



MATERIAL ACTIVATION SYSTEMS

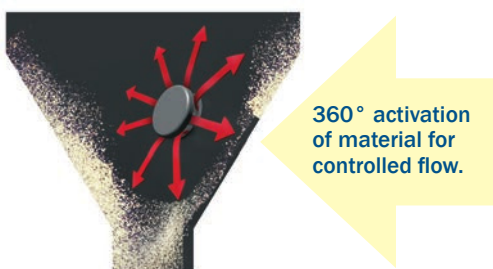
Model VA-06-TRI-TRI Model VA-12-TRI-TRI

3/4" and 1-1/2" Sanitary-Style AirSweep® Systems

Ideal for applications requiring easy installation and removal for cleaning or sanitizing.

Solve tough flow problems and eliminate ratholes, bridging and sticky buildup.

The AirSweep® material activation system delivers on-demand product flow, eliminates hang-ups and blockages, cleans interior surfaces and enhances batch uniformity.



Each AirSweep nozzle directs a high-pressure, high-volume 360° burst of compressed air or inert gas along the inside walls of process equipment or vessels, breaking friction to lift and sweep stalled material back into the flow stream. The patented nozzle design ensures an immediate reseal after each pulse to eliminate material feedback.

Sequenced pulsing of strategically-positioned AirSweep units activate bulk material to produce a first-in, first-out controlled flow.



3/4" VA-06-TRI-TRI
Shown with solenoid valve.

- Patented valve design utilizes only one moving part, ensuring an immediate reseal after each pulse to prevent clogging and material build-up
- System is mounted on the outside of the vessel for easy cleaning and maintenance
- Tri-clover clamp allows simple installation and removal without tools
- Low air consumption – each unit uses less than 10 CFM, on average
- Activate 2 ft. to 7 ft. diameter of material (depending on model)
- Manufactured from high-grade 316 Stainless Steel for long service life



Performance, per unit*			
	Solenoid Valve Diameter	Material Activation Area (diameter)	Compressed Air/Gas Consumption (per pulse)
VA-06-TRI-TRI	3/4" (19.05 mm)	2 feet (0.61 m)	0.08 scf @ 40 psi (0.002 m³ @ 2.76 bar)
		3 feet (0.91 m)	0.45 scf @ 60 psi (0.0127 m³ @ 4.14 bar)
VA-12-TRI-TRI	1-1/2" (38.1 mm)	5 feet (1.52 m)	1.9 scf @ 80 psi (0.0538 m³ @ 5.52 bar)
		7 feet (2.13 m)	2.45 scf @ 100 psi (0.069 m³ @ 6.89 bar)

*Average in 75 lbs/ft³ material; 250 millisecond pulse

Specifications subject to change without notice.

Contact us for a FREE engineered proposal to effectively implement the AirSweep® System into your specific application.



1-860-928-6551 • Sales@AirSweep.com • www.AirSweep.com

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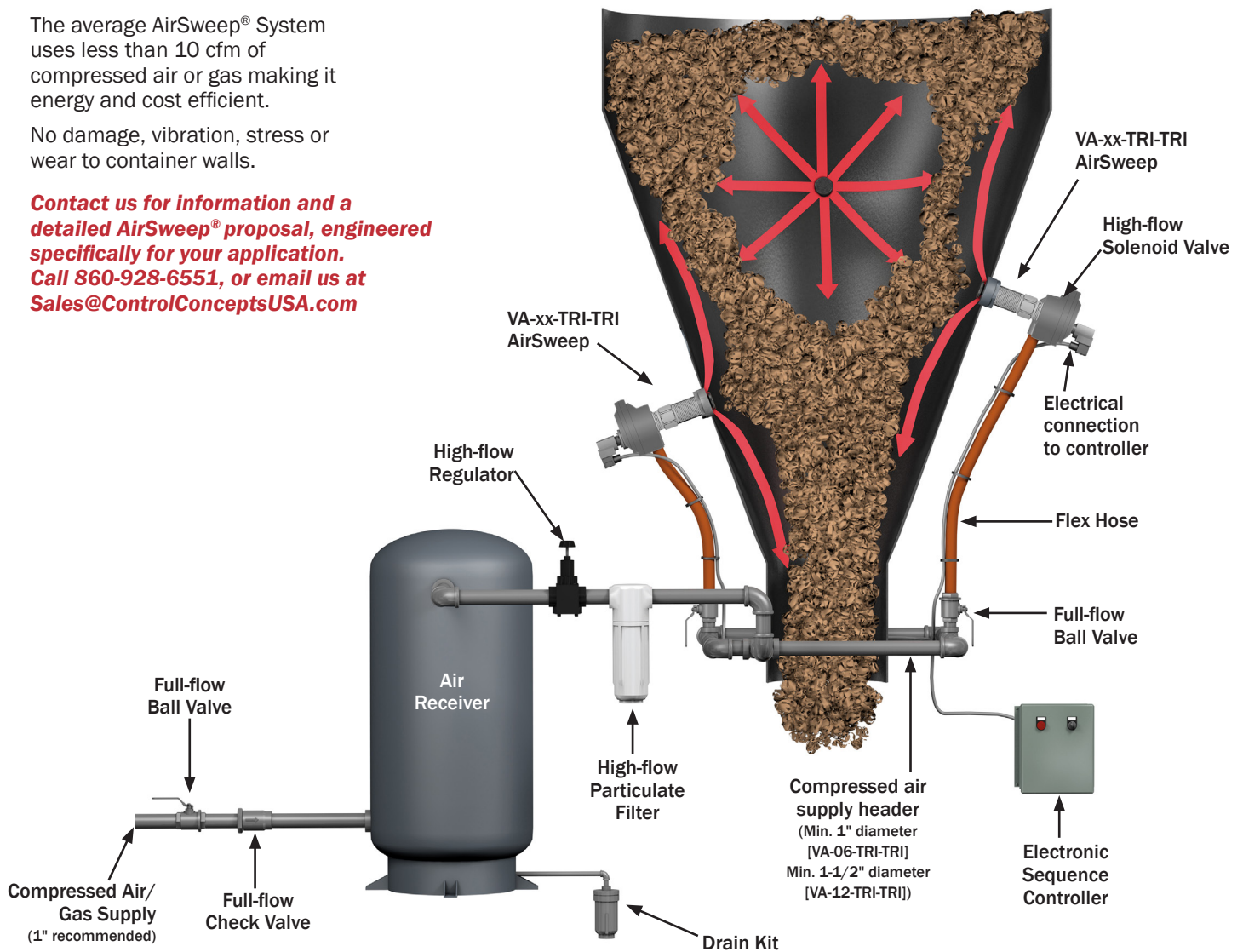
Typical Tri-Clamp Model AirSweep® System

A typical AirSweep® material activation system consists of strategically-located AirSweeps, high-flow solenoid valves, electronic sequence controller and air receiver.

The average AirSweep® System uses less than 10 cfm of compressed air or gas making it energy and cost efficient.

No damage, vibration, stress or wear to container walls.

Contact us for information and a detailed AirSweep® proposal, engineered specifically for your application. Call 860-928-6551, or email us at Sales@ControlConceptsUSA.com



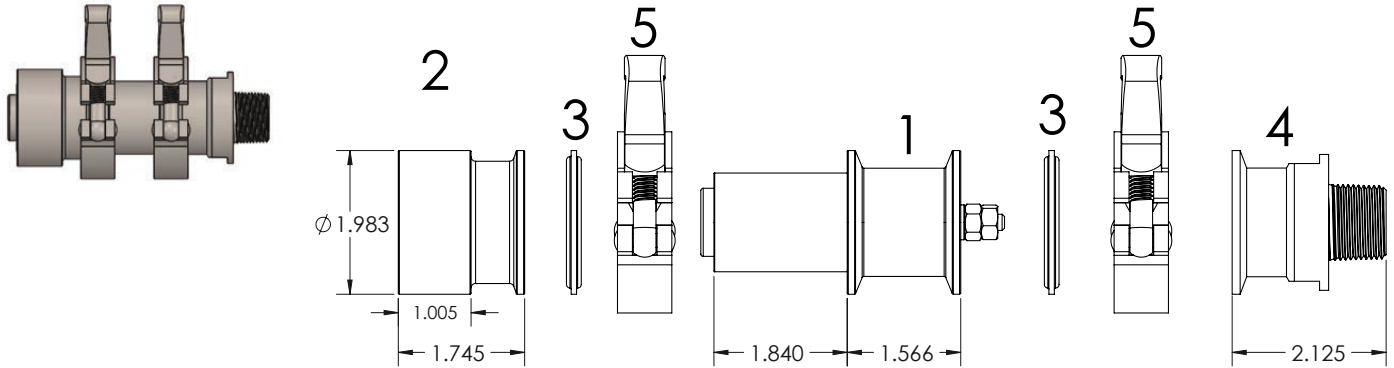
Typical AirSweep® System Components

Model VA-06-TRI-TRI	Model VA-12-TRI-TRI	Description
3/4" Solenoid Valve	1-1/2" Solenoid Valve	Delivers rapid, high-volume pulse of compressed air/gas to AirSweep nozzle.
3/4" Flex Hose Assembly	1-1/2" Flex Hose Assembly	Connects the solenoid valve to hard-piped header loop.
3/4" Full-flow Ball Valve	1-1/2" Full-flow Ball Valve	Isolation valve for individual nozzles.
1" High-flow Particulate Filter	1-1/2" High-flow Particulate Filter	Point-of-use particulate filtration enhances life of system components by removal of in-line contaminants.
30-gallon Air Receiver	60-gallon Air Receiver	Compressed air reservoir ensures instantaneous volume for system.
1" High-flow Regulator	1-1/2" High-flow Regulator	Regulates compressed air supply for proper AirSweep operation.
1" Full-flow Check Valve	1-1/2" Full-flow Check Valve	Ensures one-way flow to system.
1" Full-flow Ball Valve	1-1/2" Full-flow Ball Valve	System shut-off.
Electronic Sequence Controller		Controls sequenced pulsing of AirSweep system; adjustable for any process.

Tri-Clamp Model Specifications

Specifications subject to change without notice.

VA-06-TRI-TRI

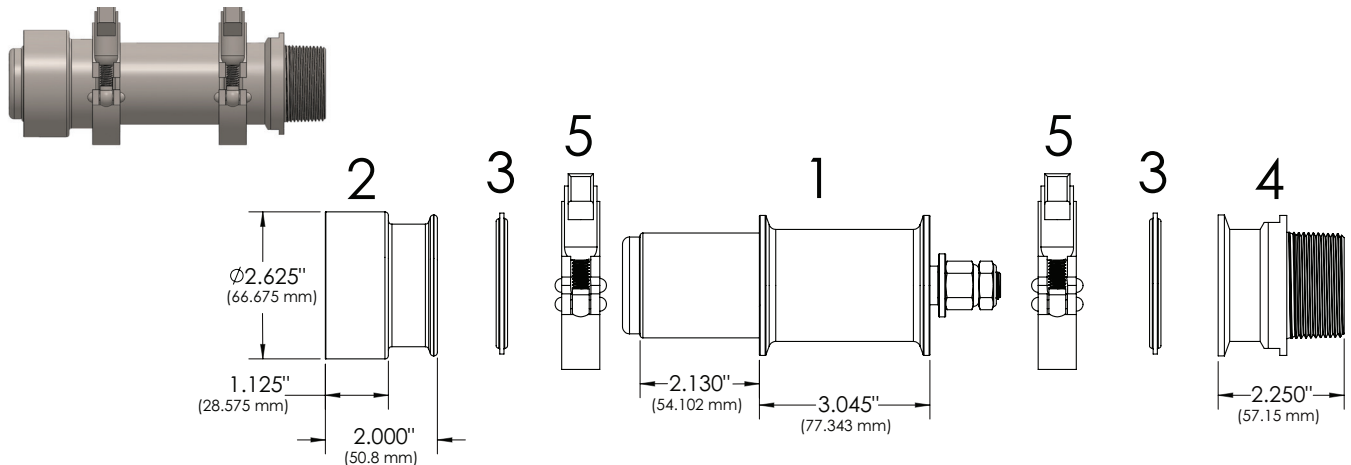


Item No.	Description	Qty.
1	Tri-Clamp unit	1
2	Mounting Coupling	1
3	Gasket	2
4	Adapter	1
5	Clamp	2

	Weight	
	VA-06-316-TRI-TRI	VA-12-316-TRI-TRI
Tri-Clamp unit	1.38 lb (0.63 kg)	**
Mounting Coupling	0.64 lb (0.29 kg)	**
Adapter	0.56 lb (0.25 kg)	**
Clamp	0.62 lb (0.28 kg)	**

** Product weight not available. Call 60-928-6551 for more information.

VA-12-TRI-TRI



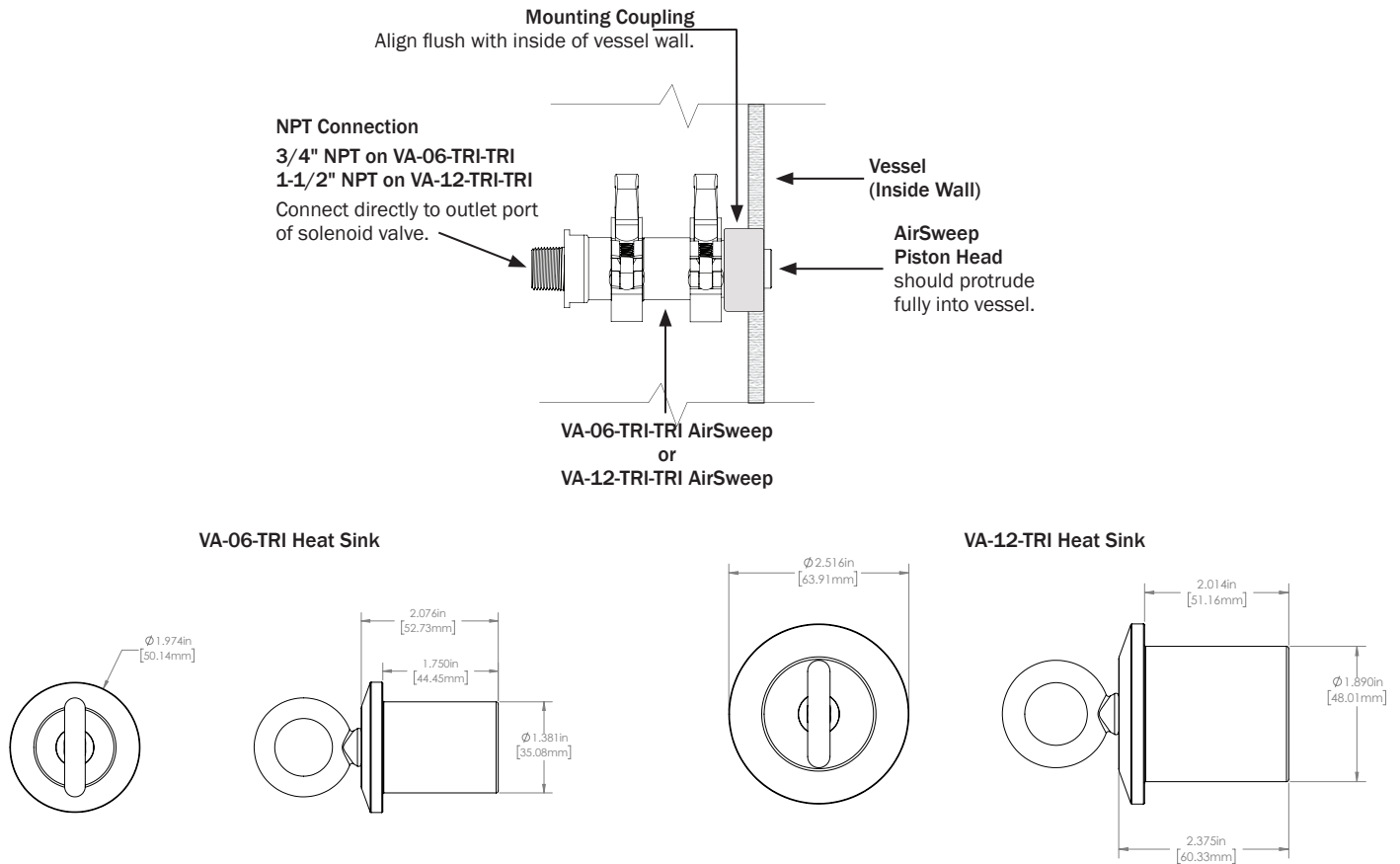
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Mounting Instructions for Tri-Clamp Models



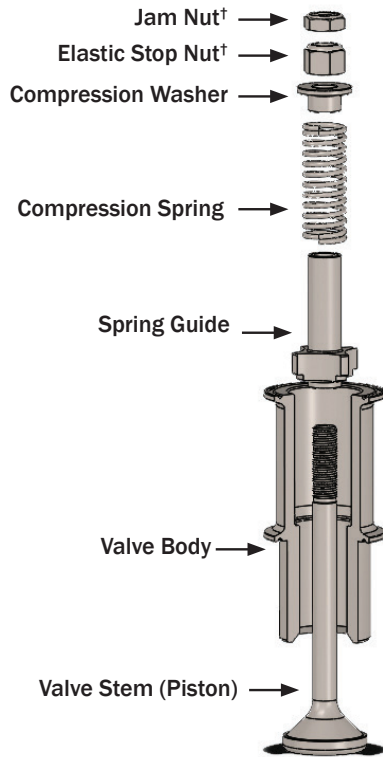
MC-06-TRI and MC-12-TRI Mounting Coupling Installation (Weld to vessel)

1. Cut hole in vessel wall. Recommended hole size of approximately 1/8" (3.175 mm) greater than diameter of coupling to allow coupling to pass through curved wall.
(For MC-06-TRI: 1.983"/50.368 mm; For MC-12-TRI: 2.380"/60.452 mm)
2. Align coupling flush with inside of vessel wall, insert the heat sink with anti-seize lubricant to protect the mounting coupling from warping, and stitch weld to evenly distribute heat to the exterior of the wall.
3. Install clamp gasket to inside groove in mounting coupling flange.
4. Push AirSweep fully into mounting coupling, ensuring clamp gasket is tightly sandwiched between AirSweep and mounting coupling.
5. Install tri-clover clamp around AirSweep and mounting coupling flange and finger-tighten until snug.
6. Apply Teflon tape to adapter thread and thread solenoid valve onto adapter. Do not over-tighten.
Do not use pipe dope or paste on threads, as this material may foul the solenoid valve.
7. Install clamp gasket to inside groove in rear AirSweep flange.
8. Position adapter flange to mate with rear AirSweep flange – with gasket sandwiched between the two parts.
9. Install tri-clover clamp around rear flange and finger-tighten until snug.

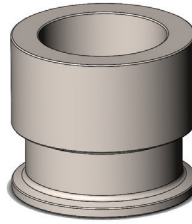
Note: On sharply curved vessel walls, front surface of mounting coupling may extend slightly into the vessel at top and bottom (12:00 & 6:00 positions), and should be flush at sides (3:00 & 9:00 positions). If the mounting coupling and AirSweep are made of dissimilar materials, an anti-seize lubricant should be used.

- For maximum effectiveness, connection between adapter and solenoid valve should be direct, with no additional pipe nipples or fittings. When possible, use only the supplied adapter. If additional pipe length is required, do not exceed 12" between solenoid valve and AirSweep.

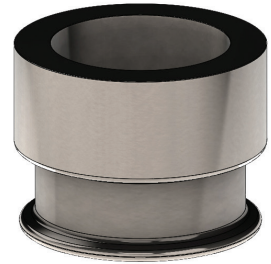
Tri-Clamp Model Assembly and Mounting



Mounting Coupling
for VA-06-TRI-TRI
(Weld to vessel)



Mounting Coupling
for VA-12-TRI-TRI
(Weld to vessel)



Qty.	Description	VA-06-TRI-TRI	VA-12-TRI-TRI
1	Valve Body	VB-06-316-TRI-TRI	VB-12-316-TRI-TRI
*1	Valve Stem	VCW-06-316	VCW-12-316
*1	Spring Guide	SG-06-316	SG-12-316
*1	Compression Spring	CS-06-316	CS-1251-316
*1	Compression Washer	CW-06-316	CW-1251-316
*†	Elastic Stop Nut	(2) ESN-06-SS	(1) ESN-1251-SS
*†	Jam Nut	NA	(1) JN-1251-SS
1	Mounting Coupling	MC-06-316-TRI	MC-12-316-TRI
1	Lock Nut	LN-06-316	LN-12-316

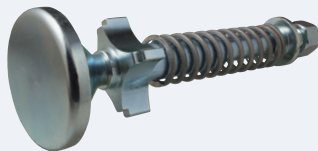
* This part is included in the Rebuild Kit.

† VA-06-TRI-TRI model includes two (2) Elastic Stop Nuts. Model VA-12-TRI-TRI include one (1) Elastic Stop Nut and one (1) Jam Nut.

TRI-TRI Model Rebuild Kit

AirSweep Nozzle Rebuild Kit contains 1 each:

- valve stem
- spring guide
- compression washer
- compression spring
- elastic stop nut
- jam nut



Recommended service interval of internal parts:

Approximately 1 million cycles.*

Maintenance recommended:

Replacement of internal parts.

Rebuild Kits	
Model	Rebuild Kit No.
VA-06-TRI-TRI	RK-06-316
VA-12-TRI-TRI	RK-12-316

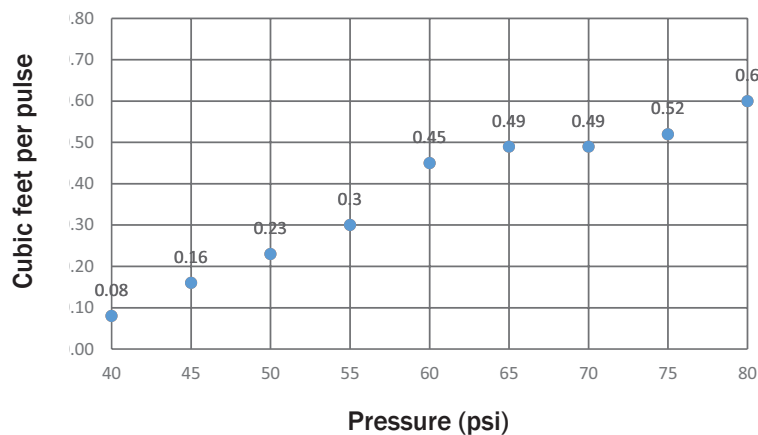
* Typical service interval under standard operating conditions. Some environments, materials and processes may result in a shorter useful service interval.

Typical Operating Parameters

Compressed Air/Gas Consumption for VA-06-TRI-TRI/VA-12-TRI-TRI AirSweep

Model	VA-06-TRI-TRI	VA-12-TRI-TRI
Recommended operating pressure	40 to 60 psi	80 to 100 psi
Typical effective diameter of material activation (dry, powdered material, 60-75 lbs/ft ³)	2 to 3 feet (0.61 to 0.91 m) around each nozzle	6 to 8 feet (1.83 to 2.44 m) around each nozzle
Recommended pulse time	250 milliseconds	250 milliseconds
Approximate air/gas consumption rate per 250 millisecond pulse	0.45 ft ³ @ 60 psi	1.9 ft ³ @ 80 psi
Typical sequence rate range (application/material dependent)	3 pulses to 12 pulses per minute	3 pulses to 12 pulses per minute
Typical (approx.) compressed air/gas consumption rate range (based on typical sequence rate range of 3 to 12 pulses/min)	1.35 to 5.4 scfm @ 60 psi	5.7 to 22.8 scfm @ 80 psi

VA-06-TRI-TRI Compressed Air/Gas Consumption



● = Consumption per 250 millisecond pulse.

VA-12-TRI-TRI Compressed Air/Gas Consumption

