GM-12192019

Finish Pro

OPERATION & MAINTENANCE MANUAL

FP-2560

FP-4075

FP-5285

INDEX

Chapter 1: Introduction

General Introduction

In addition to sanding and deburring of sheet metal, it is also useful for line grain finishing and polishing. Being a high efficiency machine, it can usually finish the process in one pass. The operation here is as follows: the work piece carried by the conveyor belt is processed when passing through under a high-speed abrasive belt. This operation has the advantages of low heat generation, high efficiency, stock removal and attractive finish. To make effective use of this machine, careful installation, operation and maintenance are very necessary. The quality of the work piece is of equal importance. The lifetime of an abrasive belt can be greatly prolonged and the use cost and maintenance frequency of the machine can been reduced if the work pieces are flat and neat. The production volume can be increased accordingly. Instructions for installation, operation and maintenance of the machine are contained in this manual.

Finish Pro

Specifications:	FP-2560	FP-4075	FP-5285
Max.part Width	24”	40”	52”
Abrasive Belt Size	25 x 60”	40-1/2” x 75”	52 x 85”
Contact Roller Size	8” Dia.	8” Dia.	10” Dia.
Pass Line Height	34” - 40”	34” - 40”	34” - 40”
Max.Thehick Ness Capacity	6 - 1/8”	6 - 1/8”	6 - 1/8”
Conveyor Drive Speeds	8 - 40 FPM	8 - 40 FPM	8 - 40 FPM
Infeed Conveyor Length	20”	20”	20”
Dust Collector Capacity	1,100 CFM	1,800 CFM	2,800 CFM
Main Motor	10 HP, 230V / 460V, 3-Ph	15 HP, 230V / 460V, 3-Ph	30 HP
Conveyor Motor	1 HP, 230V / 460V, 3-Ph	1.5 HP, 230V / 460V, 3-Ph	3 HP
Table Lifting Motor	1 HP, 230V / 460V, 3-Ph	1 HP, 230V / 460V, 3-Ph	3 HP
Net Weight,approx.	2,950 LBS	4,650 LBS	6,650 LBS
Machine Dimensions. L x W x H	55” x 63” x 69”	76” x 88” x 81”	89” x 98” x 9”

Specifications and design are subject to change without prior notice.

Chapter 2: Machine Specifications and Service

Service Charges

Payment shall be made before the departure of our testing engineers, including air tickets, accommodation charges and local transportation charges.

Period of Guarantee

We provide the following guaranteed if the machine is under operation environment and regular maintenance.

1) Period of guaranteed for the components purchased including electrical and pneumatic control parts, speed reducer, motors etc. is one year.
2) Period of guaranteed for bearings, conveyor belts and rubber rollers is one year.
3) Guarantee does not cover the following conditions:
    A) Machine is broken due to improper use
    B) Machine is knocked down or repaired without our permission.
    C) Machine is not in the possession of the original buyer or user.
    D) Machine is damaged due to handling inappropriate work pieces.

Chapter 3: Installation Guide

Installation & Testing

1. Upon receipt of the machine, please check carefully whether there is any damage on the machine from transit and put in a claim immediately with the cargo company. We are not responsible for any damage on machine in transit.
2. The machine can be unloaded with a crane or forklift. Please use a crane or forklift with suitable capacity and work carefully because the machine is very heavy. Place the machine at the right position according to the following instructions:
    a. Close to the dust collector for easier duct connection and higher efficiency of dust collecting.
    b. Make a space big enough on the belt change side of the machine for the replacement of abrasive belt. Same for the motors.
    c. Use suitable power inlet wires.
    d. Supply clean compressed air with a pressure no less than_____
    e. Pad each of the four feet of the machine with a 12mm thick iron plate with a size of ***300mm X 300mm*** to adjust the level of the machine.
    f. Remove the wooden blocks from the feet of the machine.
3. To ensure that the machine can be put into use as soon as possible, please inform our after-sales service engineers when the machine will be available one week in advance and make the following preparations prior to the arrival of the engineers:
    a. Remove the exterior packing, mount the machine in desired place, connect the dust collector, and connect power source and air source to the machine.
    b. Make sure that all the motors and parts which have been removed for safety purposes during transportation are assembled properly.

Preparation of personnel for training

1. Select the right persons for training before our engineers come. The engineers will help them get familiar with the machine and teach them how to operate and maintain the machine.
2. Please make sure to choose the persons who fit this job, which will help you improve work efficiency with relatively low use cost.

Other Preparations

1. Work Pieces for trial run
2. Abrasive belts with different grits. You can order the belts from us if it's hard for you to buy them locally since we have a belt processing plant, which provides full range of abrasive belts.
3. Power source: Please prepare wires in accordance with the wiring diagram.
4. Dust collector: Please prepare centralized or separated dust collected with a capacity of 4000 m3/h.
5. Air compressor: Please prepare centralized or separate air supply system with a capacity of 0.3m3/min. The air supplied must be dry and clean, otherwise the lifetime of the components in the air circuit could be shortened.

Installation

1. Place the machine at the specified position connected to the air compressor, dust collector, power source and grounding. Please refer to the outline drawing and wiring diagram during installation.

Electrical

1. The machine should be equipped with adequate electrical supply and the incoming line should include a fuse device. All the supply circuitry should meet electrical codes.
2. **Warning:** The machine should be properly grounded to avoid electrical shock.
3. The Connection - Attention: Only a trained person should do the following:
    a. Turn off the incoming power.
    b. Consult the circuit diagram, and confirm the wire specification.
    c. Connect the incoming line, and be sure that it has been securely connected.
    d. Re-check
    e. Turn on the main switch of incoming line after check.
    f. Check rotation of all motors.
    g. If any rotation is wrong, re-wire to correct.

Ventilation

1. Do not limit the ventilation of the motor.
2. Notice: The motor could be a little hot during normal operation. If the components are stored in wet environment, please dry before using.

Current load meter

1. The current meter on the control panel is used for measuring motor load by displaying percentage of total load. The current meter has been calibrated before leaving the factory. If it needs to be changed or repaired, please consult a professional electrician.

Power Supply Connection

1. The power supply should correspond to requirements on the data plate. The voltage should not exceed +/- 10%. Improper voltage may cause the motor to become too hot. The working current should not exceed the current rating.
2. The connection of the motor should be according to instructions. In a three-phase motor, exchange the connections of any two incoming lines, to change direction; in two-phase motors, exchange A-1 and A-2. In single-phase motor, you only have to change the whole coil.
3. The wiring of every position should be done according to national code requirements.
4. **Warning**: Incorrect grounding will cause the danger to the operator.

Compressed Air

1. Please connect the clean air supply directly into the machine. The minimum air pressure should not be lower than ***4KG/CM 2.*** There should be a water receiver and water segregator between the air supply and the machine to prolong the lifetime of pneumatic components.
2. After finishing connection of air and power source, please remember to start the conveyor motor first to see whether the motor is rotating in the right direction and correct if necessary. Please don't put the machine into use until it is tested by our testing engineers in you facility.

Choose appropriate time for machine testing

1. Please make an appointment with us or through our agent 7 days in advance after you prepared everything.

Select personnel for training

1. Please select machine operators and maintenance workers before our testing engineers' arrival. If possible, please try to choose the operators and workers with adequate education and strong personality. Good operators and maintenance workers will help improve the machine's use efficiency at a relatively low operation cost. Our testing engineer will help train 1-3 operators and maintenance workers.

Install Abrasive Belt

1. Open the side door.
2. Turn off the air pressure switch to lower the belt tensioning.
3. Loose the head lock bolt and take off the lock pad (spacer block).
4. Mount the abrasive belt on the rollers according to the arrow direction marked in the inner side of the belt and have it centered on the rollers. If there is no arrow on the abrasive belt, either direction is fine.
5. Relock the machine head; open the air pressure-revolving switch to tension the belt.
6. Press the reset button. When you hear a sound of air release, the brake will be released, which means you have successfully mounted the belt.

Ordering and Using Abrasive Belt

1. Ordering Abrasive Belt
    a. Please inform us of the type and requirements of work piece to be processed by your machine. We will recommend the right abrasive belt and ship to your factory according to your instructions.
2. Storage of Abrasive Belt
    a. Store under appropriate humidity. Store the belts in a container and take the belt out 24 hours prior to use and suspend it on a 20cm diameter round pipe. Proper storage of the abrasive belt is very important. It will become soft under high humidity, which may cause the belt to fold during use. Under low humidity, the belt may become brittle, which may result in breakage.
3. To Increase the Lifetime of the Abrasive Belt
    a. When in operation, try to feed the work pieces evenly over the entire width. This will give more even wear and more consistent results.
4. Process the wide work pieces before the narrow ones.
    a. Try to make the belt have a little oscillating movement when working so as to reduce the chance of belt mis-tracking.
    b. Watch for edge fracture of the belt.
    c. Before full speed rotation, rotate the belt by hand for a few revolutions after mounting to ensure that everything is moving properly.
    d. Allow the belt to rotate under power 2-3 minutes before introducing work piece.
    e. Release the tensioning cylinder of belt in idle time to avoid elongation of the belt.

f. Do not try to clean the belt while it is still rotating. This may cause serious injury to workers and damage the belt and machine.

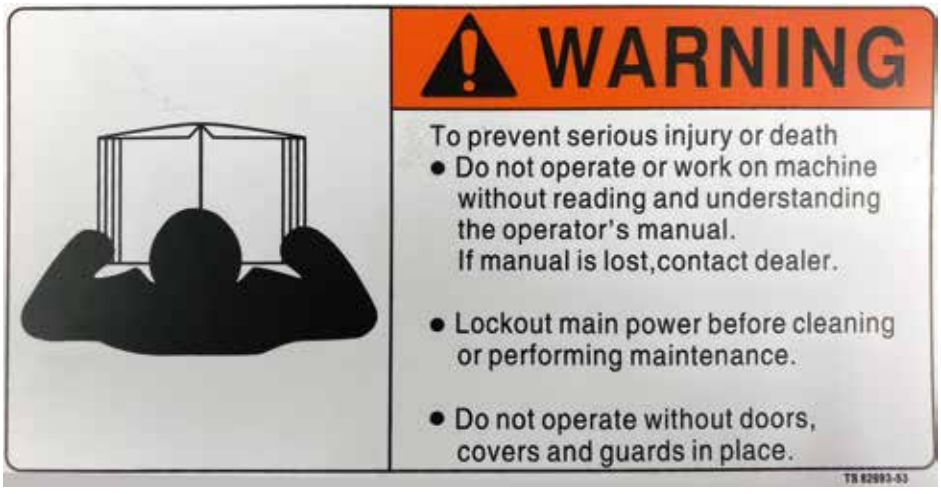
Chapter 4: Operation Instructions

Safety Instructions – Read Carefully Before Installation

Safety Summary

1. Warning: Safety First! It may cause serious damage if people do not operate according to the rules. Please read the operation manual before operation.
2. Make sure to turn off the power and turn off the main switch while doing maintenance, service, or cleaning.
3. While processing at a high speed, the work piece may eject during feeding and discharging. To avoid this, please follow these instructions:
    a. Do not feed the work pieces overlapped.
    b. Increase pressure on the pressure roller of the feeding unit.
    c. Do not stand facing the feeding work table.
4. Follow the below instructions to avoid a fire or explosion:
    a. Clean the machine everyday and properly deal with the potential pollutants.
    b. Sparks of cigarette or electric welding should be kept at least 5 meters away from the machine.
    c. Clean the machine thoroughly before and after processing different metal work piece types.
    d. Do not process work pieces shorter than it is allowed, otherwise, the rubber-grinding roller could be damaged from the work piece jamming under the grinding roller.
5. Follow the instructions below to avoid personal injury:
    a. Keep every guard and cover in place.
    b. Keep fingers, hands, feet, and clothes away from the moving parts of the machine.
    c. Do not clean oil or repair the machine under working conditions.
    d. Do not wear gloves at work.
    e. Do not put hands or fingers between the work piece and the conveyor belt.

The content contained in this and following pages outline the potential hazards when operating the machine. Please read it carefully before operation. A safe and efficient work environment is very important. If there is any question, please contact your distributor or us.
Following are safety signs, which can be found on the machine:



Read the manual carefully.

1. This contains very important information and warnings. Improper use of the machine may cause fire, explosion and serious injuries.
2. Make sure to turn off the power before oiling, cleaning, maintaining, or repairing the machine. A sudden start of the machine may cause serious injuries to the operators. Please refer to the maintenance part of this manual to obtain knowledge about proper maintenance.
3. The doors, covers, and guards are used to prevent danger from the interior of the machine. It is very dangerous to operator the machine without them. Please make regular examination of these items to ensure that none of them are missing. Please contact us for replacement if any of these items are lost or damaged.

The instructions above are very important to the operation of this machine. If your work conditions do not allow you to follow these instructions, please inform your safety supervisor or our safety director of the potential dangers.

1. Keep away from the belt and roller to avoid serious injuries from the rotating abrasive belt.
2. Open the machine door, start the belt slowly, check its tracking, and keep away from the belt. Rotate the abrasive belt slowly in accordance with procedure required in this manual. Do not operate the machine with the doors open.
3. Do not clean the abrasive belt by hand while it is on the machine, otherwise, serious abrasions may be caused.
4. Clean the machine after the belt is removed.
5. Make sure the belt is completely stopped and turn off the main power source before touching the belt.

1. It is very dangerous to approach the machine in gloves or loose clothes, which may be entwined, by the machine and pull the operator into the machine.
2. Do not touch the moving parts of the machine with a tool or other items; otherwise, it may cause serious injuries or even death.

1. When the work piece and conveyor belt are not pressed tightly enough against each other, the work piece could be ejected by the abrasive belt out of the machine at a very high speed. This may cause very serious injuries to the persons around.
2. The work piece may eject in the same direction as the abrasive rotation.
3. Do not stand in line with the conveyor belt. The feeding area is dangerous. Please protect yourself with guards if you must work in this area. We are unable to provide an overall protective device under all circumstances due to the varieties of materials to be processed.

The Pinch Roll

1. The spring press roll is used to press the work piece against the conveyor belt, which must be used to control the conveying of the work piece.

Reasons For Ejection

1. Arrangement of the rollers, work piece overlapped.
2. Slippery work piece of conveyor belt. There should be good frictional force between the conveyor belt and the work piece.
3. Too hard, greasy or worn conveyor belt will influence frictional force between the conveyor belt and work piece, which may cause the ejection of the work piece.
4. If the conveyor belt is worn and torn to some extent, it can be dressed and then be used again. Please refer to manual for dressing the conveyor belt. Please replace it if the conveying function of the

conveyor belt could not be recovered after dressing.

5. This machine is not designed to handle work pieces that cannot lay flat on the conveyor belt. Clamping fixtures are necessary for handling the materials of this kind although we do not suggest the use of this kind of device.

Thickness of Limiting Plate

This plate is used to avoid feeding over-thick work pieces into the machine. Appropriate setting of this plate could avoid overlapped work pieces from being fed into the machine.

1. Dry metal dust may cause explosion. The light metal dust of aluminum and magnesium possess high explosive properties, which could be ignited with only a spark. Therefore, any spark can be dangerous and all spark sources must be eliminated, otherwise, a fire or explosion may occur.
2. If your machine is used to process light metals, please do not process steel products which can generate sparks, otherwise, the remaining dust of the light metals may be ignited by the spark and a fire or explosion may occur.
3. Do not process mixed materials in one machine.
4. Clean the machine, duct system and dust collector thoroughly before you change the type of work piece material.
5. Correct dust collecting is important to the safe operation of the machine. Do not use it without proper dust collection.
6. The metal grinder should be equipped with a proper dust collecting system.
7. Make sure that the machine is used and maintained correctly. Improper operation may generate sparks which may lead to a production standstill or damage to the machine's parts including press roller, grinding head, and conveyor bet.
8. Neither too thick nor overlapped work pieces are allowed to be processed, which may cause production standstill or other personal injuries form the sparks generated from the overloaded condition.
9. Make regular examination of the belt limit switch to ensure that the ceramic head is in place. If not, it may cause sparking and create a dangerous situation.
10. It is strongly prohibited to smoke or weld within the 20 feet range from the machine.
11. Explosions caused by steel dust are rare, however, remaining lubricant fluid or ***(aseptic***) may contain flammable substances. Please consult the experts in ventilation for dust fire possibilities.
12. Suggestions:
    a. Find one certified ventilation expert to check the whole dust collecting system to ensure the efficiency and safety of the system.
    b. Be sure the system is made in accordance with fire control requirements and that the air velocity of the system is above ***20m/s.***
    c. Prevention of fire requires a good work environment. Please clean the machine, the dust collector, and metal chippings every day. If the condition permits, do it more frequently.
    d. Instruct your works how to put out a fire and consult a fire management expert on how to put out a fire correctly with the right fire equipment.

DANGEROUS!

1. Do not process the mixed metal pieces.
2. Try not to generate sparks while processing light metal.
3. An explosion and a fire may cause injury.

1. Keep away from the moving parks of the machine. The machine may generate strong forces under working conditions and it may not stop working even if some foreign materials such as hands or

fingers go into it. This may cause serious injuries.

2. Since the press roller applies a strong force, it is very difficult for hands, fingers or clothes to withdraw from it. The entwined materials go into the machine when the work pieces are carried into it by the conveyor belt.
3. Do not operate the machine with gloves or loose clothes.
    a. Gloves or loose clothes may be entwined into the machine.

The Clamp Point

1. If you become entwined, press the nearest emergency stop switch immediately.
2. Get familiar with all positions of the emergency stop before operation.

Feeding-Discharging Pinch Point

1. Take care when you try to implement techniques of feeding and discharging of the work pieces since more pinch points may be created by an extra conveyor belt, circulation cartons, and working points.
2. It may be necessary to add some more emergency stop switches or guards.
    a. The high voltage in the distribution box is very dangerous. Only professional electricians should be permitted to open it.
    b. Turn off the power source before cleaning, maintaining, or repairing the machine. The electrical operation may cause serious injuries.
    c. Please refer to the electrical fault safety and machine stop requirements. Do not start up the machine while any of the machine's doors are open.
    d. Users should supply the machine with proper electric power capacity and inlet wire including one fuse cut out device. All circuits and components must be in compliance with local wiring regulations and national electric does.
    e. Proper grounding is necessary for the machine to prevent injury accidental electrical shock.

Safety Devices

1. The safety devices on the machine should be checked regularly to ensure normal operation. Opening the machine without these functions is dangerous. The devices are as follows:
    a. The enclosed sanding head separates the operator from the abrasive belt and other moving parts of the machine.
    b. The brake quickly stops the rotation of the abrasive belt.
    c. The emergency stop switch quickly stops the motors to avoid further damage

    or injury. The operator can also touch the emergency stop plate on the front of the conveyor table.
2. The brake switch device for conveyor belt is used to stop the off-track belt.
3. The protective cover along the edges of the conveyor belt and other guards prevent foreign materials from going into a pinch point.
4. The danger and caution signs on the machine remind the operator of the potential dangers from the machine.
5. Do not operate the machine without the safety devices or use it under improper work conditions. Please contact our after-sales service engineers or the nearest service center immediately if any of the safety devices are not functioning properly.

REMEMBER – SAFETY FIRST!

1. Keep the machine doors and covers in place.
2. Do not get close to the rotating roller or moving conveyor belt.
3. Keep fingers, hands, and feet away from the moving parts.

4. Do not clean the abrasive belt while it is still in the machine.
5. Do not feed overlapped work pieces.
6. Do not process over-thick work pieces that may damage the machine.
7. The work piece must be pressed tightly against the conveyor belt by the press roll; otherwise, the material could be ejected out of the machine.
8. Carefully dispose of flammable materials such as metal dust from aluminum and magnesium.
9. Keep the sparks produced by smoking and welding at least 5 ***meters*** away from the machine.

Operate Using The Following Instructions To Avoid Danger

1. Proper instructions on personal safety.
2. Proper operation and maintenance.
3. Proper work environment.
4. Use the machine according to the machine application.
5. Check all guards equipped for safety purposes and report to your safety supervisor or us whenever there is a problem.

Operator's Safety

1. **Dangerous** – Do not use the machine before reading the Safety Instruction contained in the User's manual.
2. **Wear Protective Glasses** – wear glasses or protective cover to protect your eyes.
3. **Do Not Wear Loose Clothes** – Your clothes, hair, ornaments, and gloves may be entwined by the machine and may hurt you. So you should:
   a. Bind up your clothes at any time
   b. Tie your hair
   c. Do not wear gloves, ties, rings, wristwatch, and bracelets.
4. **Wear Ear Protection**
5. **Wear Protective Shoes** – We suggest you wear steel-toed shoes to protect your feet from being insured by heavy work piece falling down from the conveyor table.
6. **Stand To The Side Of The Machine** – Make sure that no one is front of the conveyor belt where they could be injured by a work piece being ejected from the machine at a high speed.
7. **Ensure That No Protective Guards Are Missing** – Keep all the protective guards in place. Do not operate without protective guards.
8. **Don't Open The Machine At During Operation –** Turn off the power source before opening doors.
9. **Release Your Hands –** The work piece will be pressed against the conveyor belt when feeding and a strong force can be created between he work piece and the conveyor belt. You should free your hands from the work piece and the conveyor belt when the conveyor belt is working.
10. **Do Not Leave The Machine Working Without Operator** – The operator must turn off the machine before leaving it. It would be dangerous if the machine were working without an operator present since it may cause injury to persons who are not familiar with it.
11. **Turn Off The Power Before Service and Maintenance** – The maintenance person may be injured if the abrasive belt is suddenly started during maintenance.
12. **Keep The Workplace Clean and Neat** – Remove excess grease; keep the floor of the workshop clean and neat. It is necessary to put anti-slip materials on the positions where the operator normally stands. Keep the work area clear.
13. **Keep Body Balance** – Don't lean over the machine.
14. **Make Proper Grounding of Your Machine** – Make sure that the machine's frame is grounded to the appropriate ground according to electrical operation.
15. **Avoid Careless Operation**

16. **Work Capacity of The Machine** – Do not make the machine work overloaded or handle work beyond its capability. We are not responsible for any result caused by improper operation.
17. **Clean The Machine After Operation** – Do not clean up the metal dust with bare hands.
18. **Improper Application** – Do not operate beyond the working range of the machine.

The Danger of Metal Processing

1. The dust of fire hazardous metal like aluminum, magnesium is explosive.
2. Deal with this kind of waste material with caution.
3. Keep the sparks, which are produced by smoking and welding at least 5 ***meters*** away from the machine.
4. Clean the machine and water tank each day. The extra metal sludge is a potential fire source.
5. Deal with the waste material according to the local statute.
6. If the waste is mixed with water, hydrogen will be produced. This can explode if confined to an enclosed space, so the machine should have enough space to discharge the gas.
7. All the machines should be grounded. Incorrect grounding can lead to a fire or electrical shock.
8. You should clean the strainer often and remove the dust waste.

Equipment Maintenance Notice

1. To protect the maintenance person, the following should be done:
   a. Turn off the power.
   b. All mechanical motion on the machine must be stopped.
   c. Lock off all the power and have the operator sign on the "stopping equipment card."
   d. Make a test to make sure that all the power is turned off.

Grounding

1. You must finish your machine earth grounding according to electric regulation. The moving abrasive belt can produce static.

The Static Will Influence Three Parts Of The Machine:

1. The dust can stick to the belt and load it up. The regular method is to change belts. Correct grounding can reduce the need for belt changing and improve finish quality.
2. Reducing the static can prolong the lifetime of bearings and bearing housings. Electrostatic can corrode bearing rollers and the bearing cover.
3. Proper grounding depends on:
   a. Soil humidity and soil type
   b. Local regulation
   c. We suggest you consult an electrician

Aluminum Product Processing

1. Summary

1-1. Scope

1-1.1 This standard is applicable to the aluminum or aluminum alloy processing industry that develops metal dust of power such as grinding, polishing, and finishing processes.

1-1.2 Our purpose of this standard is to reduce the risk of fire and explosion at the points of generation and proper treatment of the aluminum dust and powder.

2. Dust Collection

2-1 Do not smoke or create open fire in the workshop where the dust is treated.

2-2 Clean up the dust in time.

2-3 The dust cannot be allowed to be randomly piled in the work area. A fixed and safe area is

needed for the dust storage.

2-4 Eliminate fire sources. Do not smoke or create open fire in the workshop where aluminum dust is generated.

2-5 Dry dust collector should be placed outdoors.

2-6 The installation of a dust collecting system should be made in accordance with the fire control and environmental protective requirements.

2-7 Ducting System

2-7.1 The air velocity in the ducting must be no less than ***20m/s***, which is equal to ***1372.5m/min*** so as to ensure that the system is capable of transmitting both thick and thin particles.

2-7.2 The shorter and straighter, the better for the ducting.

2-7.3 The less curved conduit and abnormal parts, the better it is for the ducting system so air circulation has fewer obstacles.

2-7.4 The ducting should be made of metal with smooth interior walls and joints. There should be no places for accumulating dust. The strike line of the duct should not be above the position where the operator normally stands.

2-8 Dry dust collector

2-8.1 Textile, filter style or static dust collector is prohibited.

2-8.2 Clean the dust at least once a day or more if possible being careful not to let it fly into the air.

2-8.3 Dust collectors and other equipment which may cause explosions should be equipped with vent in operation.

3. Fire control measures

3-1 The dust should be piled in a certain area, not randomly.

3-2 Get rid of fire sources.

3-3 Do not smoke or create open fire in the workshop where aluminum dust is generated.

3-3.1 We suggest you consult the engineer.

Chapter 5: Maintenance

Cleaning The Machine

1. This machine is designed for efficient operation; please take care of it and perform good maintenance. The frequency of cleaning of the machine depends on the location and your use frequency. However, we suggest you clean it every day.
2. Cleaning the machine is required maintenance of the machine. Please clean it in accordance with our instructions as follows:
    a. Make sure that the belt stops turning.
    b. Stop compressed air supply.
3. Turn off the power source and air compressor system.
4. Start dust-collecting system. It can help remove dust while you are cleaning the machine.
5. Take off the abrasive belt.
6. Remove the surplus lubricating oil with a clean rag.
7. Remove all the items from the dustproof cover.
8. Clean with brush; blow off the dust with ***4*** compressed air.
    a. Warning – Use the compressed air carefully. Do not create dust cloud, which can easily lead to an explosion.
9. Clean the following areas:
    a. Grinding head assembly unit.
    b. Pneumatic control and abrasive belt oscillating assembly unit.
    c. Under the conveyor table.
    d. Inside the conveyor table.
10. Clean air source.

a. Clean air filters and regulators with neutral home dish detergent.
b. Rinse the above items in clear water.
c. Make all parts dry before re-assembling.

WARNING

1. Do not lubricate the air compressor system with synthetic oil or oils containing phosphate ester.
2. Because the air filters, plastic tubes, and other parts of the system are made from _____, this can easily damage by these chemicals.
3. Do not expose the air filters and the control system to materials such as tetrachloride, narkosid, acetone, paint thinner, detergent, and other harmful substances, which may cause splitting, or breakage of the plastic unit.

Start-Up Procedure

1. Check and make sure that the power sources and atmosphere are under normal conditions.
2. Start dust collector.
3. Lower the feeding table to the appropriate position and make sure that the abrasive belt is not touching the conveyor belt.
4. Check whether the abrasive belt protective travel switches and emergency stops are working properly. Press the switches to make that the machine will stop and that the power source would be cut immediately.
5. Turn on belt tensioning cylinder switch to tension the belt.
6. Press feeding button. If the feeding direction is incorrect, please contact the electrician and reconnect the power source.
7. Adjust the abrasive belt. Please wear protective glasses and press the start button to start the belt. Observe its rotation and adjust the belt adjust handle until the belt tracks side to side between the over travel limit switches.
8. Turn on the conveyor belt. Raise the conveyor table slowly to the working thickness needed. After you finish the above work, the machine can be started.
   a. Please check the tracking of the belt each time you replace one belt with another.
9. Power up machine.
10. Install abrasive belt and tension air cylinder. Push reset button.
11. Place part under the abrasive head for a scratch test.
12. Lift table and rotate abrasive head to set a scratch test (firm).
13. Reverse part by pushing button #5.
14. Start item #3 and then check abrasive head for correct rotation by pressing item #6 (clockwise w/feed).
15. Close door and press item #7 to start abrasive head.
16. You are now ready to run production.
17. Item #8 is an emergency push button.
18. Item #9 is for open and close limit switch for the table height (adjust for desired height).
19. Item #10 is to raise the table beyond the close switch limit (raise only for thin gauge material).
20. Please check the following sections if the machine cannot be started:
    a. Check the fuse or air button.
    b. Check whether the restart button is pressed.
    c. Check whether the chief power source is connected.
    d. Check the abrasive belt position to see whether it touches the over travel switch. All emergency stop switches and air pressure protective switches are series connected and therefore the machine cannot be started if one of them is not working properly.
    e. Turn off the power source and open the electric cabinet to check whether all the wires are connected tightly and properly

Shutting Down The Machine

1. Shut down the main motor.
2. Shut down the feeding motor.
3. Shut down the dust collecting system.
4. Release the tension device of the belt when the belt stops completely.
   a. Release the tension device in stand-by-time.
5. Turn off the air supply system.
6. Press the emergency stop switch in an emergency.

Using The Machine

1. Put down the conveyor table until the work piece can easily pass through.
2. Choose a work piece with a maximum working width.
3. Put the work piece on the conveyor belt under the contact roller and lift the feeding table. At the same time, pull the abrasive belt until it touches the work piece.
4. Start the conveyor belt.
5. Start the dust collecting system.
6. Start the feeding table with the lift hand wheel for about ***0.12mm***.
7. Put the work piece on the feeding table.
8. Feed the work piece, turn the lift hand wheel clockwise and observe the display in the electric current meter. You will find that the heavier the work is, the higher the reading will be.
9. Check the work piece and make adjustments (big work pieces put more load on the motor).
10. The operator should stand on the side of the machine.
11. To remove more stock, run conveyor at lower speed.
12. If the motor load on the main motor is too high and the feed speed is slow, change grit or pass through twice for additional stock removal.
13. Take care while processing a narrow work piece.
14. Sometimes the stock removal can be too much even if the load meter display on the main motor is not that high. This can cause overheating of the work piece or abrasive belt.
15. Warning: The feed direction must be right before processing a work piece; otherwise, it may cause accidents.

Maintenance Plan

1. Turn off the power and lock main switch before maintenance.
2. Forbid connecting the power while maintaining. Put a sign on the main power switch “off for maintenance”.
3. Be sure all the works in the area are away from the machine before connecting the power.
4. Do not start the machine while any of the protective covers are removed.
5. Choose high-quality, fire-resistant, and high-pressure resistant lubricating oil. Lubricate all locations on the machine according to instructions. For decelerators, please use high-quality gear wheel oil.
6. Examine the air compressed filter and dehydrator.
   a. Check this every day.
7. Remove dust from the machine.
8. Check for wear or damage on the contact roller.
   a. Uneven rubber rollers will affect the work piece.
9. Check the air pressure on the abrasive belt-tensioning cylinder.
10. Check all parts of the machine according to recommended schedule.
    a. Consult the manufacturer or dealers for more information.

Lubrication

1. Choose high-quality, fire resistant and high-pressure resistant lubricating oil.

2. The time of machine operation determines the lubrication frequency.
3. Lubricate each location of the machine according to the following schedule:
   a. All bearings on the grinding head are lubricated once every 150 hours.
   b. All out sphere base bearing should be lubricated once every 300
   c. Sealed bearings do not need to be lubricated.

Conveyor Drive – Gear Box

1. Please use high-quality lubricating oil.
2. Check the oil every 2 months and do not use too much oil on it. As long as oil is above the lower limit mark no additional is needed.

Conveyor Table Jack Screw

1. If it is used frequently, please add oil once a month.

Conveyor Table Lift Slide Block

1. Remove the second hand oil and add oil every 3-4 months.

Lubricating Chain

1. Brush lubricating oil on the roller chain once per month, we suggest you use lubricating oil including molybdenum and disulphide.

The Airline Lubricating

1. We advise one drop every 2 minutes.

Maintenance Schedule (1)

1. On your air compressor cleaner and dryer, we suggest you check and discharge the moisture as required every day.
2. Remove the dust from the machine.
3. Check the conveyor and V belt every month, do not tension the belt too much. Do not let the conveyor belt run on the machine while unattended. The conveyor belt could run off and damage the machine.
4. Check the press roller every week. This is very important for feeding stability to avoid work piece ejection. A high-speed ejection might cause serious injury. The press roller should be adjusted to ***1mm*** below the belt.
5. Check the abrasive belt stoke limit the switch. Locate the ceramic head at a position where it will be contacted by the abrasive belt if it should over travel. If the ceramic head is missing or damaged, install a new one.

Maintenance Schedule (2)

1. Check the conveyor.
2. A part or processing thin work pieces can reduce the lifetime of the belt.
3. While processing thin work pieces, the upper surface of the conveyor can be contacted by the abrasive causing premature wear.

Check Monthly

1. Check the wear on the contact roller each month. Wear or damage to the contact roller can adversely affect the result on the work piece. We suggest you keep a roller in your warehouse.
2. Be sure all safety guards are in place for operation.
3. Please check the following:
   a. Emergency disk brake. The emergency disk brake system is designed so the operator can stop the machine quickly.

i. Test: depress the emergency switch and the system should do the following:
   b. Stop all the working motors
   c. Set brake on the graining head
   d. Brake within 5 minutes. Come to a complete stop in 3-5 seconds.

Visual Survey

1. Check to see if the over travel limit switches and the emergency switches are in tact.
2. Make sure: All safety functions are in normal operating condition.
3. You do this with the following procedures:
   a. Have all workers leave the machine area.
   b. Startup the grinding head and conveyor belt feed.
   c. Touch each over travel switch by safe means.
4. The safety system should do the following:
   a. Turn off all the motors.
   b. Set the abrasive belt brake
5. All the machine covers should be in place.
6. Abrasive belt – over travel switch is in normal state
7. All the control buttons should be in normal state.
8. Keep all the safety signs in place.

Check Weekly

1. We suggest you observe the machine while it is running. If you can pinpoint problems early, machine downtime can be minimized. We suggest you keep a maintenance log to help determine when to replace components.

Regular Operation Tips

1. Use the abrasive belt carefully; damage on edges can make a belt unusable.
2. Install the abrasive belt before startup of the motor, rotate the belt by hand, check if the belt is sticking to the roller. An uneven belt can be stretched or broken under the force of operation.
3. Experiment with a variety of abrasive belts to determine what does the best job for you.
4. Keep the belt tracking properly to prevent over travel run-off.

Work Piece Feeding

1. If there is excessive rounding on the leading or trailing edge of the work piece it could mean you are applying too much grinding pressure.
2. If the grain looks different along the length of the part it could mean the part is sliding on the conveyor.
3. To increase the friction on the conveyor belt surface see the section “Dressing the Conveyor Belt”

Flaw On The Finished Work Piece

1. Horizontal lines across the whole work piece are usually vibration lines, (“chatter marks”) this may be caused by any of the following five reasons:
   a. Grinding pressure too low
   b. Vibration unsteadiness
   c. Uneven feeding
   d. Splice of the abrasive belt
   e. Contact roller (the main grinding head is out of roundness or flattened)
   f. Main axis of the grinding head is broken

Grinding Pressure Too Low

1. If the surface of material shows spotted trace, it may be because the grinding pressure is insufficient or

the surface is uneven. Attempt to increase the grinding pressure. If the mark covers the whole plate and distributes evenly, then it may not be a pressure issue.

How To Remove Vibration

1. Vibration may be caused by the following:
   a. Idler wheel or contact wheel is unbalanced
   b. V-belt is worn and torn or the motor is unbalanced.
2. To find these problems, check the contact wheel, feeding wheel bearing, motor and V belt.
3. If you change the idler roller or contact roller, you should be sure the new one is dynamically balanced. On a new machine, be sure the machine is secure and properly leveled.

Storing The Machine

1. If you do not use the machine for a long time, you should remove all dust and debris from the machine and cover with pickling oil.
2. Put a plastic cover over the machine after turning off the power and air supply.
3. Keep the machine at room temperature.

Compressed Air

1. Compressed air is used for the tracking control and tensioning of the abrasive belt.
2. The air filter is used to protect the machine and system. To avoid polluting the air with water, oil, or other, we suggest you use a drier and nonvolatile filter.
3. You should clean the cartridge filter every day. Clean and dry air is very important to pneumatic system.

Feed Speed Adjustment

1. This function can help you adjust the feeding speed and maintain optimal results.
2. Slow down the feed speed to remove more stock.
3. The feed speed can be adjusted by the following:
   a. Frequency control.

Model V-Belt Tensioning Drive

1. This can be adjusted as the figure shows
2. Attention: Not too tight. If the belt is too tight, it can destroy the motor and the contact wheel bearing and create “chatter” marks on the work piece.

Changing The Contact Roller

1. Consult the list of spare parts and installation plans.
2. Open the front and back door; remove the V-shaped belt from the contact wheel pulley.
3. Loosen the damping screw on the contact wheel-bearing block.
4. Put a board, which is the same width as the conveyor belt, on the feeding table; lift the feeding table until the board touches the contact roller.
5. Dismantle the bolt and front board on the bearing block of the two sides of the contact roller.
6. Lower down the feed table and dismantle the roller.
7. Replace the new roller.
8. Install new bolt and make sure it is fixed firmly.
9. Replace new block and V-belt.
10. Make sure that the fixed screw on the bearing of contact roller is screwed down.

Dressing The Conveyor Belt

1. The conveyor belt should be dressed when the following occurs:
   a. The conveyor belt has become smooth.

b. The conveyor belt is damaged.
c. Part of the conveyor belt has excessive wearing.

2. The conveyor and contact roller should be parallel before dressing.
3. Use a 100-grit belt to dress the conveyor belt.
4. Turn on the feed switch.
5. Lift the feeding table slowly until it touches the whole conveyor tightly.

Replacing The Conveyor Belt

1. Turn off the power and remove the feed motor.
2. Remove the screws which connect the conveyor table and lift table.
3. Remove the end plate and tensioning screw of feeding table.
4. Make sure the feeding table is supported (use a forklift if necessary).
5. Take out the conveyor assembly from the frame.
6. Loosen the end plate and remove the belt.
7. Install the new belt. Be sure the direction of rotation is in accordance with the splice.
8. Install the end plate, reposition, and tighten the screws.
9. Install the feeding table.
10. Consult the dressing the conveyor belt section.

How To Adjust The Level On The Feeding Table

1. Make sure that the grinding head is equipped with abrasive belt and that it is locked.
2. Bring up all the press rollers until it is higher than the grinding roll at ***2mm***.
3. Put two stainless steelmaster straightedges ***(1000mm***) on the two sides of the feeding table, under the grinding roller.
4. Lift the feeding table until it can touch the grinding roller.
5. Check if the two straightedges are equidistant from the grinding head.
6. If the measurements are different, use the four pillar lift system to adjust it.

How To Adjust The Pinch Rollers

1. The pinch rollers are on the two sides of the contact roller – the infeed and outfeed.
2. Make sure that the press roller is ***1mm*** below the contact line.
   a. If the press roller is too high, adjust the height screw then lock the double nuts.

Factors That Effect Abrasive Belt Tracking

1. If the tracking motion is not good, these are possible reasons:
   a. The abrasive belt is rotating in the wrong direction.
   b. The abrasive belt is out of specification.
   c. The control system is malfunctioning.
   d. The tracking cylinder has a problem.
   e. The adjustable handle is not in the right position.
   f. Pneumatic presser amplifier has a problem.
   g. The air presser is too low.

Troubleshooting Abrasive Belt Tracking Problems

1. Abrasive belt mis-tracking is a common problem that can usually be resolved with a simple adjustment. Sometimes the problem is due to a part failure. The following are basic areas to check:
   a. Check if the air supply pressure is at ***2-3kg/cm2***.
   b. Check is the tracking cylinder works when the abrasive belt activates the photo eye switch.
2. If the tracking cylinder is working, then position the abrasive belt and start the machine.
3. Adjust the tracking handle for proper oscillation.

4. If the cylinder does not work, check for the following possibilities:
    a. The cylinder is defective.
    b. The solenoid valve is defective.
    c. The photoeye switch is defective.

How To Solve The Cylinder Fault and Handspike of Cylinder

1. We use our patented thin-film as the oscillating cylinder which is easy operated and durable. If the oscillating cylinder does not work, the following are possible problems:
    a. The polyester film may be broken. If the solution has lead at place A, shift the film out counterclockwise and replace it.
    b. If the shaft is unable to return after pushing out, the return spring is damaged and needs changing. Another possibility is that the nut, which connects the top of the handspike and pillar, is too tight – the solution to this is loosen the nut until it can draw back sharply.
    c. If there is dust or lack of oil at place A, that can cause abnormal noise and binding – add lubricating oil.

How To Troubleshoot a Faulty Solenoid Valve

1. Push the manual pin (small red button). Under normal operation, the air gate should turn on and off along with the manual pin (red button). If the air gate does not work along with the button, the valve is damaged.

How To Troubleshoot a Faulty Photoeye Switch

1. Check if there is dust or grinding grit on the photoeye. Clean it with a cloth. The photo switch may be defective and may need to be changed.

Reasons for re-setting the current load indicator:

1. The voltage has changed:
2. The meter has been exchanged.
3. Incorrect reading.

Operation

1. It will be easier to install the belt if it has been hanging on a large diameter cylinder for several days.
2. As the paper belts are easily torn, please install it carefully.
3. Release the belt tension when not in use to prevent it from stretching and to prevent flattening of the contact roller.

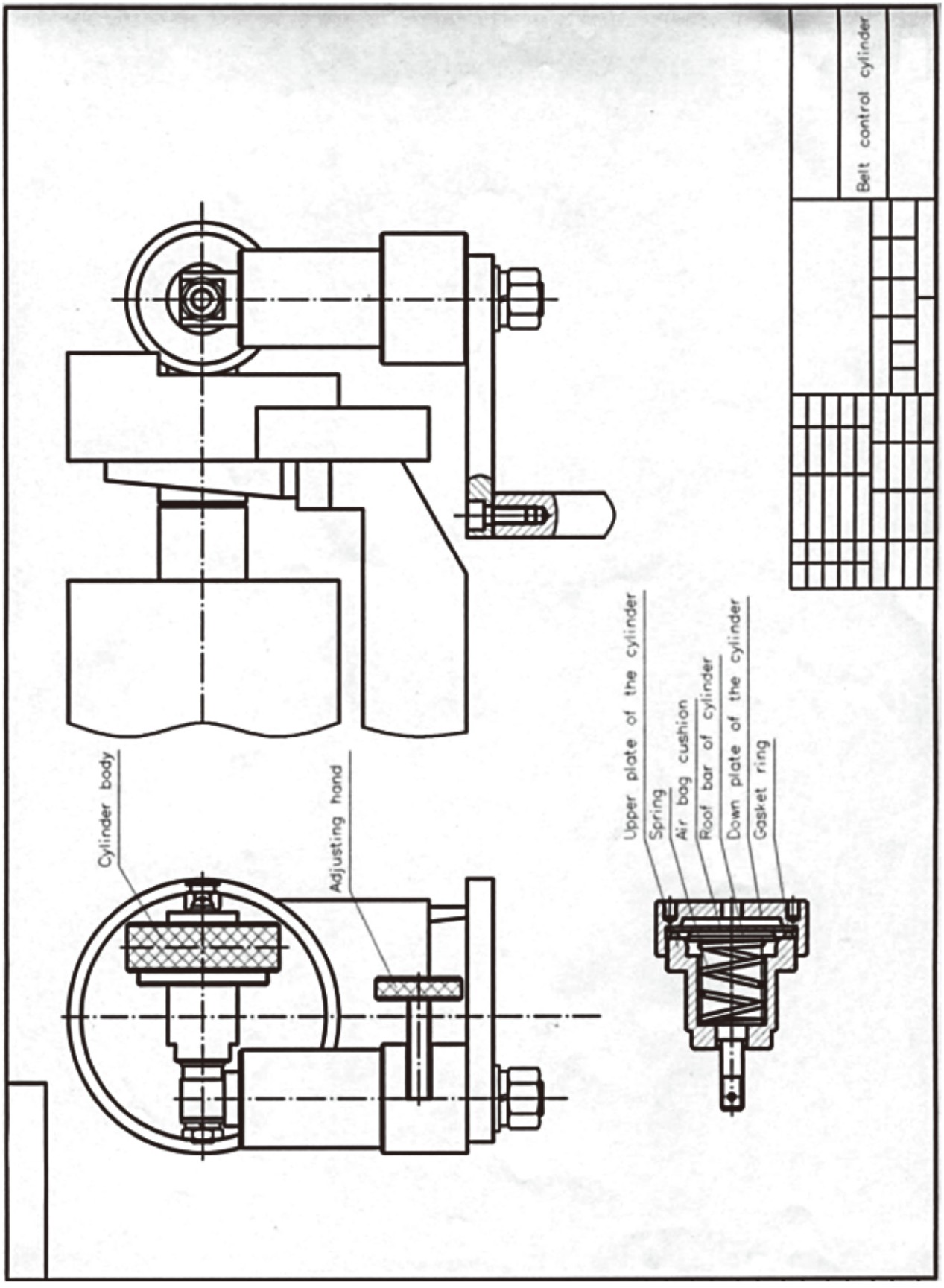
Chapter 6: Replacement Parts List

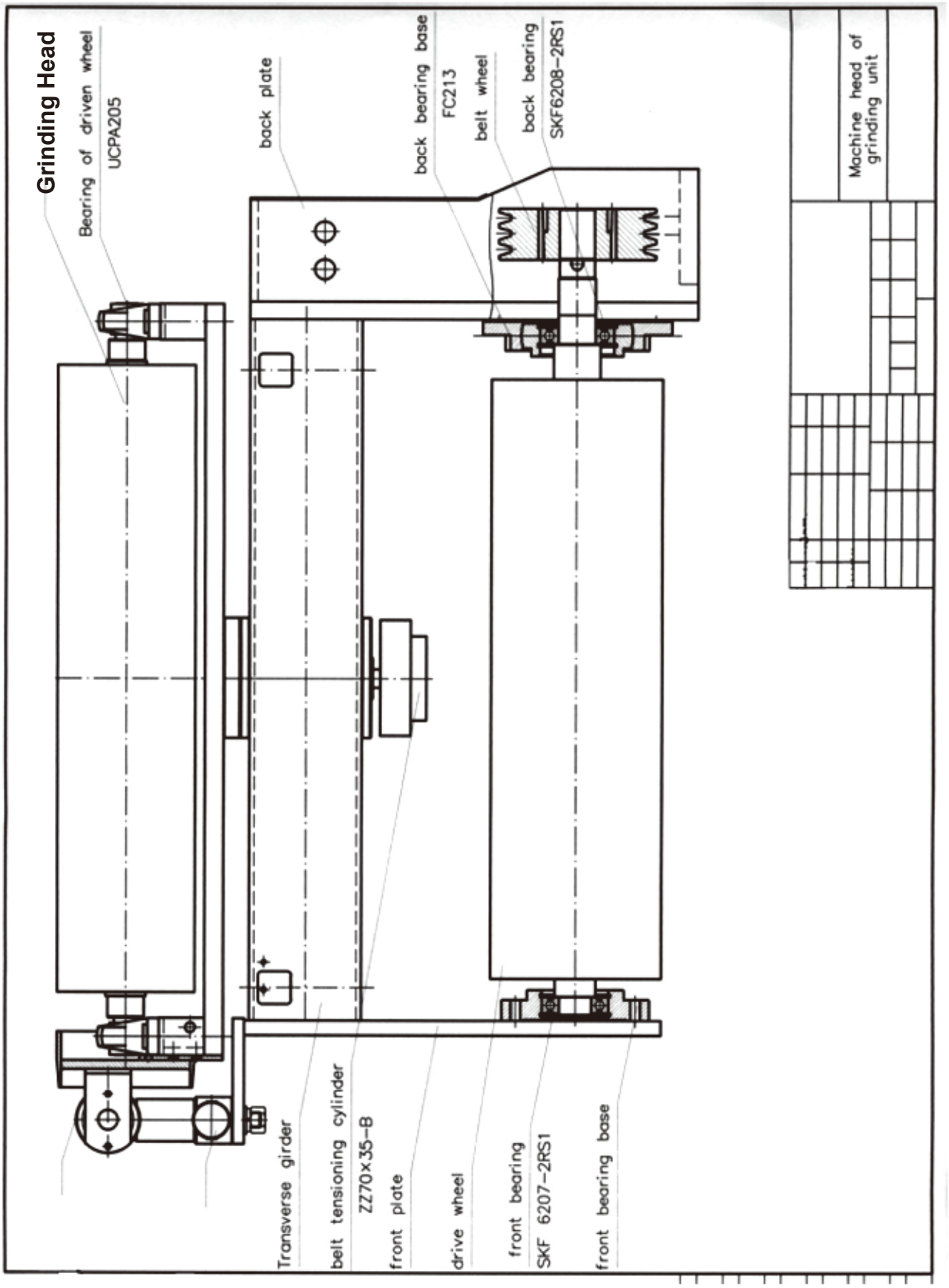
Chapter 6:Replacement Parts List

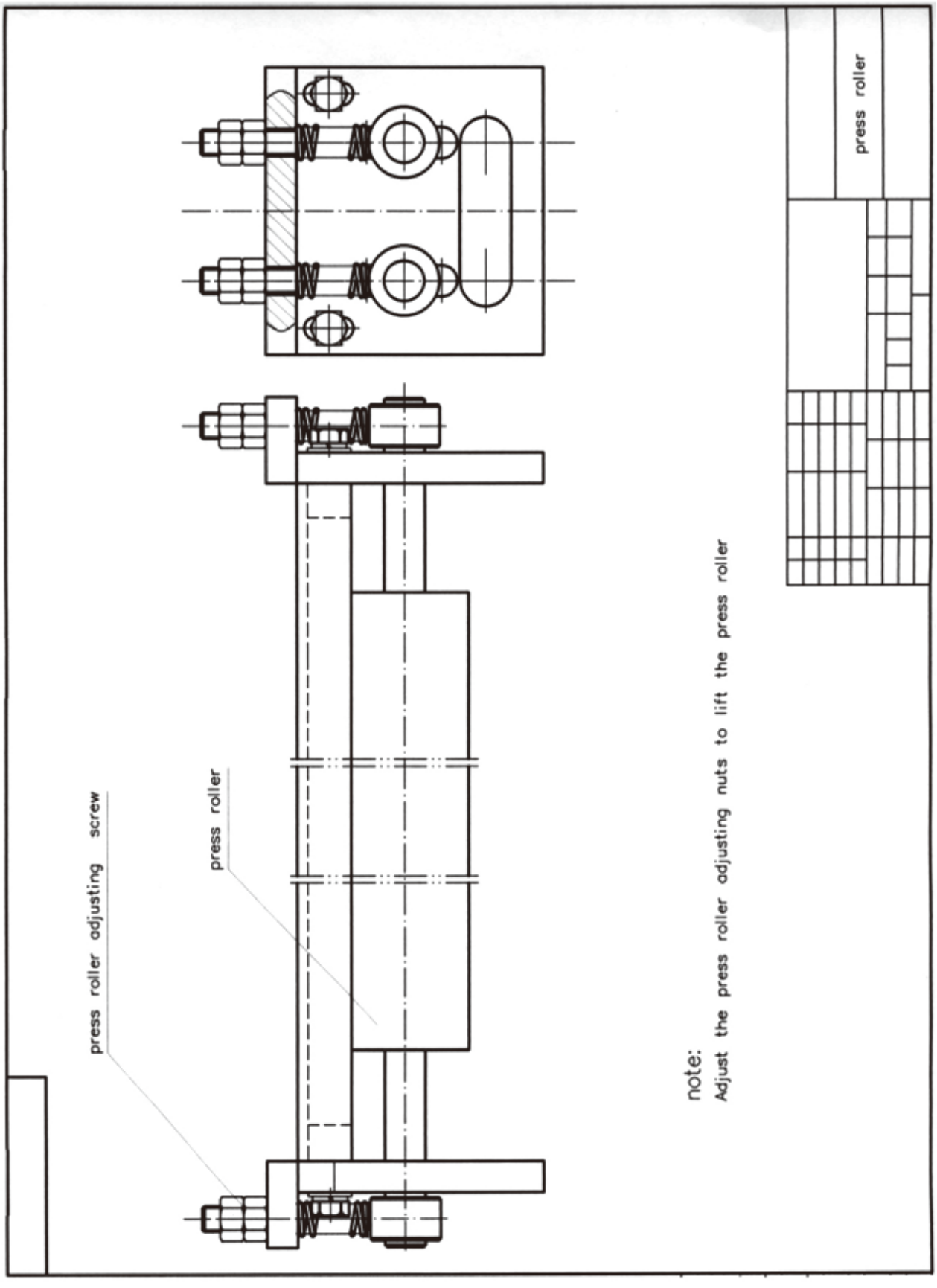
Part	Size	Qty	Remarks
Conveyor belt	267*630(heat-resistant)	1	For Feeding
Gear Box	OK	1	For Feeding
Inverter Drive	Delta	1	For Feeding
Motor	YS8024 220V/440V	1	For Feeding
	60HZ 0.75KW		
Bearing	UCFL206	2	For Feeding
			Drive Wheel
	180205-2Z	2	For Feeding
	Driven Wheel		
Grinding Wheel	630-JS(Φ185)	1	For Grinding Head
(Contact Roller)			
Bearing	SKF 6208-2RS1	1	For the Back End of
			Grinding Head
	SKF 6207-2RS1	1	For the Front End of
			Grinding Head
	UCPA205	2	For Feed
Driven Wheel of Grinding Head			
Tensioning Cylinder	ZZ70*35-B	1	For Tensioning the
			Belt
Oscillating	ZZ50*10-B	1	For Abrasive Belt
(tracking)			Control
Cylinder			
Speed Reducer	WPDO50 1:60	1	For Lift Drive
Motor	YS6324 220V/440V	1	For Lift Drive
	60HZ 180W		
Pressure Roller	630-JS(regular rubber)	2	For pressure roller
Pressure roller	630-JS(conducting resin)	2	For Pressure Roller
Bearing	180104-2Z	8	For Pressure Roller
Adjusting	AFR-2000	1	For Air Passage
Combination			
Air Switch	MSV86321TP	1	For Belt Tensioning
Solenoid Valve	4V210-08	2	For Brake Cylinder
			And Oscillating Cylinder
Mechanical Valve	MSV86321R	1	For Conveyor Belt
			Tracking
Limit Switch	8166	2	For Abrasive Belt
			Limit
	8111	2	For Abrasive Belt
			Limit
	D4MC5020	1	For Emergency Touch
			Plate
	D4MC5040	1	For Emergency Break
Cylinder	CQ2B50-25DM	1	For Brake
Cylinder	CQ2B63-10DM	1	For Abrasive Belt
			Tracking

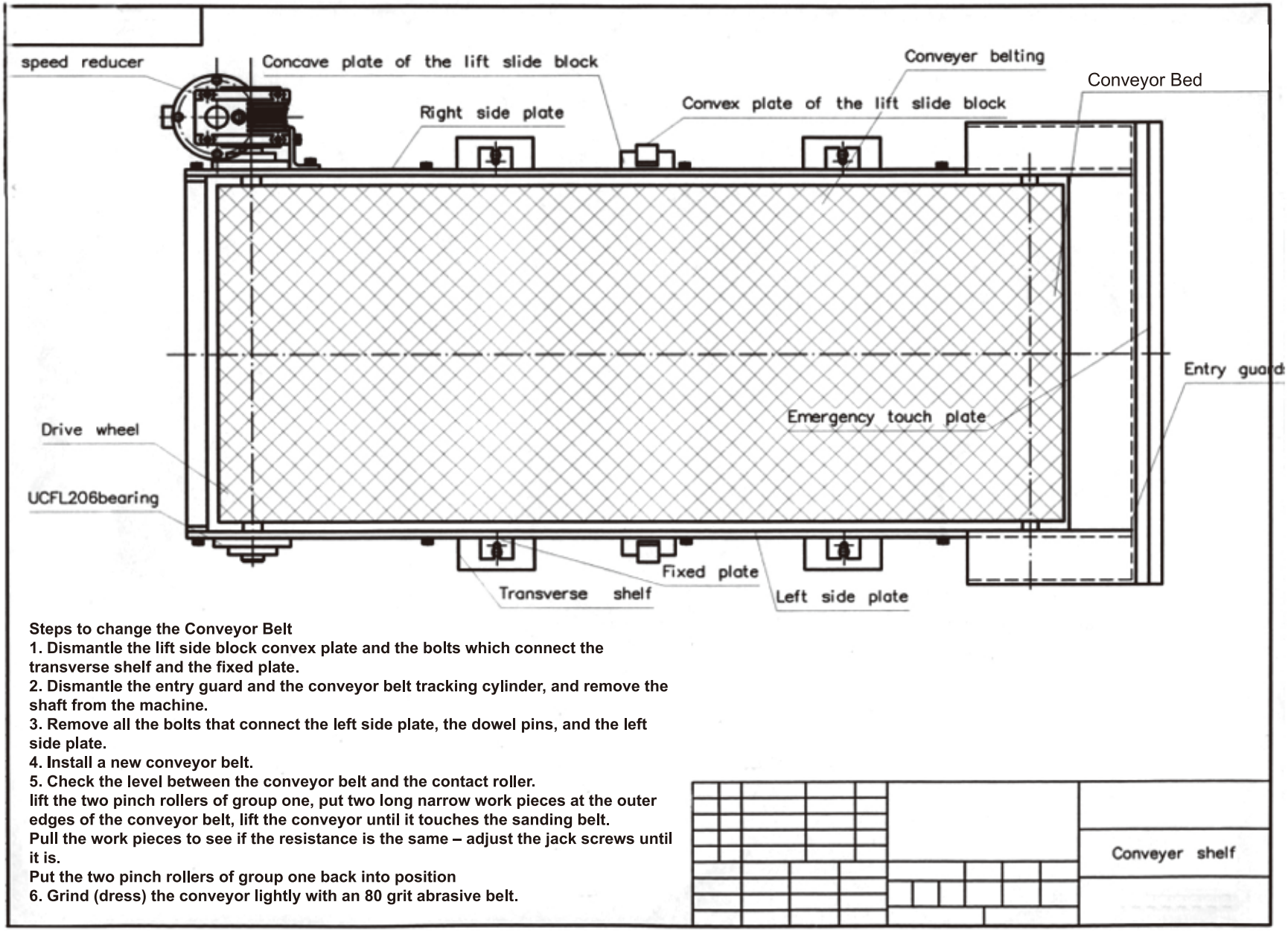
Part	Size	Qty	Remarks
Triangular Belt	A2007	3	For Grinding Roller
			Drive
Main Motor	Y132M-4 220V/440V	1	For Grinding Head
	60HZ 7.5KW		
Brake Disk		1	For Brake
Digital Display	M-10	1	For Lift
System			
Photo Switch	E3JK-R4M1	1	For Abrasive Belt
			Control
Abrasive Belt	DZ47-602P 5A	1	For Main Junction
Tension Switch			Box
On/Off Switch	NM1-63S/3300 40A	1	For Main Junction
			Box
Contactor	CJX2-0910	1	For Main Junction
			Box
	CJX2-0901	5	For Main Junction
			Box
	CJX2-3210	1	For Main Junction
			Box
Current	LM21-0.5	1	For Main Junction
Transformer			Box
Transformer	BK-100	1	For Main Junction
			Box
Thermo Relay	NR2-25	2	For Main Junction
			Box
	NR2-36	1	For Main Junction
			Box
Current Meter	85L1 30/5 A	1	For Main Junction
			Box
Voltmeter	6L2	1	For Main Junction
			Box
Button	LA42H-11	2	For Main Junction
			Box
	LA42PD-10/AC 110V	1	For Main Junction
			Box
	LA42P-11	2	For Main Junction
			Box
	LA42J-11	1	For Main Junction
			Box
Rocker Switch	LA42C 2A-20	1	For Main Junction
			Box
Timing Dashpot	H3Y-2	1	For Main Junction
Relay			Box
Air Machine	1123HST	1	For Main Junction
			Box

Chapter 7: DRAWINGS & WIRING DIAGRAM




Grinding Head
Bearing of driven wheel
UCPA205
back plate
back bearing base
FC213
belt wheel
back bearing
SKF6208-2RS1
Machine head of grinding unit
Transverse girder
belt tensioning cylinder
ZZ70x35-B
front plate
drive wheel
front bearing
SKF 6207-2RS1
front bearing base


press roller
press roller adjusting screw
press roller
note:
Adjust the press roller adjusting nuts to lift the press roller



Steps to change the Conveyor Belt

1. Dismantle the lift side block convex plate and the bolts which connect the transverse shelf and the fixed plate.

2. Dismantle the entry guard and the conveyor belt tracking cylinder, and remove the shaft from the machine.

3. Remove all the bolts that connect the left side plate, the dowel pins, and the left side plate.

4. Install a new conveyor belt.

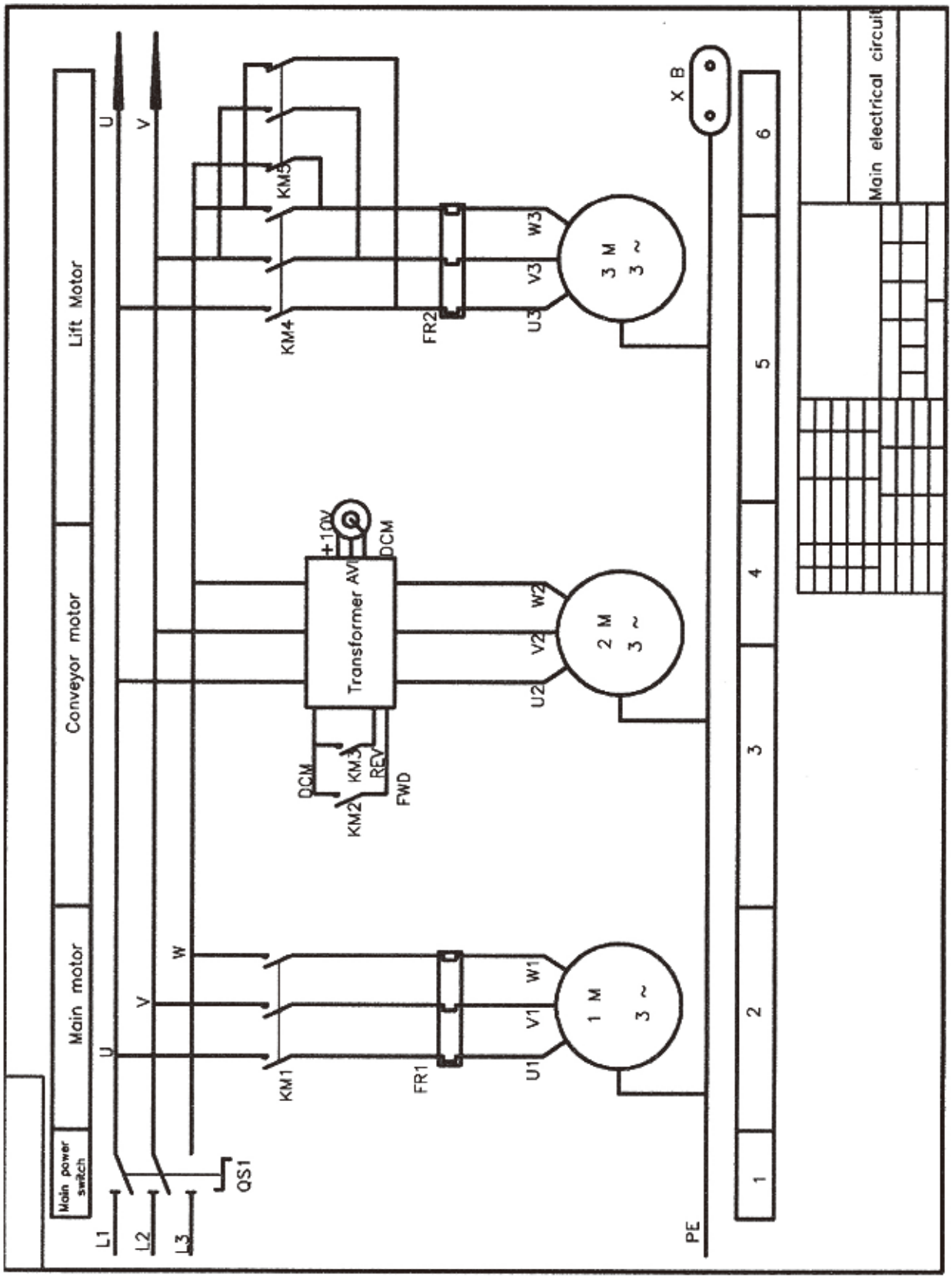
5. Check the level between the conveyor belt and the contact roller.

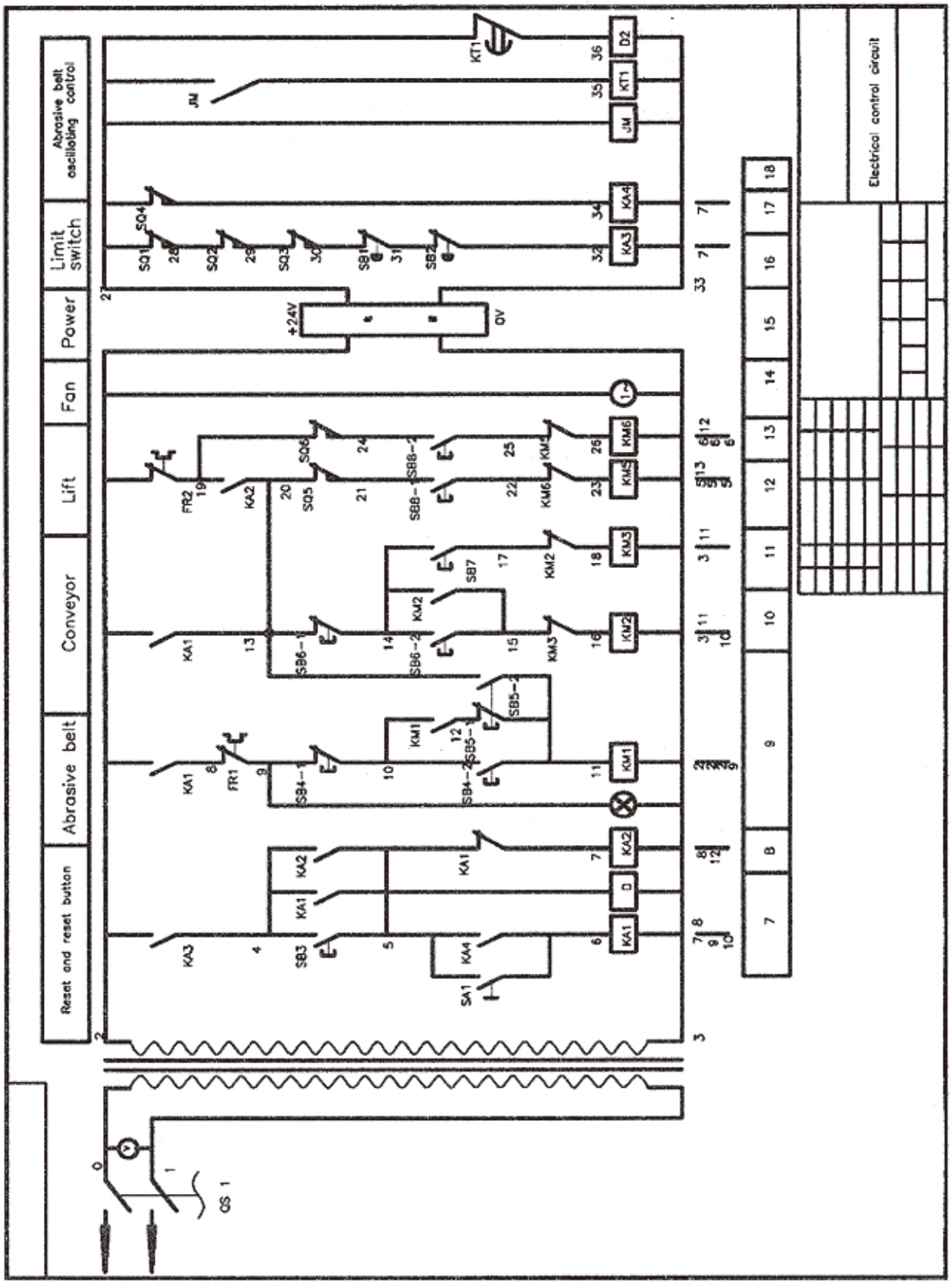
lift the two pinch rollers of group one, put two long narrow work pieces at the outer edges of the conveyor belt, lift the conveyor until it touches the sanding belt.

Pull the work pieces to see if the resistance is the same – adjust the jack screws until it is.

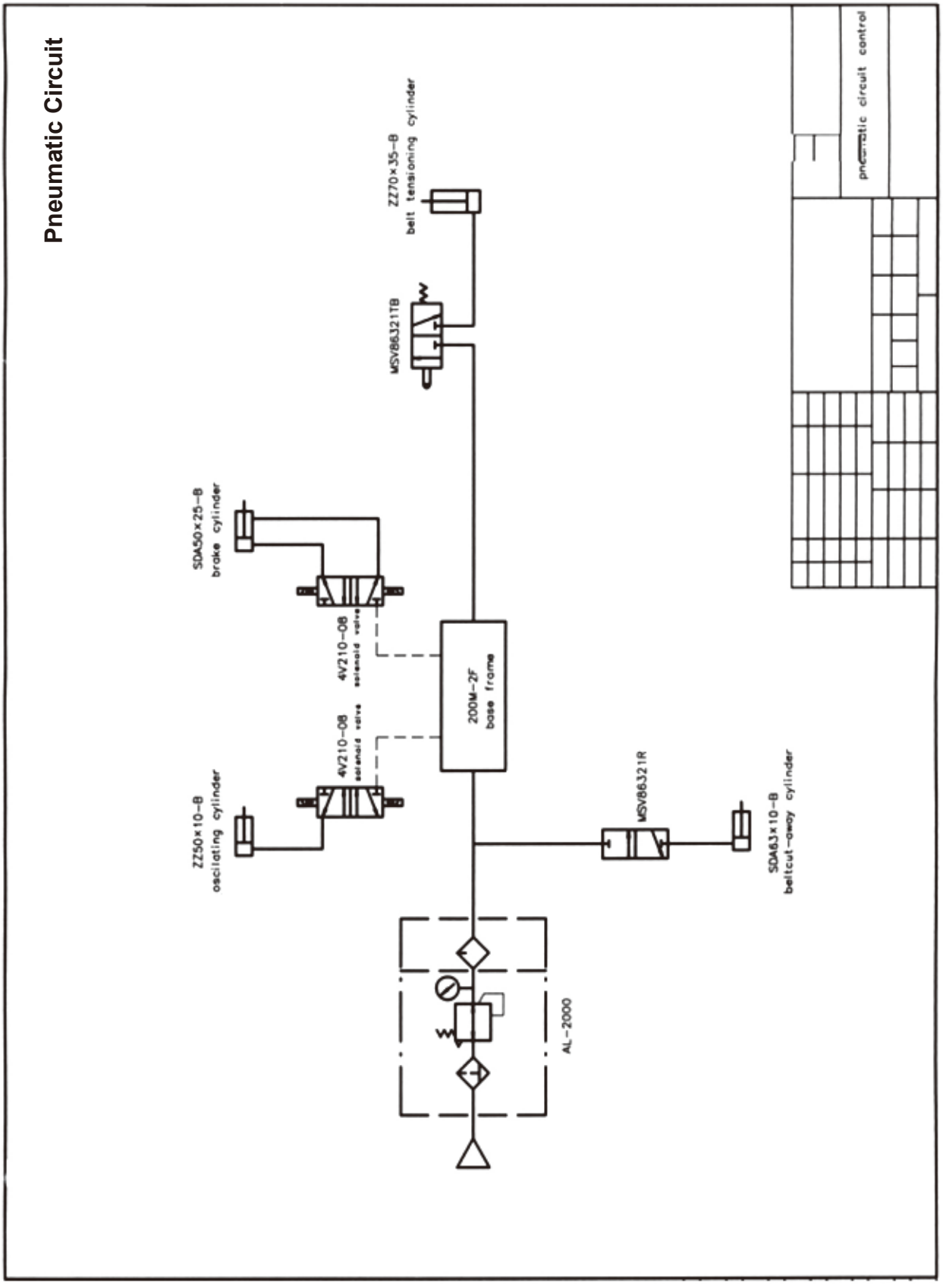
Put the two pinch rollers of group one back into position

6. Grind (dress) the conveyor lightly with an 80 grit abrasive belt.


Main electrical circuit
Lift Motor
Conveyor motor
Main motor
Main power switch
L1
L2
L3
QS1
U
V
W
KM1
FR1
U1
V1
W1
1 M
3 ~
KM2
KM3
REV
FWD
DCM
+10V
AVI
Transformer
U2
V2
W2
2 M
3 ~
KM4
KM5
FR2
U3
V3
W3
3 M
3 ~
PE
X B
1
2
3
4
5
6


Reset and reset button
Abrasive belt
Conveyor
Lift
Fan
Power
Limit switch
Abrasive belt oscillating control
Electrical control circuit
+24V
0V
QS 1
SA1
SB1
SB2
SB3
SB4-1
SB4-2
SB5-1
SB5-2
SB6-1
SB6-2
SB7
SB8-1
SB8-2
SQ1
SQ2
SQ3
SQ4
SQ5
SQ6
KA1
KA2
KA3
KA4
KM1
KM2
KM3
KM4
KM5
KM6
KT1
JM
FR1
FR2
D
D2

Pneumatic Circuit



WET DUST COLLECTOR
OPERATION & PARTS MANUAL

CAUTION

THIS IS VERY DANGEROUS MACHINE.

NEVER PLACE HANDS OR ANY PART OF BODY

INTO THE MACHINE.BODILY INJURY COULD OCCUR.NEVER

OPERATE THE MACHINE WITHOUT PROPER EYES&EARS AND

BODY PROTECTION.

Model # WDC-2100
CFM: 2,100 CFM
STAINLESS STEEL CONSTRUCTION
MAIN MOTOR: 5 HP, 220V OR 440V, 3PHASE

A. SET UP & INSTALLATION

1. CONNECT THE DUCTING BETWEEN THE SANDER AND WET DUST COLLECTOR
2. MAKE SURE THE POWER SUPPLY 220V OR 440V
3. FILL UP WATER AT ¾ FULL OF TANK AND ALWAYS HOOK UP A FRESH WATER SUPPLY TO THE DUST COLLECTOR TO ENSURE BEST DUST COLLECTOR PERFORMANCE.
4. KEEP THE TOP COVER CLOSED SECURELY BEFORE OPERATION
5. THE MACHINE OPERATES THE MOST EFFICIENTLY WHEN IT OPERATES NO MORE THAN 10 FEET LONG FROM THE DUST COLLECTOR TO THE SANDER.
6. DO NOT INSTALL EXHAUST DUCTING TO THE EXHAUST HOOD OF THE MACHINE.
7. ALWAYS SHUT DOWN THE POWER SUPPLY BEFORE SERVICING THE MACHINE, MOTOR AND IMPELLER.

B. MAINTENANCE

1. WHEN THE MACHINE WILL NOT BEUSED FOR EXTENDED PERIODS, THE WATER INSIDE THE TANK MAY DEVELOP AN ODOR. WE SUGGESTION TO REMOVE THE WATER AND CLEAN THE MACHINE.
2. IF THE MACHINE IS USED FOR 4-8 HOURS A DAY, NEED TO INSPECT THE REAR OUTLET ON THE DUST COLLECTOR EVERY TWO WEEKS. AND ALSO CLEAN INSIDE THE DUST COLLECTOR EVERY MONTH.
3. USE SHOVEL TO CLEAN THE DUST PASTE IN THE WATER TANK FREQUENTLY TO GET THE MACHINE IN HIGHEST OPERATING PERFORMANCE AND CHECK WATER LEVEL DAILY.

C. APPLICATIONS

THIS DUST COLLECTOR IS USED FOR SANDING AND DEBURRING MACHINES FOR METAL, SUCH AS ALUMINUM, TITANIUM, COPPER, ALLOY STEEL, MILD STEEL, STAINLESS STEEL. AND ALSO THIS DUST COLLECTOR IS USED FOR PLASMA TABLES, GRINDERS, BLASTING MACHINES, POLISHIING MACHINES, ETC.

D. ALL CUSTOMERS NEED TO DO:

1. DRAIN BALL VALVE
2. WATER HOSE
3. INSTALL THE DUCTING
4. FOUNDATION FOR SECURING THE MACHINE ON THE FLOOR
5. MEET ALL CODES AND REGULATIONS WITH FEDERAL AND STATE OR LOCAL CITY
6. WIRE UP THE MACHINE WITH THE PROPER CONNECTIONS TO THE MAIN ON/OFF STARTER.

7. MAKE SURE THE MOTOR ROTATE CLOCKWISE PROPERLLY. OTHERWISE, NEED TO INTERCHANGE ANY TWO HOT WIRES TO CHANGE THE MOTOR ROTATION. IF FAILURE, THE MACHINE WILL REDUCE VACUUM PERFORMANCE LEVEL.BACKWARD ROTATION WILL OVERLOAD THE MOTOR.
8. FLEXIBLE ELECTRICL CONDUIT MUST BE USED TO WIRE THE MOTOR STARTER.
9. MAKE SURE THE INPUT POWER VOLTAGE VARIATIONS OF + OR – 10% FROM THE NAME PLATE VALUE ON THE MACHINE. THE SUPPLY POWER VOLTAGE MUST BE WITHIN THE LIMIT OF THE RANGE.

E. CAUTION:

1. NEVER ATTEMPT TO REMOVE MAINTENANCE DOOR AND TOP COVER WHILE THE MACHINE IS UNDER POWER.
2. KEEP THE CORRECT WTAER LEVEL FOR EFFICIENT PERFORMANCE LEVEL, AND CHECK WATER LEVEL DAILY.
3. IN COLD WEATHER, MAKE SURE THE WATER IS NOT FROZEN
4. DO THOROUGH MACHINE CLEANING FREQUENTLY

F. TROUBLESHOOTING:

1. PROBLEM: DUST DISCHARGE FROM THE BLOWER HOOD.

SOLUTIONS:

- UNSUITABLE APPLICATIONS. DUST DOES NOT WET OR FLOATS, SUBMICRON PARTICLES OF DUST OR SMOKE.
- WATER LEVEL IS TOO LOW
- SLUDGE BUILD-UP IN SUMP CAUSES INSUFFICIENT WATER VOLUME. NEED TO FOLLOW THE MAINTENCE AND CLEANING SCHEDULES, OR THE

  DUST COLLECTOR IS TOO SMALL TO HANDLE HIGH VOLUME OF DUST.
- WATER IS FOAMING, CAUSING CARRY-OVER OF SLUDGE INTO BLOWER HOUSING. NEED TO CLEAN SUMP AND DRAIN WATER, THEN FILL SUMP WITH CLEAN WATER.

2. PROBLEM: WATER DISCHARGE FROM THE BLOWER HOOD

SOLUTIONS:

- WATER IS TOO LOW. HIGHER VELOCITY OF AIR IS CARRYING WATER VAPOR THRU THE SYTEM.
- SLUDGE BUILD-UP IN SUMP CAUSES INSUFFICIENT WATER VOLUME.
- BAFFLES REQUIRE CLEANING, ESPECIALLY THE TOP BAFFLE.
- WATER IS FOAMING, CAUSING CARRY-OVER OF SLUDGE INTO BLOWER HOUSING. NEED TO CLEAN SUMP AND DRAIN WATER, THEN FILL SUMP WITH CLEAN WATER.

3. PROBLEM: INSUFFICIENT VACUUM AT DUST SOURCE.

SOLUTIONS:

- FAN RUNS BACKWORDS. CHECK THE MOTOR ROTATION DIRECTION.
- WATER LEVEL IS TOO HIGH, THAT CREATES ADDITIONAL STATIC PRESSURE ON THE SYSTEM,WHICH RESULTS IN REDUCED AIR VOLUME THRU THE SYSTEM.
- DUST COLLECTOR IS TOO SMALL FOR THE DUST SOURCE AND PLUMBING.
- BLOCKAGE IN THE SYSTEM. CHECK DUCTING AND INTAKE PLATE.

4. PROBLEM: OSCILLATION OF THE WATER LEVEL (SURGING)

SOLUTION:

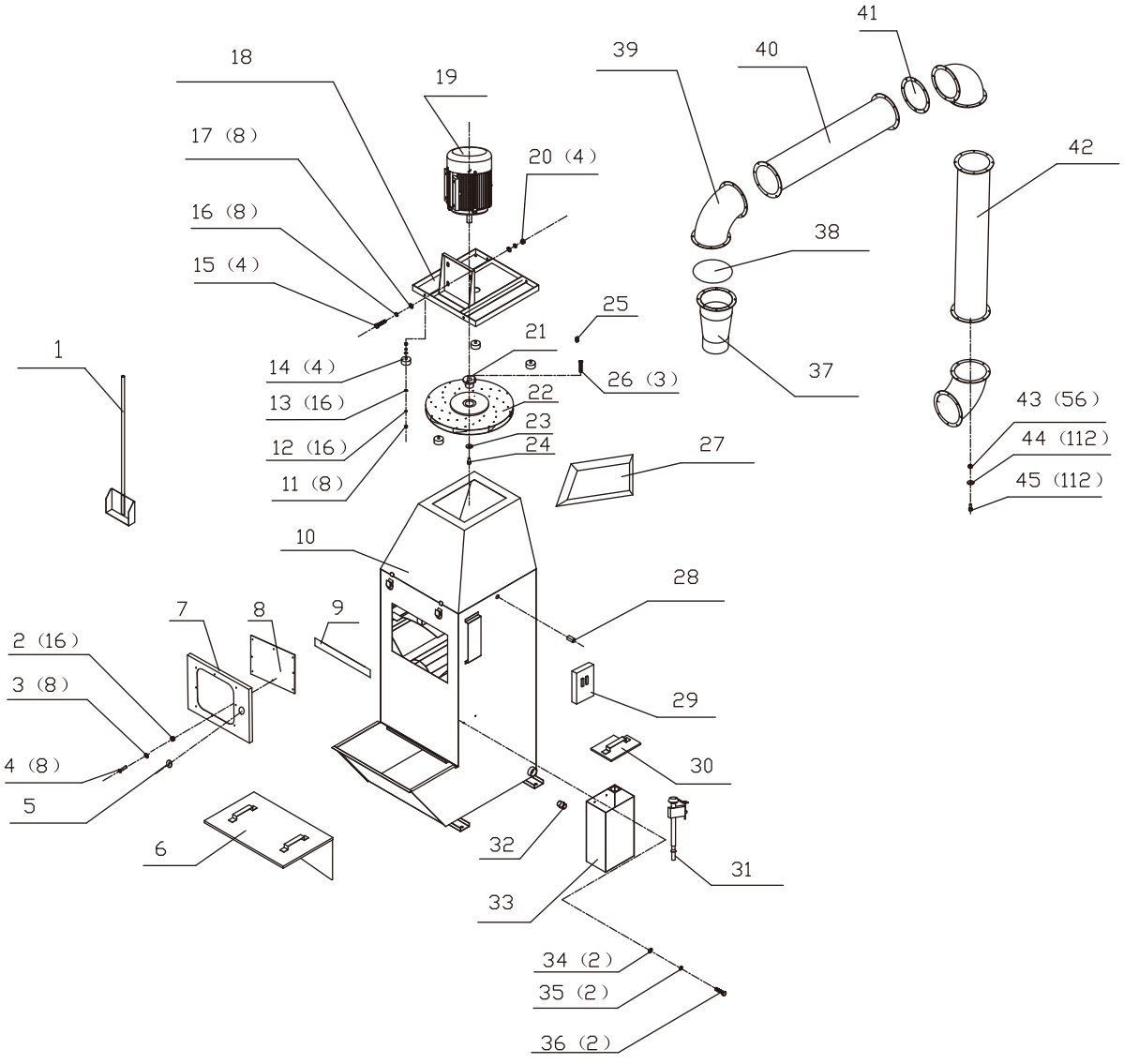
- WATER LEVEL IS TOO HIGH. REDUCE THE WATER VOLUME.

5. PROBLEM: ODOR

SOLUTION:

- FOUL WATER OR DECAYING POCKETS OF DUST. THOROUGHLY CLEAN THE MACHINE, REPLACE WATER AND ABOVE THE WATER LEVEL.

Part #	Desc.	Size	Q'ty
1	Shovel		1
2	screw	M6	8
3	flat washer	6	16
4	Hexagon head screws	6	8
5	lock	SM802	1
6	cover		1
7	front door		1
8	glass plate		1
9	plate		1
10	body		1
11	screw	M10	8
12	spring washer	10	16
13	washer	10	16
14	connecting screw rod		4
15	Six hexagon bolt	M10X40	4
16	spring washer	10	8
17	flat washer	10	8
18	Motor connecting frame		1
19	motor		1
20	screw	M10	4
21	Tension sleeve	45	1
22	impeller		1
23	gland		1
24	Six hexagon bolt	M8X16	1
25	key	B10X20	1
26	Hexagon head screws	M8X30	3
27	Sound-absorbing cotton		1
28	connecting sleeve		1
29	switch		1
30	Water tank cover		1
31	Tank inlet valve	400A	1
32	connector	1"-1"	1
33	water tank		1
34	flat washer	6	2
35	spring washer	6	2
36	Six hexagon bolt	M6X20	2
37	connector		1
38	hoop	¢ 2154	1
39	elbow		3
40	conneting pipe		2
41	seals		7
42	conneting pipe		1
43	screw	M6	56
44	flat washer	6	112
45	Hexagon socket head cap screws	M6X20	56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