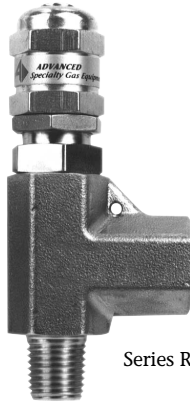

INSTRUCTIONS FOR SERIES RV5570, RV5571 & RV5580 RELIEF VALVES

THIS BOOKLET CONTAINS PROPRIETARY INFORMATION OF
ADVANCED SPECIALTY GAS EQUIPMENT CORP. AND IS PROVIDED
TO THE PURCHASER SOLELY FOR USE IN CONJUNCTION WITH
SERIES RV5570, RV5571 & RV5580 RELIEF VALVES.



Series RV5580

IMPORTANT

These instructions are for experienced operators who know the general principles and safety precautions to be observed in handling specialty gases and operating specialty gas equipment. If you are not certain you fully understand the safety precautions for handling gases, we urge you to obtain and read the Material Safety Data Sheet (MSDS) for each gas being used.

Do not permit untrained persons to install, operate, or maintain this equipment. Do not attempt to install or operate this equipment until you have read and fully understand these instructions. If you do not fully understand these instructions, contact your Advanced Specialty Gas Equipment Distributor.

Be sure this information reaches the operator. Your supplier has extra copies.



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SAFETY PRECAUTIONS

Protect yourself and others. Read and understand the following instructions before attempting to use these valves. Failure to understand and follow these instructions could result in serious personal injury and/or damage to equipment.

- Know and understand the physical and chemical properties of the gas being used.
- Observe general precautions for the use of gases. Observe safety precautions for the gas being used.
- Read and follow precautions on cylinder labels.
- Never use these valves with gases not compatible with the materials of construction. The use of gases not compatible with the materials of construction may cause damage to equipment or injury to personnel.
- If flammable gases are used with these valves, do not locate them near open flames or any other source of ignition.
- If toxic or flammable gases are used with these valves, emergency equipment applicable to the gases in use should be available in the operating area.
- Many gases can cause asphyxiation by displacing oxygen in the atmosphere. Make certain the area where this equipment is operated is well ventilated. Provide a device to warn personnel of oxygen depletion in the work area.
- Do not release toxic or flammable gases in the vicinity of personnel. Use this equipment only in well ventilated areas. Vent gases to the outside atmosphere, and in an area away from personnel. Be sure that venting and disposal methods are in accordance with Federal, State and local requirements. Locate and construct vent lines to prevent condensation or gas accumulation. Be sure the vent outlet cannot be obstructed by rain, snow, ice, insects, birds, etc. Do not interconnect vent lines; if more than one vent is needed, use separate lines.
- Never use oil or grease on these valves. Oil and grease are easily ignited and may combine violently with some gases under pressure.
- Never connect a relief valve to a supply source having a pressure greater than the adjustable pressure range of the relief valve. Refer to Product Specifications (page 7) for adjustable pressure ranges of the relief valves.

MANUFACTURER STATEMENT

The information contained in this instruction booklet has been compiled by Advanced Specialty Gas Equipment Corp., (the Company), from what it believes are authoritative sources and is offered solely as a convenience to its customers. While the Company believes that this information is accurate and factual as of the date printed, the information including design specifications is subject to change without prior notice.

DESCRIPTION

Relief valves are commonly used downstream of pressure regulators to protect the regulator and downstream components from damage due to overpressurization caused by a regulator failure.

RV5570, RV5571 and RV5580 Series Relief Valves provide accurate pressure relief while maintaining leak tight shut-off under a wide range of operating pressures. When system pressure overcomes the force exerted by the internal relief valve spring, the poppet opens, allowing flow through the valve. They may be used with hazardous gases because they have a 1/4" NPT female outlet which permits vented gas to be piped to a safe disposal system.

The RV5570 and RV5571 Series valves have brass bodies for non-corrosive service, and the RV5580 Series have Type 316 SS bodies for corrosive applications. Refer to the Gas Compatibility Chart in the Advanced Catalog for specific gas/material of construction compatibility information.

SETTING DESIRED CRACKING PRESSURE (RV5570 & RV5580)

Series RV5570 and RV5580 Relief Valves are field adjustable within their nominal cracking pressure range listed in the Product Specifications (see pg. 7). The cracking pressure is not preset when supplied. Set the desired cracking pressure before installing the valve in a system.

Note: Series RV5571 Relief Valves are not field adjustable and are supplied preset at the cracking pressure listed in the Product Specifications (see pg. 7).

1. Connect a regulated clean, dry inert gas (e.g. Nitrogen) to the inlet of the relief valve. Tee a pressure gauge into the line immediately upstream of the relief valve (Fig. 1, pg. 9).
2. To check the cracking pressure, slowly increase pressure to the relief valve inlet by slowly opening the regulator. When the gas begins flowing through the valve, read the pressure gauge to determine cracking (set) pressure.

It may be helpful to apply a leak test soap solution, such as Snoop® to the outlet port. When the inert gas causes the Snoop® to bubble, the cracking pressure has been reached.

3. Vent system to atmospheric pressure. If the cracking pressure requires adjusting, go on to the following adjustment step for the specific model.

Series RV5570 Adjustment

Remove the acorn lock nut on the relief valve. Turn the hex head adjusting screw clockwise to increase pressure or counterclockwise to decrease the set pressure. The set pressure may be checked with the acorn lock nut removed. However, the pressure should also be checked after the acorn lock nut has been reinstalled and tightened to insure the setting has not been altered by the tightening of the acorn lock nut. Repeat Step 2 above. Repeat check and adjustment procedure as necessary to obtain the desired cracking pressure.

Series RV5580 Adjustment

Loosen lock nut by turning it clockwise. Turn the adjustment cap clockwise to increase pressure or counterclockwise to decrease the set pressure. Turn lock nut counterclockwise against adjustment cap to lock-in setting. Repeat Step 2 above. Repeat check and adjustment procedure as necessary to obtain the desired cracking pressure. After desired set pressure is attained, lockwire adjustment cap and valve body together to maintain relief setting.

INSTALLATION

WARNING: Before attempting to install these relief valves, read and fully understand the safety precautions on page 3 in this booklet. Failure to follow the safety precautions may result in serious personal injury and/or damage to equipment.

1. Inspect the relief valve carefully for any evidence of damage that might have occurred in shipment.

CAUTION: Oil or grease in the presence of high pressure oxygen is explosive.

2. Insure the service gas is compatible with the materials used to construct the relief valve.
3. For Series RV5570 and RV5580 Relief Valves, set the desired cracking pressure. Refer to “Setting Desired Cracking Pressure” (page 5).
4. Ensure that the inlet process and outlet vent lines are at atmospheric pressure before installing valve.
5. Connect the relief valve to the piping system in the proper flow orientation. Refer to Product Specifications (page 7) for inlet and outlet port configuration. Use Teflon® tape on pipe threads to prevent galling.

Note: The use of joint compounds, pastes or lubricants other than Teflon® tape should be avoided since they may contaminate the valve seat or process gas.

6. Leak test all connections after installation at the maximum system operating pressure using a clean, dry inert gas (e.g. Nitrogen) and a suitable leak detection fluid such as Snoop®.

SPECIFICATIONS

| | |
|------------------------------------|---------------------|
| Adjustable Cracking Pressure Range | |
| Series RV5570 & RV5580 | See Table 1 |
| Set Cracking Pressure | |
| Series RV5571 | See Table 2 |
| Operating Temperature Range | |
| Series RV5570 | 0°F to 140°F |
| Series RV5571 | -40°F to 400°F |
| Series RV5580 | 0°F to 250°F |
| Re-seat Pressure | 70% of set pressure |
| Flow Coefficient | |
| Series RV5570 & RV5580 | See Table 1 |
| Series RV5571 | See Table 2 |
| Flow Capacity | |
| Series RV5580 | See Figures 6 and 7 |
| Inlet Connection | 1/4" NPT male |
| Outlet Connection | 1/4" NPT female |
| Weight (approx.) | |
| Series RV5570 | 6 oz. |
| Series RV5571 | 2 oz. |
| Series RV5580 | 7 oz. |

MATERIALS OF CONSTRUCTION

Body

Series RV5570 & RV5571

Brass

Series RV5580

316 Stainless Steel

Seals

See Table 1 and Table 2

Table 1, RV5570 & RV5580 Series

| Part Number | Adjustable Range (psig) | Seal Material | Flow Coefficient (C _v) |
|-------------|-------------------------|---------------|------------------------------------|
| RV5570-25 | 1-25 | Neoprene | 0.355 |
| RV5570-50 | 10-50 | Buna-N® | 0.314 |
| RV5570-200 | 25-200 | Buna-N® | 0.314 |
| RV5570-500 | 200-500 | Buna-N® | 0.314 |
| RV5570-1500 | 500-1500 | Kel-F® | 0.173 |
| RV5570-2000 | 1500-2000 | Kel-F® | 0.173 |
| RV5570-3000 | 2000-3000 | Kel-F® | 0.229 |
| RV5580-225 | 1-225 | Viton® | 0.6 |
| RV5580-350 | 50-350 | Viton® | 0.41 |
| RV5580-750 | 350-750 | Viton® | 0.41 |
| RV5580-1500 | 750-1500 | Viton® | 0.41 |
| RV5580-2250 | 1500-2250 | Viton® | 0.41 |
| RV5580-3000 | 2250-3000 | Viton® | 0.41 |
| RV5580-4000 | 3000-4000 | Viton® | 0.41 |
| RV5580-5000 | 4000-5000 | Viton® | 0.41 |
| RV5580-6000 | 5000-6000 | Viton® | 0.41 |

Table 2, RV5571 Series

| Part Number | Set Pressure (psig) | Seal Material | Flow Coefficient (C _v) |
|-------------|---------------------|---------------|------------------------------------|
| RV5571-25 | 25 | Viton® | 0.37 |
| RV5571-90 | 90 | Viton® | 0.37 |
| RV5571-135 | 135 | Viton® | 0.37 |
| RV5571-175 | 175 | Viton® | 0.37 |
| RV5571-275 | 275 | Viton® | 0.37 |
| RV5571-400 | 400 | Viton® | 0.37 |

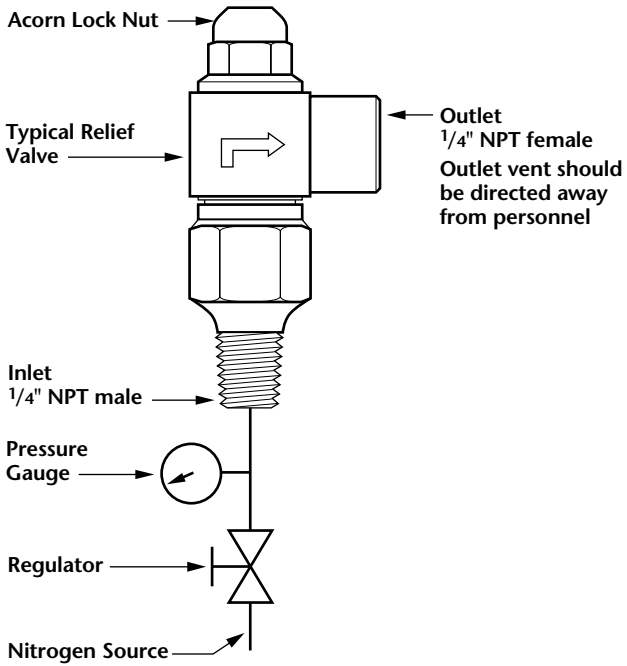


Figure 1 – Typical Configuration for Adjusting Cracking Pressure

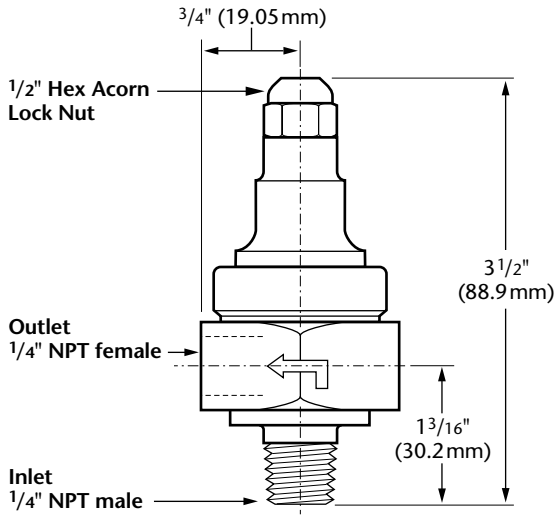


Figure 2 – Series RV5570–25 Dimensions

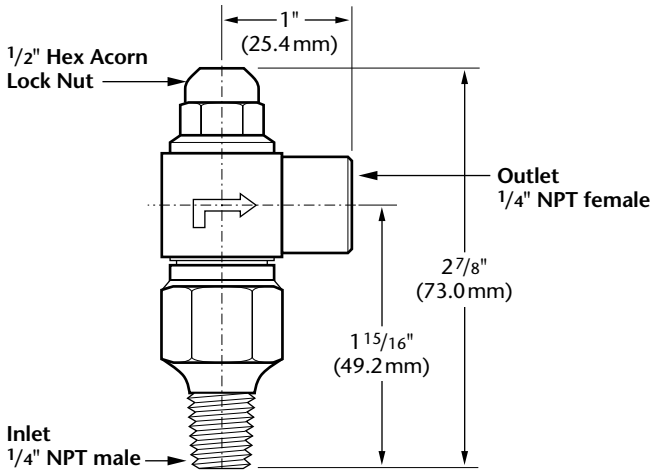


Figure 3 – Series RV5570–50 thru RV5570–3000 Dimensions

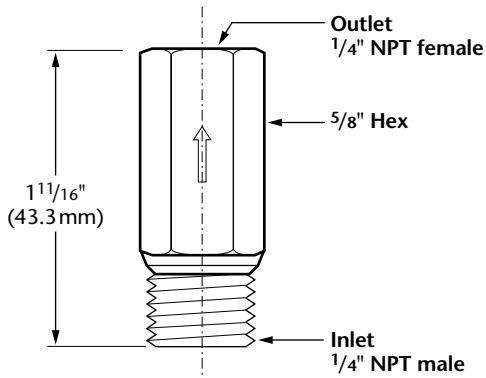


Figure 4 – Series RV5571 Dimensions

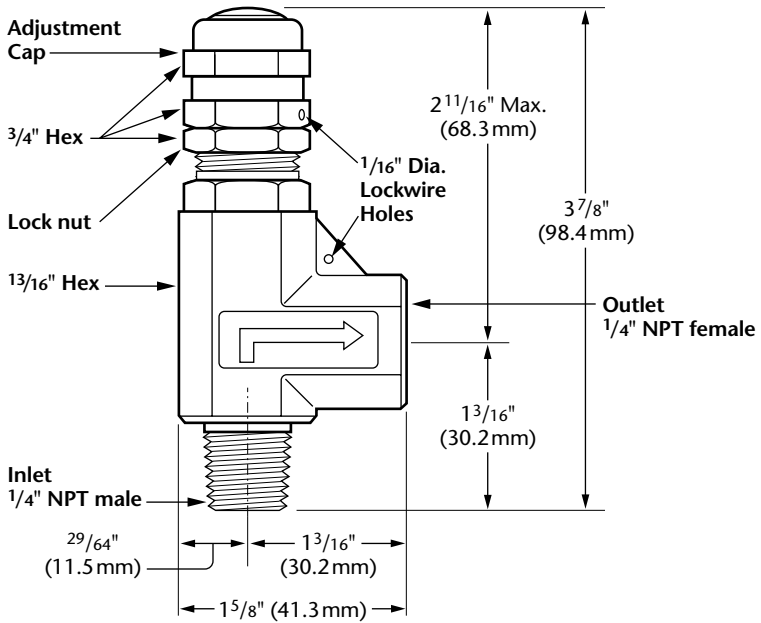


Figure 5 – Series RV5580 Dimensions

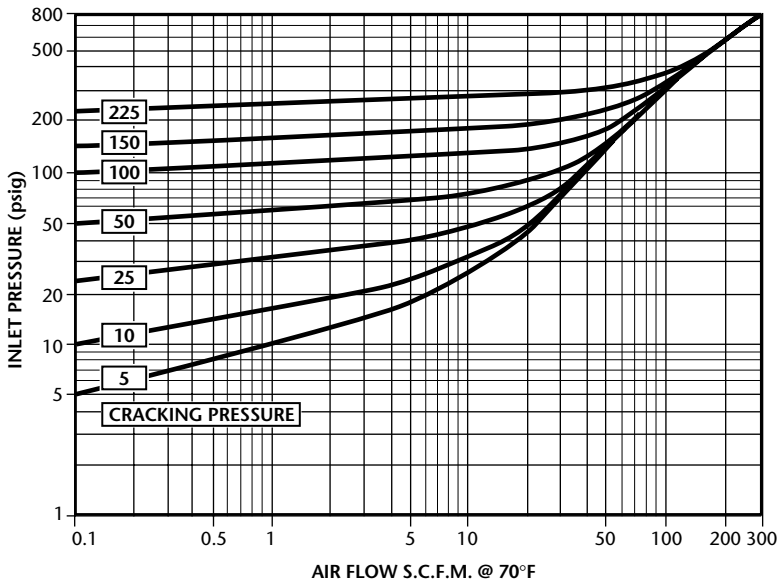


Figure 6 – Model RV5580-225 Flow Capacity

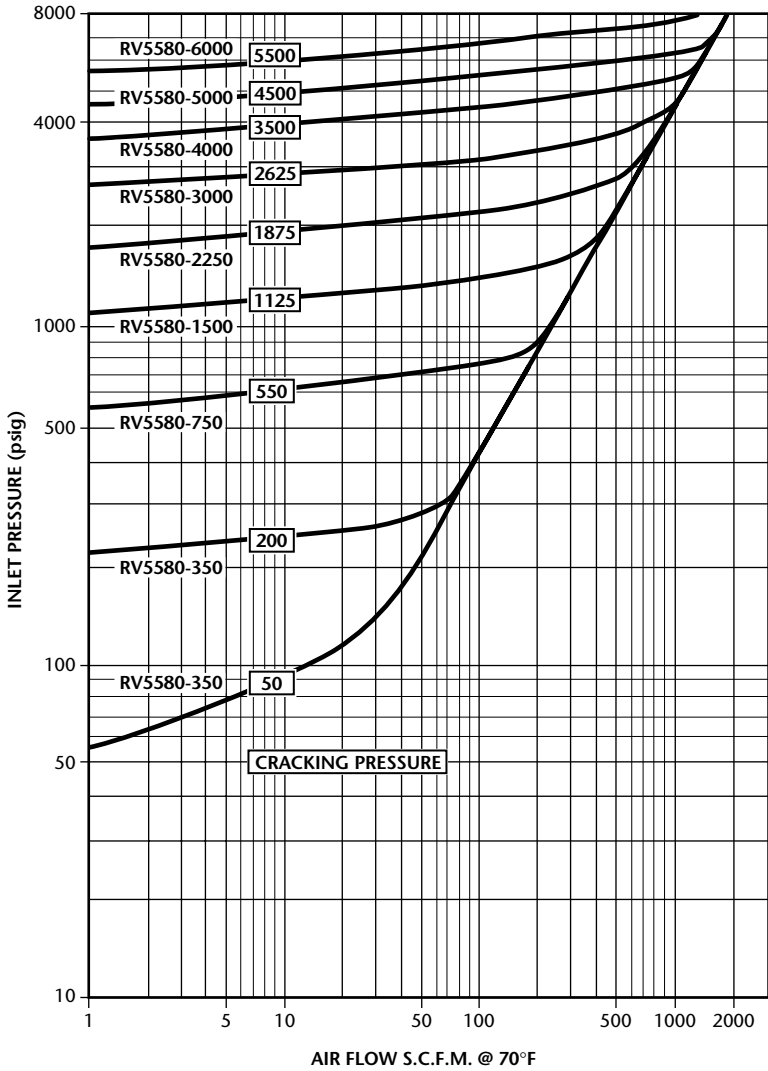


Figure 7 – Models RV5580–350 thru RV5580–6000 Flow Capacity

WARRANTY

Advanced Specialty Gas Equipment Corp., (the Company), warrants to the initial purchaser of each relief valve described herein, that such equipment will be free from defects in material and workmanship which result in breakdown or failure under normal use during a period of 12 months from date of shipment by the Company if used and maintained according to Advanced Specialty Gas Equipment written instructions. This warranty does not cover damage or malfunction due to corrosion. Purchaser is aware that this equipment is designed for specific applications and that using this equipment for the wrong application may damage or corrode the unit and cause personal injury. If there is any doubt about application, consult your Advanced Specialty Gas Equipment Corp. distributor.

The Company's liability under this warranty shall be limited to the repair, or at its option, replacement or refund of the purchase price, of such equipment which proves to be defective, provided; however, that this warranty shall only apply if the purchaser (1) gives the Company written notice within (10) days after discovery of such defect, (2) immediately on discovery of the claimed defect, discontinues all use of such equipment, and (3) returns such equipment freight prepaid to plant of manufacture.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SPECIFIED HEREIN. NO WARRANTIES BY ADVANCED SPECIALTY GAS EQUIPMENT CORP. (OTHER THAN WARRANTY OF TITLE AS PROVIDED IN THE UNIFORM COMMERCIAL CODE) SHALL BE IMPLIED OR OTHERWISE CREATED UNDER ANY APPLICABLE LAW, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. No claim against the Company of any kind, whether as to equipment delivery or for nondelivery of equipment and whether or not based on contract, warranty, negligence, strict liability in tort or otherwise, shall be greater in amount than the purchase price of the equipment in respect of which such claim is made. Without limiting the generality of the foregoing, Advanced Specialty Gas Equipment Corp. shall not be liable for any special, indirect, or consequential damage, such as failure of parts resulting from corrosion.

If it is determined by Advanced Specialty Gas Equipment Corp. that the equipment is to be repaired or replaced under the terms of this warranty, the cost of returning said equipment to the initial purchaser will be paid by the Company. If, however, equipment returned to the Company in connection with a claim under this warranty is found by the Company not to be defective hereunder, then such equipment will be returned to the initial purchaser, shipping charges collect, and additionally, a service will be paid by the purchaser to the Company to cover the cost of handling and testing such equipment.

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