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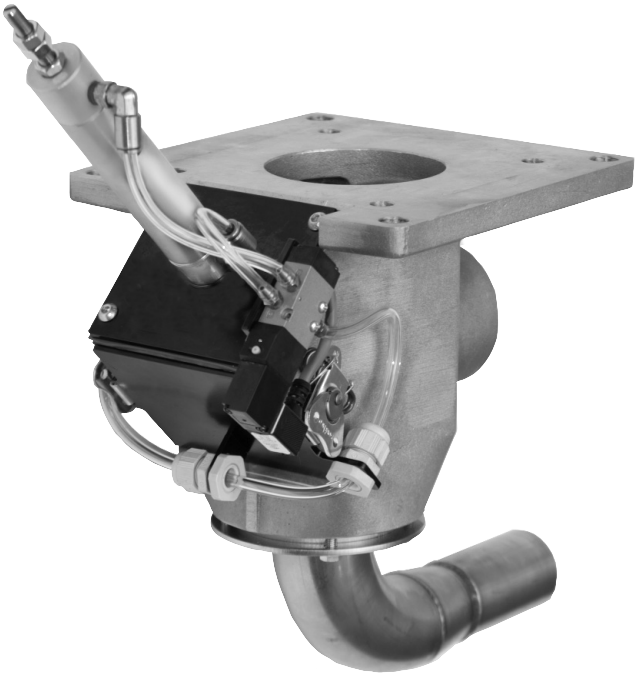
USER GUIDE

UGC031-0507

Adjustable Purge Valve

Single and Dual APV Models



Please record your equipment's model and serial number(s) and the date you received it in the spaces provided.

It's a good idea to record the model and serial number(s) of your equipment and the date you received it in the User Guide. Our service department uses this information, along with the manual number, to provide help for the specific equipment you installed.

Please keep this User Guide and all manuals, engineering prints and parts lists together for documentation of your equipment.

Date:

Manual Number: UGC031-0507

Serial Number(s):

Model Number(s):

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Table of Contents

SECTION

1

Introduction

Purpose of the User Guide

This User Guide describes the Adjustable Purge Valve and explains step-by-step how to install, operate, maintain and repair this equipment.

Before installing this product, please take a few moments to read the User Guide and review the diagrams and safety information in the instruction packet. You also should review manuals covering associated equipment in your system. This review won't take long, and it could save you valuable installation and operating time later.

How the Guide is Organized

Symbols have been used to help organize the User Guide and call your attention to important information regarding safe installation and operation.

 Symbols within triangles warn of conditions that could be hazardous to users or could damage equipment. Read and take precautions before proceeding.

1 Numbers indicate tasks or steps to be performed by the user.

◆ A diamond indicates the equipment's response to an action performed by the user.

❒ An open box marks items in a checklist.

• A circle marks items in a list.

 Indicates a tip. A tip is used to provide you with a suggestion that will help you with the maintenance and the operation of this equipment.

 Indicates a note. A note is used to provide additional information about the steps you are following throughout the manual.

Your Responsibility as a User

You must be familiar with all safety procedures concerning installation, operation and maintenance of this equipment. Responsible safety procedures include:

- Thorough review of this User Guide, paying particular attention to hazard warnings, appendices and related diagrams.
- Thorough review of the equipment itself, with careful attention to voltage sources, intended use and warning labels.
- Thorough review of instruction manuals for associated equipment.
- Step-by-step adherence to instructions outlined in this User Guide.

ATTENTION:
Read this so no one gets hurt

We design equipment with the user's safety in mind. You can avoid the potential hazards identified on the equipment by following the procedures outlined below and elsewhere in the User Guide.

⚠ WARNING: Improper installation, operation, or servicing may result in equipment damage or personal injury.

This equipment should be installed, adjusted, and serviced by a qualified technical personnel who is familiar with the construction, operation, and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed by a qualified electrical technician in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.

⚠ WARNING: Voltage hazard

This equipment is powered by single-phase alternating or direct current, as specified on the machine serial tag and data plate.

SECTION
2

Description

What is the Adjustable Purge Valve?

The Adjustable Purge Valve, or APV, allows the conveying of a single pocket of material from a hopper or surge bin, to a pre-determined location. The Dual APV model allows the conveying of two pockets of material from a single hopper or surge bin to two pre-determined locations. Both the single and dual APV models allow material to be moved from the top portion to the bottom portion of the valve(s) where it is mixed with high velocity ambient or conditioned air and then carried to its final location(s).

Typical Applications

The Single APV mounts to the bottom of a drying hopper or surge bin with included hardware. The Dual APV model consists of two (2) APVs that are bolted to an included "Y" casting that mounts to the bottom of a drying hopper or surge bin . If the optional slide gate was ordered you will need to place the slide gate between the hopper outlet and the APV or Dual APV "Y" casting.

To successfully operate the Single APV, it will require:

- A dry, clean air source
- A minimum air pressure of 60 PSI {4.1 bar} and a maximum air pressure of 100 PSI {6.9 bar} capable of 0.1 ft^3/min {3 l/min}.

To successfully operate the Dual APV, it will require:

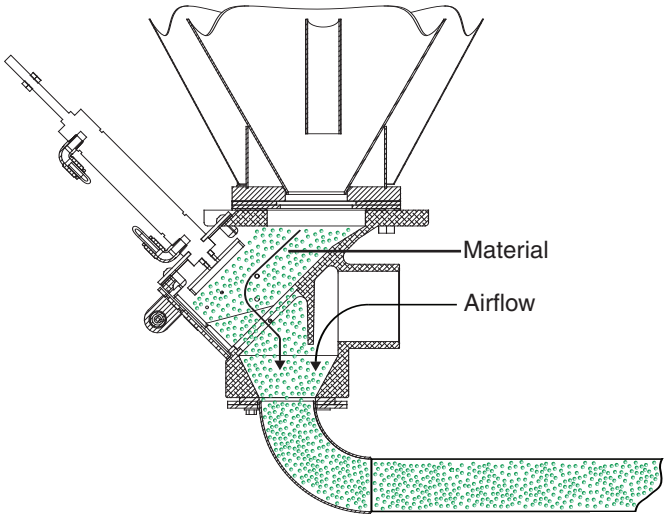
- A dry, clean air source
- A minimum air pressure of 60 PSI {4.1 bar} and a maximum air pressure of 100 PSI {6.9 bar} capable of 0.1 ft^3/min {3 l/min} to each APV valve.

How It Works

The APV allows material to be completely conveyed through a conveying line in one shot so that no material will be left behind in the line to allow cross-contamination or moisture regain.

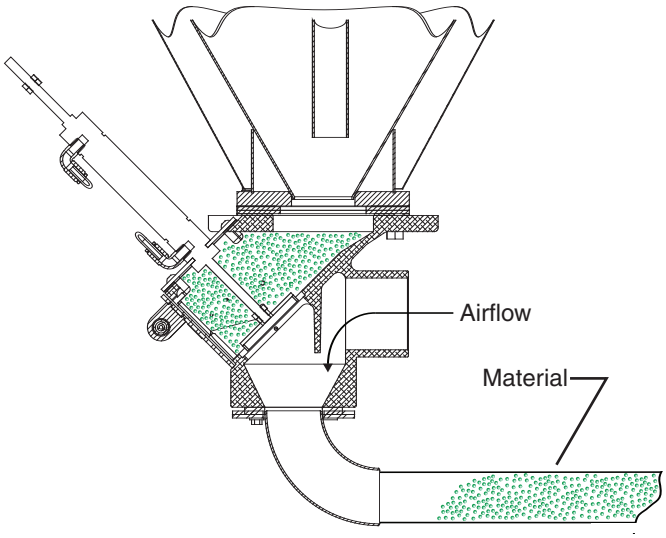
Material Conveying

When a signal from the loading system is received, the solenoid valve on the APV will engage the dispensing valve. The dispensing valve will open to a pre-determined level and allow the hopper material to flow down to the lower portion of the APV, which is under high velocity air from the dryer's vacuum system. The high velocity air will then transport the hopper material to its destination. This is referred to as load time.

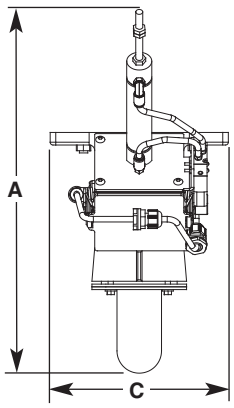


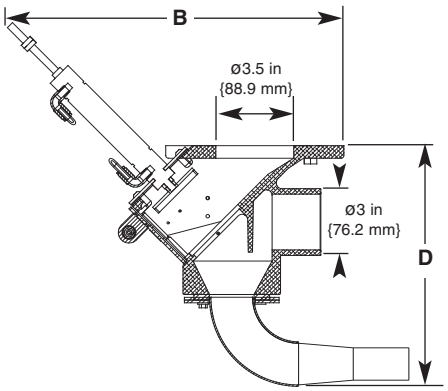
Purging

After a period of time, (the loading time is set by the you at the central loading control) the dispensing valve will close causing the material flow to stop. The loading system will continue to function. The high velocity air will continue to flow through the valve, clean the valve and completely convey the hopper material to its destination. This is referred to as purge time.



Specifications: Adjustable Purge Valve

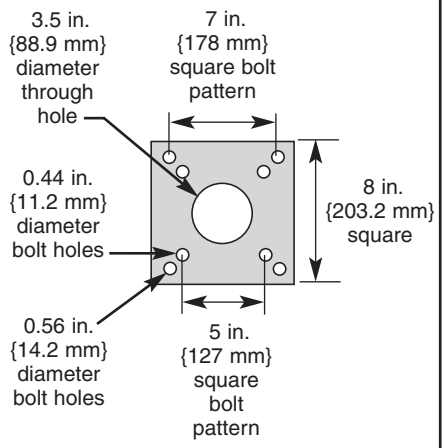




MODELS	Single APV	
Performance characteristics* inches {mm}		
Material inlet size diameter	3.5 {88.9}	
Purge air inlet	3.0 {76.2}	
Type of inlet/outlet connection	bolt-on	
Body type aluminum	cast	
Dimensions inches {mm}		
A - Overall height†	16.3 {414.0}	
B - Length	15.1 {383.5}	
C - Width	8.0 {203.2}	
D - Height under the hopper‡	Discharge line OD	Height under the hopper
	1.5 {38.1}	10.8 {274.3}
	1.75 {44.5}	10.8 {274.3}
	2.0 {50.8}	10.8 {274.3}
	2.25 {57.2}	10.9 { 277.6}
	2.5 {63.5}	11.8 {299.7}
	3.0 {76.2}	12.1 {306.0}
Weight lb {kg}		
Installed	12.0 {5.4}	
Shipping	22.0 {9.9}	
Electrical compatibility		
Available voltage	24 VAC, 24 VDC, 120 VAC	
Compressed air requirement		
0.1 ft³/min {3 l/min} @ minimum of 60 psi {4.1 bar} maximum of 100 psi {6.9 bar}; 1/4 NPT male fitting.		

MOUNTING INTERFACE

IB02 for 5 x 5 inch bolt pattern
IB03 for 7 x 7 inch bolt pattern



SPECIFICATION NOTES

* Throughputs will depend upon pump size, material line size and conveying distances.

† Overall height will vary slightly due to line size.

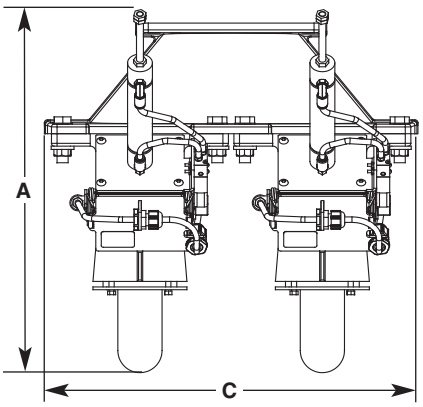
‡ The height under the hopper may vary by up to 1.5 inches {38.1 mm} depending on the material tube size. Material tube sizes change based on line size and on the amount of material being conveyed.

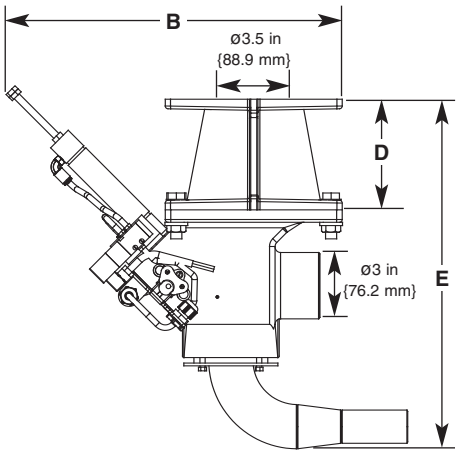
Check with a Conair representative for the most current information.

TPCS050-0507

Specifications: Adjustable Purge Valve

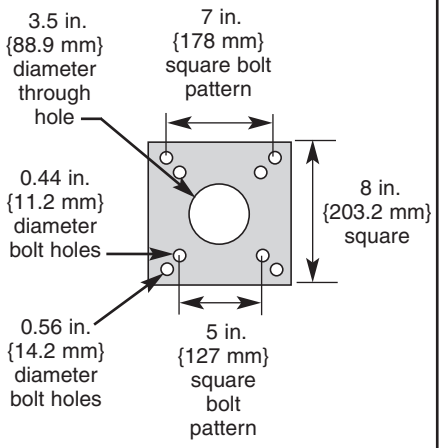
MODELS	Dual APV	
Performance characteristics* inches {mm}		
Material inlet size diameter	3.5 {88.9}	
Purge air inlet	3.0 {76.2}	
Type of inlet/outlet connection	bolt-on	
Body type aluminum	cast	
Dimensions inches {mm}		
A - Overall height†	16.3 {414.0}	
B - Length	15.1 {383.5}	
C - Width	16.9 {429.3}	
D - Adapter plate height	5.0 {127.0}	
E - Height under the hopper‡	Discharge line OD	Height under the hopper
	1.5 {38.1}	15.8 {401.3}
	1.75 {44.5}	15.8 {401.3}
	2.0 {50.8}	15.8 {401.3}
	2.25 {57.2}	15.9 { 403.9}
	2.5 {63.5}	16.8 {426.7}
	3.0 {76.2}	17.1 {434.3}
Weight lb {kg}		
Installed	45.0 {20.5}	
Shipping	55.0 {24.9}	
Electrical compatibility		
Available voltage	24 VAC, 24 VDC, 120 VAC	
Compressed air requirement		
0.2 ft³/min {5.7 l/min} @ minimum of 60 psi {4.1 bar} maximum of 100 psi {6.9 bar}; 1/4 NPT male fittings.		





"Y" CASTING MOUNTING INTERFACE

IB02 for 5 x 5 inch bolt pattern
IB03 for 7 x 7 inch bolt pattern



SPECIFICATION NOTES

* Throughputs will depend upon pump size, material line size and conveying distances.

† Overall height will vary slightly due to line size.

‡ The height under the hopper may vary by up to 1.5 inches {38.1 mm} depending on the material tube size. Material tube sizes change based on line size and on the amount of material being conveyed.

Check with a Conair representative for the most current information.

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SECTION
3

Installation

Unpacking the Boxes

Both the Single and Dual Adjustable Purge Valves come in one box.

To unpack the APV from the box:

1. **Carefully remove the APV and its components** from the shipping container.

2. **Remove all packing material,** protective paper, tape and plastic.

3. **Carefully inspect all components** to make sure no damage occurred during shipping, and that you have all the necessary hardware.

✎ **NOTE:** Please file a claim for shipping damage with carrier if damage is found.

4. **Take a moment to record serial numbers** and electrical power specifications in the blanks provided on the back of the User Guide's title page. This information will be helpful if you ever need service or parts.

5. **You are now ready to begin installation.** Follow the preparation steps on the next page.

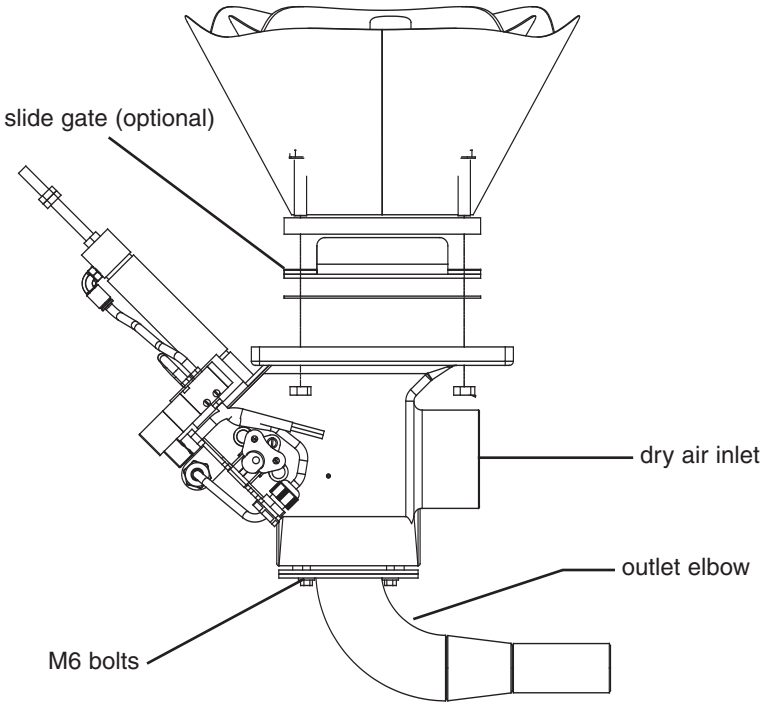
Installing the Single APV (Mechanical)

To install the Single APV:

1 **Mount the APV to the bottom of the drying hopper outlet with included hardware.** If the optional slide gate was ordered place it between the hopper outlet and the APV.

2 **If used with dry air conveying, connect the tubing from the dry air source to the inlet on the back of the APV.** The outside diameter of the inlet is 3 inches {76.2 mm}. Insert the air inlet screen into the valve before making the final connection, then secure with a hose clamp. **If used with ambient air conveying**, no connection will be necessary to the air inlet on the back of the APV. However, the air inlet screen will need to be in place to prevent any dust or fines from entering the system.

⚠ **WARNING: Disconnect power and air sources.** Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.



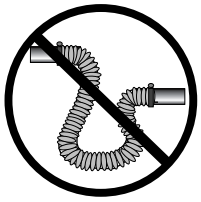
Installing the Single APV (Mechanical) (continued)

WARNING: Disconnect power and air sources. Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.

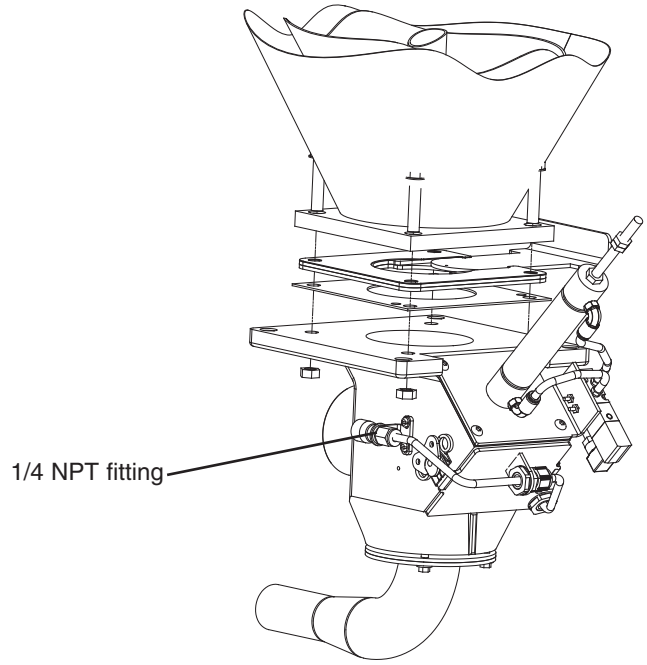
3 **Attach the necessary fittings to adapt the 1/4 NPT female fitting that is supplied on the valve.** After the fitting has been installed and secured, connect the APV to a dry, clean air source.

4 **Loosen the four (4) M6 bolts, that attach the outlet elbow located at the bottom of the purge valve, using a M10 wrench or compatible.** Rotate the outlet elbow as required, typically towards the material distribution system or other conveying lines.

5 **Once positioned to the desired direction, tighten the four (4) bolts on the outlet elbow to lock the elbow into place.** Complete installation by routing flex tubing from the outlet elbow to the material distribution system, then secure all connections with hose clamps.



NOTE: Make sure that all lines are secured, have a minimum of bends and are supported to eliminate vibration.

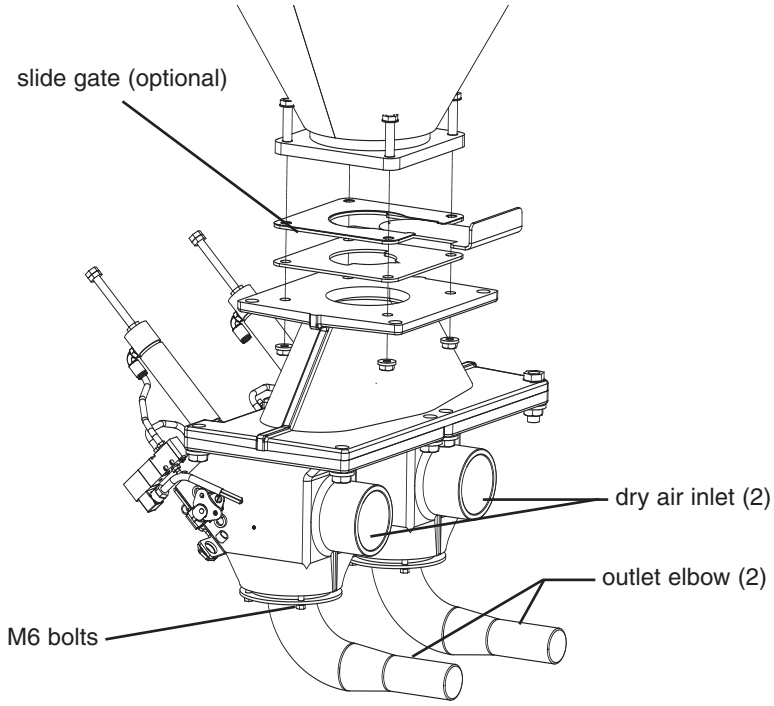


Installing the Dual APV (Mechanical)

To install the Dual APV:

1 **Mount the Dual APV to the bottom of the drying hopper outlet with included hardware.** If the optional slide gate was ordered place it between the hopper outlet and the "Y" casting.

2 **If used with dry air conveying, the purchase of the optional Dual APV Dry Air Kit is required.** *See Installation section entitled, Installing the Dry Air Kit.* **If used with ambient air conveying,** no connections are necessary to the air inlets on the back of the Dual APV. However, the air inlet screens will need to be in place to prevent any dust or fines from entering the system.



⚠ **WARNING: Disconnect power and air sources.** Always disconnect the main power source and compressed air sources before accessing the Dual APV. This prevents the Dual APV from starting during servicing, which could cause personal injury from flying debris or moving parts.

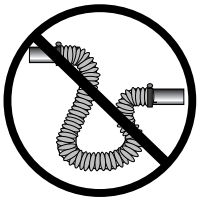
Installing the Dual APV (Mechanical) (continued)

⚠ **WARNING: Disconnect power and air sources.** Always disconnect the main power source and compressed air sources before accessing the Dual APV. This prevents the Dual APV from starting during servicing, which could cause personal injury from flying debris or moving parts.

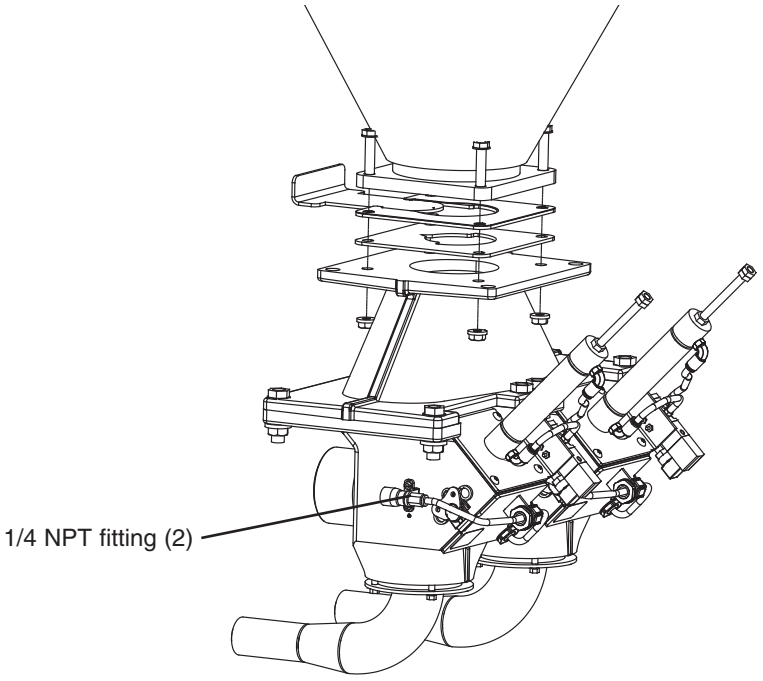
3 **Attach the necessary fittings to adapt the 1/4 NPT female fittings that are supplied on the APV valves.** After the fittings have been installed and secured, connect both APVs to a dry, clean air source.

4 **Loosen the four (4) M6 bolts, that are attach to the outlet elbows located at the bottom of the each purge valve, using a M10 wrench or compatible.** Rotate the outlet elbows as required, typically towards the material distribution system or other conveying lines.

5 **Once positioned to the desired direction, tighten the four (4) bolts on the outlet elbows to lock the elbows into place.** Complete installation by routing flex tubing from the outlet elbows to the material distribution system, then secure all connections with hose clamps.



✎ **NOTE:** Make sure that all lines are secured, have a minimum of bends and are supported to eliminate vibration.



Installing the Dry Air Kit (optional)

When using dry air conveying with the Dual APV an adapter kit is required to connect both dry air inlets of the Dual APV to a dry air source.

To connect the dry air kit to the previously installed Dual APV:

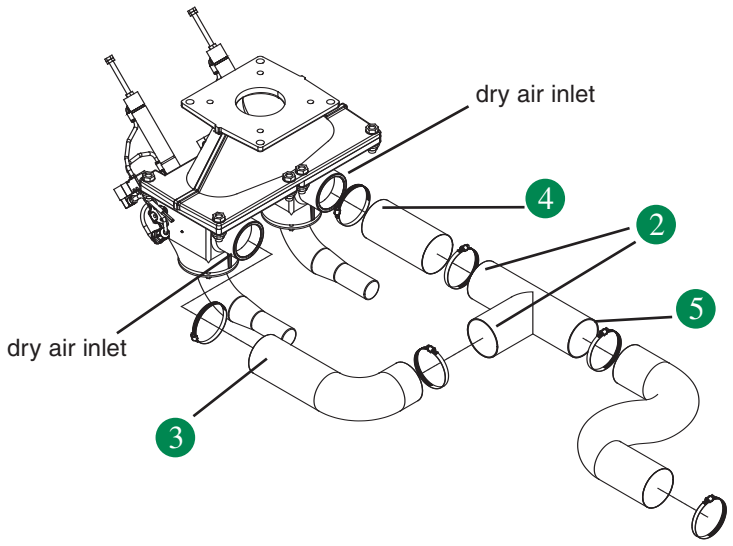
1. **Ensure that the air inlet screens that were included with the Dual APV are placed inside the valve's dry air inlets.**

2. **With the supplied hardware, connect the two (2) pieces of hose to either end of the supplied "T" tubing.** Secure with hose clamps.

3. **Attach the longer piece of hose to the dry air inlet of one of the APVs.** Secure with a hose clamp.

4. **Bend the side of the dry air assembly that does not have its hose attached towards the second APV's dry air inlet.** Attach the hose and secure with a hose clamp.

5. **Connect the remaining open end of the "T" tubing to your dry air source.** Secure with a hose clamp.



Replacement dry air kits are available from Conair.

Contact Conair Parts
(800) 458 1960
From outside of the
United States, call:
(814) 437 6861

Connecting Main Power

NOTE: The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

CAUTION: Always disconnect and lock out the main power sources before making electrical connections. Electrical connections should be made only by qualified personnel.

IMPORTANT: Always refer to the wiring diagrams that came with your equipment to locate specific electrical components. Illustrations and photographs in the User Guide are intended only to be representative only.

WARNING: Improper installation, operation, or servicing may result in equipment damage or personal injury.

This equipment should be installed, adjusted, and serviced by a qualified technical personnel who is familiar with the construction, operation and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed by a qualified electrical technician in accordance with electrical codes in your region.

To connect the APV to power source:

1 **Refer to the wiring diagrams that were shipped with your loading control and APV valve for the proper wiring procedures.** It is necessary to determine the correct termination points for the supplied wiring harness. (Red wire is positive, white is negative and green is ground.)

SECTION
4

Operation

Preparing the APV for Operation

Before operation of the APV:

1 **Cycle the APV with the optional slide gate closed or before the hopper is filled with material**. Check for air or vacuum leaks and proper operation.

2 **Set-up and enable the loading controls** (refer to your loading manual).

3 **After the APV has been checked for proper operation and any necessary adjustments to your loading control have been made** you can then fill the hopper or open the optional slide gate above the valve. Material will flood into the upper section of the valve and will be ready to be conveyed.

Making adjustments to the APV

✎ **NOTE:** The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

Once the valve is installed and operating properly, material flow adjustments can be made.

There are four ways to optimize the performance of the APV:

✎ **NOTE:** Conveying rates, loading time and purging time will vary greatly depending on conveying distances and system layout, vacuum pump size, loader size and line size. Additionally, the cleanliness of the dust collector, loader filters and other components will affect the performance as well.

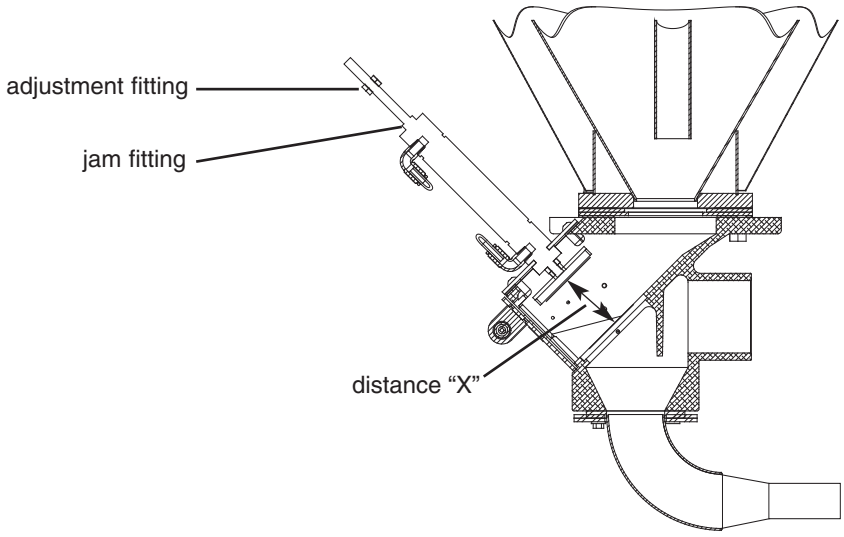
Stroke Adjustment

This adjustment determines the amount of material that is fed into the valve when it is open (distance X). When shipped the APV will be set with a 0.25 inch {6.4 mm} stroke opening, which will be a starting point for adjustment.

- **For small conveying lines** (1.5 - 2.0 in. {38.1 - 50.8 mm}) that use small vacuum pumps, the stroke opening will need to be less than 0.25 in. {6.4 mm}.
- **For larger conveying lines** (2.25 - 3.0 in. {57.2 - 76.2 mm}) that use large vacuum pumps the stroke opening will need to be greater than 0.25 in. {6.4 mm}.

To adjust the valve opening:

1 **Loosen the lock nut at the base of the cylinder and (while facing the cylinder): turn the bolt clockwise to decrease the stroke opening or counterclockwise to increase the stroke opening.** This adjustment should be done in one turn increments until desired stroke opening is reached.



Making adjustments to the APV

(continued)

✎ **NOTE:** The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

Time Adjustment

- **The initial settings for load time** - the amount of time the valve is feeding material - will be several seconds.
- **The amount of time for purging** - the amount of time the material is being cleaned from the conveying lines - should be set for twice the amount for loading.

Depending on your system layout, you will need to adjust these initial settings. For optimal conveying rates and system performance, the load time should be adequate enough to fill the loader at the end of the purging cycle. The purging time should be long enough to completely clean all material from the conveying line before the conveying system shuts down.

(continued)

Making adjustments to the APV

(continued)

✎ **NOTE:** The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

Total valve adjustment (single destination)

With the factory setting on the stroke opening and the time set as indicated in the previous section, turn on the conveying system. The material should be conveying through the valve and then purge from the conveying lines as described on page 2-3. While the material is being conveyed, monitor the vacuum level on the vacuum pump's readout gauge.

To obtain maximum conveying rates:

- **The vacuum level, during conveying, should reach approximately 11 inches of Hg for PD pumps and 10-11 inches of Hg for RG pumps.**
- **If the vacuum level is below the maximum level,** adjust the cylinder stroke so that the valve feeds more material into the conveying line.
- **If the vacuum level is too high,** restrict the cylinder stroke so that less material is fed into the conveying line.

✎ **NOTE:** Conveying rates, loading time and purging time will vary greatly depending on conveying distances, system layout, vacuum pump size, loader size and line size. In addition, the cleanliness of the dust collector, loader filters and other components will affect the performance as well.

Once the optimum vacuum level is reached, the loading and purging times should be adjusted to completely fill the loader and completely purge the conveying lines. Adjusting all three parameters will obtain a maximum conveying rate.

Total valve adjustment (multiple destinations)

When making adjustments for multiple conveying destinations, the above procedure will still apply. However, for optimal performance, it is necessary to adjust your settings for the longest conveying distance.

SECTION

5

Maintenance

Cleaning the APV

NOTE: The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

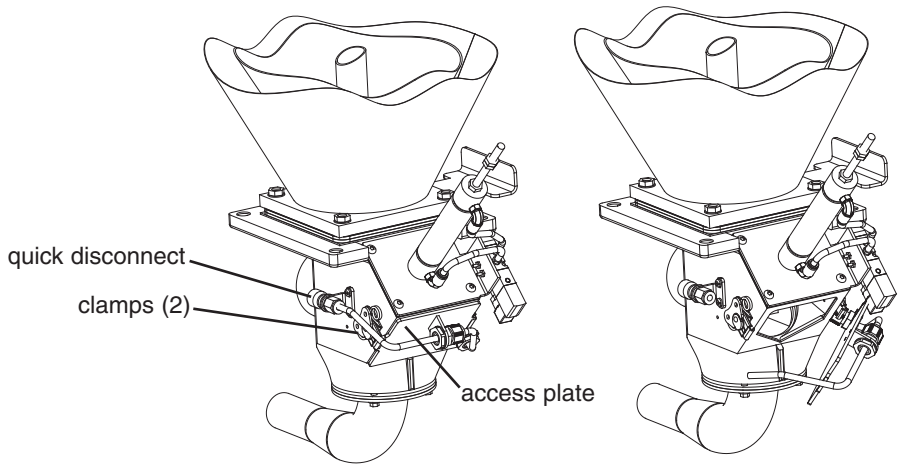
The APV and material hopper can be emptied and cleaned by removing the clean-out door located on the front of the valve. The APV is equipped with a quick disconnect air fitting that will allow you to remove the main air supply from the APV.

WARNING: When accessing the APV's internal components, disconnect all compressed air sources and disable the loading control to eliminate the risk of personal injury.

To empty and clean the APV:

1. **Close the optional slide gate that is installed above the Single APV model or if you have purchased the Dual APV model close the optional slide gate that is located above the "Y" adapter casting.** If the optional slide gate was not purchased remove all material from hopper.
2. **Disconnect, lockout main power and/or disable loading control.**
3. **Remove the air line from the quick air disconnect.**
4. **Loosen the two clamps** that are holding the access plate on the valve.
5. **To reconnect valve after clean out, follow steps 1-4 in reverse order.**

WARNING: Disconnect power and air sources. Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.



Replacing the Access Plate Gasket

✎ **NOTE:** The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

This unit has very few moving parts minimizing necessary maintenance. However, depending on material type, air quality and general environment, some components may need maintenance.

Depending on the frequency of access plate removal, it is possible to wear out the gasket that is located on the inside of the plate. The gasket should be visually inspected every time the access plate is removed. Replace the gasket if it shows any signs of wear, if not replaced there will be the potential for compromised performance.

To replace the access plate gasket on the APV:

1 **Close the optional slide gate that is installed above the Single APV model or if you have purchased the Dual APV model close the optional slide gate that is located above the "Y" adapter casting.** If the optional slide gate was not purchased remove all material from hopper.

2 **Disconnect, lockout main power and/or disable loading control.**

3 **Remove the air line from the quick air disconnect.**

4 **Loosen the two clamps** that are holding the access plate on the valve.

5 **Remove the access plate.**

6 **Remove the gasket from the inside of the access plate.**

7 **Remove any silicon that is remaining on the inside of the access plate.**

8 **Apply a small amount of silicon to the inside of the access plate.**

9 **Apply the new gasket to the silicon on the inside of the access plate,** work out any bubbles from under the gasket.

10 **To reinstall the access plate, follow steps 1-5 in reverse order.**

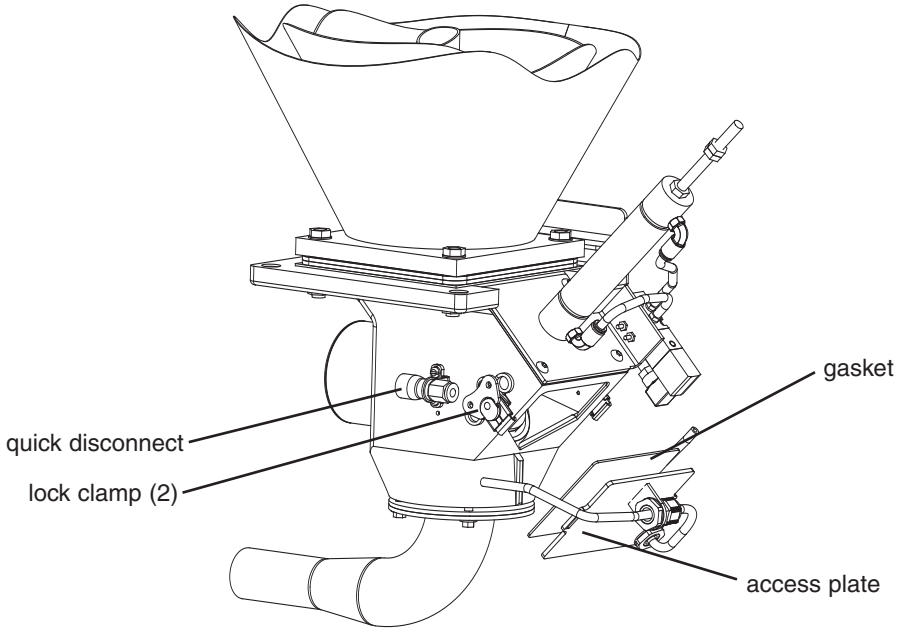
⚠ **WARNING: Disconnect power and air sources.** Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.

Replacement gaskets are available from Conair.

Contact Conair Parts
(800) 458 1960
From outside of the United States, call:
(814) 437 6861

(continued)

Replacing the Access Plate Gasket (continued)



Replacing the Valve Seat

✎ **NOTE:** The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

The valve seat that is included with the APV casting is 304 Stainless Steel and is resistant to common wear that will occur with most materials. However, it is possible that some more aggressive materials may wear the valve seat and require it to be replaced. This seat should be visually inspected every time the APV is cleaned or emptied.

To replace the valve seat on the APV:

1. **Close the optional slide gate that is installed above the Single APV model or if you have purchased the Dual APV model close the optional slide gate that is located above the "Y" adapter casting.** If the optional slide gate was not purchased remove all material from hopper.

2. **Disconnect, lockout main power and/or disable loading control.**

Replacing the Valve Seat (continued)

3 **Remove the air line from the quick air disconnect.**

4 **Loosen the two (2) clamps** that are holding the access plate to the valve.

5 **Remove the access plate.**

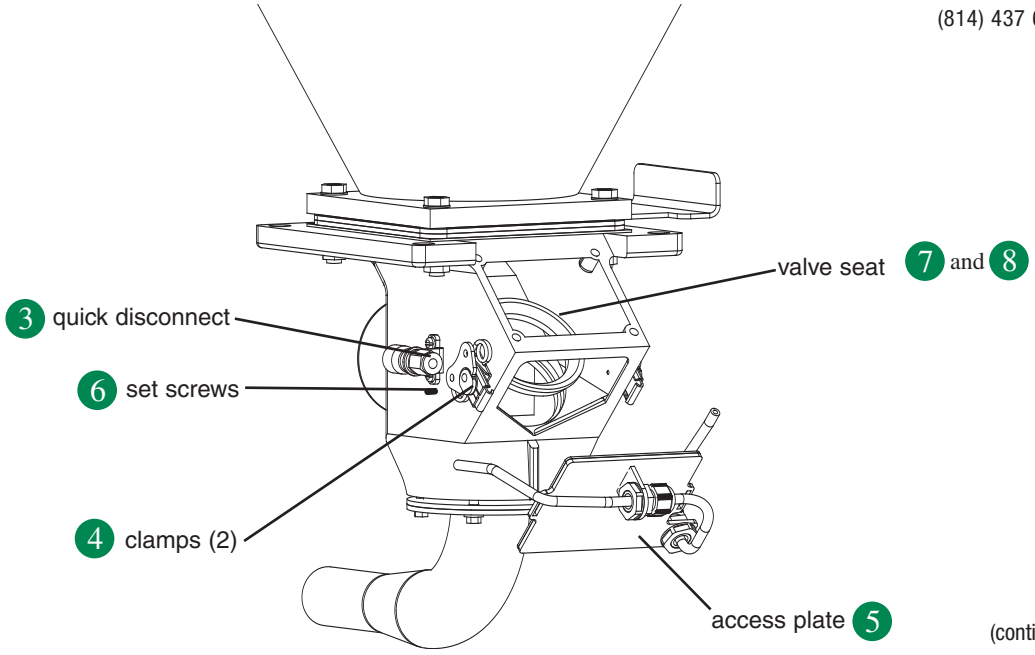
6 **Loosen the two (2) set screws that are visible on the side of the casting** that hold the valve seat in place, using a M1.5 Allen wrench.

7 **Remove the valve seat from the casting.**

8 **Install the new valve seat.**

9 **Apply a small amount of Loctite to the end of the set screws and then tighten the screws until they contact the valve seat - tighten.**

10 **To reinstall the valve seat, follow steps 1-5 in reverse order.**



⚠ **WARNING: Disconnect power and air sources.** Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.

Replacement valve seats are available from Conair.

Contact Conair Parts
(800) 458 1960
From outside of the
United States, call:
(814) 437 6861

(continued)

Replacing the Cylinder and Cylinder Mounting Gasket

NOTE: The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

Depending on the type of material that is being conveyed through valve and the frequency of usage of the valve, cylinder wear and gasket leakage can occur. If the operation of the valve becomes sluggish and/or there a noticeable air leaking sound from the cylinder, the entire cylinder assembly will need to be replaced.

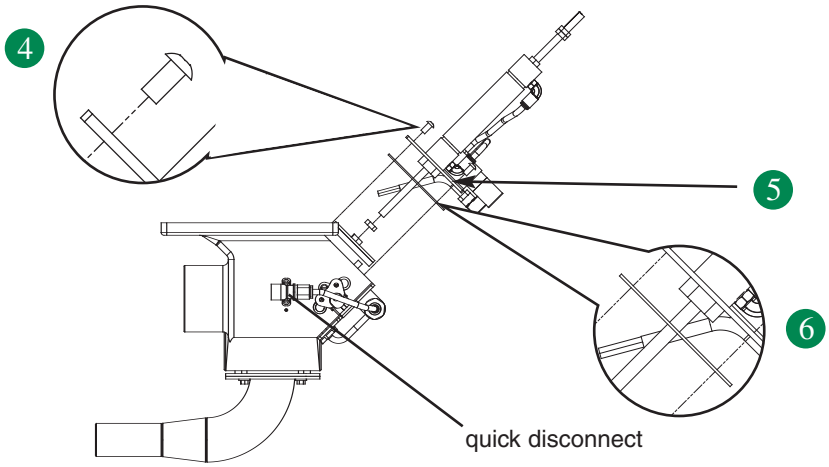
To replace the cylinder on the APV:

WARNING: Disconnect power and air sources. Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.

1. **Close the optional slide gate that is installed above the Single APV model or if you have purchased the Dual APV model close the optional slide gate that is located above the "Y" adapter casting.** If the optional slide gate was not purchased remove all material from hopper.
2. **Disconnect, lockout main power and/or disable loading control.**
3. **Remove the air line from the quick air disconnect.**
4. **Remove the four (4) M6 bolts that secure the cylinder mounting plate to the APV casting** using a M4 Allen wrench.
5. **Remove the cylinder mounting plate assembly from the casting.**

Replacement cylinders and cylinder mounting gaskets are available from Conair.

Contact Conair Parts
(800) 458 1960
From outside of the United States, call:
(814) 437 6861



Replacing the Cylinder and Cylinder Mounting Gasket (continued)

6 **Remove the mounting gasket** that is in place between the casting and the mounting plate.

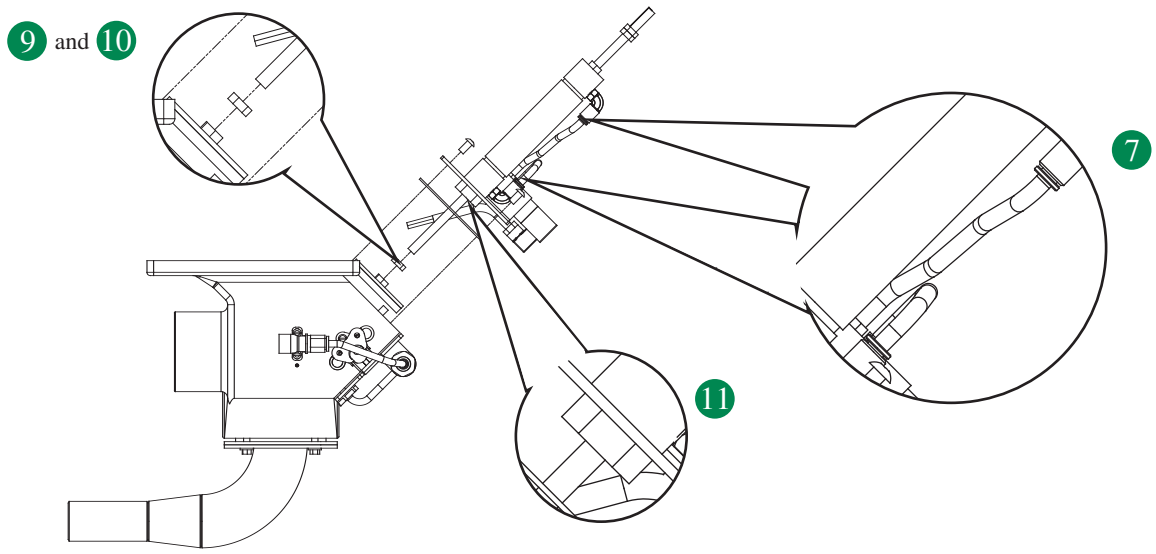
7 **Remove the air lines from the quick disconnect fittings that are mounted on the cylinder,** note which lines are connected to which fitting.

8 **Remove the quick disconnects from the cylinder.**

9 **Remove the closing pipe from the end of the cylinder,** using a 9/16" (inch) wrench and channel locks.

10 **Remove the jam fitting from the end of the cylinder.**

11 **Remove the cylinder mounting fitting that holds the cylinder in place and remove the cylinder,** note the location of the air inlets to the cylinder.



(continued)

Replacing the Cylinder and Cylinder Mounting Gasket (continued)

12 **Install the new cylinder on the plate and reconnect the air fittings.**

13 **Apply Loctite to the cylinder threads and re-install the mounting nut** to hold the cylinder in place**.**

14 **Fully install the jam fitting on the cylinder.**

15 **Apply Loctite onto the threaded end of the cylinder and install the closing pipe onto the cylinder end until it engages the jam fitting,** tighten both.

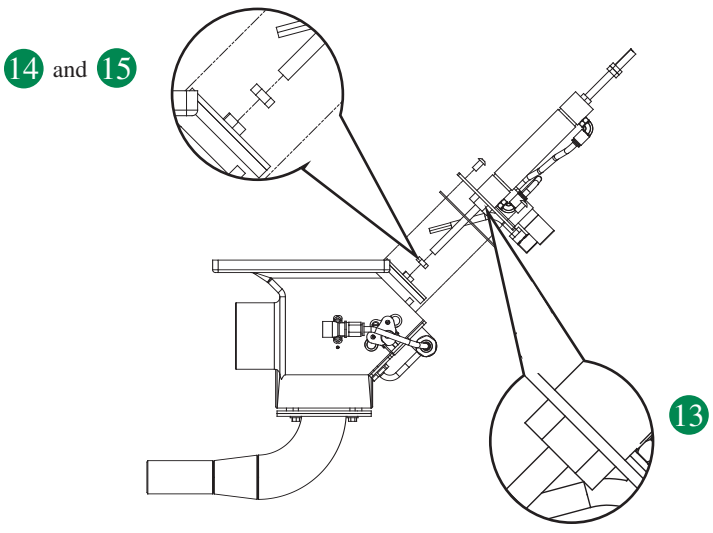
16 **Reinstall the quick disconnect air fittings and air lines** make sure to use Teflon tape or similar material on the fitting threads.

17 **Install the gasket onto the casting,** replace if needed.

18 **Install the cylinder mounting plate assembly onto the casting** and insert the four (4) M6 bolts.

19 **Check to insure that the stroke adjustment on the new cylinder is the same as on the old cylinder.**

20 **Finally, reconnect the air supply to the quick air disconnect.**



Replacing the Solenoid Valve

NOTE: The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

Depending on the quality of the air supply used in your system or the age of the solenoid valve itself, it may need to be replaced. Indications of a worn solenoid valve include sluggish cylinder operation or leaking from the solenoid valve exhausts. To test the solenoid valve from proper operation, press the green manual operator button located on the top of the solenoid valve.

To replace the solenoid valve on the APV:

1. **Disconnect, lockout main power and/or disable loading control.**
2. **Remove the Din connector,** located on the solenoid valve, with a standard screwdriver.
3. **Remove the air hose inlet and the two (2) air outlets from the solenoid valve,** note the location of the tube location and routing.
4. **Remove the two (2) screws that are holding the solenoid valve to the cylinder mounting plate.**
5. **Remove the barb fittings that are installed on the old solenoid valve and install the new solenoid valve,** check that that O-rings are in place on the barb fittings.
6. **To reinstall the solenoid valve, follow steps 1-5 in reverse order.**

Replacement solenoid valves are available from Conair.

Contact Conair Parts
(800) 458 1960
From outside of the
United States, call:
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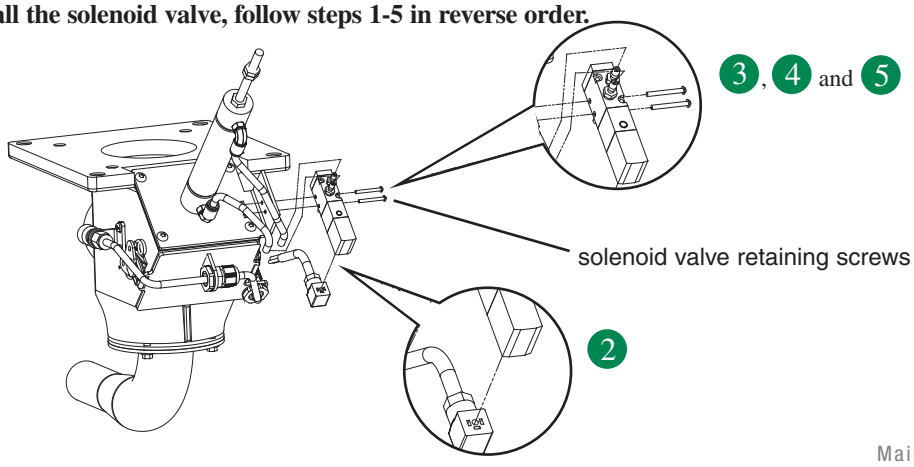
WARNING: Disconnect power and air sources. Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.



Cleaning the Air Inlet Screen

NOTE: The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

Depending on the amount of fines in the material that are conveying through the APV, the inlet air screen may need to be cleaned occasionally.

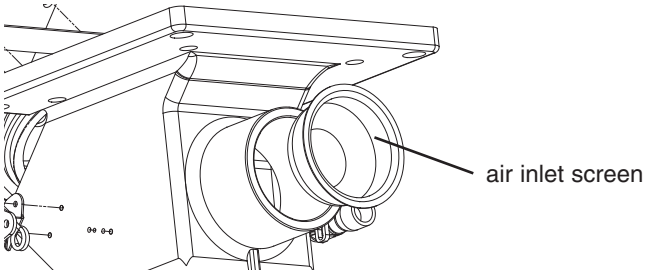
If the APV is mounted on a ResinWorks system or any other system that uses a conditioned air inlet:

WARNING: Disconnect power and air sources. Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.

1. **Disconnect, lockout main power and/or disable loading control.**
2. **Remove the air line from the quick air disconnect.**
3. **Remove the 3 inch {76.2 mm} piece of hose** that is connected to the dry air inlet on the back of the APV.
4. **Pull the inlet air screen from the APV.**
5. **Clean or replace as necessary.**
6. **To reinstall the air inlet screen, follow steps 1-5 in reverse order.**

If the APV is used without conditioned air inlet:

1. **Disconnect, lockout main power and/or disable loading control.**
2. **Remove the air line from the quick air disconnect.**
3. **Pull the inlet air screen from the APV.**
4. **Clean or replace as necessary.**
5. **To reinstall the air inlet screen, follow steps 1-4 in reverse order.**



Replacing the Quick Air Disconnect

✎ **NOTE:** The following instructions are written to describe the steps for a Single APV. For a Dual APV it will be necessary to repeat the steps a second time.

The APV is equipped with a quick air disconnect that allows you to remove the air supply to the valve. The operation of the quick disconnect is such that when the air hose is inserted a valve is depressed, which allows the air to pass from the main air supply to the solenoid valve. When the air hose is removed from the fitting, the valve is released, which seals off the air supply so that no air will pass through the disconnect. If the hose is inserted into the fitting and no air passes through the valve or if there is air leaking from the disconnect it is possible that the internal valve is damaged.

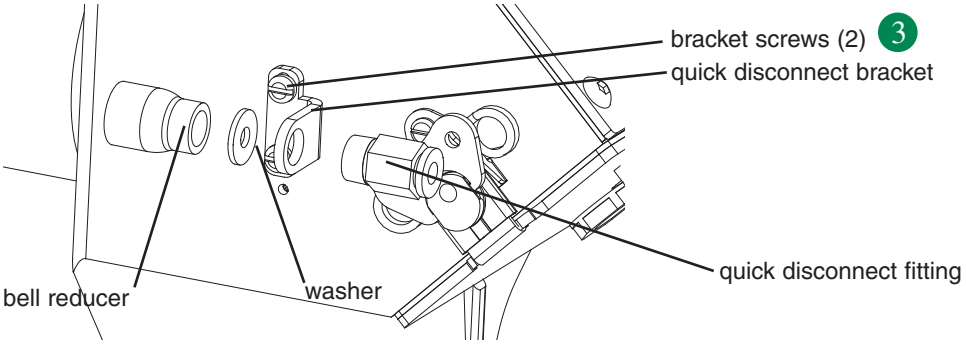
Replacement quick air disconnects are available from Conair.

Contact Conair Parts
(800) 458 1960
From outside of the United States, call:
(814) 437 6861

Replacing the quick air disconnect on the APV:

⚠ **WARNING: Disconnect power and air sources.** Always disconnect the main power source and compressed air source before accessing the APV. This prevents the APV from starting during servicing, which could cause personal injury from flying debris or moving parts.

1. **Disconnect, lockout main power and/or disable the loading control.**
2. **Remove the air line from the quick air disconnect.**
3. **Remove the two (2) screws that secure the disconnect bracket** to the casting.
4. **Separate the bell reducer and washer from the quick disconnect fitting and the bracket** with Channel Locks or a pipe wrench.
5. **Install the new quick disconnect fitting through the bracket and washer and into the bell reducer,** then tighten.
6. **To reinstall the quick air disconnect bracket, follow steps 1-3 in reverse order.**



SECTION

6

Troubleshooting

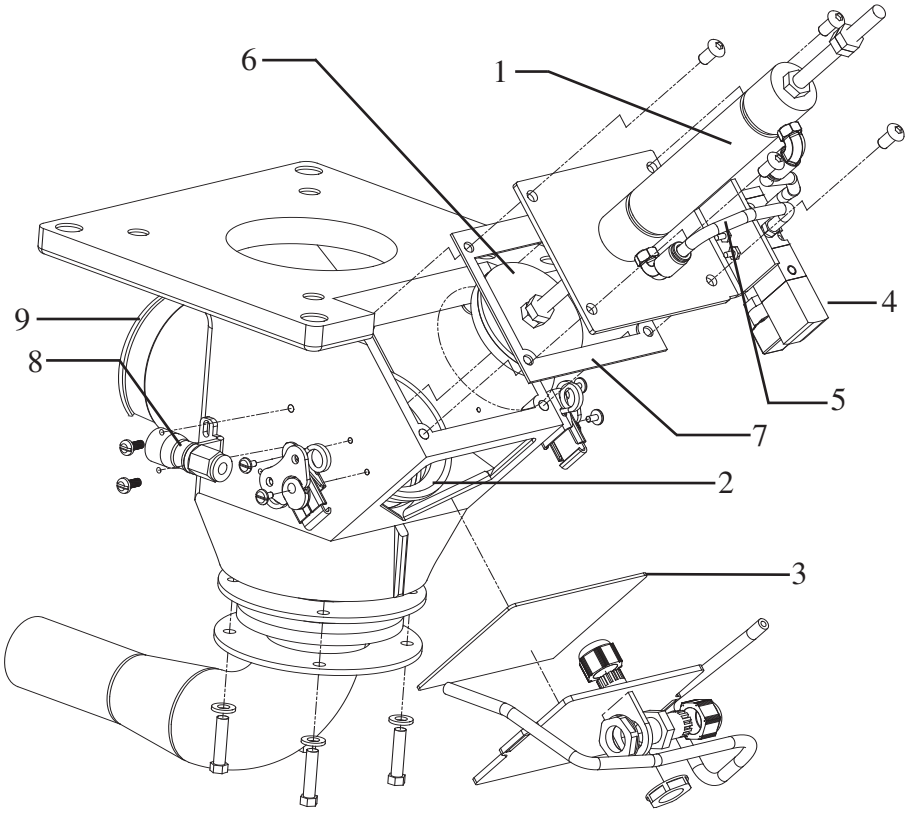
Troubleshooting

Problem	Possible cause	Solution
No material dispensing from the APV.	No air supply to the valve.	Check all air connections and make sure the air supply is present and that the air tubing is fully inserted into the quick disconnect.
	Air hose is not fully inserted into the quick disconnect shut off valve.	
	Bad quick disconnect fitting.	***See Maintenance section entitled, Replacing the quick air disconnect.***
	No signal from the loading system.	Check that the valve is connected to the loading control.
	Bad solenoid.	***See Maintenance section entitled, Replacing the solenoid valve.***
	Bad cylinder.	***See Maintenance section entitled, Replacing the cylinder and cylinder mounting gasket.***
	Incorrect stroke adjustment setting.	Check operation of cylinder, replace if necessary. ***See Operation section entitled, Making adjustments to the APV, Stroke adjustment.***
	Other conveying system problem.	Check vacuum monitor, adjust stroke if necessary. ***See Operation section entitled, Making adjustments to the APV, Stroke adjustment.***
		Check dust collector filter, clean or replace as necessary.
		Check operation of vacuum pump and dust collector.

Troubleshooting

Problem	Possible cause	Solution
Sluggish or inconsistent flow from the APV. (Loader not filling correctly, lines not purging properly or general conveying problems)	Incorrect stroke adjustment setting.	Check that the stroke adjustment is set for the correct material flow from the valve. ***See Operation section entitled, Making adjustments to the APV, Stroke adjustment.***
	Clogged dust collector.	Inspect the dust collector and other components, clean as necessary.
	Leaking vacuum or material lines.	Check for air leaks in the conveying system. Replace any worn or torn vacuum or material lines. Resecure any connections.
	Clogged inlet air screen or restriction in the inlet air line.	Check the inlet air screen(s), clean as necessary. ***See Maintenance section entitled, Cleaning the air inlet screen.***
	Incorrect settings for loading and purging times.	***See Operation section entitled, Making adjustments to the APV.***
	Defective valve seat.	***See Maintenance section entitled, Replacing the valve seat.***
	Faulty cylinder.	***See Maintenance section entitled, Replacing the cylinder and cylinder mounting gasket.***
	Solenoid causing material leakage into the conveying lines.	***See Maintenance section entitled, Replacing the solenoid valve.***
	There is an air leak in the optional dry air kit or dry air supply tubing.	Check the dry air kit tubing, resecure if necessary. Check the dry air source for leaks etc. Resecure any attached hosing or replace any damaged lines.

Spare Parts List for Single and Dual APV Models



Replacement gaskets are available from Conair.

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(814) 437 6861

No.	Part Number	Description
1	2905830101	Cylinder
2	10557102	Valve seat
3	10557102	Clean out gasket
4	266838XX (01 115 VAC) (03 24VAC) (04 24 VDC)	Solenoid valve
5	24102701	Tubing
6	101113901	Closing cone
7	10557110	Cylinder mount gasket
8	26880401	Quick air disconnect
9	10557130	Air inlet filter

We're Here to Help

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Department for a nominal fee. Most manuals can be downloaded free of charge from the product section of the Conair website.
www.conairnet.com

How to Contact Customer Service

To contact Customer Service personnel, call:

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department.

✎ **NOTE:** Normal operating hours are 8:00 AM - 5:00 PM. After hours emergency service is available at the same phone number.

Before You Call...

If you do have a problem, please complete the following checklist before calling Conair:

- ❒ Make sure you have all model, control type and serial numbers from the serial tag, and parts list numbers for your particular equipment. Service personnel will need this information to assist you..
- ❒ Make sure power is supplied to the equipment.
- ❒ Make sure that all connectors and wires within and between control systems and related components have been installed correctly.
- ❒ Check the troubleshooting guide of this manual for a solution.
- ❒ Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.
- ❒ Check that the equipment has been operated as described in this manual.
- ❒ Check accompanying schematic drawings for information on special considerations.

Equipment Guarantee

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

Performance Warranty

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

Warranty Limitations

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.