Binks®

ASSEMBLY MANUAL EN

77-3162

Binks

IntelliFlow ™ Air Manifold

For additional information or copies of your service manual, please visit us online at:

binks.com/en/library

Or use this QR code with your mobile device:

RM2

Obey local or municipal regulations for product recycling and disposal.

02 CONTENTS

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03 SAFETY

03.1 SAFETY PRECAUTIONS

Before the operation, maintenance, or servicing of this Binks system; fully read and understand all technical and safety literature for your product. This manual contains information that is important for you to know and understand.

This information relates to USER SAFETY and the PREVENTION OF EQUIPMENT PROBLEMS.

To help you understand this information, we use recognizable ANSI Z535 and ISO warning boxes and symbols throughout this manual. Please obey these safety sections.

⚠ DANGER

DANGER!: Indicates a hazardous situation that, if not avoided, will result in death or severe injury.

⚠ WARNING

WARNING!: Indicates a hazardous situation that, if not avoided, could result in death or severe injury.

⚠ CAUTION

Caution!: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury, or equipment damage.

NOTICE

Notice: Indicates information considered important but not hazard related.

SAFETY

Safety: Indicates a type of safety instruction, or a separate panel on a safety, where specific safety-related instructions or procedures are described.

Careful study and continued use of this manual will provide a better understanding of the equipment functions and procedures.

This understanding will result in improved operation, efficiency, and longer, trouble-free service with faster and easier troubleshooting. If you need the necessary safety literature for your specific system, contact your local Binks representative or Binks directly.

NOTICE

This manual lists standard specifications and service procedures. Differences can occur between this literature and your equipment.

Differences in local or municipal codes, manufacturer or plant requirements, material delivery requirements, and more can make variations unpreventable. To find these differences, compare this manual to your system installation drawings and other applicable Binks equipment manuals.

⚠ WARNING

The user MUST read and be familiar with the Safety Section in this manual and the safety literature therein identified.

Only trained personnel can operate this equipment.

All personnel who operate, clean, or maintain this equipment MUST fully read and understand this manual! To operate and service the equipment, follow all WARNINGS and safety requirements.

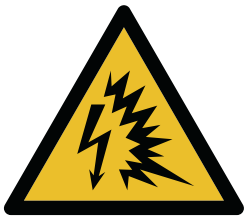
The user must be aware of and adhere to ALL local building and fire codes and ordinances, as well as NFPA 33 AND EN 16985 SAFETY STANDARDS, LATEST EDITION, or applicable country safety standards, before the installation, operation, or servicing of this equipment.

⚠ WARNING

The hazards shown on the pages that follow can occur during the normal use of this Binks equipment, but not all listed hazards will be applicable to your product model or equipment.

Repairs may only be performed by personnel authorized by Binks.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Areas  	**Fire Hazards** Improper or unsatisfactory operation and maintenance procedures will cause a fire hazard. If the safety interlocks are disabled during operation, protection against accidental arcing is shut off and can cause a fire or explosion. Frequent Power Supply or Controller shutdown identifies a problem in the system. For this occurrence, a correction will be necessary	Fire extinguishing equipment must be present in the spray area. Periodically run a test to make sure the equipment stays usable. Keep spray areas clean to prevent the build-up of combustible residues. Do not smoke in the spray area. The high voltage supplied to the atomizer must be turned off before the equipment is cleaned, flushed or maintained. Spray booth ventilation must be kept at the rates as set by NFPA-33, OSHA, country, local, and municipal codes. If flammable or combustible solvents are used to clean the equipment, ventilate the area. Prevent electrostatic arcing. Maintain spark-safe work distance between the parts that get coated and the applicator. A span of one inch for every 10KV of the output voltage is necessary. Do an equipment test only in areas free of combustible material. The test may necessitate the high voltage to be on, but only as instructed. Non-factory replacement parts or unauthorized equipment modifications can cause a fire or injury. The key switch bypass is used only during setup operation. Do no production work with disabled safety interlocks. Set up and operate the paint procedure and equipment under NFPA-33, NEC, OSHA, local, municipal, country, and European Health and Safety Norms.

AREAS Indicate possible hazard occurrences.	**HAZARDS** Indicate possible hazards.	**SAFEGUARDS** Prevention of possible hazards.
Spray Areas  	**Explosion Hazard** Improper or unsatisfactory operation and maintenance procedures will cause a fire or explosion hazard. If the safety interlocks are disabled during operation, protection against accidental arcing is shut off and can cause a fire or explosion. Frequent Power Supply or Controller shutdown identifies a problem in the system. For this occurrence, a correction will be necessary.	Prevent electrostatic arcing. Maintain spark-safe work distance between the parts that get coated and the applicator. A span of one inch for every 10KV of output voltage is necessary. Unless specifically approved for use in hazardous locations, put all electrical equipment outside of Class I or II, Division 1 or 2 hazardous areas in accordance with NFPA-33, or outside of Zone 2 or Zone 22 in accordance with EN standards. If equipped, set the current overload sensitivity as described in the related section of the equipment manual. If incorrectly set, the current overload sensitivity for protection against accidental arcing is turned off and can cause a fire or explosion. Frequent power supply shutdown indicates a problem in the system, which requires correction. Always turn off the control panel power before the system is flushed, cleaned, or servicing the spray system equipment. Make sure no objects are within the spark-safe work distance before the high voltage is turned on. The control panel must interlock with the ventilation system and conveyor in accordance with NFPA-33, EN 50176. Fire extinguishing equipment must be present in the spray area. Periodically run a test to make sure the equipment stays usable. Do an equipment test only in areas free of combustible material.
General Use and Maintenance 	Improper or unsatisfactory operation and maintenance procedures will cause a fire hazard. Personnel must be correctly trained in the operation and maintenance of this equipment.	Train all personnel in accordance with the requirements of NFPA-33, EN 60079-0. Before equipment operation, personnel must read and understand these instructions and safety precautions. Obey appropriate local, municipal, state, and national codes governing ventilation, fire protection, operation maintenance, and housekeeping. Reference OSHA, NFPA-33, EN Norms, and your insurance company requirements.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Spray Area High Voltage Equipment    	**Electrical Discharge** This equipment contains a high-voltage device that can cause an electrostatic induction on ungrounded objects. This electrical charge is capable of igniting coating materials. Insufficient ground will cause a spark hazard. A spark can ignite many coating materials and cause a fire or explosion.	Operators in the spray area and the parts to be sprayed must be sufficiently grounded. All conductive objects inside the spray area must be grounded. Hold the parts that get sprayed on conveyors or hangers that are correctly grounded. The resistance between the parts and the earth-ground must not be more than 1 MΩ. Refer to: NFPA-33. Before the equipment is operated, round all operators. They cannot wear rubber-soled insulated shoes. Wear ground straps on wrists or legs for sufficient ground contact. Operators must not wear or carry ungrounded metal objects. When used, operators must make complete contact with the applicator handle and electrostatic gun. Use conductive gloves or gloves with the palm section cut out. Operators must not wear grounded footwear. **NOTE: REFER TO NFPA-33 OR SPECIFIC COUNTRY SAFETY CODES FOR GUIDANCE TO CORRECTLY GROUND THE OPERATOR.** Except for objects needed for the high-voltage process, all electrically conductive objects in the spray area are to be grounded. Supply a grounded conductive floor in the spray area. Always turn off the applicator voltage before the system is flushed, cleaned, or when servicing the spray system equipment. Unless specifically approved for use in hazardous locations, put all electrical equipment outside of Class I or II, Division 1 or 2 hazardous areas in accordance with NFPA-33, or outside of Zone 2 or Zone 22 in accordance with EN standards. Do not install an applicator into a fluid system if the solvent supply is ungrounded. Do not touch an energized applicator electrode.

AREAS Indicate possible hazard occurrences.	**HAZARDS** Indicate possible hazards.	**SAFEGUARDS** Prevention of possible hazards.
Spray Areas 	**Toxic Fluid or Fumes** Toxic fluids or fumes can cause severe injury or death if splashed in the eyes or on the skin, or if inhaled or swallowed.	Read the Safety Data Sheet (SDS) for instructions to know and understand how to handle the specific hazards of the fluids used, and the effects of long-term exposure. During the spray, clean, or servicing of equipment, or when in the work area, keep the work area fully ventilated. Always wear personal protective equipment (PPE) when in the work area or during equipment operation. Refer to the Personal Protective Equipment warnings in this manual. Store hazardous fluid in approved containers and refer to local, municipal, state, and national codes governing the disposal of hazardous fluids.
Spray Area and Equipment Use 	High-pressure fluid sprayed from the gun, hose fittings, or ruptured/damaged components can pierce the skin. While this injury can appear as cut skin, this is a severe injury that can result in the amputation of the affected area.	Do not point or operate the spray gun at the body part of a person. Do not put your hand or fingers over the gun fluid nozzle or fittings in the hose or Proportioner. Do not try to stop or deflect leaks with your hand, glove, body, or shop rag. Do not “blowback” fluid, as the equipment is not an air spray system. Relieve pressure in the supply hoses, Proportioner, and QuickHeat™ hose before the equipment is inspected, cleaned, or serviced. Use the lowest possible pressure to recirculate, purge, or troubleshoot the equipment. Examine the hoses, couplings, and fittings every day. Service or immediately replace parts that leak, are worn, or are damaged. Replace high-pressure hose sections. They cannot be recoupled or serviced.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
Equipment and Fluids 	**Skin and Clothing Burns** Equipment surfaces and fluids can become very hot during operation.	Do not touch hot fluid or equipment during operation. Do not let clothing touch the equipment during operation or immediately after the equipment is stopped. Let the equipment fully cool before the examination or servicing of the component.
Pressurized Aluminum Parts    	The use of certain solvents and chemicals can cause equipment damage and severe personal injury.	Do not use 1,1,1-trichloroethane, methylene chloride or other halogenated hydrocarbon solvents or fluids that contain such solvents. These solvents can cause a severe chemical reaction and equipment rupture that results in equipment and property damage, serious bodily injury, or death.

AREAS Indicate possible hazard occurrences.	**HAZARDS** Indicate possible hazards.	**SAFEGUARDS** Prevention of possible hazards.
Spray Areas 	**Do Not Touch** The effect of paint flow rates and formulations on the quality of atomization can cause the turbines to rotate at high speeds.	Do not use a rag or gloved hand against the bell edge to stop or slow down a bell during rotation. Do not try to clean the bell edge during rotation.

⚠ CAUTION

Only operate the equipment after you have read this section.

04.2 ADDITIONAL SAFETY INFORMATION

The IntelliFlow has an emergency stop (E-Stop) pushbutton on the main operator panel. During an emergency, all operations for the IntelliFlow will halt when the E-Stop is engaged. The operator must disengage the E-Stop and reset the system to recover from this state.

Observe all local or municipal safety measures and wear approved protective equipment when servicing this equipment. Clean all spilled chemicals and materials and do all work in a clean and organized environment to prevent personal injury and equipment damage.

⚠ DANGER

To prevent injury or electrocution while the system is under power, do not contact, disconnect, or manipulate electrical connections or devices. The main disconnect on the right side of the controller can be locked out. Follow the proper Lockout–Tagout (LOTO) procedures for internal controller electrical work.

Only qualified electrical personnel can perform the work if diagnosis and troubleshooting are not possible during working conditions.

⚠ WARNING

To prevent possible chemical spillage when personnel are not on site, air and fluid supplies for the equipment must be disabled when the equipment idles for an extended period, such as an end-of-day shutdown.

NOTICE

During the initial commission of the equipment and at periodic times throughout equipment life, visually examine all fluid fittings for leaks.

Periodically, it is necessary to visually examine all pieces of this equipment for signs of noticeable degradation due to chemicals or other conditions in the equipment's environment.

SAFETY

Obey local or municipal regulations that require installed fire suppression for equipment operation.

If the operation of this equipment, sensors, switches, or other ancillary equipment occurs in the presence of flammable gases and vapors, connect this equipment through intrinsic-safe or Zener barriers. Classify them as a 'simple apparatus' or approve them for use in these areas.

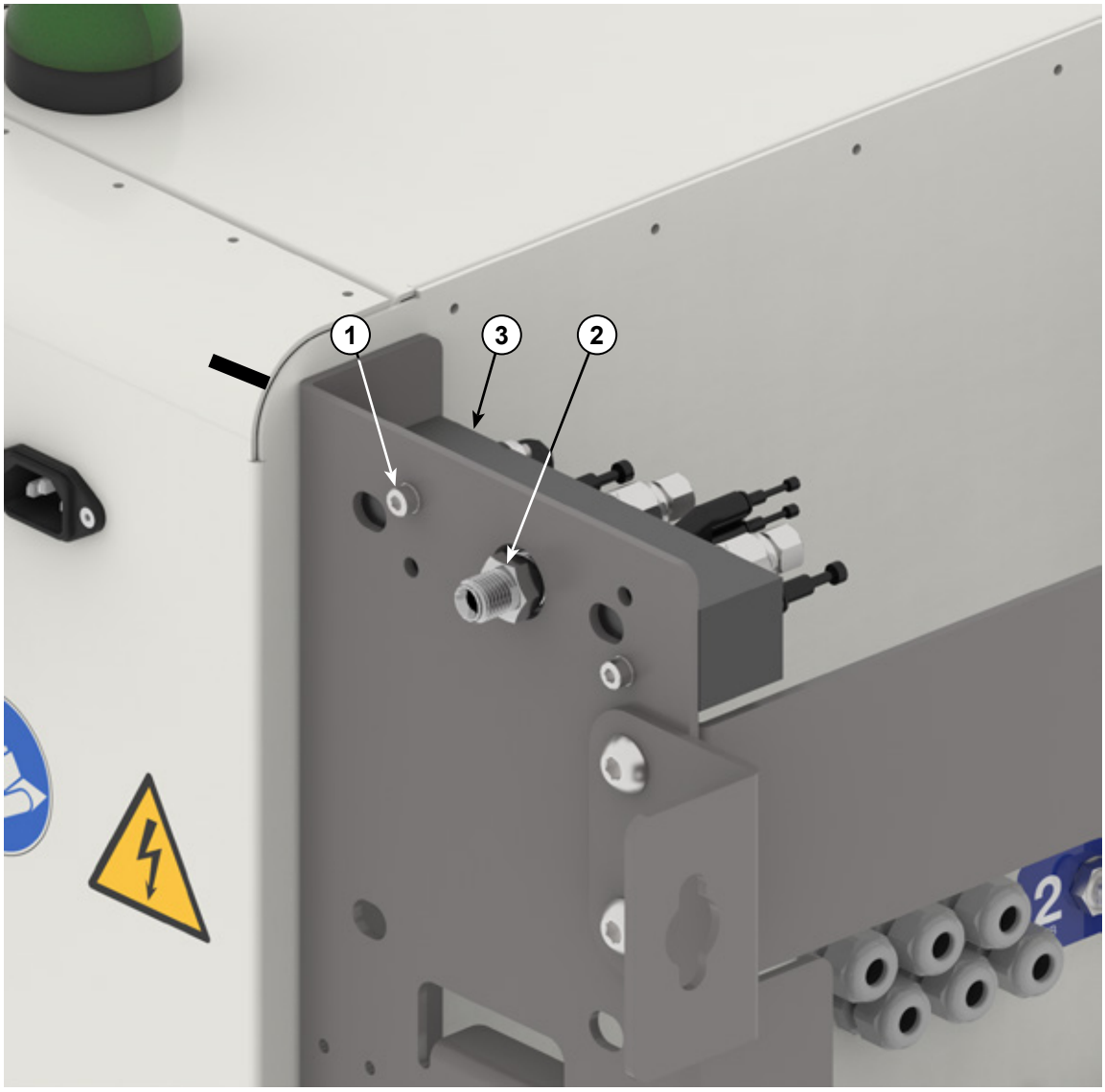
04 PRODUCT OVERVIEW

04.1 AIR MANIFOLD INTRODUCTION

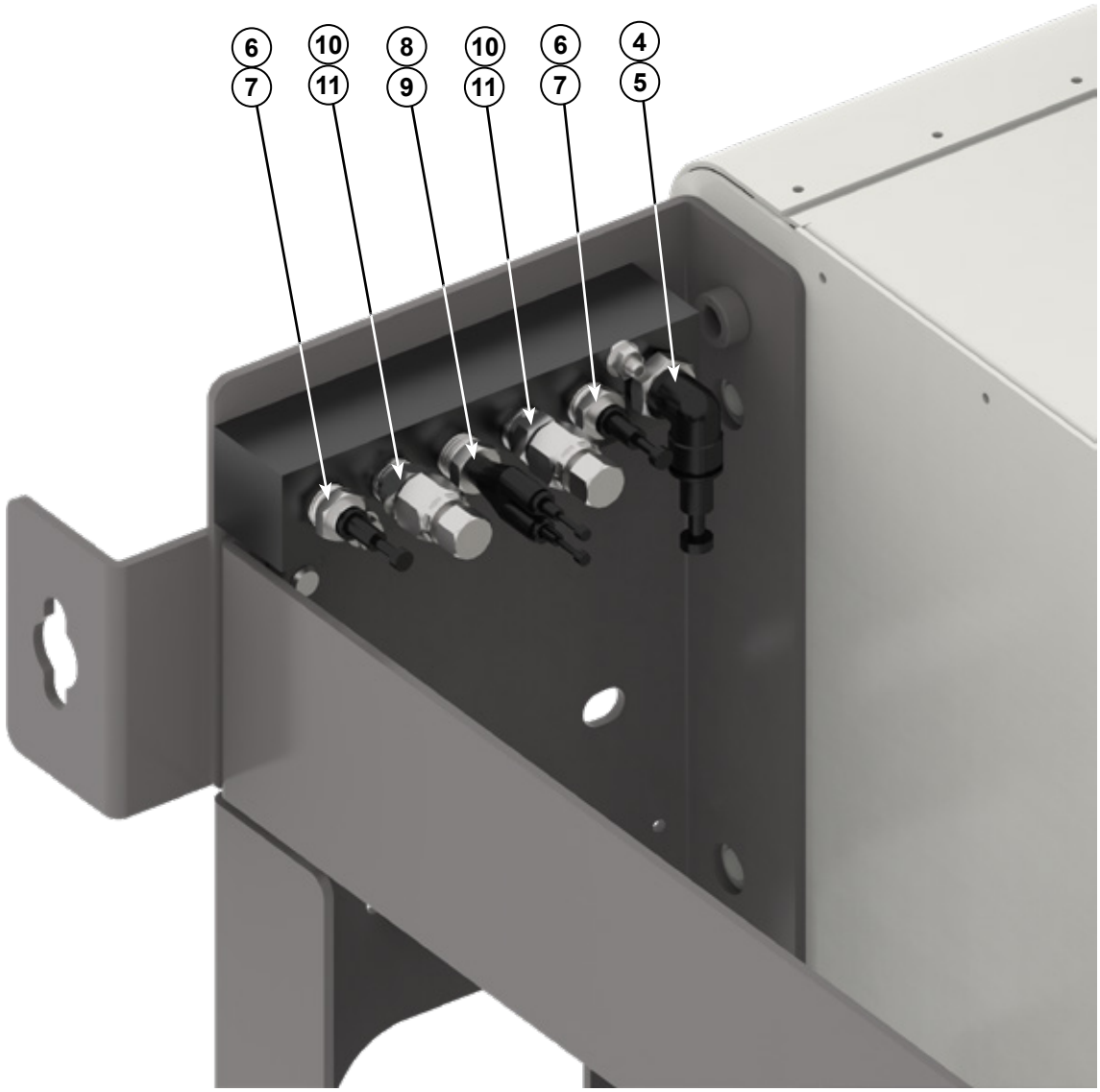
The BINKS 240-3900 air manifold distributes airflow from a single connected factory source to the controller air valve and fluid stack assemblies. The maximum incoming working pressure is 1,000 psi (68.95 bar/6895 kPa) @ 100 °F (37.77 °C). It is recommended to use an inline air filter and dryer before the air manifold.

04.2 KIT CONTENTS

240-3900 BINKS AIR MANIFOLD ITEMS	
Item	Description
1	Manifold to Mast Hardware
2	Air Inlet Supply Line
3	Air Manifold, Aluminum Use With End Plug



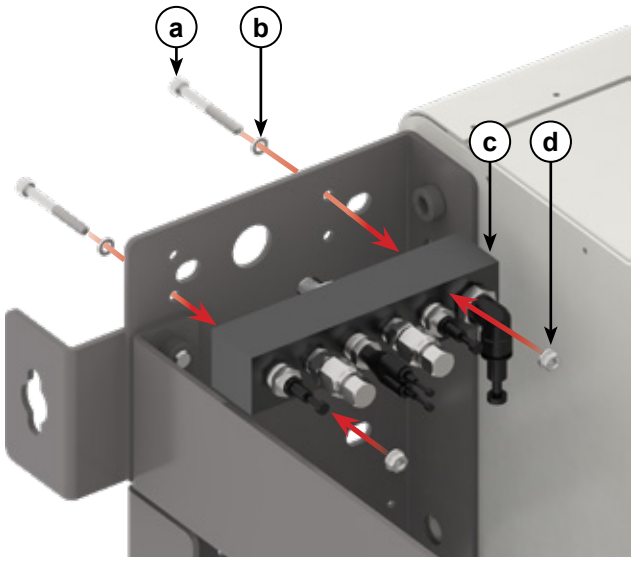
240-3900 BINKS AIR MANIFOLD ITEMS (cont.)	
Item	Description
4	Elbow Fitting to Color Change Box
5	Fitting Block-Off to Block an Unused Fitting
6	Push-In Fitting
7	Fitting Block-Off to Block an Unused Fitting
8	Push-In Y-Fitting to Air Push
9	Fitting Block-Off to Block an Unused Push-In Fitting
10	Fitting cap to Block an unused Fitting
11	Fitting to Atomizing Air



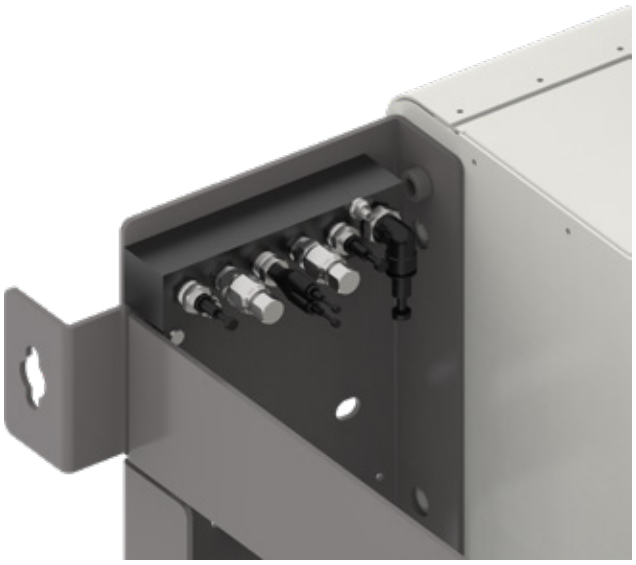
05 RM2 AIR MANIFOLD INSTALLATION

05.1 RM2 AIR MANIFOLD

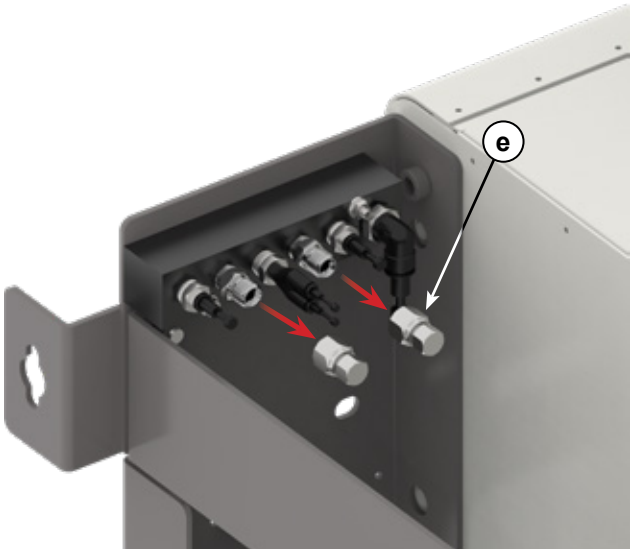
1. Put the air manifold block (c) inside and against the right side mast.
2. Put a washer (b) onto a screw (a) and into the drilled hole in the mast and through the air manifold block. Repeat with the second screw and washer.
3. Fasten the air manifold and screws to the mast with the lock nuts (d).



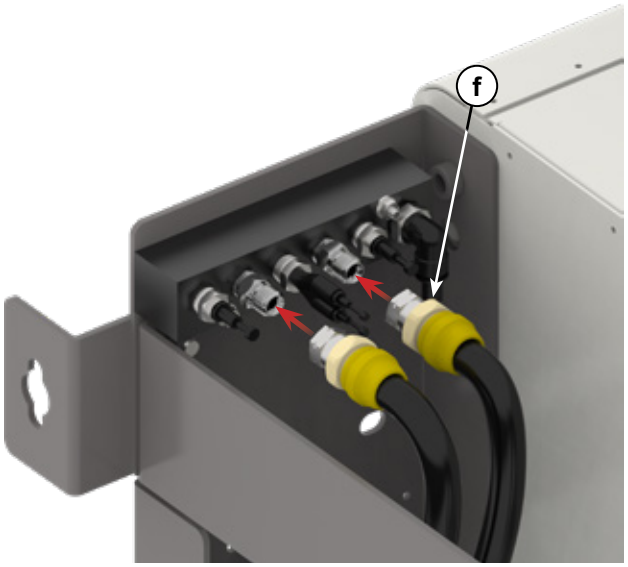
4. Tighten the lock nuts to secure the air manifold to the mast.



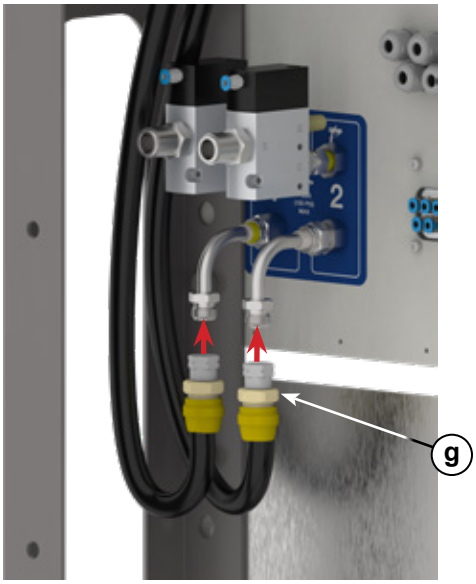
5. Remove and discard the air fitting caps (e) from the fittings.



6. Attach the ErgoFlex hoses (f) to the fittings and tighten.



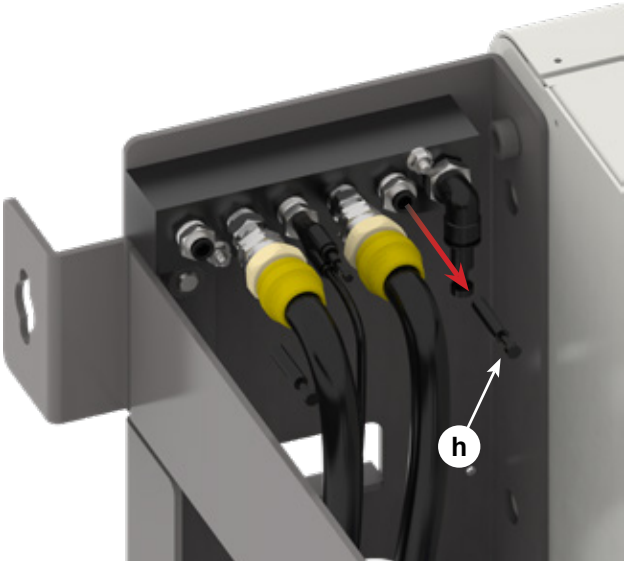
7. Attach the other end of the ErgoFlex hoses (g) to the air inlet elbow fittings and tighten.



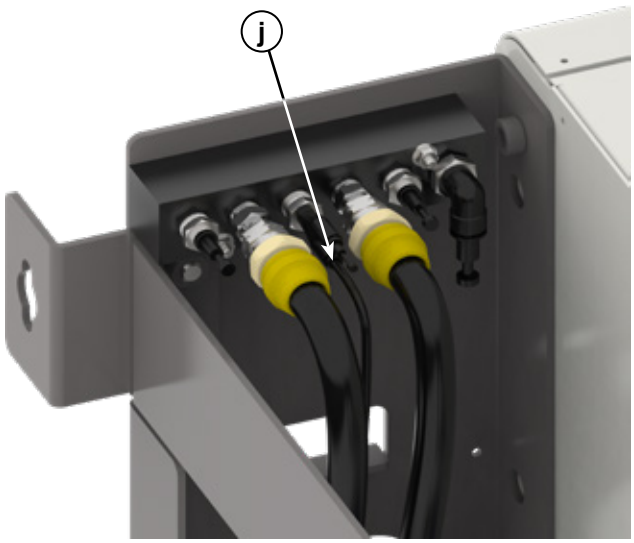
8. Remove and discard one of the air fitting plugs (h) from the Y splitter push-in fitting. The second air feed is reserved for future or optional peripheral accessories.

NOTICE

These fittings are for optional equipment. Do not remove these plugs unless optional equipment will be attached at this time.



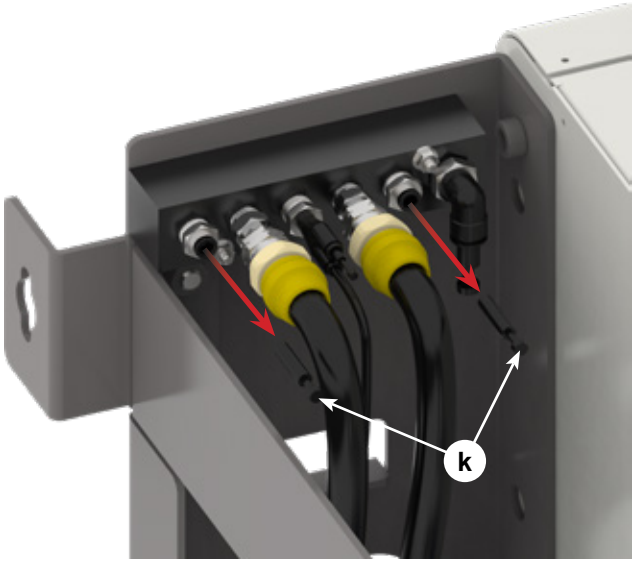
9. Insert in 5/32" air tubing (j) (not included) to supply air to the optional Gun Flush Box (if equipped).



10. Remove and discard both air fitting plugs (k) from the 1/4" push-in fittings.

NOTICE

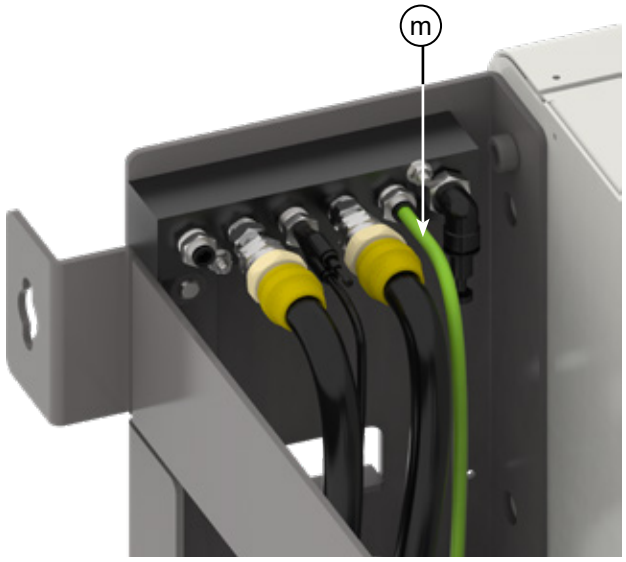
These fittings are for optional equipment. Do not remove these plugs unless optional equipment will be attached at this time.



11. Insert one end of the green 1/4" air tube (m) to a push-in fitting.

⚠ CAUTION

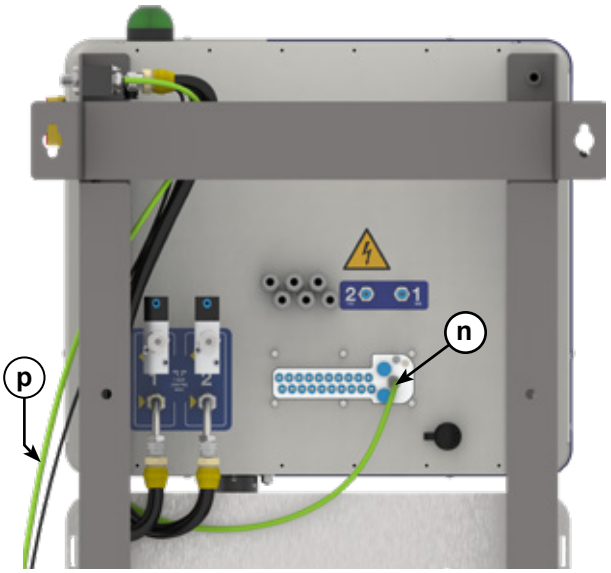
To prevent kinks and breaks, the green air tube routing must be positioned close to the controller box.



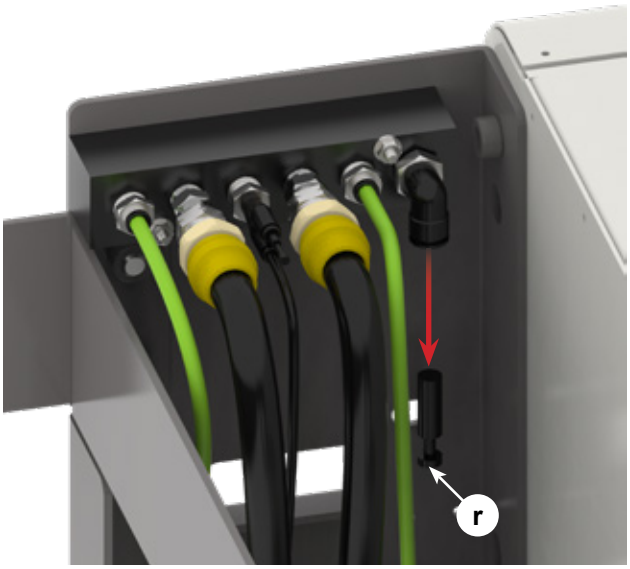
12. Cut the green air tube with an air line cutter. The cut end must be perpendicular (square) to the hose.
14. Insert the cut end of the green air tube into the VTUG port (n) in the air solenoid stack.

NOTICE

The second green air tube (p) is for optional equipment like the color change box. Do not remove this plug unless optional equipment will be attached at this time.



15. Remove and discard the 3/8" air fitting plug (r) from the 3/8" push-in elbow fitting.

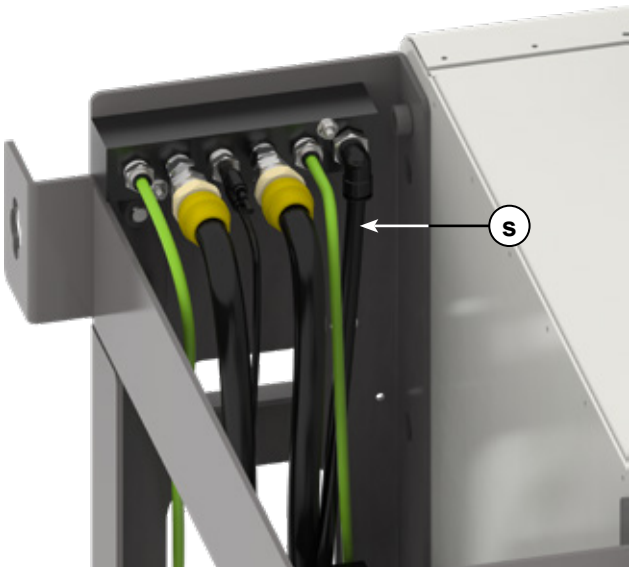


16. Insert one end of the black 3/8" air tube (s) into the push-in elbow fitting.
17. The black 3/8" air tube routing goes through the right mast opening and attaches to the the air chop regulator (not shown) if equipped.

NOTICE

The air chop regulator is only available on the Low Pressure RM2 model.

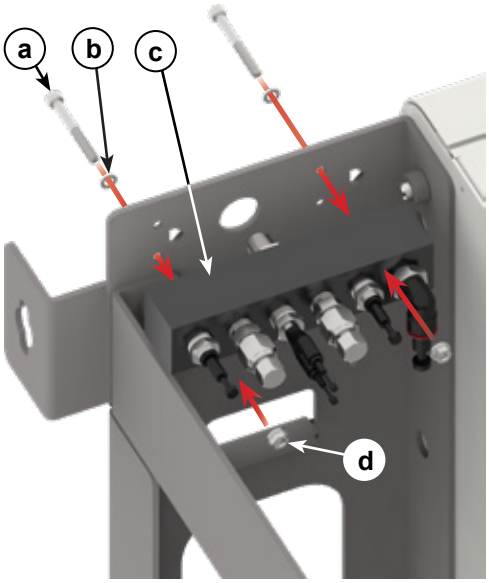
For the Medium Pressure RM2, this hose and air manifold fitting is available for future or optional equipment. Leave the fitting plug in the push-in fitting if not used.



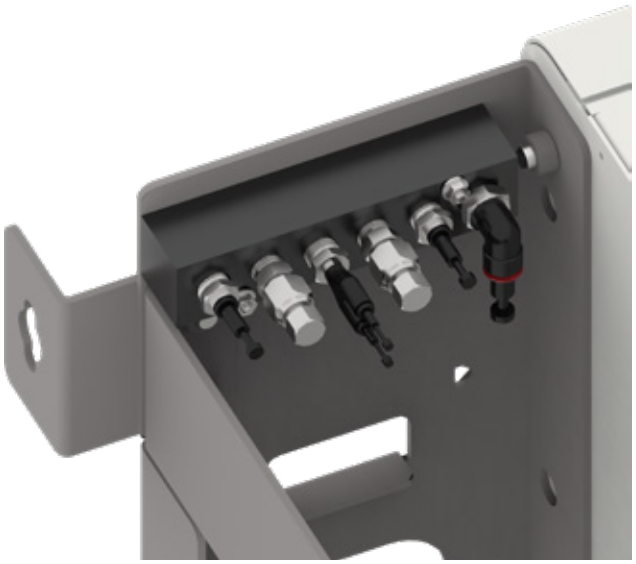
06 RE1 AIR MANIFOLD INSTALLATION

06.1 RE1 AIR MANIFOLD

1. Put the air manifold block (c) inside and against the right side mast.
2. Put a washer (b) onto a screw (a) and into the drilled hole in the mast and through the air manifold block. Repeat with the second screw and washer.
3. Fasten the air manifold and screws to the mast with the lock nuts (d).



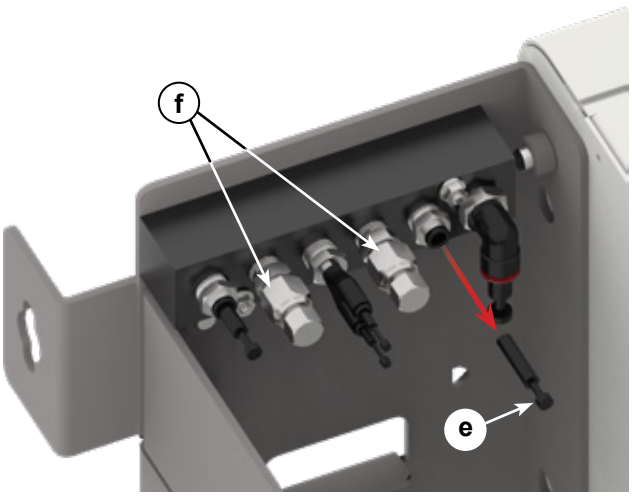
4. Tighten the lock nuts to secure the air manifold to the mast.



5. Remove and discard the air fitting plug (e) from the manifold. Keep plugs (f) in place, as fittings are not used in RE1 configuration.

NOTICE

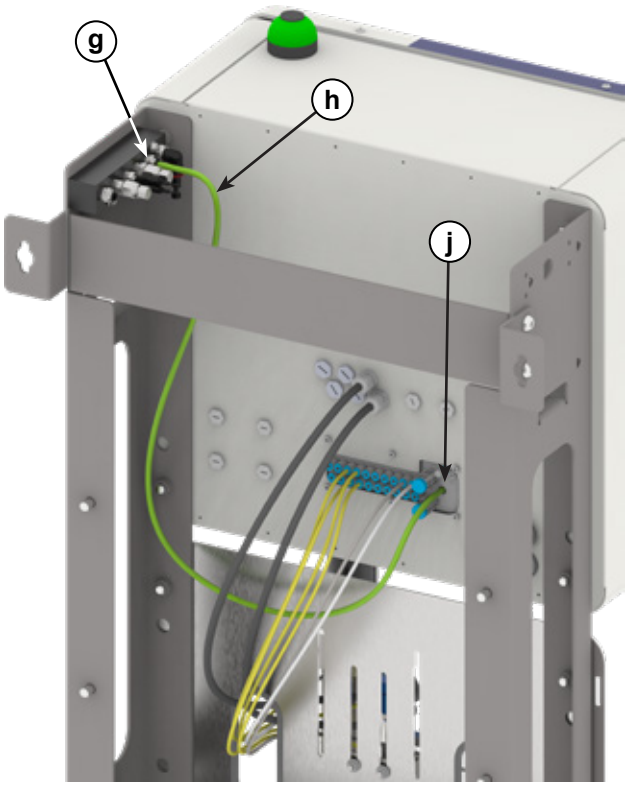
These fittings are for optional equipment. Do not remove these plugs unless optional equipment will be attached at this time.



6. Remove and discard air fitting plug (g) from the 1/4" push-in fitting.
7. Insert one end of the green 1/4" air tube (h) to a push-in fitting.
8. Cut green air tube with an air line cutter. The cut end must be perpendicular (square) to the air tube.
9. Insert the cut end of the green air tube into the VTUG port (j) in the air solenoid stack.

⚠ CAUTION

To prevent kinks and breaks, the green air tube routing must be positioned close to the controller box.



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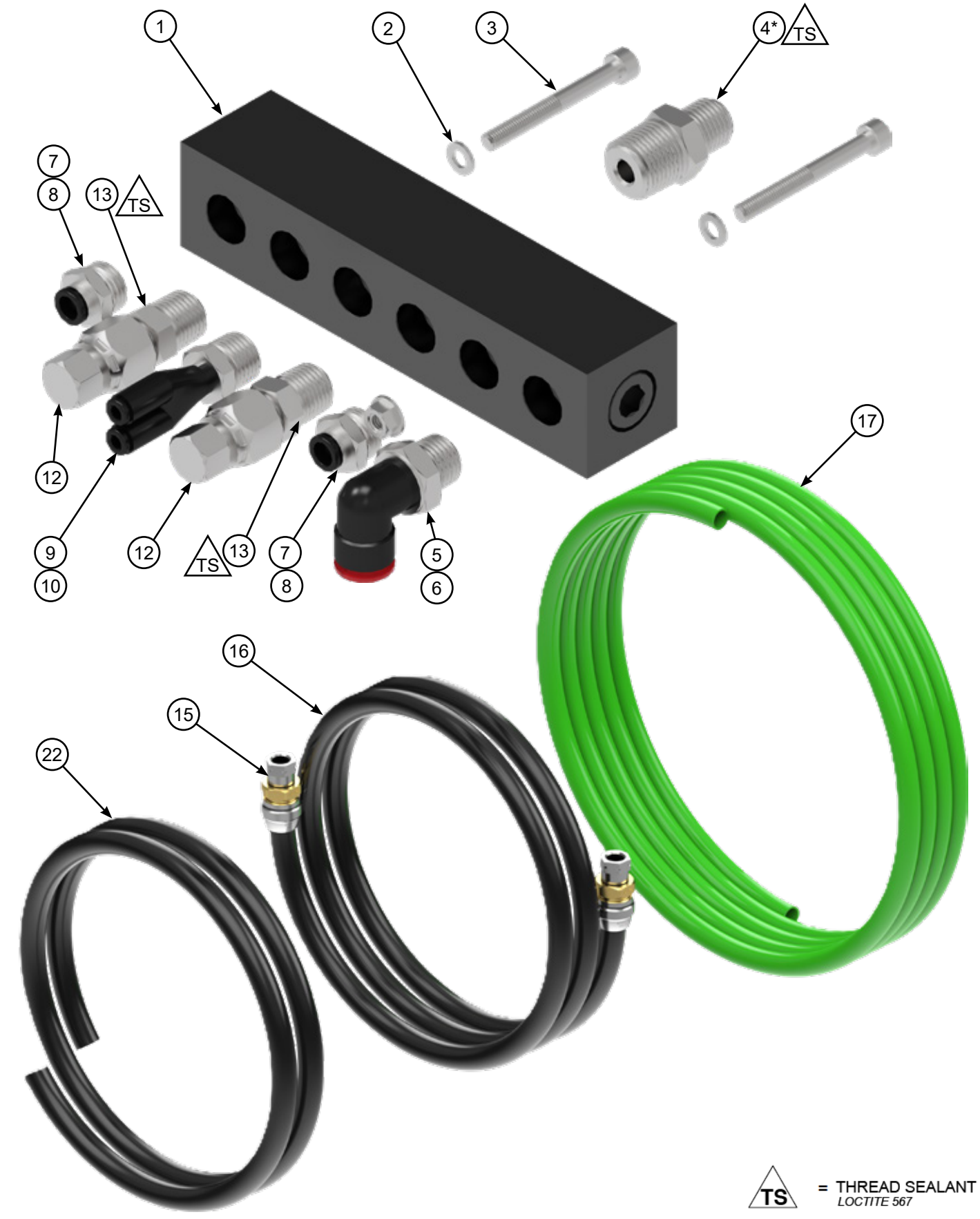
AIR MANIFOLD ASSEMBLY 240-3900



AIR MANIFOLD 240-3900				
Item No.	**Part No.**	**Description**	**Qty.**	**Notes**
1	-	Air Manifold	1	
2	-	Flat Washer, M5, 18-8	2	
3	-	Socket Head Cap Screw, M5 x 0.8, 45 mm, 18-8	2	
4	6T-4	3/8 NPT (M) x 1/4 NPS (M)	1	*Discard red cap
5	JML-38-4T	Fitting, Elbow, 1/4 NPT (M) x 3/8 ODT	1	
6	-	Block-Off Fitting, Air Tube, 10 mm *(not shown)*	1	Remove to insert air tube
7	20-7093	Push-In Fitting, 1/4 NPT X 1/4 OD	2	
8	-	Block-Off Fitting, Air Tube, *(not shown)*	2	Remove to insert air tube as needed
9	20-7094	Push-In Y-Fitting, 1/4 NPT X 5/32 OD	1	
10	-	Block-Off Fitting, Air Tube, *(not shown)*	2	Remove to insert air tube as needed
11	-	Serrated Flange Locknut, M5 x 0.8, 18-8	2	
12	4-CAP	Cap, Fitting, 1/4 NPT (F)	2	Remove to insert air tube as needed
13	4T-4	Fitting, 1/4 NPT (M) x 1/4 NPS (M)	2	
14	-	3/8" Tubing, Black	2 ft	Not shown to scale
15	72-2008	Connection, 1/4" Swivel x 3/8" ErgoFlex Hose	4	Parts create two (2) hose assemblies (one assembled hose shown)
16	71-31000	ErgoFlex HVLP Bulk Hose, 3/8 ID x 41/64 OD	2	
17	NHA-0403G	1/4" OD x .180 ID Nylon, .035" Wall, Green	6 ft	Not shown to scale

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MANUAL CHANGE SUMMARY		
Date	Description	Version
01/07/2025	Initial release	R1

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WARRANTY POLICY

This product is covered by Binks' materials and workmanship limited warranty.

The use of parts or accessories from sources other than Binks will void all warranties. Failure to follow reasonable maintenance guidance provided can invalidate the warranty.

For specific warranty information, please contact Binks.

For technical assistance or to locate an authorized distributor, contact one of our international sales and customer support locations listed below.

REGION	INDUSTRIAL/ AUTOMOTIVE	AUTOMOTIVE REFINISHING
Americas	Tel: 1-800-992-4657	Tel: 1-800-445-3988
Europe, Africa, Middle East	Tel: +4401202571111	
India	marketingroa@binks.com	
China	Tel: +862133730108	
Korea	Tel: +82313663303	
Japan	Tel: +81457856421	
Australia	Tel: +61085257555	

WARRANTY PAGE

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