



# Pneumatic Directional Control Valves – AVS Air Pilot Valves

NITRA™ pneumatic AVS-5 series directional control air valves are body ported 5-port (4-way) spool valves. Available port sizes are 1/8", 1/4", 3/8" or 1/2" NPT with flow coefficients (Cv) from 0.67 to 2.79. Models are available with single pilot spring return or double pilot 2-position operation. In addition, double pilot models are available with 3-position center closed operation. The AVS series can be used in individual valve applications, or multiple valves can be field assembled on AM-5 series manifolds for simplifying piping connections (AVS-52 & AVS-53 series only). AM-5 series manifolds are available in 2, 4, 6 or 8 stations.



Single Pilot Valve



Double Pilot Valve

## Features

- Body ported, 5-port (4-way) spool valves
- 1/8", 1/4", 3/8" or 1/2" NPT ports
- 2-position, single pilot normally closed, spring return; 2-position, double pilot; 3-position, double pilot center closed
- Single valve or multiple manifold mounted valve applications
- 2-year warranty



See [www.AutomationDirect.com](http://www.AutomationDirect.com) for a wide variety of fitting options

Diagram "A"



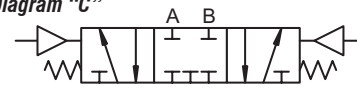
Single Pilot, Spring Return

Diagram "B"



Double Pilot, 2-Position

Diagram "C"



Double Pilot, 3-Position, Center Closed



| AVS Series Air Pilot Valve Specifications |  |                  |                                 |  |                  |                          |  |                  |                          |                   |                  |                                 |
|---|--|------------------|---------------------------------|--|------------------|--------------------------|--|------------------|--------------------------|-------------------|------------------|---------------------------------|
| Models                                    | AVS-5241   | AVS-5251         | AVS-526C1                       | AVS-5242                               | AVS-5252         | AVS-526C2                | AVS-5343                               | AVS-5353         | AVS-536C3                | AVS-5444          | AVS-5454         | AVS-546C4                       |
| Price                                     |  |                  |                                 |  |                  |                          |  |                  |                          |                   |                  |                                 |
| Weight (lbs)                              | 0.3  | 0.4              | 0.5                             | 0.3                                    | 0.4              | 0.5                      | 0.5                                    | 0.6              | 0.7                      | 1.1               | 1.2              | 1.4                             |
| Valve Type                                | 5-port 2-position  |                  | 5-port 3-position closed center | 5-port 2-position                      |                  | 5-port 3-position closed | 5-port 2-position                      |                  | 5-port 3-position closed | 5-port 2-position |                  | 5-port 3-position closed center |
| Acting                                    | single air pilot   | double air pilot |                                 | single air pilot                       | double air pilot |                          | single air pilot                       | double air pilot |                          | single air pilot  | double air pilot |                                 |
| Diagram                                   | A  | B                | C                               | A                                      | B                | C                        | A                                      | B                | C                        | A                 | B                | C                               |
| Port Size                                 | 1/8" NPT   |                  |                                 | Inlet port 1/4" NPT - Exhaust 1/8" NPT |                  |                          | Inlet port 3/8" NPT - Exhaust 1/4" NPT |                  |                          | 1/2" NPT          |                  |                                 |
| Pilot Port Size                           | 1/8" NPT   |                  |                                 |  |                  |                          |  |                  |                          |                   |                  |                                 |
| Flow Cv                                   | 0.78   | 0.67             |                                 | 0.89                                   | 0.67             |                          | 1.67                                   | 1.00             |                          | 2.79              |                  | 1.68                            |
| Fluid                                     | Air (to be filtered by 40 µ filter element)                  |                  |                                 |  |                  |                          |  |                  |                          |                   |                  |                                 |
| Min. / Max. Pressure                      | 20 to 115 psi (Pilot must be at least 50% of inlet pressure) |                  |                                 |  |                  |                          |  |                  |                          |                   |                  |                                 |
| Max Activate Rate                         | 5 cycles/sec   |                  | 3 cycles/sec                    | 5 cycles/sec                           |                  | 3 cycles/sec             | 5 cycles/sec                           |                  | 3 cycles/sec             |                   |                  |                                 |
| Temperature                               | -5 to +60 °C (23 to 140 °F)                                  |                  |                                 |  |                  |                          |  |                  |                          |                   |                  |                                 |
| Lubrication                               | Not Required   |                  |                                 |  |                  |                          |  |                  |                          |                   |                  |                                 |
| Body                                      | Aluminum Alloy   |                  |                                 |  |                  |                          |  |                  |                          |                   |                  |                                 |
| Drawing Figure                            | 1  | 2                | 3                               | 1                                      | 2                | 3                        | 4                                      | 5                | 6                        | 7                 | 8                | 9                               |

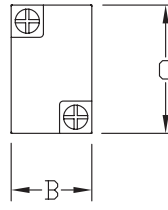
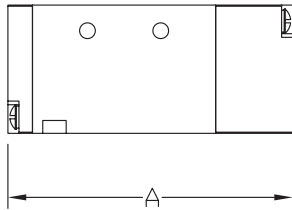
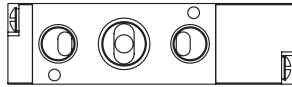


# Pneumatic Directional Control – Manual Valve Dimensions

## Dimensions

mm [inches]

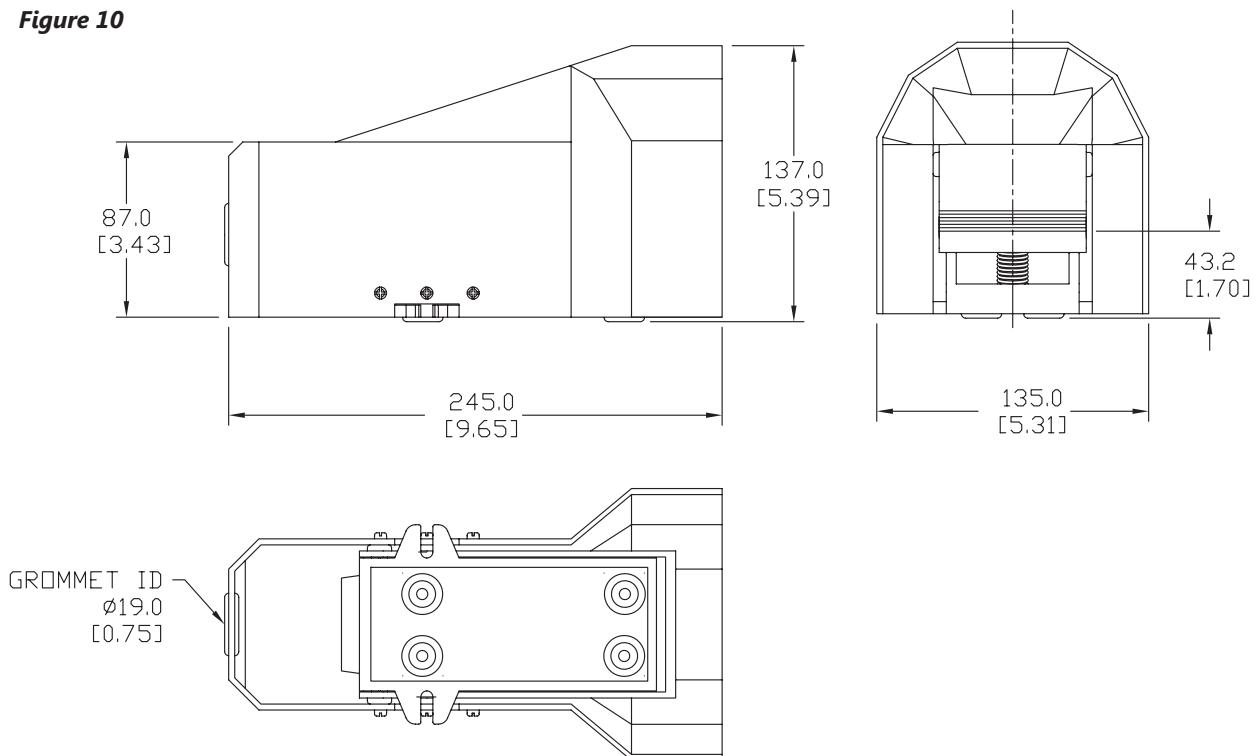
Figures 1-9



| PILOT VALVE DIMENSIONS |             |             |              |             |              |              |              |              |              |
|------------------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|
| DWG FIGURE             | 1           | 2           | 3            | 4           | 5            | 6            | 7            | 8            | 9            |
| DIM. A                 | 77.7 [3.06] | 92.0 [3.62] | 111.0 [4.37] | 95.5 [3.76] | 111.0 [4.37] | 130.0 [5.12] | 128.0 [5.04] | 142.0 [5.51] | 163.0 [6.42] |
| DIM. B                 | 22.0 [0.87] | 22.0 [0.87] | 22.0 [0.87]  | 27.0 [1.06] | 27.0 [1.06]  | 27.0 [1.06]  | 34.0 [1.34]  | 34.0 [1.34]  | 34.0 [1.34]  |
| DIM. C                 | 35.0 [1.38] | 35.0 [1.38] | 35.0 [1.38]  | 40.0 [1.57] | 40.0 [1.57]  | 40.0 [1.57]  | 50.0 [1.97]  | 50.0 [1.97]  | 50.0 [1.97]  |

See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings

Figure 10



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