

# Related Products

## Conforming to OSHA Standard Pressure Relief 3-Port Valve with Locking Hole VHS 20/30/40/50

Manually operated valve can be used to prevent accidents caused by residual pressure in pneumatic lines.

Can prevent accidents due to inadvertent air supply.

When in the exhaust position, the valve may be padlock secured.

Prevents accidental start-ups while personnel are cleaning or servicing equipment.



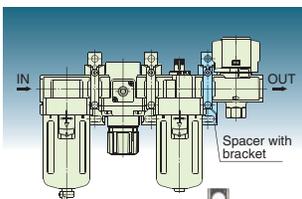
The supply/exhaust status of the air flow can be verified at a glance in the indicating window.

**SUP** : Supply  
**EXH** : Exhaust



**OSHA standard (Occupational Safety and Health Administration Department of Labor)**

For safety control, OSHA rule requires energy sources for certain equipment be turned off or disconnected and that the device either be locked or labelled with a warning tag.

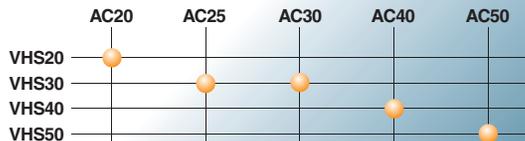


Spacer with bracket



Combination with a modular style FRL

### Combination with a modular style FRL is possible.



An interface part is required if a spacer or spacer with bracket shown in the table below is attached to a modular FRL.

| Pressure relief 3-port valve | Interface P/N | Spacer with bracket P/N | Applicable air preparation equipment |
|------------------------------|---------------|-------------------------|--------------------------------------|
| VHS20                        | Y200          | Y200T                   | AC20                                 |
| VHS30                        | Y300          | Y300T                   | AC25, AC30                           |
| VHS40                        | Y400          | Y400T                   | AC40                                 |
| VHS40-06                     | Y500          | Y500T                   | AC40-06                              |
| VHS50                        | Y600          | Y600T                   | AC50, AC60 (Note)                    |

Note) Although connection to AC60 is possible, the flow rate may decrease due to the mounting position.

## Locations in North America

- Atlanta
- Indianapolis [M]
- Phoenix
- Austin
- Los Angeles [M]
- Portland
- Boston
- Milwaukee
- Richmond
- Charlotte
- Minneapolis
- Rochester
- Chicago
- Montreal
- San Francisco
- Cincinnati
- Nashville
- St. Louis
- Cleveland
- New Jersey
- Tampa
- Dallas
- Toronto [M]
- Detroit
- Vancouver
- Windsor

[ M ] = Manufacturing

## Locations Worldwide!

### The Americas

- Argentina
- Bolivia
- Brazil
- Canada
- Chile
- Mexico
- U.S.A.
- Venezuela

### Europe

- Austria
- Bulgaria
- Croatia
- Czech
- Denmark
- Estonia
- Finland
- France
- Germany
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Netherlands
- Norway
- Poland
- Romania
- Russia
- Slovakia
- Slovenia
- Sweden
- Spain/Portugal
- Switzerland
- U.K.

### Asia

- China
- Hong Kong
- India
- Japan
- Malaysia
- Philippines
- South Korea
- Singapore
- Taiwan
- Thailand

### Oceania

- Australia
- New Zealand



SMC Corporation of America  
3011 N. Franklin Road  
Indianapolis IN 46226

1-800-762-7621(1-800-SMC-SMC1)  
[www.smcusa.com](http://www.smcusa.com)

SMC Pneumatics (Canada) Ltd.  
6768 Financial Drive Mississauga  
Ontario L5N 7J6 Canada

(905) 812-0400  
[www.smcpcanumatics.ca](http://www.smcpcanumatics.ca)

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## Soft Start Up Valve With Lock Out



Series **AVL2000/3000/4000/5000**

# Soft start up valve with lock out

- Large effective area
- Low power consumption
- Manual/Manual solenoid lock out
- Modular design

## AVL2000/3000/4000/5000

O.S.H.A compliant-lockable soft start valve. Gradual increase of supply pressure and rapid exhaust of system air when the supply is shut off.

### How to Order

**AVL 20 00-F 02 G-5 DZM-R**

Soft start valve with lock out

**Body size**

|    |        |
|----|--------|
| 20 | 1/4    |
| 30 | 3/8    |
| 40 | 1/2    |
| 50 | 3/4, 1 |

**Port thread**

|     |     |
|-----|-----|
| Nil | Rc  |
| N   | NPT |
| F   | G   |

**Port size**

|    |               |
|----|---------------|
| 02 | 1/4 (AVL2000) |
| 03 | 3/8 (AVL3000) |
| 04 | 1/2 (AVL4000) |
| 06 | 3/4 (AVL5000) |
| 10 | 1 (AVL5000)   |

**Rated coil voltage**

|     |                         |
|-----|-------------------------|
| Nil | Manual lockout          |
| 1   | 100VAC (50/60Hz)        |
| 2   | 200VAC (50/60Hz)        |
| 3   | 110 to 120VAC (50/60Hz) |
| 4   | 220VAC (50/60Hz)        |
| 5   | 24VDC                   |
| 6   | 12VDC                   |
| 9   | Others                  |

**Option**

|     |                                 |
|-----|---------------------------------|
| Nil | No gauge                        |
| G   | Pressure gauge(Unit: MPa)       |
| P   | Pressure gauge (Unit: MPa, psi) |

**Air direction**

|     |               |
|-----|---------------|
| Nil | Left to Right |
| R   | Right to Left |

**Electric entry**

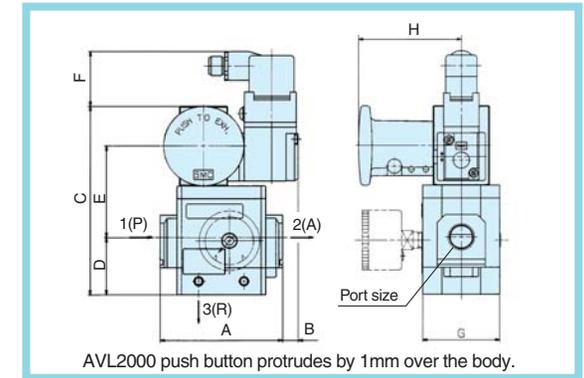
|     |   |
|-----|---|
| Nil | Manual lockout  |
| D   | D type DIN connector  |
| DZ  | D type DIN connector with indicator light & suppressor                              |
| DZM | D type DIN connector with M12 connector, indicator light & surge voltage suppressor |



### Dimension AVL2000 to AVL5000

(mm)

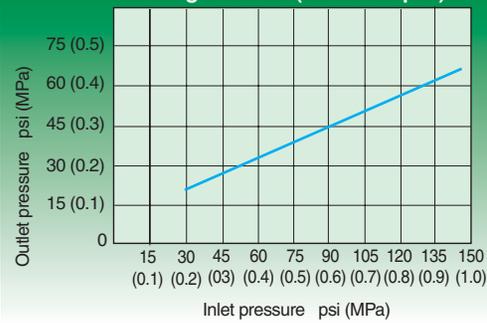
| Model                | Port size | A   | B    | C   | D  | E  | F  | G  | H            |
|----------------------|-----------|-----|------|-----|----|----|----|----|--------------|
| AVL2000-02           | 1/4       | 67  | -    | 111 | 31 | 55 | -  | 40 | 64 (Max. 73) |
| AVL2000-02-DZM       | 1/4       | 67  | 20.5 | 111 | 31 | 55 | 34 | 40 | 64 (Max. 73) |
| AVL3000-03           | 3/8       | 76  | -    | 118 | 36 | 57 | -  | 48 | 64 (Max. 73) |
| AVL3000-03-DZM       | 3/8       | 76  | 12.5 | 118 | 36 | 57 | 34 | 48 | 64 (Max. 73) |
| AVL4000-04           | 1/2       | 98  | -    | 133 | 47 | 61 | -  | 52 | 64 (Max. 73) |
| AVL4000-04-DZM       | 1/2       | 98  | -    | 133 | 47 | 61 | 34 | 52 | 64 (Max. 73) |
| AVL5000-06 to 10     | 3/4 & 1   | 128 | -    | 161 | 59 | 77 | -  | 74 | 64 (Max. 73) |
| AVL5000-06 to 10-DZM | 3/4 & 1   | 128 | -    | 161 | 59 | 77 | 34 | 74 | 64 (Max. 73) |



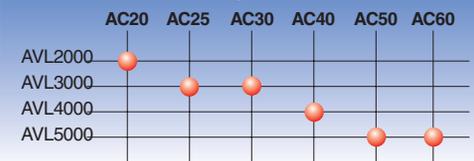
### Specifications

| Model                          | AV2000                                   | AV3000  | AV4000                               | AV5000      |             |  |  |
|--------------------------------|--|---|--------------------------------------|-------------|-------------|--|--|
| Port size                      | 1/4                                      | 3/8   | 1/2                                  | 3/4         | 1           |  |  |
| Proof pressure                 | 225psi (1.5MPa)                          |   |                                      |             |             |  |  |
| Operating pressure range       | 30 to 150psi (0.2 to 1MPa)               |   |                                      |             |             |  |  |
| Ambient and fluid temperature  | 32 to 140°F (0 to 60°C)                  |   |                                      |             |             |  |  |
| Effective area (mm²)           | 1(P) to 2(A)                             | 20  | 37                                   | 61          | 113         |  |  |
|                                | 2(A) to 3(R)                             | 24  | 49                                   | 76          | 132         |  |  |
| Weight manual/solenoid (Kg/lb) | 0.64 (1.14)                              | 0.74 (1.63)                                       | 1.00 (2.21)                          | 1.90 (4.19) | 1.84 (4.06) |  |  |
| Weight manual (Kg/lb)          | 0.52 (1.15)                              | 0.62 (1.37)                                       | 0.88 (1.94)                          | 1.78 (3.93) | 1.72 (3.79) |  |  |
| Electrical specification       | Rated coil voltage                       | 100, 200, 110 to 120, 220VAC (50/60Hz), 12, 24VDC |                                      |             |             |  |  |
|                                | Allowable voltage fluctuation            | -15% to +10% of rated voltage                     |                                      |             |             |  |  |
|                                | Coil insulation type                     | Equivalent to B type [266°F (130°C)]              |                                      |             |             |  |  |
|                                | Current consumption AC                   | Inrush  | 5.6V (50Hz), 5.0VA (60Hz)            |             |             |  |  |
|                                |  | Energized   | 3.4VA (2.1W) 50Hz, 2.3VA (1.5W) 60Hz |             |             |  |  |
| Current consumption DC         | 1.8W                                     |   |                                      |             |             |  |  |
| Electric entry                 | Type D DIN Terminal, M12 connector       |   |                                      |             |             |  |  |
| Optional specification         | Indicator light/Surge voltage suppressor |   |                                      |             |             |  |  |

### Piston B Switching Pressure (Close to Open)



### Combination with a modular style FRL is possible.



### Dimension AC20\* to AC60\*

(mm)

| Model | A1   | A2  | A3    |
|-------|------|-----|-------|
| AC20* | 41.5 | 43  | 67.5  |
| AC25* | 55   | 57  | 78    |
| AC30* | 55   | 57  | 78    |
| AC40* | 72.5 | 75  | 100.5 |
| AC50* | 93   | 96  | 131   |
| AC55* | 98   | 96  | 131   |
| AC60* | 98   | 101 | 131   |

