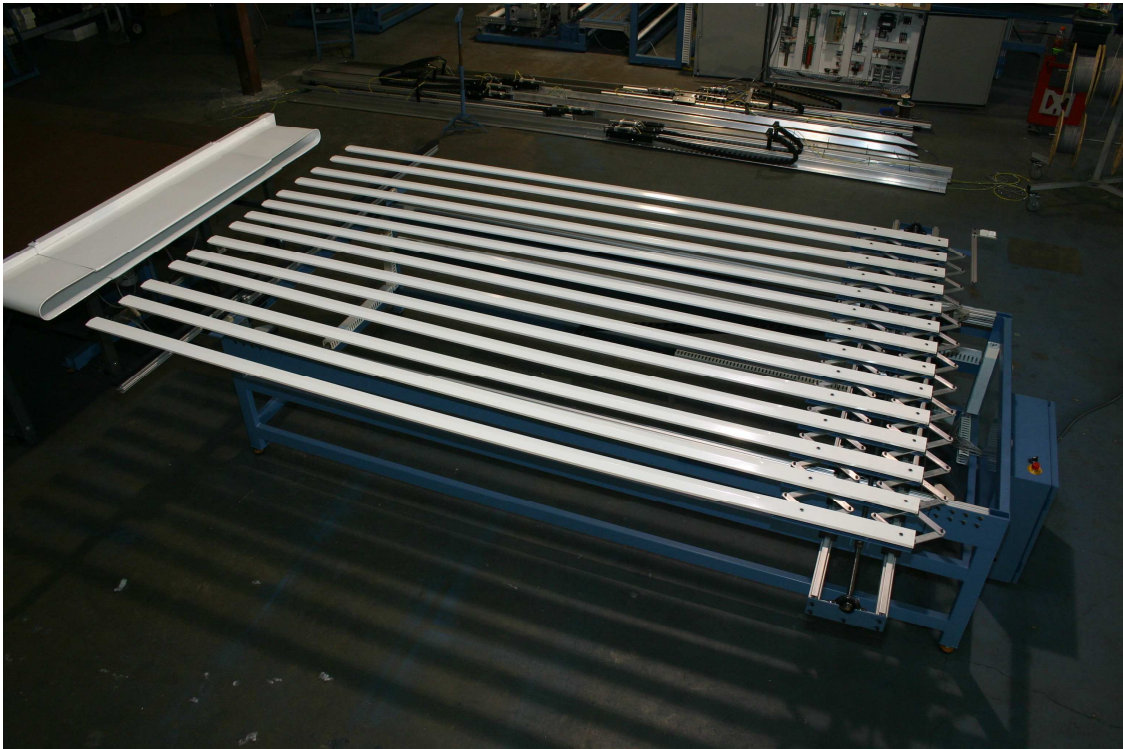


ABM INTERNATIONAL, INC.

MODEL: AF2000
COMFORTER
FILLING MACHINE
SERVICE MANUAL



www.abminternational.com



ABM INTERNATIONAL, INC.

AF-2000 COMFORTER FILLER

Manual ver: 1.0

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Introduction

ABM International would like to thank you for the purchase of an AF-2000 Comforter Filler. ABM is confident that this machine will meet or exceed your expectations for cost, speed and durability.

If at anytime you experience problems with any of your ABM machines we ask that you contact us - 24 hours a day by calling our service department at (281) 443-4440. We can help you solve the problem quickly, and correctly. Your calls, questions, and comments will in turn help us to perfect the quality of our products and services in the future.

Once again, we thank you for your purchase.

ABM International, Inc.

Joe Podolski
Vice President
Engineering Department

Section 1.0 - Safety

1.0 Safety Introduction

As with the operation of all machinery, safe operation of the AF-2000 is a major concern of ABM International, Inc. The purpose of this section is to inform personnel of the safe and prudent operation of an AF-2000.

We have attempted to recommend the most effective methods and calculations to warn against actions that could result in personal injury, or make equipment unsafe. It is important to understand that ABM cannot anticipate, or list all conceivable safety methods and warn of all the possible hazards. In the interest of promoting safety, ABM advises that the operating personnel should always make sure that personal safety and the safe operation of the machine will not be adversely affected by their actions.

It is imperative that the operating personnel of the AF-2000 read and understand the information in this manual before operating the machine.

1.1 Safety Policy Statement

The conservation of the assets of any company, which include the buildings, equipment, supplies and inventories as well as personnel, must be and is the responsibility of all levels of management. The purpose of a personnel and property conservation program is to insure that all phases of management recognize that personnel and property conservation are both inseparable parts of a company's objective...to produce quality products at the lowest possible cost.

Safety of personnel in every aspect must be of first consideration. The implementation of a conservation program will eliminate human suffering and effectively lower the direct and indirect costs resulting from employee injury. It will substantially reduce the exposure and probability of damage and / or loss of company's physical assets.

1.2 Safety Practices

The safety factors must be observed to ensure safe operation of the AF-2000.

1. Read and understand the operating instructions of the AF-2000 before operating.
2. Use extreme caution when working around the AF-2000 electrical controls.
3. Keep hands or other body parts away from the moving parts of the AF-2000.
4. Wear appropriate personal safety protection.
5. Stop the AF-2000 immediately at any sign of malfunction or danger.
6. Do not crawl under or into the AF-2000 for any reason during the operation of the machine.
7. Do not reach into the AF-2000 at any time during the operation of the machine.
8. Do not climb, walk, or stand on the AF-2000 at any time.
9. Do not tamper with factory installed guards and or safety devices.
10. Never operate machinery without all ABM installed guards and safety devices intact, and in working order.

11. Before starting the AF-2000, ensure that no loose tools, bars or parts are lying in or on any part of the machine.
12. Proper fire fighting equipment should be kept in good operating condition and kept near in the event of fire.
13. Never attempt to service any of the pneumatic components until the unit is relieved of all air pressure.
14. Do not wear loose clothing or jewelry when operating the AF-2000.
15. Always keep hair from coming in contact with moving parts.

Section 2.0 – Machine Setup

2.0 Setup Instructions

The AF-2000 is fully tested prior to breakdown and delivery to the customer. As a result, this manual provides a section on machine setup so that you can install the machine. Please read this manual in its' entirety and follow all ABM instructions, especially the inspections. Total setup time, less power and air hook-up, should take approximately 2-3 hours.

Upon receipt of the machine, check to ensure that there is no visible damage **Note: Some components may be in different locations depending on the version of the machine.**

2.1 Machinery Positioning

Determine the location in your facility for the filler. Attach the four (4) machine legs supplied with the machine to the plates that were used to bolt the filling machine to its skid. Position the machine in the desired location. ABM strongly recommends that the machine be bolted to the floor.

Manually position the filler so that the slat carriage is activating the filler home sensor. This position is the home or ready position. It may be necessary to remove the chain from the slat carriage drive shaft to move the carriage. Install the slat size change assembly to the carriage and mount the slats (see figure 2.1).

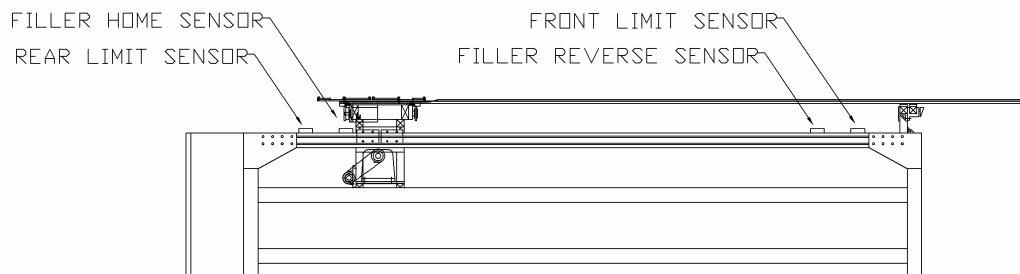


Figure 2.0: Setup of Filling Machine for Installation

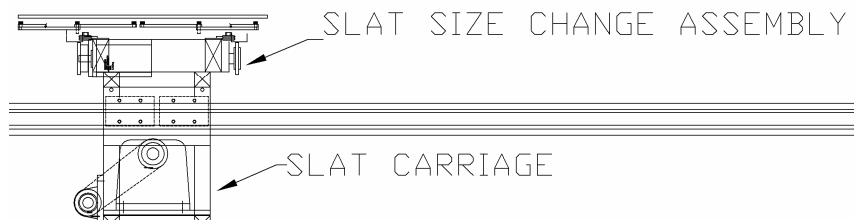


Figure 2.1: Slat size change assembly installation

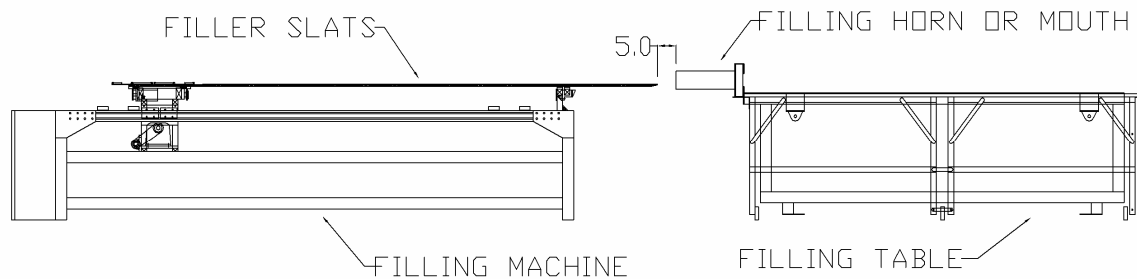


Figure 2.2: Setting the critical distance between the slats and the mouth

Attach four (4) machine legs to the table. Position the mouth of the table no farther than 5 inches from the slats when the carriage is in the home position (See Figure 2.2). ABM strongly recommends that the table be bolted to the floor.

The final step in setup is to adjust and level of the filling slats to the filling mouth. Ideally, the slats should pass through the mouth with no less than $\frac{1}{2}$ " between the bottom of the slats and the bottom of the inside of the mouth (see figure 2.3)

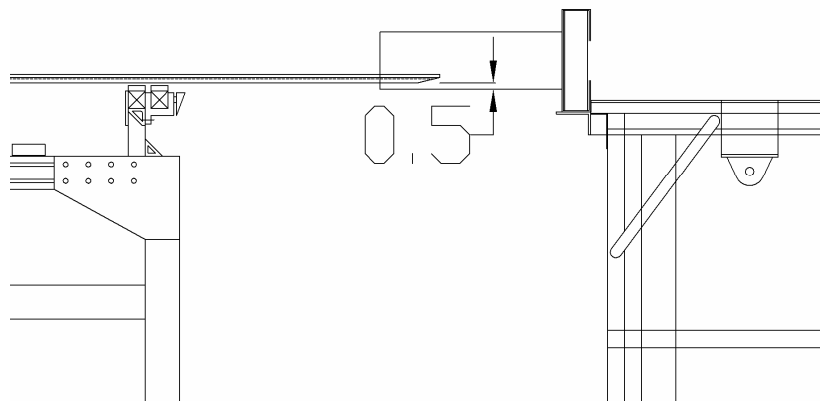


Figure 2.3: Slat to mouth height adjustment.

The mechanical setup is now complete.

2.2 Electrical Inspection

2.2 Electrical Inspection – How the Control System Works

Before testing the electronics of the filler, the user must understand how the control system works. The electrical cabinet located at the rear of the filling machine controls the operations of both the filling machine and filling table. In addition, the control system reports its status to a BC-2000 batt cutting machine if equipped. The communication between the AF-2000 and BC-2000 is open loop. This means the filling machine reports its status to the BC-2000. However, the AF-2000 does not receive any return status from the BC-2000. This allows the AF-2000 to work alone or in cooperation with a BC-2000 with little to no changes to the control system.

If the table or filler encounters an error, the information is relayed to the main controller. The main controller stops production and informs the operator of the error condition. The communication is open loop, meaning one way. The main cutter knows the status of the other modules, but the table and filler are only aware of their own status. If a problem is encountered with a module, that specific module must be corrected to return the machine to proper functioning.

Connect the Filling machine to the table using the provided electrical diagrams. If equipped, connect the Filling machine to the BC-2000 batt cutter machine.

2.3 Filling Machine Inspection

This section will confirm that the electronics of the panel cutter are functioning properly.

WARNING: ELECTRICAL SHOCK HAZARD. IF A PROBLEM IS FOUND, YOU SHOULD NOT ATTEMPT TO REPAIR IT WITH THE POWER ON. DISCONNECT THE MACHINE PRIOR TO ADJUSTING ANY COMPONENTS WITHIN THE ELECTRICAL CABINET.

Connect the filling machine to a 20A, 220V single phase supply. ABM does not supply a main disconnect for the machine but strongly recommends the use of one. Connect the machine to power using the approved standards of your area.

The filling machine is powered ON by simply turning the main disconnect ON. If the machine is connected to a BC-2000 the both machines must be ON to perform these tests.

First confirm that the E-STOP circuit is functioning properly. There are three E-STOPS on an AF-2000. The first is mounted on the electrical cabinet. The other two sensors are located on either side of the filling mouth in the push button stations. Pressing any of the E-STOP buttons should disable all power to the machine. If a BC-2000 is attached, power for both machines should be disabled if any of the E-STOP buttons on either machine is activated. After successfully testing the E-STOP circuit you may check the other sensors for proper functioning.

WARNING: THE NEXT STEP IS TO BE PERFORMED WITH THE PANEL OPEN AND THE POWER ON. ANY PROBLEMS ENCOUNTERED IN THE PANEL SHOULD BE REPAIRED WITH THE POWER OFF. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.

The filling machine is controlled by a programmable logic controller. All of the sensors in the control system are digital (ON or OFF). Open the cabinet and check to make sure all of the sensors are working. A working sensor will cause an input to change state (ON or OFF) when it is manually switched.

Check all of the sensors and pushbuttons on the filler and table for proper functioning. See figure 2.4 for the general locations of the sensors and buttons.

Once the sensors have been checked, the machine is ready for a dry cycle test.

Use the 3 button station on the filling mouth to test the size change system. Pressing the IN or OUT button adjusts both the table and filler simultaneously. Holding the center button and pressing the IN or OUT button will only drive the slats. Press and hold the IN button until the table and slats have stopped on the inner narrow limits. The table and slats will automatically stop as they engage the limits.

Pull the slat wings out fully to engage the size change enable sensors. This will allow the slats to open wider. Failure to engage the size change enable sensors will disable the slats ability to open up to larger sizes. Press and hold the OUT button until the table and slats have stopped on the wide limits. Using the 3 button station on the filling mouth, adjust the slats and mouth so the slats will fit on the inside of the mouth.

The next test will require two personnel. With one person positioned on each side of the filling mouth, press the START buttons simultaneously. Keep your hands and body clear of the mouth and slats. The filler carriage and slats should move forward into the mouth, make contact with the filler reverse sensor and return to the home sensor.

Setup is now complete.

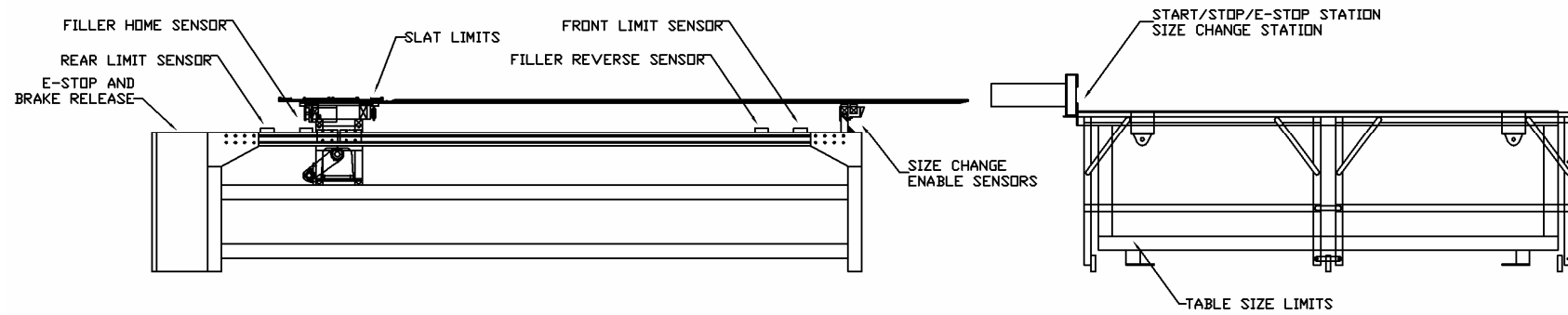


Figure 2.4: Sensor locations

Section 3.0 – Operation

3.0 Filling Table Operation

The filling table performs four functions – operator interface, product support, mouth size changing and comforter shell preparation.

The filling table has push button control boxes located on either side of the filling mouth. From these pushbuttons the operators can change the table size, change the slat size, initiate a filling cycle and perform emergency stops.

To change table size the operator on the side of the 3 button station must press the IN or OUT buttons. The table is limited to a minimum close size of approximately 64” and a maximum of approximately 116” (machine sizes may vary). The IN and OUT button also control the width of the slats on the filling machine. The slats are also limited in minimum and maximum size. Pressing the IN or OUT button will cause both the slats and mouth to move together (Please note that the slat enable sensors must be engaged for the slats to change size). It is common for the slats and table to adjust at different speeds. Because of this the slat size and table sizes may need to be adjusted separately. Pressing the center button on the 3 button station will lock out the table and enable the slats to change size on there own.

To initiate a filling cycle, both START buttons must be pressed at the same time. Pressing either of the E-STOP buttons will disable all power to the machinery immediately.

3.2 Filling Machine Operation

The filling machine performs the task of ramming the fill material into the shell of a comforter or futon. The filling machine cycles between the home sensor and the reverse sensor to fill a product. Both the home and reverse sensor may be adjusted to increase or decrease stroke of the machine as well as cycle time. The speed of the filling operation can be adjusted in the electronics cabinet. Reducing the frequency of the carriages variable frequency drive will slow down the speed of fill. Increasing the frequency will speed up the cycle. **NOTE: Setting the frequency too high (over 75) or too low (below 20) may result in inconsistent machine cycling and may result in damage to the machine.**

If the carriage is not on the home sensor when the START buttons are pressed, the carriage will move towards the cabinet until the home sensor is activated. Once the home sensor is activated, the machine will perform a standard filling cycle

Front and rear limits are installed in case the machine overruns the reverse or home sensors. The limits will stop and reset the machine cycle. To move the carriage off a limit, turn off the brake switch located on the main cabinet and manually push the carriage off of the sensor. Re-engage the brake. To avoid overruns, set the home sensor and reverse sensor far enough away from the limits to allow the machine to stop completely. Additionally, the speed may need to be reduced so that the carriage stops

while activating the home sensor. If the machine stops past the home sensor it will crash into the rear limit the next time the START buttons are pressed.

3.3 AF-2000 and BC-2000 Co-operation

The AF-2000 has been designed to work in conjunction with a BC-2000 Batt cutter. The AF-2000 signals the BC-2000 that it is in the ready (or home) position. It also tells the BC-2000 when it has filled a comforter. This allows the BC-2000 to prepare and drop cut panels onto the filler as they are needed.

The AF-2000 must be fitted with a reflective plate when connected to the BC-2000. This plate allows the BC-2000 to determine where to drop the cut material onto the filler. Without the reflector, the machines cannot communicate properly. Position the reflector on the filling machine so that the BC-2000 drops the material evenly over the filling machine. Position the drop sensor of the BC-2000 so that the reflector can be seen when the filling machine is in the home (or ready) position.

With the filler in the ready position, press START on the BC-2000. The BC-2000 will pull out and cut a panel of material. The BC-2000 will then pull the material onto the filler and drop it when the drop sensor sees the reflector on the filling machine. The BC-2000 will return home and wait for the filling machine to perform a filling cycle before dropping another piece of material onto the filler.

3.4 Proper Product Filling Practices

There are a few techniques that help produce a better filled product:

When positioning a comforter shell onto the mouth adjust the mouth to create a snug fit between the mouth and shell. Too tight a fit may cause the shell to tear. Too loose a fit may cause inconsistent filling and wrinkling.

Position the batting or fill material so that it hangs over the leading edge of the slats. This allows the slats to grab and pull the material into the edges of the shell. This will help to produce comforter with more fill in the edges.

When the filling machine is ramming the fill through the mouth, keep a slight tension on the shell with your hand. As the machine begins to retract, grab the filled corners of the comforter shell and walk away from the mouth towards the end of the table pulling the remaining shell and fill through the mouth.

Section 4.0 – Troubleshooting guide

This section is included to help diagnose and solve any problems that may occur with the AF-2000. ABM has done its best to include as much information as possible. However, not all problems are listed, therefore ABM asks that whenever a problem occurs you contact a service technician at our home office. To reach service dial 281-443-4440 and ask for a service technician, they are on call 24 hours a day, seven days a week.

4.1 Electrical Power

The AF-2000 runs on a 20 amp, 220VAC single phase supply line. The PLC controller, inputs (sensors) and outputs (valves) run on 24Vdc produced by the power supplies found in the cabinet.

4.2 Verifying Inputs and Outputs

Inputs and Outputs can be visibly verified for proper functioning. The filler and table are controlled via a programmable logic controller (PLC). As inputs and outputs are turned on and off, the lights of the PLC will turn on and off. All input and output troubleshooting should begin with a visible confirmation of proper functioning.

4.3 Pneumatic systems

An AF-2000 is not equipped with a pneumatic system as delivered from the factory.

4.4 Troubleshooting notes

A few blank pages are provided so that you and your personnel can keep records and notes of machine problems. By using this section and keeping it attached to the manual, you will always have your own personalized quick reference repair section.

TROUBLESHOOTING NOTES:

Date	Problem	Solution

TROUBLESHOOTING NOTES:

Date	Problem	Solution

TROUBLESHOOTING NOTES:

Date	Problem	Solution

TROUBLESHOOTING NOTES:

Date	Problem	Solution

Section 5.0 – Parts List

This section lists the ABM part numbers needed to order any part on the AF-2000. The section is divided into two lists. Both lists show the quantity, item description and ABM part number for all the components needed to completely rebuild a machine. ABM carries all of the components below in stock at all times. Any order placed before 6:00 P.M. CST can be shipped the same day for next day delivery. The parts/service department can be reached at (281)443-4440. As with any machine, buying the correct parts from the correct manufacturer will allow your machines to operate their best. Buying parts from sources other than ABM will void your warranty.

Filler

<u>Qty</u>	<u>Description</u>	<u>ABM #</u>
2	Slide support plate	M-1005-002B
14	Filler channel	M-1005-003A
4	Size change plate A	M-1005-004
4	Size change plate B	M-1005-005
24	Size change plate C	M-1005-006
24	Size change plate D	M-1005-007
1	Track support frame assembly	M-1005-009
1	Size changer motor plate	M-1005-010
1	Front bearing support assembly	M-1005-015
4	Bearing plate	M-1005-016A
2	Rack drive	M-1005-017
1	Drive shaft	M-1005-018
14	Channel Spacer	M-1005-019A
1	Main drive motor plate	M-1005-020
1	Reflective tape bracket	M-1005-027
2	Gear rack cover	M-1005-030
1	Cable carrier support bracket	M-1005-032
14	Upper channel spacer	M-1005-035A
28	Slat Bearing	M-1005-037
56	Slat lower bearing	M-1007-038
2	Track support frame bracket	M-1007-039
1	Front bearing support bracket	M-1007-040
1	Powdercoating - Brandt Blue - Frame, Gear Rack Guards	
2	SPROCKET - CARRIER DRIVE SHAFT, SLAT SIZE CHANGE SCREW	C1005-030
2	SPROCKET - CARRIER MOTOR / ALL OTHERS	C1005-035
1	BUSHING - SLAT SIZE CHANGE SCREW	
1	BUSHING - CARRIER DRIVE SHAFT	C1005-031
1	BUSHING - CARRIER MOTOR	C1005-034
1	BUSHING - ACME SCREW, SLAT SIZE MOTOR	C1005-036
4	GEAR RACK PITCH 10, 1 FACE, 1 THICK, 6' LONG	C1005-044
4	#40 Chain	
2	3/4" Clamptite collar - acme screw lock	

4	3/4" x 1-1/2" x 36" BLACK UHMW	M-1005-016A
1	Gear Motor - Slat size change 1/15HP, 5:1	C-1007-043
1	Gear Motor - Slat Carriage 1HP, 5:1	C1005-045
1	E-stop Button	
1	Brake On/Off Switch	
1	N.O. contact block	
1	N.C. contact block	
1	Brake On/Off Nameplate	
1	E-stop Nameplate	
1	4 Norm. Open contactor 24VDC Coil	C-1007-324
1	Circuit breaker 15 Amp	C-1007-327
150	1/4-20 T-Nut	
50	5/16 T-Nut	
2	LINEAR GUIDE BEAM	
2	FRONT SLAT BEAM C	
2	SLAT CRADLE BEAM	
2	SLAT FRONT BEAM	
1	SLAT FRONT BEAM B	
1	SLAT POSITION BEAM	
3	SLAT CRADLE SPACER BEAM	
2	CRADLE BEAMS	
20	Upper UHMW bearing	
40	Lower UHMW bearing	
1	Fuse block 6.3 x 32mm fuse	C-1007-344
14	2 to 1 terminal block - (8) IN, (3) #11, (3) #10, (3) E-STOP	C-1007-349
3	2 to 1 terminal block end plate	C-1007-350
16	3 level terminal block	C-1007-351
1	3 level terminal block end plate	C-1007-352
1	80 piece jumper pins red	C-1007-353
1	80 piece jumper pins blue	C-1007-354
6	Din rail stops	C-1007-356
0.25	Blank Marking Tags - 100 per sheet	C-1007-357
2	Marker Strip 10pcs per strip	
6	2" wide x 2" high x 6 ft white wire duct	C-1007-308
6	2" wide x 6 ft white wire duct cover	C-1007-309
1	Power Distribution Block	C-1007-321
1	Distribution block plastic cover	C-1007-321-1
1	3 Pole type FRN-R fuse block, 30 amp max	C-1007-322
6	1/4 x 1" x 12' ALUM RECT.	
1	CARRIER NYLATRAC W/ STD BRKTS	C-1005-053
2	CARRIER RAIL	C-1005-052-1
4	CARRIER BEARING BLOCK	C-1005-052-1A
50	Motor wire, 4 conductor wire, 16 gage (500' spool)	
100	2 conductor Hi-flex cable	

25	4 conductor Hi-flex cable	
25	7 conductor Hi-flex cable	
1	Disconnect Switch	
1	Disconnect	
3	1" dia. two hole base mount pillow block bearing	C1005-028
3	3/4" dia. Base mount pillow block bearing	
1	24x24x8 Enclosure, Nema 12, with panel	C-1007-302
1	Ice cube relay (Single Pull)	C-1007-328
1	Ice cube relay socket (Single Pull)	C-1007-329
1	Power Supply - 24 vDC 15W	
2	10 PITCH 18 TEETH Spur Gear 1" BORE	C1005-029
52	1/4 dia. x 1/4 lg x 10-24 thread shoulder screw	C-1005-060
28	1/4 dia. x 1/2 lg. x 10-24 thread shoulder screw	C-1005-061
1	RH Acme screw 3/4-6 x 6'	
1	LH Acme screw 3/4-6 x 6'	
1	RH Acme nut 3/4-6	
1	LH Acme nut 3/4-6	
4	Locking Handle - 5/16-18 THREAD	
3	Fuse, Class FLNR, 10 Amp	C-1007-335
2	Fuse, 313 Series (.25" x 1.25"), 1/2 Amp slow	C-1007-336
1	Acme screw solid shaft coupling - 3/4" x 3/4"	
4	3/8" x 1/2" SHOULDER BOLTS	
2	5/16-18 Coupling Nut	
4	SMALL MACHINE MOUNTS	
1	1 HP Standard inverter drive	C-1007-319A
2	1/2 HP Standard inverter drive	C-1007-319
2	ABM Sticker	
2	AF-2000 Sticker	
2	USA Sticker	
1	PLC 16 DIGITAL IN / 8 RELAY OUT	
6	Mechanical roller switch	
6	Conduit connector	
2	6 hole slotted inside corner bracket - front slat support	

Filler Table

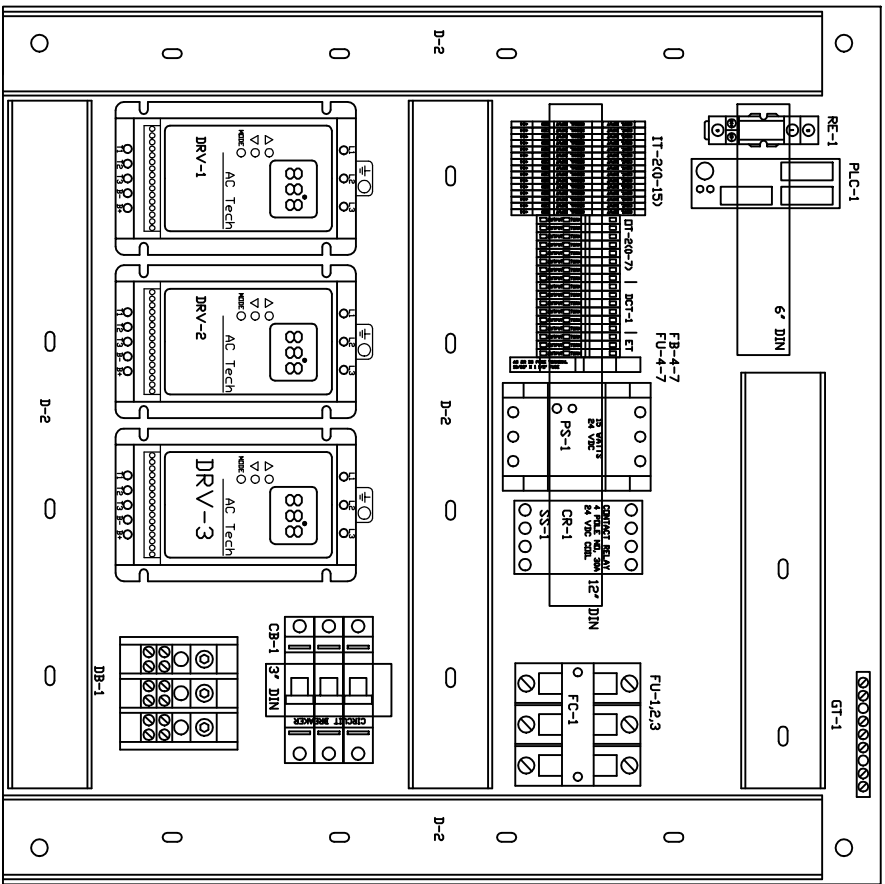
<u>Qty</u>	<u>Description</u>	<u>ABM #</u>
1	Mouth size assembly (Dan River)	M-1005-022
2	Mouth mounting plate	M-1005-023
1	Mouth motor mounting plate	M-1005-024

1	Powder coating - Brandt Blue - Frame	
1	Powder coating - Sky White - Mouth	
3	SPROCKET - CARRIER MOTOR / ALL OTHERS	C1005-035
2	BUSHING - ACME SCREW, SLAT SIZE MOTOR	C1005-036
1	BUSHING - TABLE SIZE MOTOR	C1005-038
20	#40 Chain	
1	Gear Motor - Table size change 1/4HP, 10:1	C-1000-024
2	2 Button push button station	C-1007-366
1	3 Button push button station	C-1007-367
2	Black Pushbutton (Arrow)	
1	White Pushbutton	
2	Green Pushbutton	
2	E-stop Pushbutton	
5	N.O. contact block for push button stations	C-1007-368
2	N.C. contact block for pushbutton station	
2	TABLE LIMIT BEAM	
10	3 level terminal block	C-1007-351
1	3 level terminal block end plate	C-1007-352
1	80 piece jumper pins red	C-1007-353
1	80 piece jumper pins blue	C-1007-354
2	Din rail stops	C-1007-356
2	Blank Marking Tags	C-1007-357
5	1/2" Liquid-Tite Conduit fittings	E-1003-900
15	4 conductor Hi-flex cable	
15	7 conductor Hi-flex cable	
4	3/4" dia. Base mount pillow block bearing	
1	Cabinet - 12 x 12 x 6	C-1007-302
1	RH Acme screw 3/4-6 x 6'	
1	LH Acme screw 3/4-6 x 6'	
2	RH Acme nut 3/4-6	
2	LH Acme nut 3/4-6	
12	Table Casters	
2	Acme screw solid shaft coupling - 3/4" x 3/4"	
8	3/8" x 1/2" SHOULDER BOLTS	
4	5/16-18 Coupling Nut	
4	SMALL MACHINE MOUNTS	
2	Mechanical roller switch	
2	Conduit connector	
2	Table	



Appendices

The following pages provide technical information with regards to the electronics located within the machinery.



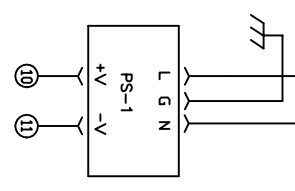
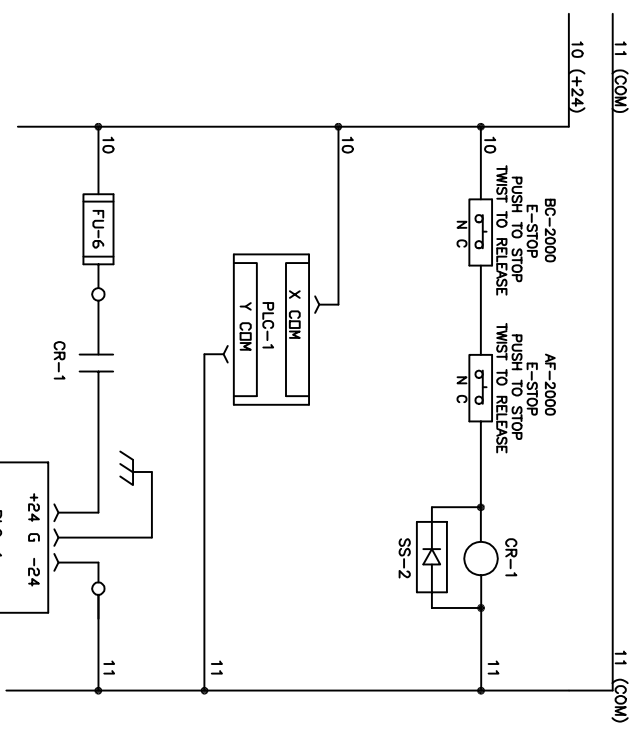
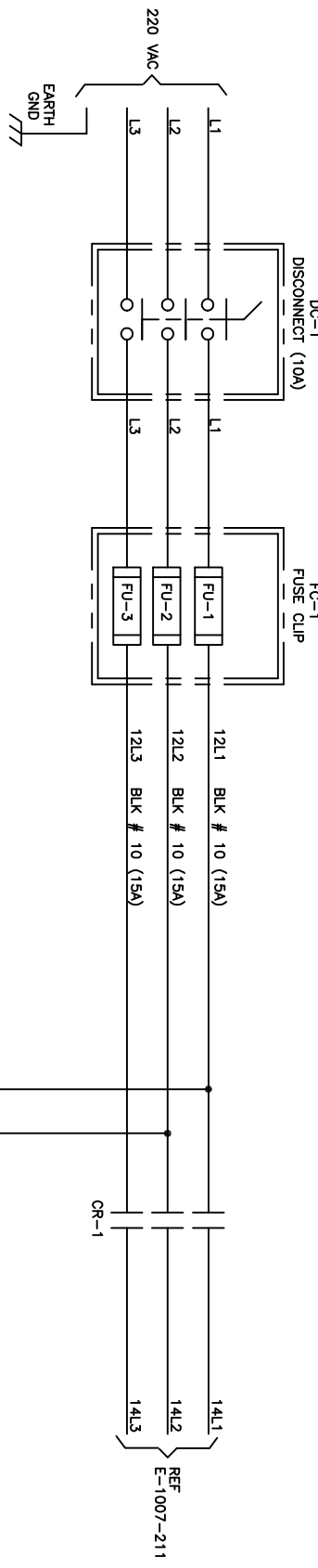
INCHES

UNLESS OTHERWISE SPECIFIED
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 ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE
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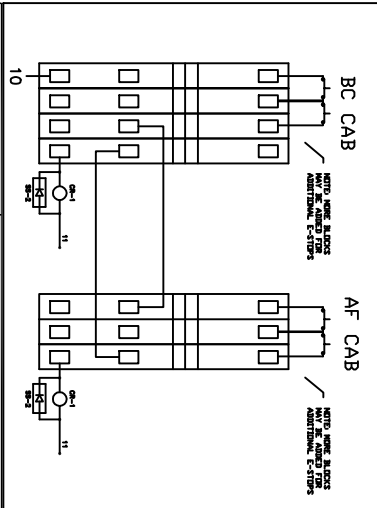
ABM INTERNATIONAL 1401 W. 10TH AVENUE DENVER, CO 80202	
STAND ALONE ADJUSTABLE RULER AND TABLE	
DRAWN BY: JOE PODOLSKI DATE: 3/23/07	CHECKED BY: _____ DATE: _____
SHEET NO. 1 TOTAL SHEETS 1	REVISION NO. E-1007-201A

NOTES:

1) CONNECT H1 TO H3 AND H2 TO H4 FOR 230 VAC LINE.



NOTE: E-STOP WIRING



INCHES

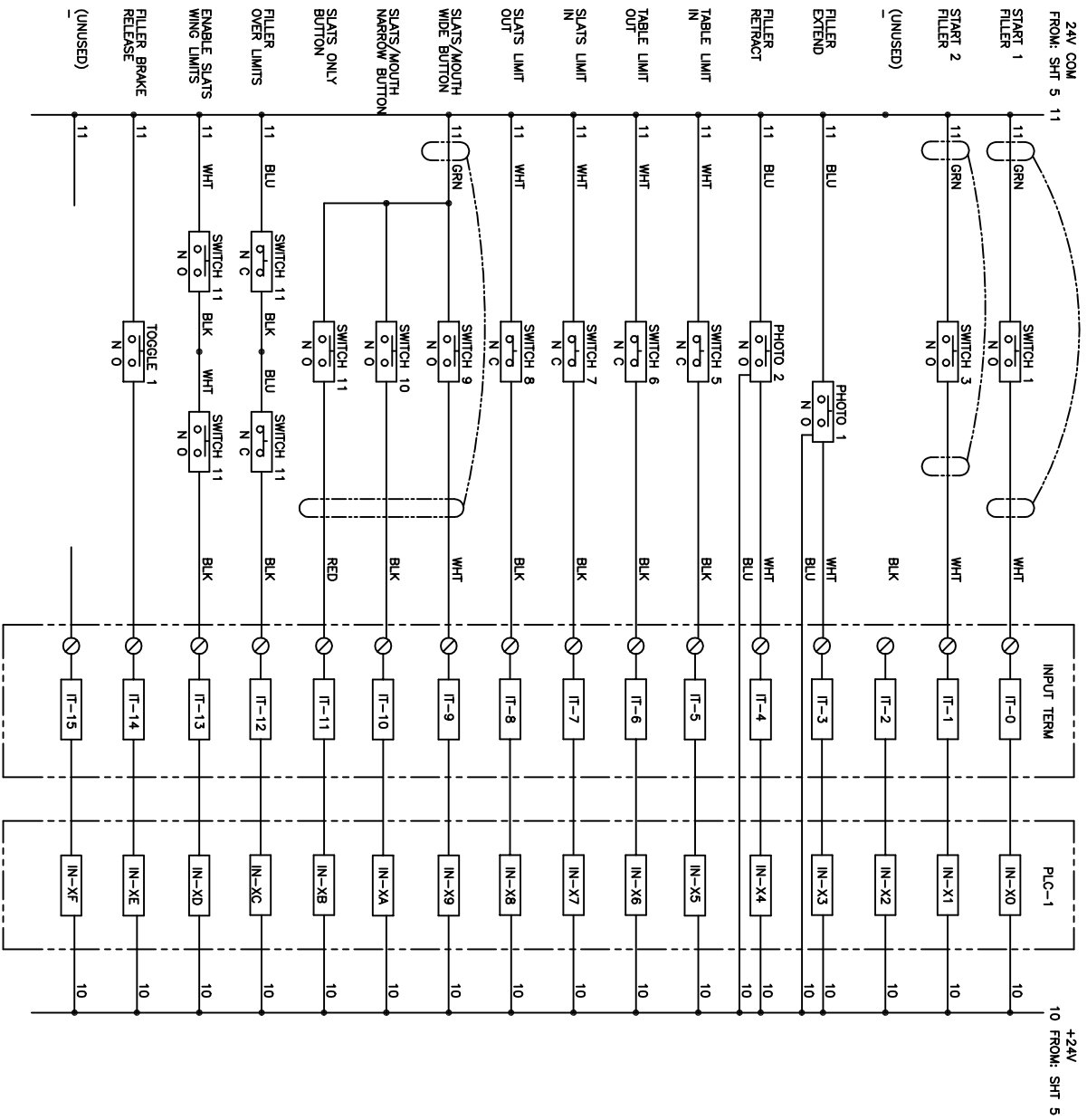
ABM INTERNATIONAL

ASAP INTERNATIONAL, Inc.
ELK GROVE VILLAGE, IL 60007

STAND ALONE ADJUSTABLE
FILTER AND TABLE

DESIGNED BY: JOE PODOLSKI
DATE: 4/2/07

PROJECT NO.	1007	DATE	4/2/07
DESIGNED BY	JOE PODOLSKI	CHECKED BY	JOE PODOLSKI
DRAWN BY	JOE PODOLSKI	DATE	4/2/07
SCALE	1	SHEET NO.	1
E-1007-2108			



- NOTES:
- 1) HIGH OFF-STATE VOLTAGES MUST BE SHUNTED WITH A 1K OHM 1 WATT RESISTOR.
 - 2) DIODE IS REQUIRED FOR INDUCTIVE LOADS.

INCHES

UNLESS OTHERWISE SPECIFIED

ABM INTERNATIONAL
 6000 WILSON BLVD
 CHICAGO, ILL. 60631
 TEL: 773-340-1000
 FAX: 773-340-1001

STAND ALONE ADJUSTABLE
 FILLER AND TABLE

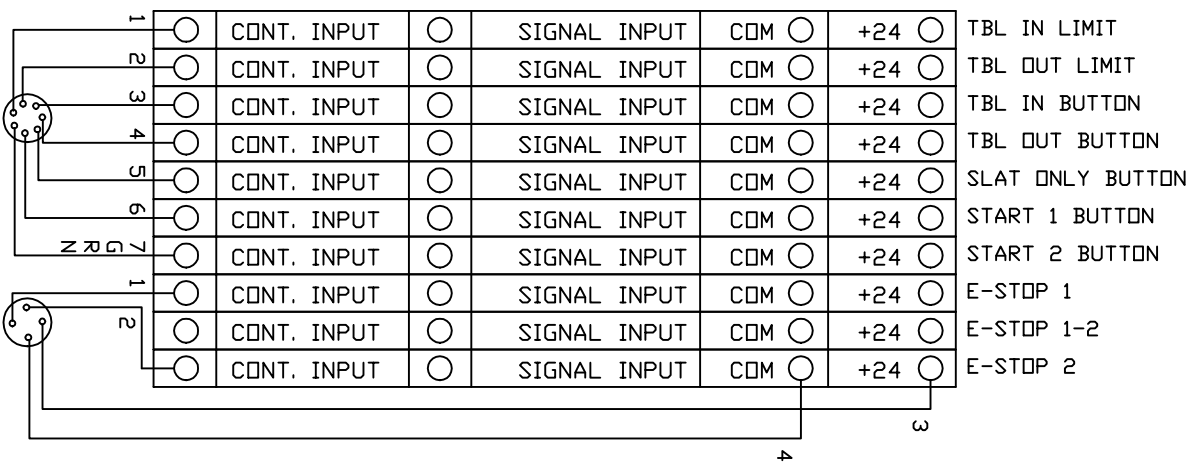
DESIGNED BY: JOE PODOLSKI
 DATE: 4/2/07

ISSUED BY: JOE PODOLSKI
 DATE: 4/2/07

REVISION NO. 1

1 1 E-1007-212A

NOTE: ALL SWITCHES AND BUTTONS ARE WIRED TO CDM (#11)



INCHES
UNLESS OTHERWISE SPECIFIED

ABM INTERNATIONAL
AVAL, MISSOURI, Mo.
EX. GROUP NUMBER: 00007

TITLE: FILLER AND TABLE

DESIGNED BY: JOE PODOLSKI
DATE: 4/12/07

DRAWN BY: JAMES MOORE
DATE: -

CHECKED BY: -
DATE: -

APPROVED BY: -
DATE: -

1 1 E-1007-215A