

## Self Contained Tubular Valve

## Bulletin 814-d



Waddell Self Contained Tubular Valve

### Product Overview

The Waddell Self Contained Tubular Valve automatically maintains the field set flow rate in spite of pressure changes from 0.5" to 4".

The constant volume of air is maintained by a field adjustable lever system, set point spring and aerodynamic air flow control blade.

An optional model can vary the flow rate between the a minimum and maximum flow rate by using either a pneumatic or electronic actuator.

### Applications

- Research Laboratory
- Pharmaceutical Manufacturing
- Clean Spaces
- Containment Areas
- Isolation Space

### Benefits

- VVT systems
- Operation independent of mounting position
- For temperatures between -20°F and 100°F
- Cost Effective

### Application

Where specified the valve can provide constant volume air flow between two different pressure settings i.e. occupied/unoccupied or summer/winter requirements.

The valve provides constant volume performance under both negative pressures (exhaust duct work) or positive pressures (supply duct work).

- Laboratory Supply and Exhaust
- Pharmaceutical Manufacturing
- Clean Spaces
- Containment Areas

### Construction

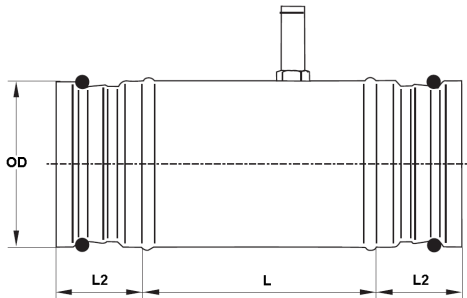
The external casing is a offered primarily in galvanized steel. For special applications corrosion resistant paint or stainless steel are available. Duct construction are with a roll formed shape including a rubber gasket providing excellent protection against air flow leakage.

## Aerodynamic Performance

| Nominal Size | Maximum Pressure |       | Flow Range (cfm) |      | Flow Range (L/sec) |     |      |
|--------------|------------------|-------|------------------|------|--------------------|-----|------|
|              | Inches           | In WC | Pa               | min  | max                | min | max  |
| 3            | 4                |       | 1000             | 85   | 184                | 40  | 86   |
| 4            | 4                |       | 1000             | 127  | 290                | 60  | 136  |
| 5            | 4                |       | 1000             | 204  | 450                | 96  | 212  |
| 6            | 4                |       | 1000             | 340  | 730                | 160 | 344  |
| 8            | 4                |       | 1000             | 509  | 1138               | 240 | 537  |
| 10           | 4                |       | 1000             | 816  | 1750               | 385 | 825  |
| 12           | 4                |       | 1000             | 1308 | 3228               | 617 | 1523 |
| 16           | 4                |       | 1000             | 2106 | 4842               | 993 | 2285 |

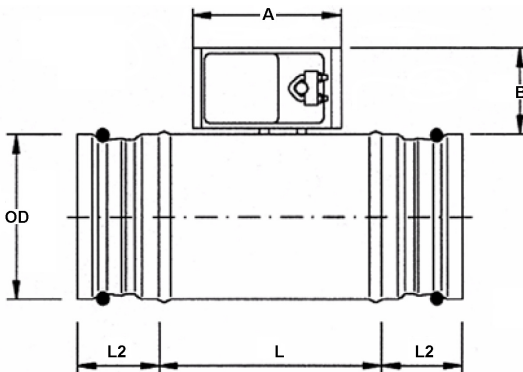
## Dimensions

### Without Actuator



| Size | OD    | L    | L2   |
|------|-------|------|------|
| 3    | 3.15  | 4.72 | 1.6  |
| 4    | 3.93  | 6.70 | 1.6  |
| 5    | 4.92  | 6.70 | 1.6  |
| 6    | 6.29  | 6.70 | 1.6  |
| 8    | 7.87  | 9.5  | 1.6  |
| 10   | 9.89  | 9.5  | 1.6  |
| 12   | 12.40 | 13.4 | 2.25 |
| 16   | 15.70 | 15.2 | 2.25 |

### With Actuator



| Size | OD    | L    | L2   | A   | B   |
|------|-------|------|------|-----|-----|
| 3    | 3.15  | 4.72 | 1.6  | 6.2 | 4.3 |
| 4    | 3.93  | 6.70 | 1.6  | 6.2 | 4.3 |
| 5    | 4.92  | 6.70 | 1.6  | 6.2 | 4.3 |
| 6    | 6.29  | 6.70 | 1.6  | 6.2 | 4.3 |
| 8    | 7.87  | 9.5  | 1.6  | 6.2 | 4.3 |
| 10   | 9.89  | 9.5  | 1.6  | 6.2 | 4.3 |
| 12   | 12.40 | 13.4 | 2.25 | 6.2 | 4.3 |
| 16   | 15.70 | 15.2 | 2.25 | 10  | 6.3 |

NOTE: Contact factory for certified drawings