BODY



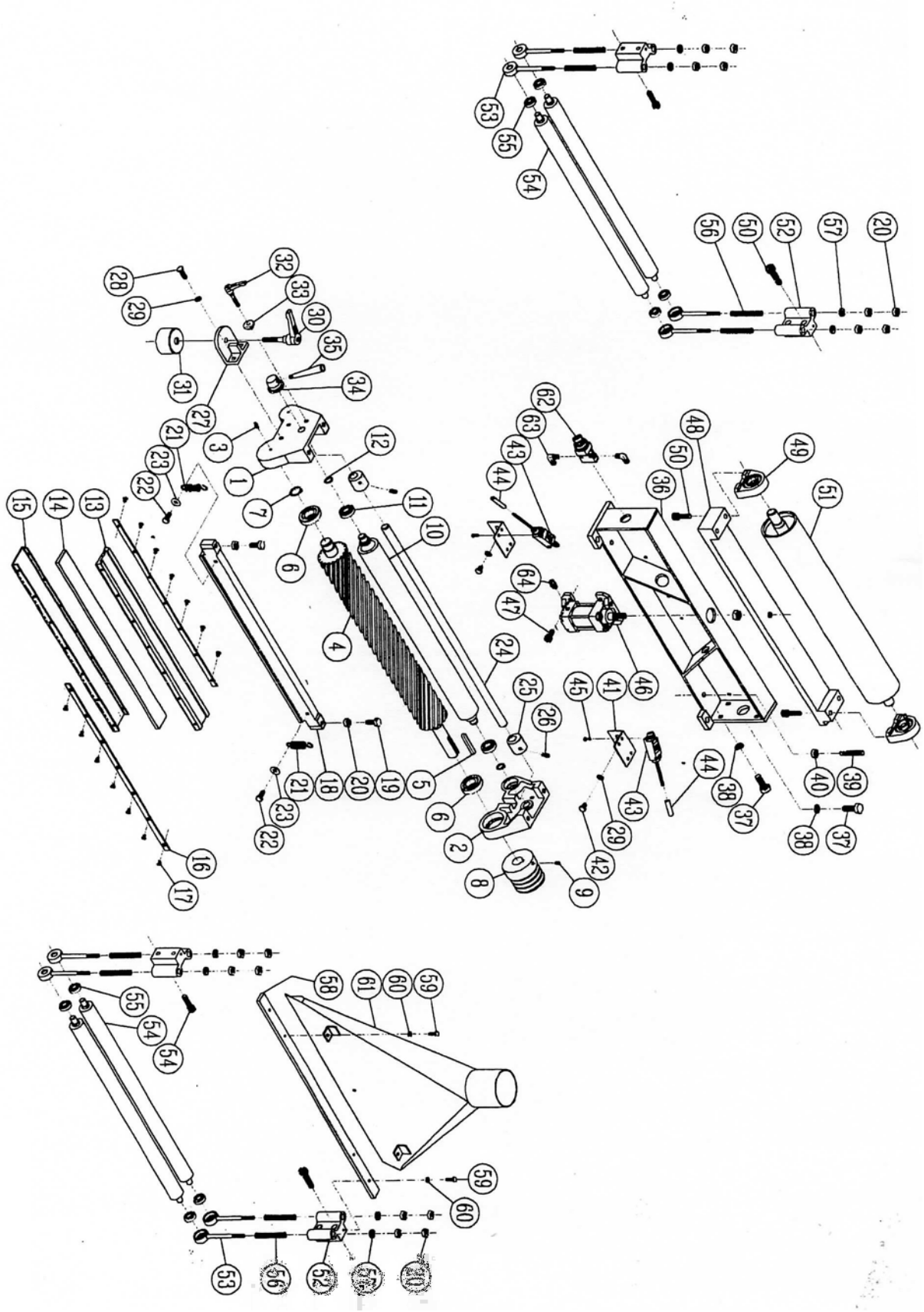
PARTS LIST FOR MI - 17203 - BODY

ITEM NO.	PARTS NO.	DESCRIPTION	SPECIFICATION	Q'ty
1	MI-17203-01	MACHINE FRAME		1
2	MI-17203-02	MOTOR PLATE		1
3	MI-17203-03	HINGE ROD		1
4	MI-17203-04	ADJUSTED STUD	M12*120	2
5	MI-17203-05	NUT	M12	6
6	MI-17203-06	FLAT WASHER	M12	4
7	MI-17203-07	MOTOR	10HP,4P,CW	1
8	MI-17203-08	HEX. HEAD BOLT	M10*30	4
9	MI-17203-09	LOCK WASHER	M10	18
10	MI-17203-10	BRAKE DISC	φ12"	1
11	MI-17203-11	HEX. HEAD BOLT	M8*20	5
12	MI-17203-12	LOCK WASHER	M8	9
13	MI-17203-13	MOTOR PULLEY		1
14	MI-17203-14	SET SCREW	M8*12	1
15	MI-17203-15	V-BELT	A72	3
16	MI-17203-16	BRAKE BLOCK BRACKET (L)		1
17	MI-17203-17	BRAKE BLOCK		1
18	MI-17203-18	MOTOR	1/2HP,4P	1
19	MI-17203-19	HEX. HEAD BOLT	M8*30	4
20	MI-17203-20	MOTOR PULLEY		1
21	MI-17203-21	SET SCREW	M6*10	1
22	MI-17203-22	V-BELT	A44	1
23	MI-17203-23	PULLEY GUARD		1
24	MI-17203-24	PAN HEAD BOLT	M6*12	30
25	MI-17203-25	TABLE SLIDE (EXTERNAL)		2
26	MI-17203-26	HEX. HEAD BOLT	M10*25	14
27	MI-17203-27	SUPPORTED BLOCK FRAME		1
28	MI-17203-28	LEFT UPPER PLATE		1
29	MI-17203-29	HINGE ROD		6
30	MI-17203-30	DOOR LOCK		4
31	MI-17203-31	ELECTRICAL BOX		1
32	MI-17203-32	REAR UPPER PLATE		1
33	MI-17203-33	TOP PLATE		1
34	MI-17203-34	RING HEAD SCREW	M12	2
35	MI-17203-35	NUT	M12	2

PARTS LIST FOR MI - 17203 - BODY

ITEM NO.	PARTS NO.	DESCRIPTION	SPECIFICATION	Q'ty
36	MI-17203-36	CYLINDER	CM30*5SD	1
37	MI-17203-37	HEX. SOCKET CAP BOLT	M10*50	1
38	MI-17203-38	NUT	M10	1
39	MI-17203-39	SPEED ADJUSTABLE JOINT		2
40	MI-17203-40	ADJUSTED NUT		1
41	MI-17203-41	ROD END BEARING	POS10L	1
42	MI-17203-42	HEX. SOCKET CAP BOLT	M8*30	1
43	MI-17203-43	RIGHT UPPER PLATE		1
44	MI-17203-44	RIGHT LOWER PLATE		1
45	MI-17203-45	PAN HEAD BOLT	M6*30	4
46	MI-17203-46	FRONT UPPER PLATE		1
47	MI-17203-47	BRACKET		1
48	MI-17203-48	HEX. HEAD BOLT	M6*20	2
49	MI-17203-49	HEX. SOCKET CAP BOLT	M6*20	7
50	MI-17203-50	MULTI-FUNCTION SET		1
51	MI-17203-51	PAN HEAD BOLT	M5*10	2
52	MI-17203-52	GUARD PLATE		1
53	MI-17203-53	FLAT WASHER	M6	6
54	MI-17203-54	SWITCH BOX		1
55	MI-17203-55	SWITCH PANEL		1
56	MI-17203-56	PAN HEAD BOLT	M4*10	10
57	MI-17203-57	FRONT LOWER PLATE		1
58	MI-17203-58	LIMIT SWITCH	TZ-7311	2
59	MI-17203-59	PAN HEAD BOLT	M4*35	4
60	MI-17203-60	L - JOINT		1
61	MI-17203-61	PHOTOELECTRIC SWITCH	E3JM-R 4M4T-G	1
62	MI-17203-62	PHOTOELECTRIC SWITCH BRACKET		1
63	MI-17203-63	NUT	M6	4
64	MI-17203-64	REFLECTING MIRROR BRACKET		1
65	MI-17203-65	NUT	M4	2

PARTS LIST FOR MI - 17203 - ARM



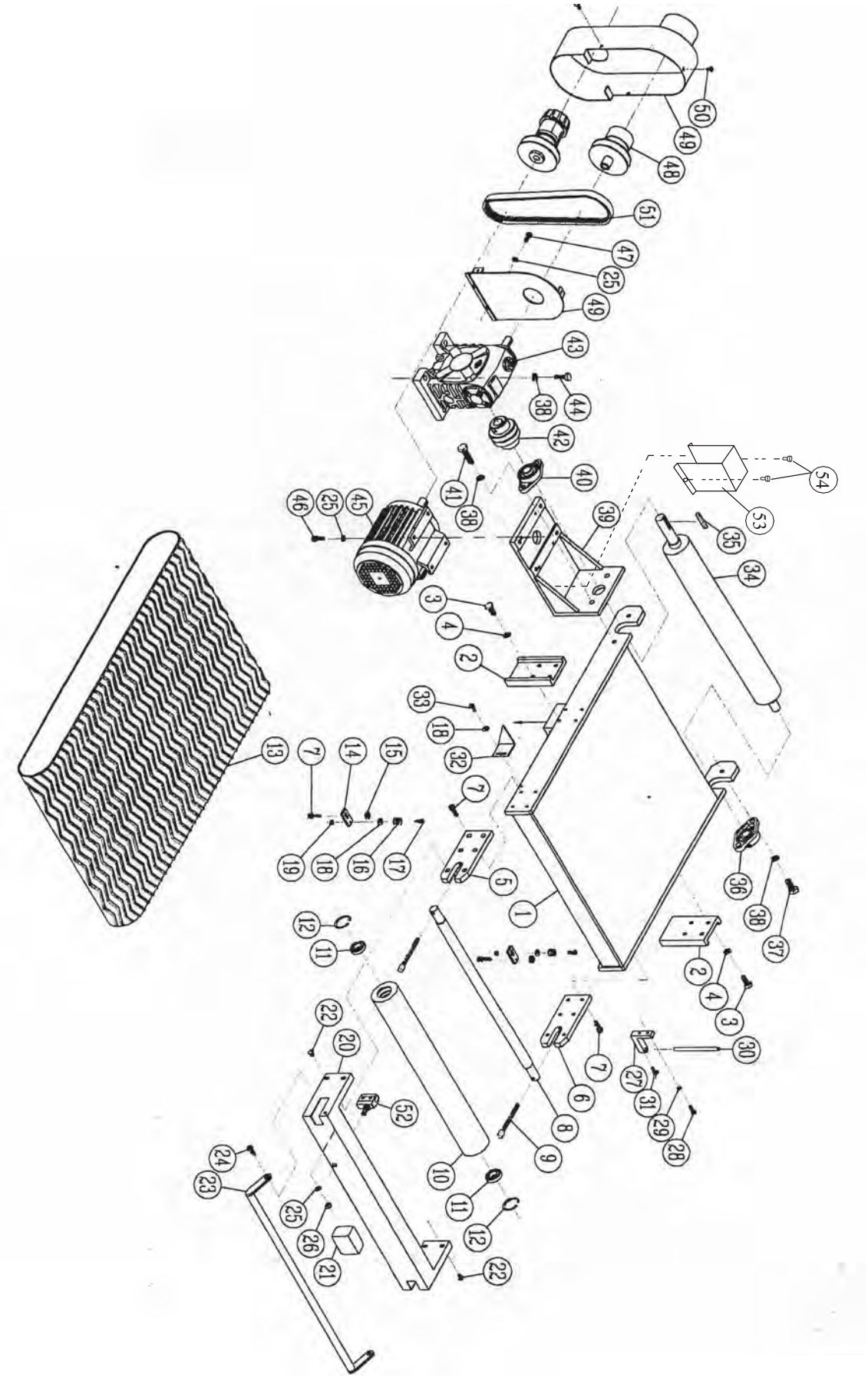
PARTS LIST FOR MI - 17203 - ARM

ITEM NO.	PARTS NO.	DESCRIPTION	SPECIFICATION	Q'ty
1	MI-17203-66	ROLLER BRACKET (L)		1
2	MI-17203-67	ROLLER BRACKET (R)		1
3	MI-17203-68	GREASE NIPPLE	PT 1/8"	4
4	MI-17203-69	FEED ROLLER		1
5	MI-17203-70	KEY	8*7*65	1
6	MI-17203-71	BALL BEARING	6206ZZ	2
7	MI-17203-72	RETAINING RING	S30	1
8	MI-17203-73	ROLLER PULLEY		1
9	MI-17203-74	SET SCREW	M8*20	1
10	MI-17203-75	ABRASIVE ROLLER		1
11	MI-17203-76	BALL BEARING	6004ZZ	2
12	MI-17203-77	RETAINING RING	S20	2
13	MI-17203-78	SANDING STAND (LOWER)		1
14	MI-17203-79	WOOL PAD		1
15	MI-17203-80	CARBONIC PAD		1
16	MI-17203-81	FASTENING GIB		2
17	MI-17203-82	COUNTERSUNK HEAD BOLT	1/4"*3/8"	14
18	MI-17203-83	SANDING STAND (UPPER)		1
19	MI-17203-84	HEX. HEAD BOLT	M10*25	2
20	MI-17203-85	NUT	M10	18
21	MI-17203-86	STAND SPRING		2
22	MI-17203-87	HEX. HEAD BOLT	M8*20	2
23	MI-17203-88	FLAT WASHER	M8	2
24	MI-17203-89	GUIDE ROD		1
25	MI-17203-90	ECCENTRIC COLLAR		2
26	MI-17203-91	SET SCREW	M8*16	4
27	MI-17203-92	SUPPORTED BLOCK BRACKET		1
28	MI-17203-93	HEX. HEAD BOLT	M8*25	2
29	MI-17203-94	LOCK WASHER	M8	2
30	MI-17203-95	LOCK HANDLE		1
31	MI-17203-96	SUPPORTED BLOCK		1
32	MI-17203-97	LOCK HANDLE		1
33	MI-17203-98	LOCK PIECES		1
34	MI-17203-99	HOIST BUSHING		1
35	MI-17203-100	HOIST BUSHING BAR		1

PARTS LIST FOR MI - 17203 - ARM

ITEM NO.	PARTS NO.	DESCRIPTION	SPECIFICATION	Q'ty
36	MI-17203-101	MAIN FRAME		1
37	MI-17203-102	HEX. HEAD BOLT	M12*35	8
38	MI-17203-103	LOCK WASHER	M12	8
39	MI-17203-104	STUD	3/8"*2-1/2"	2
40	MI-17203-105	NUT	3/8"	2
41	MI-17203-106	LIMIT SWITCH BRACKET		2
42	MI-17203-107	HEX. HEAD BOLT	M8*12	2
43	MI-17203-108	LIMIT SWITCH	8167	2
44	MI-17203-109	MAGNETIC SLEEVE	8166	2
45	MI-17203-110	PAN HEAD BOLT	M5*10	4
46	MI-17203-111	CYLINDER	AS50*30LA	1
47	MI-17203-112	HEX. SOCKET CAP BOLT	M8*20	4
48	MI-17203-113	UPPER ABRASIVE ROLLER BRACKET		1
49	MI-17203-114	BEARING UNIT	UCPA205	2
50	MI-17203-115	HEX. SOCKET CAP BOLT	M10*35	12
51	MI-17203-116	UPPER ABRASIVE ROLLER		1
52	MI-17203-117	PRESS ROLLER BRACKET		4
53	MI-17203-118	PRESS ROLLER STUD		8
54	MI-17203-119	PRESS ROLLER		4
55	MI-17203-120	BALL BEARING	6002LLU	8
56	MI-17203-121	COIL SPRING		8
57	MI-17203-122	SPACER		8
58	MI-17203-123	DUST HOOD FASTENED BAR		1
59	MI-17203-124	HEX. HEAD BOLT	M6*20	4
60	MI-17203-125	LOCK WASHER	M6	4
61	MI-17203-126	DUST HOOD		1
62	MI-17203-127	SELECTED SWITCH	1/8"	1
63	MI-17203-128	SPEED ADJUSTED NUT	1/8"	2
64	MI-17203-129	JOINT	PT 1/4"-(6mm)	1

PARTS LIST FOR MI - 17203 - FEED



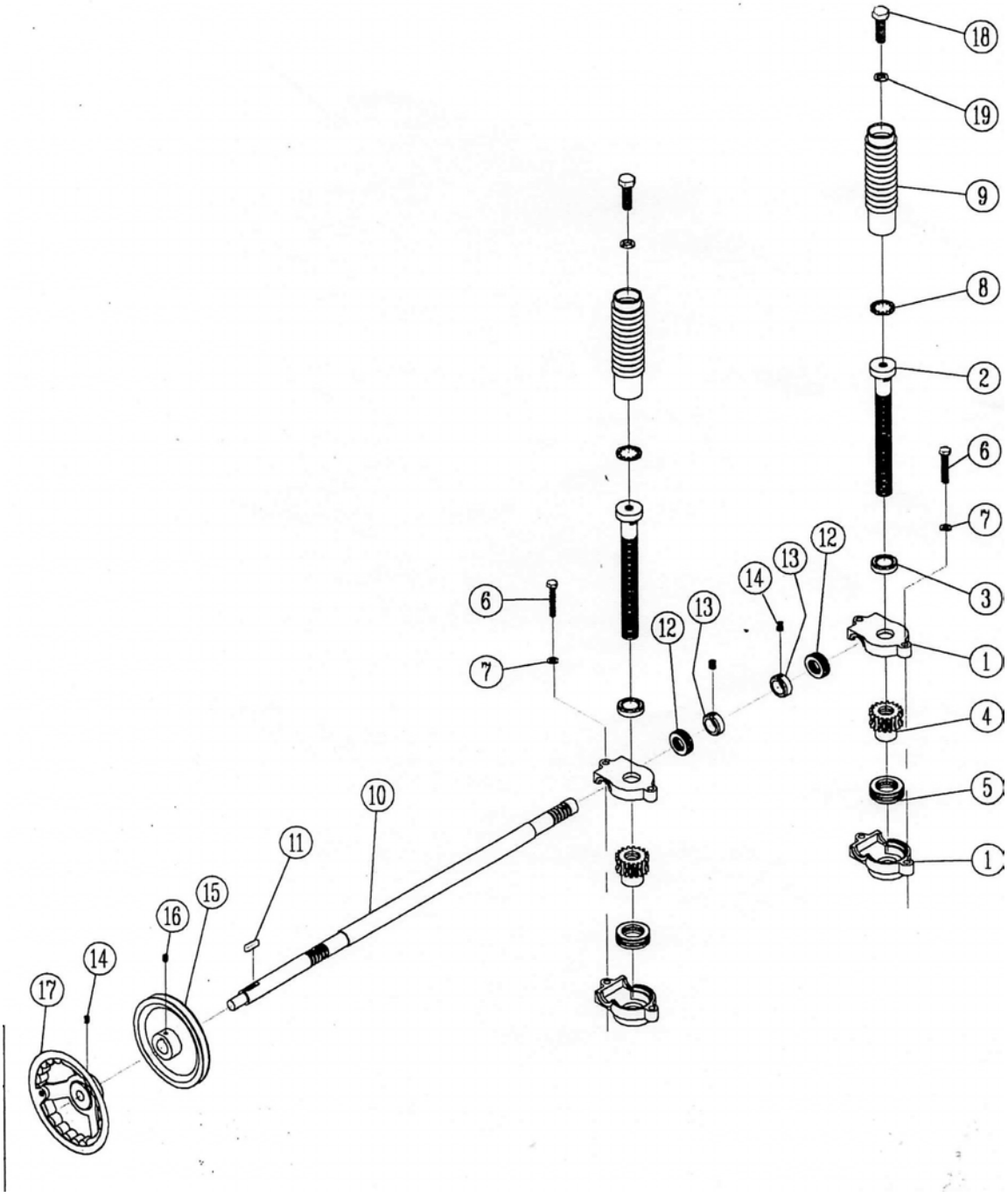
PARTS LIST FOR MI - 17203 - FEED

ITEM NO.	PARTS NO.	DESCRIPTION	SPECIFICATION	Q'ty
1	MI-17203-130	TABLE		1
2	MI-17203-131	TABLE SLIDE (INTERNAL)		2
3	MI-17203-132	HEX. HEAD BOLT	M10*25	8
4	MI-17203-133	LOCK WASHER	M10	8
5	MI-17203-134	FRONT ROLLER BRACKET (L)		1
6	MI-17203-135	FRONT ROLLER BRACKET (R)		1
7	MI-17203-136	HEX SOCKET CAP BOLT	M8*25	10
8	MI-17203-137	FRONT CONVEYOR ROLLER ROD		1
9	MI-17203-138	ADJUSTED SCREW		2
10	MI-17203-139	FRONT CONVEYOR ROLLER		1
11	MI-17203-140	BALL BEARING	6005LLU	2
12	MI-17203-141	RETAINING RING	R47	2
13	MI-17203-142	CONVEYOR BELT		1
14	MI-17203-143	LOCATED BRACKET		2
15	MI-17203-144	SPACER		4
16	MI-17203-145	GUIDE COLLAR		2
17	MI-17203-146	HEX. SOCKET CAP BOLT	M6*25	2
18	MI-17203-147	FLAT WASHER	M6	3
19	MI-17203-148	NUT	M6	2
20	MI-17203-149	CONVEYOR BELT GUARD		1
21	MI-17203-150	PAD		1
22	MI-17203-151	BUTTON HEAD BOLT	M8*12	4
23	MI-17203-152	GUARD ROD		1
24	MI-17203-153	HEX. SOCKET CAP BOLT	M8*20	2
25	MI-17203-154	LOCK WASHER	M8	8
26	MI-17203-155	NUT	M8	2
27	MI-17203-156	LOCATED ROD BRACKET		1
28	MI-17203-157	HEX. HEAD BOLT	M6*20	2
29	MI-17203-158	LOCK WASHER	M6	2
30	MI-17203-159	LOCATED ROD		1
31	MI-17203-160	WING BOLT	1/4"*3/4"	1
32	MI-17203-161	POINTER		1
33	MI-17203-162	HEX. SOCKET CAP BOLT	M6*12	1
34	MI-17203-163	REAR CONVEYOR ROLLER		1
35	MI-17203-164	KEY	7*7*50	1

PARTS LIST FOR MI - 17203 - FEED

ITEM NO.	PARTS NO.	DESCRIPTION	SPECIFICATION	Q'ty
36	MI-17203-165	BEARING UNIT	UCFL205	1
37	MI-17203-166	HEX. HEAD BOLT	M12*30	2
38	MI-17203-167	LOCK WASHER	M12*30	8
39	MI-17203-168	REDUCER BRACKET		1
40	MI-17203-169	BEARING UNIT	UUCFL206	1
41	MI-17203-170	HEX. HEAD BOLT	M12*50	2
42	MI-17203-171	COUPLER	#82	1
43	MI-17203-172	WORM GEAD REDUCER	#70,1/4,HW	1
44	MI-17203-173	HEX. HEAD BOLT	M12*40	4
45	MI-17203-174	MOTOR	1HP,4P,CCW	1
46	MI-17203-175	HEX. HEAD BOLT	M8*25	4
47	MI-17203-176	HEX. HEAD BOLT	M8*20	2
48	MI-17203-177	SPEED VARIABLE PULLEY	APH124,IHP	1
49	MI-17203-178	PULLEY GUARD		1
50	MI-17203-179	PAN HEAD BOLT	M6*12	3
51	MI-17203-180	V - BELT	1422V-320	1
52	MI-17203-181	LIMIT SWITCH	7312	1
53	MI-17203-182	GUARD		1
54	MI-17203-183	SCREW		2

PARTS LIST FOR MI - 17203 - HOIST



PARTS LIST FOR MI - 17203 - HOIST

ITEM NO.	PARTS NO.	DESCRIPTION	SPECIFICATION	Q'ty
1	MI-17203-184	WORM GEAR CASE		2
2	MI-17203-185	HOIST COLUMN		2
3	MI-17203-186	SPINDLE SPACER		2
4	MI-17203-187	WORM GEAR		2
5	MI-17203-188	BALL THRUST BEARING	2907(T)	2
6	MI-17203-189	HEX. HEAD BOLT	M8*55	4
7	MI-17203-190	LOCK WASHER	M8	4
8	MI-17203-191	GEAR WASHER	AW-1"	2
9	MI-17203-192	SLEEVE		2
10	MI-17203-193	WORM ROD		1
11	MI-17203-194	KEY	8*7*40	1
12	MI-17203-195	BALL THRUST BEARING	51105(T)	2
13	MI-17203-196	SET COLLAR		2
14	MI-17203-197	SET SCREW	M8*10	2
15	MI-17203-198	WORM ROD PULLEY		1
16	MI-17203-199	SET SCREW	M6*10	1
17	MI-17203-200	HEAND WHEEL		1
18	MI-17203-201	HEX. HEAD BOLT	M12*40	2
19	MI-17203-202	LOCK WASHER	M12	2