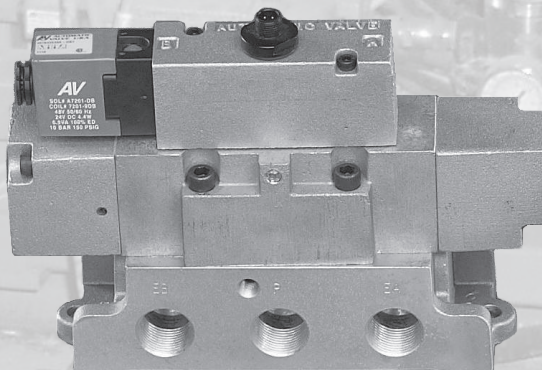
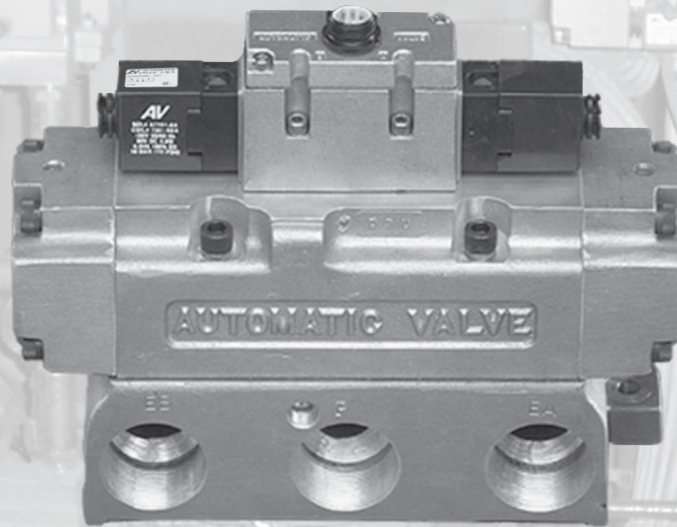
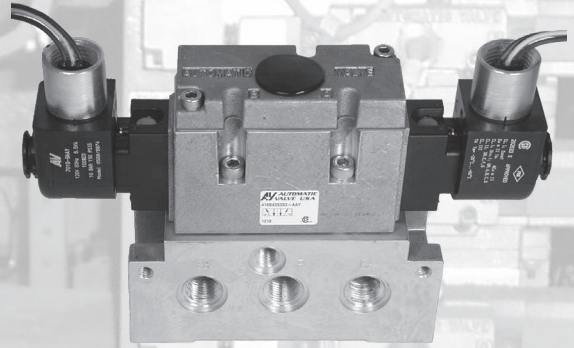


ISO 9001 **AV** *AUTOMATIC VALVE*



World Class Pneumatic Solutions

AV AUTOMATIC VALVE



SAE Spool Valves

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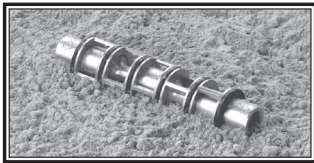
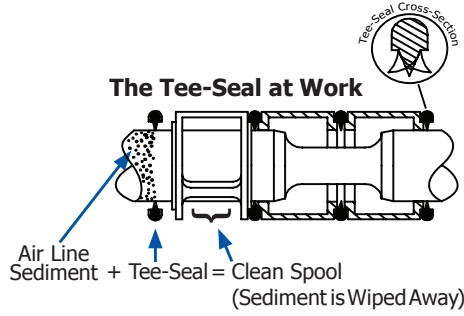
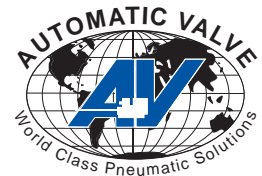
5/2



5/3



SAE Spool Valves Design Features



Valves

- Conforms to SAE J2051 specifications for series 125, 250 and 1000.
- Flow Range of 2 to 20 Cv.
- Complete range of bases and operators available.
- Do you have specific application needs? Consult the factory. We will build it for you.

Tapered Tee-Seal..... Eats Dirt

- Bidirectional tapered Tee-Seal eliminates sticking problems.
 - Flexes to clean spool
 - Mechanically Locked
 - No Spiral Twist
 - No Extrusion
 - Air Line Sediment is Wiped Away.
- Tested tough and proven reliable according to SAE specifications: Rust and water injected every 864,000 cycles for 20 million cycles.

Solenoid ... Guaranteed Against Burnout

- Three-way pilot uses full air line pressure to shift the valve.
- Pilot is internally supplied when the pressure at port one is 35 to 150 PSIG (240 to 1030 kPa).
- Coil is hermetically sealed as an integral watertight molded unit.
- Intrinsically-safe and explosion-proof versions available.
- Push Non-Locking Override is standard.

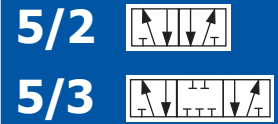
Products Certified To:

- CSA - (C22.2 and UL STD 429)
- Factory Mutual - Explosion Proof Environments
- ATEX - Explosion Proof Environments
- CE - EMF and Low Voltage Directives

F Configuration: Valve to Base

| Description | Configuration | Model Number Prefix | Available Series |
|--|---------------|---------------------|--------------------------------------|
| Valve Only | | = 407 | A04 (125) A06 (250) A20 (1000) |
| Valve + Sub-Base | | = 409 | A04 (125) A06 (250) A20 (1000) |
| Valve + Manifold (Bottom Cylinder Ports) | | = 413 | A04 (125) A06 (250) |
| Valve + Manifold (Bottom/Side Cylinder Ports) | | = 416 | A04 (125) A06 (250) |

SAE Spool Valves Specs & Model Numbers



Specifications

| Valve Operation | | Valve Operation | |
|--|---------------------------------|---|--|
| <p>A04 A06 A20</p> | | <p>5/3 BLOCK Maintained Energized 12: Pressure from Port 1 to Port 2 Exhaust from Port 4 to Port 5 De-Energized: All ports Blocked Maintained Energized 14: Pressure from Port 1 to Port 4 Exhaust from Port 2 to Port 3</p> | |
| <p>5/2 SINGLE De-Energized: Pressure from Port 1 to Port 2 Exhaust from Port 4 to Port 5 Energized: Pressure from Port 1 to Port 4 Exhaust from Port 2 to Port 3</p> | | <p>5/3 EXHAUST Maintained Energized 12: Pressure from Port 1 to Port 2 Exhaust from Port 4 to Port 5 De-Energized: Port 2 open to Port 3, Port 4 open to Port 5 Port 1 Blocked Maintained Energized 14: Pressure from Port 1 to Port 4 Exhaust from Port 2 to Port 3</p> | |
| <p>5/2 DOUBLE Momentarily Energized 12: Pressure from Port 1 to Port 2 Exhaust from Port 4 to Port 5 Momentarily Energized 14: Pressure from Port 1 to Port 4 Exhaust from Port 2 to Port 3</p> | | <p>5/3 PRESSURE Maintained Energized 12: Pressure from Port 1 to Port 2 Exhaust from Port 4 to Port 5 De-Energized: Port 1 open to Ports 2 & 4; Ports 3 & 5 Blocked Maintained Energized 14: Pressure from Port 1 to Port 4 Exhaust from Port 2 to Port 3</p> | |
| Operating Temperatures | Solenoid Pilot Operated | Treated Buna-N Seals (Treated NBR, Standard) | Fluoroelastomer Seals (FPM (FKM), Option A) |
| | Standard | -18°C to +50°C (0°F to +123°F) | -18°C to +50°C (0°F to +123°F) |
| | Operating Pressures | Solenoid Pilot Operated | Inlet Port |
| Standard 2 Position | Standard 3 Position | External Pilot (Option B) | |
| | Standard 2 Position | 240 - 1030 kPa (35 - 150 PSIG) | - |
| | Standard 3 Position | 345 - 1030 kPa (50 - 150PSIG) | - |
| | External Pilot (Option B) | Vacuum - 240 kPa (Vacuum - 35 PSIG) | 240 - 1030 kPa (35 - 150 PSIG) |
| Filtration & Lubrication | Media - Air Or Inert Gas | | |
| Air Line Lubrication of Automatic Valve products is not required, but is recommended to maximize service life. Oils should be compatible with seal material, have an ISO 32 viscosity, and have an aniline range between 82°C (180°F) and 99°C (210°F). Filter to 50 microns or better. For temperatures below 40°F, air must be dry to prevent formation of ice. Refer to the Maintenance section of this catalog for recommended lubricants. | | | |

F

Model Numbers

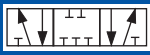
| Series | Body Type | Function | Series | | Operator 1 | Center Operator | Operator 2 | Voltage ¹ | Options* |
|-------------------|--|-----------------------------|--------|-----------|---------------------------|--|--------------------------------|--------------------------------|-------------------------------------|
| | | | # | Port Size | | | | | |
| A04 (125) | 407 Valve Only | B 4 Way 2 Position | 43 | - | S3 Weather-Proof Solenoid | 9D 3 Position Spring Center (Solenoid & Air Pilot) | S3 Weather-Proof Solenoid | -AA 110/50, 120/60 | A Fluoroelastomer Seals (A04 & A06) |
| | 409 Valve with Sub-Base | C 4 Way 3 Position Block | 42 | 1/4 | 1A Air Pilot | | 1A Air Pilot | -AB 220/50, 240/60, 125VDC | B External Pilot Connection |
| | 413 Valve with Manifold (Bottom Cylinder Ports) | D 4 Way 3 Position Exhaust | 43 | 3/8 | 3B Hand Lever (A04 & A06) | | 1C 2 Position Air Return (A06) | -DA 22/50, 24/60, 12VDC | D Dustproof |
| | 416 Valve with Manifold (Bottom-Side Cylinder Ports) | E 4 Way 3 Position Pressure | 67 | - | | | 7A 2 Position Detent | -DB 24VDC | Y Explosion-Proof Coil (CSA,FM) |
| A06 (250) | 407 Valve Only | | 65 | 1/2 | | 7B 3 Position Detent | -DE 125VDC (Y coil) | 0 GM - 5 Pin Micro | |
| | 409 Valve with Sub-Base | | 67 | 3/4 | | 9A 2 Position Spring Return | | 1 Ford - 5 Pin Micro | |
| | | | 60 | 1 | | 9B 3 Position Spring Center (For Manual Operators) | | 2 Chrysler - 5 Pin Micro AC/DC | |
| | 413 Valve with Manifold (Bottom Cylinder Ports) | | 65 | 1/2 | | | | 3 GM - 5 Pin Mini | |
| | 416 Valve with Manifold (Bottom-Side Cylinder Ports) | | 67 | 3/4 | | | | 4 Ford - 5 Pin Mini | |
| A20 (1000) | 407 Valve Only | | 12 | - | | | | 5 Chrysler - 5 Pin Mini | |
| | 409 Valve with Sub-Base | | 12 | 1 1/4 | | | | 6 GM - 4 Pin Micro DC | |
| | | | 15 | 1 1/2 | | | | 7 Ford - 4 Pin Micro DC | |

* Not all Options are available for all models. Refer to "Options" at the end of this Section for additional information.
¹ Consult the Factory for additional voltages.

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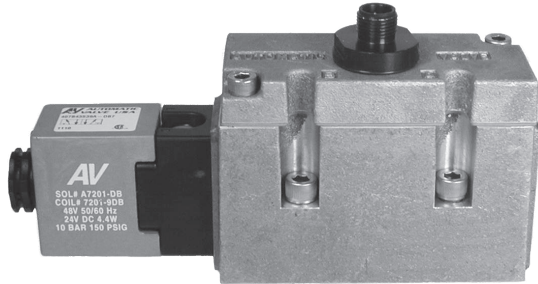
5/3



SAE Spool Valves Standard Solenoid

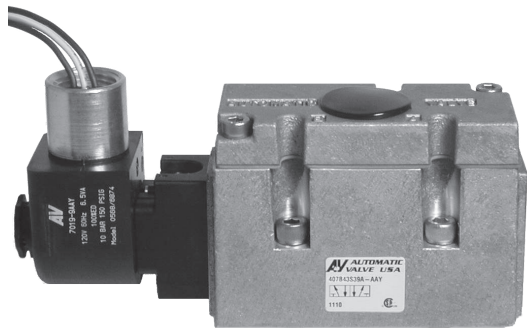


A04 (125 Series) - Single Weather-Proof (W-P)



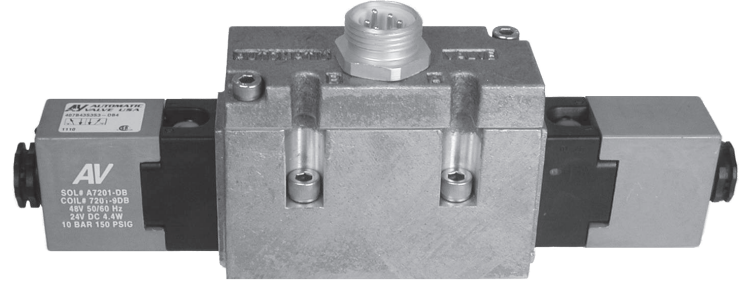
407B43S39A-DB7

Explosion-Proof



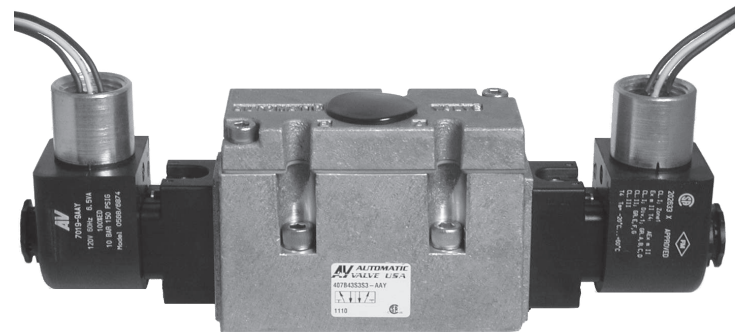
407B43S39A-AAV

A04 (125 Series) - Double Weather-Proof (W-P)



407B43S3S3-DB4

Explosion-Proof



407B43S3S3-AAV

Model Numbers

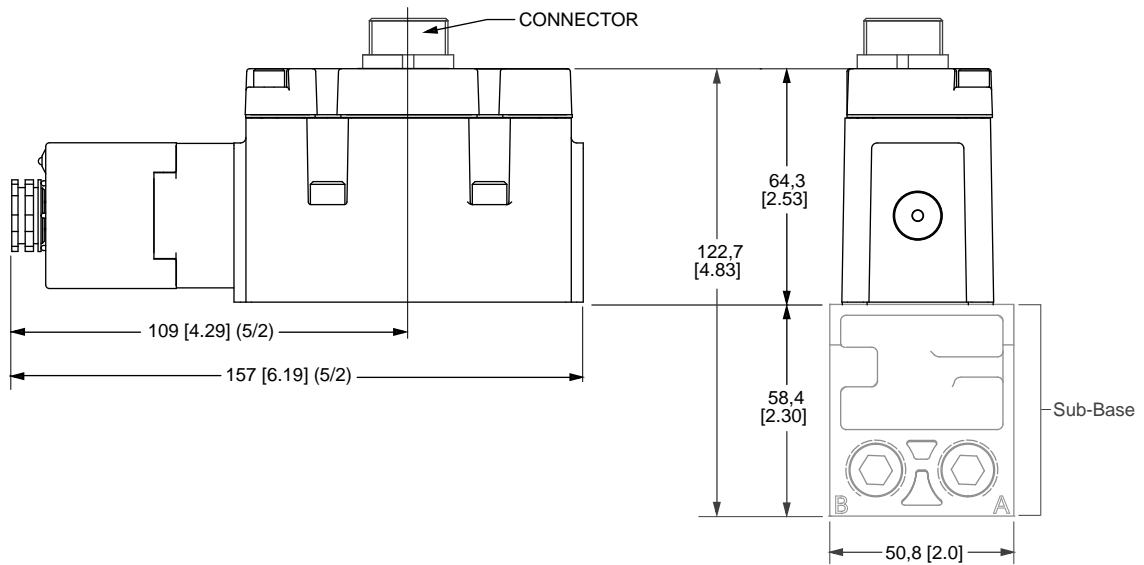
| Body Type | Port Loc'n | Port Size | Flow l/min (Cv) | Operator ¹ | 5/2 | | 5/3 | | | Materials | Weight kg (lb) |
|---|------------|-----------|-----------------|-----------------------|----------------|----------------|------------------|------------------|------------------|---------------|-------------------|
| | | | | | Single | Double | Block | Exhaust | Pressure | | |
| | | | | | | | | | | | |
| Valve Only | - | - | 1841(1.9) | W-P | 407B43S39A-** | 407B43S3S3-** | 407C43S39DS3-** | 407D43S39DS3-** | 407E43S39DS3-** | Seal =NBR | 2,0 (4.5) |
| | | | | E-P | 407B43S39A-**Y | 407B43S3S3-**Y | 407C43S39DS3-**Y | 407D43S39DS3-**Y | 407E43S39DS3-**Y | | |
| Valve + Sub-Base | 1/4 | 5/3 | 2360(2.4) | W-P | 409B42S39A-** | 409B42S3S3-** | 409C42S39DS3-** | 409D42S39DS3-** | 409E42S39DS3-** | Body=Aluminum | 2,4 (5.4) |
| | | | | E-P | 409B42S39A-**Y | 409B42S3S3-**Y | 409C42S39DS3-**Y | 409D42S39DS3-**Y | 409E42S39DS3-**Y | | |
| Valve + Manifold (Bottom Cyl Ports) | 3/8 | 5/2 | 2360(2.4) | W-P | 413B43S39A-** | 413B43S3S3-** | 413C43S39DS3-** | 413D43S39DS3-** | 413E43S39DS3-** | Body=Aluminum | 2,5 (5.5) |
| | | | | E-P | 413B43S39A-**Y | 413B43S3S3-**Y | 413C43S39DS3-**Y | 413D43S39DS3-**Y | 413E43S39DS3-**Y | | |
| Valve + Manifold (Bottom/Side Cyl Ports) | 3/8 | 5/2 | 2360(2.4) | W-P | 416B43S39A-** | 416B43S3S3-** | 416C43S39DS3-** | 416D43S39DS3-** | 416E43S39DS3-** | Body=Aluminum | 2,7 (5.9) |
| | | | | E-P | 416B43S39A-**Y | 416B43S3S3-**Y | 416C43S39DS3-**Y | 416D43S39DS3-**Y | 416E43S39DS3-**Y | | |

** = Coil Voltage Code. Coils also sold separately. Refer to "Electrical Information" at the end of this Section for additional information.

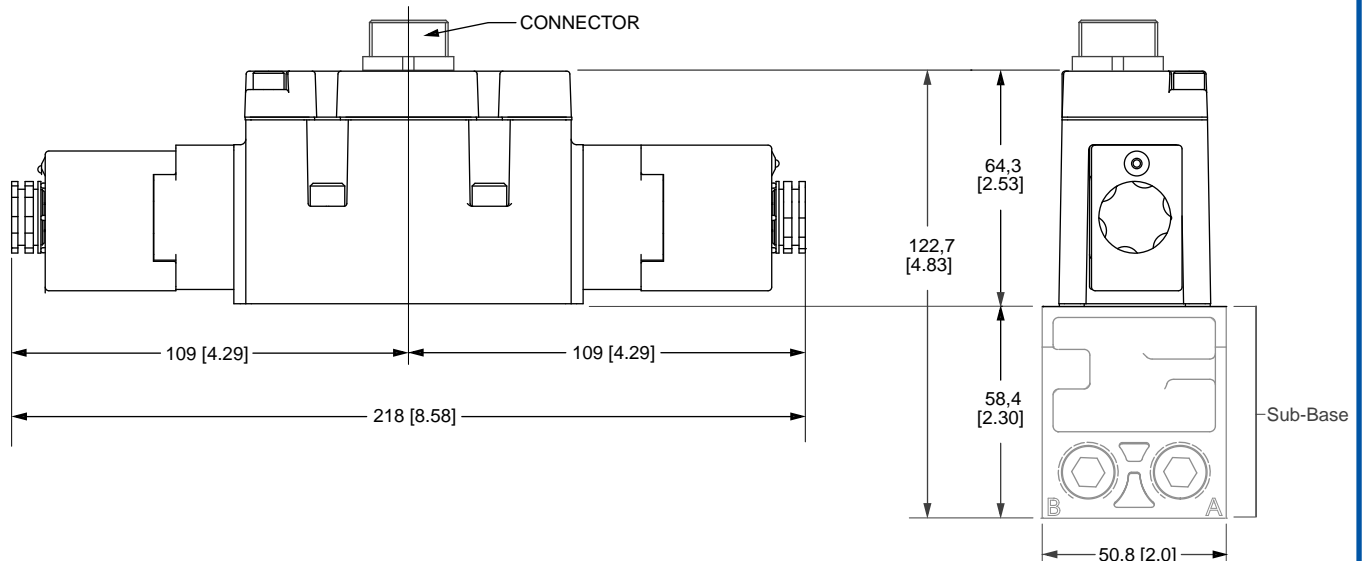
¹ W-P = Weather-Proof; E-P = Explosion-Proof

Dimensional Information

A04 (125 Series) - Single



A04 (125 Series) - Double

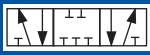


Units of Measure: Top - mm, Bottom - inches

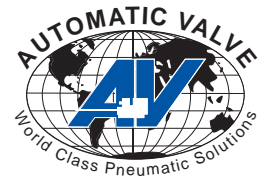
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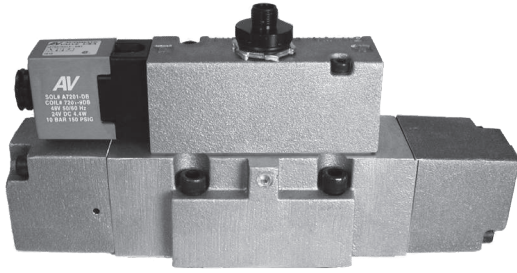
5/3



SAE Spool Valves Standard Solenoid

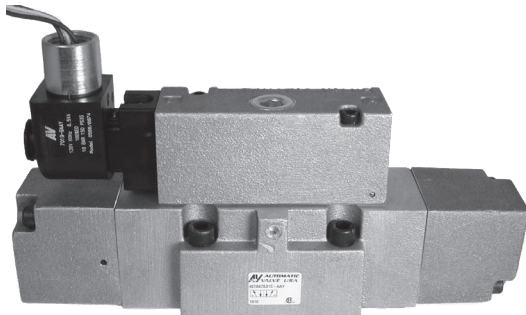


A06 (250 Series) - Single Weather-Proof (W-P)



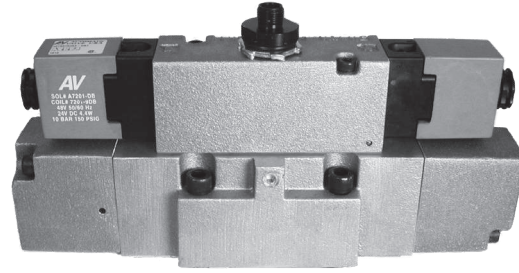
407B67S31C-DB7

Explosion-Proof



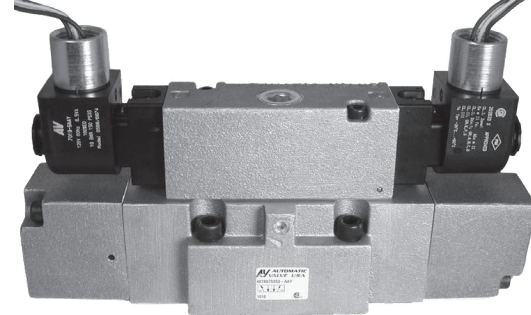
407B67S39A-AAV

A06 (250 Series) - Double Weather-Proof (W-P)



407B67S3S3-DB7

Explosion-Proof



407B67S3S3-AAV

Model Numbers

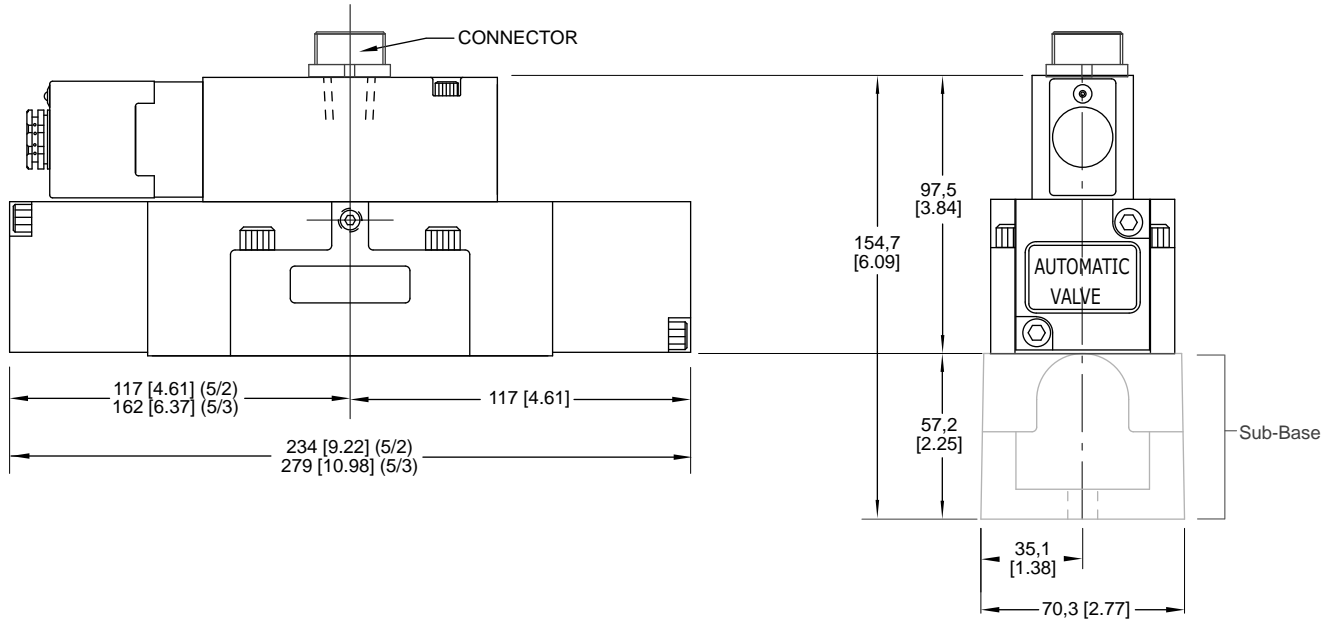
| Body Type | Port Loc'n | Port Size | Flow l/min (Cv) | Operator ¹ | 5/2 | | 5/3 | | | Materials | Weight kg (lb) |
|---|------------|-----------|----------------------|-----------------------|----------------|------------------|------------------|------------------|------------------|------------------------|-------------------|
| | | | | | Single | Double | Block | Exhaust | Pressure | | |
| | | | | | | | | | | | |
| Valve Only | - | - | 5/3 Flow: 6599 (6.7) | W-P | 407B67S39A-** | 407B67S3S3-** | 407C67S39DS3-** | 407D67S39DS3-** | 407E67S39DS3-** | Body=Aluminum Seal+NBR | 3,7 (8.3) |
| | | E-P | | 407B67S39A-**Y | 407B67S3S3-**Y | 407C67S39DS3-**Y | 407D67S39DS3-**Y | 407E67S39DS3-**Y | | | |
| Valve + Sub-Base | 1/2 | 3/4 | 5/3 Flow: 8460 (8.6) | W-P | 409B65S39A-** | 409B65S3S3-** | 409C65S39DS3-** | 409D65S39DS3-** | 409E65S39DS3-** | 5,0 (11.0) | |
| | | | | E-P | 409B65S39A-**Y | 409B65S3S3-**Y | 409C65S39DS3-**Y | 409D65S39DS3-**Y | 409E65S39DS3-**Y | | |
| | 1 | W-P | | 409B67S39A-** | 409B67S3S3-** | 409C67S39DS3-** | 409D67S39DS3-** | 409E67S39DS3-** | | | |
| | | E-P | | 409B67S39A-**Y | 409B67S3S3-**Y | 409C67S39DS3-**Y | 409D67S39DS3-**Y | 409E67S39DS3-**Y | | | |
| Valve + Manifold (Bottom Cyl Ports) | 1/2 | 3/4 | 5/2 Flow: 8460 (8.6) | W-P | 413B65S39A-** | 413B65S3S3-** | 413C65S39DS3-** | 413D65S39DS3-** | 413E65S39DS3-** | 5,0 (11.0) | |
| | | | | E-P | 413B65S39A-**Y | 413B65S3S3-**Y | 413C65S39DS3-**Y | 413D65S39DS3-**Y | 413E65S39DS3-**Y | | |
| | 3/4 | W-P | | 413B67S39A-** | 413B67S3S3-** | 413C67S39DS3-** | 413D67S39DS3-** | 413E67S39DS3-** | | | |
| | | E-P | | 413B67S39A-**Y | 413B67S3S3-**Y | 413C67S39DS3-**Y | 413D67S39DS3-**Y | 413E67S39DS3-**Y | | | |
| Valve + Manifold (Bottom/Side Cyl Ports) | 1/2 | 3/4 | 5/2 Flow: 8460 (8.6) | W-P | 416B65S39A-** | 416B65S3S3-** | 416C65S39DS3-** | 416D65S39DS3-** | 416E65S39DS3-** | 4,5 (10.1) | |
| | | | | E-P | 416B65S39A-**Y | 416B65S3S3-**Y | 416C65S39DS3-**Y | 416D65S39DS3-**Y | 416E65S39DS3-**Y | | |
| | 3/4 | W-P | | 416B67S39A-** | 416B67S3S3-** | 416C67S39DS3-** | 416D67S39DS3-** | 416E67S39DS3-** | | | |
| | | E-P | | 416B67S39A-**Y | 416B67S3S3-**Y | 416C67S39DS3-**Y | 416D67S39DS3-**Y | 416E67S39DS3-**Y | | | |

** = Coil Voltage Code. Coils also sold separately. Refer to "Electrical Information" at the end of this Section for additional information.

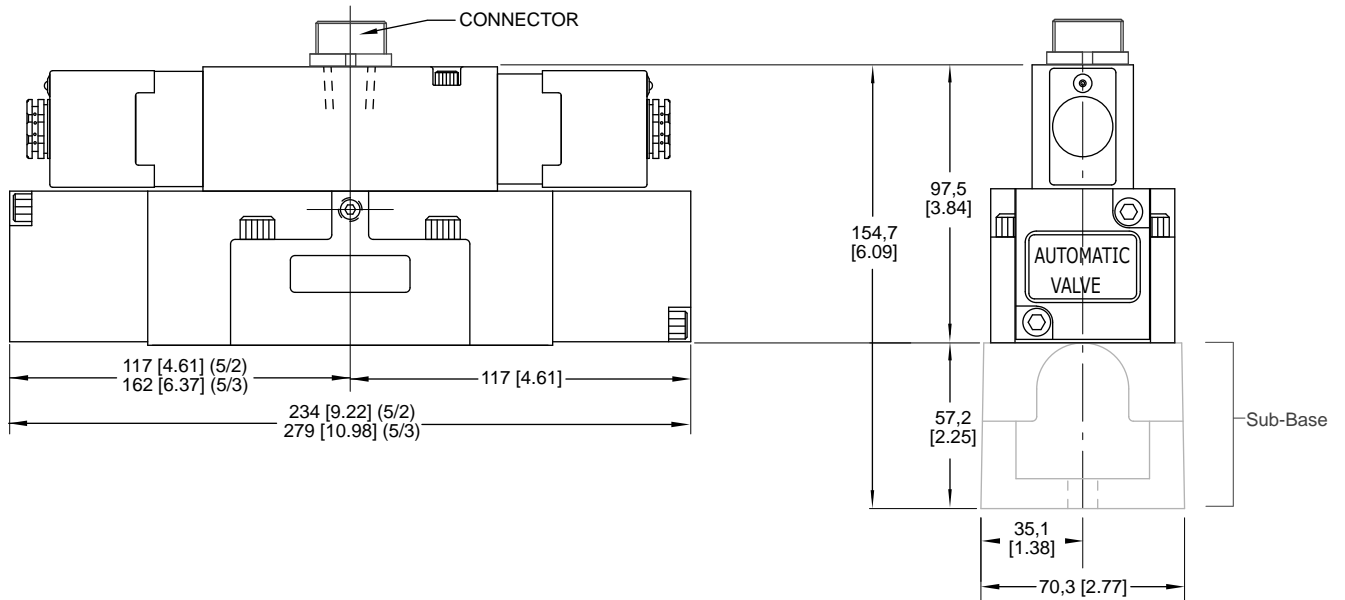
¹ W-P = Weather-Proof; E-P = Explosion-Proof

Dimensional Information

A06 (250 Series) - Single



A06 (250 Series) - Double

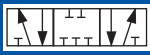


Units of Measure: Top - mm, Bottom - inches

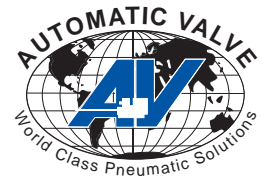
5/2



5/3

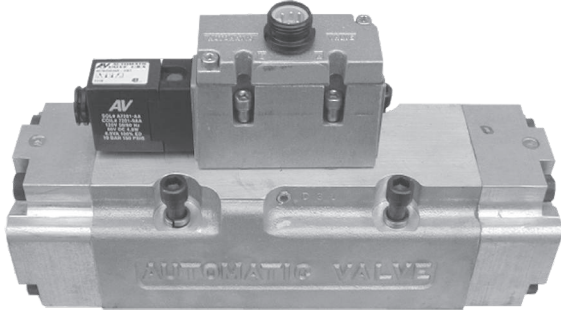


SAE Spool Valves Standard Solenoid



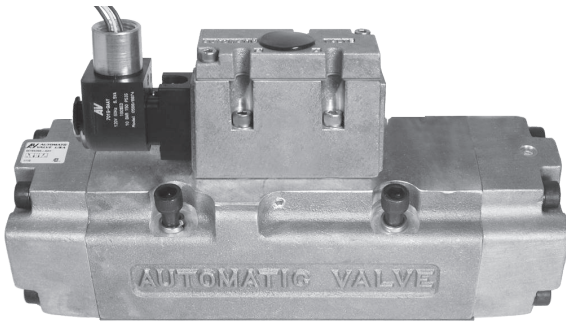
A20 (1000 Series) - Single

Weather-Proof (W-P)



407B12S39A-AA4

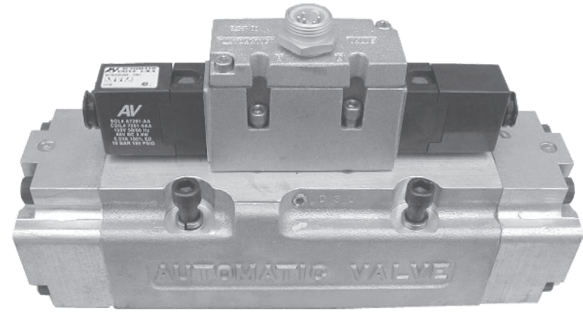
Explosion-Proof



407B12S39A-AA4

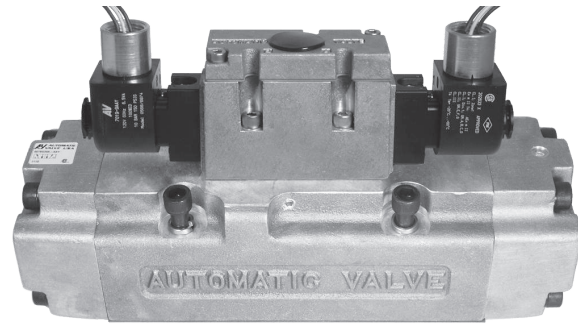
A20 (1000 Series) - Double

Weather-Proof (W-P)



407B12S3S3-AA4

Explosion-Proof



407B12S3S3-AA4

F

Model Numbers

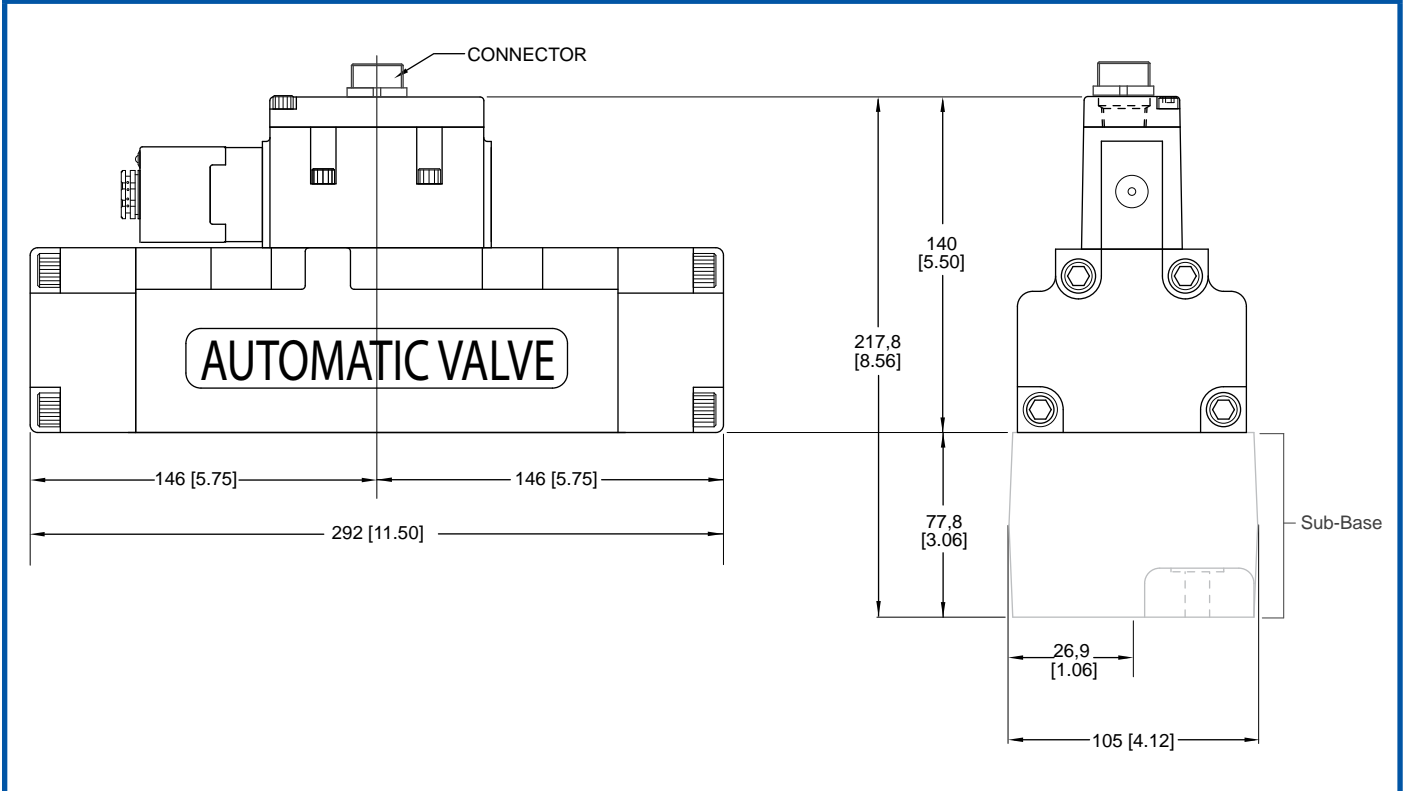
| Body Type | Port Loc'n | Port Size | Flow l/min (Cv) | Operator ¹ | 5/2 | | 5/3 | | | Materials | Weight kg (lb) |
|---------------------|------------|-----------|-------------------------|-----------------------|----------------|------------------|------------------|------------------|------------------|---------------|-------------------|
| | | | | | Single | Double | Block | Exhaust | Pressure | | |
| | | | | | | | | | | | |
| Valve Only | - | - | 5/2 Flow: 22,340 (17.7) | W-P | 407B12S39A-** | 407B12S3S3-** | 407C12S39DS3-** | 407D12S39DS3-** | 407E12S39DS3-** | Seal+NBR | 8,7 (19.4) |
| | | | | E-P | 407B12S39A-**Y | 407B12S3S3-**Y | 407C12S39DS3-**Y | 407D12S39DS3-**Y | 407E12S39DS3-**Y | | |
| Valve + Sub-Base | Base | 1 | 5/3 Flow: 22,340 (22.7) | W-P | 409B10S39A-** | 409B10S3S3-** | 409C10S39DS3-** | 409D10S39DS3-** | 409E10S39DS3-** | Body=Aluminum | 12,0 (26.7) |
| | | | | E-P | 409B10S39A-**Y | 409B10S3S3-**Y | 409C10S39DS3-**Y | 409D10S39DS3-**Y | 409E10S39DS3-**Y | | |
| | 11/4 | W-P | | 409B12S39A-** | 409B12S3S3-** | 409C12S39DS3-** | 409D12S39DS3-** | 409E12S39DS3-** | | | |
| | | E-P | | 409B12S39A-**Y | 409B12S3S3-**Y | 409C12S39DS3-**Y | 409D12S39DS3-**Y | 409E12S39DS3-**Y | | | |
| | 11/2 | W-P | | 409B15S39A-** | 409B15S3S3-** | 409C15S39DS3-** | 409D15S39DS3-** | 409E15S39DS3-** | | | |
| | | E-P | | 409B15S39A-**Y | 409B15S3S3-**Y | 409C15S39DS3-**Y | 409D15S39DS3-**Y | 409E15S39DS3-**Y | | | |

** = Coil Voltage Code. Coils also sold separately. Refer to "Electrical Information" at the end of this Section for additional information.

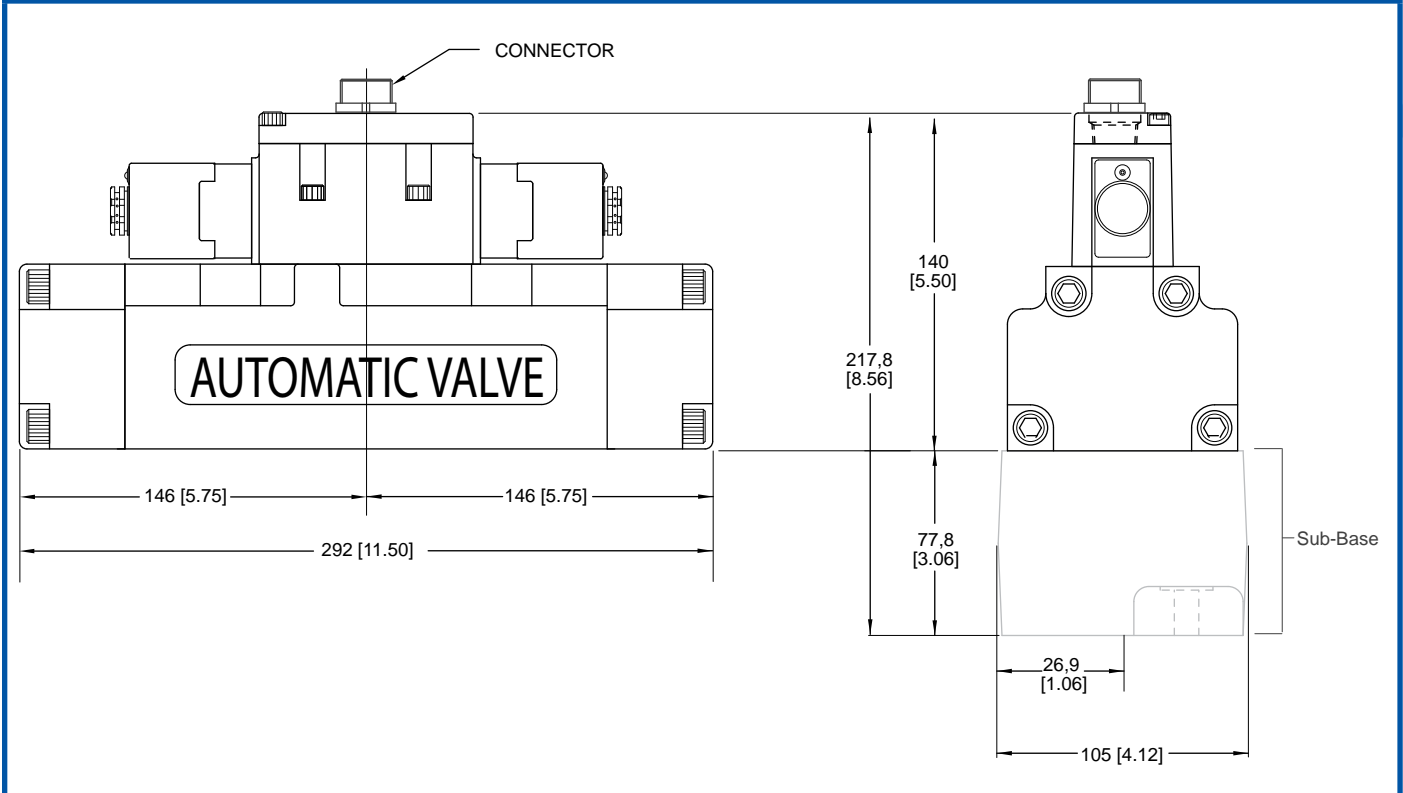
¹ W-P = Weather-Proof; E-P = Explosion-Proof

Dimensional Information

A20 (1000 Series) - Single



A20 (1000 Series) - Double



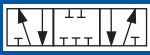
Units of Measure: Top - mm, Bottom - inches

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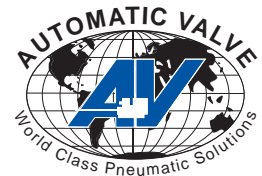
5/2



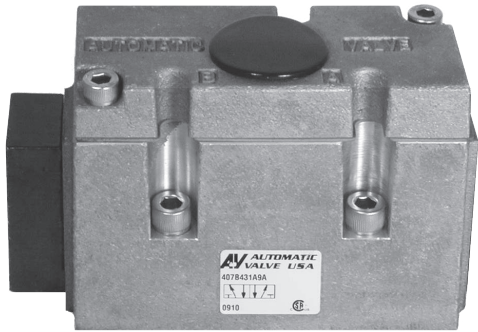
5/3



SAE Spool Valves Air Pilot

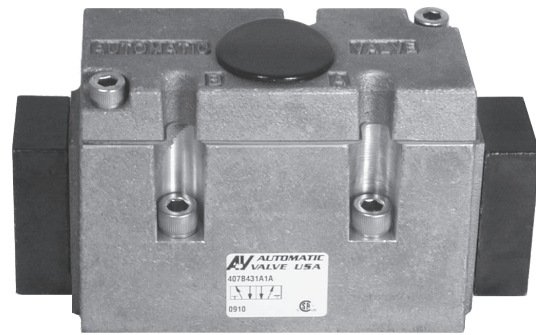


A04 (125 Series) - Single



407B431A9A

A04 (125 Series) - Double



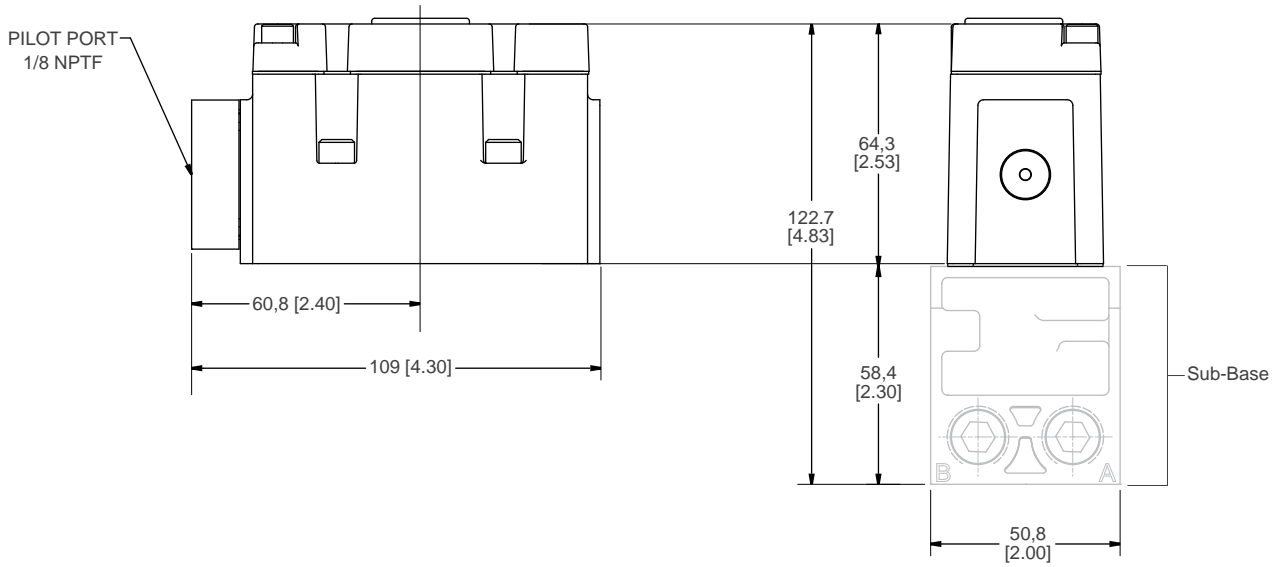
407B431A1A

Model Numbers

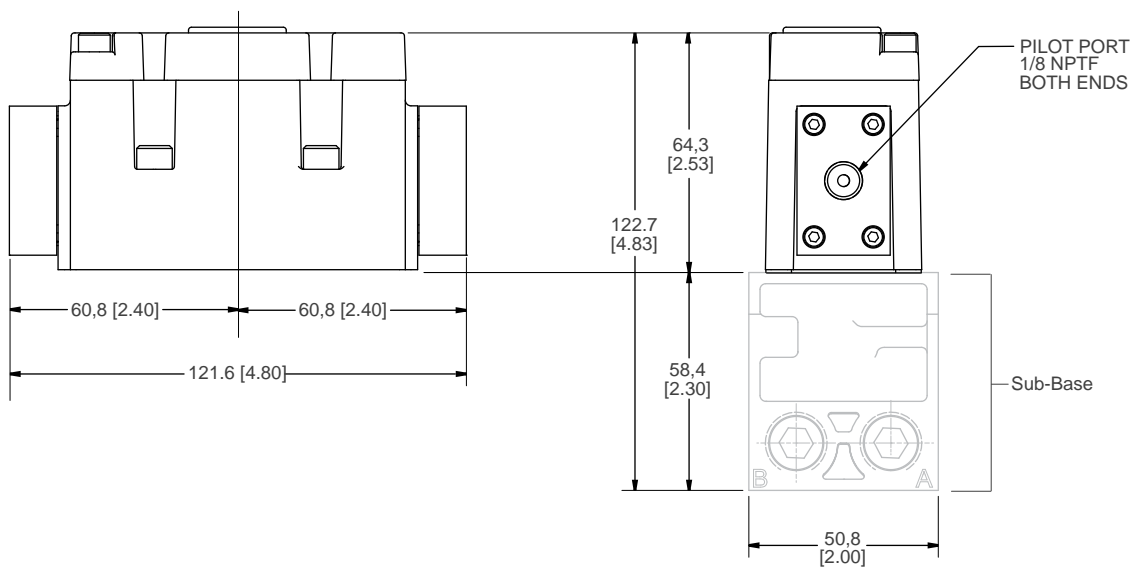
| Body Type | Port Loc'n | Port Size | Flow l/min (Cv) | 5/2 | | 5/3 | | | Materials | Weight (kg (lb)) |
|--|------------|-----------|----------------------|------------|------------|--------------|--------------|--------------|--------------------------|------------------|
| | | | | Single | Double | Block | Exhaust | Pressure | | |
| | | | | | | | | | | |
| Valve Only | - | - | 5/3 Flow: 1841 (1.9) | 407B431A9A | 407B431A1A | 407C431A9D1A | 407D431A9D1A | 407E431A9D1A | Body=Aluminum Seal = NBR | 1.0 (2.3) |
| Valve + Sub-Base | 1/4 | - | 5/3 Flow: 1841 (1.9) | 409B421A9A | 409B421A1A | 409C421A9D1A | 409D421A9D1A | 409E421A9D1A | | 1.4 (3.2) |
| Valve + Manifold (Bottom Cyl Ports) | 3/8 | - | 5/2 Flow: 2360 (2.4) | 413B431A9A | 413B431A1A | 413C431A9D1A | 413D431A9D1A | 413E431A9D1A | | 1.5 (3.3) |
| Valve + Manifold (Bottom/Side Cyl Ports) | 3/8 | - | 5/2 Flow: 2360 (2.4) | 416B431A9A | 416B431A1A | 416C431A9D1A | 416D431A9D1A | 416E431A9D1A | | 1.7 (3.7) |

Dimensional Information

A04 (125 Series) - Single



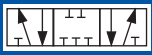
A04 (125 Series) - Double



5/2



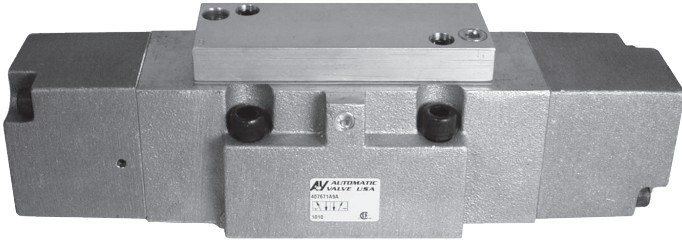
5/3



SAE Spool Valves Air Pilot

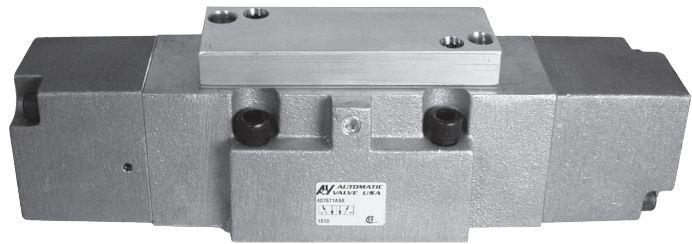


A06 (250 Series) - Single



407B671A9A

A06 (250 Series) - Double



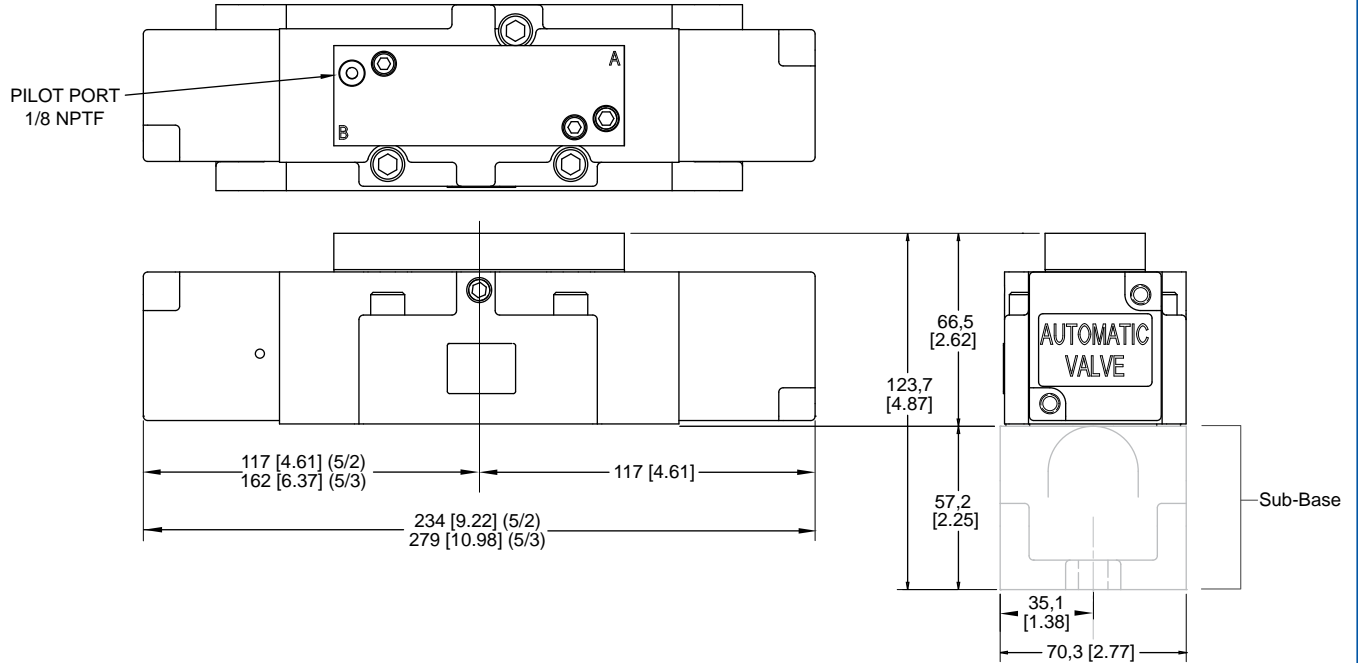
407B671A1A

Model Numbers

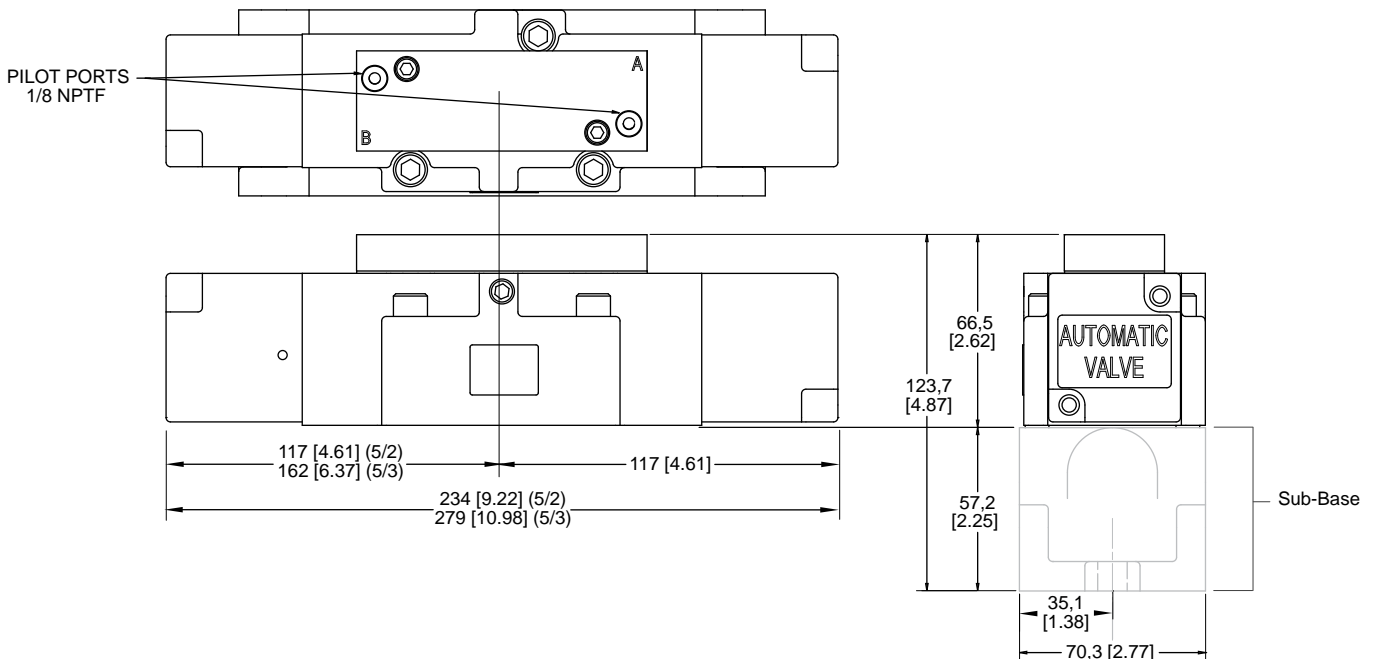
| Body Type | Port Loc'n | Port Size | Flow l/min (Cv) | 5/2 | | 5/3 | | | Materials | Weight Kg (lb) |
|--|------------|-----------|----------------------|----------------------|-------------------|---------------------|---------------------|---------------------|--------------------------|----------------|
| | | | | Single | Double | Block | Exhaust | Pressure | | |
| | | | | | | | | | | |
| Valve Only | | - | | 407B671A9A | 407B671A1A | 407C671A9D1A | 407D671A9D1A | 407E671A9D1A | Body=Aluminum Seal = NBR | 3,5 (7.8) |
| Valve + Sub-Base | Base | 1/2 | 5/3 Flow: 6599 (6.7) | 409B651A9A | 409B651A1A | 409C651A9D1A | 409D651A9D1A | 409E651A9D1A | | 4,7 (10.5) |
| | | 3/4 | | 409B671A9A | 409B671A1A | 409C671A9D1A | 409D671A9D1A | 409E671A9D1A | | |
| | | 1 | | 409B601A9A | 409B601A1A | 409C601A9D1A | 409D601A9D1A | 409E601A9D1A | | |
| Valve + Manifold (Bottom Cyl Ports) | Base | 1/2 | 5/2 Flow: 8460 (8.6) | 413B651A9A | 413B651A1A | 413C651A9D1A | 413D651A9D1A | 413E651A9D1A | 4,3 (9.6) | |
| | | 3/4 | | 413B671A9A | 413B671A1A | 413C671A9D1A | 413D671A9D1A | 413E671A9D1A | | |
| Valve + Manifold (Bottom/Side Cyl Ports) | Base | 1/2 | | 5/2 Flow: 8460 (8.6) | 416B651A9A | 416B651A1A | 416C651A9D1A | 416D651A9D1A | 416E651A9D1A | 4,3 (9.6) |
| | | 3/4 | 416B671A9A | | 416B671A1A | 416C671A9D1A | 416D671A9D1A | 416E671A9D1A | | |

Dimensional Information

A06 (250 Series) - Single



A06 (250 Series) - Double

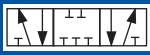


Units of Measure: Top - mm, Bottom - inches

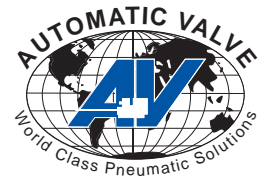
5/2



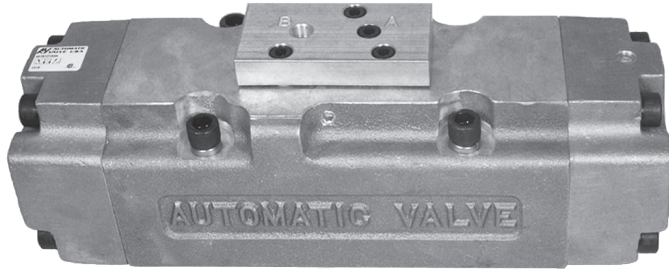
5/3



SAE Spool Valves Air Pilot

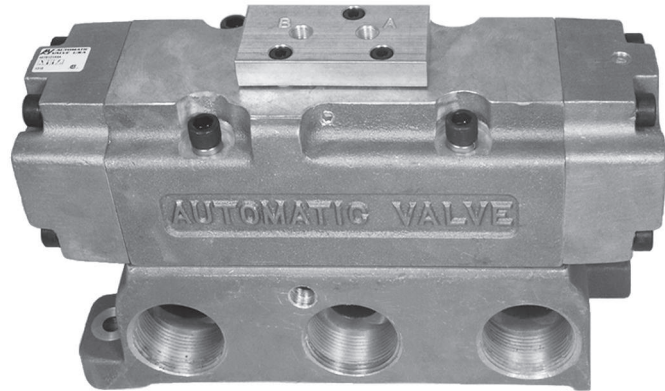


A20 (1000 Series) - Single



407B121A9A

A20 (1000 Series) - Double



409B151A1A

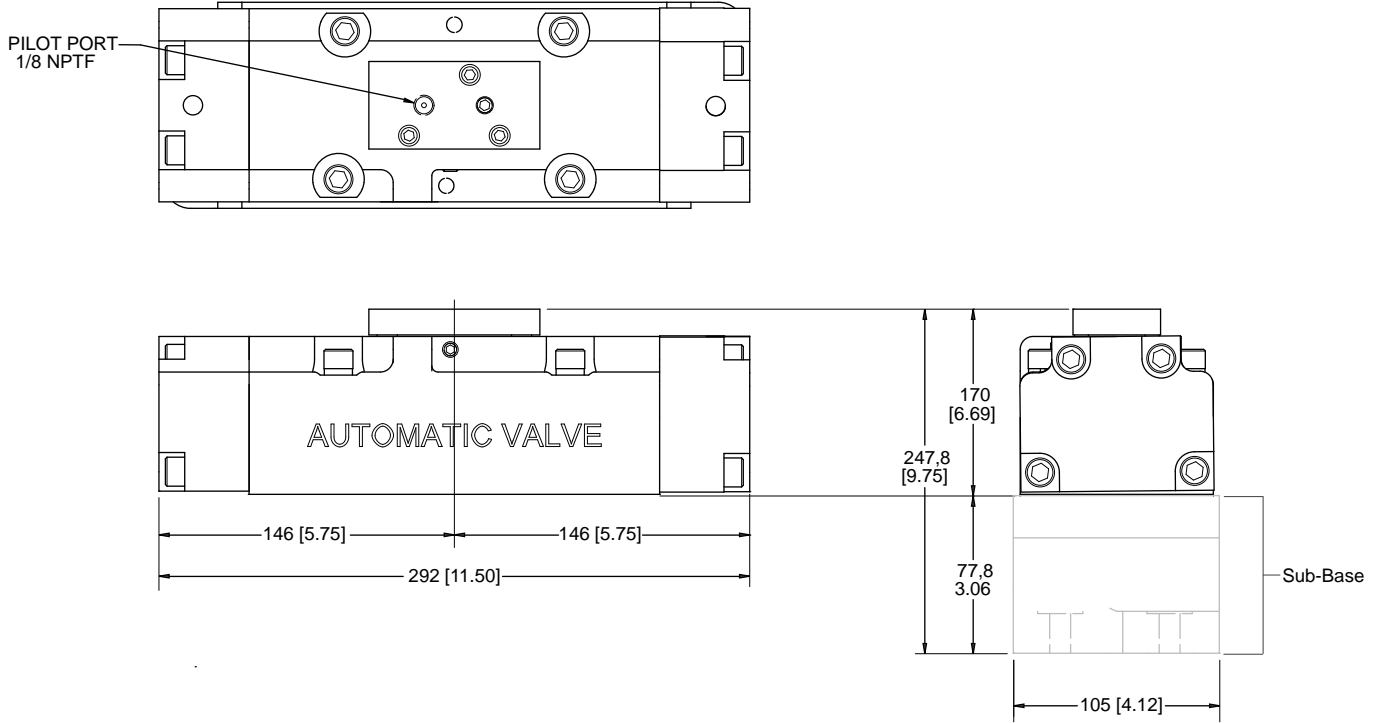
F

Model Numbers

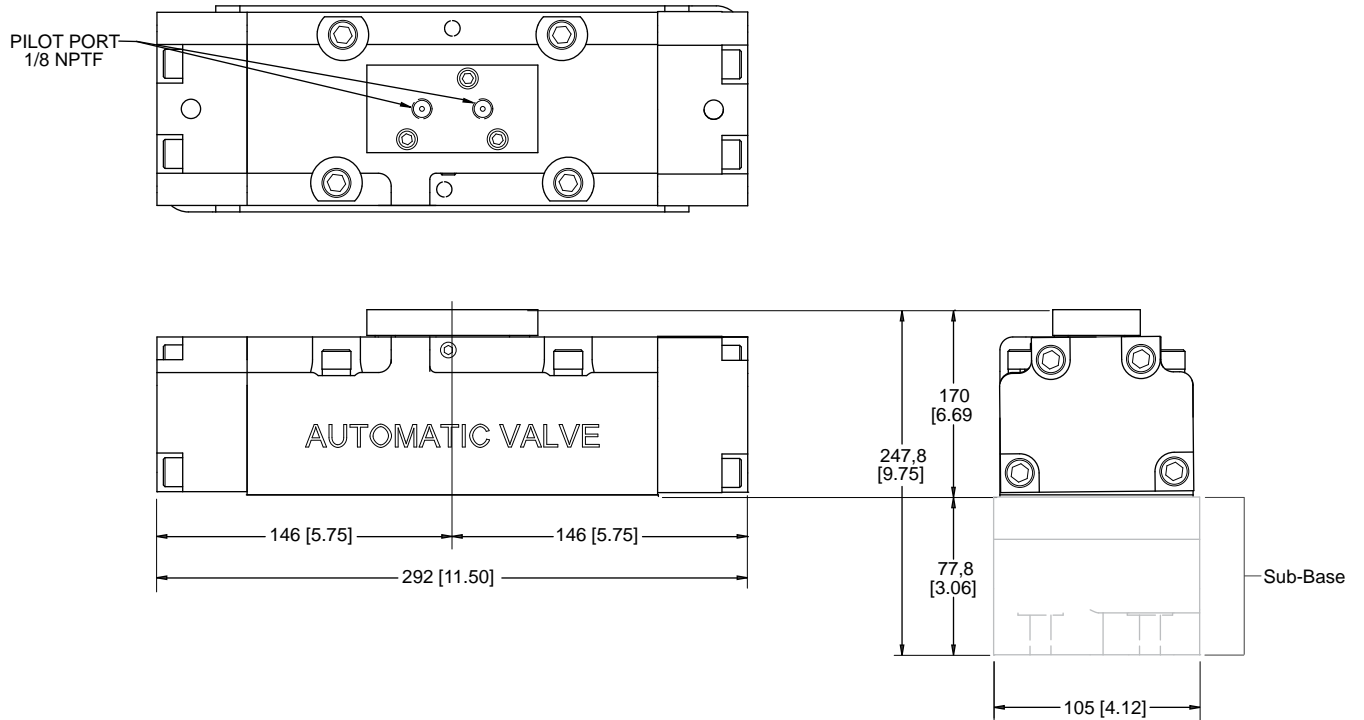
| Body Type | Port Loc'n | Port Size | Flow l/min (Cv) | 5/2 | | 5/3 | | | Materials | Weight Kg (lb) |
|------------------|------------|-----------|---|------------|------------|--------------|--------------|--------------|---------------------------|----------------|
| | | | | Single | Double | Block | Exhaust | Pressure | | |
| | | | | | | | | | | |
| Valve Only | | - | 5/2 Flow: 22,340 (22.7) 5/3: 17425 (17.7) | 407B121A9A | 407B121A1A | 407C121A9D1A | 407D121A9D1A | 407E121A9D1A | Seal+NBR Body=Aluminum | 8,0 (17.8) |
| Valve + Sub-Base | Base | 1 | | 409B101A9A | 409B101A1A | 409C101A9D1A | 409D101A9D1A | 409E101A9D1A | | 11,3 (25.1) |
| | | 1 1/4 | | 409B121A9A | 409B121A1A | 409C121A9D1A | 409D121A9D1A | 409E121A9D1A | | |
| | | 1 1/2 | | 409B151A9A | 409B151A1A | 409C151A9D1A | 409D151A9D1A | 409E151A9D1A | | |

Dimensional Information

A20 (1000 Series) - Single



A20 (1000 Series) - Double

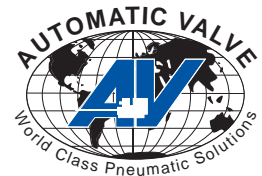


Units of Measure: Top - mm, Bottom - inches

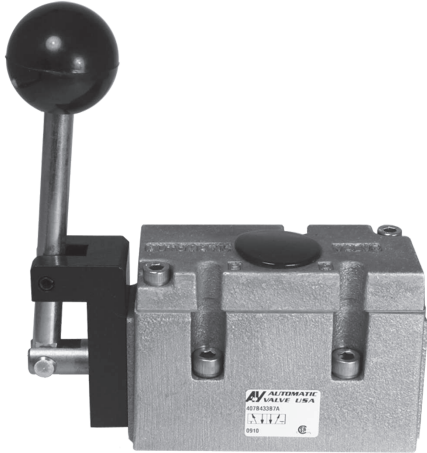
5/2



SAE Spool Valves Manual

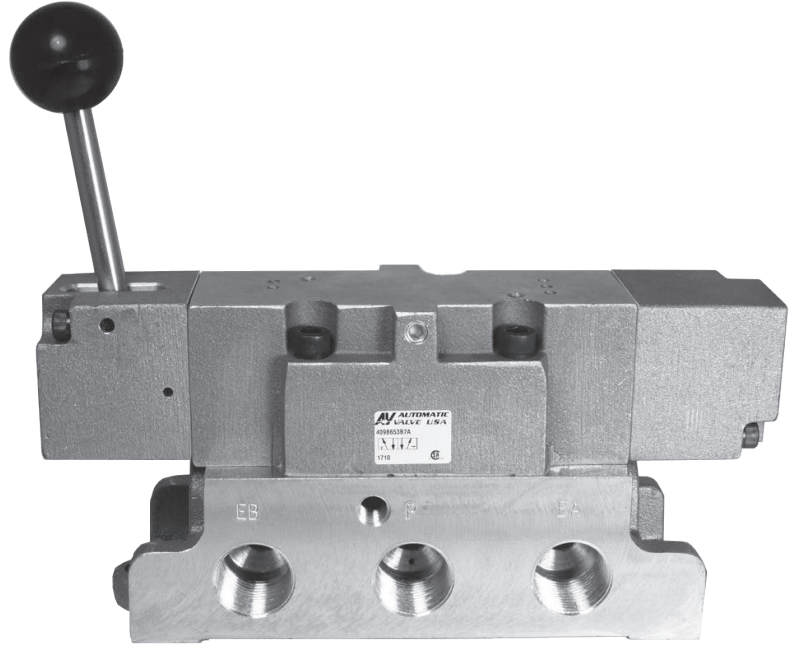


A04 (125 Series)



407B433B7A

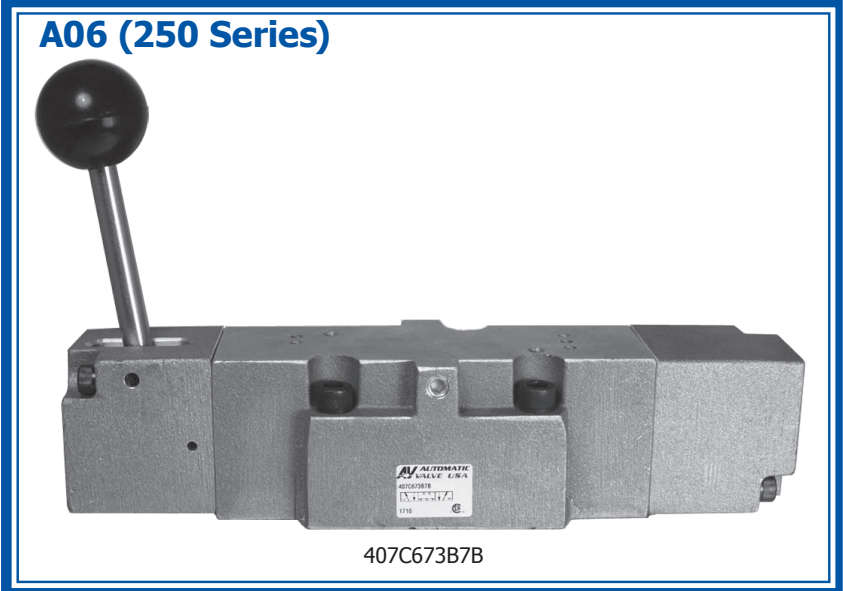
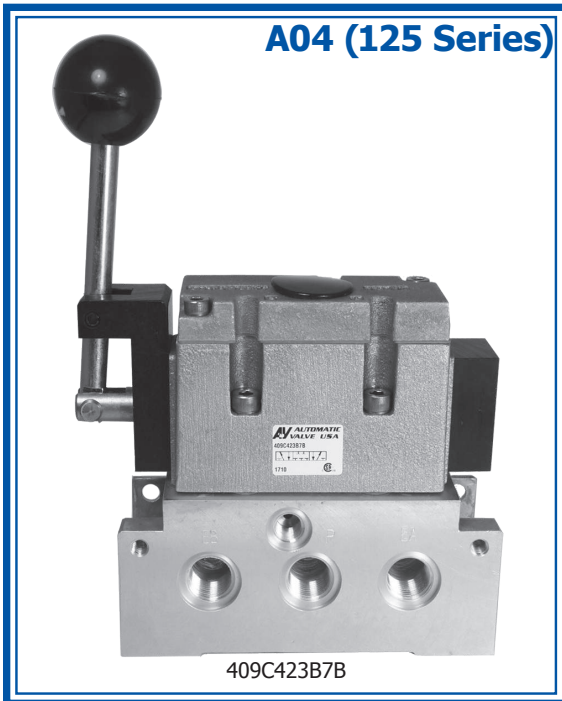
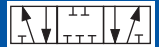
A06 (250 Series)



409B673B7A

Model Numbers

| | Body Type | Port Loc'n | Port Size | Flow (5/2) l/min (Cv) | Operator | 5/2 | | Material | | Wt Kg (lb) |
|------------------------|---|------------|-----------|-----------------------------|----------------------------|-------------------|-------------------|----------|------|------------------|
| | | | | | | Detented | Spring Return | Body | Seal | |
| | | | | | | | | | | |
| F A04 | Valve Only | Base | - | 2360 (2.4) | Hand Lever Line Mounted | 407B433B7A | 407B433B9A | Aluminum | NBR | 1,0 (2.3) |
| | Valve + Sub-Base | | 1/4 | | | 409B423B7A | 409B423B9A | | | 1,4 (3.2) |
| | Valve + Manifold (Bottom Cyl Ports) | | 3/8 | | | 413B433B7A | 413B433B9A | | | 1,5 (3.3) |
| | Valve + Manifold (Bottom/Side Cyl Ports) | | 3/8 | | | 416B433B7A | 416B433B9A | | | 1,7 (3.7) |
| A06 | Valve Only | Base | - | 8460 (8.6) | Hand Lever Line Mounted | 407B673B7A | 407B673B9A | Aluminum | NBR | 3,1 (6.9) |
| | Valve + Sub-Base | | 1/2 | | | 409B653B7A | 409B653B9A | | | 4,3 (9.6) |
| | | | 3/4 | | | 409B673B7A | 409B673B9A | | | |
| | | | 1 | | | 409B603B7A | 409B603B9A | | | |
| | Valve + Manifold (Bottom Cyl Ports) | | 1/2 | | | 413B653B7A | 413B653B9A | | | 3,9 (8.7) |
| | | | 3/4 | | | 413B673B7A | 413B673B9A | | | |



Model Numbers

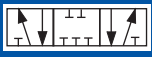
| Series | Body Type | Port Size | Flow 5/3 l/min (Cv) | Operator | 5/3 (4 Way 3 Position) | | | | | | Materials | Weight kg (lb) |
|------------|--|-----------|---------------------------|--------------------------|------------------------|------------|------------|---------------|------------|------------|-------------------------------|----------------|
| | | | | | Detented | | | Spring Center | | | | |
| | | | | | Block | Exhaust | Pressure | Block | Exhaust | Pressure | | |
| | | | | | | | | | | | | |
| A04 | Valve only | - | 2360 (2.4) | Hand Lever, Line Mounted | 407C433B7B | 407D433B7B | 407E433B7B | 407C433B9B | 407D433B9B | 407E433B9B | Body = Aluminum Seal = NBR | 1,0 (2.3) |
| | Valve + Sub-Base | 1/4 | | | 409C423B7B | 409D423B7B | 409E423B7B | 409C423B9B | 409D423B9B | 409E423B9B | | 1,4 (3.2) |
| | Valve + Manifold (Bottom Cyl Ports) | 3/8 | | | 413C433B7B | 413D433B7B | 413E433B7B | 413C433B9B | 413D433B9B | 413E433B9B | | 1,5 (3.3) |
| | Valve + Manifold (Bottom/Side Cyl Ports) | 3/8 | | | 416C433B7B | 416D433B7B | 416E433B7B | 416C433B9B | 416D433B9B | 416E433B9B | | 1,7 (3.7) |
| A06 | Valve Only | - | 8460 (8.6) | Hand Lever, Line Mounted | 407C673B7B | 407D673B7B | 407E673B7B | 407C673B9B | 407D673B9B | 407E673B9B | Body = Aluminum Seal = NBR | 3,1 (6.9) |
| | Valve + Sub-Base | 1/2 | | | 409C653B7B | 409D653B7B | 409E653B7B | 409C653B9B | 409D653B9B | 409E653B9B | | 4,3 (9.6) |
| | | 3/4 | | | 409C673B7B | 409D673B7B | 409E673B7B | 409C673B9B | 409D673B9B | 409E673B9B | | |
| | | 1 | | | 409C603B7B | 409D603B7B | 409E603B7B | 409C603B9B | 409D603B9B | 409E603B9B | | |
| | Valve + Manifold (Bottom Cyl Ports) | 1/2 | | | 413C653B7B | 413D653B7B | 413E653B7B | 413C653B9B | 413D653B9B | 413E653B9B | | 3,9 (8.7) |
| | | 3/4 | | | 413C673B7B | 413D673B7B | 413E673B7B | 413C673B9B | 413D673B9B | 413E673B9B | | |

F

5/2



5/3

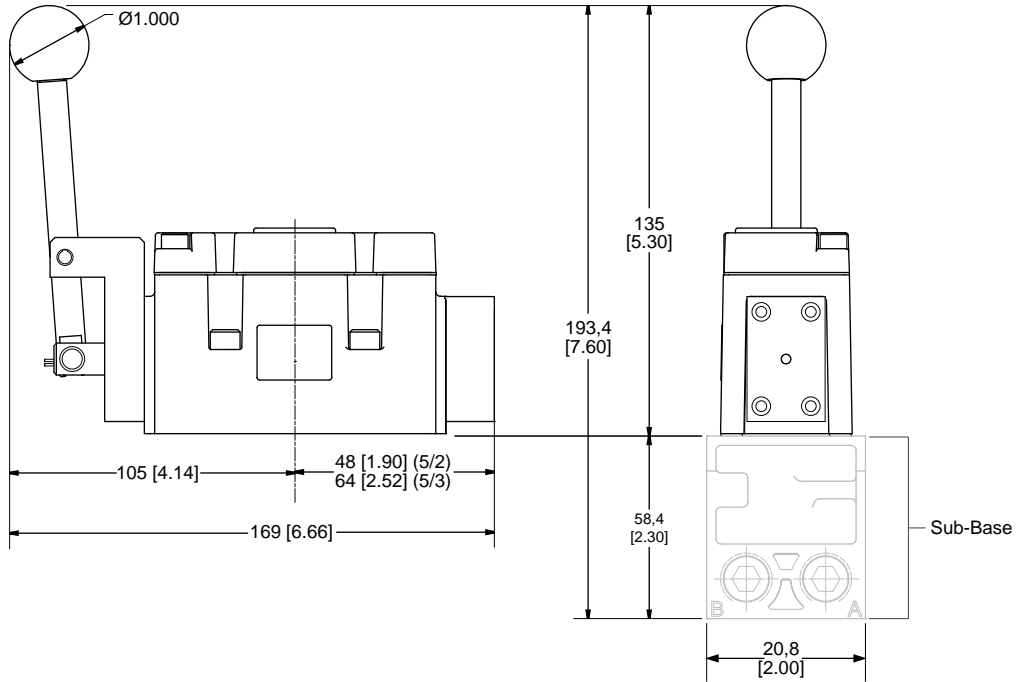


SAE Spool Valves Manual

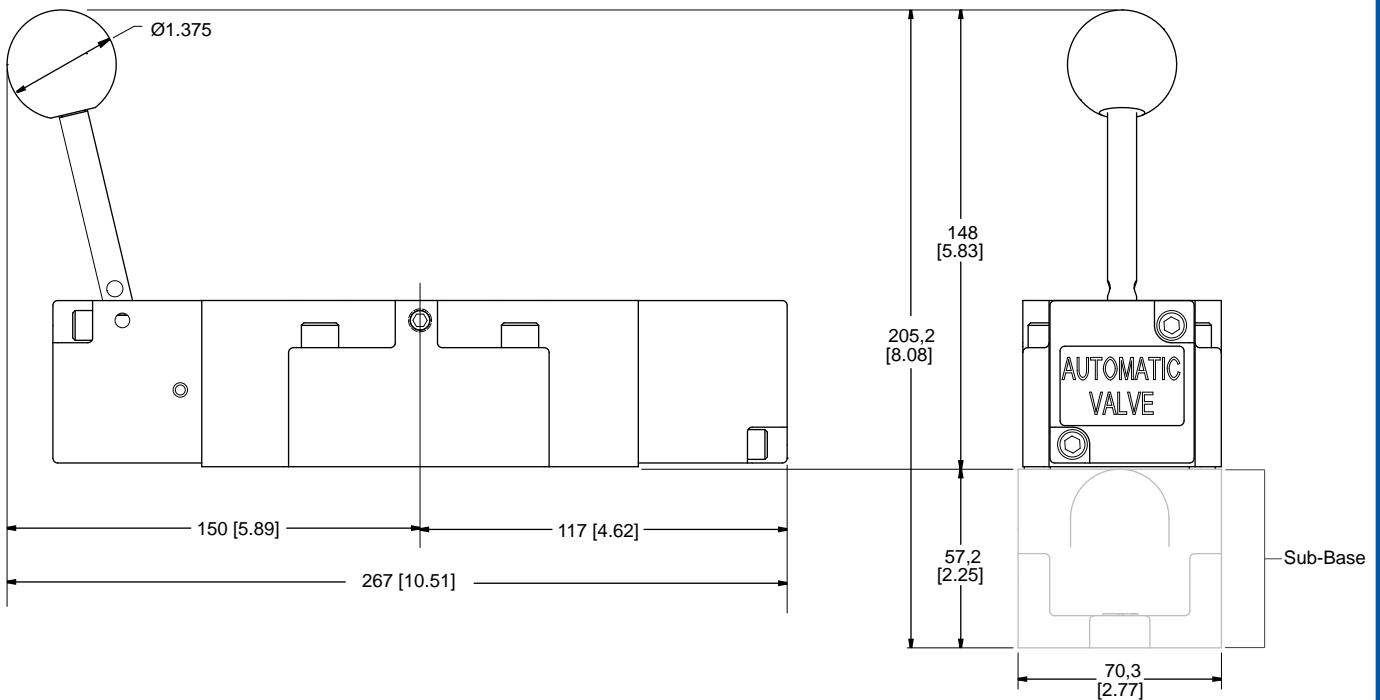


Dimensional Information

A04 (125 Series) Hand Lever



A06 (250 Series) Hand Lever



Units of Measure: Top - mm, Bottom - inches

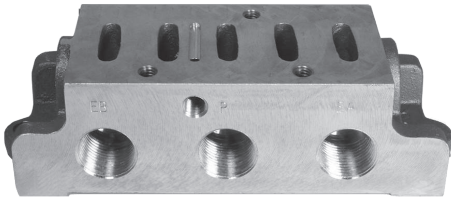
Sub-Bases (409)

A04



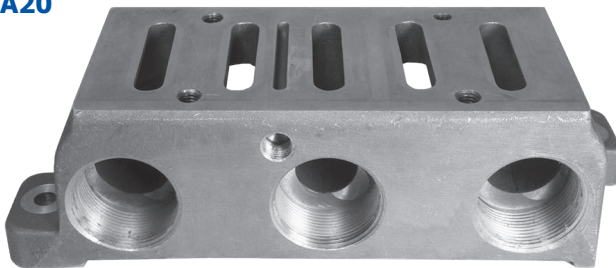
A6318-025

A06



A6331-075

A20



A5247-150

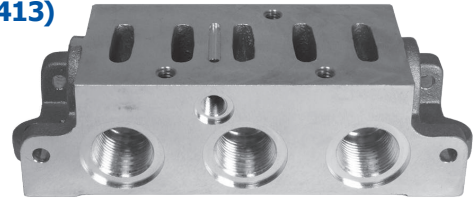
Manifolds (413 & 416)

A04



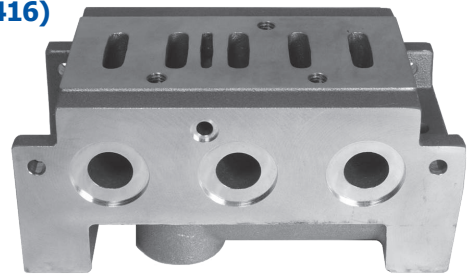
A6250-038 (413)
A6880-120 (416)

A06 (413)



A6265-075

A06 (416)



A6886-120

Model Numbers

| SAE AV Series | Automotive Series | 409 | | 413 | | | | 416 | | | | | | |
|---------------|-------------------|---------------------|---------------|---|-----------|----------------------|---------------|--|-------------------|-----------|----------------------|---------------|-----------------------------------|---------------|
| | | Individual Sub-Base | | Manifold ¹ Bottom Cylinder Ports | | Manifold Accessories | | Manifold ¹ Bottom/Side Cylinder Ports | | | Manifold Accessories | | | |
| | | 409 Model Numbers | Cyl Port Size | 413 Model Numbers | Port Size | | Blocking Disk | Blank Station Covers ² | 416 Model Numbers | Port Size | | Blocking Disk | Blank Station Covers ² | End Plate Kit |
| | | | P EA EB | A B | | P EA EB | | | A B | | | | | |
| A04 | 125 | A6318-025 | 1/4 | A6250-038 | 3/8 | 3/8 | 0957-038 | A6658 | A6880-120 | 3/8 | 3/8 | A7002-010 | A6658 | - |
| A06 | 250 | A6331-050 | 1/2 | A6265-050 | 3/4 | 1/2 | 0957-075 | A5903 | A6886-120 | 3/4 | 1/2 | A7002-020 | A5903 | B6891 |
| | | A6331-075 | 3/4 | | | | | | A6886-130 | 3/4 | 3/4 | | | |
| | | A6331-100 | 1 | | | | | | | | | | | |
| A20 | 1000 | A5247-125 | 1 1/4 | - | - | - | - | - | - | - | - | - | - | |
| | | A5247-150 | 1 1/2 | | | | | | | | | | | |

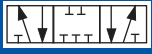
¹ Seals and mounting hardware are included

² Each Blank Station requires a cover.

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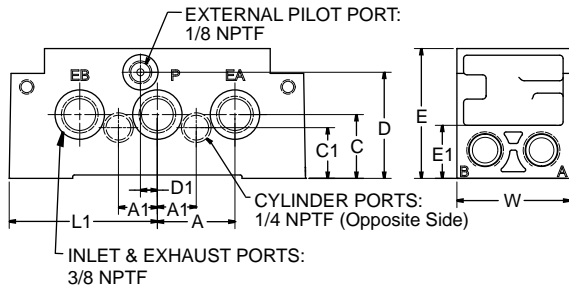
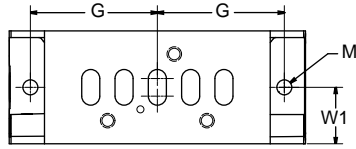


SAE Spool Valves Sub-Bases & Manifolds

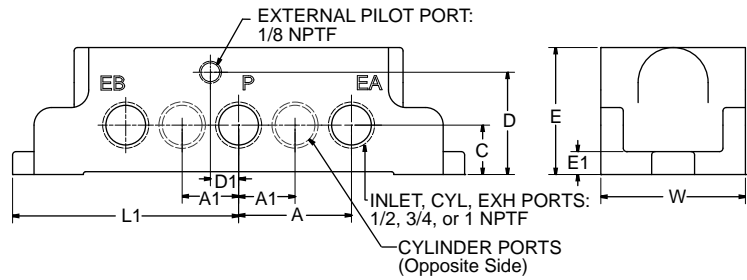
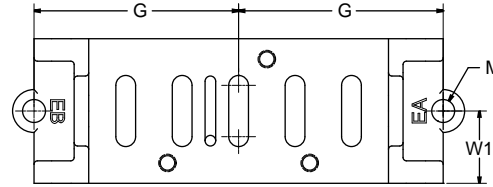


Dimensional Information

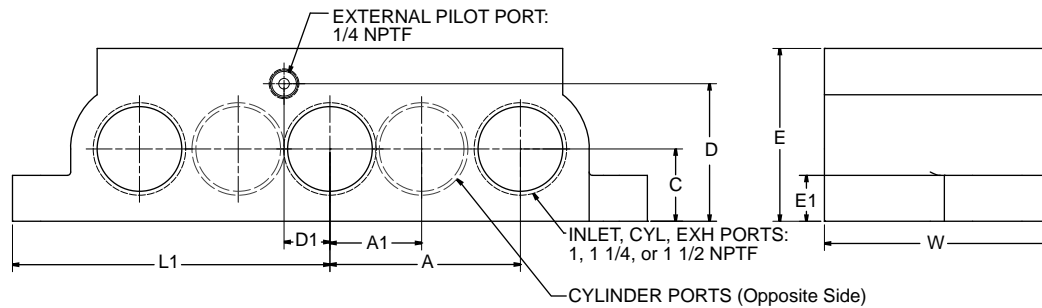
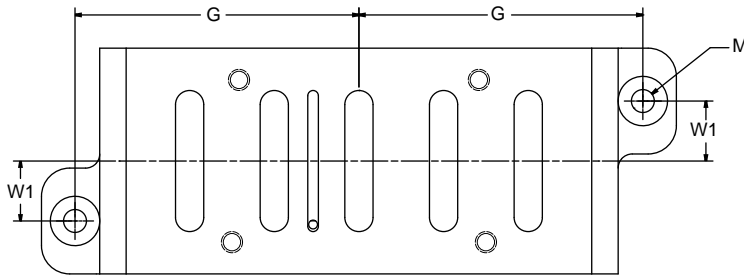
A04 Sub-Base (409)



A06 Sub-Base (409)



A20 Sub-Base (409)

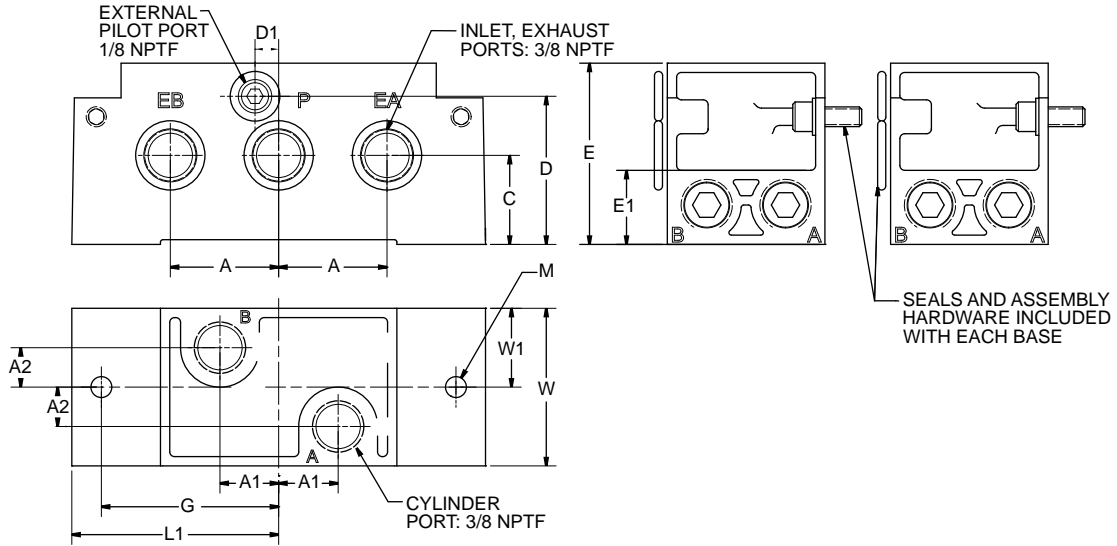


| Series | Model | A | A1 | C | C1 | D | D1 | E | E1 | G | L1 | M | W | W1 |
|-------------------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|
| A04 (125) | 409 | 35,1 1.38 | 175 0.69 | 28,7 1.13 | 22,9 0.90 | 47,8 1.88 | 7,62 0.30 | 58,4 2.30 | 23,9 0.94 | 57,2 2.25 | 66,68 2.63 | 6,6 0.26 | 50,8 2.00 | 25,4 1.00 |
| A06 (250) | 409 | 50,8 2.00 | 25,4 1.00 | 22,2 0.88 | - | 46,0 1.81 | 12,7 0.50 | 57,2 2.25 | 10,3 0.41 | 92,1 3.63 | 91,95 3.63 | 10,2 0.41 | 70,3 2.77 | 35,1 1.38 |
| A20 (1000) | 409 | 85,7 3.38 | 41,3 1.63 | 3,25 1.28 | - | 61,9 2.44 | 20,6 0.81 | 77,8 3.06 | 20,6 0.81 | 128 5.03 | 143 5.62 | 10,3 0.41 | 105 4.12 | 26,9 1.06 |

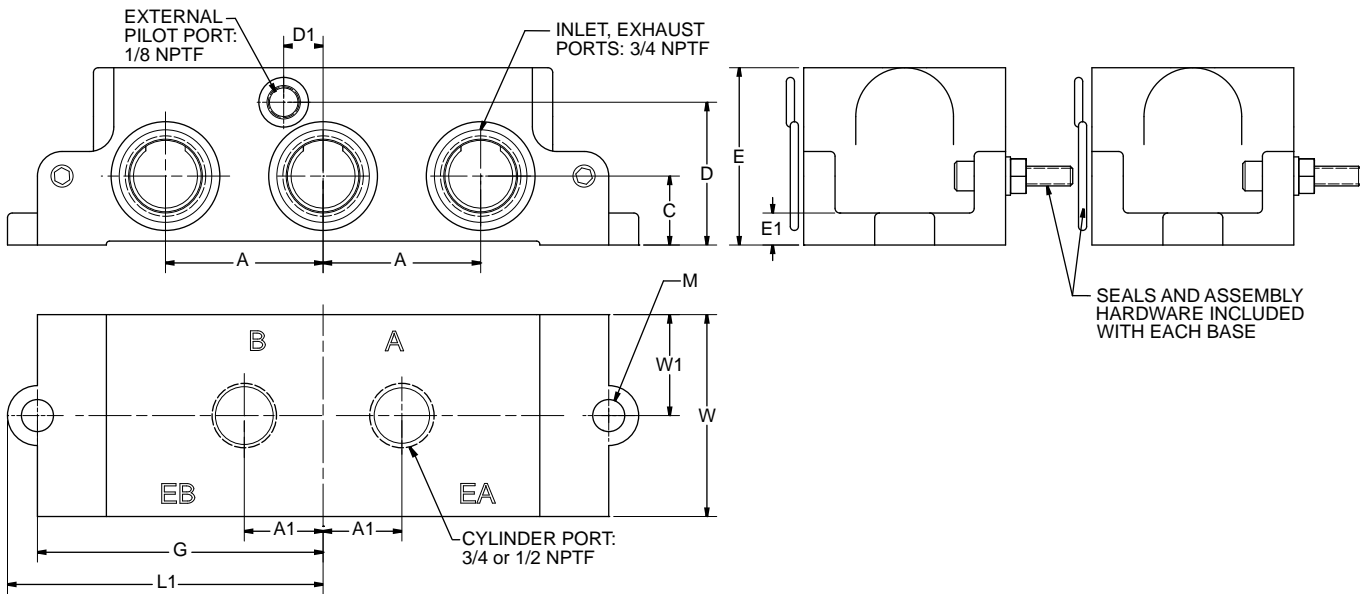
Units of Measure: Top - mm, Bottom - inches

Dimensional Information

A04 Manifold (Bottom Cylinder Ports) (413)



A06 Manifold (Bottom Cylinder Ports) (413)



F

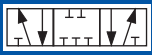
| Series | Model | A | A1 | A2 | C | D | D1 | E | E1 | G | L1 | M | W | W1 |
|----------------------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| A04 (125) | 413 | 35,1 1.38 | 19,1 0.75 | 12,7 0.50 | 28,7 1.13 | 47,8 1.88 | 7,62 0.30 | 58,4 2.30 | 23,9 0.94 | 57,2 2.25 | 66,5 2.62 | 6,6 0.26 | 50,8 2.00 | 25,4 1.00 |
| A06 (250) | 413 | 50,8 2.00 | 25,4 1.00 | 22,2 1.88 | 50,8 2.00 | 71,5 2.81 | 12,7 0.50 | 82,6 3.25 | 10,3 0.41 | 79,4 3.12 | 88,9 3.50 | 8,7 0.34 | 88,9 3.50 | 44,5 1.75 |

Units of Measure: Top - mm, Bottom - inches

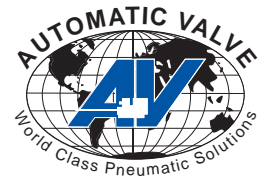
5/2



5/3

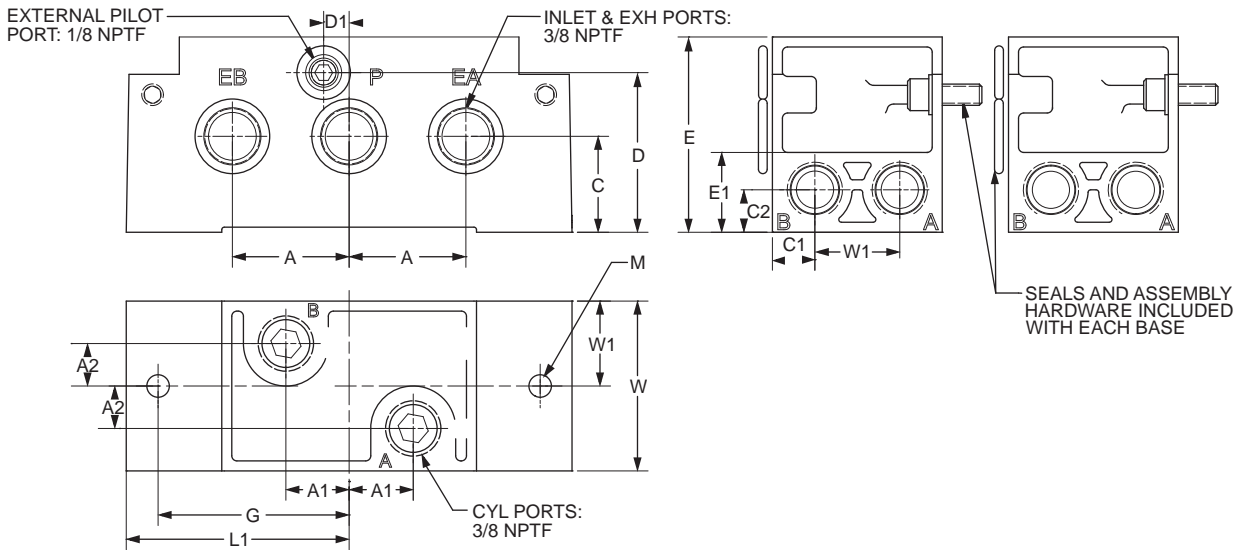


SAE Spool Valves Sub-Bases & Manifolds

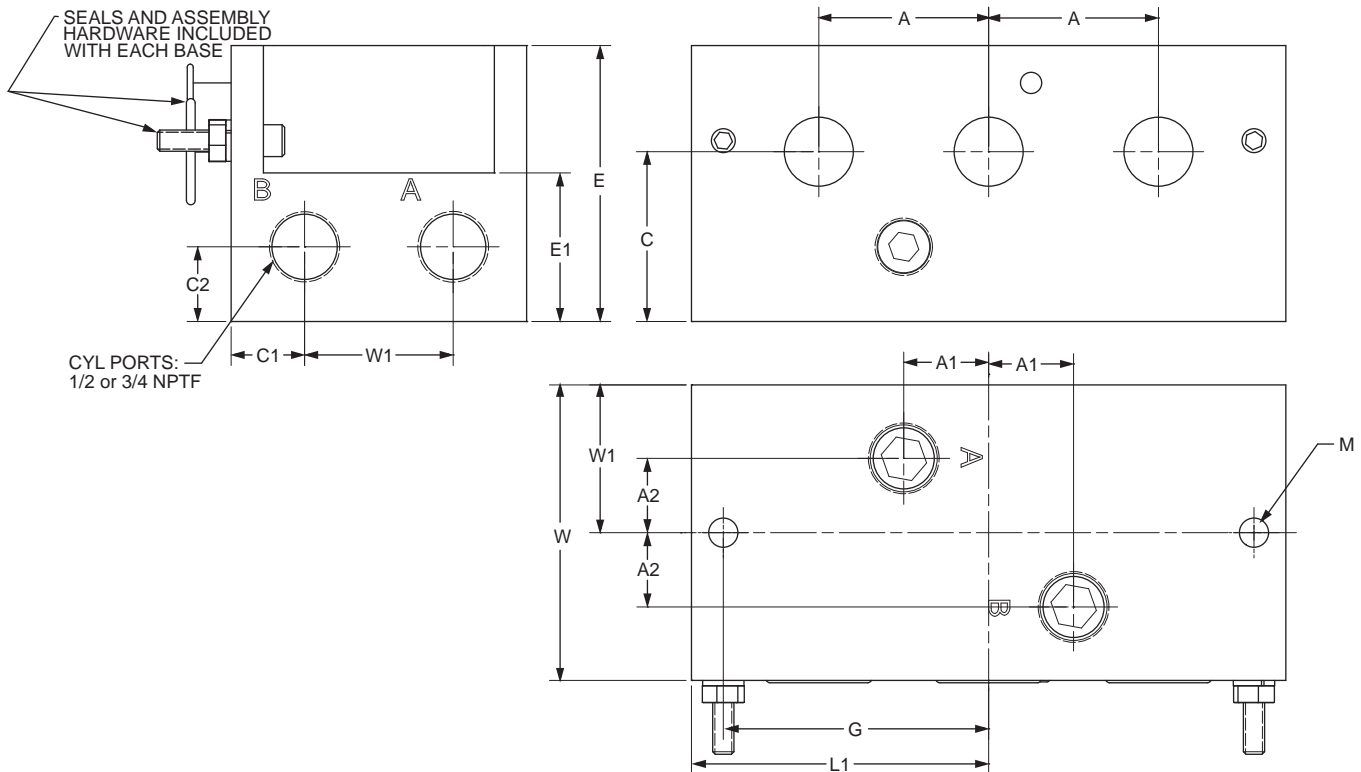


Dimensional Information

A04 Manifold (Bottom/Side Cylinder Ports) (416)



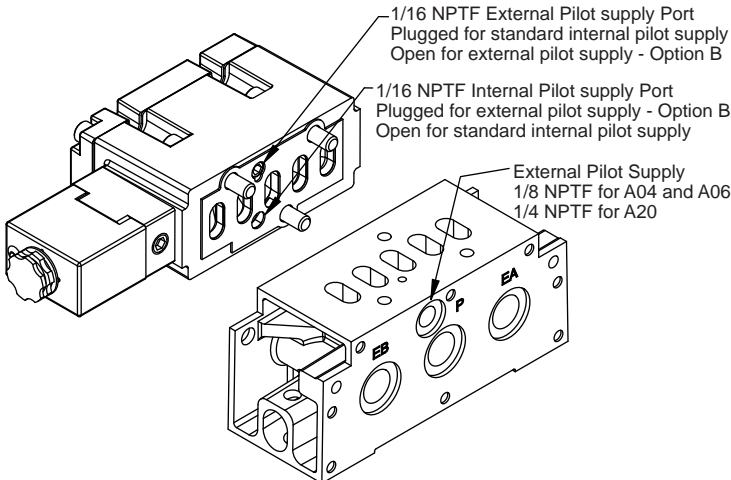
A06 Manifold (Bottom/Side Cylinder Ports) (416)



| Series | Model | A | A1 | A2 | C | C1 | C2 | D | D1 | E | E1 | G | L1 | M | W | W1 |
|------------------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| A04 (125) | 416 | 34,9 1.38 | 18,9 0.75 | 12,7 0.50 | 28,7 1.13 | 12,7 0.50 | 12,7 0.50 | 47,8 1.88 | 7,62 1.30 | 58,4 2.30 | 23,9 1.94 | 57,2 2.25 | 66,7 2.62 | 6,73 0.26 | 50,8 2.00 | 25,4 1.00 |
| A06 (250) | 416 | 50,8 2.00 | 25,4 1.00 | 22,2 0.88 | 50,8 2.00 | 22,2 0.88 | 22,2 0.88 | 46,0 1.81 | 12,7 0.50 | 82,6 3.25 | 44,5 1.75 | 79,4 3.12 | 88,9 3.50 | 8,73 0.34 | 88,4 3.48 | 44,2 1.74 |

Units of Measure: Top - mm, Bottom - inches

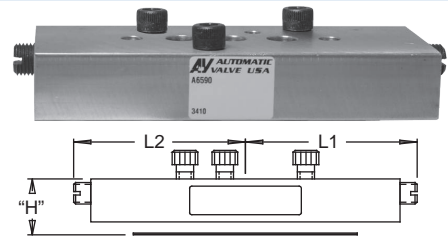
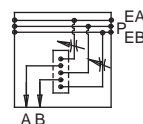
Options (Add the suffix to the end of the Model Number in alpha-numeric order)

| Suffix | Option | Description |
|----------|---------------------------------------|--|
| A | Fluoroelastomer Seals | For applications where fluid media or ambient conditions are not compatible with nitrile seals. <i>Note: Fluorocarbon seals do not increase the effective temperature range of the valve. For high temperature applications, consult the factory.</i> (Available for A04 and A06 Only) |
| B | External Pilot | For solenoid applications where the pressure to port one is less than 2 BAR (35 PSIG). See example below for field conversion. |
| | | <p style="text-align: center;">Field Conversion</p>  <ul style="list-style-type: none"> Remove the valve from the sub-base and turn upside down. Remove the 1/16 NPTF pipe plug from the external pilot supply port in the valve and install it in the supply port. Connect the air supply to the external pilot supply port in the base. |
| D | Dustproof | For applications in extremely dusty and contaminated environments. Vent ports are plugged and spring pad breather vent is eliminated. |
| Y | Explosion-Proof Coil (CSA, FM) | Refer to the "Electrical Information" page in this section for details. |
| 0 | GM - 5 Pin Micro | Customer Specification for Connector Wiring. For more information see the Wiring Chart on the Service Information page in this section. |
| 1 | Ford - 5 Pin Micro | |
| 2 | Chrysler - 5 Pin Micro AC/DC | |
| 3 | GM - 5 Pin Mini | |
| 4 | Ford - 5 Pin Mini | |
| 5 | Chrysler - 5 Pin Mini | |
| 6 | GM - 4 Pin Micro DC | |
| 7 | Ford - 4 Pin Micro DC | |

Accessories

Interposed Flow Control

- Restricts air flow from Port A to Port EA and from Port B to Port EB.
- Mounts between the valve and the sub-base or between the valve and the single pressure regulator.
- Vibration-proof metering control
- Interposed Flow Controls cannot be used with Interposed Dual Pressure Regulators.

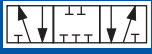


| AV Series (SAE) | Model Number | Weight | | Dimensions | | |
|------------------|--------------|-----------|-------------|-------------|-------------|--|
| | | Kg (lb) | H | L1 | L2 | |
| A04 (125) | A6590 | 0,3 (0.7) | 19,8 (0.78) | 63,5 (2.50) | 63,5 (2.50) | |

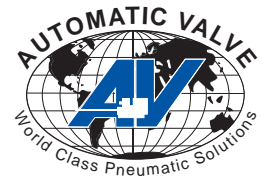
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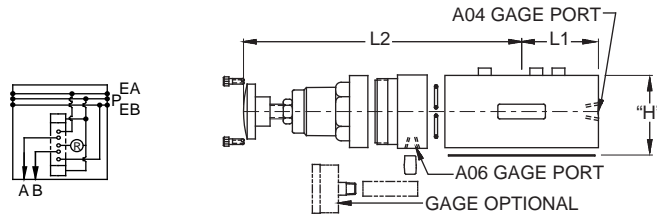
SAE Spool Valves Accessories



Sandwich Single Pressure Regulator

Features

- Regulates single inlet pressure from Inlet Port P to Cylinder Ports A & B.
- Mounts between the valve and sub-base.
- Two Pressure Ranges: 0,6-4,1 BAR (5-60 PSIG); and 0,7-9,0 BAR (10-130 PSIG).
- 1/8 NPTF gage port.
- On series A04, color coded locking rings identify the pressure range: Yellow 5-60PSIG; Red 10-130PSIG.
- In series A06 the fingertip control knob and locking nut are standard.
- If pressure is less than 2 BAR (35 PSIG), then valve must be externally piloted [3,4 BAR (50 PSIG) for 3 position valves].



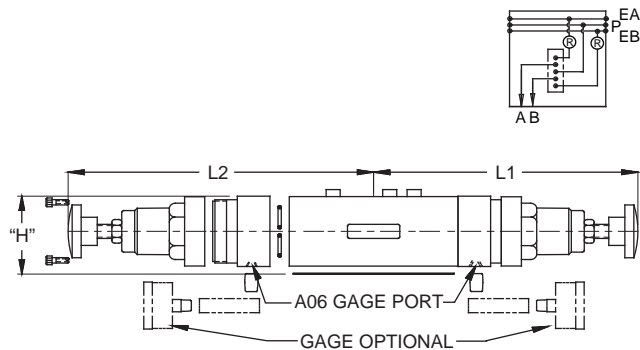
| AV Series (SAE) | Type | Model Number | | Weight Kg (lb) | Dimensions (top-mm; bottom-inches) | | |
|-----------------|-----------|--------------|-------------|----------------|------------------------------------|--------------|-------------|
| | | 5-60 PSIG | 10-130 PSIG | | H | L1 | L2 |
| A04 (125) | Regulator | B6691-060 | B6691-130 | 0,5 (1.2) | 37,3 1.47 | 54,9 2.16 | 107 4.25 |
| | Gage | A5655-060 | A5655-160 | - | - | - | - |
| A06 (250) | Regulator | B6693-060 | B6693-130 | 1,5 (3.5) | 63,5 2.5 | 66,7 2.63 | 208 8.23 |
| | Gage | A6785-060 | A6785-160 | - | - | - | - |

Sandwich Dual Pressure Regulator



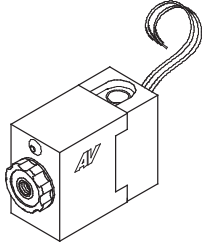
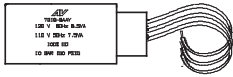
Features

- Regulates dual inlet pressure from EA - EB to cylinder ports A & B.
- Mounts between the valve and sub-base.
- Two Pressure Ranges: 0,3-4,1 BAR (5-60 PSIG); and 0,7-9,0 BAR (10-130 PSIG).
- 1/8 NPTF gage port.
- On series A04, color coded locking rings identify the pressure range: Yellow 5-60; Red 10-130 PSIG.
- In series A06 the fingertip control knob and locking nut are standard.
- Dual Pressure Regulators require a valve external pilot supply and cannot be used with sandwich flow controls.



| AV Series (SAE) | Type | Model Number | | Weight Kg (lb) | Dimensions (top-mm; bottom-inches) | | |
|-----------------|-----------|--------------|---------------|----------------|------------------------------------|-------------|-------------|
| | | 5-60 PSIG | 10-130 PSIG | | H | L1 | L2 |
| A04 (125) | Regulator | - | B6692-130-130 | 0,6 (1.3) | 37,3 1.47 | 108 4.25 | 108 4.25 |
| | Gage | - | - | - | - | - | - |
| A06 (250) | Regulator | - | B6694-130-130 | 2,6 (5.6) | 63,5 2.50 | 208 8.23 | 208 8.23 |
| | Gage | A6785-060 | A6785-130 | - | - | - | - |

Part Numbers

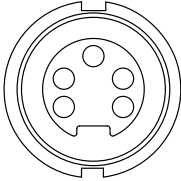
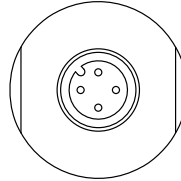
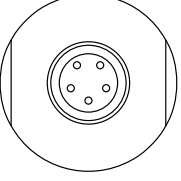
| Description | Operator Type | Instructions | Kg (lb) | Coil Part Number **=Voltage |
|---|---------------|--|----------------|--------------------------------|
| Weather-Proof 18" Leads NEMA 4X  | S | Coil included (specify voltage code from table below) | 0,12 (0.27) | A7201-** |
| Explosion-Proof 1/2" Conduit with 24" Leads CSA & FM Approved CL. I; Zone1 ExmIIT4; AExmII CL. I; Div.1; GR. A, B, C, D CL. II; GR. E, F, G CL. III T4 Ta=-20°C to +60°C NEMA 4, 4X, 7C, 7D, 9  | Y | Coil included (specify voltage code from table below) | 0,20 (0.44) | 7019-9**Y |

Voltage Codes

| ** Code | Voltage +/-10% | | Current (Amps) | | | | Resistance (OHMS @ 25°C) | | Power (AC=VA, DC=Watts) | |
|-----------|------------------|---------|----------------|-----|---------|-----|--------------------------|------|-------------------------|-----|
| | | | Inrush | | Holding | | S | Y | S | Y |
| | Operator Type: | | S | Y | S | Y | | | | |
| | NEMA | | NEMA | | | | | | | |
| 4 | 7, 9 | 4 | 7, 9 | 4 | 7, 9 | 4 | 7, 9 | 4 | 7, 9 | |
| AA | 120/50 120/60 | 120/60 | .07 | .10 | .05 | .05 | 908 | 530 | 6.9 | 6.5 |
| AB | 240/50 240/60 | 240/60 | .15 | .05 | .13 | .03 | 3630 | 2345 | 6.9 | 6.8 |
| DA | 12 VDC | 12 VDC | .37 | .38 | .37 | .38 | 33 | 32 | 4.4 | 4.5 |
| DB | 24 VDC | 24 VDC | .18 | .19 | .18 | .19 | 130 | 128 | 4.4 | 4.5 |
| AB | 125 VDC | - | .03 | - | .03 | - | 3630 | - | 4.8 | - |
| DE | - | 125 VDC | - | .04 | - | .04 | - | 2820 | - | 5.5 |

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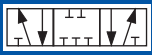
Connectors

| |  |  |  |
|--------------------|---|--|---|
| Type | 5 pin mini | 4 pin micro | 5 pin micro |
| Connection | 1/2-14-NPT | M12x1 | M12x1 |
| Options | 3, 4, 5 | 6, 7 | 0, 1, 2 |
| Part Number | 6095 | 6095-002 | 6095-003 |

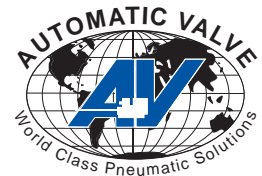
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SAE Spool Valves Service Information

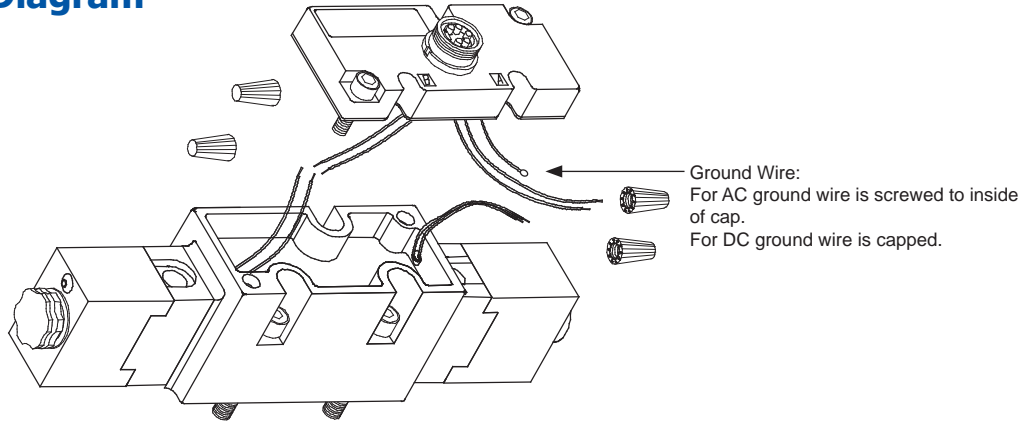


Wiring

| Options | | | | | Pin Number | | | | | | | | | |
|-------------|-------------|------------|----------|--|------------|-------------|-------|-------------|-------|---------------------|------------|-------------|-----------|-------------|
| 4 pin Micro | 5 Pin Micro | 5 Pin Mini | Cst. | Schematic [For SGL Solenoid use Sol B pin out] (See next Page for Wiring & Service Diagram) | 1 | | 2 | | 3 | | 4 | | 5 | |
| | | | | | Lead | Connects To | Lead | Connects To | Lead | Connects To | Lead | Connects To | Lead | Connects To |
| - | 0 | - | GM | | Red/White | Sol A Brown | Red | Sol B Black | Green | Ground | Red/Yellow | Sol B Brown | Red/Black | Sol A Black |
| - | 1 | - | Ford | | Red/White | Sol B Brown | Red | Sol A Black | Green | Ground | Red/Yellow | Sol A Brown | Red/Black | Sol B Black |
| - | 2 AC | - | Chrysler | | Red/White | Sol A Brown | Red | Sol A Black | Green | Ground | Red/Yellow | Sol B Brown | Red/Black | Sol B Black |
| - | 2 DC | - | Chrysler | | Red/White | Sol A Brown | Red | Sol B Brown | Green | Ground | Red/Yellow | Sol A Black | Red/Black | Sol B Black |
| - | - | 3 | GM | | Red/White | Sol A Brown | Red | Sol B Black | Green | Ground | Red/Yellow | Sol B Brown | Red/Black | Sol A Black |
| - | - | 4 | Ford | | Red/White | Sol B Brown | Red | Sol A Brown | Green | Ground | Red/Yellow | Sol A Black | Red/Black | Sol B Black |
| - | - | 5 | Chrysler | | Red/White | Sol A Brown | Red | Sol A Black | Green | Ground | Red/Yellow | Sol B Brown | Red/Black | Sol B Black |
| 6 | - | - | GM | | Brown | Sol A Brown | White | - | Blue | Sol A Sol B (Black) | Black | Sol B Brown | None | |
| 7 | - | - | Ford | | Brown | - | White | Sol A Brown | Blue | Sol A Sol B (Black) | Black | Sol B Brown | None | |

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Wiring & Service Diagram

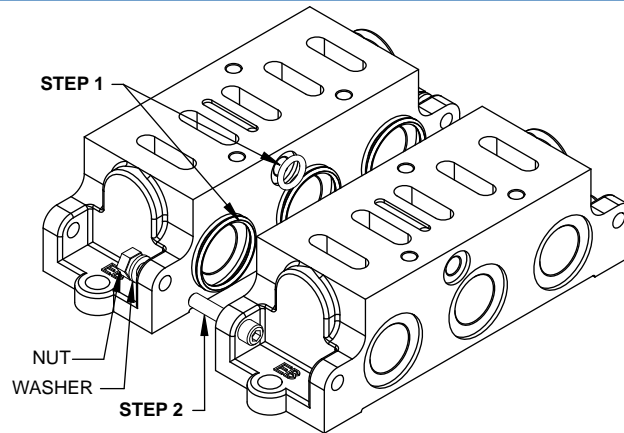


Assembly: Valve to Manifold Base

413 Assembly

Instructions:

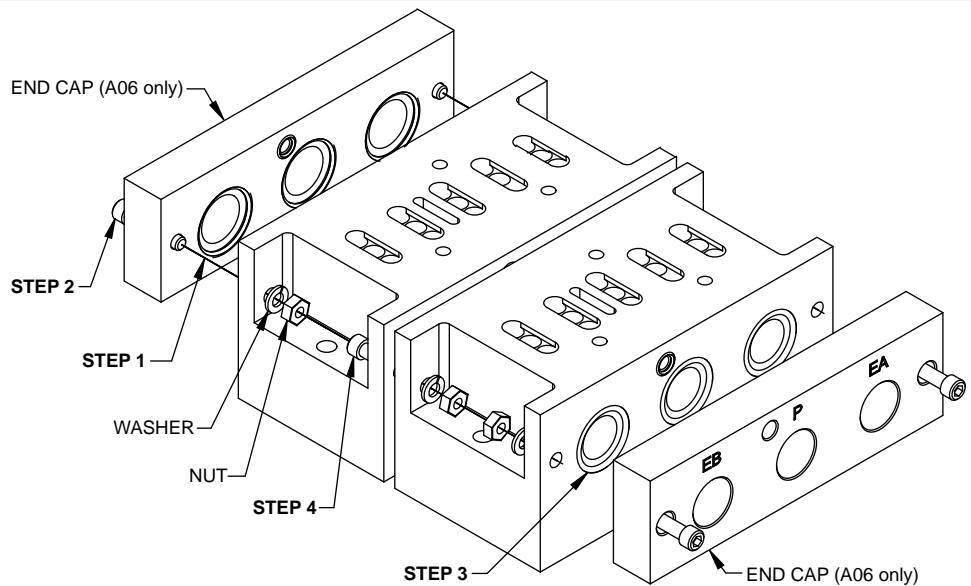
- STEP 1: Place O-Rings in counterbores in base.
- STEP 2: Assemble base to base using screws, washers, and nuts.



416 Assembly

Instructions:

- STEP 1: Place O-Rings in counterbores of end caps.
- STEP 2: Assemble cap to base using screws, washers, and nuts.
- STEP 3: Place O-Rings in counterbores of base.
- STEP 4: Assemble base to base using screws, washers, and nuts.

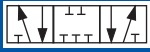


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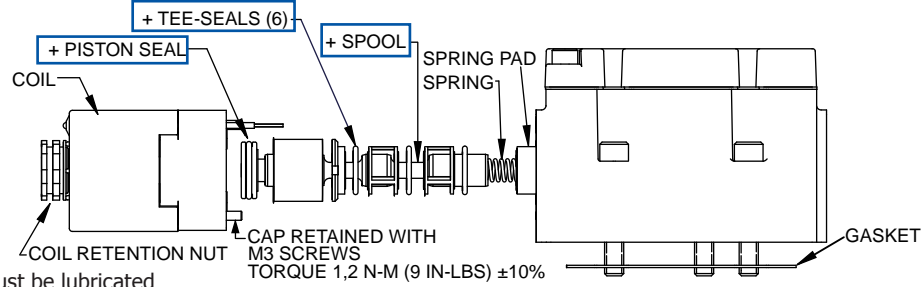
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SAE Spool Valves Service Information



A04 (125 Series)



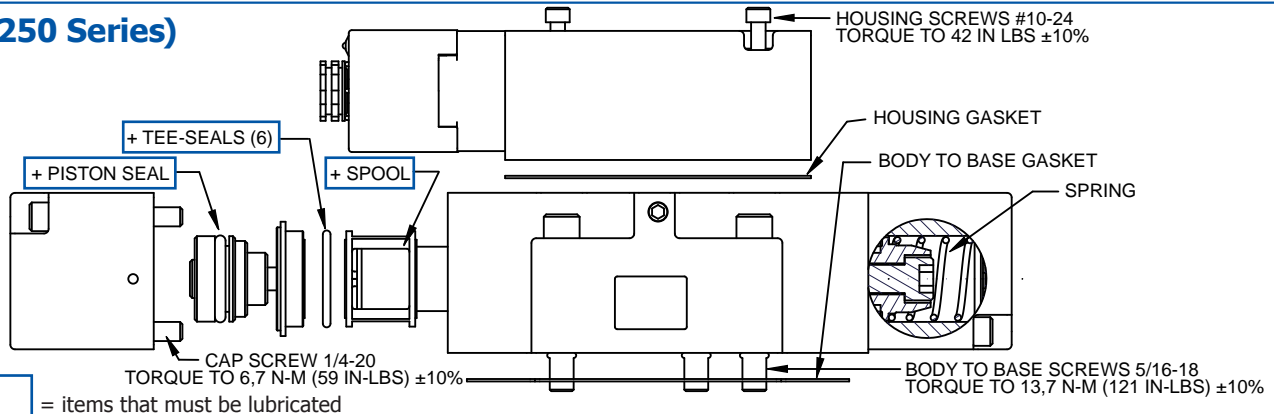
+ = items that must be lubricated

Service Kit Installation Instructions

- Follow appropriate lock-out/tag-out procedures. Do not attempt to service a valve, if you are not familiar with lock-out/tag-out procedures.
- Turn off electrical power to the valve.
- Remove valve from all electrical and air power sources.
- Ensure all stored air power is exhausted.
- Remove coil by first removing coil pretention nut.
- Remove operator cap by first removing 4 socket head cap screws.
- Remove existing serviceable components by "pushing" internal components gently out of the valve body.
- Clean the spool with a clean cloth.
- Discard the spring (Single Spring Return models only).
- Lubricate the designated "+" items in above assembly drawing with a thin film of lubricant - the item should look "WET" with no excess lubricant visible.
- Replace components as shown above.
 - Replace spring pad (where required) & spring (Single Spring Return Models Only).
 - Alternate Tee-seals and spacers.
 - Once all 6 Tee-seals are installed, replace the retainer, bushing & piston, and spool.
- Orientate the operator cap by aligning the open end of the gasket with the pilot hole in the valve body. (For external pilot, this hole is covered; see Field Conversion on Options Page.)
- Torque cap screws into body to 1,02 N-m (9 in-lbs) ±10%. Alternate tightening of the screws, so cap "squeezes" evenly onto body.

Valve must be disconnected from all air and electrical power sources before disassembly.

A06 (250 Series)



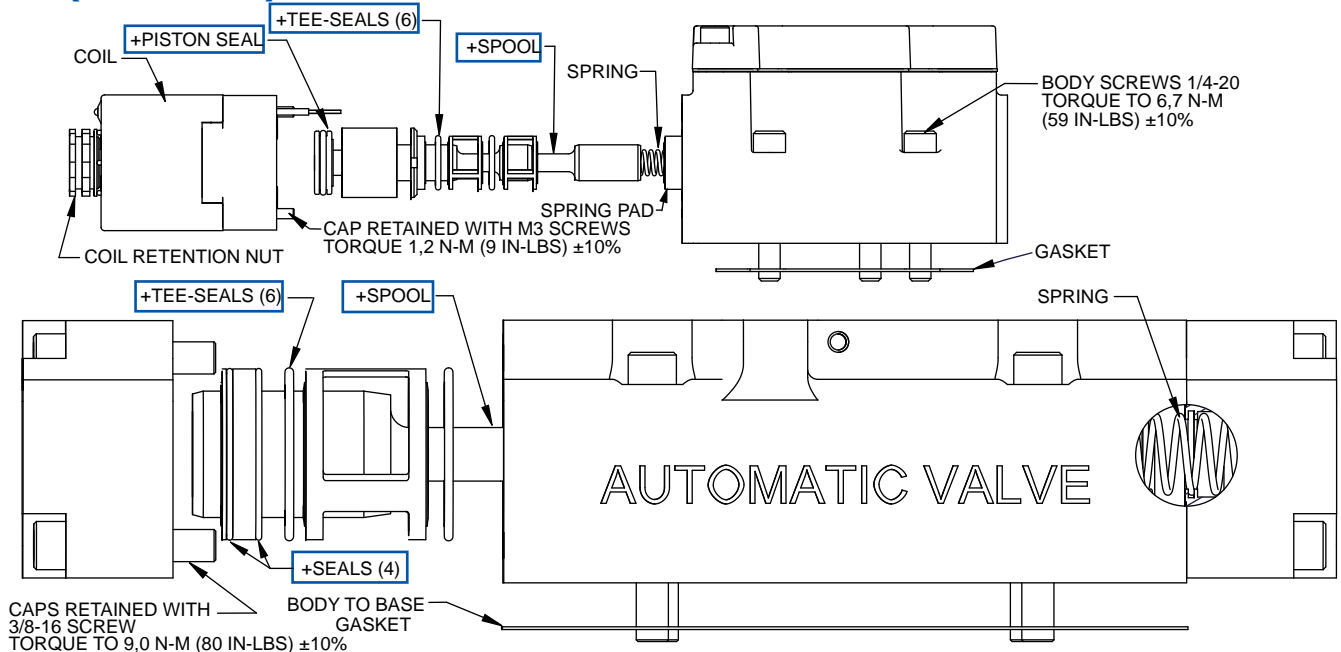
+ = items that must be lubricated

Service Kit Installation Instructions

- Follow appropriate lock-out/tag-out procedures. Do not attempt to service a valve, if you are not familiar with lock-out/tag-out procedures.
- Turn off electrical power to the valve.
- Remove valve from all electrical and air power sources.
- Ensure all stored air power is exhausted.
- Remove end caps by first removing 2 socket head cap screws.
- Remove existing serviceable components by "pushing" internal components gently out of the valve body.
- Clean the spool with a clean cloth.
- Discard the spring (Single Spring Return Models Only).
- Lubricate the designated "+" items in the above assembly drawing with a thin film of lubricant - the item should look "WET" with no excess lubricant visible.
- Replace components as shown above.
 - Alternate Tee-seals and spacers.
 - Once all 6 Tee-seals are installed, insert the retainer and piston into end cap. Insert O-ring in end cap.
 - Replace spring (Single Spring Return models only).
- Orientate spool as shown above.
- Make sure rubber plug is still present in body. (9A Oper. Only)
- Orientate the caps by aligning the pilot hole in the valve body with the pilot hole in the cap. (For external pilot, this hole is covered; see Field Conversion on Options Page in this Section.)
- Torque cap screws into body to 6,7 N-m (59 in-lbs) ±10%. Alternate tightening of the screws, so that cap "squeezes" evenly onto body.
- Replace the housing gasket, if necessary. Torque housing screws to 4,8 N-m (42 in-lbs) ±10%. Take care not to scratch interface surface.
- Replace the body-to-base gasket, if necessary. Torque body-base screws to 13,7 N-m (121 in-lbs) ±10%.

Valve must be disconnected from all air and electrical power sources before disassembly.

A20 (1000 Series)



+ = items that must be lubricated

Service Kit Installation Instructions

1. Follow appropriate lock-out/tag-out procedures. Do not attempt to service a valve, if you are not familiar with lock-out/tag-out procedures.
2. Turn off electrical power to the valve.
3. Remove valve from all electrical and air power sources.
4. Ensure all stored air power is exhausted.
5. Remove plate (for air pilot) or operating valve (A04 for solenoid valves).
6. For solenoid valves follow the Service Kit Installation Instructions for the A04 (see previous page).
7. To service the A20 valve body follow the Service Kit Installation Instructions for the A06 (see previous page), except on Step 14, torque cap screws to 9,0 N-m (80 in-lbs) ±10%.
8. Replace the gasket between the A20 and the plate or A04 operating valve, if necessary. Do not scratch the interface surfaces.
9. Orientate the plate or A04 operating valve to the A20 body by aligning air pilot holes.
10. Torque cap screws into body to 6,7 N-m (59 in-lbs) ±10%. Alternate tightening of so that cap "squeezes" evenly onto body.

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Air Line Lubrication of Automatic Valve products is not required, but is recommended to maximize service life. Oils should be compatible with seal material, have an ISO 32 or lighter viscosity, and have an aniline point between 82°C (180°F) and 99°C (210°F). Refer to the Maintenance Section of this catalog for recommended lubricants.

Model Numbers: Service Kits

| Series | Function | | | |
|--------|---|--|---|---|
| | Single | | Double | |
| | Model Number | Contents | Model Number | Contents |
| A04 | K-A04-SGL K-A04-SGL-A (fluoroelastamer) | Tee-Seals (6), Gasket (1), Piston Seal (1), Spring (1) | K-A04-DBL K-A04-DBL-A (fluoroelastamer) | Tee-Seals (6), Gasket (1), Piston Seals (2) |
| A06 | K-A06-SGL K-A06-SGL-A (fluoroelastamer) | Tee-Seals (6), Gaskets (2), Piston Seal (1), Spring (1) | K-A06-DBL K-A06-DBL-A (fluoroelastamer) | Tee-Seals (6), Gaskets (2), Piston Seals (2) |
| A20 | K-A20-SGL | Tee-Seals (12), Gaskets(2), Piston Seals(3), Springs(2) | K-A20-DBL | Tee-Seals (12), Gasket(2), Piston Seals (6) |