



VMAU Spray Gun



NEW Variable Automatic Spray Gun with modular designed components provides solutions to your most demanding spray application challenges.

Specifications

Incorporates independent controls of liquid, atomizing air and fan air for fine tuning of spray capacity, droplet size, and spray patterns

O-ring sealed air cap on the fluid tip for positive alignment and sealing

Patent-pending modular body and threadless fluid tip design

Inlet connection: 1/4" NPT, 1/4" BSPT or Sanitary Flange

Available in a wide array of spray set-up configurations

Available with anti-bearding set-ups

Available with sanitary fluid connections

Available with optional Diaphragm Actuator

FDA compliant material options

Benefits

- Modular design offers the flexibility to fit various unique spray applications
- Maximizes uniform spray distribution
- Minimizes overspray
- Energy savings in adjustable fan air settings
- Decreases seal failure, bearding and plugging
- Reduces maintenance costs
- Easy access dramatically cuts cleaning and maintenance downtime
- Increases throughput
- Improves spray and product quality
- Easy change-over from model VAU to model VMAU
- Threadless sanitary design with no internal threads in the liquid chamber

Typical Applications



Butter Coating



Sugar Coating



Tablet Coating

Food Product Coating

Lubrication

Moisturizing

Recirculating Systems

Spraying Viscous Liquids:

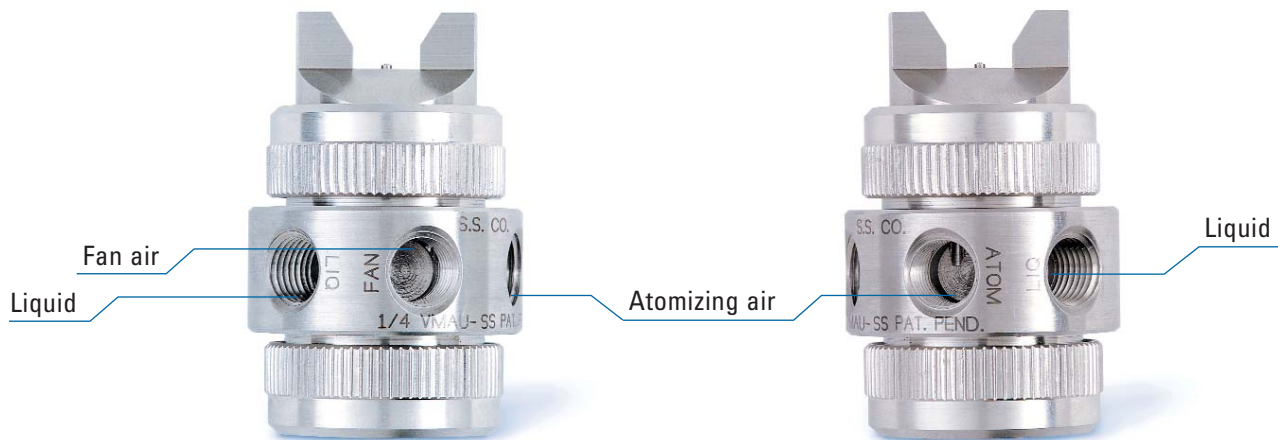
butter, sugar, wax, syrup, non-skid coatings, film coatings, etc.

Uniform Spray Distribution with Minimal Overspray

Independent Controls for Maximum Flexibility

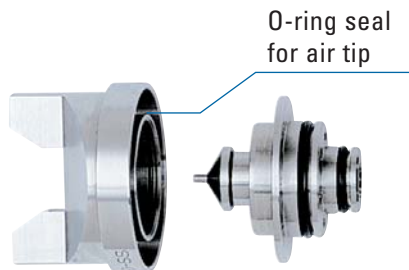
The VMAU Automatic air atomizing spray guns feature individual controls of the liquid, atomizing air, and fan air allowing you to fine tune spray capacity, droplet size, and spray patterns. You can:

- Change liquid flow rates to increase or decrease the amount of product sprayed
- Adjust the atomizing air to affect the spray atomization without affecting the liquid flow rate
- Alter fan air from a round spray pattern to a flat spray pattern



Baffling System for Uniform Spray Patterns

The VMAU uses a baffling system for supplying the atomizing and fan air. This system distributes both the fan and atomizing air equally, providing a more uniform spray pattern.

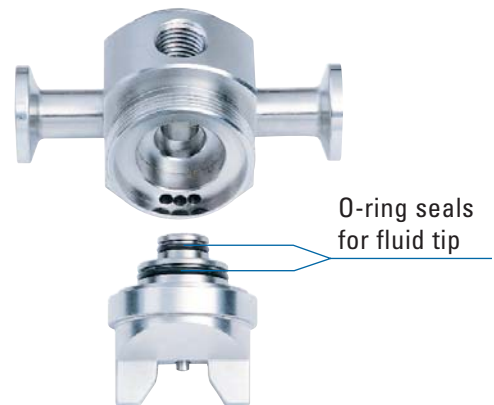


Air Cap Placement and Seal for Consistent Spray Patterns

The VMAU's air cap is located on the fluid tip and is O-ring sealed. It offers a better alignment and a tight seal for a more consistent spray pattern.

Threadless Fluid Tip for Sanitary Spray

The VMAU's fluid cap is inserted into the body and sealed via two O-rings. The connection is completely threadless.



Wide Range of Spray Set-ups to Meet Specific Requirements

Available in a wide range of spray set-ups the VMAU allows you to select the set-up that will best suit your needs. With less fan air pressure, you can achieve the spray you require while reducing production costs and overspray.

Reduce Downtime and Maintenance Costs

Modular Design for Quick and Easy Maintenance

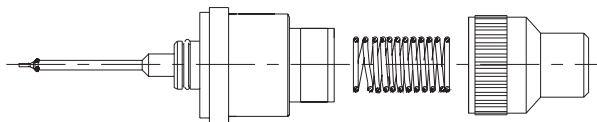
The VMAU's patent-pending modular body and threadless fluid tip design are a revolutionary advance for reducing maintenance costs.



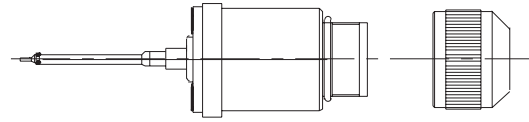
- No tools are needed for disassembling the VMAU spray gun. To replace the actuator, simply disconnect it, replace it with a back-up actuator, and you're up and running in no time — without using any tools!
- The VMAU spray gun can be hand-piped and serviced without disconnecting the body.
- Should you develop a need for additional VMAU accessories in the future, upgrades are plug-and-spray. Your investment in the spray unit is secure.

Actuators Designed to Reduce Downtime Due to Failed Seals

All of the VMAU spray gun's actuators have the liquid shut-off seal on the needle tip, allowing easy removal for cleaning maintenance. To better suit your needs there are two types of actuators to choose from: standard O-ring Actuator (single or double action) or an optional Diaphragm Actuator (double action).



Single Action



- The O-ring Actuator is easy to maintain. Simply remove actuator cylinder cap by hand and push the needle assembly out. The seals come right out with the assembly, allowing easy removal for cleaning and maintenance. There are no packing screws or retainers that require tools for removal.
- The Diaphragm Actuator replaces the conventional seals with a patented diaphragm design seal to minimize actuator seal failures. For applications in which seal failure is a major cause of downtime, such as spraying abrasives like sugar, wax, non-skid coating or film coating materials, the optional Diaphragm Actuator can reduce maintenance costs.

Designed to Minimize Plugging

- The VMAU has a built-in clean-out/shut-off needle that can automatically activate during each spray cycle for maximum protection against clogging.
- ¼ inch connections provide larger free passage for air and liquid through the inlets.
- The VMAU is also available with larger sized orifices up to .10 to allow passage of larger solids through the fluid tip.

NOTE: For current VAU customers, the VMAU's centerline distance and mounting thread is the same as the VAU, allowing easy changeover.

Standard Set-ups

The VMAU can utilize any of eight different spray set-ups that provide flow rates ranging from .74 gph (2.8 l/h) to 73 gph (276 l/h). The following chart provides liquid capacity data for each of the available set-ups. Refer to the data sheets, available through your local Spraying Systems Co. sales office, for additional details and spray performance data.

NOTE: Spray set-ups are interchangeable, however each set-up uses a different size needle.

Interchangeable Spray Set-ups

Spray Set-up Number	Liquid Capacity				Data Sheet Number
	GPH		l/h		
	3 psi	20 psi	.2 bar	1.4 bar	
SUVM67A-SS	.74	2.90	2.80	7.30	52530-001
SUVM67B-SS	1.10	1.90	4.20	11.10	52530-002
SUVM67-SS	2.20	5.60	8.10	21.00	52530-003
SUVM113A-SS	3.60	9.40	13.60	35.00	52530-004
SUVM113-SS	4.90	12.80	18.40	48.00	52530-005
SUVM128-SS	10.80	28.00	40.80	106.00	52530-006
SUVM152-SS	19.00	50.00	72.00	189.00	52530-007
SUVM189-SS	28.00	73.00	106.00	276.00	52530-008

Anti-Bearding Set-up

Frequent shut downs to clean coating material from air atomizing spray gun components have a serious impact on productivity. The new VMAU anti-bearding spray set-up can help to improve process quality, volume, and profitability in these situations.

In typical air atomizing coating applications such as aqueous film coating, the low-pressure zone created by the exiting air draws a few fine droplets back to the air cap. These droplets are deposited on the air cap face, dry, and build-up in layers causing bearding. Bearding can block liquid and air orifices, resulting in a distorted spray distribution. Frequent cleaning is necessary to ensure coating quality.

The new VMAU anti-bearding spray set-up has a modified air cap and fluid cap tip design that changes the point of atomization and spray formation. These changes prevent the droplets from being deposited onto the air cap.

Specifications

Compatible with all standard Spraying Systems Co. VMAU automatic air atomizing assemblies

The shut-off seal is on the needle, not in the tip, for easy cleaning and replacement

FDA compliant material

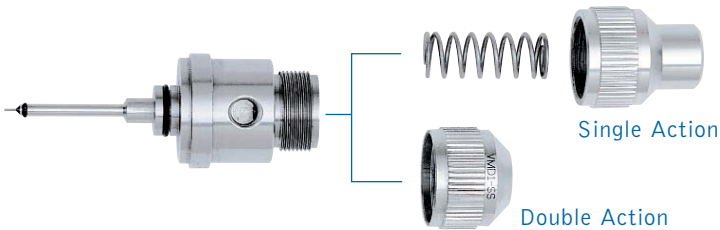
Benefits

- Significantly reduces bearding and clogging on spray gun components
- Dramatically cuts cleaning and maintenance downtime
- Increases throughput
- Improves spray and product quality
- Easily replaces existing set-ups

Actuator Options

To customize your VMAU set-up to suit your specific application, Spraying Systems Co. offers:

- O-ring sealed actuators, both single and double action models
- Diaphragm-sealed actuator for applications where failure of conventional seals is a problem
- A Back Plug (VAA Type) option, for applications not requiring actuator



Single- and Double-Action O-ring Sealed Actuators

The VMAU's O-ring sealed actuator is available in both single action (spring-return) and double action (springless) models. The actuator can be disassembled without tools for easy cleaning and maintenance.



Diaphragm Actuator

Failure of conventional seals is a major problem when working with harsh materials and environments, such as applying sugar, wax, non-skid coating, and film coating. The VMAU's Diaphragm Actuator eliminates these failures by replacing conventional seals with a patented diaphragm design to seal the shut-off/clean-out needle. No "O" rings, packing, or interference seals on the needle means reduced downtime.

Body Styles — Standard and Sanitary

Standard Body Style



Specifications

O-ring Actuator (standard)
FDA compliant material
¼" NPT or BSPT inlet connections
Threadless connection for the fluid tip
¼" NPT air connections
Recirculating models
Material Options: 303 stainless steel, 316 stainless steel

Optional Sanitary Body Style



Specifications

The patented sanitary body contains no internal threads in the liquid chamber
Sanitary connection diaphragm sealed actuator — there are no cavities, no O-rings
FDA compliant material
Sanitary liquid inlet connections
Sanitary connection for the fluid tip
Sanitary or NPT air connections
Recirculating models
Material Options: 303 stainless steel, 316 stainless steel

VMAU Ordering Information



Standard



1/2" Sanitary Flange Fluid Connections

Standard and Sanitary Body

1/4VMAU-XX	1/4 NPT connections
B1/4VMAU-XX	1/4 BSPT connections
S1/4VMAU-XX	Sanitary fluid connections and 1/4 NPT air connections
SB1/4VMAU-XX	Sanitary fluid connections and 1/4 BSPT air connections
XX = Material code SS = 303 Stainless Steel or 316SS = 316 Stainless Steel	

Spray Set-up

Standard spray set-up	Anti-bearding spray set-up
SUVM67A-XX	NA
SUVM67B-XX	NA
SUVM67-XX	NA
SUVM113A-XX	SUVM113AAB-XX
SUVM113-XX	SUVM113AB-XX
SUVM128-XX	SUVM128AB-XX
SUVM152-XX	SUVM152AB-XX
SUVM189-XX	SUVM189AB-XX
XX = Material code SS = 303 Stainless Steel or 316SS = 316 Stainless Steel	

Body Ordering Sample

1/4VMAU	-	316SS
Model #		Material Code

Note: body, actuator and spray set-up must be ordered separately

Spray Set-up Ordering Sample

SUVM113AAB	-	316SS
Anti-bearding Spray Set-up		Material Code

O-ring Sealed Actuator - Single Action

Standard Spray	NPT Style	BSPT Style	Material Code	Corresponding Spray Set-up
52519	001	101	XX	(67B)
52519	002	102	XX	(67A)
52519	003	103	XX	(67)
52519	004	104	XX	(113A)
52519	005	105	XX	(113)
52519	006	106	XX	(128)
52519	007	107	XX	(152)
52519	008	108	XX	(189)
Anti-Bearding Spray	NPT Style	BSPT Style	Material Code	Corresponding Spray Set-up
52519	404	504	XX	(113AAB)
52519	405	505	XX	(113AB)
52519	406	506	XX	(128AB)
52519	407	507	XX	(152AB)
52519	408	508	XX	(189AB)
XX = Material code SS = 303 Stainless Steel or 316SS = 316 Stainless Steel				

O-ring Sealed Actuator - Double Action

Standard Spray	NPT Style	BSPT Style	Material Code	Corresponding Spray Set-up
52519	201	301	XX	(67B)
52519	202	302	XX	(67A)
52519	203	303	XX	(67)
52519	204	304	XX	(113A)
52519	205	305	XX	(113)
52519	206	306	XX	(128)
52519	207	307	XX	(152)
52519	208	308	XX	(189)
Anti-Bearding Spray	NPT Style	BSPT Style	Material Code	Corresponding Spray Set-up
52519	604	704	XX	(113AAB)
52519	605	705	XX	(113AB)
52519	606	706	XX	(128AB)
52519	607	707	XX	(152AB)
52519	608	708	XX	(189AB)
XX = Material code SS = 303 Stainless Steel or 316SS = 316 Stainless Steel				



O-ring Sealed Actuator - Single Action



O-ring Sealed Actuator - Double Action



Diaphragm Actuator - Double Action

Diaphragm Actuator - Double Action

Standard Spray	NPT Style	BSPT Style	Material Code	Corresponding Spray Set-up
52511	001	101	XX	(67B)
52511	002	102	XX	(67A)
52511	003	103	XX	(67)
52511	004	104	XX	(113A)
52511	005	105	XX	(113)
52511	006	106	XX	(128)
52511	007	107	XX	(152)
52511	008	108	XX	(189)

Anti-Bearding Spray	NPT Style	BSPT Style	Material Code	Corresponding Spray Set-up
52511	204	304	XX	(113AAB)
52511	205	305	XX	(113AB)
52511	206	306	XX	(128AB)
52511	207	307	XX	(152AB)
52511	208	308	XX	(189AB)

XX = Material code
SS = 303 Stainless Steel or 316SS = 316 Stainless Steel

Actuator Assembly Ordering Sample

52511	-	304	-	316SS
Actuator Style		Actuator Endcap		Material Code

Diaphragm Material Options

CP52515-001-XX
XX = Material code
SIL = Silicone (FDA compliant)
NBN = Nitrile/Buna-N (FDA compliant)
EPR = EPDM

Diaphragm Ordering Sample

CP52515-001	-	SIL
Diaphragm		Material Code



Backplug
for applications not requiring an actuator

Backplug

CP52505-001-XX
XX = Material code
SS = 303 Stainless Steel or 316SS = 316 Stainless Steel

Backplug Ordering Sample

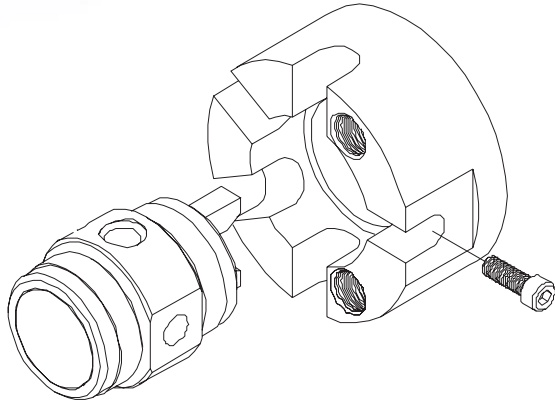
CP52505-001	-	316SS
Backplug		Material Code

Heat Jacket

51120-VMAU-XX
XX = Material code
NP = Nickel Plated Brass
316SS = 316 Stainless Steel
ALA = Anodized Aluminum

Heat Jacket Ordering Sample

51120-VMAU	-	316SS
Heat Jacket		Material Code



Spray Gun Heat Jacket

Wax, sugar, syrup, and other viscous liquids thicken or solidify when cooled, making atomization difficult. The new Spray Gun Heat Jacket from Spraying Systems Co. keeps atomizing liquids warm to prevent thickening.

Specifications

Easy slip-on and compact design for fast installation and cleaning

Patent-pending design enables heat jacket to maintain liquid temperature throughout the entire nozzle — body, inlets, and air caps

Remains connected to the heat source while the VMAU is serviced

Connections: NPT liquid inlet and outlet

FDA compliant material option

Material Options: anodized aluminum, nickel plated brass, and 316 stainless steel. All three materials can be used with hot liquids, but only brass and stainless steel can be used with steam.

Easy Installation

The Spray Gun Heat Jacket simply slips over the body of a VMAU. Attach the Heat Jacket to a hot water or steam supply and it begins efficiently transferring heat to your atomizing liquid.

Efficient Design Maximizes Heat Transfer to Prevent Clogging

The Heat Jacket's patent-pending design heats not only the VMAU body but also the inlets and air cap. This maintains the liquid temperature through the spray gun.

The Heat Jacket's internal swirling action keeps fluid in motion, permitting uniform heat transfer.

Typical Applications

Viscous liquid spraying	Grease and oil
Adhesive coating	Sugar coating
Butter coating	Syrup coating
Chocolate coating	Wax coating

Reduces Downtime

Traditional attempts to warm thick liquids involve cumbersome tubing or heat tracing, making a service in the field time-consuming. The new Spray Nozzle Heat Jacket can remain connected to the heat source while the actuator is removed for service, dramatically reducing downtime.



Spraying Systems Co.
Experts in Spray Technology



Spray
Nozzles



Spray
Control



Spray
Analysis



Spray
Fabrication

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