Handhabungstechnik Motore & Getriebe Pneumatik Hydraulik Systemlösungen



# Produktkatalog

# MAC 3/2 Wegeventile

Serie 200 - 1/8" 1/4"





# Über Uns

Die Firma **as-tec Mechatronik GmbH** ist ein herstellerunabhängiger Lieferant von Systemlösungen und Komponenten für pneumatische, hydraulische und elektrische Antriebs- und Steuerungstechnik.

Wir bieten unseren Kunden für ihre Projekte im Maschinen- und Anlagenbau, beziehungsweise für die Instandhaltung ihrer Fertigungseinrichtungen die am besten geeigneten Produkte aus unserem herstellerübergreifenden Produktportfolio.

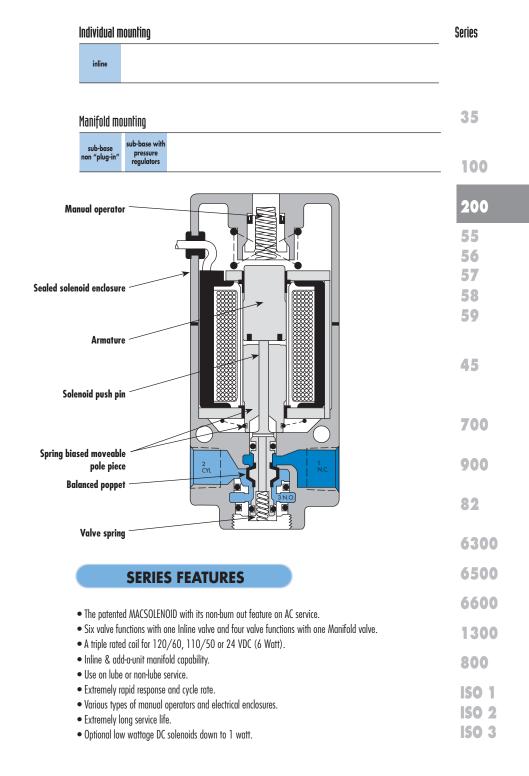
In unserer Werkstätte produzieren wir kundenspezifische Lösungen wie zum Beispiel Ventileinheiten, Schaltschränke und Sonderzylinder. Weiters halten wir sowohl Standardkomponenten als auch speziell für Kunden bevorratete Produkte auf Lager.







## Direct solenoid and solenoid pilot operated valves









#### **APPLICATION CONVERSION PROCEDURE:**

### **INDIVIDUAL MODELS**

The balanced poppet design facilitates using the same valve for 6 functions with any port being connected to vacuum, pressure or plugged. Piping is shown in the chart below.

#### **MANIFOLD MODELS**

The interchangeable function plate between the valve body and base permits selection for 2- or 3-way, Normally Closed or Normally Open operation, instead of through piping as shown below in the Inlines. On 3-way applications, one function plate is used for both N.C. and N.O. When "3-C" is visible on the plate, the function will be N.C.

When "3-0" is visible, the function is N.O. On 2-way applications, a separate plate is used and like the 3-way plate is marked "2-C" for N.C. and "2-0" on the other side for N.O. The 2-way plates block the exhaust at the valve, permitting the mixing in a stack of

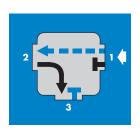
3-ways and 2-ways. Changes within a stack from one function to another can be made without disturbing the plumbing.

#### **SPECIAL APPLICATIONS:**

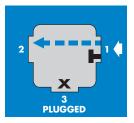
## **N.C. ONLY MODELS**

A single purpose Normally Closed Only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired.

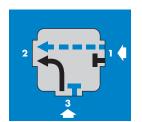
## PIPING CHART FOR INDIVIDUAL MODELS



3 Way Normally Closed



2 Way Normally Closed



Selector



3 Way Normally Open



2 Way Normally Open



Divertor





## Direct solenoid and solenoid pilot operated valves

| Function   | Port size                  | Flow (Max)  | Individual mounting   | Series               |
|--|----------------------------|---|---|----------------------|
| 3/2 NO-NC, 2/2 NO-NC   | G1/8" - G1/4"              | 500 NI/min  | inline  |                      |
| 1. Balanced poppet, immune to v pressure. 2. Short stroke with high flow. 3. The patented solenoid develop |                            |   |   | 35                   |
| forces.  4. Powerful return spring. 5. Manual operator standard on   |                            |   |   | 100                  |
| Burn-out proof solenoid on AC  |                            |   |   | 200                  |
| HOW TO ORDER   |                            |   |   | 55<br>56<br>57       |
| Port size  |                            | Universal valve   | NC only ve  | silve 58             |
|  |                            | Ž, w  |   | 59<br>]w             |
| G1/8"<br>G1/4"   |                            | 224B-xxyzz Mod 005<br>225B-xxyzz Mod 005  | 274B-xxyzz Mi<br>275B-xxyzz Mi                                    |                      |
| SOLENOID OPERATOR ➤  |                            | <u>XX Y ZZ</u> *  |   | 700                  |
| XX Voltage<br>11 110V~/50Hz  | Y                          | Manual operator   | ZZ Electrical conn  | ection               |
| 11 110V~/50Hz<br>12 220V~/50Hz<br>22 24V~/50Hz<br>52 24V=/2,5W   |                            | Non-locking<br>Locking  | JA Square connector JC Square connector w BA Flying leads (45 cm) |                      |
| 78 24V=/24W<br>61 24V=/8,5W  |                            |   |   | 82                   |
| * Other options available, see Notes:  | page 305.                  |   |   | 6300                 |
| CHANGING FROM NORMALLY<br>Individual inline valves can be c<br>NORMALLY CLOSED ONLY MC                     | changed from normally clos | OPEN ed to normally open by connecting the in                                     | let to port 3 instead of port 1.                                  | 6500                 |
| A single purpose Normally Clos   | ed only model is available | for those applications where a greater to ired. Model numbers are indicated above | lerance for heavy concentrations o                                | f water, <b>6600</b> |
|  |                            |   |   | 1300                 |
|  |                            |   |   | 800                  |
|  |                            |   |   | ISO 1<br>ISO 2       |

**ISO 3** 







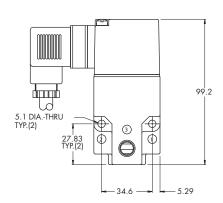
| Fluid :                            | Compressed air, vacuum, inert gases  |  |  |  |  |  |
|------------------------------------|--|--|--|--|--|--|
| Pressure range :                   | Vacuum to 10 bar   |  |  |  |  |  |
| Lubrication :                      | Not required, if used select a medium aniline point lubricant (between 80°C and 100°C) |  |  |  |  |  |
| Filtration:                        | 40 μ   |  |  |  |  |  |
| Temperature range :                | -18°C to 60°C (0°F to 140°F)   |  |  |  |  |  |
| Flow (at 6 bar, $\Delta P=1$ bar): | 500 NI/min   |  |  |  |  |  |
| Coil:                              | General purpose class A, continuous duty, encapsulated                                 |  |  |  |  |  |
| Voltage range:                     | -15% to +10% of nominal voltage  |  |  |  |  |  |
| Protection:                        | Consult factory  |  |  |  |  |  |
| Power:                             | ~ Inrush : 33 VA Holding : 19.7 VA   |  |  |  |  |  |
|                                    | = 1 to 24 W  |  |  |  |  |  |
| Response times:                    | 24 V=/8.5 W Energize : 15 ms De-energize : 5 ms  |  |  |  |  |  |
|                                    | 50 Hz/6 W Energize : 3-8 ms De-energize : 3-13 ms                                      |  |  |  |  |  |

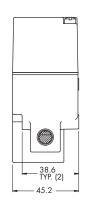
Spare parts : • Solenoid operator (power  $\geq$  6 W) : D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

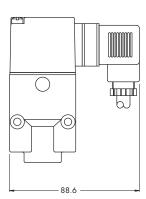
Options : • NPTF threads.

## DIMENSIONS

Dimensions shown are metric (mm)









## Direct solenoid and solenoid pilot operated valves

| Function   | Port size              | Flow (Max)   | Manifold mounting                                  | Series   |
|--|------------------------|--|--|----------|
| 3/2 NO-NC, 2/2 NO-NC   | G1/8" - G1/4"          | 500 NI/n   | sub-base<br>non "plug-in"                          |          |
| OPERATIONAL BENEFITS   |                        |  |  |          |
| Balanced poppet, immune to vo<br>pressure.     Short stroke with high flow.     The patented solenoid develops |                        |  |  | 35       |
| forces.<br>4. Powerful return spring.<br>5. Manual operator standard on c                                      | ıll valves.            |  |  | 100      |
| 6. Burn-out proof solenoid on AC   |                        |  |  | 200      |
|  |                        |  |  | 55<br>56 |
| HOW TO ORDER   |                        |  | a  | 57       |
| Port size  |                        | Universal valve  | NC only valve                                      | 58<br>59 |
|  |                        | CYL  | CYL IN EXH   | 37       |
| Valve less base  |                        | 250B- <b>XXYZZ</b>                                       | 280B- <b>xxyzz</b>                                 | 45       |
| G1/8" base<br>G1/4" base   |                        | 256B- <b>XXYZZ</b> Mod 005<br>257B- <b>XXYZZ</b> Mod 005 | 286B-xxyzz Mod 00<br>287B-xxyzz Mod 00             | 05       |
| ·  |                        |  | ZOT B-RATEZ TYTOU OU                               | <u> </u> |
| SOLENOID OPERATOR ➤  |                        | <u>XX Y ZZ</u> *   |  | 700      |
|  |                        |  |  |          |
| XX Voltage   | Y                      |  | ZZ Electrical connection                           | 900      |
| 11 110V~/50Hz<br>12 220V~/50Hz   |                        | · ten re-ening   | JC Square connector with light JA Square connector |          |
| 22 24V~/50Hz   |                        | Locking  | BA Flying leads (45 cm)                            |          |
| 52 24V=/2,5W<br>78 24V=/24W  |                        |  |  | 82       |
| 61 24V=/24VV<br>61 24V=/8,5W   |                        |  |  |          |
| * Other options available, see p   | page 305.              |  |  | 6300     |
| End plate kit required (Port size :  | G1/4"): A2-5003-01P.   |  |  | 6500     |
| 26XB-xxyzz Mod 005   | 206 Moo                | 005 207  | 7 Mod 005  | 6600     |
| - universal 2-way  | у (В                   | ase only - G1/8")  | (Base only - G1/4")                                | 1300     |
|  |                        |  |  | 800      |
| CHANGING FROM NORMALLY For manifold base mounted valve   |                        |  | plates are available; a reversible plate for 3 Way | ISO 1    |
| valves (N.C. & N.O.), one plate  | for 2 Way N.C. and one |  | s, determined by the valve model number, are       | ISO 2    |
| supplied automatically with the v  |                        |  |  | ISO 3    |
| NORMALLY CLOSED ONLY MOI   |                        | for those applications where = ====                      | ater tolerance for heavy concentrations of water,  | 130 0    |
| compressor products and other a  |                        | appca.ions whole a giet                                  | or water,  |          |







| Fluid:                             | Compressed air, vac                                    | uum, inert aases             |  |  |  |  |
|------------------------------------|--|------------------------------|--|--|--|--|
| Pressure range :                   | Vacuum to 10 bar                                       | , g                          |  |  |  |  |
| Lubrication :                      | Not required, if used                                  | select a medium aniline      | point lubricant (between 80°C and 100°C) |  |  |  |
| Filtration:                        | 40 µ   |                              | · · · · · · · · · · · · · · · · · · ·    |  |  |  |
| Temperature range :                | -18°C to 60°C (0°F                                     | -18°C to 60°C (0°F to 140°F) |  |  |  |  |
| Flow (at 6 bar, $\Delta P=1$ bar): | 500 NI/min   |                              |  |  |  |  |
| Coil:                              | General purpose class A, continuous duty, encapsulated |                              |  |  |  |  |
| Voltage range:                     | -15% to +10% of no                                     | minal voltage                |  |  |  |  |
| Protection :                       | Consult factory  |                              |  |  |  |  |
| Power:                             | ~ Inrush : 33 VA                                       | Holding: 19.7 VA             |  |  |  |  |
|                                    | = 1 to 24 W  |                              |  |  |  |  |
| Response times:                    | 24 V=/8.5 W  | Energize : 15 ms             | De-energize : 5 ms                       |  |  |  |
|                                    | 50 Hz/6 W  | Energize : 3-8 ms            | De-energize: 3-13 ms                     |  |  |  |

Spare parts: • Solenoid operator (power ≥ 6 W): D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

• Function plate: A2-7005. • Seal between bases: B5-5010. • Tie-rod (x2): B4-9004.

Options : • NPTF threads. • Isolation of inlet : Mod. 313P. • Isolation of exhaust : Mod. 313E.

• Additional bottom inlet: Mod. 0210. • Bottom cyl. port: Mod. 0009. • All bottom & side ports: Mod. 0004.

Note: • Specify Mod. number after valve model number (i.e. 257B-111BA Mod. 0210)

## DIMENSIONS Dimensions shown are metric (mm) G1/8" OR G1/4" CYL PORT 42,0 75,7 14,5 19,2 45,9 20.1 18,0 35,1 OPTIONAL G1/8" OR G1/4" BOTTOM PORTS 20,1 75,8 35.6 102,1 52,1 G1/4" INLET & EXH. PORTS EACH END MT'G SLOT 8,1 DIA. MAX.



## Direct solenoid and solenoid pilot operated valves

| Function  | Port size | Flow (Max) | Manifold mounting                       | Series |
|---|-----------|------------|---|--------|
| 3/2 NO-NC, 2/2 NO-NO  | G1/4"     | 400 NI/min | sub-base with<br>pressure<br>regulators |        |
| OPERATIONAL BENEFITS  |           |            |   |        |
| Balanced poppet, immun pressure.     Short stroke with high flo |           |            |   | 35     |

- 3. The patented solenoid develops high shifting
- 4. Powerful return spring.

HOW TO ORDER

SOLENOID OPERATOR ➤

- 5. Manual operator standard on all valves.
- 6. Burn-out proof solenoid on AC service.
- 7. Individual pressure control to each cylinder

Port size

Valve less base

G1/4" base



100

200

55 56

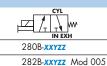
**57** 

58 59

45

700

900



NC only valve



252B-**XXYZZ** Mod 005

250B-xxyzz

**Universal** valve

| XX        | Voltage    | Y | Manual operator | ZZ | Electrical connection       |
|-----------|------------|---|-----------------|----|-----------------------------|
| 11        | 110V~/50Hz | 1 | Non-locking     | JA | Square connector            |
| 12        | 220V~/50Hz | 2 | Locking         | JC | Square connector with light |
| 22        | 24V~/50Hz  |   |                 | BA | Flying leads (45 cm)        |
| 52        | 24V=/2,5W  |   |                 |    |                             |
| <i>78</i> | 24V=/24W   |   |                 |    |                             |
| 61        | 24V=/8.5W  |   |                 |    |                             |

<sup>\*</sup> Other options available, see page 305.

Manifold fastening kit required: N-02003

#### MODEL 252B-

3-Way N.C. or N.O.

2-Way N.C. or N.O.

### 282B-

3-Way N.C. only

## INDIVIDUAL PRESSURE CONTROL TO EACH CYLINDER PORT

In this version the common inlet pressure supplies each individual valve in the stack. This common pressure passes through a relieving type regulator mounted on the same base as the valve and is supplied through the function plate to the Normally Closed or Normally Open poppet position. Through use of the appropriate function plate on the 200 Series basic valve, the operation can be Normally Closed Or Normally Open, 3-way or 2-way except for 282B models which are Normally Closed only. The exhaust ("out") port is common. Operation of the valves then opens or closes the cylinder port (See schematic diagram next page).

82

6300

6500

6600

1300

800

**ISO** 1 **ISO 2** 

**ISO 3** 







| Fluid:                             | Compressed air, vacuum, inert gases                    |                         |  |  |  |  |
|------------------------------------|--|-------------------------|--|--|--|--|
| Pressure range:                    | Vacuum to 10 bar                                       |                         |  |  |  |  |
| Lubrication:                       | Not required, if used                                  | select a medium aniline | point lubricant (between 80°C and 100°C) |  |  |  |
| Filtration:                        | 40 µ   |                         |  |  |  |  |
| Temperature range :                | -18°C to 60°C (0°F to                                  | o 140°F)                |  |  |  |  |
| Flow (at 6 bar, $\Delta P=1$ bar): | 400 NI/min   |                         |  |  |  |  |
| Coil:                              | General purpose class A, continuous duty, encapsulated |                         |  |  |  |  |
| Voltage range:                     | -15% to +10% of nominal voltage                        |                         |  |  |  |  |
| Protection:                        | Consult factory  |                         |  |  |  |  |
| Power:                             | ~ Inrush : 33 VA                                       | Holding: 19.7 VA        |  |  |  |  |
|                                    | = 1 to 24 W  |                         |  |  |  |  |
| Response times:                    | 24 V=/8.5 W  | Energize : 15 ms        | De-energize : 5 ms                       |  |  |  |
|                                    | 50 Hz/6 W  | Energize : 3-8 ms       | De-energize : 3-13 ms                    |  |  |  |

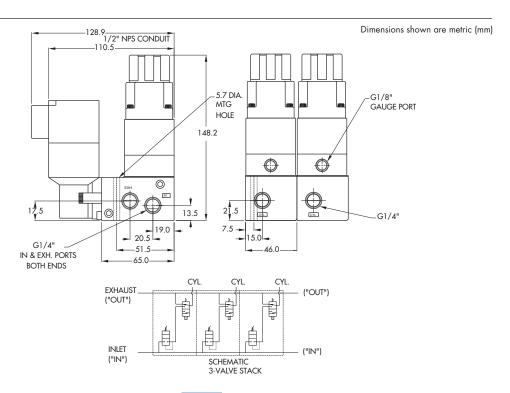
Spare parts : • Solenoid operator (power ≥ 6 W) : D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

• Function plate: A2-7005. • Seal between bases (x2): 17016-01. • Tie-rod (x2): B4-9004. • Pressure regulator: PR02A-A0AA.

Options : • NPTF threads. • Isolation of inlet and/or exhaust.

• Mod. PR80 (0-5,3 bar pressure range), Mod PR30 (0-2 bar pressure range)

## DIMENSIONS





## Direct solenoid and solenoid pilot operated valves

| Function  | Port size |  | Flow (Max)               | Manifold mounting                    |   | Series   |
|---|-----------|--|--------------------------|--------------------------------------|---|----------|
| 3/2 NO-NC, 2/2 NO-NC  | G1/4"     |  | 400 NI/min               | sub-base with pressure regulators    |   |          |
| OPERATIONAL BENEFITS  |           |  |                          |                                      |   |          |
| Balanced poppet, immune to variety pressure.     Short stroke with high flow.     The patented solenoid develop |           |  |                          |                                      |   | 35       |
| forces.  4. Powerful return spring.  5. Manual operator standard on   |           |  |                          |                                      |   | 100      |
| <ul><li>6. Burn-out proof solenoid on AC</li><li>7. Selected pressure control to a</li></ul>                    | service.  |  |                          | 0                                    |   | 200      |
|   |           |  |                          | 0 -                                  | 200   | 55       |
| HOW TO ORDER  |           |  |                          |                                      | .0  | 56<br>57 |
| HOW TO ORDIN  | Port size |  |                          | NC only valve                        |   | 58       |
|   |           |  |                          | CYL                                  |   | 59       |
|   |           |  |                          | IN EXH                               |   |          |
|   | Valve     |  |                          | 251B- <b>XXYZZ</b> Mod 005           |   | 45       |
| SOLENOID OPERATOR >   |           | <u> </u>   | Y <u>ZZ</u> *            |                                      |   |          |
| XX Voltage  |           | Y Manual ope   |                          | ZZ Electrical                        | connection  | 700      |
| 11 110V~/50Hz   |           | 1 Non-locking  | FIGIO                    | JA Square conne                      |   | 200      |
| 12 220V~/50Hz<br>22 24V~/50Hz   |           | 2 Locking  |                          | JC Square conne<br>BA Flying leads ( | ector with light<br>45 cm)                                  | 900      |
| 52 24V=/2,5W<br>78 24V=/24W   |           | <del>-</del><br>-  |                          |                                      |   | 200      |
| 61 24V=/8,5W  * Other options available, see  | nage 305  | -  |                          |                                      |   | 82       |
| ·   | . •       |  |                          |                                      |   |          |
| Manifold fastening kit required   |           |  |                          |                                      |   | 6300     |
| MODEL<br>251B-  | This      | CTED PRESSURE CONTROL<br>version permits the alternate     | selection of any of the  |                                      |   | 6500     |
| 3-Way Normally Closed   |           | •  |                          | , ,                                  | pressure port passes through utlet Port). Pressure supplied | //00     |
|   |           | common inlet port is reguld<br>d in the stack the Normally |                          |                                      |   | 6600     |
|   | valve     | is open to the common outl                                 | et. If two valves are en | ergized at the same time the         |   | 1300     |
|   | open      | to exhaust from the common<br>natic diagram next page).    |                          |                                      |   | 800      |
|   |           |  |                          |                                      |   | ISO 1    |
|   |           |  |                          |                                      |   | ISO 2    |

**ISO 3** 







| Fluid:                             | Compressed air, vac                                    | Compressed air, vacuum, inert gases |  |  |  |  |  |
|------------------------------------|--|-------------------------------------|--|--|--|--|--|
| Pressure range :                   | Vacuum to 10 bar                                       |                                     |  |  |  |  |  |
| Lubrication :                      | Not required, if used                                  | select a medium aniline             | point lubricant (between 80°C and 100°C) |  |  |  |  |
| Filtration:                        | 40 µ   |                                     |  |  |  |  |  |
| Temperature range :                | -18°C to 60°C (0°F t                                   | -18°C to 60°C (0°F to 140°F)        |  |  |  |  |  |
| Flow (at 6 bar, $\Delta P=1$ bar): | 400 NI/min   | 400 NI/min                          |  |  |  |  |  |
| Coil:                              | General purpose class A, continuous duty, encapsulated |                                     |  |  |  |  |  |
| Voltage range :                    | -15% to +10% of no                                     | -15% to +10% of nominal voltage     |  |  |  |  |  |
| Protection :                       | Consult factory  |                                     |  |  |  |  |  |
| Power:                             | ~ Inrush : 33 VA                                       | Holding: 19.7 VA                    |  |  |  |  |  |
|                                    | = 1 to 24 $W$  |                                     |  |  |  |  |  |
| Response times:                    | 24 V=/8.5 W  | Energize : 15 ms                    | De-energize : 5 ms                       |  |  |  |  |
|                                    | 50 Hz/6 W  | Energize : 3-8 ms                   | De-energize : 3-13 ms                    |  |  |  |  |

Spare parts: • Solenoid operator (power ≥ 6 W): D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

• Function plate: A2-7005. • Seal between bases (x2): 17016-01. • Tie-rod (x2): B4-9004. • Pressure regulator: PR02A-A0AA.

Options : • NPTF threads. • Isolation of inlet and/or exhaust.

• Mod. PR80 (0-5,3 bar pressure range), Mod PR30 (0-2 bar pressure range)

## DIMENSIONS

Dimensions shown are metric (mm) 28.9 1/2" NPS CONDUIT —110.5 5.7 DIA G1/8" GAUGE PORT MTG HOLE 148.2 0  $\bigcirc$ 0  $\ominus$  $\Theta$ 13.5 20.5 G1/4" IN & EXH. PORTS BOTH ENDS -46.0 -51.5 EXHAUST OR N.O. OPTIONAL COMMON OUTLET ("OUT") PRESSURE ("OUT") COMMON SUPPLY ("IN") SCHEMATIC 3-VALVE STACK ("IN")



| Function             | Port size   | Flow (Max)         | Individual m | nounting | Series |
|----------------------|-------------|--------------------|--------------|----------|--------|
| 3/2 NO-NC, 2/2 NO-NC | 1/8" - 1/4" | 0.5 C <sub>v</sub> | inline       |          |        |

- 1. Balanced poppet, immune to variations of pressure.
- 2. Short stroke with high flow.
- 3. The patented solenoid develops high shifting forces.
- 4. Powerful return spring.
- 5. Manual operator standard on all valves.
- 6. Burn-out proof solenoid on AC service.



HOW TO ORDER

| Port size | Universal valve   | NC only valve                        |
|-----------|---|--------------------------------------|
|           | $\square$ $\uparrow$ $\uparrow$ $\downarrow$ $\uparrow$ $\downarrow$ | $rac{2}{\sqrt{1}\sqrt{1}\sqrt{3}}$ w |
| 1/8" NPTF | 224B- <b>XXYZZ</b>  | 274B- <b>XXYZZ</b>                   |
| 1/4" NPTF | 225B- <b>XXYZZ</b>  | 275B- <b>XXYZZ</b>                   |

| SOLENOID OPERATOR ➤ | X |
|---------------------|---|
|                     |   |

| XX | Voltage                        | Y | Manual operator | ZZ | Electrical connection       |
|----|--------------------------------|---|-----------------|----|-----------------------------|
| 11 | 120/60, 110/50, 24 VDC (6.0 W) | 1 | Non-locking     | JA | Square connector            |
| 12 | 240/60, 220/50                 | 2 | Locking         | JC | Square connector with light |
| 22 | 24/60, 24/50                   |   |                 | BA | Flying leads (18")          |
| 52 | 24 VDC (2.5 W)                 |   |                 | CA | Conduit 1/2" NPS            |
| 78 | 24 VDC (24.0 W)                |   |                 |    |                             |
| 61 | 24 VDC (8.5 W)                 |   |                 |    |                             |
|    |                                |   |                 |    |                             |

<sup>\*</sup> Other options available, see page 357.

CHANGING FROM NORMALLY CLOSED TO NORMALLY OPEN

Individual inline valves can be changed from normally closed to normally open by connecting the inlet to port 3 instead of port 1.

NORMALLY CLOSED ONLY MODELS

A single purpose Normally Closed only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired. Model numbers are indicated above.

35

100

200

55

56

58 59

45

700

900

82

6300

6500

6600

1300

800

**ISO** 1 **ISO 2** 

**ISO** 3 **MAC 125A** 

**MAC 250A** 







Fluid: Compressed air, vacuum, inert gases

Pressure range: Vacuum to 150 PSI

**Lubrication:** Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)

Filtration:

Temperature range:  $0^{\circ}F$  to  $140^{\circ}F$  (-18°C to  $60^{\circ}C)$ 

Flow (at 6 bar,  $\Delta P = 1 bar$ ):

0.5 C<sub>v</sub>

Coil: General purpose class A, continuous duty, encapsulated

-15% to +10% of nominal voltage Voltage range:

Protection: Consult factory

~ Inrush : 33 VA Power: Holding: 19.7 VA

= 1 to 24 W

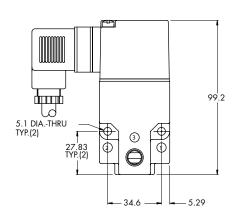
24 VDC (8.5 W) Energize: 15 ms Response times: De-energize : 5 ms 120/60 Energize: 3-8 ms De-energize : 3-13 ms

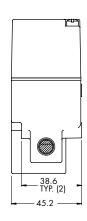
Spare parts: ullet-Solenoid operator (power  $\geq$  6 W) : D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

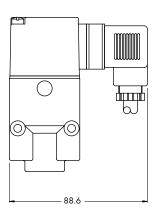
Options: • BSPP threads.

## DIMENSIONS

Dimensions shown are metric (mm)









| Function             | Port size   | Flow (Max)         | Individual mounting             | Series |
|----------------------|-------------|--------------------|---------------------------------|--------|
| 3/2 NO-NC, 2/2 NO-NC | 1/8" - 1/4" | 0.5 C <sub>v</sub> | inline<br>hazardous<br>location |        |

- Balanced poppet, immune to variations of pressure.
- 2. Short stroke with high flow.
- 3. The patented solenoid develops high shifting forces.
- 4. Powerful return spring.
- 5. Burn-out proof solenoid on AC service.



## HOW TO ORDER

| Port size | Universal valve  | NC only valve      |
|-----------|--|--------------------|
|           | $\square$ $\uparrow$ $\downarrow$ | $\square$          |
| 1/8" NPTF | 224B- <b>XX0EA</b>   | 274B- <b>xx0ea</b> |
| 1/4" NPTF | 225B- <b>XX0EA</b>   | 275B- <b>XX0EA</b> |

## SOLENOID OPERATOR ➤



| XX | Voltage                        |
|----|--------------------------------|
| 11 | 120/60, 110/50, 24 VDC (6.0 W) |
| 12 | 240/60, 220/50                 |
| 22 | 24/60, 24/50                   |
| 50 | 24 VDC (6.0 W)                 |
| 55 | 12 VDC (6.0 W)                 |
| 60 | 12 VDC (9.5 W)                 |
| 61 | 24 VDC (8.5 W)                 |
|    |                                |

#### Notes

The special version of the 200 Series designed for hazardous locations has been approved by CSA for Class I, Groups B, C & D; Class II, Groups E, F & G. Maximum rated fluid and ambient temperature is 40°C; maximum pressure is 150 p.s.i.

Approval is limited to certain common AC & DC voltages which are those designated in the table above.

These valves are supplied without manual operators. This version of the 200 Series can be supplied on the standard individual inline or the manifold valve body assemblies. It can also be supplied as a pilot for the 57, 58 and 59 Series (with special adapter plate # M-00012).

#### CHANGING FROM NORMALLY CLOSED TO NORMALLY OPEN

Individual inline valves can be changed from normally closed to normally open by connecting the inlet to port 3 instead of port 1. NORMALLY CLOSED ONLY MODELS

A single purpose Normally Closed only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired. Model numbers are indicated above.

35

100

200

200

**55 56** 

57 58

59

45

700

900

82

6300

6500

6600

1300

800 ISO 1

ISO 2 ISO 3

MAC 125A MAC 250A







Power:

Fluid: Compressed air, vacuum, inert gases

Pressure range: Vacuum to 150 PSI

**Lubrication:** Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)

Filtration:

Temperature range:  $0^{\circ}F$  to  $104^{\circ}F$  (-18°C to  $40^{\circ}C)$ 

Coil: General purpose class A, continuous duty, encapsulated

-15% to +10% of nominal voltage Voltage range:

NEMA 7, NEMA 9; Class I Groups B, C & D; Class II Groups E, F & G. Protection:

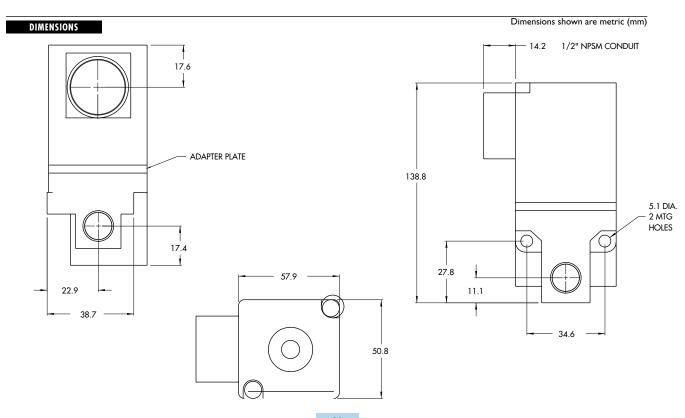
 $\sim$  Inrush : 33 VA Holding: 19.7 VA

= 1 to 24 W

24 VDC (8.5 W) Response times: Energize: 15 ms De-energize : 5 ms 120/60 Energize: 3-8 ms De-energize: 3-13 ms

Spare parts: •-Solenoid operator (power ≥ 6 W) : D4-XXAAB. • Adapter plate ass'y. : A3-0506.

• BSPP threads. Options:





| Function             | Port size   | Floш (Max)         | Manifold mounting         | Series |
|----------------------|-------------|--------------------|---------------------------|--------|
| 3/2 NO-NC, 2/2 NO-NC | 1/8" - 1/4" | 0.5 C <sub>V</sub> | sub-base<br>non "plug-in" |        |

- Balanced poppet, immune to variations of pressure.
- 2. Short stroke with high flow.
- 3. The patented solenoid develops high shifting forces.
- 4. Powerful return spring.
- 5. Manual operator standard on all valves.
- 6. Burn-out proof solenoid on AC service.



## HOW TO ORDER

| Port size       | Universal valve    | NC only valve      |
|-----------------|--------------------|--------------------|
|                 | CYL<br>IN EXH      | CYL<br>IN EXH      |
| Valve less base | 250B- <b>XXYZZ</b> | 280B- <b>XXYZZ</b> |
| 1/8" base NPTF  | 256B- <b>XXYZZ</b> | 286B- <b>xxyzz</b> |
| 1/4" base NPTF  | 257B- <b>xxyzz</b> | 287B- <b>XXYZZ</b> |

| SOLENOID OPERATOR > |  |
|---------------------|--|
|                     |  |

| XX        | Voltage                        | Y | Manual operator | ZZ | Electrical connection       |
|-----------|--------------------------------|---|-----------------|----|-----------------------------|
| 11        | 120/60, 110/50, 24 VDC (6.0 W) | 1 | Non-locking     | JC | Square connector with light |
| 12        | 240/60, 220/50                 | 2 | Locking         | JA | Square connector            |
| 22        | 24/60, 24/50                   |   |                 | BA | Flying leads (18")          |
| 52        | 24 VDC (2.5 W)                 |   |                 | CA | Conduit 1/2" NPS            |
| <i>78</i> | 24 VDC (24.0 W)                |   |                 |    |                             |
| 61        | 24 VDC (8.5 W)                 |   |                 |    |                             |

<sup>\*</sup> Other options available, see page 357.

End plate kit required (Port size: 1/4"): A2-5003-01.

### OPTIONS

| 2 <u>6</u> XB- <b>xxyzz</b> |          | 206          |       | 207          |      |
|-----------------------------|----------|--------------|-------|--------------|------|
| - universo                  | ıl 2-way | (Base only - | 1/8") | (Base only - | /4") |

### CHANGING FROM NORMALLY CLOSED TO NORMALLY OPEN

For manifold base mounted valves a plate is provided between the valve and the base. Three plates are available; a reversible plate for 3 Way valves (N.C. & N.O.), one plate for 2 Way N.C. and one for 2 Way N.O. Appropriate plates, determined by the valve model number, are supplied automatically with the valve.

#### NORMALLY CLOSED ONLY MODELS

A single purpose Normally Closed only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired. Model numbers are indicated above.

35

100

200

55 56

57 58

59

45

700

900

82

6300

6500 6600

1300

800

ISO 1

ISO 3

MAC 125A MAC 250A







Fluid: Compressed air, vacuum, inert gases

Pressure range: Vacuum to 150 PSI

**Lubrication:** Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)

Filtration: 40

Temperature range: 0°F to 140°F (-18°C to 60°C)

Flow (at 6 bar,  $\Delta P=1$ bar): 0.5 C<sub>v</sub>

Coil: General purpose class A, continuous duty, encapsulated

**Voltage range:** -15% to +10% of nominal voltage

Protection: Consult factory

Power: ~ Inrush: 33 VA Holding: 19.7 VA

= 1 to 24 W

 Response times:
 24 VDC (8.5 W)
 Energize : 15 ms
 De-energize : 5 ms

 120/60
 Energize : 3-8 ms
 De-energize : 3-13 ms

Spare parts: 
•-Solenoid operator (power ≥ 6 W): D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

• Function plate: A2-7005. • Seal between bases: B5-5010. • Tie-rod (x2): B4-9004.

Options: 
• BSPP threads. • Explosion-proof model. • Isolation of inlet: Mod. 313P. • Isolation of exhaust: Mod. 313E.

• Additional bottom inlet: Mod. 0210. • Bottom cyl. port: Mod. 0009. • All bottom & side ports: Mod. 0004.

Note: • Specify Mod. number after valve model number (i.e. 257B-111BA Mod. 0210)

## Dimensions shown are metric (mm) DIMENSIONS 1/8" OR 1/4" CYL PORT -28,0 42,0 75,7 14,5 19,2 22,9 45,9 20, . 12,7 \_ 12,7 18,0 35,1 OPTIONAL 1/8" OR 20,1 1/4" BOTTOM PORTS 75,8 39,4 52,1 1/4" INLET & EXH. PORTS EACH END MT'G SLOT 8,1 DIA. MAX.



| Function             | Port size | Flow (Max)         | Manifold mounting                       | Series |
|----------------------|-----------|--------------------|---|--------|
| 3/2 NO-NC, 2/2 NO-NC | 1/4"      | 0.4 C <sub>V</sub> | sub-base<br>with pressure<br>regulators |        |

- 1. Balanced poppet, immune to variations of pressure.
- 2. Short stroke with high flow.
- 3. The patented solenoid develops high shifting forces.
- 4. Powerful return spring.
- 5. Manual operator standard on all valves.
- 6. Burn-out proof solenoid on AC service.
- 7. Individual pressure control to each cylinder



**Electrical connection** 

Square connector Square connector with light Flying leads (18")

Conduit 1/2" NPS

35

100

200

55

56

58

59

45

## HOW TO ORDER

| Port size       | Universal valve    | NC only valve      |
|-----------------|--------------------|--------------------|
|                 | CYL W<br>IN EXH    | CYL<br>IN EXH      |
| Valve less base | 250B- <b>XXYZZ</b> | 280B- <b>xxyzz</b> |
| 1/4" base NPTF  | 252B- <b>xxyzz</b> | 282B- <b>XXYZZ</b> |

| S | SOLENC | DID OPERATOR ➤                 |   | <u>XX</u> Y  |
|---|--------|--------------------------------|---|--------------|
|   |        |                                |   |              |
|   | XX     | Voltage                        | Y | Manual opera |
|   | 11     | 120/60, 110/50, 24 VDC (6.0 W) | 1 | Non-locking  |
| _ | 12     | 240/60, 220/50                 | 2 | Locking      |

| XX        | voitage                        |
|-----------|--------------------------------|
| 11        | 120/60, 110/50, 24 VDC (6.0 W) |
| 12        | 240/60, 220/50                 |
| 22        | 24/60, 24/50                   |
| 52        | 24 VDC (2.5 W)                 |
| <i>78</i> | 24 VDC (24.0 W)                |
| 61        | 24 VDC (8.5 W)                 |
|           |                                |

<sup>\*</sup> Other options available, see page 357.

Manifold fastening kit required: N-02003

## MODEL

252B-

3-Way N.C. or N.O.

262B-

2-Way N.C. or N.O.

282B-

3-Way N.C. only

## INDIVIDUAL PRESSURE CONTROL TO EACH CYLINDER PORT

In this version the common inlet pressure supplies each individual valve in the stack. This common pressure passes through a relieving type regulator mounted on the same base as the valve and is supplied through the function plate to the Normally Closed or Normally Open poppet position. Through use of the appropriate function plate on the 200 Series basic valve, the operation can be Normally Closed Or Normally Open, 3-way or 2-way except for 282B models which are Normally Closed only. The exhaust ("out") port is common. Operation of the valves then opens or closes the cylinder port (See schematic diagram next page).

JA

CA

700

900

82

6300

6500

6600

1300

**ISO** 1

800

**ISO 2 ISO** 3

**MAC 125A MAC 250A** 







Fluid: Compressed air, vacuum, inert gases Vacuum to 150 PSI Pressure range: **Lubrication:** Not required, if used select a medium aniline point lubricant (between 180°F and 210°F) Filtration: Temperature range: 0°F to 140°F (-18°C to 60°C) Flow (at 6 bar,  $\Delta P = 1 bar$ ):  $0.4 C_v$ General purpose class A, continuous duty, encapsulated Coil: -15% to +10% of nominal voltage Voltage range: Protection: Consult factory ~ Inrush : 33 VA Holding: 19.7 VA Power:

Response times:

= 1 to 24 W

24 VDC (8.5 W) Energize : 15 ms De-energize : 5 ms

120/60 Energize : 3-8 ms De-energize : 3-13 ms

Spare parts: •-Solenoid operator (power ≥ 6 W): D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

• Function plate: A2-7005. • Seal between bases (x2): 17016-01. • Tie-rod (x2): B4-9004. • Pressure regulator: PR02A-A0AA.

Options : • BSPP threads. • Explosion-proof model. • Isolation of inlet and/or exhaust.

• Mod. PR80 (0-80 pressure range), Mod PR30 (0-30 pressure range)

## DIMENSIONS

Dimensions shown are metric (mm) 128.9 1/2" NPS CONDUIT —110.5— 5.7 DIA 1/8" NPTF MTG GAUGE PORT HOLE 148.2  $\bigcirc$ 0 17.5 13.5 \_1/4" NPTF 19.0 1/4" NPTF -51.5 -46.0 IN & EXH. PORTS -65.0-**BOTH ENDS** CYL. CYL. CYL. **EXHAUST** ("OUT") ("OUT") INLET ("IN") ("IN") SCHEMATIC 3-VALVE STACK



| Function             | Inlet & outlet port size Flow (Max) Manifold mounting |                    | Series                                  |  |
|----------------------|---|--------------------|---|--|
| 3/2 NO-NC, 2/2 NO-NC | 1/4"  | 0.4 C <sub>v</sub> | sub-base<br>with pressure<br>regulators |  |

- 1. Balanced poppet, immune to variations of pressure.
- 2. Short stroke with high flow.
- 3. The patented solenoid develops high shifting forces.
- 4. Powerful return spring.
- 5. Manual operator standard on all valves.
- 6. Burn-out proof solenoid on AC service.
- 7. Selected pressure control to a single outlet.



**Electrical connection** 

Square connector with light

Square connector

Flying leads (18") Conduit 1/2" NPS 35

100

200

55

56

58

59

45

## HOW TO ORDER

| Port size           | NC only valve      |
|---------------------|--------------------|
|                     | CYL<br>IN EXH      |
| Valve               | 251B- <b>xxyzz</b> |
| SOLENOID OPERATOR ➤ | Y ZZ.              |

**Manual operator** 

Non-locking

Locking

| XX | Voltage                        | Y |
|----|--------------------------------|---|
| 11 | 120/60, 110/50, 24 VDC (6.0 W) | 1 |
| 12 | 240/60, 220/50                 | 2 |
| 22 | 24/60, 24/50                   |   |
| 52 | 24 VDC (2.5 W)                 |   |
| 78 | 24 VDC (24.0 W)                |   |
| 61 | 24 VDC (8.5 W)                 | _ |

<sup>\*</sup> Other options available, see page 357.

Manifold fastening kit required: N-02003

#### MODEL 251B-

3-Way Normally Closed

## SELECTED PRESSURE CONTROL TO A SINGLE OUTLET

This version permits the alternate selection of any of the regulated pressures in the stack to one common outlet. With all valves de-energized the regulated pressure supplied to the Normally Open pressure port passes through the valves and out the corresponding port at the other end of the stack (Common Outlet Port). Pressure supplied to the common inlet port is regulated at each valve and blocked by the poppet of each valve. When a valve is shifted in the stack the Normally Open pressure is blocked and the regulated normally closed pressure of that valve is open to the common outlet. If two valves are energized at the same time the pressure at the common outlet would be that of the energized valve nearest the outlet. If the normally open pressure port is not used it is open to exhaust from the common outlet. The individual cylinder port in each base is non-operative. (See schematic diagram next page).

JA

BA

700

900

82

6300

6500

6600

1300

800 **ISO** 1

**ISO 2 ISO** 3

**MAC 125A MAC 250A** 







Fluid: Compressed air, vacuum, inert gases

Vacuum to 150 PSI Pressure range:

**Lubrication:** Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)

Filtration:

Temperature range: 0°F to 140°F (-18°C to 60°C)

Flow (at 6 bar,  $\Delta P = 1 bar$ ):  $0.4 C_v$ 

General purpose class A, continuous duty, encapsulated Coil:

-15% to +10% of nominal voltage Voltage range:

Protection: Consult factory

~ Inrush : 33 VA Holding: 19.7 VA Power:

= 1 to 24 W

24 VDC (8.5 W) Response times: Energize: 15 ms De-energize: 5 ms 120/60 Energize: 3-8 ms De-energize: 3-13 ms

•-Solenoid operator (power ≥ 6 W): D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

• Function plate: A2-7005. • Seal between bases (x2): 17016-01. • Tie-rod (x2): B4-9004. • Pressure regulator: PR02A-A0AA.

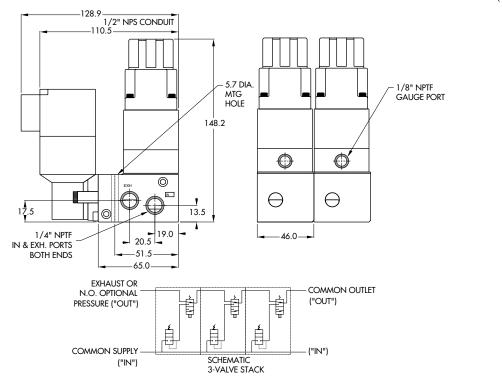
Options : • BSPP threads. • Explosion-proof model. • Isolation of inlet and/or exhaust.

• Mod. PR80 (0-80 pressure range), Mod PR30 (0-30 pressure range)

## DIMENSIONS

Spare parts:

Dimensions shown are metric (mm)





| Function             | Port size   | Flow (Max)         | Manifold mounting                 |  |
|----------------------|-------------|--------------------|-----------------------------------|--|
| 3/2 NO-NC, 2/2 NO-NC | 1/8" - 1/4" | 0.5 C <sub>v</sub> | sub-base<br>hazardous<br>location |  |

- Balanced poppet, immune to variations of pressure.
- 2. Short stroke with high flow.
- 3. The patented solenoid develops high shifting forces.
- 4. Powerful return spring.
- 5. Burn-out proof solenoid on AC service.



#### HOW TO ORDER

| Port size       | Universal valve    | NC only valve      |
|-----------------|--------------------|--------------------|
|                 | CYL<br>IN EXH      | CYL IN EXH         |
| Valve less base | 250B- <b>xx0eA</b> | 280B- <b>xx0ea</b> |
| 1/8" base NPTF  | 258B- <b>XX0EA</b> | 288B- <b>xx0ea</b> |
| 1/4" base NPTF  | 259B- <b>xx0eA</b> | 289B- <b>xx0ea</b> |

## SOLENOID OPERATOR ➤



| XX | Voltage                        |
|----|--------------------------------|
| 11 | 120/60, 110/50, 24 VDC (6.0 W) |
| 12 | 240/60, 220/50                 |
| 22 | 24/60, 24/50                   |
| 50 | 24 VDC (6.0 W)                 |
| 55 | 12 VDC (6.0 W)                 |
| 60 | 12 VDC (9.5 W)                 |
| 61 | 24 VDC (8.5 W)                 |

End plate kit required (Port size: 1/4"): A2-5003-01.

### OPTIONS

| 26XB-XX0EA            |     | 208          |       | 209            |      |
|-----------------------|-----|--------------|-------|----------------|------|
| Legal 2- universal 2- | way | (Base only - | 1/8″) | (Base only - 1 | 1/4″ |

### Notes:

The special version of the 200 Series designed for hazardous locations has been approved by CSA for Class I, Groups B, C & D; Class II, Groups E, F & G. Maximum rated fluid and ambient temperature is 40°C; maximum pressure is 150 p.s.i.

Approval is limited to certain common AC & DC voltages which are those designated in the table above.

These valves are supplied without manual operators. This version of the 200 Series can be supplied on the standard individual inline or the manifold valve body assemblies. It can also be supplied as a pilot for the 57, 58 and 59 Series (with special adapter plate # M-00012).

### CHANGING FROM NORMALLY CLOSED TO NORMALLY OPEN

For manifold base mounted valves a plate is provided between the valve and the base. Three plates are available; a reversible plate for 3 Way valves (N.C. & N.O.), one plate for 2 Way N.C and one for 2 Way N.O. Appropriate plates, determined by the valve model number, are supplied automatically with the valve. NORMALLY CLOSED ONLY MODELS

A single purpose Normally Closed only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired. Model numbers are indicated above.

35

100

200

55

56 57

58

**59** 

45

700

900

82

6300

6500

6600

1300

800

ISO 1

ISO 2

MAC 125A MAC 250A







Fluid: Compressed air, vacuum, inert gases

Vacuum to 150 PSI Pressure range:

**Lubrication:** Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)

Filtration:

Temperature range : 0°F to 140°F (-18°C to 60°C)

Flow (at 6 bar,  $\Delta P = 1 bar$ ):

 $0.5 \, C_v$ 

Coil: General purpose class A, continuous duty, encapsulated

-15% to +10% of nominal voltage Voltage range:

Protection: Consult factory

~ Inrush : 33 VA Holding: 19.7 VA Power:

= 1 to 24 W

24 VDC (8.5 W) Response times: Energize: 15 ms De-energize : 5 ms

> 120/60 Energize: 3-8 ms De-energize: 3-13 ms

Spare parts: •-Solenoid operator (power ≥ 6 W): D4-XXAAC-0EA. • Function plate: A2-7005. • Seal between bases: B5-5010.

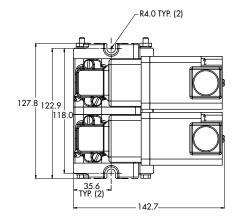
• Tie-rod (x2): 19598.

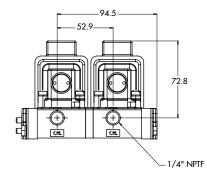
• BSPP threads. • Isolation of inlet: Mod. 313P. • Isolation of exhaust: Mod. 313E. Options:

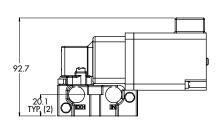
• Additional bottom inlet: Mod 0210.

DIMENSIONS

Dimensions shown are metric (mm)







## Codification table for voltages / Manual operator / Electrical connection / Wire length

VALVE CODE >  $-\frac{XX}{1} \frac{Y}{2} \frac{ZZ}{3} \frac{(-VV)}{4}$ 

| OPTIONS AVAILABLE FOR   | OPTIONS AVAILABLE FOR  |  |  |
|---|--|--|--|
| - valves type 100 Series<br>- pilot valves "CNOMO"  | - valves type 200 Series   |  |  |
| - Pilot operated valves with pilots type 100 Series<br>Series : 55 - 56 - 700 - 800 - 900<br>- 6300 - 6500 - 6600 - 1300<br>- ISO 1 - ISO 2 - ISO 3.<br>- MAC 125 - MAC 250 - MAC 500 | - pilot operated valves with pilots type 200 Series<br>Series: 200 - 57 - 58 - 59. |  |  |
| - Pilot operated valves with pilots "CNOMO"<br>Series : ISO1 - ISO2 - ISO3  |  |  |  |



Used on valve series: 100, 55, 56, 700, 800, 900, 6300, 6500, 6600, 1300, MVA1C, MVA2B, MVA3B, MAC125, MAC250, MAC500.

1. VOLTAGE (100 Serie type coil)

Used on valve series: 200, 57, 58, 59.

|                     | 1. VOLTAGE (100 Serie type coil)  |           | 1. VOLTAGE (200 Serie type coil)      |
|---------------------|---|-----------|---------------------------------------|
| XX Y Z              | VOLTAGE   | - XX Y Z  | Z VOLTAGE                             |
| 11                  | 120/60, 110/50  | 11        | 120/60, 110/50, 24 VDC (6 W)          |
| 12                  | 240/60, 220/50  | 12        | 240/60, 220/50                        |
| 13                  | 100/60, 100/50  | 13        | 100/60, 100/50                        |
| 15                  | 200/60, 200 /50   | 14        | 200/60, 200/50                        |
| 16                  | 10/60   | 20        | 6/60                                  |
| 20                  | 6/60  | 21        | 12/60                                 |
| 21                  | 12/50, 12/60  | 22        | 24/60, 24/50                          |
| 22                  | 24/60, 24/50  | 23        | 32/60, 32/50                          |
| 23                  | 32/60, 32/50  | 24        | 48/60, 42/50                          |
| 24                  | 48/60, 42/50  | 25        | 240/50                                |
| 26*                 | 380/50, 440/50, 440/60, 480/60  | 26        | 480/60, 440/50                        |
| 29                  | 220/60  | 27        | 127/60                                |
| 34                  | 127/50, 120/50  | 28        | 415/50                                |
| 35                  | 48/50   | 29        | 220/60                                |
| 6                   | 16/60   | 30        | 380/50                                |
| 31                  | 24/50   | 31        | 550/60, 550/50                        |
| 50                  | 24 VDC (6 W)  | 32        | 120/60, 110/50                        |
| 51                  | 24 VDC (4 W)  | 33        | 600/60                                |
| 54                  | 12 VDC (4 W)  | 34        | 127/50                                |
| 5                   | 12 VDC (6 W)  | 35        | 48/50                                 |
| 7                   | 12 VDC (2.5 W)  | 50        | 24 VDC (6 W)                          |
| 9                   | 24 VDC (2.5 W)  | 51        | 24 VDC (4.5 W)                        |
| 0                   | 12 VDC (8.5 W)  | 52        | 24 VDC (2.5 W)                        |
| 51                  | 24 VDC (8.5 W)  | 53        | 24 VDC (1.0 W)                        |
| 4                   | 6 VDC (6 W)   |           | 12 VDC (6 W)                          |
| 5                   | 32 VDC (7 W)  | 57        | 12 VDC (2.5 W)                        |
| 66                  | 48 VDC (5.8 W)  | 58        | 48 VDC (2.5 W)                        |
| <del>7</del>        | 64 VDC (7.5 W)  | 60        | 12 VDC (9.5 W)                        |
| <u>,</u><br>8       | 120 VDC (6.4 W)   | 61        | 24 VDC (8.5 W)                        |
| 59*                 | 220 VDC (8.7 W), 250 VDC (11.2 W)                                       | 64        | 6 VDC (8.5 W)                         |
| 5                   | 90 VDC (8.8 W)  | 65        | 32 VDC (10 W)                         |
| <del>5</del><br>'6* | 100 VDC (6.9 W)   | 66        | 48 VDC (11.5 W)                       |
| 34*                 | 125 VDC (10.9 W)  | 67        | 64 VDC (10.5 W)                       |
| 37*                 | 24 VDC (17.1 W)   | 68        | 120 VDC (12.3 W)                      |
| <del>/</del><br>8*  | 12 VDC (17.1 W)   | 69        | 250 VDC (9.2 W)                       |
| 9*                  | 36 VDC (18.8 W)   | 71        | 8 VDC (8.2 W)                         |
| 90                  | 28 VDC (8.2 W)  | 72        | 24 VDC (12 W)                         |
| 91*                 | 6 VDC (10.6 W)  | 73        | 198 VDC (10 W)                        |
| 92                  | 190 VDC (6.5 W)   | 74        | 72 VDC (11.3 W)                       |
| 92<br>94            | 3 VDC (7 W)   | 75        | 90 VDC (11.3 W)                       |
|                     |   |           |                                       |
| 95<br>A 1           | 38 VDC (6.4 W)  | <u>76</u> | 100 VDC (9 W)                         |
| 4 <i>1</i><br>42    | 24 VDC (1 W)  |           | 220 VDC (10 W), 230 VDC (11.6 W       |
| 42<br>43            | 12 VDC (1 W)  |           | 24 VDC (24 W)<br>55 VDC (10.6 W)      |
|                     | 9 VDC (1 W)<br>Protection diode (DC) - MAX. 8.5W                        | 80        | · · · · · · · · · · · · · · · · · · · |
|                     | Protection diode (DC) - MAX. 8.5W  Protection varistor (AC) - MAX. 8.5W | 82        | 170 VDC (11.1 W)                      |
| oltages are         | , ,   | 83        | 15 VDC (8.1 W)                        |
| olages are          | CLOF Only   | 84        | 125 VDC (10 W)                        |
|                     |   | 86        | 36 VDC (11 W)                         |
|                     |   | 93*       | 12 VDC (24 W)                         |

S



0

p

|           | 2. MANUAL OPERATOR (Common options for 100 & 200 Series type coils) |    |                                 |  |  |  |
|-----------|---|----|---------------------------------|--|--|--|
| - XX Y ZZ | MANUAL OPERATOR   |    |                                 |  |  |  |
| 0         | No operator   | 5* | No Operator with Light          |  |  |  |
| 1         | Non-locking recessed  | 6* | Non-Locking Recessed with Light |  |  |  |
| 2         | Locking recessed  | 7* | Locking Recessed with Light     |  |  |  |
| 3         | Non-locking extended  | 8* | Non-Locking Extended with Light |  |  |  |
| 4         | Locking extended  | 9* | Locking Extended with Light     |  |  |  |

<sup>\*</sup> Lights used with "AA" electrical connection

| 3    | 3. ELECT | RICAL CONNECTION (100 Serie type coil) |      | 3. | . ELECT | RICAL CONNECTION (200 Serie type co  |
|------|----------|--|------|----|---------|--------------------------------------|
| XX Y | ZZ       | ELECTRICAL CONNECTION                  | - XX | Y  | ZZ      | ELECTRICAL CONNECTION                |
|      | AA       | Wiring box with 1/2" NPS conduit       |      |    | AA      | Wiring box with 1/2" NPS conduit     |
|      | BA       | Flying leads                           |      |    | BA      | Flying leads                         |
|      | CA       | 1/2" NPS conduit                       |      |    | CA      | 1/2" NPS conduit                     |
|      | СС       | 1/2" NPT conduit                       |      |    | СС      | 1/2" NPT conduit                     |
|      | FA       | Military type 2 PIN                    |      |    | EA      | Explosion proof (200 Series)         |
|      | GA       | Military type 3 PIN                    |      |    | EA      | Explosion proof (57, 58 & 59 Series) |
|      | НА       | AA with ground wire                    |      |    | FA      | Military type 2 PIN                  |
|      | JA*      | Square connector                       |      |    | GA      | Military type 3 PIN                  |
|      | JB       | Rectangular connector                  |      |    | HA      | AA with ground wire                  |
|      | JC*      | Square connector with light            |      |    | JA*     | Square connector                     |
|      | JD       | Rectangular connector with light       |      |    | JC      | Square connector with light          |
|      | JE       | Square connector on top                |      |    | JJ      | Square connector, male only          |
|      |          | (ISO2, ISO3)                           |      |    | NA      | CA with ground wire                  |
|      | JF       | Rectangular connector on top           |      |    | NC      | CC with ground wire                  |
|      |          | (ISO1, ISO2, ISO3)                     |      |    |         |                                      |
|      | JG       | JE with light                          |      |    |         |                                      |
|      | JH       | JF with light                          |      |    |         |                                      |
|      | JJ       | Square connector, male only            |      |    |         |                                      |
|      | JM       | Rectangular connector, male only       |      |    |         |                                      |
|      | MA       | Electrical common conduit              |      |    |         |                                      |
|      |          | (100 Series-Manifold/900 Series)       |      |    |         |                                      |
|      | МВ       | Electrical common conduit              |      |    |         |                                      |
|      |          | (100 Series-Stacking/700 Series)       |      |    |         |                                      |
|      | NA       | CA with ground wire                    |      |    |         |                                      |
|      | NC       | CC with ground wire                    |      |    |         |                                      |
|      | RA       | 3/8" NPS conduit                       |      |    |         |                                      |



| 4. COIL WIRE LENGTH (Common options for 100 & 200 Serie type coils) |
|---|
| WIRE LENGTH   |
| 18"   |
| 24"   |
| 36"   |
| 48"   |
| 72"   |
| 6"  |
| 12"   |
| 120"  |
| 60"   |
| 144"  |
| the base  |
| 24"   |
| 36"   |
| 48"   |
| 60"   |
| 72"   |
| 120"  |
|   |



| Function             | Port size | Floш (Max)         | Manifold mounting Series                |  |
|----------------------|-----------|--------------------|---|--|
| 3/2 NO-NC, 2/2 NO-NC | 1/4"      | 0.4 C <sub>v</sub> | sub-base<br>with pressure<br>regulators |  |

- Balanced poppet, immune to variations of pressure.
- 2. Short stroke with high flow.
- 3. The patented solenoid develops high shifting forces.
- 4. Powerful return spring.
- 5. Manual operator standard on all valves.
- 6. Burn-out proof solenoid on AC service.
- 7. Individual pressure control to each cylinder port.



35

100

200

55

56

5*7* 

**59** 

\_\_\_

45

## HOW TO ORDER

| Port size       | Universal valve    | NC only valve      |
|-----------------|--------------------|--------------------|
|                 | CYL<br>IN EXH      | CYL IN EXH         |
| Valve less base | 250B- <b>xxyzz</b> | 280B- <b>xxyzz</b> |
| 1/4" base NPTF  | 252B- <b>xxyzz</b> | 282B- <b>XXYZZ</b> |

| XX        | Voltage                        |
|-----------|--------------------------------|
| 11        | 120/60, 110/50, 24 VDC (6.0 W) |
| 12        | 240/60, 220/50                 |
| 22        | 24/60, 24/50                   |
| 52        | 24 VDC (2.5 W)                 |
| <i>78</i> | 24 VDC (24.0 W)                |
| 61        | 24 VDC (8.5 W)                 |
|           |                                |

| Y | Manual operator | ZZ | Electrical connection       |
|---|-----------------|----|-----------------------------|
| 1 | Non-locking     | JA | Square connector            |
| 2 | Locking         | JC | Square connector with light |
|   |                 | BA | Flying leads (18")          |
|   |                 | CA | Conduit 1/2" NPS            |
|   |                 |    |                             |

Manifold fastening kit required: N-02003

MODEL

252B-

3-Way N.C. or N.O.

262B-

2-Way N.C. or N.O.

282B-

3-Way N.C. only

## INDIVIDUAL PRESSURE CONTROL TO EACH CYLINDER PORT

In this version the common inlet pressure supplies each individual valve in the stack. This common pressure passes through a relieving type regulator mounted on the same base as the valve and is supplied through the function plate to the Normally Closed or Normally Open poppet position. Through use of the appropriate function plate on the 200 Series basic valve, the operation can be Normally Closed Or Normally Open, 3-way or 2-way except for 282B models which are Normally Closed only. The exhaust ("out") port is common. Operation of the valves then opens or closes the cylinder port (See schematic diagram next page).

700

900

82

6300

6500

6600

1300

800 ISO 1

ISO 2 ISO 3

MAC 125A MAC 250A

<sup>\*</sup> Other options available, see page 357.







Fluid: Compressed air, vacuum, inert gases

Vacuum to 150 PSI Pressure range:

**Lubrication:** Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)

Filtration:

Temperature range: 0°F to 140°F (-18°C to 60°C)

Flow (at 6 bar,  $\Delta P = 1 bar$ ):  $0.4 C_v$ 

General purpose class A, continuous duty, encapsulated Coil:

-15% to +10% of nominal voltage Voltage range:

Protection: Consult factory

~ Inrush : 33 VA Holding: 19.7 VA Power:

= 1 to 24 W

24 VDC (8.5 W) Response times: Energize: 15 ms De-energize: 5 ms 120/60 Energize: 3-8 ms De-energize: 3-13 ms

•-Solenoid operator (power ≥ 6 W): D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

• Function plate: A2-7005. • Seal between bases (x2): 17016-01. • Tie-rod (x2): B4-9004. • Pressure regulator: PR02A-A0AA.

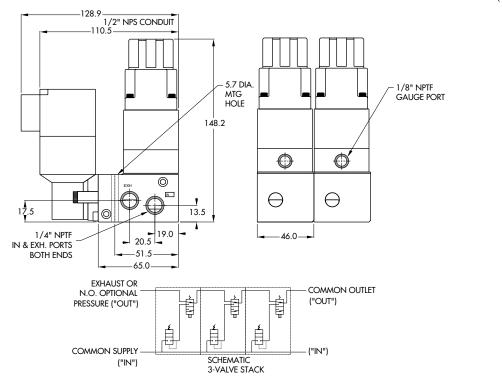
Options : • BSPP threads. • Explosion-proof model. • Isolation of inlet and/or exhaust.

• Mod. PR80 (0-80 pressure range), Mod PR30 (0-30 pressure range)

## DIMENSIONS

Spare parts:

Dimensions shown are metric (mm)





| Function             | Inlet & outlet port size | Flow (Max)         | Manifold mounting                       | Series |
|----------------------|--------------------------|--------------------|---|--------|
| 3/2 NO-NC, 2/2 NO-NC | 1/4"                     | 0.4 C <sub>v</sub> | sub-base<br>with pressure<br>regulators |        |

- 1. Balanced poppet, immune to variations of pressure.
- 2. Short stroke with high flow.
- 3. The patented solenoid develops high shifting forces.
- 4. Powerful return spring.
- 5. Manual operator standard on all valves.
- 6. Burn-out proof solenoid on AC service.
- 7. Selected pressure control to a single outlet.

Port size



35

100

200

55

56 **57** 

58 59

45

NC only valve

## HOW TO ORDER

|        | Valve                          |   |                  | CYL<br>IN EXH<br>251B-XXYZZ |                             |  |
|--------|--------------------------------|---|------------------|-----------------------------|-----------------------------|--|
| SOLENC | DID OPERATOR >                 |   | <u>XX Y ZZ</u> . |                             |                             |  |
| XX     | Voltage                        | Y | Manual operator  | ZZ                          | Electrical connection       |  |
| 11     | 120/60, 110/50, 24 VDC (6.0 W) | 1 | Non-locking      | JA                          | Square connector            |  |
| 12     | 240/60, 220/50                 | 2 | Locking          | JC                          | Square connector with light |  |
| 22     | 24/60, 24/50                   |   | -                | BA                          | Flying leads (18")          |  |
| 52     | 24 VDC (2.5 W)                 |   |                  | CA                          | Conduit 1/2" NPS            |  |
| 78     | 24 VDC (24.0 W)                |   |                  | <del></del>                 |                             |  |
|        |                                |   |                  |                             |                             |  |

<sup>24</sup> VDC (8.5 W) Other options available, see page 357.

Manifold fastening kit required: N-02003

## MODEL

## 251B-

3-Way Normally Closed

## SELECTED PRESSURE CONTROL TO A SINGLE OUTLET

This version permits the alternate selection of any of the regulated pressures in the stack to one common outlet. With all valves de-energized the regulated pressure supplied to the Normally Open pressure port passes through the valves and out the corresponding port at the other end of the stack (Common Outlet Port). Pressure supplied to the common inlet port is regulated at each valve and blocked by the poppet of each valve. When a valve is shifted in the stack the Normally Open pressure is blocked and the regulated normally closed pressure of that valve is open to the common outlet. If two valves are energized at the same time the pressure at the common outlet would be that of the energized valve nearest the outlet. If the normally open pressure port is not used it is open to exhaust from the common outlet. The individual cylinder port in each base is non-operative. (See schematic diagram next page).

700

900

82

6300

6500

6600

1300

800 **ISO** 1

**ISO 2 ISO 3** 

**MAC 125A MAC 250A** 







Fluid: Compressed air, vacuum, inert gases Vacuum to 150 PSI Pressure range: Not required, if used select a medium aniline point lubricant (between 180°F and 210°F) **Lubrication:** Filtration: 0°F to 140°F (-18°C to 60°C) Temperature range: Flow (at 6 bar,  $\Delta P = 1 bar$ ): 0.4 C<sub>v</sub> Coil: General purpose class A, continuous duty, encapsulated -15% to +10% of nominal voltage Voltage range: Protection: Consult factory ~ Inrush : 33 VA Holding: 19.7 VA Power: = 1 to 24 W24 VDC (8.5 W) Energize: 15 ms Response times: De-energize: 5 ms 120/60 Energize: 3-8 ms De-energize: 3-13 ms

Spare parts: •-Solenoid operator (power ≥ 6 W): D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

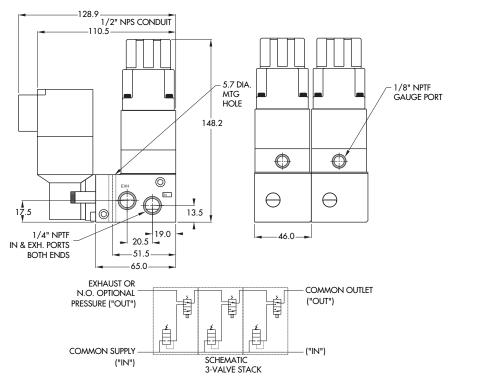
• Function plate: A2-7005. • Seal between bases (x2): 17016-01. • Tie-rod (x2): B4-9004. • Pressure regulator: PR02A-A0AA.

Options : • BSPP threads. • Explosion-proof model. • Isolation of inlet and/or exhaust.

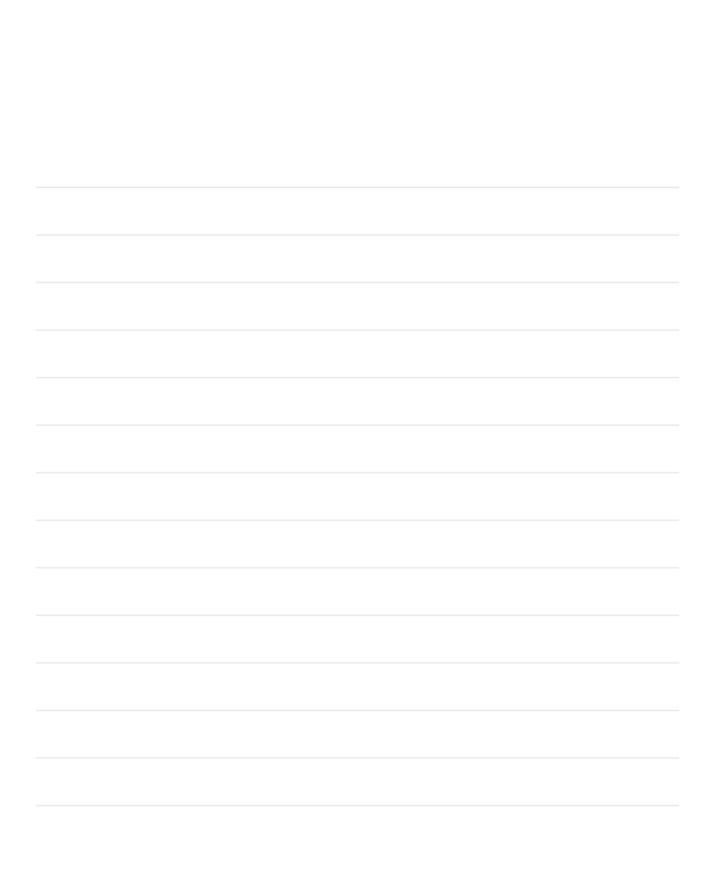
• Mod. PR80 (0-80 pressure range), Mod PR30 (0-30 pressure range)

## DIMENSIONS

Dimensions shown are metric (mm)



# Notizen





## as-tec Mechatronik GmbH

A-4840 Vöcklabruck Linzer Straße 59

t: +43 7672 33033 0 m: office@as-tec.at w<sup>3</sup>: www.as-tec.at

Ausgabe: 09.2020