



Installation/Operations Manual

Preliminary Copy

Contents

1.	Safety.....	2
1.1	Symbols and their interpretation.....	2
1.2	Liability.....	2
1.3	General Warnings and Cautions.....	2
1.4	Application Restrictions.....	2
2.	Installation Instruction.....	3
2.1	Warnings and Cautions.....	3
2.2	Selecting the location.....	3
2.3	Leveling the Machine.....	3
2.4	Connection to power.....	4
2.5	Connection to Vacuum Pump.....	4
2.6	Connection to air supply.....	5
2.7	Connection to Air Separation.....	5
3.	Operating Controls.....	6
3.1	Right Side Panel.....	6
3.2	Left Side Panel.....	6
4.	The Touch Screen Operations.....	7
4.1	Boot Up Screen.....	7
4.2	Setup.....	7
4.3	Inputs/Outputs Screens.....	9
4.4	Function Buttons.....	9
4.5	Faults Display.....	10
5.	Operation.....	10
5.1	Startup.....	10
6.	Maintenance.....	12
6.1	Troubleshooting Guide.....	12
7.	Schematics.....	13

1. Safety

1.1 Symbols and their interpretation



CAUTION: Neglecting a safety instruction identified with the CAUTION symbol may lead to property damage.



WARNING: Neglecting a safety instruction identified with the WARNING symbol may lead to personal injury.



POINTER: It is strongly recommended to observe instruction identified with the POINTER symbol.

1.2 Liability



- In no event will Fusion Systems Inc. be responsible or liable for indirect or consequential damages resulting from the use of this equipment.
- The information contained in this manual is subject to change due to improvements in design.
- Though this document has been checked for inaccuracies, Fusion Systems Inc. does not assume responsibility for any errors contained herein.
- This manual is provided as an aid when operating the V2 – Sheet Feeder. Prior to operation is strongly advised that the user be thoroughly familiar with the V2 operating manual.
- Fusion Systems Inc. is not responsible or liable for any disadvantage occurred for not following the operating instructions.



- All operators must be adequately trained.

1.3 General Warnings and Cautions



- Disconnect the air supply prior to servicing the machine.



- Switch OFF Main Disconnect Switch prior to connecting / disconnecting power.

1.4 Application Restrictions



- Any use other than described in this manual may cause damage to equipment, personal injury or property damage.

2. Installation Instruction

2.1 Warnings and Cautions



The machine operates on 120 Volts 50/60Hz (110-240 Volts 50/60Hz models are also available), single-phase AC power.



Switch off main disconnect switch prior to connecting power and air.

Check the water trap daily and drain as required by pressing the drain valve (see 2.4)

2.2 Selecting the location



Choose a well-ventilated area away from direct sunlight to install your Sheet Feeder. Make sure the machine is positioned away from walls and other obstruction and placed on flat surface. The guards, operating panel and other machine openings must be accessible.

2.3 Leveling the Machine



Before operation the machine must be leveled. The level of the machine is adjusted by four (4) feet, one at each corner of the machine.

2.4 Connection to power



The machine is equipped with SJT 3 conductor cable with plug

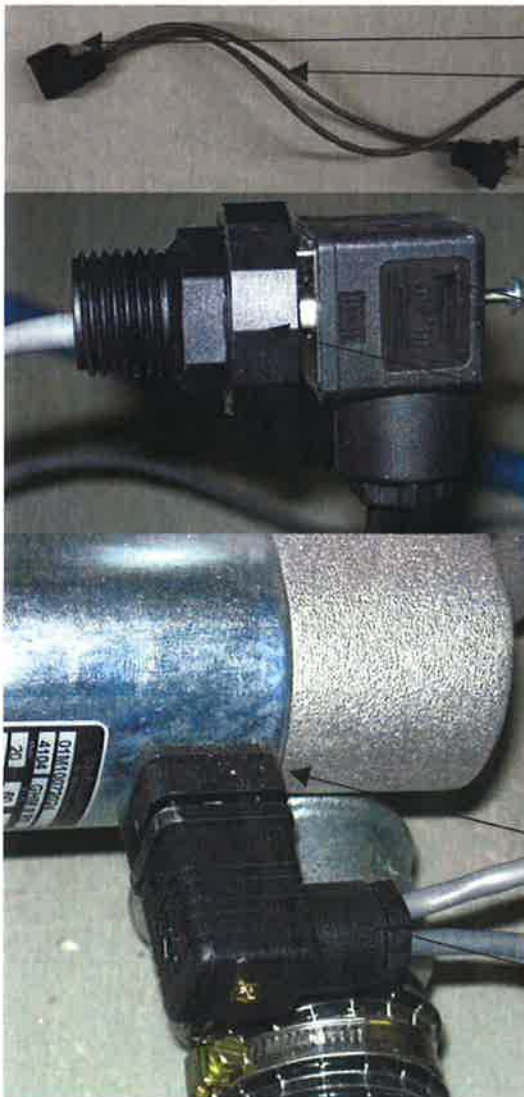
Power requirement:

- 120 VAC
- 5 Amperes

Main disconnect switch

Power Cord

2.5 Connection to Vacuum Pump



Sheet Feeder Female plug

Sheet Feeder Vacuum pump interconnect cable

Sheet Feeder Male plug

1. Connect Sheet Feeder male plug to Plotter female plug

Plotter female plug

Sheet Feeder male plug

2. Connect Sheet Feeder female plug to Vacuum pump connector

Vacuum pump connector

Sheet Feeder female plug

2.6 Connection to air supply



The machine requires clean, dry air.

Minimum requirement:

- 6 bar (90psi)

Adjust system pressure by lifting the adjusting knob to unlock, then turning the knob clockwise to increase the pressure or counterclockwise to decrease the pressure. Push down on the adjusting knob to lock the regulator after making adjustment.

Adjusting knob

Connection for air supply

Pressure gauge

Drain valve for water trap

2.7 Connection to Air Separation



The Air Separation System requires clean, dry air. Is located on the opposite side of main air supply.

Minimum requirement:

- 6 bar (90psi)

Adjust system pressure by lifting the adjusting knob to unlock, then turning the knob clockwise to increase the pressure or counterclockwise to decrease the pressure. Push down on the adjusting knob to lock the regulator after making adjustment.

Adjusting knob

Connection for air supply

Pressure gauge

Drain valve for water trap

3. Operating Controls

3.1 Right Side Panel



Emergency Stop

Touch screen interface

3.2 Left Side Panel



Emergency Stop



















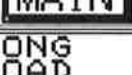

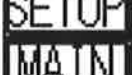













4. The Touch Screen Operations

4.1 Boot Up Screen





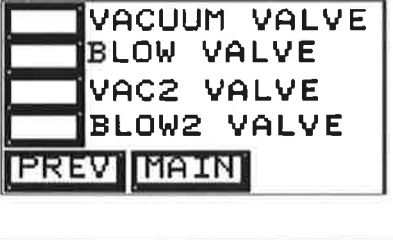


4.2 Setup


Function	Display	Result
Default Screen	<p>The display shows 'NOT READY' at the top. Below it are four buttons: 'JOG', 'AUTO', 'STOP', and 'I/O'. At the bottom are two buttons: 'SETUP' and 'I/O'.</p>	Default display for AUTO menu. Touch to move to the SETUP menus
Setup Screen 1 of 2	<p>The display shows '-* ROLL BK 1' and '** DELAY' on the left, and 'NEXT' on the right. Below that, it shows '** VAC SP' and '** SPEED' on the left, and 'MAIN' on the right.</p>	Default display for the first SETUP menu. Touch NEXT to move to the second menu
ROLL BK1 1-9	<p>The display shows 'ROLL BACK SCALE (1-9)' at the top. Below it are two buttons: '+' and '-'. At the bottom are two buttons: 'SETUP' and 'MAIN'.</p>	ROLL BACK SCALE The Sheet is lifted up after is loaded on the cutter table to prevent from damage when conveyor belt is moving. Touch to increase the value Touch to decrease the value
DELAY 0 – 99 sec.	<p>The display shows 'DELAY FOR THE NEXT SHEET LOAD' at the top. Below it are two buttons: '+' and '-'. At the bottom are two buttons: 'SETUP' and 'MAIN'.</p>	DELAY The time that Feeder is waiting at park position before will load the next sheet Touch to increase time value Touch to decrease time value
VAC SP 0 – 10	<p>The display shows 'VACUUM SET POINT' at the top. Below it are two buttons: '+' and '-'. At the bottom are two buttons: 'SETUP' and 'MAIN'.</p>	VACUUM SET POINT The amount vacuum that must be accumulated before the sheet will be lift up. Touch to increase value Touch to decrease value

<p>SPEED 2-10</p>	<p>SPEED</p> <p>-**    </p>	<p>SPEED The operating speed of the Sheet Feeder</p> <p>Touch  to increase value Touch  to decrease value</p>
<p>Setup Screen 2 of 2</p>	<p>-* DROP SHT </p> <p>OFF AIR SEP </p> <p>OFF LONG SHT</p> <p>-** AIR PRES </p> <p>-** ROLL BK2 </p>	<p>Default display for the second SETUP menu. Touch PREV to move to the first menu. Touch MAIN to move to the main menu.</p>
<p>DROP SHT 0-9</p>	<p># OF INDEXES AFTER THE SHEET WAS DROPPED</p> <p>-*    </p>	<p>NUMBER OF INDEXES AFTER THE SHEET WAS DROPPED Number of times that Feeder is repeating the sheet pick up routine. When the number of attempts is over the set value the Feeder stops and SHEET DROPPED message is displayed</p> <p>Touch  to increase value Touch  to decrease value</p>
<p>AIR SEP</p>	<p>ENABLE AIR SEPARATION</p> <p>  </p>	<p>ENABLE AIR SEPARATION Touch ON/OFF to toggle between ON and OFF ON - Enables Air Separation OFF - Disables Air Separation</p>
<p>LONG SHT</p>	<p>ENABLE LONG SHEET LOAD</p> <p>  </p>	<p>ENABLE LONG SHEET LOAD This feature is used with optional arms installed on the Feeder. Touch ON/OFF to toggle between ON and OFF ON - Enables Board Loading OFF - Disables Board Loading</p>
<p>AIR PRES 0 - 10</p>	<p>AIR PRESSURE SET POINT</p> <p>-**    </p>	<p>AIR PRESSURE SET POINT The minimum amount of air pressure for operation of Feeder.</p> <p>Touch  to increase value Touch  to decrease value</p>
<p>ROLL BK2 1-40</p>	<p>ROLL BACK #2 SCALE (1-40)</p> <p>-**    </p>	<p>ROLL BACK #2 SCALE This feature is for use with optional board loading arms installed. The moving beam of the Feeder is lift up after the Cutter is pulling the board.</p> <p>Touch  to increase value Touch  to decrease value</p>


4.3 Inputs/Outputs Screens

Main Screen		<p>Default display for AUTO menu.</p> <p>I/O Touch to move to the I/O menus</p>
First inputs screen		<p>The current state of the sensors and amount of the air pressure.</p> <p>Touch NEXT to move to the next inputs screen</p>
Second inputs screen		<p>The current state of the sensors and amount of the vacuum.</p> <p>Touch NEXT to move to the next screen</p>
First Outputs screen		<p>The current state of the motor and air separation. The MTR BRAKE and AIR SEP. VAL. may be toggle by touching the adequate Buttons.</p> <p>Touch NEXT to move to the next screen</p>
Second Outputs screen		<p>The current state of the vacuum system. May be toggle by touching the adequate Buttons. VAC2 VALVE and BLOW2 VALVE is working with optional board loading feature</p> <p>Touch MAIN to move to the Main screen</p>

4.4 Function Buttons

Main Screen		<p>Default display for AUTO menu.</p> <p>JOG Touch to Home the machine when the screen background is red (Faults – see 4.5). If the background is green JOG initiates the new cycle.</p> <p>STOP Touch to Stop the machine at any time.</p> <p>AUTO Touch to toggle between AUTO/MANUAL. In MANUAL mode the machine is continuing the cycle as long as the JOG button is hold, releasing it pauses the cycle. To exit Touch STOP and touch MANUAL to toggle to AUTO mode.</p>
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4.5 Faults Display

<p>Main Screen</p>		<p>If there is a fault or error in the Feeder the Touch Screen background color will change to red (Green for normal operation)</p> <p>The possible errors/faults:</p> <p>NOT READY – The Feeder was stopped by touching the STOP or was just power up</p> <p>LASER EYE INTERRUPTION – occurs when the light beam is interrupted</p> <p>MOTOR OVERLOAD - occurs when the moving beam of the Feeder is blocked or the Current Sensor is not set correctly.</p> <p>OUT OF PRODUCT – there is no sheets on the Feeder table to load.</p> <p>LOW PRESSURE – The Air Pressure is below the Set Point (see 1.2 Setup)</p> <p>END OF LIMIT AT PLOTTER POSITION – occurs when the end of travel sensor is made</p> <p>DROPPED SHEET – occurs when the sheet was dropped during transport from table to plotter.</p>
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5. Operation

5.1 Startup



1. Connect main pneumatic line to machine



2. Turn ON main disconnect switch

FUSION

V2 SHEET FEEDER







3. Release both of the Emergency Stop buttons.



4. Touch JOG to home the machine.

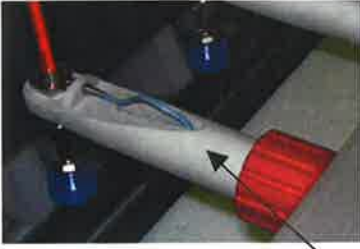
6. Maintenance

6.1 Troubleshooting Guide

Symptom	Possible Cause	Remedy
Machine won't cycle	Low or no air pressure	Provide clean, dry air
		Adjust system pressure regulator (see 2.6)
		Check the air pressure set point (see 4.2)
	Machine in MANUAL mode	Touch MANUAL to switch to AUTO mode.
	Control not initialized	The Emergency Stop must be released
MOTOR OVERLOAD message, but there was no reason for that	The Current Sensor need to be adjusted	<p>The Current Sensor is located on the Controls Panel</p>  <p>Turn the pad clockwise to increase the current limit</p>
LASER EYE INTERUPTION message, but there was no reason for that	The Photo Eye need to be adjusted	<p>The Photo Eye is located on the adjustable bracket below the motor</p>  <p>Adjust the high of the sensor</p>  <p>Turn the pad clockwise to increase the sensitivity.</p>
	The reflective tape may be damage or dirt	<p>The Reflective Tape is located on opposite side of the Photo Eye.</p>  <p>Clean up the tape or replace it if is damaged.</p>

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V2 SHEET FEEDER

<p>LASER EYE INTERUPTION message, but there was no reason for that</p>	<p>The Arm with sensor (Red ring) needs to be adjusted.</p>	<p>The Arm needs to be adjust to always be on the sheets stock</p>  <p>Adjust the position of the Arm</p>
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7. Schematics

