

OSKAR Robotic Welding Collector

General Safety Information

MACHINE WARNING SIGNS



Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Used without the safety alert symbol (▲) indicates potentially hazardous situation which, if not avoided, may result in property damage.



Warning of electric shock



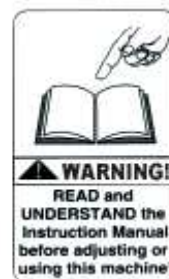
Do not expose the equipment to rain or use in damp locations.



Figure 1



Do not use the equipment around flammable products, if not avoided, sparks can ignite vapors from flammable products. Read and understand all warnings and operating instructions before using this equipment. Failure to follow all instructions may result in electric shock, fire, and/or serious personal injury or property damage.



WARNING!
READ and UNDERSTAND the Instruction Manual before adjusting or using this machine!

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



SMT-090217



OSKAR Robotic Welding Collector

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Specifications

Motor.....	10 HP (7460 W)
Air Volume (C.F.M.).....	3000 Ft ³ /Min (85 M ³ /Min)
Air-to-cloth Spun Bond.....	5.81
Space Occupied (L x W x H).....	102.4" x 86.7" x 45.9" (260 x 220 x 116.5 cm)
Approximate Weight.....	2447 lbs (1110 kgs)

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General Safety Information

(Continued)

▲ WARNING

Use this product carefully to effectively avoid any possible danger. Observe the following safety regulations to avoid bodily injury due to electrocution during use.

Read this Manual carefully before operating the product and preserve the Operation Manual properly.

1. Keep work area clean and organized.
 - A disorderly working environment will cause inconvenience and danger during operation.
2. Check if the working environment is suitable for using the product.
 - Do not use the product in a humid environment.
 - Use the product in a good working environment to reduce risks.
 - Do not use the product in a flammable gas or liquid environment to avoid danger.
3. Keep other persons away from the product, except for the operator, to avoid danger.
 - Do not let children get close to the

product. All wires used by the product shall be in a safe location to prevent children from touching them.

4. All tools shall be safely stored.
 - When the tools are not used, please store them in a dry place safely beyond the reach and access of children.
5. If the machine breaks down, contact a service technician. Do not attempt to repair and possibly damage the machine.
6. When using the product, be sure to put on a welding suit and mask.
7. Use the electrical wires correctly.
 - During use, do not drag the electrical wires forcefully. Do not use these wires if fraying or current leakage occurs to avoid injury to the operator.
8. Before replacing parts, shut off power to the machine.
 - Check that the switch is in "on" or "off" position. Do not attempt the replacement when the machine is running. To replace parts or filter material, make certain that the switch is "off".
9. Use the power cord correctly. The total length of power cord shall not exceed 10 feet to avoid low power due to a drop in

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voltage and to prevent a possible hazard.

▲ WARNING

When connecting the product, always follow the instructions in the Operation Manual to avoid injuries.

10. Care and Maintenance:

- Confirm that the parts/accessories have been fully assembled and will not adversely affect the machine operation.
- Check if the machine is operated properly.
- Replace damaged parts or accessories according to the instructions of the Manual. If the said instructions are not specified in the Manual, have a professional technician carry out the maintenance or replacement.
- Check that the electrical specifications of this machine meet safety requirements, and that the maintenance is carried out by a professional technician. Use original manufacturer's parts and accessories to avoid injury.
- If a problem occurs, contact your dealer immediately.

ADDITIONAL WELDING FUME EXTRACTOR SAFETY RULES

▲ WARNING

The Welding Fume Extractor can be dangerous if it is operated incorrectly.

Therefore, the product must be used cautiously to avoid causing a hazard or damage. Unnecessary injuries may occur by failing to follow the instructions of the Safety Rules Manual. Be sure to put on protection equipment or suit that can protect your body, such as helmet and eye mask to avoid injuries from occurring. If any doubts or any unfitness occurs during use, be sure to stop the operation immediately. Keep in mind that the user shall be liable for using according to the specified safety rules and for operating the machine correctly.

1. Read this Manual carefully before operating the product.
2. Be sure to follow local electrical and safety regulations and observe the electrical safety standards practiced in the relevant area. All electrical wire connections and installation shall be carried out by a professional technician.
3. Do not operate the product near flammable materials, as sparks may ignite these materials and cause an explosion. Please confirm there aren't any flammables near the working site to avoid hazard.
4. This product is suitable for collecting smoke and welding oil gas. Do not use it in collecting iron chips and dust at the same time to avoid producing sparks.
5. Before replacement of parts or filter

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materials, be certain that the switch is disconnected.

6. Do not kink the power cord and keep it away from oil, chemicals or flammables.
7. Check that the voltage, phase count and grounding wire match the machine requirements.
8. When the fan blades are operated at high speed, do not reach hand near these blades to prevent finger from breaking or clothes/necktie from getting caught. Do not put the hand or foreign matter into the air inlet to avoid getting caught in the high-speed rotation of fan blades.
9. When not in use, all air inlets of Welding Smoke Treatment Machine shall be covered.

Assembly

Do not connect the Welding Smoke Treatment Machine before the assembly is finished and you have read and understood all of the precautions stated in the Manual.

NOTE: For correct assembly, refer to the Illustrations and Parts List on pages 12-16.

Installation

MOVING AND TRANSPORTATION

The net weight of this machine is about 291 lbs. It CANNOT be handled and transported without the help of lifting tools. For your

safety, read all instructions carefully.

Do not move without the help of others to avoid causing danger.

ELECTRICAL INSTALLATION

POWER CONNECTION

1. Confirm that the power is properly



connected under normal power

supply condition. It is recommended to provide manual shutdown device before connecting power.

2. It is recommended to protect the control equipment with suitable grade of fuse, and the length of fuse and power cord shall not be over 10 feet.

SHUTDOWN

1. Disconnect power by manual method.
2. When stopping operation, check if the switch is under off status.

EARTHING WIRE

Connect yellow/green wires to the earthing wire power jack. Confirm that the earthing wire has been properly connected before connecting main power cord to the machine at all times.



Do not disconnect the wiring jack

before cutting off power!

POWER INSTALLATION AND STORAGE

The electrical power is configured as following. If conditions are beyond the scope stated below, then it is required to ensure



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that the power is well arranged and safe.

- Ambient temperature: Between 41°F and 131°F. If the time is over 24 hours, then the ambient average temperature shall not be over 122°F.
- Humidity: Between 30% and 95%
- Altitude: 3,280 feet
- Moving and Storing: -13°F to 131°F. For short-time storage (less than 24 hours), the storage temperature can be up to 158°F.

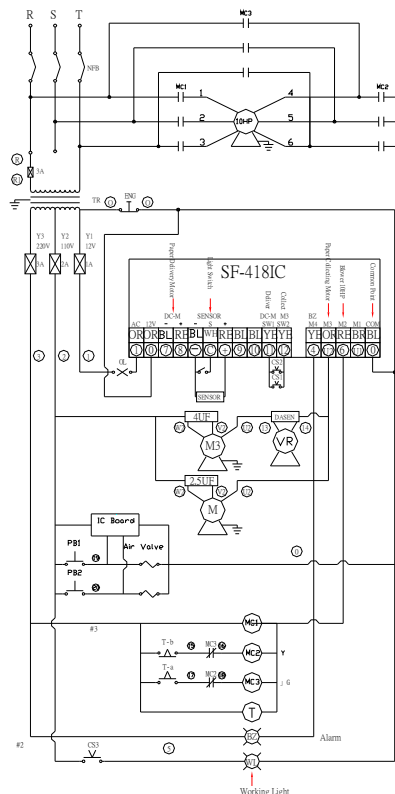


Figure 2 – Electrical Circuit Diagram

Operation

PRIOR TO START UP

Purpose: The Welding Fume Extractor is specially suitable for treating the smoke generated during ordinary welding processing work, which can effectively collect and screen the smoke resulting from the welding work in maintaining the air quality of the working environment.

- Before starting the machine, be sure to read this Manual carefully.
- Before starting the machine, check if relevant safety protection measures have been taken according to the Manual.
- Before starting the machine, watch the motor turning direction according to the instruction of arrow direction.

START UP

1. To ensure satisfactory performance for the Welding Smoke Treatment Machine, please confirm the air volume, power and the matching table of the Welding Smoke Treatment Machine.
2. Connect power according to electrical installation procedure after installing the Welding Smoke Treatment Machine and the table. Disconnect power according to electrical installation procedure when the

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machine is not used.

3. The Welding Smoke Treatment Machine shall be turned on and off by pushing I/O button. Under normal operation status, use such I/O button.

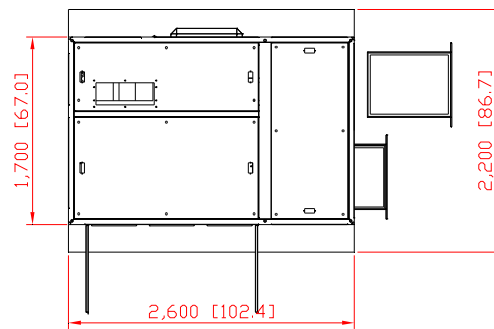
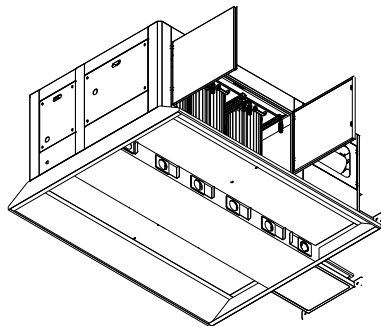
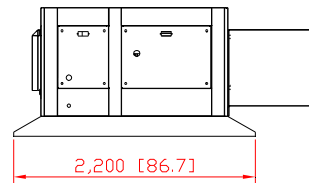
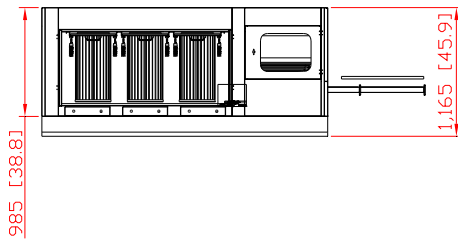
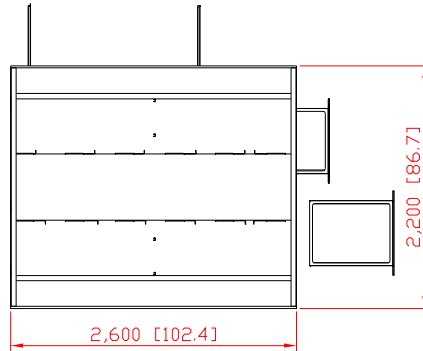
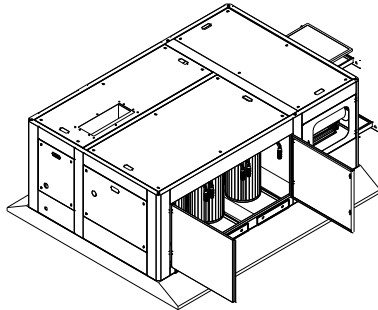
Unpacking

The machine should be unpacked carefully. Check if the machine and components are consistent with those indicated in the Parts List. If any doubt arises or when the components are incomplete, contact your dealer.



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Dimensions (in mm / inches)



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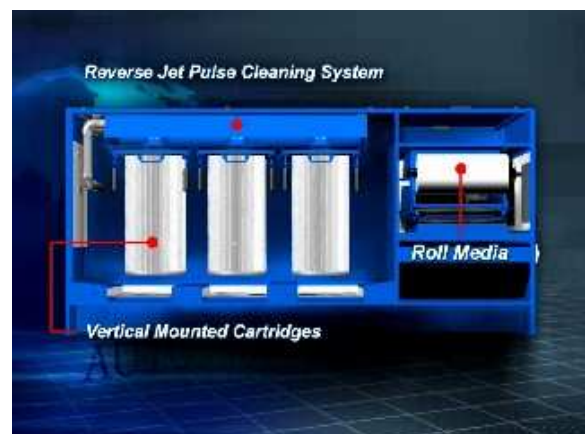
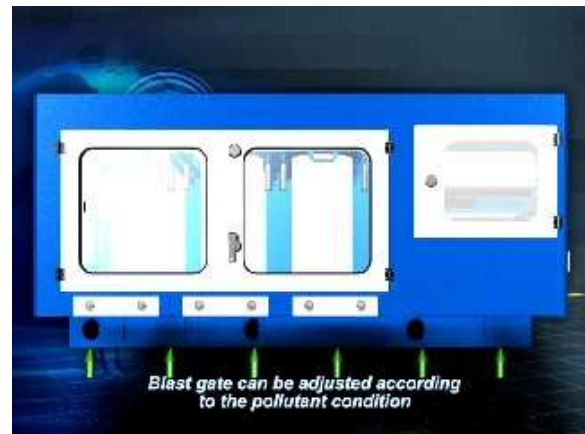
FEATURES

3) Filter Hydrant Inlet

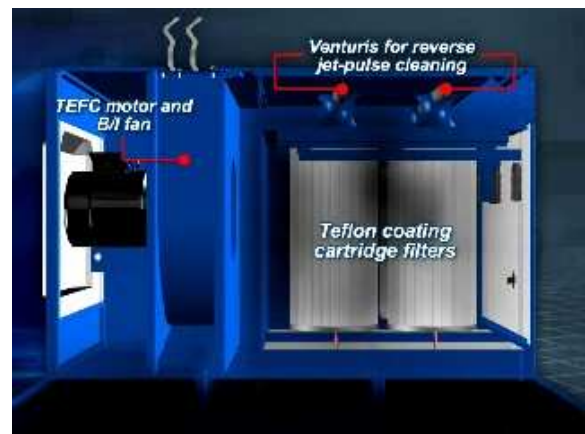
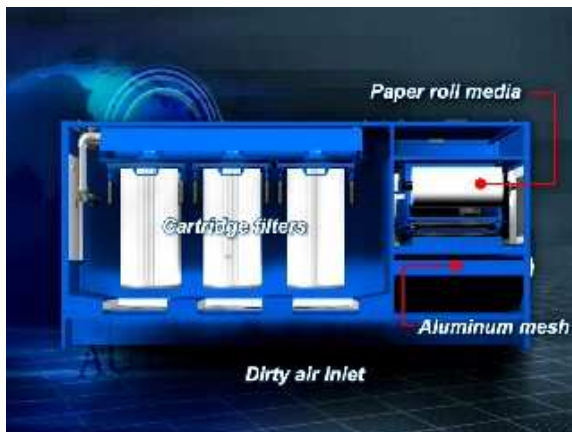
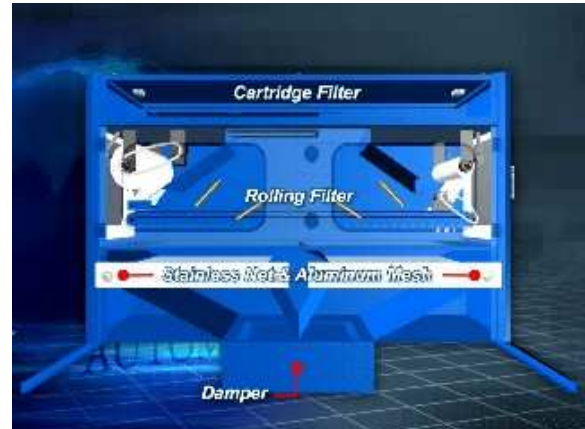


Filter Hydrant Inlet

The inlet can be connected to a water conduit to put out fire spark.



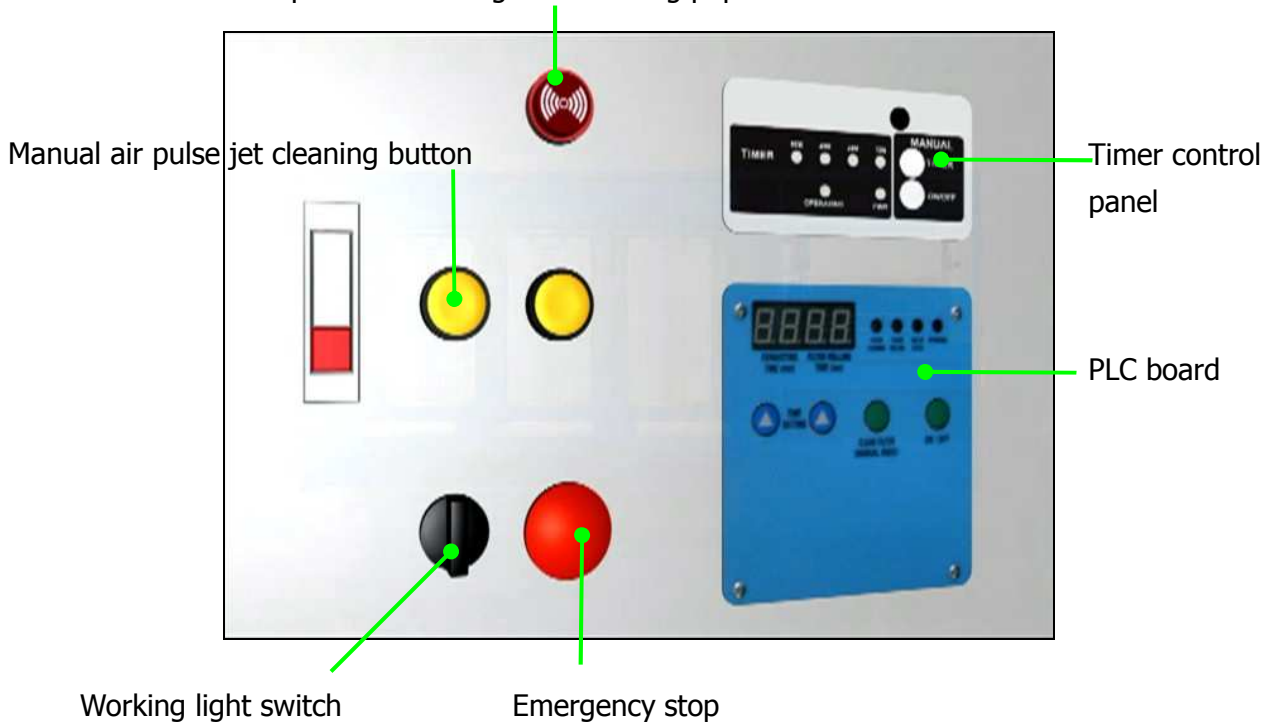
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Control Box

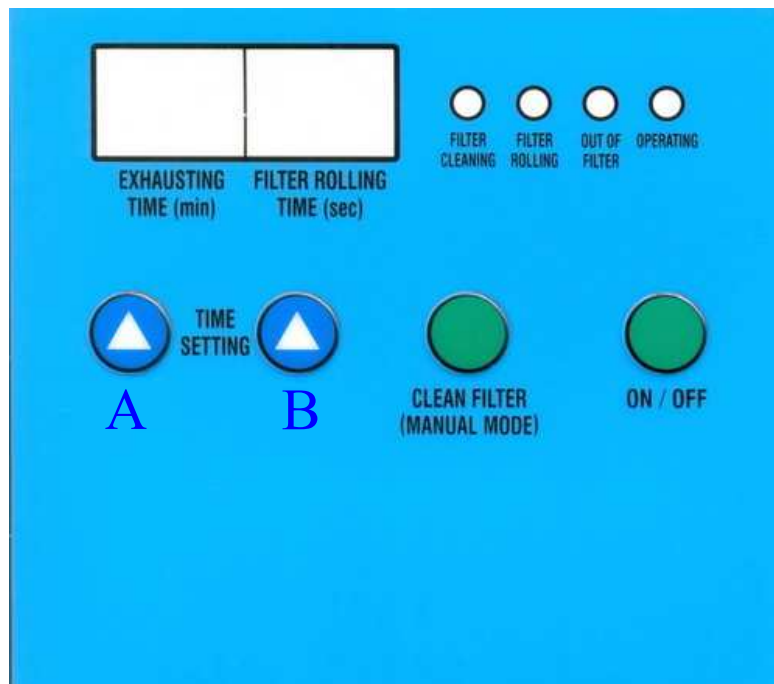
The alarm beeps when running out of rolling paper filter



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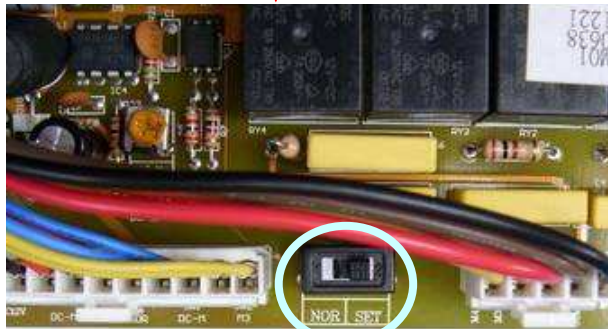
1. "ON/OFF": ON/OFF switch.
2. "TIME SETTINGS": Set the dust-collecting cycle [in SET position](#).
 - (1) "A" Button: Control the "**Dust Collecting Time**" (by minute). The dust-collecting cycle after starting the machine can be set at 30min/ 45min/ 1H/ 2H/ 3H/ 4H of the dust-collecting interval respectively.
 - (2) "B" Button: Control the "**Filter Rotation Time**" (by second). The rolling time renewing for Roller-type Filter can be set at 10/ 15/ 20 /25 /30 /40 seconds of turning duration.

"Example": Presuming "Fume-collecting Time" is 30 minutes and that of "Filter Rotation Time" is 10 seconds, which means the Roller-type Filter will automatically roll and renew for every 30 minutes of machine operation and the rolling duration per time shall be 10 sec
3. Indicator Description:
 - (1) RUNNING: Illuminates after starting the operation.
 - (2) FILTER RUN OUT: Illuminates when the Roller-type Filter runs out.
 - (3) FILTER CHANGE: Illuminates when changing the Roller-type Filter Paper.
 - (4) FILTER WASH: Illuminates during vibrating dust washing.

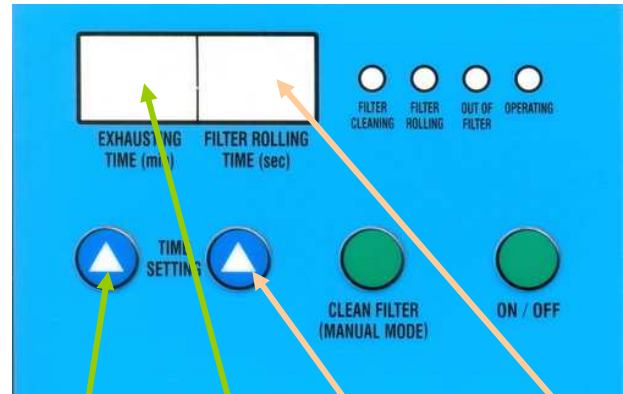
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Rolling Paper Setting

1. Adjust the bottom switch (at back) from NOR to SET to modify settings.



2. When IC panel in SET position, the numerical of the panel will flash as follows:



Left Blue Button Press Frequency	Left Screen Display	Right Blue Button Press Frequency	Right Screen Display
1	30	1	10
2	45	2	15
3	1H	3	20
4	2H	4	25
5	3H	5	30
6	4H	6	40

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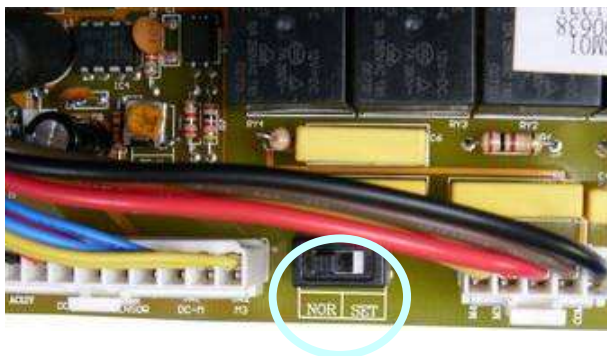


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3. Press left blue button to set exhausting time.
4. Press right blue button to set filter rolling time.
5. Assuming that the exhausting time is set at 1H, filter rolling time is set at 10 sec.
6. After settings, switch back to NOR and fasten the control box securely.
8. The IC screen displays:

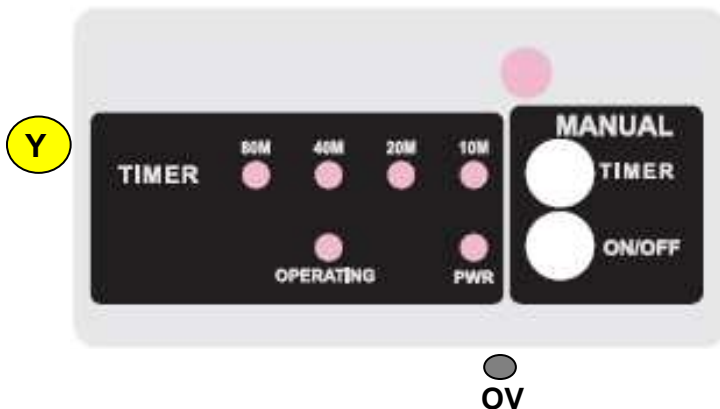


7. IC control panel works only in NOR position.



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Control Panel



80M/40M/20M/10M: Time setting indicating light (accumulated function)

TIMER: Time adjusting button

ON/OFF: ON / OFF button

PWR: Power indicating light

OPERATING: Operation indicating light

Y : Manual air pulse jet cleaning button

OV : Overload 25A

Accumulated Function:

1. When operating, timer will automatically set to release air in every 10 minutes.
2. Press TIMER once, the time setting light will be switched to 20M. Press it one more time, both 10M and 20M lights will be on, so the time is accumulated to clean in every 30 minutes.
3. Press TIMER again, the time setting light will be switched to 40M.

4. Press it one more time, both 10M and 40M lights will be on and the time is accumulated to clean in every 50 minutes. Press it again, both 20M and 40M lights will be on and the time is accumulated to clean in every 60 minutes. Press it again, the 10M, 20M and 40M lights will be on and the time is accumulated to clean in every 70 mins.
5. Following this cycle, the time setting may be adjusted manually to 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 120 and 150 mins. The maximum allowance time setting would be 150 mins.

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Pulse Cleaning Setting:

Timer Operation (Accumulated Function)				
Pulse Frequency	80M	40M	20M	10M
ON				●
1			●	
2			●	●
3		●		
4		●		●
5		●	●	
6		●	●	●
7	●			
8	●			●
9	●		●	
10	●	●		
11	●	●	●	●

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Roller Paper Conveyed System

1. Operation Introduction:



The rolling paper filter is attached beneath the steel wire during machine operation. The roll media system is conveyed via chain and steel wire which is driven by a **110V** DC motor (refer to the red circle). Whereas, paper collecting side for the dirty roll paper is transmitted through a **110V** motor (see photo 2, pink circle). This **110V** motor is a torque motor that will stop operating when sensing tense paper roll media. If the chain and steel wire do not move or are delivered more slowly by this torque **110V** motor, the strong power of **110V** motor without any torque function will rip off the paper filter.

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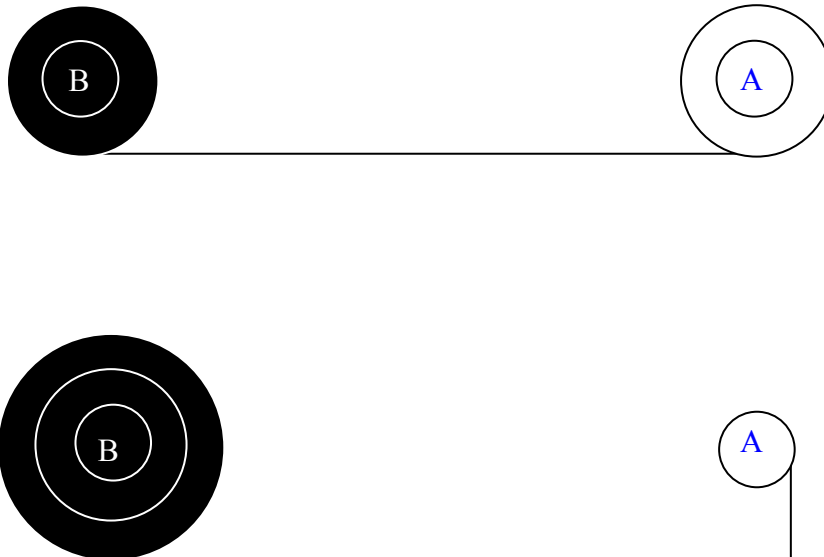
The two yellow buttons at both sides are in use only when loading/unloading the roller paper filter. The torque settings for 110V motor is adjusted and fixed after a long period of testings. If intending to control the roller media manually, please push the yellow button to transport the clean paper at photo 2 (green circle) and push the other yellow button to gather the dirty paper filter at photo 2 (pink circle).

2. Concept for driving the conveyor:

The conveyor is propelled by one 110V motor and one 110V torque motor. When rolling the paper, the circumferences for both rolls have been changed. Further explanation as the below drawings:



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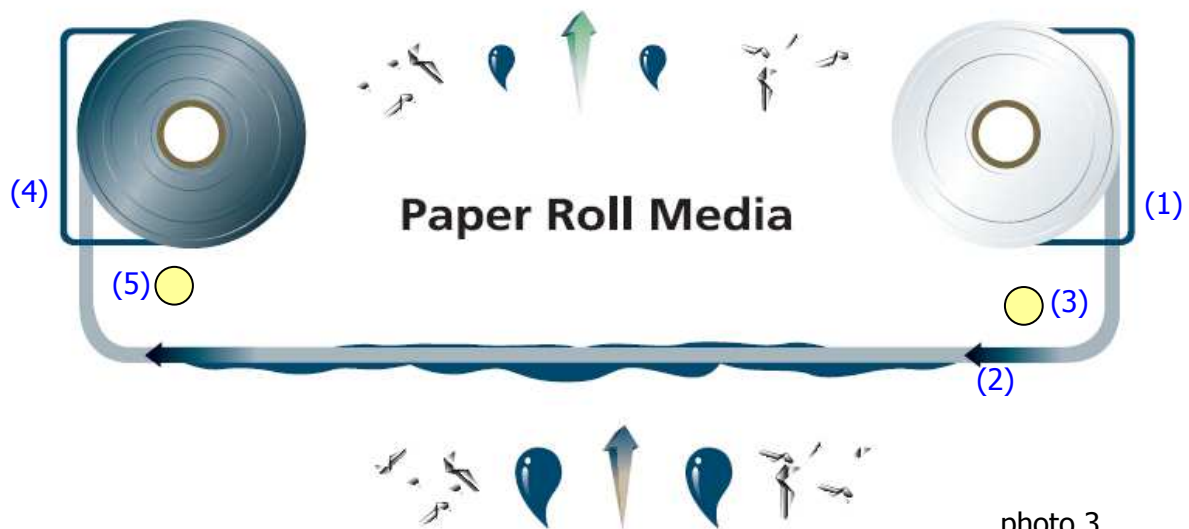


When the paper filter is transmitted to the dirty side, A expands and B accumulates. The periphery for A and B varies.

PLC attached to the machine is able to control the roller paper system simultaneously, which is to have A extended and request B to roll up accordingly. Please press control panel for manipulating the paper roll media system.

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3. Procedures for installing paper roll media:



- (1) Install the new roll media at your right side when facing the right side of the machine.
- (2) Pull out the new roll media a little and stick the new paper on the chain.
- (3) Push the yellow button to deliver the paper.
- (4) Fasten the conveyed paper filter securely.
- (5) Push the other yellow button to roll up the paper.
- (6) Assembly completed.

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Maintenance:

REGULAR Maintenance



1) Water Filtering Device

Water Filtering Device

Air requirement for the pulse jet cleaning system is 6 kg.

Release the water from the nozzle when water reaches the black level.



Water Filtering Device

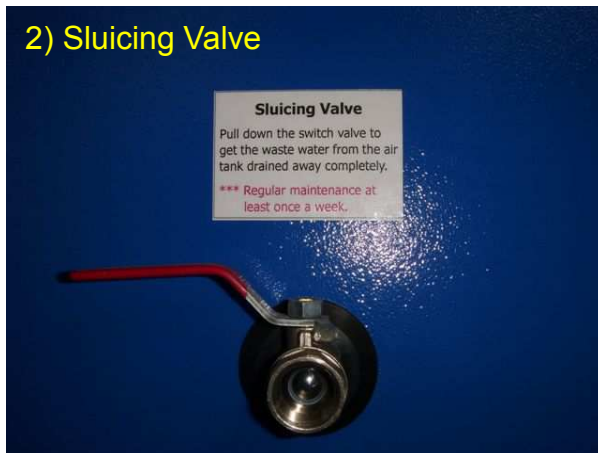
Air requirement for the pulse jet cleaning system is 6 kg.

Release the water from the nozzle when water reaches the black level.

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WEEKLY Maintenance

2) Sluicing Valve



Sluicing Valve

Pull down the switch valve to get the waste water from the air tank drained away completely.

***Regular maintenance at least once a week.



Aluminum Mesh

Clean at least once a week.

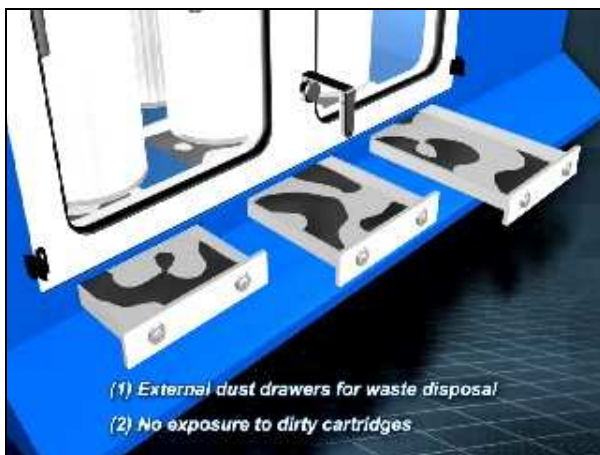
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Rolling Filter

Paper is conveyed automatically.
Check weekly in case the paper runs out.

MONTHLY Maintenance



Drawer

Clean the drawers monthly.



Filter Fixer

Check the Filter Fixer weekly. Ensure that the Fixers are secured.

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Repair Parts Illustration

For Repair Parts, call 1-919-570-2862

24 hours a day – 365 days a year

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

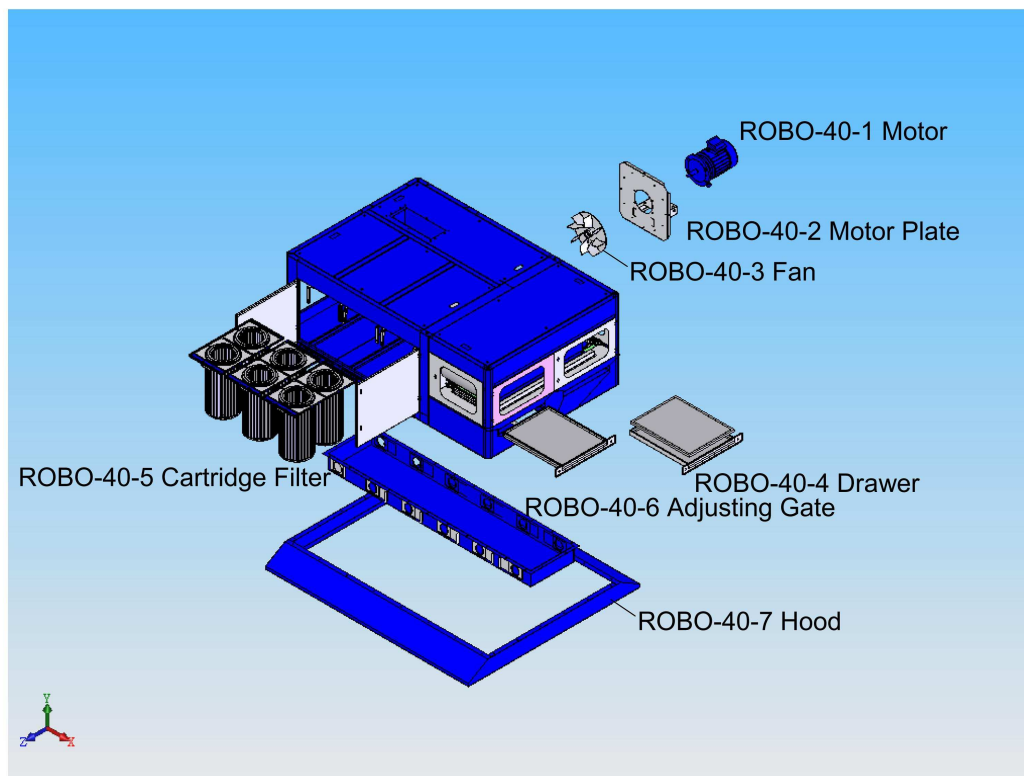


Figure 3

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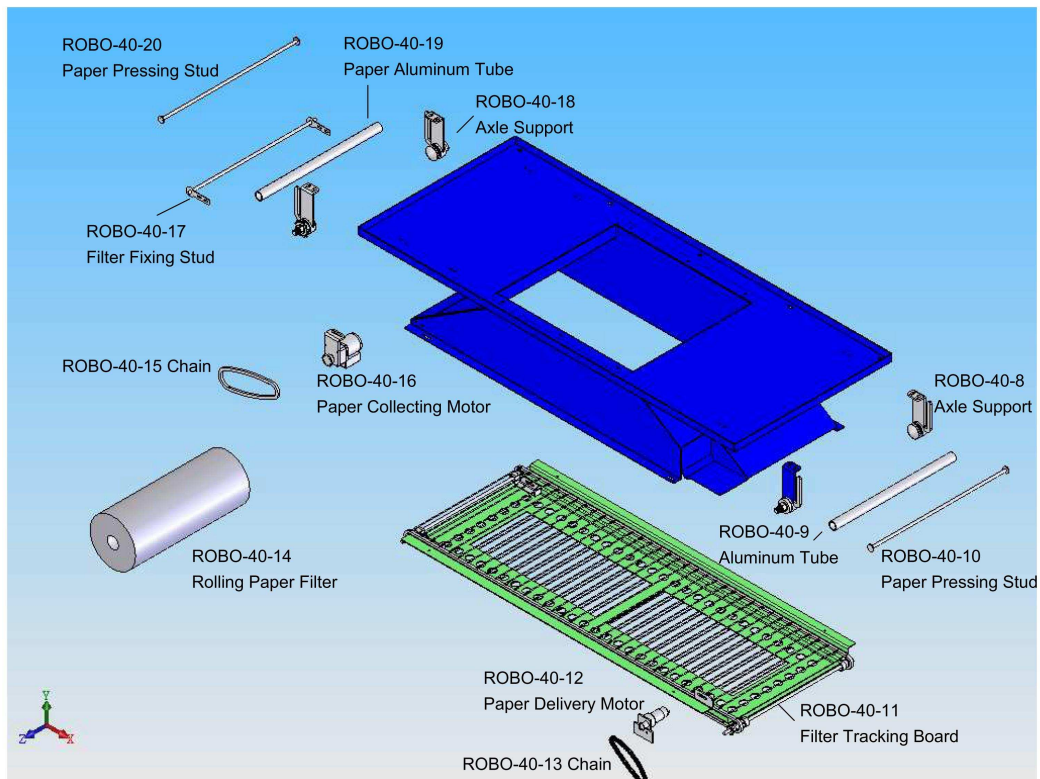
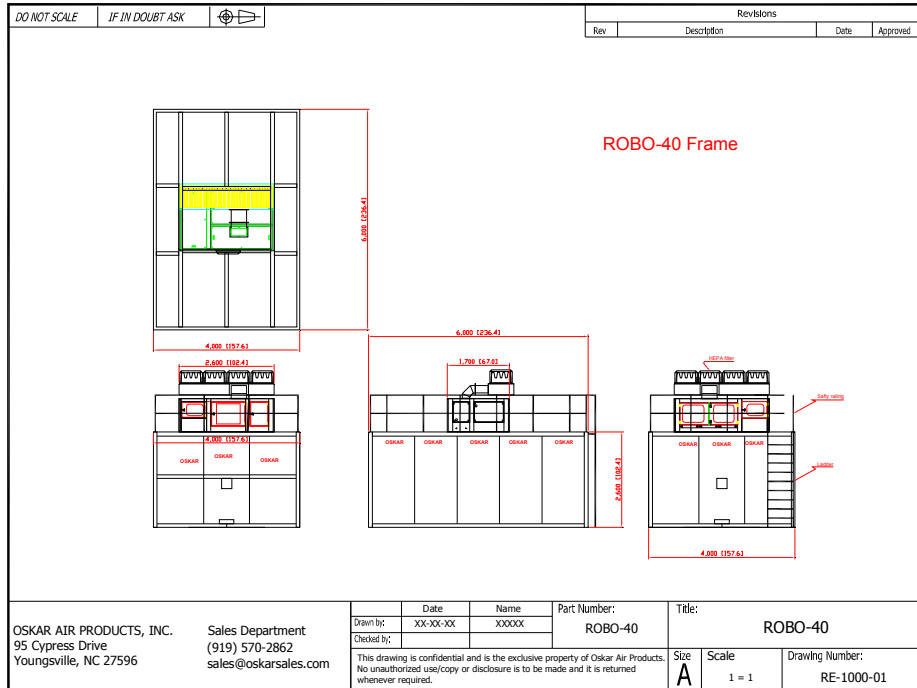


Figure 4

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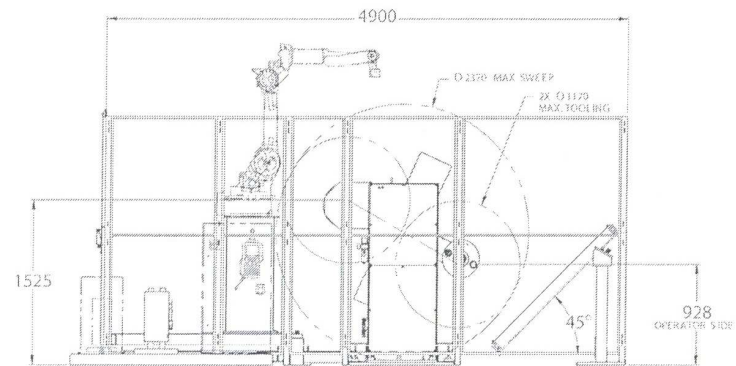
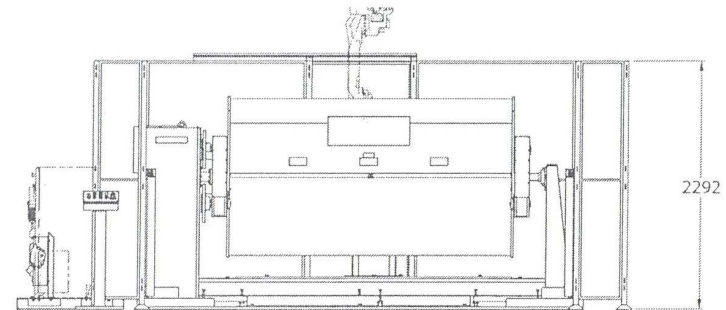
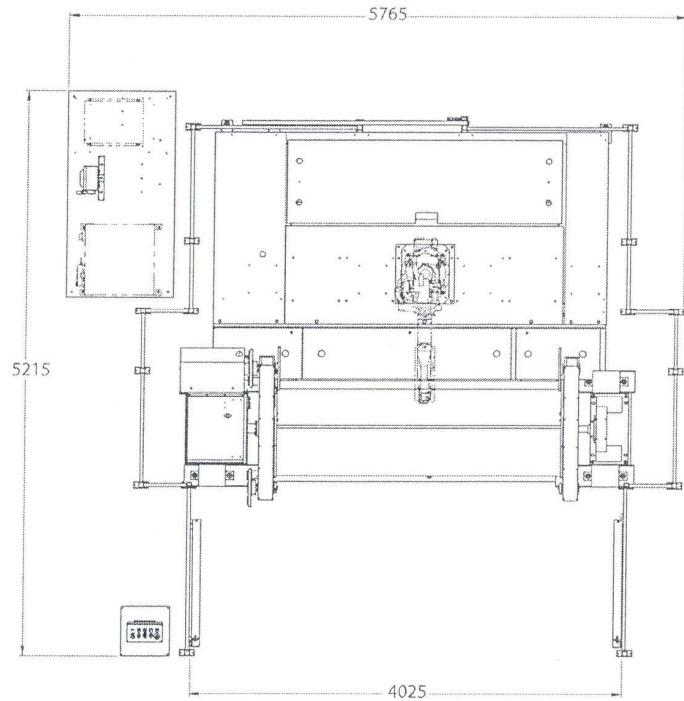
Application for ROBO-40:



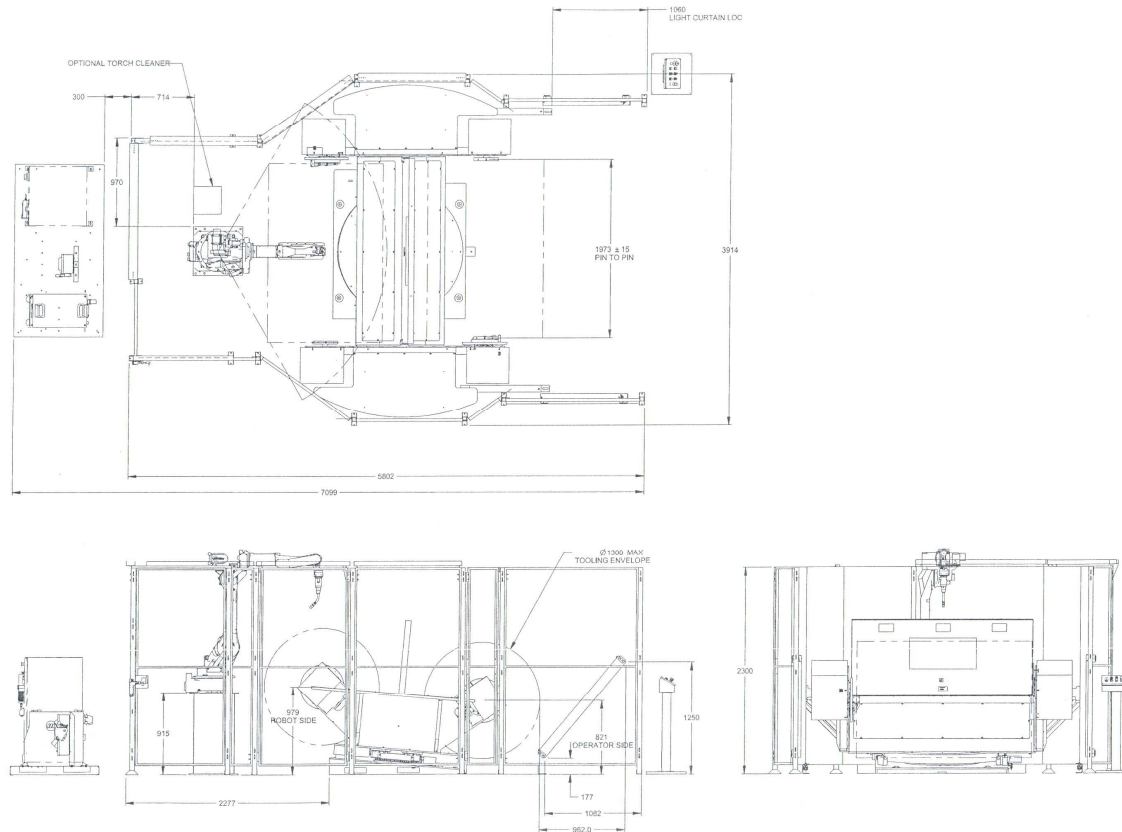
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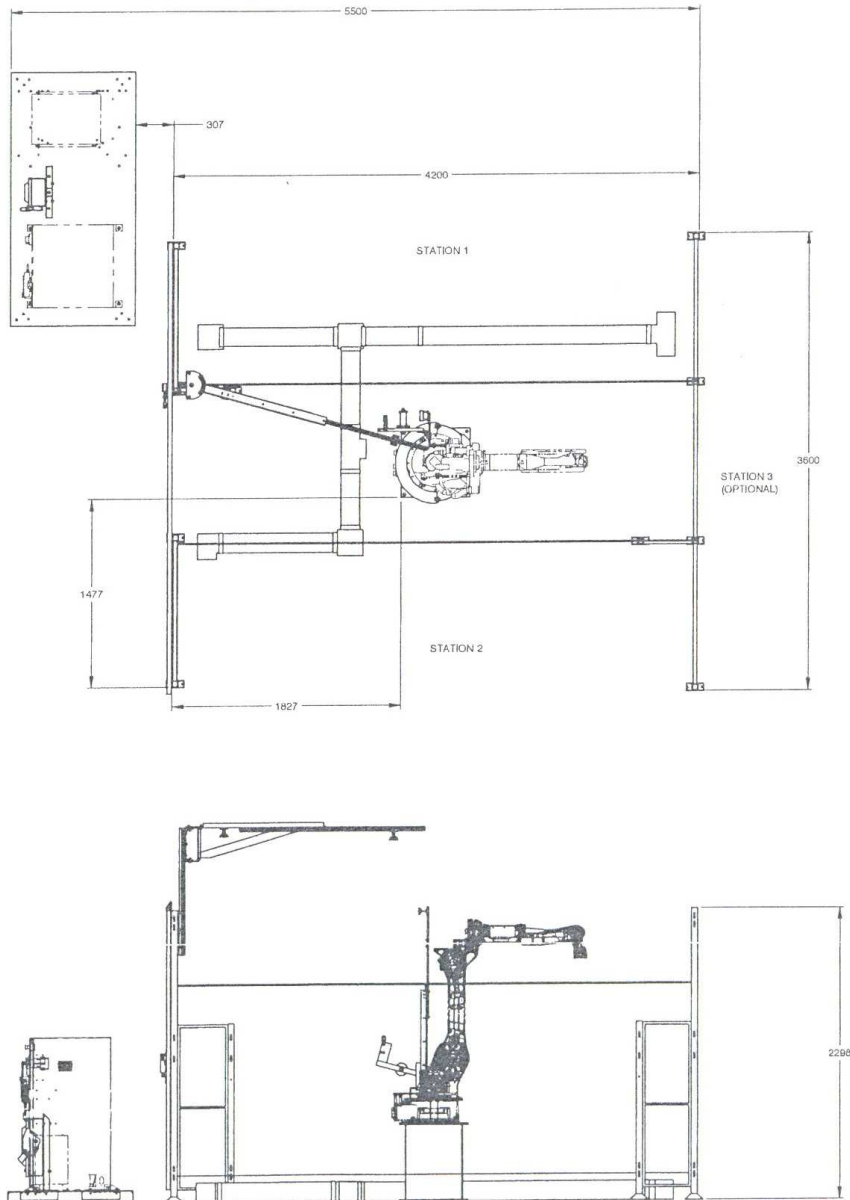
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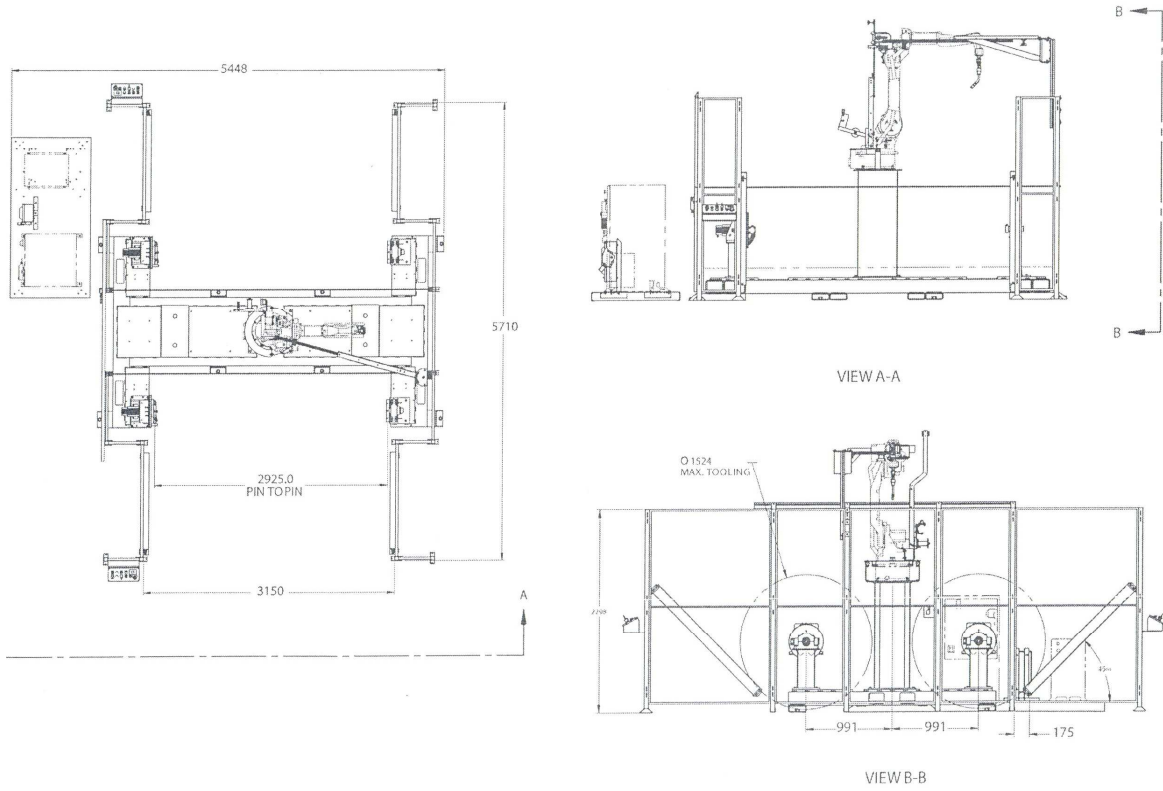
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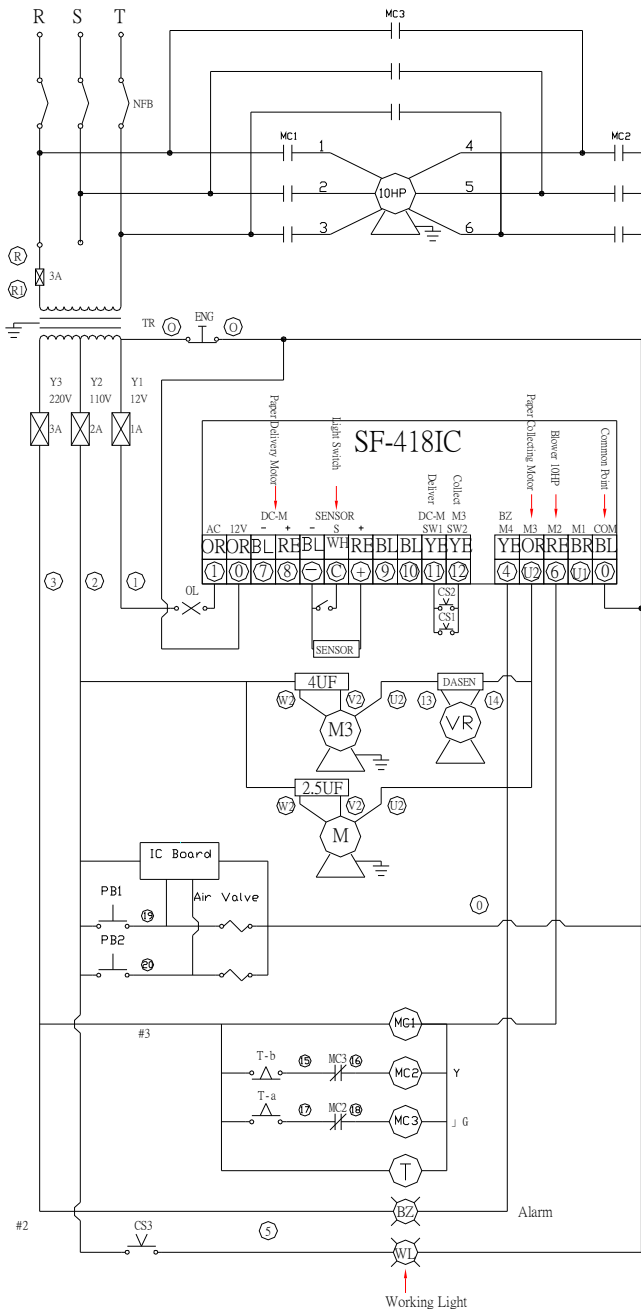


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Appendix



Electrical Circuit Diagram

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

