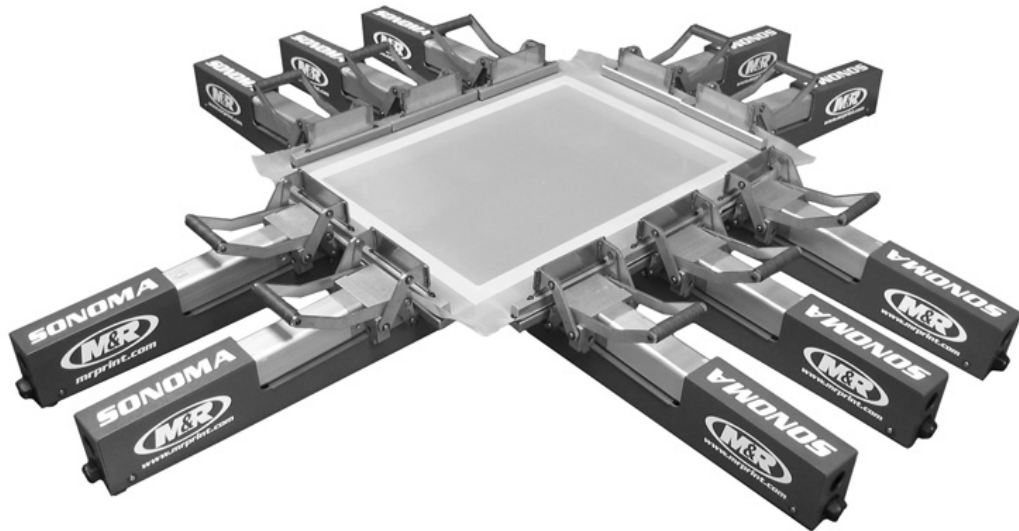


V.011207 Part # MAN-SONOMA

Sonoma Av2  
**\$45.00 USD**

# **Sonoma**<sup>TM</sup>



**The M&R Companies**  
**M&R • NUARC • AMSCOMATIC**

WWW.MRPRINT.COM  
Toll-Free: 800-736-6431  
USA Direct: 630-858-6101  
USA Fax: 630-858-6134  
Outside USA: +847-967-4461  
Outside USA Fax: +847-967-0417  
1N 372 Main St. Glen Ellyn, IL 60137 USA



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## 1. Safety and Operational Guidelines

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### DANGER



**This symbol identifies situations that endanger people, property, and/or equipment.** If such conditions exist, the equipment must be shut down and all energy sources (electrical, gas, and pneumatic) must be disconnected, purged, and locked out until the problem is resolved.

**Never attempt to bypass or defeat any safety device.** Do not attempt to operate the equipment if any safety device is not functioning properly, or if any doubt exists about proper operation of safety devices.

**The product described in this publication may operate at high speed and contain numerous moving parts.** It may employ natural gas or propane, mechanical or pneumatic forces, and/or hazardous voltages, and may create other conditions that could, through misuse, abuse, unauthorized alteration or retrofitting, inattention, or lack of understanding, result in injury, death, or damage to the product or to other equipment. In addition, improper operation may also depreciate the value of the machine and other assets of the owner, and impair the working efficiency of the machine.

**Energy Sources** M&R equipment may use one or more of the following energy sources:

- Compressed Air (Pneumatic Energy)
- Electricity
- Gas (Natural Gas or Propane)

Each form of energy presents its own unique hazards and requires appropriate precautions.

### Danger From Compressed Air (Pneumatic Energy)



Only qualified personnel should be allowed to work on pneumatic components or assemblies. Before work is started on pneumatic components or assemblies, equipment should be disconnected from the air supply and all pneumatic lines should be purged to prevent accidental operation of pneumatic assemblies. All pneumatic pipes and hoses should be checked frequently for damage and wear.

### Danger From Electrical Energy



Only qualified personnel should have access to electrical enclosures or work on electrical systems, and enclosures should be locked when not in use. Electrical equipment should be checked regularly.

### WARNING



Failure to follow safety and maintenance procedures or to take appropriate corrected action when required can result in severe or fatal personal injuries, property damage, and/or damage to the equipment.

## 1.1 Management Responsibilities

- Management Responsibilities**
1. Ensure that this equipment is used only for the purposes set forth in the “Defined Purpose” section of this manual.
  2. Ensure that all employees involved with the operation of this equipment or working near it read, understand, and act in accordance with the operational and safety standards set forth in this manual, including the Operator Responsibilities listed below.
  3. Ensure that all recommended preventive maintenance is carried out according to M&R guidelines.
  4. Should any problem arise which compromises the safe operation or normal functioning of this equipment, ensure that the equipment is immediately shut down, sources of power to the equipment is shut off and secured, and that personnel not trained to repair – and directly involved in repairing – the equipment are removed from the immediate area and not allowed to return until the equipment has been returned to a safe and fully-functional condition.
  5. Provide, and compel use of, any personal protection devices that may be required for the safe operation of this equipment.
  6. Make no modification to equipment or equipment software without written approval from M&R.
  7. Provide – and support with written documentation – necessary employee training to ensure safe operation, including but not limited to instruction in:
    - a. the operation of this machine
    - b. the use of personal protection devices
    - c. preventive maintenance procedures

## 1.2 Operator Responsibilities

### Operator Responsibilities

Note: 'Operator Responsibilities' pertain to all employees who work on or near the equipment; this includes, but is not limited to those who clean, maintain and repair the equipment as well as those who operate it. In general, all those who work on or near the equipment have a duty to use reasonable and ordinary care for their own safety when in the vicinity of the machine. Failure to use reasonable and ordinary care subjects people and property to serious personal injury and/or death and to destruction of personal and/or company property. M&R expressly disclaims any and all liability, whether in contract, tort or by statute, for damages, whether in the nature of personal injury/death and/or property damage, and whether direct, indirect, consequential or incidental, as a result of a failure to use reasonable and ordinary care.

1. Ensure that this equipment is used only for the purposes set forth in the "Defined Purpose" section of this manual.
2. Read, understand, and act in accordance with the safety and operational standards and guidelines set forth in this manual.
3. Install and maintain the equipment and safety devices in accordance with this manual; this includes checking the equipment and safety devices for external or visible damage at least once per shift, and making sure all safety and danger notices are in place and in readable condition.
4. Make no modification to equipment or equipment software without written approval from M&R.
5. Ensure that all other employees working on or near this equipment are knowledgeable in its safe operation, and closely supervise inexperienced employees; keep bystanders away from the equipment.
6. Make sure the area around the equipment is clear and free of obstructions, clean up spills immediately, and remove ink and other contaminants at the end of each shift.
7. Ensure that any and all safety guards (including but not limited to safety bar, foot switch, yellow cycle interruption cords, infrared safety beam, yellow floor mats, or hand switches) provided with this equipment for the purpose of protecting personnel by automatically stopping the equipment are in place – and are not removed, disabled or rendered ineffective during operation.
8. Wear any personal protection devices required for the safe operation of this equipment.
9. Avoid wearing anything that could become entangled in moving parts; for example, but not by way of limitation, tie back, pin up, or cover long hair.
10. Do not attempt to operate this equipment if you are sick, fatigued, or under the influence of alcohol and/or drugs including, but not limited to, prescriptions and over-the-counter medications that warn against the operation of equipment.
11. Avoid standing on any part of the equipment not intended for that purpose.
12. Immediately shut down the equipment, disconnect and lock out all sources of power (electrical, gas, and/or pneumatic); and purge all lines under pressure if the equipment fails to be fully operational or if any safety device fails to operate properly, and ensure that the equipment stays offline until the safety device is again operational.
13. Perform – and document – preventive maintenance at intervals described in the Operator's Manual.
14. Keep this Operator's Manual in clean, easily readable condition near the equipment at all times so it can be quickly accessed by operators and maintenance personnel.

## 2. General Information

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**This Document** This document is based on information available at the time of its publication. While every effort has been made to be accurate, the information contained herein does not purport to cover all details or variations in hardware, software, features, or specifications, or to provide for every possible contingency in connection with installation, operation and maintenance. Features may be described herein which are not present in all models of this product. M&R Printing Equipment, Inc. and its subsidiaries reserve the right to alter specifications in the manufacture of their products, and they assume no obligation of notice to holders of this document with respect to changes subsequently made.


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## 2.1 Service and Parts

### Manufacturer's Rating Plate

Most products manufactured by the M&R Companies carry a metal manufacturer's rating plate similar to the one shown below. Please use it to fill out the product information below, and be prepared to provide the identification information when calling. This helps us respond to your needs more quickly.

VOLTS	PHASE	HERTZ	TOTAL F.L.A.	A.L.M.
SHORT CIRCUIT CURRENT RATING		AMPS LARGEST HEATER LOAD		
	kA rms symmetrical		V maximum	
FACTORY	SCHEMATIC No.		MACHINE No.	
MODEL No.			SERIAL No.	
		M&R Printing Equipment, Inc. 1 N 372 Main Street Glen Ellyn, Illinois 60137 U.S.A.		M&R Part No. 7009187C - BLACK 7009187D - RED 7009187E - BLUE

<b>Model No.</b>	
<b>Machine No.</b>	
<b>Serial No.</b>	
<b>Schematic No.</b>	
<b>Date Installed</b>	
<b>Installed by</b>	
<b>Optional Features and Special Information</b>	

**Contacting M&R** If you need service or have questions about your equipment, call the appropriate number and ask for Technical Support. If you need parts, ask for the Parts Department.

<b>From the United States &amp; Canada</b> Monday-Friday between 8:30 AM and 5:00 PM Central Standard/Daylight Time	<b>800-736-6431</b> Or <b>630-858-6101</b>
<b>From all other countries</b> Monday-Friday between 14:30 and 23:00 Greenwich Mean Time (GMT)	<b>+847-967-4461</b>
<b>Outside Regular Hours</b>	<b>Call our Global Hotline:</b> <b>+630-462-4715</b>
Visit <a href="http://www.mrprint.com">www.mrprint.com</a> for a list of global contacts	<a href="http://www.mrprint.com">www.mrprint.com</a>

## 2.2 Defined Purpose

<b>Textile Presses</b>	Textile Presses are designed to print textile inks on textile substrates, as more fully set forth in the manual specific to that product. Any other use of this equipment is not permitted.
<b>Textile Dryers</b>	Textile Dryers are designed to cure/dry textile inks on textile substrates, as more fully set forth in the manual specific to that product. Any other use of this equipment is not permitted.
<b>Graphic Presses</b>	Graphic Presses are designed to print graphic inks on rigid and semi-rigid flat substrates, as more fully set forth in the manual specific to that product. Any other use of this equipment is not permitted.
<b>Graphic Dryers</b>	Graphic Dryers are designed to cure/dry graphic inks on rigid and semi-rigid flat substrates, as more fully set forth in the manual specific to that product. Any other use of this equipment is not permitted.
<b>Exposure Equipment</b>	Exposure Equipment is designed to produce photographic printing plates and printing screens, as more fully set forth in the manual specific to that product. Any other use of this equipment is not permitted.
<b>Folding and Packaging Equipment</b>	Folding and Packaging Equipment is designed to fold, transport, and package textile materials, as more fully set forth in the manual specific to that product. Any other use of this equipment is not permitted.
<b>Ancillary Equipment</b>	Ancillary Equipment is designed to perform specific operations related to processing and handling of substrates, as more fully set forth in the manual specific to that product. Any other use of this equipment is not permitted.

## 2.3 Warranty

**Limited Warranty** Your Warranty does not apply to damages sustained due to equipment misuse, whether intentional or negligent, and such misuse may void your warranty. Misuse includes – but is not limited to – the items listed below. In addition, M&R Printing Equipment, Inc. accepts no responsibility for personal injury or property damage caused by misuse.

1. Use of the equipment for any non-defined purpose
2. Improper installation or use of the equipment
3. Operation of the equipment with defective safety devices
4. Operation of the equipment with safety devices removed, disabled, not working in whole or in part or in any manner rendered ineffective for the purpose for which they were designed
5. Failure to comply with instructions for transportation, storage, installation, operation, maintenance, setup, and take-down of the equipment as described in the Operator's Manual
6. Unauthorized modification of the equipment or equipment software
7. Failure to replace worn or defective parts
8. Failure to use M&R supplied replacement and repair parts
9. Defective repairs made to the equipment
10. Dangerous conditions which result from improper use of the equipment

### 3. Product Specifications

Specifications	
	Sonoma
Overall Length (Clamp)	81cm (32")
Width (Clamp)	25.4cm (10")
Height (Clamp Closed)	23cm (9")
Height (Clamp Open)	41cm (16")
Cylinder Stroke	16.5cm (6.5")
Clamp System Dimensions	Screen Frame O.D. plus 137cm (54")
Air Consumption	0.15 cfm (Max @ 140 PSI)
Shipping Weight	16kg (36lbs)

### 4. Installation and Assembly

Place the unit on a flat, level, rigid surface. The operator control panel should be mounted in the immediate area where the unit is to be operated.

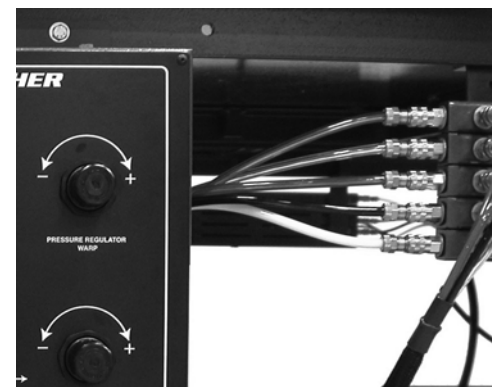
**Control Panel Mount**

Mount the control panel so that it does not interfere with the operation and/or free movement of the clamps.



**Manifold Mount**

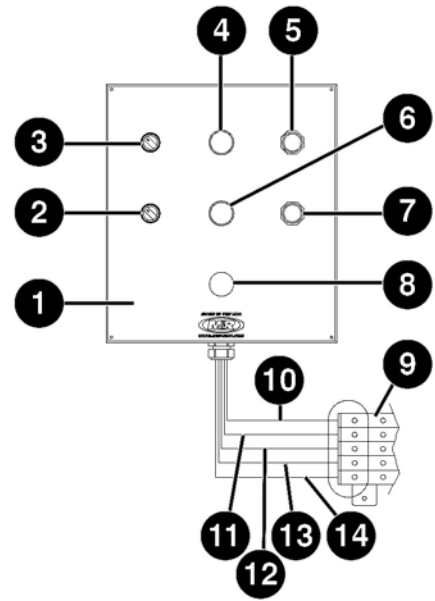
The universal manifold should be mounted in an area central to all clamp assemblies.



**Air Tube Installation**

Connected the universal manifold to the control panel via the five color coded air tubes (White, Black, Clear, Blue and Red). In the illustration, the air tubes are connected with White at the top, followed by Black, Clear, Blue and Red.

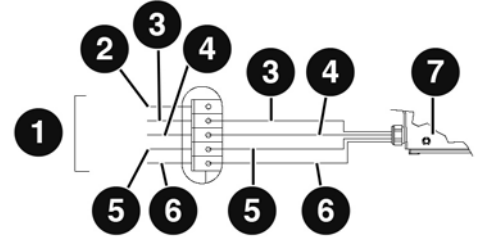
Number	Description
1	Control Box
2	Lift/Lower Switch
3	Stretch/Release Switch
4	Pressure Gauge
5	Pressure Regulator (Warp)
6	Pressure Gauge
7	Pressure Regulator (Weft)
8	Emergency Stop
9	Manifold
10	Red
11	Black
12	Clear
13	Blue
14	White



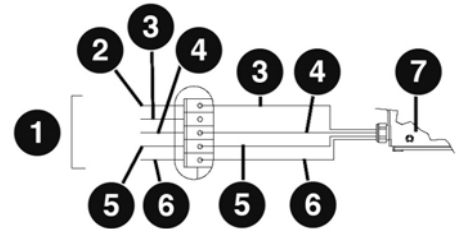
**Clamp  
Assembly  
Connection**

Each clamp assembly includes four color coded air tubes (Black, Clear, Blue and Red) for the supply of compressed air. Connect the clamp assemblies to the central manifold according to the illustrations to enable either simultaneous tensioning of the warp and weft or independent tensioning of the warp and weft. Connect the 110 PSI compressed air supply to the control panel.

Simultaneous tensioning of warp and weft.



Independent tensioning of warp and weft.

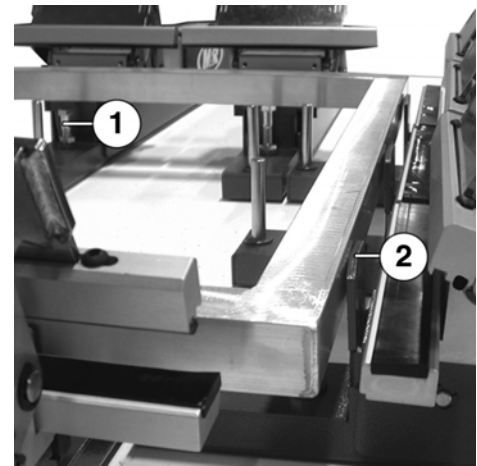


Number	Description
1	From control box
2	White
3	Black
4	Clear
5	Blue
6	Red
7	Rear of clamp

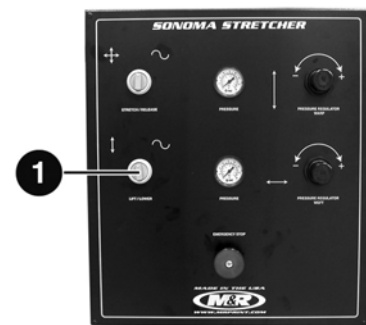
## 5. Operation

### 5.1 Mesh Installation

Arrange tension clamps around the screen frame edge so the clamp jaws are positioned evenly. Place the screen frame in the center of the clamp assemblies and adjust each support bolt (1) so the frame is 1/8" to 1/4" above the back lip (2) of the clamp assembly.



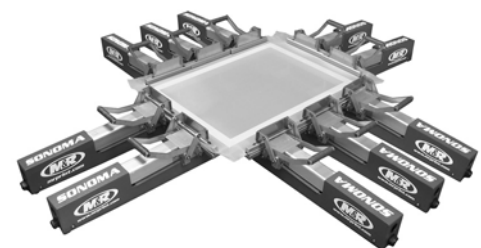
Place the LIFT/LOWER switch (1) in the LIFT position to raise the clamp assemblies above and away from the screen frame for mesh installation and tensioning.



Place the screen mesh over the frame and pull it taught. Secure the mesh in the clamp assemblies by pulling down on the locking handle grip.



When properly positioned the screen frame and the mesh should appear as illustrated.



## 5.2 Tension Adjustment

Adjust the tension for the warp and weft direction.

**Warp** - Warp is the lengthwise direction (as the fabric comes off the bolt) of the woven fabric.

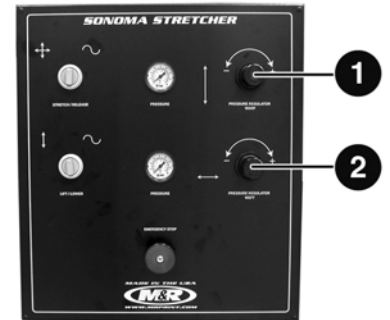
**Weft** - is the side-to-side direction of the filling fibers

### Independent Tension

To increase the tension in either the warp (1) or the weft (2) direction, use the appropriate pressure regulator.

To increase tension, grasp and pull "out" the black plastic knob on the regulator to unlock the adjustment. Slowly turn the knob clockwise to **increase** the tension, or counter-clockwise to **decrease** the tension.

Observe the warp/weft pressure gauges as you adjust the pressure for the desired tension.



### Simultaneous Tension

To increase the tension in both the warp and the weft direction, use the **WARP** pressure regulator (1).

To increase tension, grasp and pull "out" the black plastic knob on the regulator to unlock the adjustment. Slowly turn the knob clockwise to **increase** the tension, or counter-clockwise to **decrease** the tension.

Observe the warp pressure gauge as you adjust the pressure for the desired tension.



When appropriate pressure/tension is achieved, place the LIFT/LOWER switch (1) in the LOWER position to lower the tensioned mesh down in contact with the screen frame.

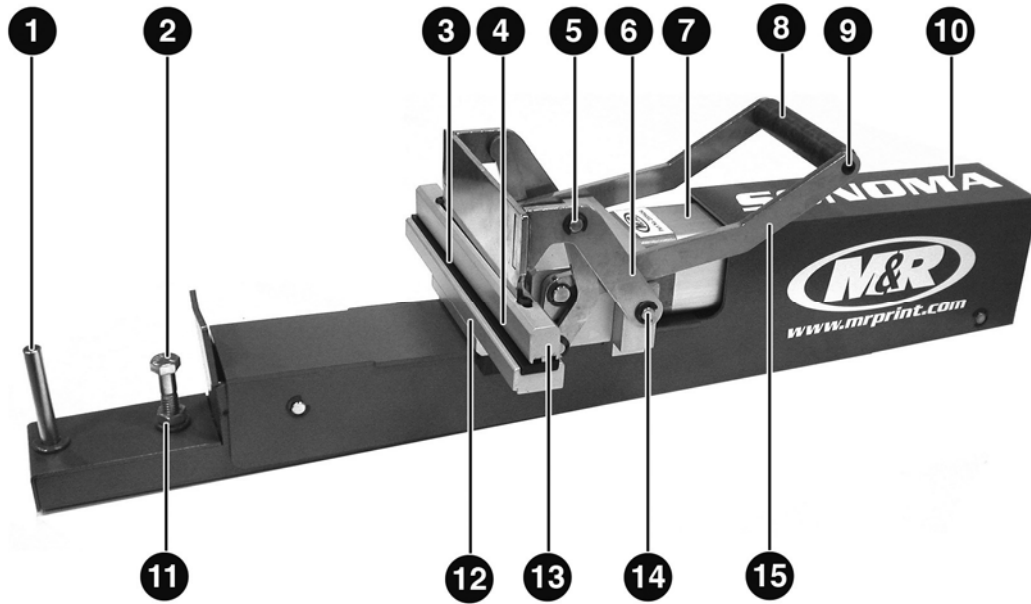


### Adhesive

Secure the tensioned mesh to the screen frame using your preferred adhesive. Check the supplier's recommendations regarding how long the mesh should hold tension before adhesive application. Allow the adhesive to cure according to manufacturer direction. Place the STRETCH/RELEASE switch in the RELEASE position and remove the screen frame. Trim away excess mesh.

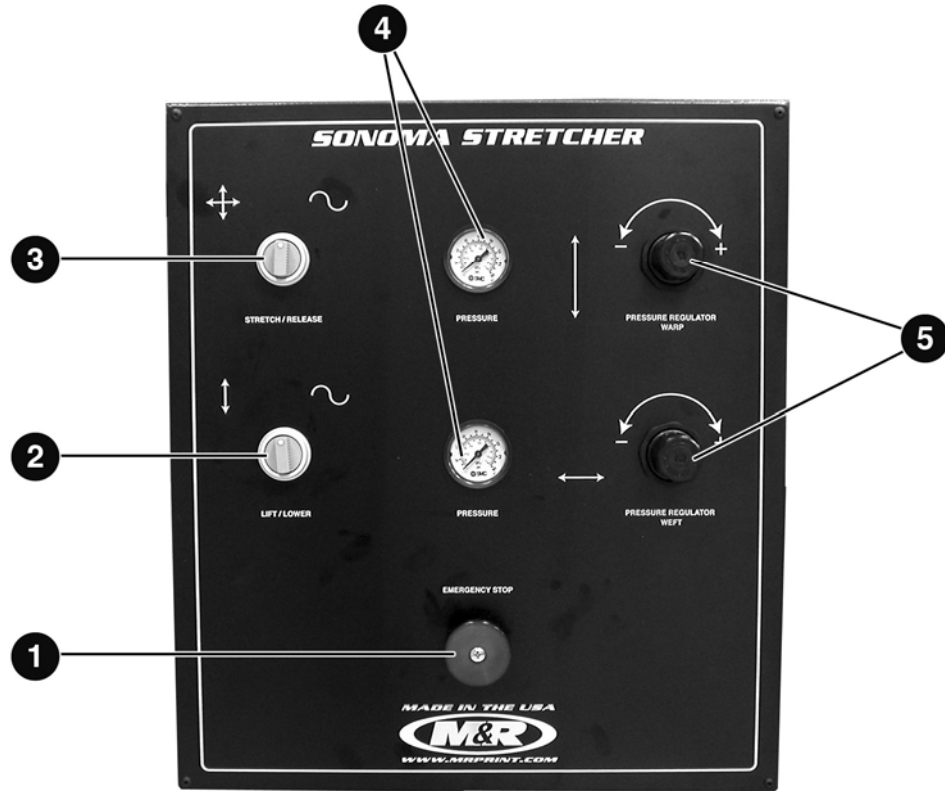
## 6. Replacement Parts

### Stretcher



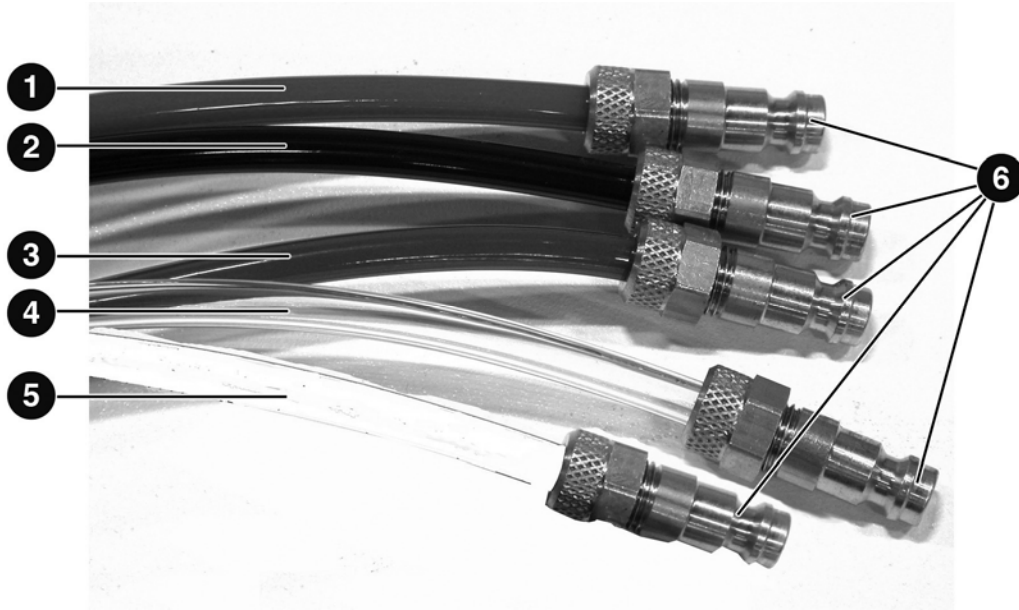
	Stretcher Part Name	Part Numbers Sonoma
1	Safety Pin	9170259
2	Hex Head Bolt 1/2" -13 x 2-1/4"	3008179
3	Carriage Pusher Pad	9170218
4	Top Pusher Insert	9170223
5	External Retaining Ring 3/8" "E" Style	3024070
6	Top Pusher Assembly	9170205
7	Air Cylinder	2009454
8	Top Pusher Handle Rod Cover	9170227
9	Handle Arm Pin	9170207
10	Top Channel Weldment	9170235
11	Hex Head Jam Nut 1/2" – 13	3013050
12	Carriage Pusher Pad Base	9170219
13	Top Pusher Insert Holder	9170224
14	Main Arm Pin	9170206
15	Top Pusher Hand Arm	9170202

**Control Box**



	Control Box Part Name	Part Numbers Sonoma
1	Emergency Stop Button	2003264
2	3 Position Selector Valve	2003262
3	3 Position Selector Valve	2003252
4	Pressure Gauge	2003261
5	Pressure Regulator	2003260

**Hoses**



	<b>Hoses Part Name</b>	<b>Part Numbers Sonoma</b>
1	Polyurethane Tube 1/4" Red	2001111
2	Polyurethane Tube 1/4" Black	2001109
3	Polyurethane Tube 1/4" Blue	2001112
4	Polyurethane Tube 1/4" Clear	2001110
5	Polyurethane Tube 1/4" White	2001107
6	Quick disconnect Auto Plug 1/4" Tubing	2003265