

# "ADEX" Series

## Air Control Valves

A00 – .01 Cv M3 Port A05 – .18 Cv M5 Port A12 – .47 Cv 1/8" Port

# Section D

www.parker.com/pneu/adex



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**BOLD ITEMS ARE MOST POPULAR.** 



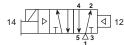
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# "ADEX" Series Valves 4-Way, 2 & 3-Position; 3-Way, 2-Position

# Single Solenoid

4-Way, 2-Position

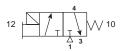


De-energized position – Solenoid operator 14 de-energized. Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

Energized position – Solenoid operator 14 energized. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

# Single Solenoid

3-Way, 2-Position NC



#### **Normally Closed:**

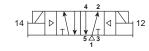
De-energized position – Solenoid 12 de-energized. Pressure at inlet port 1 blocked, outlet port 2 connected to exhaust port 3.

Energized position – Solenoid 12 energized.

Pressure at inlet port 1 connected to outlet port 2, exhaust port 3 is blocked.

# Double Solenoid

4-Way, 2-Position



Solenoid operator 14 energized last. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

Solenoid operator 12 energized last.

Pressure at inlet port 1 connected to outlet port 2.

Outlet port 4 connected to exhaust port 5.

#### Vacuum Applications (Device becomes NO):

- '1' port is connected to atmosphere or compressed air † when required.
- 2' port is outlet
- '3' port is connected to vacuum
- \* When both vacuum and compressed air are required, maximum pressure is 85 PSIG (586 kPa).

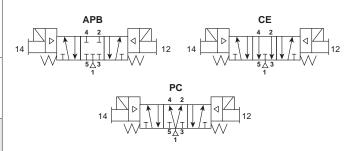
# **Double Solenoid**

4-Way, 3-Position

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With 12 operator energized – inlet port 1 connected to cylinder port 2, cylinder port 4 connected to exhaust port 5.

With 14 operator energized – inlet port 1 connected to cylinder port 4, cylinder port 2 connected to exhaust port 3.

#### Function 1: All Ports Blocked (APB)

All ports blocked in the center position.

#### Function 2: Center Exhaust (CE)

Cylinder ports 4 and 2 connected to exhaust ports 5 and 3 in center position. Port 1 is blocked.

#### **Function 3: Pressure Center (PC)**

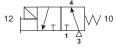
Pressure port 1 connected to cylinder ports 4 and 2, and exhaust ports 5 and 3 blocked in center position.

#### **Dual Pressure (Subbase valves only):**

May be used for dual pressure service with pressure at ports 3 & 5. **Specify External Pilot option "X" on Valve AND Manifold.** In the 3-Position valve, the effect of dual pressure is extremely important when the valve is in the center position, as the CE and PC functions are reversed. Therefore, care should be used when selecting a 3-Position valve.

# Single Solenoid

3-Way, 2-Position NO\*



#### **Normally Open:**

D100

De-energized position – Solenoid 12 de-energized. Pressure at inlet port 3 connected to outlet port 2, exhaust port 1 is blocked.

Energized position – Solenoid 12 energized. Pressure at inlet

port 3 blocked, outlet port 2 connected to exhaust port 1.

\* To obtain NO function, ports 1 & 3 are reversed (1 becomes exhaust and 3 becomes supply).

#### Vacuum Applications (Device becomes NC):

- '1' port is connected to vacuum
- '2' port is outlet
- '3' port is connected to atmosphere or compressed air † when required.
- † When both vacuum and compressed air are required, maximum pressure is 58 PSIG (400 kPa).

**Caution:** Normally Open and Normally Closed 3-Way valve <u>cannot</u> be mixed on the same manifold.

"A00" Valve "A05" Valve "A12" Valve

## Flow Ratings\*

• A00: .02 Cv

• A05: .18 Cv

• A12: .47 Cv

# **Operating Pressure**

- Vacuum to 100 PSIG\*
- A00S (NO) vacuum to 70 PSIG

#### **Ports**

• A00: M3

• A05: M5

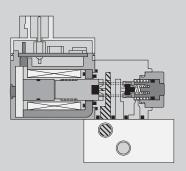
• A12: 1/8 Inch

# **Mounting**

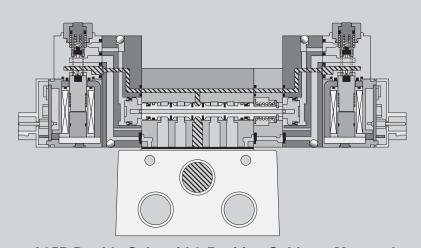
- Inline
- Subbase Mount

# **Solenoids**

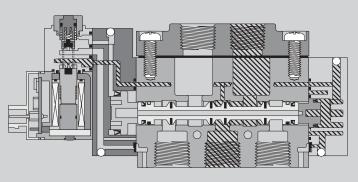
- 0.6 Watt
- 5VDC, 12VDC, 24VDC and 110/120VAC
- LED and Surge Suppression



**A00S Single Solenoid Normally Closed (NC)** 



**A05P Double Solenoid 3-Position Subbase Mounted** 



**A12R Single Solenoid Inline** 





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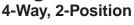
Viking Xtreme

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<sup>\*</sup> See catalog technical section for more information.

# Single Solenoid







## Inline

		4 2	
14		↓ / <sub>T</sub>	12
·		5 △ 3 1	

A05	A05RS251PM5MF	24VDC	M5	.17 Cv
	A05RS252PM5MF	12VDC	CIVI	.17 CV
A12	A12RS251PN1MF	24VDC	1/8"	47.00
	A12RS252PN1MF	12VDC	1/8	.47 Cv

#### Subbase

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A05	A05PS251P	24VDC	Less	.18 Cv
	A05PS252P	12VDC	Base	.10 CV
A12	A12PS251P	24VDC	Less	.44 Cv
	A12PS252P	12VDC	Base	.44 CV

**Note:** Wired electrical connectors sold separately. See Accessory Section.

# **Double Solenoid**

4-Way, 2-Position



#### Inline

niine	5 <u>∆</u> 3			
A05	A05RD251PM5MF	24VDC	M5	.17 Cv
	A05RD252PM5MF	12VDC	CIVI	.17 CV
<b>A12</b>	A12RD251PN1MF	24VDC		

12VDC

A12RD252PN1MF

1/8"

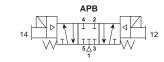
.47 Cv

#### **Subbase**

A05	A05PD251P	24VDC	M5	.18 Cv
	A05PD252P	12VDC	IVIO	.16 CV
A12	A12PD251P	24VDC	1/8"	.44 Cv
	A12PD252P	12VDC	1/8	.44 CV

## Double Solenoid 4-Way, 3-Position, APB





#### Inline

A05	A05RD351PM5MF	24VDC	M5	M5 16 Cv	.16 Cv
	A05RD352PM5MF	12VDC	CIVI	.16 CV	
A12	A12RD351PN1MF	24VDC	1/8"	.43 Cv	
	A12RD352PN1MF	12VDC	1/0	.43 CV	

#### Subbase

A05	A05PD351P A05PD352P	24VDC 12VDC	Less Base	.16 Cv
A12	A12PD351P	24VDC	Less	.40 Cv
	A12PD352P	12VDC	Base	.40 60

#### ANSI Cv vs. JIS Cv

For Pneumatic Valve flow, the measurement **Cv** – Coefficient of Flow – is used to convey to the user how much air can flow through a given valve. Most valve manufactures publish this information in their catalogs to assist the user in choosing the proper valve for their application. In publishing this data however, there are discrepancies in how the

**Cv** is calculated, resulting in some **Cv**'s being OVERSTATED by **20 to 40%**. This can adversely affect the user's application because the valve flows LESS than the published **Cv**.

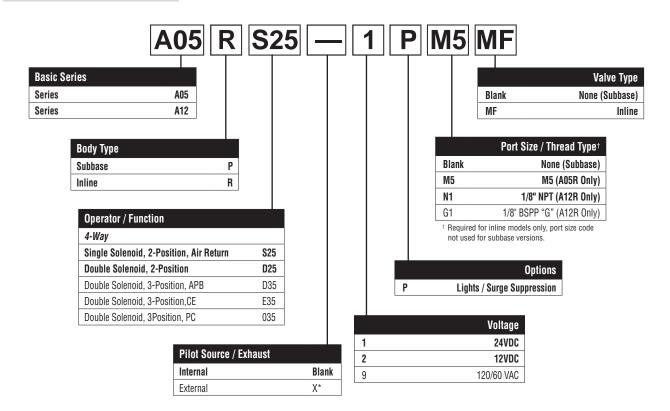
The reason for the large discrepancy is in the method of calculation - the ANSI (NFPA) or the JIS standard.

Parker's **Cv** valve is calculated using the ANSI (NFPA) T3.21.3-1990 standard. The ANSI (NFPA) method is a structured test using very specific tube sizes and lengths, inlet pressures and pressure drops, and volume chambers.

Locking Flush Override. Mounting screws and gaskets included with valve.

# "ADEX" Series

#### **BOLD OPTIONS ARE MOST POPULAR.**





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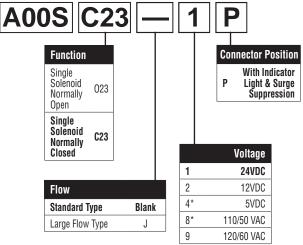
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#### **Common Part Numbers**

# Valve Only – Single Solenoid 3-Way, 2-Position\*



<sup>\*</sup> Screwdriver-Operated, Locking Manual Override (LMOR).



<sup>\*</sup> Special Order

#### Subbase

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	Model Number	All Ports
A00	A00SBM3	M3

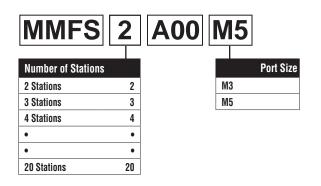
Mounting screws and gaskets included with valve.

## Manifold\*



Normally Closed valves (A00SC23•P) and Normally Open valves (A00S023•P) cannot be mounted on the same manifold simultaneously.

Mounting screws and gaskets included with valve.



#### **BOLD OPTIONS ARE MOST POPULAR.**



### **IEM Bar Manifold**



4-Way, NPTF (Individual Wiring Type)	MMFU##A05F
4-Way, NPTF (Collective Wiring Type)	MMCU‡‡A05F

## - stations 2 to 20 ‡‡ - stations 2 to 12

(Even numbers only)

- Utilizes Inline mount ADEX valves.
- Bolts and Gaskets are included with valve.
- A05 Collective Wiring Type Manifold Kits also include an Adapter Plate for use with the MCS Module.



4-Way, NPTF (Individual Wiring Type)	MMFU##A12F
4-Way, NPTF (Collective Wiring Type)	MMCU‡‡A12F

## - stations 2 to 20

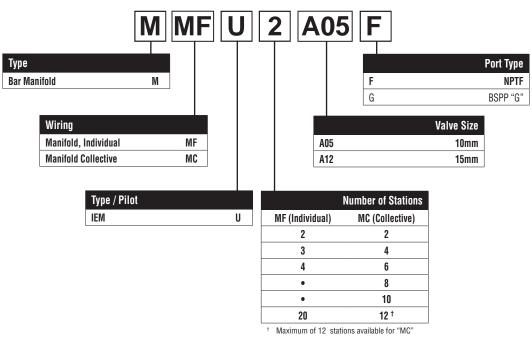
‡‡ - stations 2 to 12

(Even numbers only)

Pilot Exhaust for IEM Manifold is captured through the "3" and "5" galley.

# **Model Number**

#### **BOLD OPTIONS ARE MOST POPULAR.**



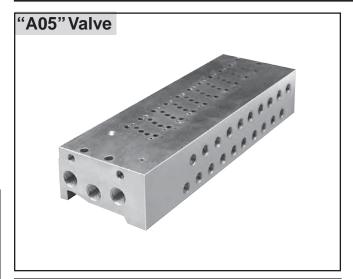
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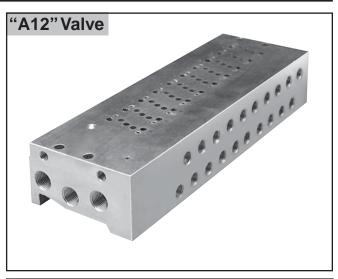
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4-Way, M5 (Individual Wiring Type)	MMFS##A05FM5
4-Way, M5 (Collective Wiring Type)	MMCS‡‡A05FM5

## - stations 2 to 20 ‡‡ - stations 2 to 12 (Even numbers only)

- Utilizes Subbase mount ADEX valves.
- Bolts and Gaskets are included with valve.



4-Way, 1/8" NPTF (Individual Wiring Type)	MMFS##A12FF1
4-Way, 1/8" NPTF (Collective Wiring Type)	MMCS‡‡A12FF1

## - stations 2 to 20 ‡‡ - stations 2 to 12

(Even numbers only)

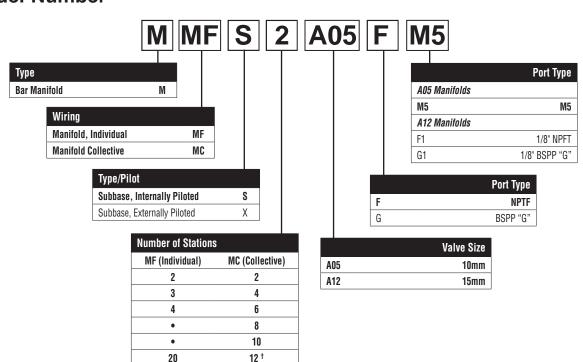
#### Internally Piloted Manifolds -

Pilot exhaust is captured through the "3" and "5" galley.

#### Externally Pilot Manifold -

Pilot exhaust is captured through the "Y" galley.

#### **BOLD OPTIONS ARE MOST POPULAR. Model Number**

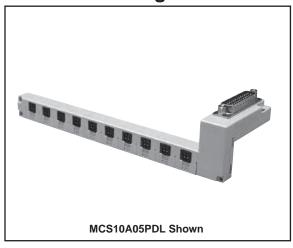


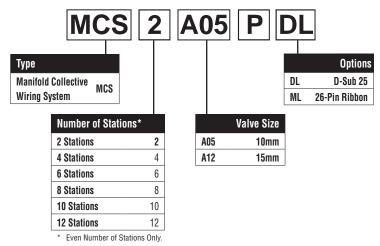
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## **Collective Wiring**

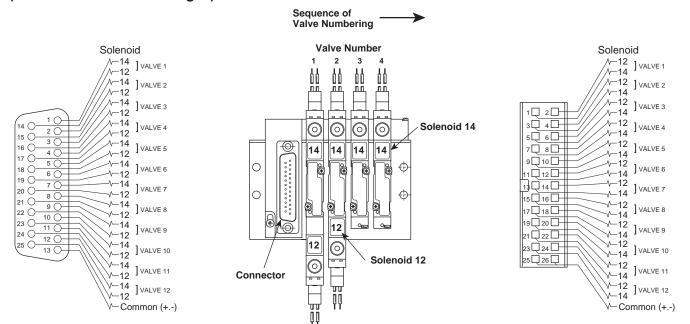




**BOLD OPTIONS ARE MOST POPULAR.** 

# **Collective Wiring Pin Mapping**

(Not Available for AC Voltages)



Pin Map for D-Sub 25 Connector

Valve and Solenoid Addresses

Pin Map for 26-Pin Ribbon Connector

#### Notes:

- The MCS Collective Wiring System is "Polarity Neutral". Polarity is addressed with the Collective Wired Connectors (page D108).
  - Example: When 'positive' common is used, an A05 single solenoid valve uses an A05PSCC. When
  - 'negative' common is used, use A05PSCCM.

- 2. The MCS Collective Wiring System provides for both the "14" and "12" addresses at each valve location. When single solenoid valves are used, skip the "12" address for both wiring and controller programming.
- Be sure that the leakage current of the controller outputs is less than 1.5 ma.



# **Individual Wired Connectors**

#### P / R Type

Size	Voltage	Length	Part Number
A00		.5 meter	A05PDCCL5
A05	DC	1 meter	A05PDCCL10
		3 meter	A05PDCCL30
A12	40	.5 meter	A05PACCL5
	AC	1 meter	A05PACCL10

A05PDCCL##

DC Voltage: Positive "+" (Red Wire) Negative "-" (Black Wire)

AC Voltage: Both Wires are Blue (Polarity Neutral)

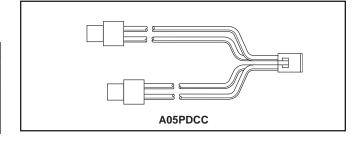
## **Collective Wired Connectors** P / R Type

NPN

A05PSCC

A05PDCC

**Part Number** Size **PNP** A05 Single A05PSCCM A12 A05PDCCM Double



PNP = SOURCING = "Negative Common" = Yellow Wires

NPN = SINKING = "Positive Common" = Red Wires



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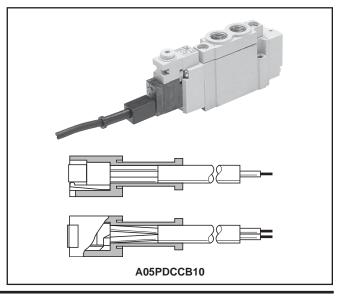
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# **Wired Connectors with** Protective Cover - P / R Type

	7.		
Size	Length	Part Number	
A00			
A05	1 meter	A05PDCCB10	
A12			

The cover is made of chloroprene rubber for electrical use, assuring excellent weather and insulation resistance. However, be careful not to place it under splash of cutting oil.

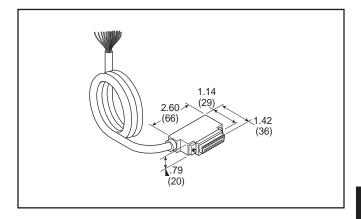




# Cable with Female D-Sub, 25-Pin Connector

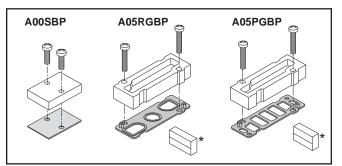
Part Number	Description	
DSS25FB1K	25-Pin, D-Sub Cable, 1 meter (3.3 ft.)	

Note: For use with ADEX MCS system only. Connection to control system is through 25 colored wires AWG 24. Includes (2) M2.5 mm screws.



# **Blanking Plate**

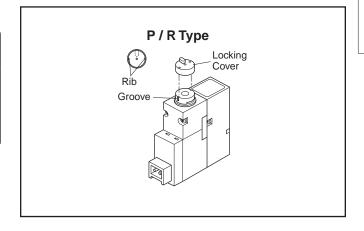
Size	Туре	Part Number
A00	Subbase	A00SBP
A05	Body Ported	A05RGBP
	Subbase	A05PGBP
A12	Body Ported	A12RGBP
	Subbase	A12PGBP



<sup>\*</sup> Outlet Pin Cover used with Collective Wiring System only.

# **Extended Override Cover**

Size	Orange: For 14 Side Solenoid	Green: For 12 Side Solenoid
A00		
A05	A05PLA	A05PLB
A12		





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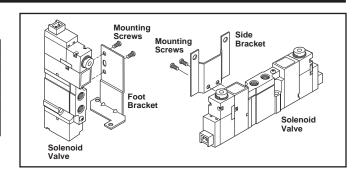
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# **Mounting Bracket**

Size	Туре	Part Number
A05	Side	A05RBS
	Foot	A05RBF
A12	Side	A12RBS
	Foot	A12RBF

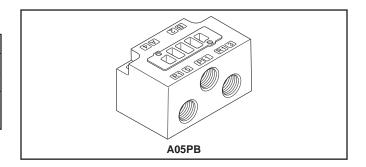
Kit Includes: (1) Bracket, (2) Screws



### **Subbases**

Size	Port Size	Part Number
A05	1/8" NPT	A05PBN1
	1/8" BSPP "G"	A05PBG1
A12	1/4" NPT	A12PBN2
	1/4" BSPP "G"	A12PBG2

Kit Includes: (1) Subbase (Holddown Bolts and Gasket are included with valve)



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# **Individual Air Supply Spacer**

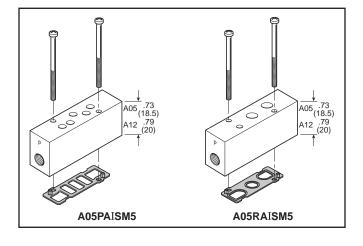
Mounts between valve and manifold. Supply from the manifold is blocked and only the valve mounted on the spacer receives the individual supply.

Size	Туре	Port Size	Internal Pilot Part Number	External Pilot* Part Number
A05	Inline	M5	A05RAISM5	A05RAXISM5
	Subbase	M5	A05PAISM5	A05PAXISM5
A12	Inline	1/8" NPT	A12RAISN1	A12RAXISN1
	Subbase	1/8" NPT	A12PAISN1	A12PAXISN1

Can only be used on Collective wiring type manifolds.

 $\underline{\ }^*$  Can only be used with External Piloted valve. External pilot is located on the X Port of the manifold

Kit Includes: (1) Spacer, (2) Screws, and (1) Gasket



# Individual Air Exhaust Spacer

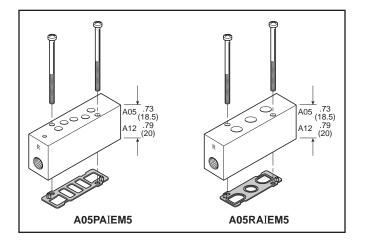
Mounts between valve and manifold. Exhaust from the manifold is blocked and only the valve mounted on the spacer has the individual exhaust.

Size	Туре	Port Size	Internal Pilot Part Number	External Pilot* Part Number
A05	Inline	M5	A05RAIEM5	A05RAXIEM5
	Subbase	M5	A05PAIEM5	A05PAXIEM5
A12	Inline	1/8" NPT	A12RAIEN1	A12RAXIEN1
	Subbase	1/8" NPT	A12PAIE N1	A12PAXIEN1

Can only be used on Collective wiring type manifolds.

\* Can only be used with External Piloted valve. External pilot is located on the X Port of the manifold

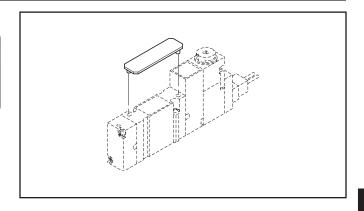
Kit Includes: (1) Spacer, (2) Screws, and (1) Gasket





# **Labeling Tag**

Size	Description	Part Number
A05 A12	White Label Tag	A05PN



## **Exhaust Mufflers**

Male Thread	Model Number
M5	P6M-PAC5
1/8" NPT	EM12
1/4" NPT	EM25

P6M - Plastic; EM - Sintered Bronze

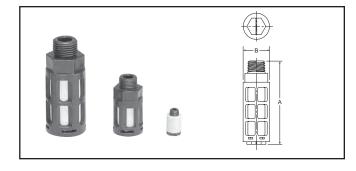


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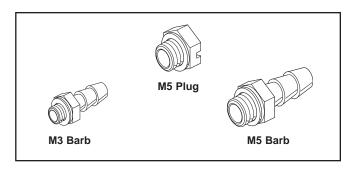
# **Plastic Silencers**

Thread	Part Number		A (mm)	B (mm)	
Size	NPT	BSPT "R"			
M5	AS-5		.43 (11)	.32 (8)	
1/8"	ASN-6 AS-6		1.57 (40)	.63 (16)	
1/4"	ASN-8 AS-8		2.56 (65)	.83 (21)	



# M3 & M5 Fittings

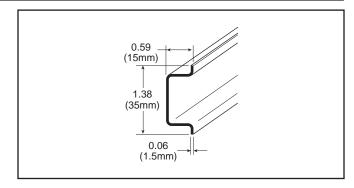
Description	Part Number
M5 Plug Fitting	N220-1900J
M3 to 3mm Barb	BC03M3
M3 to 4mm Barb	BC04M3
M5 to 3mm Barb	BC03M5





## **DIN Rail**

Part Number	Description	
AM1DE200	6 Foot Rail Length	



# **DIN Rail Hardware Kit**

Size	Tune Dord Number			Dimensions		
Size	Туре	Part Number	Α	В	С	
A05	IEM	MFUA05DB	2.24	1.00	.31	
	Subbase	MFSA05DB	(57)	(25)	(8)	
A12	IEM	MFUA12DB	2.91	1.00	.39	
	Subbase	MFSA12DB	(74)	(25)	(10)	

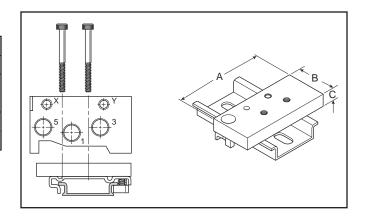
Kit includes: (2) Screws, (2) Clamps

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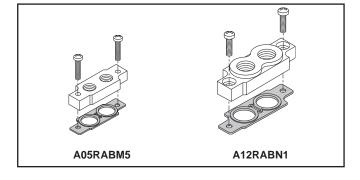
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# Replacement Kits Cylinder Port Plate Kits

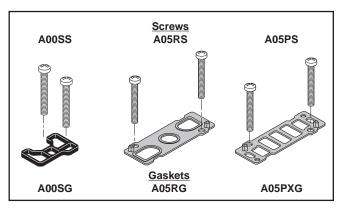
Size	Fitting	Part Number
A05	M5	A05RABM5
A12	1/8" NPT	A12RABN1
	1/8" BSPP "G"	A12RABG1



#### **Base Gasket Kits**

Size	Туре	Gasket Only	Screw
A00	Subbase	A00SG	A00SS
A05	Body Ported	A05RG	A05RS
	Subbase Int.	A05PG	A05PS
	Subbase Ext.	A05PXG	A05PS
A12	Body Ported	A12RG	A12RS
	Subase Int.	A12PG	A12PS
	Subbase Ext.	A12PXG	A12PS

These are spare parts, mounting screws and gaskets included with valves.





#### **General Characteristics**

# Flow Rating (Cv)

Size	Port Sizo	Port Size Mounting Style	ANSI /	(NFPA)	JIS Method		
Size Port Size	Fort Size		2-Position	3-Position	2-Position	3-Position	
A00	M3	Subbase	.010	_	_	_	
	M5	Subbase	.017	_	_	_	
A00****J	M5	Subbase	.020	_	_	_	
A05	M5	Inline	.18	.16	.22	.20	
	M5	Subbase	.17	.16	.32	.32	
A12	1/8" Ports	Inline	.47	.43	.48	.46	
	1/8" Ports	Subbase	.44	.40	.61	.42	

ANSI / (NFPA) T3.21.3-1990 standard for Cv measurement.

## **Response Time**

Value Cine	Dout Cine		0 Cu. In. Te	st Chamber			
Valve Size	Port Size		Fill	Exhaust			
2-Position S	2-Position Single Solenoid / Air Return						
A00	М3		.004	.006			
A05	M5		.014	.025			
A12	1/8"		.016	.030			
2-Position D	ouble Solence	oic	I				
A00	М3		_	_			
A05	M5		.011	.015			
A12	1/8"		.010	.012			
3-Position D	ouble Solenc	oic	I				
A00	М3			_			
A05	M5		.013	.017			
A12	1/8"		.013	.014			

**Average Fill Time (Seconds):** With 100 PSIG supply, time required to fill from 0-90 PSIG and exhaust from 100 PSIG to 10 PSIG is measured from instant of energizing, or de-energizing 24VDC solenoid. Times shown are average.

Tested per ANSI / (NFPA) T3.21.8.

# **Temperature Rating**

Intermittent Duty (AC & DC Voltage):

32°F to 122°F (0°C to 50°C) Voltage Rated +10 / -10%

**Continuous Duty (DC Voltage Only):** 

32°F to 104°F (0°C to 40°C) Voltage Rated +0 / -10%

# **Operating Pressure**

**Maximum: 4-Way:** 100 PSIG (690 kPa)

**3-Way:** 100 PSIG (690 kPa) NC\* 70 PSIG (483 kPa) NO\*

#### Minimum:

Description		Interna	al Pilot	External Pilot	
		PSIG	kPa	PSIG	kPa
	0: 1 0 1 :1		450	Vac	uum
4 30/	Single Solenoid	22	152	36	248
	Double Solenoid –	15 30	104	Vacuum	
4-Way	2-Position			36	248
	Double Solenoid -		207	Vacuum	
	3-Position		207	36	248
3-Way	A00 Series	Vacuum			

EZ

Z

## **Solenoid Information**

	Standard					
Power		With Indicator Light & Surge Suppressor				
	D	C	W	0.6		
	AC	100V	VA	1.2		
		110V	VA	1.4		
Consumption	High Flow					
				With Indicator Light & Surge Suppressor		
	DC		W	0.91		
	AC	100V	VA	_		
	110V		VA	_		

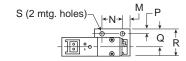


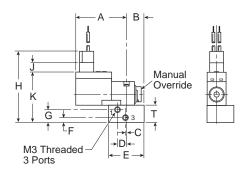
<sup>\*</sup> When using vacuum and pressure on ports 1 & 3 – 85 PSIG (586 kPa) NC; 58 PSIG (400 kPa) NO (see page D100).

В

# Subbase







Q & B Option

A00 - Subbase

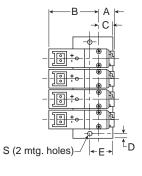
<b>A</b> 1.00 (25)	<b>A</b> <sub>1</sub> 1.18 (30)	B .41 (11)	<b>C</b> .015 (.4)	.17 (4)
<b>E</b>	<b>F</b> .12 (3)	<b>G</b>	<b>H</b>	<b>H</b> <sub>1</sub>
.79		.28	1.54	1.38
(20)		(7)	(39)	(34)
<b>J</b>	<b>J</b> <sub>1</sub> .20 (5)	<b>K</b>	L	<b>M</b>
.24		1.11	.32	.18
(6)		(28)	(8)	(5)
<b>N</b>	<b>P</b> .10 (3)	<b>Q</b>	<b>R</b>	\$
.47		.39	.59	.106
(12)		(10)	(15)	(2.7)
<b>T</b> .38 (10)				

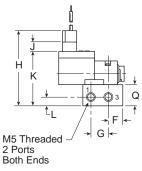
Inches (mm)

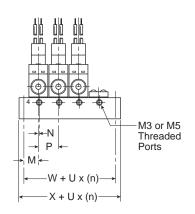
#### P & S Option

# A00

# **Manifold**







#### A00 - Manifold

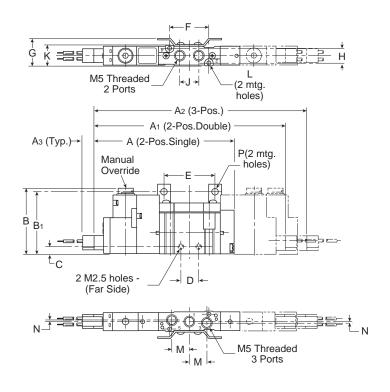
<b>A</b> .36 (9)	<b>B</b> 1.00 (25)	<b>C</b> .31 (8)	<b>D</b> .10 (3)	<b>E</b> .51 (13)
<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>
.31	.39	1.63	.20	1.22
(8)	(10)	(42)	(5)	(31)
<b>L</b>	<b>M</b>	<b>N</b>	<b>P</b>	<b>Q</b>
.20	.33	.02	.41	.47
(5)	(9)	(.6)	(10.5)	(12)
<b>S</b>	<b>U</b>	X	<b>W</b>	
.125	.41	.45	.26	
(3.2)	(10.5)	(11.5)	(6.5)	

Inches (mm)

n = Number of stations.

EZ

# Single & Double Operators - Inline



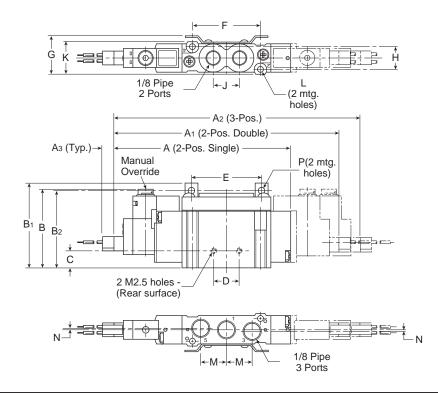
#### A05R - Inline

<b>A</b> 2.91 (74)	<b>A</b> <sub>1</sub> 3.94 (100)	<b>A</b> <sub>2</sub> 4.25 (108)	<b>A</b> <sub>3</sub> .24 (6)	<b>B</b> 1.38 (35)
<b>B</b> <sub>1</sub> 1.30 (33)	C .16  (4)	.38 (10)	E 1.06 (27)	<b>F</b> .83 (21)
<b>G</b> .57 (15)	<b>H</b> .33 (9)	<b>J</b> .40 (10)	<b>K</b> .45 (11.4)	<b>L</b> Ø .08 Ø (2.1)
M .37 (10)	<b>N</b> .04 (1)	<b>P</b> Ø .14 Ø (3.5)		

Inches (mm)

# **A12**

# Single & Double Operators - Inline

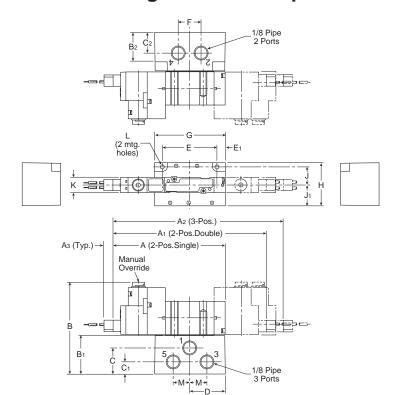


#### A12R - Inline

<b>A</b>	<b>A</b> <sub>1</sub>	<b>A</b> <sub>2</sub>	<b>A</b> <sub>3</sub> .24 (6)	<b>B</b>
3.68	4.69	5.12		1.64
(94)	(119)	(130)		(42)
<b>B</b> <sub>1</sub>	<b>B</b> <sub>2</sub>	<b>C</b>	<b>D</b> .51 (13)	<b>E</b>
1.77	1.70	.35		1.46
(45)	(43)	(9)		(37
<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>
1.42	.80	.47	.55	.68
(36)	(20)	(12)	(14)	(17)
<b>L</b>	<b>M</b>	N	<b>P</b>	
Ø .12	.55	.03	Ø .14	
Ø (3.1)	(14)	(0.8)	Ø (3.5)	

Inches (mm)

# A05 Single & Double Operators – Subbase

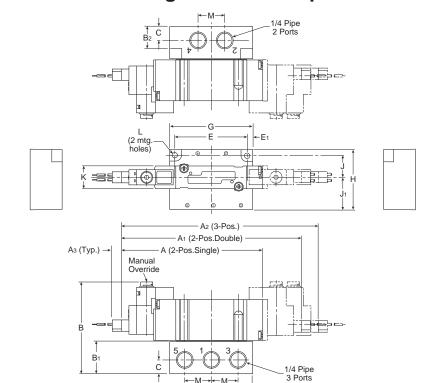


#### A05P - Subbase

<b>A</b>	<b>A</b> <sub>1</sub>	<b>A</b> <sub>2</sub>	<b>A</b> <sub>3</sub>	<b>B</b> 2.35 (60)
2.91	3.94	4.25	.24	
(74)	(100)	(108)	(6)	
<b>B</b> <sub>1</sub> .96 (25)	<b>B</b> <sub>2</sub> .75 (19)	<b>C</b> .65 (17)	C <sub>1</sub> .30 (8)	.53 (14)
<b>D</b>	E	<b>E</b> 1 .20 (5)	<b>F</b>	<b>G</b>
.89	1.38		.57	1.77
(23)	(35)		(15)	(45)
<b>H</b>	<b>J</b>	<b>J</b> <sub>1</sub>	<b>K</b>	<b>L</b>
.08	.45	.51	.39	Ø .13
(28)	(11.5)	(13)	(10)	Ø (3.2)
<b>M</b> .45 (12)				

Inches (mm)

# Single & Double Operators - Subbase



#### $A_2$ Аз 5.12 3.68 4.69 .24 2.41 (119)(94)(130)(6) (61) $B_2$ С D Ε .75 .37 1.10 1.89 (22)(19)(10)(28)Εı G Н J

A12P - Subbase

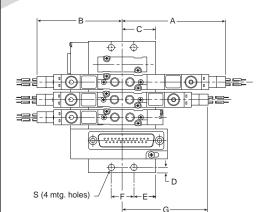
(48)J1 .57 .16 2.20 1.59 .87 (14.5)(4)(56)(41)(22)L Ø .17 .59 .71 (15)Ø (4.3)

Inches (mm)

Both Ends

**A05** 

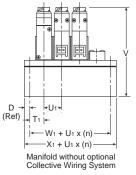
## Manifold - Valve Inline



# A05R - Manifold, Valve Inline

<b>A</b> 2.52 (64)	<b>B</b> 2.21 (56)	.94 (24)	<b>D</b> .16 (4)	.61 (16)	<b>F</b> .63 (16)
<b>G</b>	<b>H</b>	<b>J</b>	<b>M</b>	<b>Q</b>	<b>S</b>
2.21	.94	.61	.37	.63	Ø .18
(56)	(24)	(16)	(10)	(16)	Ø (4.5)
<b>T</b>	<b>T</b> <sub>1</sub> .51 (13)	<b>U</b>	<b>U</b> <sub>1</sub>	<b>V</b>	<b>W</b>
1.34		.49	.41	2.32	1.36
(34)		(12.5)	(10.5)	(59)	(35)
<b>W</b> <sub>1</sub> .37 (9.5)	<b>X</b> 167 (43)	X <sub>1</sub> .68 (17.5)			

Inches (mm)



n = Number of stations.

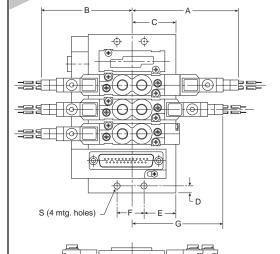
A12R - Manifold, Valve Inline

### A12 Manifold - Valve Inline

D

W + U x (n)

 $X + U \times (n)$ 



М

			,		
<b>A</b> 3.01 (77)	<b>B</b> 2.58 (66)	<b>C</b> 1.14 (29)	<b>D</b> .20 (5)	<b>E</b> .76 (19)	<b>F</b> .77 (19.6)
<b>G</b> 2.58 (66)	<b>H</b> 1.08 (28)	<b>J</b> .71 (18)	<b>M</b> .41 (11)	<b>Q</b> .77 (20)	<b>S</b> Ø .18 Ø (4.5)
T 1.48 (38)	<b>T</b> <sub>1</sub> .51 (13)	<b>U</b> .69 (17.5)	<b>U</b> <sub>1</sub> .63 (16)	<b>V</b> 2.74 (70)	<b>W</b> 1.34 (34)
<b>W</b> <sub>1</sub> .39 (10)	X 1.73 (44)	X <sub>1</sub> .79 (20)			

/ /		) v
D→	+T1→+-U1→	
(Ref)	₩1 + U1 x (n)	→
	≺ X1 + U1 x (n)	
	Manifold without optional	
	Collective Wiring System	n = Number of stations.
		II - I dillibol di stationis.

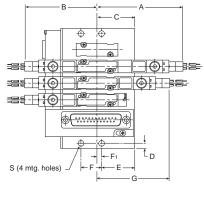
Inches (mm)

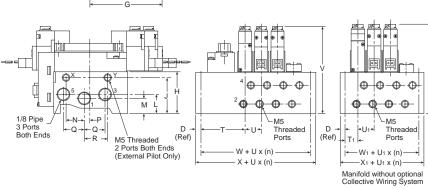
1/4 Pipe 3 Ports Both Ends ⊷U→

W + U x (n)  $X + U \times (n)$ 

**A12** 

# Manifold - Side Ports





#### A05P - Manifold, Side Ports

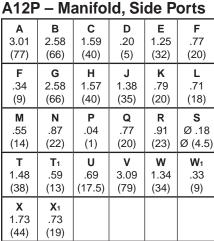
<b>A</b> 2.52 (64)	<b>B</b> 2.21 (56)	<b>C</b> 1.12 (29)	<b>D</b> .16 (4)	E 1.00 (26)	<b>F</b> .63 (16)
<b>F</b> <sub>1</sub>	<b>G</b>	<b>H</b>	<b>J</b>	<b>L</b>	<b>M</b>
.19	2.21	1.26	1.08	.59	.45
(5)	(56)	(32)	(28)	(15)	(11.5)
N	<b>P</b> .13 (3)	<b>Q</b>	<b>R</b>	<b>S</b>	T
.55		.63	.71	Ø .18	1.34
(14)		(16)	(18)	Ø (4.5)	(34)
T <sub>1</sub> .39 (10)	<b>U</b>	<b>U</b> <sub>1</sub>	<b>V</b>	<b>W</b>	<b>W</b> <sub>1</sub>
	.49	.41	2.64	1.32	.37
	(12.5)	(10.5)	(67)	(34)	(10)
X 1.65 (42)	X <sub>1</sub> .67 (18)				

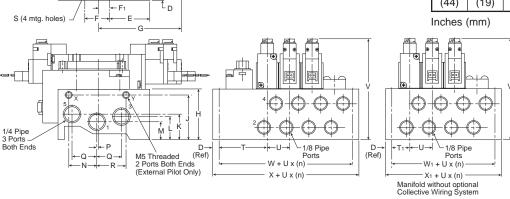
Inches (mm)

n = Number of stations.

## Manifold - Side Ports

# Manifold – Side Ports





n = Number of stations.