

## VQ-11 Series Needle Valve



### MAXIMUM ALLOWABLE WORKING PRESSURE AND TEMPERATURE

Valve Size	Specifications	
V4	Normally Open Normally Closed Double Acting	Actuator Pressure: 75 Psig (.52 MPa) 75 Psig (.52 MPa) 55 Psig (.38 MPa)
	Normally Open Normally Closed Double Acting	System Pressure: 450 Psig @ 70 °F (3.1 MPa @ 21 °C) 600 Psig @ 70 °F (4.1 MPa @ 21 °C) 450 Psig @ 70 °F (3.1 MPa @ 21 °C)
V6	Normally Open Normally Closed Double Acting	Actuator Pressure: 75 Psig (.52 MPa) 75 Psig (.52 MPa) 55 Psig (.38 MPa)
	Normally Open Normally Closed Double Acting	System Pressure: 450 Psig @ 70 °F (3.1 MPa @ 21 °C) 500 Psig @ 70 °F (3.4 MPa @ 21 °C) 450 Psig @ 70 °F (3.1 MPa @ 21 °C)

The arrow on the valve body indicates the normal direction of flow. Valve pressure ratings are based on the normal direction of flow. Refer to Parker VQ-11 Series Needle Valve Maintenance Instruction MI-102 when maintenance is required.

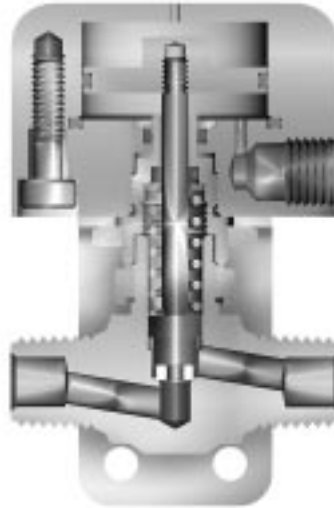


Figure 1: VQ-11AC Series Actuated Valve Cross Sectional View

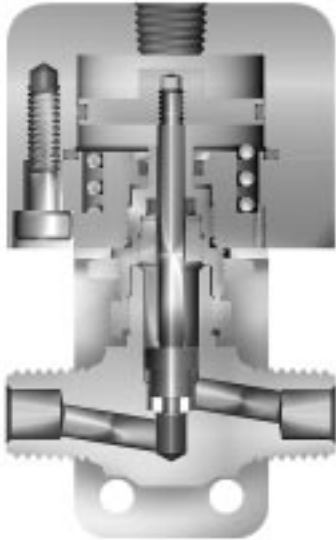


Figure 2: VQ-11AO Series Actuated Valve Cross Sectional View

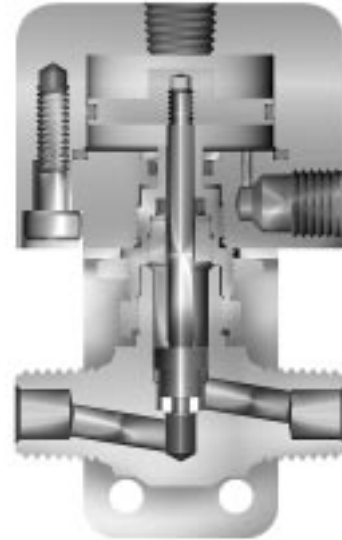


Figure 3: VQ-11AD Series Actuated Valve Cross Sectional View

## AIR ACTUATOR CONNECTIONS

1. Air Actuator ports are 1/8-27 NPT internal female pipe threads. When making pipe thread connections to the air actuator, use a high quality pipe joint compound or PTFE tape made for this purpose. PTFE tape should not be overhanging or covering the first external pipe thread.
2. Engage the external pipe connection into the actuator, hand tight.
3. With a proper wrench, continue to tighten the connection to a leak tight joint.
4. It is recommended that no wrenching be applied to the actuator during this make-up but, rather be held firmly by hand. If clamping of the actuator for make-up is unavoidable, be certain the entire actuator length (or height) is supported to avoid crushing.

**NOTE:** Installation of this 1/8-27 NPT Port may be achieved by loosening the lock-nut located under the actuator with a 1 inch hex wrench. Rotate the actuator by hand in a counter-clockwise direction until the proper port alignment is realized but never more than one full turn; retighten the lock-nut to 25 in-lbs (2.8 N-m).

## VALVE CONNECTOR MAKE-UP INSTRUCTIONS

### MALE AND FEMALE PIPE PORTS

Wrench flats are provided on the Valve Body. It is recommended a smooth-jawed wrench or vise be used to grip the Valve Body.

1. On the male threaded part of the connection, apply a high quality pipe joint compound or PTFE tape made for this purpose. When PTFE tape is used, it is recommended two full turns of tape be applied. PTFE tape should not be overhanging or covering the first thread
2. Engage the Valve and the other component part together, until hand-tight.
3. With a proper wrench, holding both the Valve and the component part, continue to tighten to achieve a leak-tight joint.

### ULTRASEAL CONNECTIONS

1. Insert the proper O-Ring into the UltraSeal fitting's O-Ring groove. Position the UltraSeal gland sealing face against the O-Ring, and then advance the Nut to a finger-tight position.
2. A positive seal is obtained by advancing the Nut no less than 1/4 turn from the finger-tight position. Proper UltraSeal make-up is achieved when a sharp rise in required application torque occurs, which indicates proper seal face contact and O-Ring seal compression into the UltraSeal groove.

### VACUSEAL CONNECTIONS

1. A positive seal is obtained by advancing the Nut 1/8 turn from the finger-tight position.
2. A new gasket should be installed upon each fitting re-make to insure system pressure integrity.

### TUBE FITTING CONNECTIONS

1. Insert the tube into the Valve port until the tube bottoms out in the Valve Body. Care should be exercised to insure the tube is properly aligned with the Valve Body and port.
2. Normal make-up for US Customary port sizes 1 thru 3 (1/16 thru 3/16 inch) and SI port sizes 2 thru 4 (2 thru 4 mm) is 3/4 turn from finger tight. Normal make-up for US Customary port sizes 4 thru 16 (1/4 thru 1 inch) and SI port sizes 5 thru 25 (5 thru 25 mm) is 1 1/4 turn from finger tight. For larger port sizes consult Parker Ferrule Presetting Tool Instructions.

**PLEASE FOLLOW THE ABOVE DIRECTIONS FOR COUNTING THE NUMBER OF TURNS FOR PROPER FITTING MAKE-UP. DO NOT MAKE-UP TUBE FITTINGS BY TORQUE OR "FEEL". VARIABLES SUCH AS TUBING AND FITTING TOLERANCES, TUBE WALL THICKNESS, AND THE LUBRICITY OF NUT LUBRICANTS CAN RESULT IN AN IMPROPERLY ASSEMBLED TUBE FITTING CONNECTION.**

**A** -Two ferrule A-LOK®  
compression port



**Z** -Single ferrule CPI™  
compression port



**F** -ANSI/ASME B1.20.1  
Internal pipe threads



**V** -VacuSeal face  
seal port



**Q** -UltraSeal face  
seal port



**M** -ANSI/ASME B1.20.1  
External pipe threads



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## WARNING

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

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**ALL PARKER VALVES MUST PASS A RIGID OPERATIONAL AND LEAKAGE TEST BEFORE LEAVING THE FACTORY. IT IS RECOMMENDED AFTER ANY REASSEMBLY, THE VALVE SHOULD BE TESTED BY THE USER FOR OPERATION AND LEAKAGE. IF THESE INSTRUCTIONS ARE NOT FULLY COMPLIED WITH, THE REPAIRED PRODUCT MAY FAIL AND CAUSE DAMAGE TO PROPERTY OR INJURY TO PERSONS. PARKER HANNIFIN CANNOT ASSUME RESPONSIBILITY FOR PERFORMANCE OF A CUSTOMER SERVICED VALVE.**

