ASCO numatics EXPRESS SHIPPING PROGRAM

Valid from 11/01/13 until 01/31/14

www.asconumatics.ca

EMERSON. Industrial Automation

Shipping Program Details

The **ASCO Numatics Express Shipping Program** provides 1 Day delivery for a variety of fluid automation products and assemblies.

The program includes the most popular configurations of **ASCO RedHat valves, Numatics Directional Control 2000 Series and Mark Series, including individual bases, manifold blocks and sandwich regulators.** Additionally, **Air Preparation Equipment (FRLs)** and **A Series NFPA cylinders** are part of the Express Program.

ASCO Numatics will ship any order received prior to **1 pm EST** for up to **5 pieces** of ASCO valve assemblies, Air Preparation and NFPA cylinders and up to **2 pieces** of Numatics assembly kits and manifolds configured from this catalogue in 1 Business Day. *(Example: Orders received Monday prior to 1pm will ship by or before end of business on Tuesday)*. Saturdays, Sundays and Holidays are excluded. ASCO Numatics Express orders cannot be cancelled or adjusted once entered.

We are committed to providing you with an unmatched level of customer service, quality and reliability. If you cannot locate the specific product for your application or need additional product specifications, please visit www.asconumatics.ca or call 1.866.696.1601.

How to Order

Find the part number you are looking for in the provided tables.
The tables provide information on the following characteristics to help in making your choice:

• Pipe Size	• ASCO Numatics Catalogue Number	• Wattage
• Orifice Size	• Body Material	• Function
• Cv Flow	• Voltage	• Mounting
• Operating Pressure Differential	• Maximum Fluid Temperature	• Wiring Option

ASCO®

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)									Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Max AC@131°F			Max DC@104°F			Max DC@131°F								
			Air	Water	Light Oil	Air	Water	Light Oil	Air	Water	Light Oil	AC	DC			AC	DC
Normally Closed, NBR Disc																	
1/8	3/64	0.06	750	750	725	750	640	550	750	600	500	180	180	① 8262H001	Brass	6.1/F	10.6/H

numatics

① 051 BB 4 Z2 M N 000 61

Valve Series & Port Size
051* = 1/8 (Threaded)
*Use for valve unit only (mounting =00)

Valve Type
BB = Double Solenoid Pilot with flush non-locking override

Function
4 = 2 Poistion, 4-way

Mounting
Z2 = Manifold Block w/Side & Bottom Ports Double Solenoid Internal Circuit Board

Voltage
61 = 24 VDC

Options
000 = No Options

Port Type
N = NPTF (1/8 only)

Wiring Option
M = Plug-in DC w/Light

① Catalogue Number

When ordering any Product, simply supply the **Catalogue Number** located in the table. Example: 8262H001

CAUTION: Users should consult www.asconumatics.ca for Catalogue 35 to see complete specification for the product selected from this catalogue. Users should consult www.numatics.com to see complete specifications on Numatics products.

⚠**WARNING:** Improper selection or use of products and related items in this catalogue can cause death, serious injury, or property damage.

† As Industry requirements change, ASCO Numatics reserves the right to modify the contents of this catalogue and program without notification. Updates on this program can be obtained from the ASCO Numatics website www.asconumatics.ca or by calling 1.866.696.1601 or by contacting your local ASCO Numatics representative or distributor and referencing the ASCO Numatics Express program

Table of Contents

How To Order—Mechanical

Click on the Bulletin number (ie. 8030) to link to the corresponding technical specifications page for full valve details.

Bulletin	Chg	Suffix	AC	DC
8030				
8030	G003		♦	
8030	G013		♦	
8030	G017		♦	
8030	G066		♦	
8040				
8040	H006		♦	
8040	H007		♦	
8040	H008		♦	
8040	G021		♦	
8040	G022		♦	
8040	G023		♦	
8210				
8210	G001		♦	♦
8210	G001	HW	♦	
8210	G002		♦	♦
8210	G002	HW	♦	
8210	G002	V	♦	♦
8210	G003		♦	♦
8210	G004		♦	♦
8210	G004	V	♦	♦
8210	G006		♦	
8210	G007		♦	
8210	G008		♦	♦
8210	G009		♦	♦
8210	G009	HW	♦	
8210	G009	V	♦	♦
8210	G011		♦	
8210	G012		♦	
8210	G013		♦	
8210	G014		♦	
8210	G018		♦	
8210	G022		♦	♦
8210	G022	V	♦	
8210	G026		♦	
8210	G027		♦	
8210	G032		♦	
8210	G033		♦	♦
8210	G034		♦	♦
8210	G035		♦	♦
8210	G054		♦	
8210	G054	V	♦	
8210	G055		♦	
8210	G056		♦	
8210	G056	V	♦	
8210	G087		♦	♦
8210	G087	V	♦	♦
8210	G088		♦	♦
8210	G088	V	♦	♦
8210	G089		♦	
8210	G089	V	♦	
8210	G093		♦	♦
8210	G093	HW	♦	
8210	G094		♦	♦
8210	G094	HW	♦	
8210	G094	V	♦	♦
8210	G095		♦	♦
8210	G095	HW	♦	
8210	G095	V	♦	♦
8210	G100		♦	♦
8210	G100	V	♦	

Bulletin	Chg	Suffix	AC	DC
8210	G101		♦	♦
8210	G103		♦	
8210	G104		♦	
8210	G127		♦	♦
8210	G127	V	♦	♦
8210	G129		♦	♦
8210	G129	V	♦	♦
8214				
8214	G010		♦	
8214	G020		♦	
8214	G020	B	♦	
8214	G023		♦	
8214	G030		♦	
8214	G030	B	♦	
8214	G033		♦	
8215				
8215	G010		♦	♦
8215	G020		♦	♦
8215	G023		♦	
8215	G030		♦	♦
8215	G033		♦	
8220				
8220	G404		♦	
8220	G406		♦	
8220	G407		♦	
8220	G409		♦	
8220	G411		♦	
8220	G025		♦	
8220	G027		♦	
8220	G029		♦	
8220	G031		♦	
8221				
8221	G003		♦	♦
8221	G005		♦	♦
8221	G005	HW	♦	
8221	G007		♦	♦
8221	G007	HW	♦	
8221	G009		♦	
8221	G011		♦	
8221	G013		♦	
8223				
8223	G003		♦	♦
8223	G010		♦	♦
8223	G021		♦	
8223	G023		♦	♦
8223	G025		♦	♦
8223	G027		♦	
8262				
8262	H001		♦	♦
8262	H002		♦	♦
8262	H006		♦	♦
8262	H007		♦	♦
8262	H014		♦	♦
8262	H019		♦	♦
8262	H020		♦	♦
8262	H022		♦	♦
8262	H038			♦
8262	H090		♦	♦
8262	H086		♦	♦
8262	H202		♦	♦

Bulletin	Chg	Suffix	AC	DC
8262	H208		♦	♦
8262	H210		♦	♦
8262	H261		♦	♦
8263				
8263	H002		♦	♦
8263	H206		♦	♦
8263	H332		♦	♦
8316				
8316	G034		♦	
8316	G054		♦	♦
8316	G056		♦	
8316	G064		♦	♦
8316	G066		♦	
8316	G074		♦	♦
8316	G076		♦	
8221				
8320	G172		♦	♦
8320	G174		♦	♦
8320	G182		♦	♦
8320	G184		♦	♦
8320	G184	MO	♦	♦
8320	G186		♦	♦
8320	G200		♦	♦
8320	G202		♦	♦
8320	G212		♦	♦
8320	G215		♦	♦
8320	G224		♦	♦
8320	G230		♦	♦
8320	G231		♦	♦
8320	G702		♦	♦
8320	G712		♦	♦
8320	G714		♦	♦
8342				
8342	G022		♦	
8342	G001		♦	
8342	G001	MS	♦	
8342	G003		♦	
8342	G003	MS	♦	
8342	G020		♦	
8342	G701		♦	
8342	G701	MS	♦	
8344				
8344	G070	MO*	♦	♦
8344	G072	MO*	♦	♦
8344	G074		♦	♦
8344	G080		♦	♦
8344	G082		♦	♦
8345				
8345	G001		♦	♦
8345	G001	MO	♦	
8551				
8551	A001	MS	♦	♦
8551	A002	MS	♦	♦
8551	A017	MS	♦	♦
8551	A018	MS	♦	♦
8553	A017	MS	♦	♦
8553	A018	MS	♦	♦

*8344 MO option available in AC only

Return to Table of Contents

How To Order—AC Option

Type	Class	Prefix	120/60	240/60	24/60	208/60	480/60	550/60*
Conduit 18" Leads	F	None	♦	♦	♦	♦	♦	♦
Explosion Proof	F	EF	♦	♦	♦			
Spade	F	OFSF/OFSP	♦	♦	♦			
Din	F	SC/SD	♦	♦	♦			
Screw Terminals	F	OFKF/OFKP	♦	♦	♦			
JB with Spade	F	JSF/JSP	♦	♦	♦			
JB with Screw	F	JKF/JKP	♦	♦	♦			
Conduit 18" Leads	H	HT/HB	♦	♦	♦			
Conduit 72" Leads	F	L	♦	♦				
Conduit 72" Leads	H	HTL/HBL	♦					
Spade	H	OFSS/OFST	♦					
Din	H	SU/SV	♦					
Screw Terminals	H	OFKH/OFKB	♦					
JB with Spade	H	JSS/JST	♦					
JB with Screw	H	JKH/JKB	♦					
Explosion Proof 72" Leads	F	EFL	♦					
Explosion Proof	H	EFHT/EFHB	♦					

How To Order—DC Option

Type	Class	Prefix	24/DC	12/DC	48/DC	120/DC		
Conduit 18" Leads	F	None	♦	♦	♦	♦		
Explosion Proof	F	EF	♦	♦	♦	♦		
Spade	F	OFSF/OFSP	♦	♦				
Din	F	SC/SD	♦	♦				
Din	H	SU/SV	♦					
Screw Terminals	F	OFKF/OFKP	♦	♦				
JB with Spade	F	JSF/JSP	♦	♦				
JB with Screw	F	JKF/JKP	♦	♦				
Conduit 72" Leads	F	L	♦	♦	♦			
Conduit 18" Leads	H	HT/HB	♦	♦				
Explosion Proof	H	EFHT/EFHB	♦					

Notes:

- 8551 Series are only available in: SC, WT & EF (120/60 & 240/60 in AC and 12 & 24/DC in DC)
- 8553 Series are only available in: WT & EF 120/60 & 240/60 in AC and 12 & 24/DC in DC)
- 8262 Standard Class H in Catalogue 35 available in: 12/24DC Conduit and EF 24/DC
- 8210 (G127 & G129) only available in Explosion Proof (EF, EFL, EFHT)
- 20.1H Spaded, Screw and Din is not available

*Available on 6.1F & 10.1F Coils Only

Enclosure & Termination Prefix

WATTAGE	INS	SOLENOID OPTION REQUIRED						
		LEADS		SPADE		SCREW		DIN
		STANDARD						
		G.P.	EXPL. PROOF	JUNC. BOX	OPEN FRAME	JUNC. BOX	OPEN FRAME	STD
AC	RED HAT II							
6.1/FT, 9.5/FT	F	---	EF	JSF	OFSF	JKF	OFKF	SC
	H	HT	EFHT	JST	OFST	JKH	OFKH	SU
10.1/FT	F		EF	JSF	OFSF	JKF	OFKF	SC
	H	HT	EFHT	JST	OFST	JKH	OFKH	SU
16.1/FT	F	---	EF	JSF	OFSF	JKF	OFKF	SC
	H	HT	EFHT	JST	OFST	JKH	OFKH	SU
17.1/FB	F	---	EF	JSP	OFSP	JKP	OFKP	SD
	H	HB	EFHB	JSS	OFSS	JKB	OFKB	SV
20.1/FB	F	---	EF	JSP	OFSP	JKP	OFKP	SD
	H	HB	EFHB	JSS	OFSS	JKB	OFKB	SV
DC	RED HAT II							
10.6/FT	F	---	EF	JSF	OFSF	JKF	OFHF	SC
	H	HT	EFHT	---	---	---	---	---
11.6/FT	F	---	EF	JSF	OFSF	JKF	OFHF	SC
	H	HT	EFHT	---	---	---	---	---
22.6/FB	F		EF	JSP	OFSP		OFKP	SD
	H	HB	EFHB	---	---	---	---	---

Optional Feature Selection Instructions

Using the Enclosure & Termination Prefix table above, find the desired solenoid option along the top rows of the chart and the watt rating/class of coil insulation within the first two columns of the chart. Class F temperature protection is available, plus the higher temperature protection of a Class H coil. The choice of prefixes is shown as you read across and intersect your solenoid option and watt rating/class of coil choices.

For example, to select an 8262H002 valve with a Class H Open Frame Spade Terminal Solenoid, assuming the voltage to be 120 volts AC, 60 Hz:

- In the Specification Table for Series 8262, the Watt Rating/Class of Coil Insulation is 6.1/F for Catalogue Number 8262H002.
- Using the Enclosure & Termination Prefix table above, find the listing for ***Open Frame*** Solenoid under the ***Spade*** Terminal Coil along the top rows of the chart. Then, find 6.1/F within the first two columns of the chart. Reading across, you'll find the prefix "OFST." To order, specify Catalogue Number OF-ST8262H002, 120/60.

(**Note:** Always include the voltage and frequency.)

8030 Series Low Pressure Solenoid Valve (Direct Acting, 2/2)

- Pipe Sizes from 3/8” to 3/4” NPT
- Brass or Stainless Bodies
- Operate at low pressures: no minimum required; up to 15psi (1 bar) maximum differential
- Normally closed or normally open operation

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)			Max Fluid Temp °F	Catalogue Number	Body Material	Watt Rating
			Min	Max AC					
				Air	Water				
Normally Closed									
3/8	3/8	1.8	0	15	15	200	8030G013	Brass	10.1/F
1/2	7/16	2.8	0	15	15	200	8030G017	Brass	16.1/F
		2.8	0	4	6	125	8030G066	Stainless	6.1/F
3/4	3/4	5	0	2	2	200	8030G003	Brass	10.1/F

8040 Series Aluminum Body Solenoid Valve (Direct Acting or Piloted, 2/2)

- Pipe Sizes from: 1/8” to 3/4”
- Lightweight, low cost valves for air service
- Ideal for low pressure applications
- Provides high flow
- Air and vacuum service

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)		Max Fluid Temp °F	Catalogue Number	Body Material	Watt Rating
			Min	Max AC				
				Air - Fuel Gas				
Normally Closed								
1/8	5/16	1	0	15	125	8040H006	Aluminum	6.1/F
1/4	5/16	1.1	0	15	125	8040H007	Aluminum	6.1/F
3/8	5/16	1.2	0	15	125	8040H008	Aluminum	6.1/F
3/8	3/4	3.9	0	2	125	8040G021	Aluminum	10.1/F
1/2	3/4	5.4	0	2	125	8040G022	Aluminum	10.1/F
3/4	3/4	9.5	0	2	125	8040G023	Aluminum	10.1/F

8210 Series General Service Solenoid Valve (Pilot Operated, 2/2)

- Wide range of pressure ratings, sizes and resilient materials provide long service life and low internal leakage
- High flow valves for liquid, corrosive and air/inert gas service

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)							Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Min	Max AC			Max DC								
				Air	Water	Light Oil	Air	Water	Light Oil	AC	DC			AC	DC
Normally Closed															
3/8	5/8	3	5	200	150	135	125	100	100	180	150	8210G001	Brass	6.1/F	11.6/F
		3	5	-	125	-	-	-	-	210	-	8210G001HW	Brass	6.1/F	-
		3	5	200	150	135	125	100	100	180	150	8210G001V	Brass	6.1/F	11.6/F
		3	5	300	300	300	-	-	-	175	-	8210G006	Brass	17.1/F	-
		3	5	300	300	300	-	-	-	175	-	8210G006V	Brass	17.1/F	-
		3	0	150	150	-	40	40	-	180	150	8210G093	Brass	10.1/F	11.6/F
		3	0	-	100	-	-	-	-	210	-	8210G093HW	Brass	10.1/F	-
		3	0	-	100	-	-	-	-	210	-	8210G093V	Brass	10.1/F	-
1/2	5/8	4	5	200	100	100	125	100	100	180	150	8210G002	Brass	6.1/F	11.6/F
		4	5	-	125	-	-	-	-	210	-	8210G002HW	Brass	6.1/F	-
		4	5	200	100	100	125	100	100	180	150	8210G002V	Brass	6.1/F	11.6/F
		4	5	300	300	300	-	-	-	175	-	8210G007	Brass	17.1/F	-
		4	0	150	150	125	125	125	125	175	150	8210G087	Stainless	17.1/F	11.6/F
		4	0	150	150	125	125	125	125	175	150	8210G087V	Stainless	17.1/F	11.6/F
		4	0	150	150	-	40	40	-	180	150	8210G094	Brass	17.1/F	10.1/F
		4	0	-	100	-	-	-	-	210	-	8210G094HW	Brass	17.1/F	-
		4	0	150	150	-	40	40	-	180	150	8210G094V	Brass	17.1/F	10.1/F
3/4	3/4	6.5	5	250	150	100	125	125	125	180	150	8210G003	Brass	6.1/F	11.6/F
		5	5	125	125	75	100	90	75	180	150	8210G009	Brass	6.1/F	11.6/F
		5	5	-	125	-	-	-	-	210	-	8210G009HW	Brass	6.1/F	-
		5	5	125	125	75	100	90	75	180	150	8210G009V	Brass	6.1/F	11.6/F
		6	0	350	300	200	-	-	-	200	-	8210G026	Brass	16.1/F	-
		5	0	150	150	125	40	40	-	175	150	8210G088	Stainless	17.1/F	11.6/F
												8210G088V	Stainless		
		5	0	150	150	-	40	40	-	180	150	8210G095	Brass	10.1/F	11.6/F
		5	0	-	100	-	-	-	-	210	-	8210G095HW	Brass	10.1/F	-
		5	0	150	150	-	40	40	-	180	150	8210G095V	Brass	10.1/F	11.6/F
1	1	13	5	150	150	100	125	125	125	180	150	8210G004	Brass	6.1/F	11.6/F
		13	5	150	150	100	125	125	125	180	150	8210G004V	Brass	6.1/F	11.6/F
		13.5	0	300	225	115	-	-	-	200	-	8210G027	Brass	20.1/F	-
		13	0	150	125	125	-	-	-	180	-	8210G054	Brass	16.1/F	-
		13	0	150	125	125	-	-	-	180	-	8210G054V	Brass	16.1/F	-
		13	0	150	125	125	-	-	-	180	-	8210G089	Stainless	17.1/F	-
		13	0	150	125	125	-	-	-	180	-	8210G089V	Stainless	17.1/F	-
1 1/4	1 1/8	15	5	150	150	100	-	-	-	180	-	8210G008	Brass	6.1/F	-
		15	5	150	150	100	-	-	-	180	-	8210G008V	Brass	6.1/F	-
		15	0	150	125	125	-	-	-	180	-	8210G055	Brass	16.1/F	-
		15	0	150	125	125	-	-	-	180	-	8210G055V	Brass	16.1/F	-
1 1/2	1 1/4	22.5	5	150	150	100	125	125	125	180	150	8210G022	Brass	6.1/F	11.6/F
		22.5	5	150	150	100	125	125	125	180	150	8210G022V	Brass	6.1/F	-
		22.5	0	150	125	125	-	-	-	180	-	8210G056	Brass	16.1/F	-
		22.5	0	150	125	125	-	-	-	180	-	8210G056V	Brass	16.1/F	-
		22.5	5	150	150	100	125	125	125	180	150	EF8210G127	Stainless	6.1/F	11.6/F
		22.5	5	150	150	100	125	125	125	180	150	EF8210G127V	Stainless	6.1/F	11.6/F
2	1 3/4	43	5	150	125	90	50	50	50	180	150	8210G100	Brass	6.1/F	11.6/F
		43	5	150	125	90	50	50	50	180	150	8210G100V	Brass	6.1/F	-
		43	5	150	125	90	50	50	50	180	150	EF8210G129	Stainless	6.1/F	11.6/F
		43	5	150	125	90	50	50	50	180	150	EF8210G129V	Stainless	6.1/F	11.6/F
2 1/2	1 3/4	45	5	150	125	90	50	50	50	180	150	8210G101	Brass	6.1/F	11.6/F
Normally Open															
3/8	5/8	3	5	250	200	200	-	-	-	180	-	8210G011	Brass	10.1/F	-
		3	0	150	150	125	125	125	80	180	150	8210G033	Brass	10.1/F	11.6/F
1/2	5/8	4	5	250	200	200	-	-	-	180	-	8210G012	Brass	10.1/F	-
		4	0	150	150	125	125	125	80	180	150	8210G034	Brass	10.1/F	11.6/F
3/4	3/4	6.5	5	250	200	200	-	-	-	180	-	8210G013	Brass	16.1/F	-
		5.5	0	150	150	125	-	-	-	180	-	8210G035	Brass	10.1/F	-
1	1	13	5	150	150	125	-	-	-	180	-	8210G014	Brass	16.1/F	-
1 1/4	1 1/8	15	5	150	150	125	-	-	-	180	-	8210G018	Brass	16.1/F	-
2	1 3/4	43	5	125	125	125	-	-	-	180	-	8210G103	Brass	16.1/F	-
2 1/2	1 3/4	45	5	125	125	125	-	-	-	180	-	8210G104	Brass	16.1/F	-

8214 Series Combustion Gas Shutoff Valve (Pilot Operated, 2/2)

- 2-way normally closed operation
- Die-cast aluminum bodies
- Zero differential piloted diaphragm
- For on-off control of fuel gas in commercial and industrial gas burners
- Valves provided with 1/8” NPT upstream and downstream pipe taps with plugs for routine testing

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)		Max Fluid Temp °F	Catalogue Number	Body Material	Wattage
			Min.	Max.	AC			AC
Combusion (Fuel Gas) - Normally Closed								
3/8	3/4	3.4	0	5	125	8214G010	Aluminum	17.1
1/2	3/4	4.4	0	5	125	8214G020	Aluminum	17.1
		4.4	0	50	125	8214G020B	Aluminum	17.1
3/4	3/4	5.1	0	5	125	8214G030	Aluminum	17.1
		5.1	0	50	125	8214G030B	Aluminum	17.1
Combusion (Fuel Gas) - Normally Open								
1/2	3/4	4.4	0	5	125	8214G023	Aluminum	17.1
3/4	3/4	5.1	0	50	125	8214G033	Aluminum	17.1

8215 Series Aluminum Body Solenoid Valve (Direct Acting or Piloted, 2/2)

- Lightweight, low-cost valves for air service
- Ideal for low pressure applications
- Provides high flow, Cv up to 138 (Kv 118)
- Air and vacuum service

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)			Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Min	Max AC Air-Fuel Gas	Max DC Air-Fuel Gas	AC	DC			AC	DC
Normally Closed											
3/8	3/4	3.4	0	50	25	125	104	8215G010	Aluminum	10.1/F	11.6/F
1/2	3/4	4.4	0	50	25	125		8215G020	Aluminum	10.1/F	11.6/F
3/4	3/4	5.1	0	50	25	125	104	8215G030	Aluminum	10.1/F	11.6/F
Normally Open											
1/2	3/4	4	0	125	125	125	-	8215G023	Aluminum	10.1/F	-
3/4	3/4	4.6	0	125	125	125	-	8215G033	Aluminum	10.1/F	-

8220 Series Hot Water and Steam Valves (2/2)

- Hot water service to 210 psi differential @ 210°F; Steam service to 125 psi differential @ 353°F
- Specify these valves for high-temperature applications found in laundries, molding, steam atomization, sterilizers, autoclaves, and many other
- Series 8220: pilot operated diaphragm and piston valves; floating PTFE diaphragms or stainless steel pistons with EPDM or PTFE discs

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)			Max Fluid Temp °F		Catalogue Number	Body Material	Wattage
				Max AC		AC				
			Min.	Steam	Hot Water	Steam	Hot Water			AC
Steam/Hot Water Service - Pilot Operated - Normally Closed										
1/2	1/2	4.7	5	50	150	300	210	8220G404	Brass	6.1/F
		4.7	5	125	150	353	210	8220G406*	Brass	10.1/H
3/4	3/4	8.8	5	50	150	300	210	8220G407	Brass	6.1/F
		8.8	5	125	150	353	210	8220G409*	Brass	10.1/H
1	1	11.5	5	125	150	353	210	8220G411*	Brass	10.1/H
		13.5	5 ①	125	150	353	210	8220G025	Brass	10.1/H
1 1/4	1 1/8	15	5 ①	1125	150	353	210	8220G027	Brass	10.1/H
1 1/2	1 1/4	22.5	5 ①	125	150	353	210	8220G029	Brass	10.1/H
2	1 3/4	43	5	125	150	353	210	8220G031	Brass	10.1/H

① Once opened at higher pressure, valve will remain open to 3 psi at inlet. * Ambient temperature range 32°F - 140°F

8221 Series Slow Closing, Hot Water and Steam Valves, (2/2)

- Hot water service to 210 psi differential @ 210°F; Steam service to 125 psi differential @ 353°F
- Specify these valves for high-temperature applications found in laundries, molding, steam atomization, sterilizers, autoclaves, and many other
- Series 8221: slow-closing, anti-water hammer design

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)		Max Fluid Temp °F	Catalogue Number	Body Material	Wattage
			Hot Water					
			Min.	Max.	AC			AC
Hot Water Service Only - Slow Closing - Normally Closed, EPDM Disc								
3/4	3/4	5.5	5 ①	150	210	8221G005HW	Brass	6.1/F
1	1	11.5	5 ①	150	210	8221G007HW	Brass	6.1/F

① Once opened at higher pressure, valve will remain open to 3 psi at inlet.

8221 Series Slow Closing Solenoid Valves (Pilot Operated, 2/2)

- Pilot operated, normally closed
- Snubber slows disc closing speed to protect system against water hammer damage more effectively than other techniques
- Pressure spike due to water hammer is reduced to a point eliminating the need for suppressors or other controls in most water systems
- Fluid Controls Institute Inc. evaluations have classified these valves

Pipe sizes	FCI-82-1 Class
1/2", 3/4"	CC
1", 1 1/4", 1 1/2", 2"	BB

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)			Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Min	Max AC Water	Max DC Water	AC	DC			AC	DC
Normally Closed											
1/2	9/16	3.5	5	150	125	180	150	8221G003	Brass	6.1/F	11.6/F
3/4	3/4	5.5	5	150	125	180	150	8221G005	Brass	6.1/F	11.6/F
1	1	11.5	5	150	125	180	150	8221G007	Brass	6.1/F	11.6/F
1 1/4	1 1/8	13	5	150	-	180	-	8221G009	Brass	6.1/F	-
1 1/2	1 1/4	24	5	150	-	180	-	8221G011	Brass	6.1/F	-
2	1 3/4	36	5	150	-	180	-	8221G013	Brass	6.1/F	-

8223 Series High Pressure Solenoid Valves (Pilot Operated, 2/2)

- Rugged piston construction built to withstand pressure ratings to 1500 psi
- Angle body design for high flows
- Ideal for high-pressure water applications, such as car washes
- Mountable in any position

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)							Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Min	Max AC Air	Max AC Water	Max AC Light Oil	Max DC Air	Max DC Water	Max DC Light Oil	AC	DC			AC	DC
Normally Closed															
1/2	3/8	3.2	25	1500	1500	1500	500	500	500	200	150	8223G003	Brass	17.1/F	22.6/F
1/2	3/8	3.2	25	1500	1500	1500	500	500	500	200	150	8223G010	Stainless	17.1/F	22.6/F
1/4	5/16	1.5	10	750	750	750	-	-	-	200	-	8223G021	Brass	10.1/F	-
3/8	5/16	1.5	10	750	750	750	400	400	400	200	150	8223G023	Brass	10.1/F	22.6/F
1/4	5/16	1.5	10	1500	1500	1500	500	500	500	200	150	8223G025	Brass	17.1/F	22.6/F
3/8	5/16	1.5	10	1500	1500	1500	-	-	-	200	-	8223G027	Brass	17.1/F	-

8262 & 8263 Series General Service Solenoid Valves (Direct Acting, 2/2)

- Welded core tube provides higher pressure ratings
- Reliable, proven design with high flows
- Small poppet valves for tight shutoff
- Wide range of elastomers for specialty service applications
- Mountable in any position
- Tapped mounting holes in body standard

Operational & Technical Information

8262 Series

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)									Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Max AC@131°F			Max DC@104°F			Max DC@131°F								
			Air	Water	Light Oil	Air	Water	Light Oil	Air	Water	Light Oil	AC	DC			AC	DC
Normally Closed, NBR Disc																	
1/8	3/64	0.06	750	750	725	750	640	550	750	600	500	180	180	8262H001	Brass	6.1/F	10.6/H
1/8	3/32	0.21	370	330	190	235	160	160	215	150	145	180	180	8262H014	Brass	6.1/F	10.6/H
1/8	1/8	0.35	185	180	120	130	110	95	120	100	90	180	180	8262H002	Brass	6.1/F	10.6/H
		0.35	185	180	120	130	110	95	120	100	90	180	180	8262H006	Stainless	6.1/F	10.6/H
1/4	3/64	0.06	750	750	725	750	640	550	750	600	500	180	180	8262H019	Brass	6.1/F	10.6/H
1/4	3/32	0.21	370	330	160	235	160	160	215	150	145	180	180	8262H020	Brass	6.1/F	10.6/H
		0.21	370	330	160	235	160	160	215	150	145	180	180	8262H086	Stainless	6.1/F	10.6/H
1/4	1/8	0.35	185	180	90	130	110	90	120	100	85	180	180	8262H007	Stainless	6.1/F	10.6/H
		0.35	185	180	90	130	110	90	120	100	85	180	180	8262H022	Brass	6.1/F	10.6/H
1/4	5/32	0.52	210	200	145	65	63	63	55	54	54	180	180	8262H202	Brass	10.1/F	11.6/H
1/4	7/32	0.73	100	100	100	35	35	35	30	30	30	180	180	8262H208	Brass	10.1/F	11.6/H
1/4	9/32	0.88	36	36	33	27	23	21	24	22	20	180	180	8262H038	Stainless	-	10.6/H
		0.88	36	36	33	27	23	21	24	22	20	180	180	8262H090	Brass	6.1/F	10.6/H
3/8	9/32	0.88	100	85	70	53	50	47	48	46	44	180	180	8262H210	Brass	17.1/F	22.6/H
Normally Open, UR Disc																	
1/4	3/32	0.17	300	250	230	200	150	125	-	-	-	140	140	8262H261	Brass	10.1/F	11.6/F

8263 Series

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)									Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Max AC@131oF			Max DC@104oF			Max DC@131oF								
			Air	Water	Light Oil	Air	Water	Light Oil	Air	Water	Light Oil	AC	DC			AC	DC
Normally Closed, NBR Disc																	
3/8	1/8	0.35	185	180	90	130	110	80	120	100	75	180	180	8263H002	Brass	6.1/F	10.6/H
3/8	7/32	0.73	125	100	100	70	70	70	65	65	65	180	180	8263H206	Brass	17.1/F	22.6/H
		0.73	125	100	100	70	70	70	65	65	65	180	180	8263H332	Stainless	17.1/F	22.6/H

8316 Series Air and Water Solenoid Valves (Pilot Operated, 3/2)

- Diaphragm poppet valves suitable for controlling air, inert gas, and liquids
- Internal piloting controls large orifices to provide high flows
- Can be used to pilot large actuators to provide quick closing of large control valves
- Resilient seating for tight shutoff
- Mountable in any position

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)					Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Min	Max AC		Max DC		AC	DC			AC	DC
				Air-Inert Gas	Water	Air-Inert Gas	Water						
Normally Closed													
3/8	5/8	3	10	150	125	125	125	180	120	8316G054	Brass	6.1/F	10.6/F
1/2	5/8	3.2	10	150	125	125	125	180	120	8316G064	Brass	6.1/F	10.6/F
3/4	11/16	4.8	10	150	125	125	125	180	120	8316G074	Brass	6.1/F	10.6/F
1	1	12.5	10	150	125	-	-	180	-	8316G034	Brass	6.1/F	-
Normally Open													
3/8	5/8	2.5	10	150	125	-	-	180	-	8316G056	Brass	6.1/F	-
1/2	5/8	3.2	10	150	125	-	-	180	-	8316G066	Brass	6.1/F	-
3/4	11/16	4.8	10	150	125	-	-	180	-	8316G076	Brass	6.1/F	-

8320 Series General Service Solenoid Valves (Direct Acting, 3/2)

- All NPT connections are in the valve body to allow in-line piping
- No Minimum Operating Pressure Differential required
- Broadest range of applications
- Mountable in any position

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)						Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
			Max AC			Max DC							AC	DC
			Air	Water	Light Oil @ 300 SSU	Air	Water	Light Oil @ 300 SSU	AC	DC				
Universal Operation														
1/8	1/16	0.09	175	175	175	125	125	125	200	150	8320G212	Brrass	17.1/F	22.6/F
1/4	1/16	0.09	125	130	130	75	75	75	200	150	8320G172	Brass	10.1/F	11.6/F
		0.09	175	175	175	125	125	125	200	150	8320G230	Stainless	17.1/F	22.6/F
1/4	3/32	0.12	100	100	100	60	60	60	200	150	8320G174	Brass	17.1/F	11.6/F
		0.12	100	100	100	60	60	60	200	150	8320G200	Stainless	17.1/F	11.6/F
Normally Closed														
1/8	1/16	0.09	210	225	225	160	160	160	200	150	8320G215	Brass	17.1/F	11.6/F
		0.09	210	225	225	160	160	160	200	150	8320G224	Stainless	17.1/F	11.6/F
1/4	1/16	0.09	210	225	225	160	160	160	200	150	8320G182	Brass	17.1/F	11.6/F
		0.09	210	225	225	160	160	160	200	150	8320G231	Stainless	17.1/F	11.6/F
1/4	3/32	0.12	150	150	150	115	115	115	200	150	8320G184	Brass	10.1/F	11.6/F
		0.12	150	150	150	-	-	-	200	-	8320G184MO	Brass	10.1/F	-
		0.12	150	150	150	115	115	115	200	150	8320G202	Stainless	10.1/F	11.6/F
1/4	1/8	0.25	85	85	85	60	60	60	200	150	8320G186	Brass	10.1/F	11.6/F
Normally Closed - NAMUR MOUNT														
1/4	3/32	0.12	100	-	-	100	-	-	180	120	8320G702	Brass	6.1/F	10.6/F
		0.12	100	-	-	100	-	-	180	120	8320G712	Stainless	6.1/F	10.6/F
		0.12	150	-	-	150	-	-	200	150	8320G704	Brass	10.1/F	22.6/F
		0.12	150	-	-	150	-	-	200	150	8320G714	Stainless	10.1/F	22.6/F

8342 Series General Service Solenoid Valves (Direct Acting, 4/2)

- Direct acting operation and high flow construction
- Direct acting, high flow slide-style valve
- Optional flow control regulates cylinder speed independently, in either direction
- Mechanical detent on dual solenoids holds last position, even after loss of electric power, pneumatics or pressure
- No Minimum Operating Pressure Differential required to shift valve
- Dual solenoid operation: solenoid may be energized momentarily (1/10 second) or continuously
- Mountable in any position

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi) Max AC: Air-Inert Gas	Water	Light Oil @ 300 SSU	Max Fluid Temp °F: AC	Catalogue Number	Body Material	Wattage: AC
Single Solenoid Construction									
1/4	3/16	0.70	125	100	100	160	8342G001	Brass	20.1/F
		0.70	125	100	100	160	8342G001MS	Brass	20.1/F
		0.70	125	100	100	160	8342G701	Stainless	20.1/F
		0.70	125	100	100	160	8342G701MS	Stainless	20.1/F
3/8	3/16	0.70	125	100	100	160	8342G003	Brass	20.1/F
		0.70	125	100	100	160	8342G003MS	Brass	20.1/F
Dual Solenoid Construction									
3/8	3/16	0.70	125	125	125	160	8342G022	Brass	16.1/F
1/4	3/16	0.70	125	125	125	160	8342G020	Brass	16.1/F

8344 Series Piston/Poppet Solenoid Valves (Pilot Operated, 4/2)

- Sturdy, robust construction
- Piston-operated poppet design provides high flow
- For use with air or water
- Wide range of sizes and flow rates
- Single or dual solenoid constructions
- Dual solenoid can be shifted with a momentary signal and remain in position even if electrical power is lost
- Mountable in any position

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow Factor: Press.	Exh.	Operating Pressure Differential (psi): Min.	Max AC: Air-Inert Gas	Water	Light Oil @ 300 SSU	Max DC: Air-Inert Gas	Water	Light Oil @ 300 SSU	Max Fluid Temp °F: AC	DC	Catalogue Number	Body Material	Wattage: AC	DC
Single Solenoid																
1/4	1/4	0.80	1.0	10	150	125	125	125	125	125	180	150	8344G070	Brass	10.1/F	11.6/F
3/8	3/8	1.40	2.2	10	150	125	125	125	125	125	180	150	8344G072	Brass	10.1/F	11.6/F
1/2	3/8	1.40	2.2	10	150	125	125	125	125	125	180	150	8344G074	Brass	10.1/F	11.6/F
Dual Solenoid																
3/8	3/8	1.40	2.2	10	250	200	125	125	125	100	180	120	8344G080	Brass	6.1/F	10.6/F
1/2	3/8	1.40	2.2	10	250	200	125	125	125	100	180	120	8344G082	Brass	6.1/F	10.6/F

8345 General Service Solenoid Valves (Pilot Operated, 4/2)

- Compact valves for general service applications
- Low-cost, 4-way valve when low flow is sufficient
- Mountable in any position

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)		Cv Flow Factor		Operating Pressure Differential (psi)							Max Fluid Temp °F		Catalogue Number	Body Material	Wattage	
					Min.	Max AC			Max DC								
	Press.	Exh.	Press.	Exh.		Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
Single Solenoid																	
1/4	1/16	3/32	0.09	0.09	10	150	150	150	100	100	100	180	104	8345G001	Brass	10.1/F	11.6/F
		3/32	0.09	0.09	10	150	150	150	-	-	-	180	-	8345G001MO	Brass	10.1/F	-

8551 & 8553 Direct Mount / Inline Spool Valves (Pilot Operated, 3/2 & 5/2)

- Compact spool valve convertible from 3/2 to 5/2
- NAMUR mount construction
- Standard manual operator
- DIN, Watertight and Explosion proof solenoids available
- Single and dual solenoid constructions
- Mountable in any position
- Vents air from spring side of actuator to prevent corrosion of actuator

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)		Fluid Temp °F			Single Solenoid Catalogue Number	Dual Solenoid Catalogue Number	Body Material	Wattage	
			Min.	Max.	Min.	Max. AC	Max. DC				AC	DC
Open Frame DIN Coil												
1/4 ①	1/4	0.86	30	150	5	140	140	SC8551A001MS	SC8551A002MS	Aluminum	2.5	3.0
1/4		0.86	30	150	5	140	140	SC8551A017MS	SC8551A018MS	Aluminum	2.5	3
Watertight Enclosure												
1/4 ①	1/4	0.86	30	150	5	140	77	WT8551A001MS	WT8551A002MS	Aluminum	6.3	6.9
1/4	1/4	0.86	30	150	5	140	77	WT8551A017MS	WT8551A018MS	Aluminum	6.3	6.9
1/2	1/2	3.7	30	150	-15	140	77	WT8553A017MS	WT8553A018MS	Aluminum	6.3	6.9
Explosionproof Enclosure												
1/4 ①	1/4	0.86	30	150	5	104	77	EF8551A001MS	EF8551A002MS	Aluminum	6.3	6.9
1/4		0.86	30	150	5	104	77	EF8551A017MS	EF8551A018MS	Aluminum	6.3	6.9
1/2	1/2	3.7	30	150	-15	140	77	EF8553A017MS	EF8553A018MS	Aluminum	6.3	6.9

① 1/8 inch NPT exhausts

How To Order—Next Gen Valves

Bulletin	Chg	Suffix	AC	DC	Bulletin	Chg	Suffix	AC	DC	Bulletin	Chg	Suffix	AC	DC
8210	P004		♦	♦	8210	P093		♦	♦	8320	P172		♦	♦
8210	P007		♦	♦	8210	P094		♦	♦	8320	P174		♦	♦
8210	P008		♦	♦	8210	P095		♦	♦	8320	P184		♦	♦
8210	P022		♦	♦	8210	P100		♦	♦	8320	P704		♦	♦
8210	P034		♦	♦	8223	P003		♦	♦	8320	P714		♦	♦
8210	P035		♦	♦	8223	P010		♦	♦	8344	P074		♦	♦
8210	P087		♦	♦	8262	R202		♦	♦	8345	P001		♦	♦
8210	P088		♦	♦	8262	R208		♦	♦	*8551	P409		♦	♦
8210	P093		♦	♦	8316	P064		♦	♦					

*Available in Explosion Proof only

Coil Options

How To Order—Next Gen Coils AC/DC

Type	Class	Prefix	12-24/DC	24-99 AC/DC	100-240 AC/DC
Conduit 18" Leads	H	None	♦	♦	♦
Explosion Proof	H	EE	♦	♦	♦

Optional: Class 1 Division 2 for Hazardous Locations and Watertight, Types 3, 3S, 4, 4X.
(To order, add prefix “EE” to catalogue number.)

Next Generation Solenoid Valves (2/2)

- Two-way (2/2) Next Generation solenoid valves have one inlet port and one outlet port.
- Control of air, water, light oil, and non-corrosive media.
- Normally closed (opens when energized) and normally open (closed when energized)
- Pipe size - 1/8 to 2 inch.

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)				Max Fluid Temp	Catalogue Number	Body Material	Wattage
			Min	Max AC/DC						
				Air	Water	Light Oil				AC/DC
Next Generation Solenoid Valves 2/2 Normally Closed										
1/4	5/32	0.52	0	300	225	225	180	8262R202	Brass	2
	7/32	0.73	0	125	125	125	180	8262R208	Brass	2
3/8	5/8	3	0	150	150	-	180	8210P093	Brass	2
1/2	3/8	3.2	25	1500	1500	1500	180	8223P003	Brass	2
		3.2	25	1500	1500	1500	180	8223P010	Stainless	2
1/2	5/8	4	5	300	300	300	180	8210P007	Brass	2
		4	0	150	150	125	180	8210P087	Stainless	2
		4	0	150	150	-	180	8210P094	Brass	2
3/4	3/4	5	0	150	150	-	180	8210P095	Brass	2
3/4	5/8	4.5	0	150	150	125	180	8210P088	Stainless	2
1	1	13	5	150	150	150	180	8210P004	Brass	2
1 1/4	1 1/8	15	5	150	150	100	180	8210P008	Brass	2
1 1/2	1 1/4	22.5	5	150	150	100	180	8210P022	Brass	2
2	1 3/4	43	5	150	125	90	180	8210P100	Brass	2
Next Generation Solenoid Valves 2/2 Normally Open										
1/2	5/8	4	0	150	150	125	180	8210P034	Brass	2
3/4	3/4	5.5	0	150	150	125	180	8210P035	Brass	2

Next Generation Solenoid Valves (3/2), (5/2)

- Three-way (3/2) Next Generation solenoid valves have three ports and two orifices. When one orifice is open, the other is closed.
- Control of air, water, light oil, and other non-corrosive media.
- Normally closed (pressure to cylinder port when energized) operation.
- Normally open (cylinder port exhausts when energized) operation.
- Universal operation (can function as normally open, normally closed, diverter of fluid flow, or selector of 2 fluid sources configurable by piping).
- Four-way, five port (5/2) Next Generation solenoid valves have one pressure port, 2 cylinder ports and either 1 or 2 exhaust ports.

Operational & Technical Information

Pipe Size (ins)	Orifice Size (ins)	Cv Flow	Operating Pressure Differential (psi)				Max Fluid Temp	Catalogue Number	Body Material	Wattage
			Min	Max AC/DC						
				Air	Water	Light Oil				AC/DC
Next Generation Solenoid Valves 3/2 Normally Closed										
1/4	7/64	0.23	0	150	150	150	180	8320P184	Brass	2
	9/32	0.8	10	200	200	200	180	8345P001	Brass	2
1/2	5/8	3.2	10	250	250	-	180	8316P064	Brass	2
3/4	11/16	4.8	10	250	250	-	180	8344P074	Brass	2
Next Generation Solenoid Valves NAMUR MOUNT - 3/2 Normally Closed										
1/4	3/32	0.12	-	150	-	-	180	8320P704	Brass	2
		0.12	-	150	-	-	180	8320P714	Stainless	2
Next Generation Solenoid Valves 3/2 Universal Operation										
1/4	5/64	0.12	0	116	116	116	180	8320P172	Brass	2
	7/64	0.23	0	60	60	60	180	8320P174	Brass	2
Next Generation NAMUR Mount - 3/2, 5/2 Single Solenoid Valves										
1/4	1/4	0.86	30.0	150.0	-	-	180	EE8551P409	Stainless	2

8290 Assemblies - Angle Body Multi-Purpose Valves

- 2-way direct acting valve available in bronze or stainless steel bodies.
- Suitable for general service (air, inert gas, water, oil, light slurries) and Steam and Hot Water applications

Operational & Technical Information

Pipe Size	Operating Pressure Min.	Operating Pressure Max. Fluids	Operating Pressure Max. Steam	Catalogue Number	Pilot Valve	Max. Air/Water Pilot Pressure (PSI)	* 120/60 Assembly Number	* 24/DC Assembly Number
50 mm Operator (Bronze 8290 & Brass Pilot Valve)								
Normally Closed - Entry Under the Disc - Bronze Body Construction								
1/2	0	240	150	8290A384	SC8356A002V	60-150	141053-006	141053-026
3/4		150	150	8290A385			141053-007	141053-027
1		90	90	8290A386			141053-008	141053-028
63 mm Operator (Bronze 8290 & Brass Pilot Valve)								
Normally Closed - Entry Under the Disc - Bronze Body Construction								
1/2	0	240	150	8290B002	SC8356A002V	38-150	141053-009	141053-029
3/4		240	150	8290B005		60-150	141053-010	141053-030
1		150	150	8290B010			141053-011	141053-031
1 1/4		90	90	8290A016			141053-012	141053-032
1 1/2		60	60	8290A020			141053-013	141053-033
2		40	40	8290A024			141053-014	141053-034
32 mm Operator (Stainless Steel 8290 and Pilot Valve)								
Normally Closed - Entry Under the Disc - Stainless Steel Body Construction								
3/8	0	240	150	8290A791	SC8356A014V	60-150	141053-015	141053-035
1/2		180	150	8290A792			141053-016	141053-036
3/4		90	90	8290A793			141053-017	141053-037
50 mm Operator (Stainless Steel 8290 and Pilot Valve)								
Normally Closed - Entry Under the Disc - Stainless Steel Body Construction								
1/2	0	240	150	8290A393	SC8356A014V	60-150	141053-018	141053-038
3/4		150	150	8290A394			141053-019	141053-039
1		90	90	8290A395			141053-020	141053-040
63 mm Operator (Stainless Steel 8290 and Pilot Valve)								
Normally Closed - Entry Under the Disc - Stainless Steel Body Construction								
1/2	0	240	150	8290B045	SC8356A014V	38-150	141053-021	141053-041
3/4		240	150	8290B048		60-150	141053-002	141053-042
1		150	150	8290B053			141053-022	141053-043
1 1/4		90	90	8290A059			141053-023	141053-044
1 1/2		60	60	8290A063			141053-024	141053-045
2		40	40	8290A067			141053-025	141053-046

Pipe Size	Operating Pressure Min.	Operating Pressure Max. Fluids	Operating Pressure Max. Steam	Max Fluid Temp °F	Max. Air/Water Pilot Pressure (PSI)	Catalogue Number Clamp Connection	Catalogue Number Butt Welding Connection	Body Material
63 mm Operator (Clamp & Butt Welding S290 Connection Valves)								
Normally Closed - Entry Under the Disc								
1/2	0	240	150	366	38-150	S290B137	S290B205	Stainless Steel
3/4		240	150		60-150	S290B140	S290B208	
1		150	150			S290B145	S290B211	
2		40	40			S290A687	S290A719	

- 8290 Valves with Visual Indicator Option.

32mm Operator with Visual Indicator		
Pipe Size (ins)	Catalogue Number	Body Material
3/8	8290A791 VI	Stainless Steel
1/2	8290A792 VI	
3/4	8290A793 VI	

50mm Operator with Visual Indicator		
Pipe Size (ins)	Catalogue Number	Body Material
1/2	8290A384 VI	Bronze
	8290A393 VI	Stainless Steel
3/4	8290A385 VI	Bronze
	8290A391 VI	Bronze
	8290A394 VI	Stainless Steel
1	8290A386 VI	Bronze
	8290A392 VI	Bronze
	8290A395 VI	Stainless Steel

8290 Angle Body Multi-Purpose Valves with Compact Signaling Unit

- 2-way direct acting valve available in bronze or stainless steel bodies.
- Suitable for general service (air, inert gas, water, oil, light slurries) and Steam and Hot Water applications
- The signalling unit electrically and visually indicates whether the valve is open or closed
- It is possible to install one or two reed switches or magneto-resistive detectors to monitor one or both extreme positions of a valve

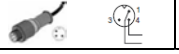
Operational & Technical Information

How To Order - Choose a valve catalogue number with pre-installed signaling support suffix “SU” + catalogue number of detector and required quantity.

Valves with pre-installed signaling support

Pipe Size	Operating Pressure Differential (PSI) Min.	Max. Fluids	Max. Steam	Catalogue Number Bronze	Catalogue Number Stainless Steel
32 mm Operator					
Normally Closed - Entry Under the Disc					
3/8	0	240	150	8290A791SU	-
1/2		180	150	8290A792SU	-
3/4		90	90	8290A793SU	-
50 mm Operator					
Normally Closed - Entry Under the Disc					
1/2	0	240	150	8290A384SU	8290A393SU
3/4		150	150	8290A385SU	8290A394SU
1		90	90	8290A386SU	8290A395SU
50 mm Operator					
Normally Closed - Entry Above Disc - Rapid Cycling Steam Applications					
3/4	0	-	150	8290A391SU	-
1		-	150	8290A392SU	-
63 mm Operator					
Normally Closed - Entry Under the Disc					
1/2	0	240	150	8290B002SU	8290B045SU
3/4		240	150	8290B005SU	8290B048SU
1		150	150	8290B010SU	8290B053SU
1 1/4		90	90	8290A016SU	8290A059SU
1 1/2		60	60	8290A020SU	8290A063SU
2		40	40	8290A024SU	8290A067SU
90 mm Operator					
Normally Closed - Entry Under the Disc					
1 1/4	0	180	150	8290A017SU	8290A060SU
1 1/2		120	120	8290A021SU	8290A064SU
2		90	90	8290A025SU	8290A068SU
125 mm Operator					
Normally Closed - Entry Under the Disc					
2 1/2	0	90	90	8290A488SU	8290A501SU

Magnetic Position Detector

Description			IP	Lead		Catalogue Number Reed Switch Detector	Catalogue Number PNP - MR Detector
Stripped ends	2 wires	2 m	IP67	PUR	 (0,14 mm²)	REED-FL2-00	-
	3 wires	2 m				-	PNP-FL2-00-U
3-pin plug-in male connector and Ø M8		0.3 m	IP67	PUR	 1 - 3	REED-QDS-M8U	PNP-QDS-M8-U
3-pin screw-type male connector, Ø M12		0.3 m	IP67	PUR		REED-QDS-M12E	-

Detectors are always delivered separately.
Contact Technical Support for Electrical Characteristics.

Coil Kits

Coil Kit#			
238210-005-D*	238610-094-D*	238714-017-D*	272610-058-D*
238210-032-D*	238610-105-D*	238714-034-D*	272610-058-K*
238210-032-K*	238610-132-D*	238714-104-D*	272610-088-D*
238210-052-D*	238610-132-K*	238714-106-D*	272610-105-D*
238210-058-D*	238610-152-D*	238714-117-D*	272610-132-D*
238210-058-K*	238610-158-D*	238714-134-D*	272610-132-K*
238210-088-D*	238610-158-K*	238810-005-D*	272610-152-D*
238210-094-D*	238610-188-D*	238810-032-D*	272610-158-D*
238212-005-*	238612-005-*	238810-032-K*	272610-158-K*
238212-032-*	238612-032-*	238810-058-D*	272610-188-D*
238212-058-*	238612-058-*	238810-132-D*	272612-005-*
238214-005-D*	238612-105-*	238810-132-K*	272612-032-*
238214-032-D*	238612-132-*	238810-158-D*	272612-058-*
238214-032-K*	238612-158-*	238812-032-*	272612-105-*
238214-058-D*	238614-005-D*	238812-132-*	272612-132-*
238310-004-D*	238614-032-D*	238814-032-D*	272612-158-*
238310-004-K*	238614-032-K*	238814-132-D*	272614-005-D*
238310-006-D*	238614-058-D*	238910-004-D*	272614-032-D*
238310-006-K*	238614-105-D*	238910-006-D*	272614-058-D*
238310-017-D*	238614-132-D*	238910-104-D*	272614-105-D*
238310-034-D*	238614-132-K*	238910-106-D*	272614-132-D*
238312-004-*	238614-158-D*	238912-006-*	272614-132-K*
238312-006-*	238710-004-D*	238912-106-*	272614-158-D*
238314-004-D*	238710-004-K*	238914-006-D*	272810-032-D*
238314-006-D*	238710-006-D*	238914-106-D*	272810-032-K*
238314-017-D*	238710-006-K*	250404-601-*	272810-058-D*
238314-034-D*	238710-017-D*	250404-602-*	272810-132-D*
238410-032-D*	238710-017-K*	250404-603-*	272810-132-K*
238410-032-K*	238710-017-K*	250504-601-*	272810-158-D*
238410-058-D*	238710-034-D*	250504-602-*	272812-032-*
238414-032-D*	238710-104-D*	250504-603-*	272814-032-D*
238412-032-*	238710-104-K*	266762-902-D*	272814-032-K*
238510-004-D*	238710-106-D*	266762-902-D*	272814-132-D*
238510-006-D*	238710-106-K*	266762-903-D*	400125-041-*
238512-006-*	238710-117-D*	266763-902-D*	400125-042-*
238514-006-D*	238710-117-K*	266763-903-D*	400125-088-*
238610-005-D*	238710-134-D*	270007-004-D*	400125-142-*
238610-032-D*	238712-004-*	270007-006-D*	400125-221-*
238610-032-K*	238712-006-*	270008-004-D*	400125-225-*
238610-052-D*	238712-104-*	272610-005-D*	400125-228-*
238610-058-D*	238712-106-*	272610-032-D*	
238610-058-K*	238714-004-D*	272610-032-K*	
238610-088-D*	238714-006-D*	272610-052-D*	

How to Obtain the Coil Kit Number :

① Coil Numbers are engraved on the coil. Include an asterisk at the end of the part number to order kit.

② Refer to Catalogue 35 or Consult the factory - techsalescdn@emerson.com

2005 Series, 4-way, Spool & Sleeve

- 5 Ported 2 and 3 position 4-way, Spool & Sleeve
- Cv: 0.56
- Solenoid air pilot actuated
- Low wattage plug-in - 1.0 watt for DC application
- DC solenoids polarity insensitive with surge suppression
- Plug together circuit boards eliminate internal wiring
- Integral recessed gaskets
- Interchangeable Push-in fittings to accommodate various tube sizes
- Simple conversion from internal to external pilot supply
- NEMA 4 / IP65

Operational & Technical Information

VALVE DATA	ENGLISH	METRIC
Cv	0.56	0.56
Flow Capacity	26 SCFM @ 80 PSIG upstream pressure to atmosphere	552 Nl/m @ 6 bar upstream to 5 bar downstream
Operating Pressure Range	28" Hg. Vacuum to 150 PSIG	Vacuum to 10 bar
Operating Pressure Range - 3 Way	22" Hg. Vacuum to 100 PSIG	Vacuum to 7 bar
Pilot Pressure Range	26 to 120 PSIG	1.8 to 8.2 bar
Pilot Pressure Range - 3 Way	26 to 120 PSIG	1.8 to 7 bar
Pilot Pressure Vacuum	50 to 100 PSIG	3.5 to 7 bar
Temperature Range (Ambient)	-10°F to +115°F	-23°C to +46°C

All Solenoids are Continous Duty Rated	24VDC	110-120 VAC / 50/60 Hz
Power (Watts)	1.35	4.2
Holding Current (Amps)	0.04	0.04

RESPONSE TIME IN SECONDS	ENERGIZE	DE-ENERGIZE	ENERGIZE	DE-ENERGIZE
2 - Position, Single, Spring Return	0.014	0.016	0.014	0.016
2 - Position, Double, Detented	0.013	N/A	0.013	N/A
3 - Position, Spring Centered	0.014	0.016	0.014	0.016
Dual 3 Way	0.014	0.016	0.014	0.016

How To Order

Valves — **051 BB 4 Z2 M N 000 61**

Valve Series & Port Size
051* = 1/8 (Threaded)
052 = 1/4 (Push-in)
05H = 6mm
*Use for valve unit only (mounting = 00)

Valve Type
BA = Single Solenoid Pilot (Spring Return) with Flush Non-Locking Override
BB = Double Solenoid Pilot with Flush Non-Locking Override
00 = Blank Station

Function
4 = 2 Position, 4-way
5 = 3 Position, 4-way Open Centre
6 = 3 Position, 4-way Closed Centre
P = Blank Station Plate

Mounting
00 = Valve Unit Only
Z1 = Manifold Block w/ Side and Bottom Ports, Single Solenoid Internal Circuit Board
Z2 = Manifold Block w/ Side and Bottom Ports, Double Solenoid Internal Circuit Board
Z5 = Z1 w/ Speed Control
Z6 = Z2 w/ Speed Control
R1 = Z1 w/ Ribbon Cable Connector
R2 = Z2 w/ Ribbon Cable Connector
R5 = Z5 w/ Ribbon Cable Connector
R6 = Z6 w/ Ribbon Cable Connector
3A = Individual Base, Side Ports, Individual Exhaust
3C = 3A w/ Speed Control

Wiring Option
K = Plug-in AC w/Light
M = Plug-in DC w/Light
0 = Blank Station Plate

Port Type
L = Push-in Fitting
N = NPTF (1/8 only)
0 = Valve Unit Only

Options
000 = No Options
11B = Flush Locking Override

Voltage
30 = 110-120/50-60 VAC
61 = 24 VDC
00 = Blank Station

See How To Order Manifolds (page 34-36) for Ordering Details
Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

How To Order

Regulators

051 RS 1 Z2 J P 000 00

Valve Series & Port Size
051* = 1/8
052 = 1/4 (Push-in)
05H = 8mm
*Use for regulator unit only (mounting = 00)

Regulator Type
RS = Single Pressure to Port 1 (P)
RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range
1 = 10-130 PSIG (0.7-9bar)

Mounting
00 = Regulator Unit Only
Z1 = Manifold Block w/ Side and Bottom Ports, Single Solenoid Internal Circuit Board
Z2 = Manifold Block w/ Side and Bottom Ports, Double Solenoid Internal Circuit Board
Z5 = Z1 w/ Speed Control
Z6 = Z2 w/ Speed Control
R1 = Z1 w/ Ribbon Cable Connector
R2 = Z2 w/ Ribbon Cable Connector
R5 = Z5 w/ Ribbon Cable Connector
R6 = Z6 w/ Ribbon Cable Connector
3A = Individual Base, Side Ports, Individual Exhaust
3C = 3A w/ Speed Control

Wiring Option
J = Plug-in Receptacle Assembly

Port Type
L = Push-in
P = NPTF/Regulator Unit Only

Options
000 = No Options
61Y = Extended Gauge (Even Numbered Stations)

Assembly Kit

AK J E D 0000 3 L STD

Electrical/Electronics Type & Location
F = Terminal Strip 1-16
J = 25 Pin Sub-D

Valve Series
E = 2005 Series Valves

Number of Valve Stations

A = 1	I = 9	Q = 17	Y = 25
B = 2	J = 10	R = 18	Z = 26
C = 3K	K = 11S	S = 19	2 = 27
D = 4L	L = 12T	T = 20	3 = 28
E = 5M	M = 13U	U = 21	4 = 29
F = 6N	N = 14V	V = 22	5 = 30
G = 7O	O = 15W	W = 23	6 = 31
H = 8P	P = 16X	X = 24	7 = 32

End Plate Port Size
3 = Port Type L or N
Port 1 = 3/8, Port 3/5 = 3/8

Port Type
L = Push-in
N = NPTF

Options
STD = Standard
MUF = Muffler

Note: Maximum number of valve stations is determined by:

- The electrical connection type.
- The valve type - single solenoid valve are up to the maximum solenoid outputs allowed by the electrical connection type (refer to full catalogue) or combination of single and/or double solenoid valves not to exceed the maximum number of solenoid outputs allowed.

See How To Order Manifolds (page 34-36) for Ordering Details
Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

2012 Series, 4-way, Spool & Sleeve

- 5 Ported, 2 and 3 position, 4-way, Spool & Sleeve
- Cv: 1.20
- Solenoid air pilot actuated
- Low wattage plug-in - 2.5 watt for DC application
- DC solenoids polarity insensitive with surge suppression
- Plug together circuit boards eliminate internal wiring
- Integral recessed gaskets
- Interchangeable Push-in fittings to accommodate
- Simple conversion from internal to external pilot supply
- Modular plug-together Fieldbus electronics
- NEMA 4 / IP65

Operational & Technical Information

VALVE DATA	ENGLISH	METRIC
Cv	1.2	1.2
Flow Capacity	56 SCFM @ 80 PSIG upstream pressure to atmosphere	1180 Nl/m @ 6 bar upstream to 5 bar downstream
Operating Pressure Range	28" Hg. Vacuum to 150 PSIG	Vacuum to 10 bar
Pilot Pressure Range	26 to 120 PSIG	1.8 to 8.2 bar
Temperature Range (Ambient)	-10°F to +115°F	-23°C to +46°C

All Solenoids are Continous Duty Rated	24VDC	110-120 VAC / 50/60 Hz
Power (Watts)	2.5	4.2
Holding Current (Amps)	0.10	0.04

RESPONSE TIME IN SECONDS	ENERGIZE	DE-ENERGIZE	ENERGIZE	DE-ENERGIZE
2 - Position, Single, Spring Return	0.010	0.020	0.010	0.020
2 - Position, Double, Detented	0.010	N/A	0.010	N/A
3 - Position, Spring Centered	0.010	0.020	0.010	0.020

How To Order

Valves

122 BB 4 Z2 M L 000 61

Valve Series & Port Size
122* = 1/4
123 = 3/8
12H = 8mm
*Use for valve unit only (mounting = 00)

Valve Type
BA = Single Solenoid Pilot (Spring Return) with Flush Non-Locking Override
BB = Double Solenoid Pilot with Flush Non-Locking Override
00 = Blank Station

Function
4 = 2 Position, 4-way
5 = 3 Position, 4-way Open Centre
6 = 3 Position, 4-way Closed Centre
P = Blank Station Plate

Mounting
00 = Valve Unit Only
Z1 = Manifold Block w/ Side and Bottom Ports, Single Solenoid Internal Circuit Board
Z2 = Manifold Block w/ Side and Bottom Ports, Double Solenoid Internal Circuit Board
Z5 = Z1 w/ Speed Control
Z6 = Z2 w/ Speed Control
R1 = Z1 w/ Ribbon Cable Connector
R2 = Z2 w/ Ribbon Cable Connector
R5 = Z5 w/ Ribbon Cable Connector
R6 = Z6 w/ Ribbon Cable Connector
3A = Individual Base, Side Ports, Individual Exhaust
3C = 3A w/ Speed Control

Wiring Option
K = Plug-in AC w/Light
M = Plug-in DC w/Light
0 = Blank Station Plate

Port Type
L = Push-in Fitting
N = NPTF
0 = Valve Unit Only

Options
000 = No Options
11B = Flush Locking Override

Voltage
30 = 110-120/50-60 VAC
61 = 24 VDC
00 = Blank Station

Regulators

122 RS 1 Z2 J L 000 00

Valve Series & Port Size
122* = 1/4
123 = 3/8
*Use for regulator unit only (mounting = 00)

Regulator Type
RS = Single Pressure to Port 1 (P)
RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range
1 = 10-130 PSIG (0.7-9 bar)

Mounting
00 = Regulator Unit Only
Z1 = Manifold Block w/ Side and Bottom Ports, Single Solenoid Internal Circuit Board
Z2 = Manifold Block w/ Side and Bottom Ports, Double Solenoid Internal Circuit Board
Z5 = Z1 w/ Speed Control
Z6 = Z2 w/ Speed Control
R1 = Z1 w/ Ribbon Cable Connector
R2 = Z2 w/ Ribbon Cable Connector
R5 = Z5 w/ Ribbon Cable Connector
R6 = Z6 w/ Ribbon Cable Connector
3A = Individual Base, Side Ports, Individual Exhaust
3C = 3A w/ Speed Control

Wiring Option
J = Plug-in Receptacle Assembly

Port Type
L = Push-in Fitting
N = NPTF
0 = Regulator Unit Only

Options
000 = No Options
16W = Top Facing Gauge

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program TODAY

How To Order

Assembly Kit

AK J G D 0000 3 L STD

Electrical/Electronics Type & Location
F = Terminal Strip 1-16
J = 25 Pin Sub-D

Valve Series
G = 2012 Series Valves

Number of Valve Stations

A = 1	I = 9	Q = 17	Y = 25
B = 2	J = 10	R = 18	Z = 26
C = 3	K = 11	S = 19	2 = 27
D = 4	L = 12	T = 20	3 = 28
E = 5	M = 13	U = 21	4 = 29
F = 6	N = 14	V = 22	5 = 30
G = 7	O = 15	W = 23	6 = 31
H = 8	P = 16	X = 24	7 = 32

Options
STD = Standard
MUF = Muffler

Port Type
L = Push-in
N = NPTF

End Plate Port Size
3 = Port Type L or N
Port 1 = 3/8, Port 3/5 = 3/8

Note: Maximum number of valve stations is determined by:

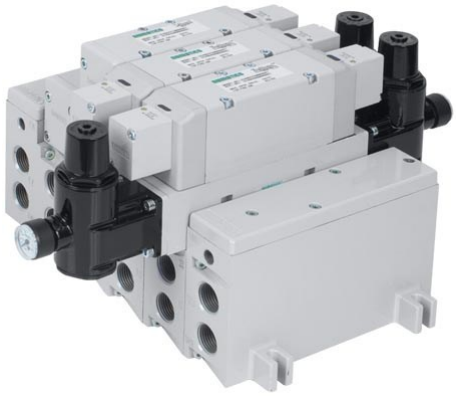
- The electrical connection type.
- The valve type - single solenoid valve are up to the maximum solenoid outputs allowed by the electrical connection type (refer to full catalogue) or combination of single and/or double solenoid valves not to exceed the maximum number of solenoid outputs allowed.

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

2035 Series, 4-way, Spool & Sleeve



- 5 Ported, 2 and 3 position, 4-way, Spool & Sleeve
- Cv: 3.5
- Solenoid air pilot actuated
- Low wattage plug-in - 2.5 watt for DC application
- DC solenoids polarity insensitive with surge suppression
- Plug together circuit boards eliminate internal wiring
- Integral recessed gaskets
- Simple conversion from internal to external pilot supply
- Modular plug-together Fieldbus electronics
- Designed to meet NEMA 4 / IP65
- Manifold connection allows disassembly at any station

Operational & Technical Information

VALVE DATA	ENGLISH	METRIC
Cv	3.5	3.5
Flow Capacity	161 SCFM @ 80 PSIG upstream pressure to atmosphere	3500 Nl/m @ 6 bar upstream to 5 bar downstream
Operating Pressure Range	28" Hg. Vacuum to 145 PSIG	Vacuum to 10 bar
Pilot Pressure Range	26 to 120 PSIG	1.8 to 8.2 bar
Temperature Range (Ambient)	-10°F to +115°F	-23°C to +46°C

All Solenoids are Continous Duty Rated	24VDC	110-120 VAC / 50/60 Hz
Power (Watts)	2.5	4.2
Holding Current (Amps)	0.10	0.04

RESPONSE TIME IN SECONDS	ENERGIZE	DE-ENERGIZE	ENERGIZE	DE-ENERGIZE
2 - Position, Single, Spring Return	0.021	0.067	0.015	0.070
2 - Position, Double, Detented	0.017	N/A	0.015	N/A
3 - Position, Spring Centered	0.021	0.072	0.018	0.080

*Valve on 1/2 NPTF sub-plate
**Per ISO 12238 Standard

How To Order

Valves

353 BB 4 Z2 M N 000 61

Valve Series & Port Size
353* = 3/8
354 = 1/2
*Use for valve unit only (mounting = 00)

Valve Type
BA = Single Solenoid Pilot (Spring Return) with Flush Non-Locking Override
BB = Double Solenoid Pilot with Flush Non-Locking Override
00 = Blank Station

Function
4 = 2 Position, 4-way
5 = 3 Position, 4-way Open Centre
6 = 3 Position, 4-way Closed Centre
P = Blank Station Plate

Mounting
00 = Valve Unit Only
Z1 = Manifold Block w/ Side and Bottom Ports, Single Solenoid Internal Circuit Board
Z2 = Manifold Block w/ Side and Bottom Ports, Double Solenoid Internal Circuit Board
Z5 = Z1 w/ Speed Control
Z6 = Z2 w/ Speed Control
R1 = Z1 w/ Ribbon Cable Connector
R2 = Z2 w/ Ribbon Cable Connector
R5 = Z5 w/ Ribbon Cable Connector
R6 = Z6 w/ Ribbon Cable Connector
3A = Individual Base, Side Ports, Individual Exhaust
3B = Individual Base, Side and Bottom Ports, Individual Exhaust
3C = 3A w/ Speed Control
3D = 3B w/ Speed Control

Wiring Option
K = Plug-in AC w/Light
M = Plug-in DC w/Light
0 = Blank Station Plate

Port Type
N = NPTF
0 = Valve Unit Only

Options
000 = No Options
11B = Flush Locking Override

Voltage
30 = 110-120/50-60 VAC
61 = 24 VDC
00 = Blank Station

Regulators

353 RS 1 Z2 J N 000 00

Valve Series & Port Size
353* = 3/8
354 = 1/2
*Use for regulator unit only (mounting = 00)

Regulator Type
RS = Single Pressure to Port 1 (P)
RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range
1 = 10-130 PSIG (0.7-9 bar)

Mounting
00 = Regulator Unit Only
Z1 = Manifold Block w/ Side and Bottom Ports, Single Solenoid Internal Circuit Board
Z2 = Manifold Block w/ Side and Bottom Ports, Double Solenoid Internal Circuit Board
Z5 = Z1 w/ Speed Control
Z6 = Z2 w/ Speed Control
R1 = Z1 w/ Ribbon Cable Connector
R2 = Z2 w/ Ribbon Cable Connector
R5 = Z5 w/ Ribbon Cable Connector
R6 = Z6 w/ Ribbon Cable Connector

Wiring Option
J = Plug-in Receptacle Assembly

Port Type
N = NPTF
0 = Regulator Unit Only

Options
000 = No Options

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program TODAY

How To Order

Assembly Kit

AK J B D 0000 4 N STD

Electrical/Electronics Type & Location
F = Terminal Strip 1-16
J = 25 Pin Sub-D

Valve Series
B = 2035 Series Valves

Number of Valve Stations

A = 1	I = 9	Q = 17	Y = 25
B = 2	J = 10	R = 18	Z = 26
C = 3	K = 11	S = 19	2 = 27
D = 4	L = 12	T = 20	3 = 28
E = 5	M = 13	U = 21	4 = 29
F = 6	N = 14	V = 22	5 = 30
G = 7	O = 15	W = 23	6 = 31
H = 8	P = 16	X = 24	7 = 32

End Plate Port Size
4 = 1/2

Port Type
N = NPTF

Options
STD = Standard
MUF = Muffler

Note: Maximum number of valve stations is determined by:

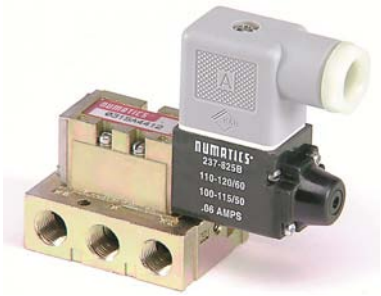
- The electrical connection type.
- The valve type - single solenoid valve are up to the maximum solenoid outputs allowed by the electrical connection type (refer to full catalogue) or combination of single and/or double solenoid valves not to exceed the maximum number of solenoid outputs allowed.

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

Mark 3 Series 4-way, Spool & Sleeve



- 5 Ported, 2 and 3 position
- Cv: 0.35
- Direct solenoid actuated
- Plug-in solenoid with indicator light
- Unlubricated or lubricated service
- Integral speed control available
- Integral regulators available
- Nema4

Operational & Technical Information

VALVE DATA	ENGLISH		METRIC	
Cv	1/8 NPTF = 0.35	10-32 UNF = 0.35	1/8 G Tap = 0.80	1/4 G Tap = 1.0
Flow Capacity	16-21 SCFM	8.34 SCFM	345 Nl/m	177 Nl/m
	Upstream pressure to atmosphere @ 80 PSIG		@ 6 bar upstream, 5 bar downstream	
Operating Pressure Range	28" Hg. Vacuum to 150 PSIG		Vacuum to 10 bar	
Temperature Range (Ambient)	-10°F to +115°F		-23°C to +46°C	

All Solenoids are Continous Duty Rated		24VDC	120 VAC, 60 Hz
Power (Watts)		6.0	N/A
Holding Current (Amps)		0.250	0.090
Inrush Current (Amps)		N/A	0.008
Energize in Seconds	2 - Position, Single, Spring Return	0.012	0.008
	2 - Position, Double, Detented	0.012	0.008
	3 - Position, Spring Centered	0.012	0.008
De-Energize in Seconds	2 - Position, Single, Spring Return	0.008	0.012
	2 - Position, Double, Detented	N/A	N/A
	3 - Position, Spring Centered	0.008	0.012

How To Order

Valves

031 SA 4 15 2 0 000 30

Valve Series & Port Size
031* = 1/8
*Use for valve unit only (mounting = 00)

Valve Type
SA = Single direct solenoid, Spring return with flush non-locking override
SS = Double Direct Solenoid with flush non-locking override

Function
4 = 2 Position, 4-way (5/2)
5 = 3 Position, 4-way Open Centre (5/3) Dual Pressure
6 = 3 Position, 4-way (5/3) Blocked Centre

Mounting
00 = Valve Unit Only
01 = Valve Unit Only with Speed Control
15 = Manifold Block, Side and Bottom Cylinder Ports
25 = 15 with Speed Control
41 = Standard Base, Side Ports, Individual Exhaust
46 = 41 with Speed Control

Voltage
30 = 110-120/50-60 VAC
61 = 24 VDC

Options
000 = No Options
11B = Flush Locking Override
11Z = Extended Locking Override

Port Type
0 = NPTF

Wiring Option
C = Proprietary AC Plug-In
E = Proprietary DC Plug-In
O = AC Hardwired with 15" Leads (SA, SS or Air Pilot & Function 4 Only)
2 = DIN Plug-in AC Solenoid (SA or SS only)
4 = DIN Plug-in DC Solenoid (SA or SS only)

Regulators

031 RS 7 00 O 0 000 00

Valve Series & Port Size
031 = 1/8"

Regulator Type
RS = Single Pressure to Port 1 (P)
RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range
7 = 0-100 PSIG (0-6.9 Bar)

Mounting
00 = Regulator Unit Only
02** = Regulator Unit for Use with Speed Control

Options
000 = No Options

Port Type
0 = NPTF

Wiring Option
O = Non Plug-in

**Speed control can only be used with type RS. There model numbers include regulator with extra long screws #127-332. For complete information on ordering with speed control, see online PDF

Assembly Kit

AK 0 C E 0000 2 N STD

Electrical/Electronics Type & Location
0 = Standard

Valve Series
C = Mark 3 Series Valves

Number of Valve Stations

A = 1	E = 5	I = 9	M = 13
B = 2	F = 6	J = 10	N = 14
C = 3	G = 7	K = 11	O = 15
D = 4	H = 8	L = 12	P = 16

End Plate Port Size
2 = 1/4

Port Type
N = NPTF

Options
STD = Standard

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Mark 8 Series 4-way, Spool & Sleeve

- 5 Ported, 2 and 3 position
- Cv: 0.8—1.0
- Direct solenoid actuated
- Plug-in solenoid with indicator light
- Unlubricated or lubricated service
- Integral speed control available
- Integral regulators available
- Nema4 / IP65

Operational & Technical Information

VALVE DATA	ENGLISH		METRIC	
Cv	1/8 NPTF = 0.80	1/4 NPTF = 1.0	1/8 G Tap = 0.80	1/4 G Tap = 1.0
Flow Capacity	37 SCFM	46 SCFM	790 Nl/m	985 Nl/m
	Upstream pressure to atmosphere @ 80 PSIG		@ 6 bar upstream, 5 bar downstream	
Operating Pressure Range	28" Hg. Vacuum to 150 PSIG		Vacuum to 10 bar	
Temperature Range (Ambient)	-10°F to +115°F		-23°C to +46°C	

All Solenoids are Continous Duty Rated		24VDC	120 VAC, 60 Hz
Power (Watts)		6.0	N/A
Holding Current (Amps)		0.25	0.090
Inrush Current (Amps)		N/A	0.380
Energize in Seconds	2 - Position, Single, Spring Return	0.032	0.011
	2 - Position, Double, Detented	0.028	0.012
	3 - Position, Spring Centered	0.028	0.012
De-Energize in Seconds	2 - Position, Single, Spring Return	0.01	0.011
	2 - Position, Double, Detented	N/A	N/A
	3 - Position, Spring Centered	0.008	0.018

How To Order

Valves

082 SA 4 15 K 0 000 30

Valve Series & Port Size
081* = 1/8
082 = 1/4
*Use for valve unit only (mounting = 00)

Valve Type
SA = Single Direct Solenoid, Spring return with Flush Non-Locking Override
SS = Double Direct Solenoid with Flush Non-Locking Override

Function
4 = 2 Position, 4-way (5/2)
5 = 3 Position, 4-way Open Centre (5/3) Dual Pressure
6 = 3 Position, 4-way (5/3) Blocked Centre
P = Blank Station Plate

Mounting
00 = Valve Unit Only
01 = Valve Unit, Speed Control w/o Mounting
02 = Valve Unit w/ Long Screws for use w/ Speed Control or Regulator, w/o Mounting
15 = Manifold Block, Side and Bottom Cylinder Ports
25 = Manifold Block, Side and Bottom Cylinder Ports, Speed Control
31 = Plug-in Base, Common Exhaust, Side Cylinder Ports
32 = Plug-in Base, Common Exhaust, Side and Bottom Cylinder Ports
35 = Plug-in Base, Common Exhaust, Side Cylinder Ports, Speed Control
36 = Plug-in Base, Common Exhaust, Side and Bottom Cylinder Ports, Speed Control
3A = Plug-in Base, Individual Exhaust, Side Cylinder Ports
3B = Plug-in Base, Individual Exhaust, Side and Bottom Cylinder Ports
3C = Plug-in Base, Individual Exhaust, Side Cylinder Ports, Speed Control
3D = Plug-in Base, Individual Exhaust, Side and Bottom Cylinder Ports, Speed Control

Wiring Option
K = Plug-in AC w/Light
M = Plug-in DC w/Light

Port Type
0 = NPTF Pressure Ports with NPTF Conduit Ports or Valve Unit without NPTF

Options
000 = No Options
11B = Flush Locking Override (SA Only)
19M = Terminal Block in Mounting
46T = Zinc Plated Solenoid Armature (AC Only)

Voltage
00 = Blank Station
30 = 110-120/50-60 VAC
61 = 24 VDC

See How To Order Manifolds (page 34-36) for Ordering Details
Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program TODAY

How To Order

Regulators

082 RS 1 15 J 0 000 00

Valve Series & Port Size
081* = 1/8
082 = 1/4
*Use for regulator unit only (mounting = 00)

Regulator Type
RS = Single Pressure to Port 1 (P)
RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range
1 = 10-130 PSIG (0.7-9 Bar)

Mounting
00 = Regulator Unit Only
15 = Manifold Block, Side and Bottom Cylinder Ports
25 = 15 with Speed Control (RS only)
31 = Plug-in Base, Side Ports, Common Exhaust
32 = 31 with Bottom Ports
35 = 31 with Speed Control (RS only)
36 = 35 with Bottom Ports (RS only)
3A = Individual Base, Side Ports, Individual Exhaust
3B = 3A with Bottom Ports
3C = 3A with Speed Control (RS only)
3D = 3C with Bottom Ports (RS only)

Wiring Option
J = Plug-in Receptacle Assembly

Port Type
0 = NPTF Pressure Ports with NPTF

Options
000 = No Options
16W = Fitting(s) for Top Facing Gauge

Assembly Kit

AK 0 H F 0000 3 N STD

Electrical/Electronics Type & Location
0 = Standard

Valve Series
H = Mark 8 Series Valves

Number of Valve Stations

A = 1	E = 5	I = 9	M = 13
B = 2	F = 6	J = 10	N = 14
C = 3	G = 7	K = 11	O = 15
D = 4	H = 8	L = 12	P = 16

End Plate Port Size
3 = 3/8

Port Type
N = NPTF Pressure Ports w/ NPTF Conduit Ports

Options
STD = Standard

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

Mark 15 Series 4-way, Spool & Sleeve

- 5 Ported, 2 and 3 position
- Cv: 1.5
- Direct solenoid or air pilot actuated
- Plug-in solenoid with indicator light
- Unlubricated or lubricated service
- Integral speed control available
- Integral regulators available
- NEMA 4 / IP65
- Body to base plug-in

Operational & Technical Information

VALVE DATA	ENGLISH		METRIC	
Cv	1/4 NPTF = 1.4	3/8 NPTF = 1.5	1/8 G Tap = 0.80	1/4 G Tap = 1.0
Flow Capacity	65 SCFM	69 SCFM	1379 Nl/m	1477 Nl/m
	Upstream pressure to atmosphere @ 80 PSIG		@ 6 bar upstream, 5 bar downstream	
Operating Pressure Range	28" Hg. Vacuum to 150 PSIG		Vacuum to 10 bar	
Temperature Range (Ambient)	-10°F to +115°F		-23°C to +46°C	

All Solenoids are Continous Duty Rated		24VDC	120 VAC, 60 Hz
Power (Watts)		6.0	N/A
Holding Current (Amps)		0.25	0.090
Inrush Current (Amps)		N/A	0.580
Energize in Seconds	2 - Position, Single, Spring Return	0.034	0.010
	2 - Position, Double, Detented	0.035	0.010
	3 - Position, Spring Centered	0.040	0.010
De-Energize in Seconds	2 - Position, Single, Spring Return	0.011	0.015
	2 - Position, Double, Detented	N/A	N/A
	3 - Position, Spring Centered	0.010	0.012

How To Order

Valves

152 SA 4 15 K 0 000 30

Valve Series & Port Size
152* = 1/4
153 = 3/8
*Use for regulator unit only (mounting = 00)

Valve Type
SA = Single Direct Solenoid, Spring Return with Flush Non-Locking Override
SS = Double Direct Solenoid with Flush (Std.) Non-Locking Override

Function
4 = 2 Position, 4-way (5/2)
5 = 3 Position, 4-way Open Centre (5/3) Dual Pressure
6 = 3 Position, 4-way (5/3) Blocked Centre
P = Blank Station Plate

Mounting
00 = Valve Unit Only
01 = Valve Unit, Speed Control, w/o Mounting
02 = Valve Unit w/ Long Screws for Speed Control
15 = Manifold Block, Side and Bottom Cylinder Ports
25 = Manifold Block, Side and Bottom Cylinder Ports, Speed Control
3A = Plug-in Base, Individual Exhaust, Side Cylinder Ports
3B = Plug-in Base, Individual Exhaust, Side and Bottom Cylinder Ports
3C = Plug-in Base, Individual Exhaust, Side Cylinder Ports, Speed Control
3D = Plug-in Base, Individual Exhaust, Side and Bottom Cylinder Ports, Speed Control
31 = Plug-in Base, Common Exhaust, Side Cylinder Ports
32 = Plug-in Base, Common Exhaust, Side and Bottom Cylinder Ports
35 = Plug-in Base, Common Exhaust, Side Cylinder Ports, Speed Control
36 = Plug-in Base, Common Exhaust, Side and Bottom Cylinder Ports, Speed Control

Wiring Option
K = Plug-in AC w/Light
M = Plug-in DC w/Light

Port Type
0 = NPTF Pressure Ports with NPTF Conduit Ports or Valve Unit without NPTF

Options
000 = No Options
11B = Flush Locking Override (SA Only)
19M = Terminal Block in Mounting
46T = Zinc Plated Solenoid Armature (AC only)

Voltage
00 = Blank Station
30 = 110-120/50-60 VAC
61 = 24 VDC

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

How To Order

Regulators

152 RS 1 15 J 0 000 00

Valve Series & Port Size
152* = 1/4
153 = 3/8
*Use for valve unit only (mounting = 00)

Regulator Type
RS = Single Pressure to Valve (P)
RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range
1 = 10-130 PSIG (0.7-9 bar)

Mounting
00 = Regulator Unit Only
15 = Manifold Block, Side and Bottom Cylinder Ports
25 = Manifold Block, Side and Bottom Cylinder Ports, Speed Control
3A = Plug-in Base, Individual Exhaust, Side Ports
3B = Plug-in Base, Individual Exhaust, Side and Bottom Ports
3C = Plug-in Base, Individual Exhaust, Side Ports, Speed Control
3D = Plug-in Base, Individual Exhaust, Side and Bottom Ports, Speed Control
31 = Plug-in Base, Common Exhaust, Side Ports
32 = Plug-in Base, Common Exhaust, Side and Bottom Ports
35 = Plug-in Base, Common Exhaust, Side Ports, Speed Control
36 = Plug-in Base, Common Exhaust, Side and Bottom Ports, Speed Control

Wiring Option
J = Plug-in Receptacle Assembly

Port Type
0 = NPTF Pressure Ports with NPTF Conduit Ports or Valve Unit without NPTF

Options
000 = No Options
16W = Fitting(s) for Top Facing Gauge

Assembly Kit

AK 0 J H 0000 4 N STD

Electrical/Electronics Type & Location
0 = Standard

Valve Series
J = Mark 15 Series Valves

Number of Valve Stations

A = 1	E = 5	I = 9	M = 13
B = 2	F = 6	J = 10	N = 14
C = 3	G = 7	K = 11	O = 15
D = 4	H = 8	L = 12	P = 16

End Plate Port Size
4 = 1/2

Port Type
N = NPTF Pressure Ports w/ NPTF Conduit Ports

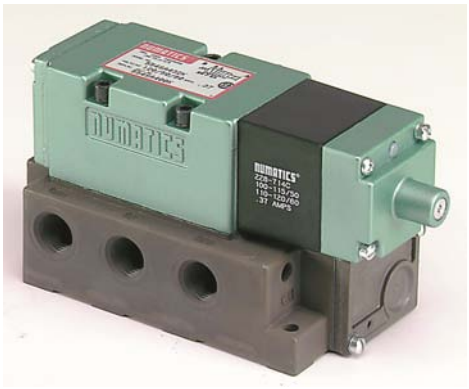
Options
STD = Standard

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

Mark 55 Series 4-way, Spool & Sleeve



- 5 Ported, 2 and 3 position
- Cv: 1.5
- Direct solenoid or air pilot actuated
- Plug-in solenoid with indicator light
- Unlubricated or lubricated service
- Integral speed control available
- Integral regulators available
- NEMA 4 / IP65

Operational & Technical Information

VALVE DATA	ENGLISH		METRIC	
Cv	1/2 NPTF = 5.0	3/4 NPTF = 5.5	1/2 G Tap = 5.0	3/4 G Tap = 5.5
Flow Capacity	232 SCFM	255 SCFM	4925 Nl/m	5417 Nl/m
	Upstream pressure to atmosphere @ 80 PSIG		@ 6 bar upstream, 5 bar downstream	
Operating Pressure Range	28" Hg. Vacuum to 150 PSIG		Vacuum to 10 bar	
Temperature Range (Ambient)	-10°F to +115°F		-23°C to +46°C	

All Solenoids are Continous Duty Rated		24VDC	120 VAC, 60 Hz
Power (Watts)	Single Solenoid	N/A	11.5
	Double Solenoid	N/A	5.6
Holding Current (Amps)	Single Solenoid	1.8	0.28
	Double Solenoid	1.3	0.24
Inrush Current (Amps)	Single Solenoid	13.0	2.5
	Doulbe Solenoid	12.4	2.1
Energize In Seconds	2 - Position, Single, Spring Return	0.015	0.015
	2 - Position, Double, Detented	0.018	0.018
	3 - Position, Spring Centered	0.015	0.015
De-Energize in Seconds	2 - Position, Single, Spring Return	0.030	0.030
	2 - Position, Double, Detented	N/A	N/A
	3 - Position, Spring Centered	0.030	0.030

How To Order

Valves

553 SA 4 15 K 0 000 30

Valve Series & Port Size
554* = 1/2
555 = 3/4
*Use for regulator unit only (mounting = 00)

Valve Type
SA = Single Direct Solenoid, Spring Return with Flush Non-Locking Override (Std.)
SS = Double Direct Solenoid with Flush Non-Locking Override (Std.)
BA = Single Solenoid Air Pilot, Spring Return with Flush Non-Locking Override
BB = Double Solenoid Air Pilot with Flush Non-Locking Override

Function
4 = 2 Position, 4-way (5/2)
5 = 3 Position, 4-way Open Centre (5/3)
6 = 3 Position, 4-way (5/3) Blocked Centre

Mounting
00 = Valve Unit Only
3A = Individual Base, Side Ports, Individual Exhaust
3C = 3A with Speed Control
15 = Manifold Block with Side and Bottom Cylinder Ports
25 = 15 with Speed Control
31 = Plug-in Base, Side Ports, Common Exhaust
35 = 31 with Speed Control

Wiring Option
K = Plug-in AC w/Light
M = Plug-in DC w/Light (SPA 55 only)

Port Type
0 = NPTF
T = NPTF (Solenoid Pilot Valves)

Options
000 = No Options
19M = Terminal Block in Conduit Area (Mark 55 and SPA 55 only)

Voltage
00 = Air Pilot
30 = 110-120/50-60 VAC
61 = 24 VDC

Regulators

553 RS 1 15 J P 000 00

Valve Series & Port Size
554* = 1/2
555 = 3/4
*Use for valve unit only (mounting = 00)

Regulator Type
RS = Single Pressure to Port 1 (P)
RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range
1 = 10-130 PSIG (0.7-9 bar)

Mounting
00 = Regulator Unit Only
01 = Regulator Unit Only with Speed Control
3A = Individual Base, Side Ports, Individual Exhaust
3C = 3A with Speed Control
15 = Manifold Block, Side and Bottom Cylinder Ports
25 = 15 with Speed Control
31 = Plug-in Base, Side Ports, Common Exhaust
35 = 31 with Speed Control

Wiring Option
J = Plug-in Receptacle Assembly

Port Type
P = NPTF

Options
000 = No Options

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program TODAY

How To Order

Assembly Kit

AK 0 P H 0000 7 N STD

Electrical/Electronics Type & Location
0 = Standard

Valve Series
P = Mark 55 Series Valves (full size)

Number of Valve Stations

A = 1	E = 5	I = 9	M = 13
B = 2	F = 6	J = 10	N = 14
C = 3	G = 7	K = 11	O = 15
D = 4	H = 8	L = 12	P = 16

End Plate Port Size
7 = 1-1/4 Full Size

Port Type
N = NPTF Pressure Ports w/ NPTF Conduit Ports

Options
STD = Standard

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

ISO 5599/2 Series, 4-way, Spool & Sleeve

- 5 Ported, 2 and 3 position
- Cv: 1.2 to 2.9
- Solenoid Pilot Actuated
- Complies with ISO Standard 5599/2 Size 1 & 2
- NEMA 4/IP 65

Operational & Technical Information

Valve data		Solenoid Pilot Actuated	
		English	Metric
Cv	Size 1	1.3	1.3
	Size 2	2.9	2.9
Flow capacity	Size 1	60.1 SCFM	1280 Nl/m
	Size 2	134.0 SCFM	2857 Nl/m
Main valve operating pressure range - All Sizes		80 PSIG upstream pressure to atmosphere	6 bar upstream to 5 bar downstream
Pilot pressure range - All Sizes		15 to 125 PSIG	1 to 8.6 bar
Temperature range (Ambient) - All Sizes		-10°F to +115°F	-23°F to +50°F

All Solenoids are Continuous Duty Rated	24 VDC Solenoid Pilot Size 1 & 2
Power (Watts) - All Sizes	4.0
Holding Current (Amps)	0.16
In-Rush Current (Amps) - All Sizes	NA

Repsonse Time in Seconds	Solenoid Pilot Actuated			
	Energize (Sec)		De-Energize (Sec)	
	Size 1	Size 2	Size 1	Size 2
2-Position, Single, Spring Return	0.013	0.013	0.036	0.060
2-Position, Double, Detented	0.013	0.013	NA	NA
3-Position, Spring Centered	0.013	0.013	0.036	0.060

How To Order

Valves — I12 BA 4 Z2 M P 000 61

Valve Series & Port Size
I12* = Size 1-1/4
I13 = Size 1-3/8
I24 = Size 2-1/2
I34* = Size 3-1/2
*Use for valve unit only (mounting = 00)

Valve Type
BA = Single Solenoid Pilot (Spring Return) with Flush Non-Locking Override
BB = Double Solenoid Pilot with Flush Non-Locking Override

Function
4 = 2 Position, 4-way
5 = 3 Position, 4-way Open Centre
6 = 3 Position, 4-way Closed Centre
P = Blank Station Plate

Mounting
00 = Valve Unit Only
15**= Manifold Block, Side and Bottom Cylinder Ports
3A = Individual Base, Side Ports, Individual Exhaust (with 56Y option Only)
Z1 = Manifold Block w/ Side and bottom Ports, Single Solenoid Internal Circuit Board
Z2**= Manifold Block w/ Side and Bottom Ports, Double Solenoid Internal Circuit Board
Z5 = Z1 with Speed Control
Z6 = Z2 with Speed Control
R1 = Z1 with Ribbon Cable Connector
R2 = Z2 with Ribbon Cable Connector
R5 = Z5 with Ribbon Cable Connector
R6 = Z6 with Ribbon Cable Connector

**Also used with Function P = Blank Station

Wiring Option
K = Plug-in AC w/Light
M = Plug-in DC w/Light
O = Blank Station Plate

Port Type
P = NPTF (Solenoid Pilot Valves)
Q = G Tap (Solenoid Pilot Valves)
(conforms to ISO Standards 1179-1)

Options
000 = No Options
56Y = 4 pin, 12mm Electrical Connector in Conduit Port of Base Mounting Only (3A only)

Voltage
00 = Blank Station
30 = 110-120/50-60 VAC
61 = 24 VDC (SPA only)

Assembly Kit — AK J Q B 0000 3 G STD

Electrical/Connection Type & Location
F* = Terminal Strip 1-16
J* = 25 Pin Sub-D
*Used with Z-board only

Valve Series
Q = ISO 5599/2 Size 1
R = ISO 5599/2 Size 2

Number of Valve Stations

A = 1	I = 9
B = 2	J = 10
C = 3	K = 11
D = 4	L = 12
E = 5	M = 13
F = 6	N = 14
G = 7	O = 15
H = 8	P = 16

End Plate Port Size
3 = 3/8 (Size 1)
4 = 1/2 (Size 2)

Port Type
G = G Tap

Options
STD = Standard

See How To Order Manifolds (page 34-36) for Ordering Details

Configurable items on this page may be included in the Today Program

ISO 15407-2 Series—26mm, 4-way, Spool & Sleeve

- 5 Ported, 2 and 3 position
- Cv: 1.2
- Solenoid Air Pilot Actuated
- Low wattage coil
- DC solenoids polarity insensitive with spike suppression
- Plug together circuit boards eliminate internal wiring
- Integral recessed gaskets
- NEMA 4/IP65

Operational & Technical Information

Valve data	English	Metric
Cv	1.2	1.2
Flow capacity	56 SCFM @ 80 PSIG upstream pressure to atmosphere	1180 Nl/m @ 6 bar upstream to 5 bar downstream
Operating Pressure Range	28" Hg Vacuum to 150 PSIG	Vacuum to 10 bar
Pilot Pressure Range	26 to 120 PSIG	1.8 to 8.2 bar
Temperature range (Ambient)	-10°F to +115°F	-23°C to +46°C

All Solenoids are Continuous Duty Rated	24 VDC
Power (Watts) - All Sizes	2.5
Holding Current (Amps)	0.100

Repsonse Time in Seconds	Solenoid Pilot Actuated	
	Energize (Sec)	De-Energize (Sec)
2-Position, Single, Spring Return	0.010	0.020
2-Position, Double, Detented	0.010	NA
3-Position, Spring Centered	0.010	0.020

How To Order

Valves

I62 BB 4 Z2 M N 000 61

Valve Series & Port Size
I62* = 1/4
I63 = 3/8
I6H = 8mm
I6K = 10mm
*Use for valve unit only (mounting =00)

Valve Type
BA = Single Solenoid Pilot (Spring Return) with flush non-locking override
BB = Double Solenoid Pilot with flush non-locking override

Function
4 = 2 Position, 4-way
5 = 3 Position, 4-way Open Centre
6 = 3 Position, 4-way Closed Centre
P = Blank Station Plate

Mounting
00 = Valve Unit Only
Z1 = Manifold Block w/ Side and Bottom Ports, Single Solenoid Internal Circuit Board
Z2 = Manifold Block w/ Side and Bottom Ports, Double Solenoid Internal Circuit Board
Z5 = Z1 with Speed Control
Z6 = Z2 with Speed Control
R1 = Z1 with Ribbon Cable Connector
R2 = Z2 with Ribbon Cable Connector
R5 = Z5 with Ribbon Cable Connector
R6 = Z6 with Ribbon Cable Connector
3A = Individual Base, Side Ports, Individual Exhaust (with 56Y option Only)

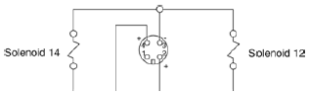
Wiring Option
K = Plug-in AC w/ Light
M = Plug-in DC w/Light
O = Blank Station Plate

Port Type
N = NPTF
G = G Tap ISO228/I=G
0 = Valve Unit Only

Options
000 = No Options
56Y = 4 pin, 12mm Electrical Connector in Conduit Port of Base Mounting Only (3A only)

Voltage
00 = Blank Station
30 = 110-120/50-60 VAC
61 = 24 VDC (SPA only)

56Y (Mounting)
4 Pin 12mm (Micro) Connector



Regulators

I62 RS 1 Z1 J N 000 00

Valve Series & Port Size
I62* = 1/4
I63 = 3/8
I6H = 8mm
I6K = 10mm
*Use for valve unit only (mounting =00)

Regulator Type
RS = Single Pressure to Port 1 (P)
RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range
1 = 10-130 PSIG (0.7-9 bar)

Mounting
00 = Regulator Unit Only
Z1 = Manifold Block w/ Side and Bottom Ports, Single Solenoid Internal Circuit Board
Z2 = Manifold Block w/ Side and Bottom Ports Double Solenoid, Internal Circuit Board
Z5 = Z1 with Speed Control
Z6 = Z2 with Speed Control
R1 = Z1 with Ribbon Cable Connector
R2 = Z2 with Ribbon Cable Connector
R5 = Z5 with Ribbon Cable Connector
R6 = Z6 with Ribbon Cable Connector

Wiring Option
J = Plug-in Receptacle Assembly

Port Type
N = NPTF
G = G Tap ISO228/I=G
0 = Regulator Unit Only

Options
000 = No Options
16W = Fitting(s) for Top Facing Gauge

See How To Order Manifolds (page 34-36) for Ordering Details

Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program

How To Order

Assembly Kit **AK J X B 0000 3 G STD**

Electrical/Connection Type & Location
F = Terminal Strip 1-16
J = 25 Pin Sub-D

Valve Series
X = 15407-2 (26mm)

Number of Valve Stations

A = 1	I = 9	Q = 17Y	Y = 25
B = 2	J = 10	R = 18Z	Z = 26
C = 3	K = 11	S = 192	2 = 27
D = 4	L = 12	T = 203	3 = 28
E = 5	M = 13	U = 214	4 = 29
F = 6	N = 14	V = 225	5 = 30
G = 7	O = 15	W = 236	6 = 31
H = 8	P = 16	X = 247	7 = 32

Options
STD = Standard
MUF = Muffler in End Plates

Port Type
N = NPTF
G = G Tap

End Plate Port Size
3 = Port Type N or G
Port 1 = 3/8, Port 3/5 = 1/2

Note: Maximum number of valve stations is determined by:

- The electrical connection type.
- The valve type - single solenoid valve are up to the maximum solenoid outputs allowed by the electrical connection type (refer to full catalogue) or combination of single and/or double solenoid valves not to exceed the maximum number of solenoid outputs allowed.

See How To Order Manifolds (page 34-36) for Ordering Details

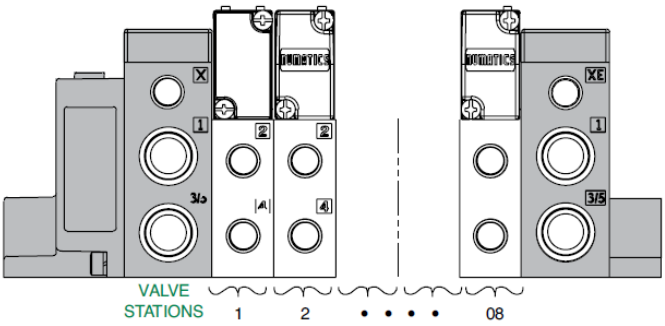
Note: Additional station configurations may be available please consult factory.

Configurable items on this page may be included in the Today Program TODAY

How To Order Manifolds

AKJ 25 Pin Sub-D

- Shaded components described by Assembly Kit (AK) model number designation (Refer to Valve Series How to Order Charts)
- Each valve manifold station is listed in sequential order from left to right when facing the port side of the manifold as indicated.

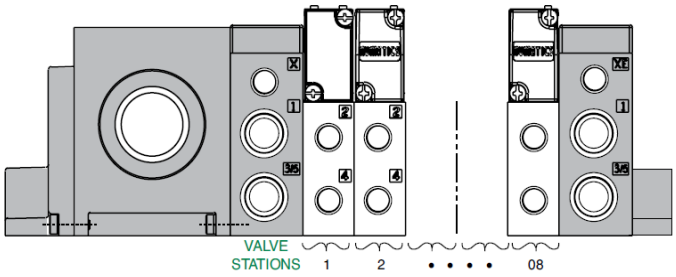


Example order: (2005 Series)

25 Pin Sub-D	AKJED00003NSTD
Valve Station 1	051BA4Z2MN00061
Valve Station 2	051BA4Z2MN00061
Valve Station 3	051BB4Z2MN00061
Valve Station 4	051BB4Z2MN00061
	ASSEMBLED

AKF 1-16 Terminal Strip

- Ordering using the same method as Sub-D



Example order: (2005 Series)

	AKFEF00003LSTD
Valve Station 1	052BA4Z2ML00061
Valve Station 2	052BA4Z2ML00061
Valve Station 3	052BB4Z2ML00061
Valve Station 4	052BB4Z2ML00061
Valve Station 5	052BB5Z2ML00061
Valve Station 6	052BB6Z2ML00061
	ASSEMBLED

How To Order

Assembly Kit — **A K 3 E D 0 0 0 0 3 L STD**

Electrical / Electronic Type
3 = G3 Electronics

Valve Series
0 = N/A
E = 2005
G = 2012
B = 2035
Q = ISO5599/2 Size 1
R = ISO5599/2 Size 2
X = ISO15407-2 26mm

Number of Valve Stations

A = 1	I = 9	Q = 17	Y = 25
B = 2	J = 10	R = 18	Z = 26
C = 3	K = 11	S = 19	2 = 27
D = 4	L = 12	T = 20	3 = 28
E = 5	M = 13	U = 21	4 = 29
F = 6	N = 14	V = 22	5 = 30
G = 7	O = 15	W = 23	6 = 31
H = 8	P = 16	X = 24	7 = 32

Special Options
STD = Standard
MUF = Muffler

End Plate Port Type
L = Push-in Fitting
N = NPTF Pressure Ports

End Plate Port Size
2 = 1/4
3 = 3/8
4 = 1/2
6 = 1
H = 8mm (5/16)
K = 10mm
X = Two or more valve groups

How To Order

Electronics — **G3 EP1 00 R 0 STD**

Electronics Protocols
DN1 = DeviceNet
EP1 = EtherNet/IP
PT1 = PROFIBUS-DP
PN1 = PROFINET
DS2 = Sub-bus Valve Manifold
DS3 = Sub-bus I/O Assembly

Number of I/O Modules

00 = 0	09 = 9
01 = 1	10 = 10
02 = 2	11 = 11
03 = 3	12 = 12
04 = 4	13 = 13
05 = 5	14 = 14
06 = 6	15 = 15
07 = 7	16 = 16
08 = 8	

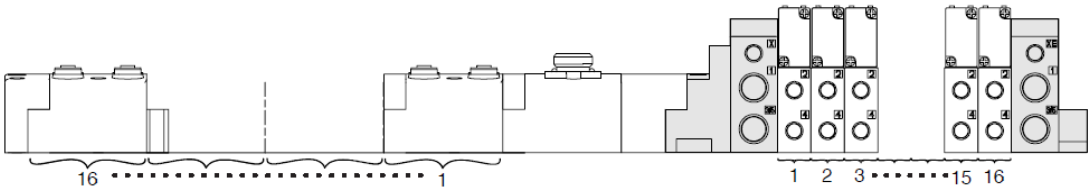
Left Mounting
D = w/Sub-bus Out
R = w/Terminating Resistor

Special Options
STD = Standard
E40 = Auto Recovery Module

Modification
0 = Initial Release

Ordering Valve Manifold Assemblies with G3 Electronics and Discrete I/O

For Valve Series 2005, 2012, 2035, ISO5599/2 and ISO 15407-2 26mm



Shaded components are described by the assembly kit (AK) model number (see page 26).The communication module and number of I/O modules are described by the Electronic Interface (G3) model number designation (see page 26).

Each valve station is listed in sequential order from left to right when facing the port side of the manifold as shown.

Each discrete I/O module is listed in sequential order from RIGHT to LEFT starting from the communication module as shown.

NOTE:

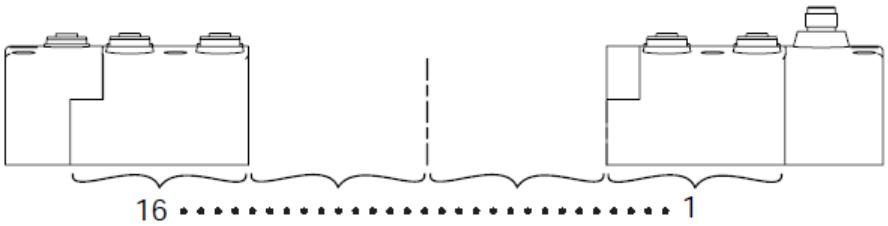
1. A total of 32 solenoid outputs are available. Either 32 single solenoid valves or 16 double solenoid valves or any combination of singles and doubles not to exceed 32 outputs can be specified.
2. For manifold assemblies that exceed 16 solenoids, the assembly MUST be configured so that an even number of solenoids are utilized prior to the station using the ribbon cable feature. The 16th and the 17th solenoids cannot be on the same valve.

Example Order - 2005 Shown

Assy Kit AK3EP00003LMUF
Station 1 052BB4Z2ML00061
Station 2 052BB4Z2ML00061
Station 3 052BB4Z2ML00061
Station 4 052BB4Z2ML00061
Station 5 052BB4Z2ML00061
Station 6 052BB4Z2ML00061
Station 7 052BB4Z2ML00061
Station 8 052BB4Z2ML00061
Station 9 052BB4R2ML00061
Station 10 052BB4Z2ML00061
Station 11 052BB4Z2ML00061
Station 12 052BB4Z2ML00061
Station 13 052BB4Z2ML00061
Station 14 052BB4Z2ML00061
Station 15 052BB4Z2ML00061
Station 16 052BB4Z2ML00061
Electronics G3DN116R0E40
Station 1 240-205
Station 2 240-205

Station 15 240-205
Station 16 240-205

Ordering G3 Electronics Assemblies with I/O Only



Example Order - I/O assembly with Sub-Bus in and Sub-Bus out Modules

Electronics G3DS316D0STD
Station 1 240-205
Station 2 240-205

**

Station 15 240-205

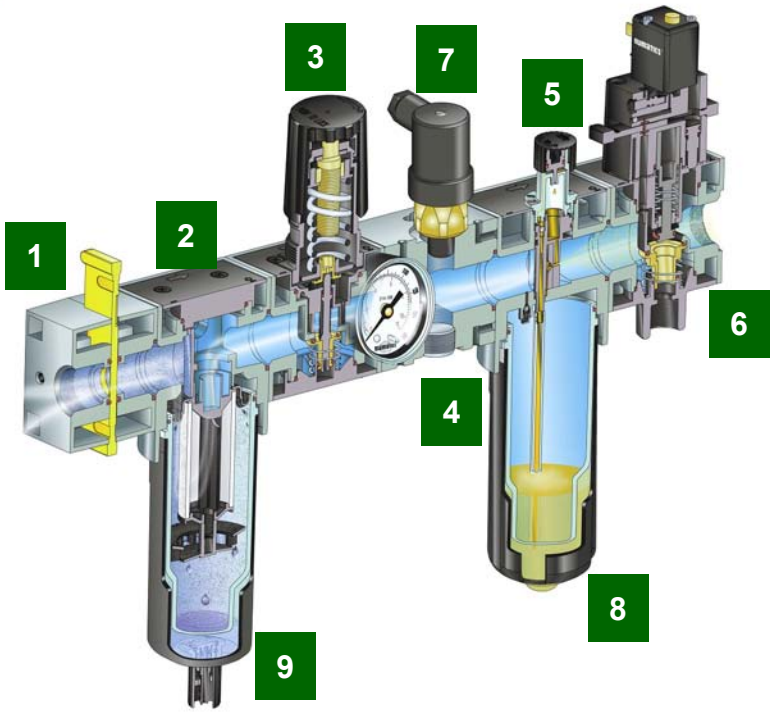
Station 16 240-205

Configurable items on this page may be included in the Today Program

StockBlok Assemblies—FRLs in Standard Combination

Made with lightweight but sturdy aluminum castings, the **FlexiBlok®** FRL Series offers the most reliable performance and durability of any FRL line.

Most components can be modified with available options and accessories like metal bowls and easy-to-operate drains.



1. Shutoff Valve
- Relieving/Non Relieving

2. Filter
- 5 Micron particulate
- 3 Coalescing Grades
- Adsorbing Grade

3. Regulator
- Multiple Pressure Ranges
- Relieving/Non-Relieving

4. Diverter Block
- Provides Versatility

5. Lubricator
- Siphon Tube Design Provides Accurate Oil Metering

6. Solenoid Soft Start Quick Exhaust Valve
- Solenoid Quick Exhaust and Air Pilot Versions

7. Pressure Switch
- Field installable Connector or 12mm Micro Styles

8. Bowls
- Polycarbonate, metal, Circlevision

9. Drains
- 6 Styles

**Some configurations of Stockblok options may not be included in Express program*

How

M32 — 04 XFRLX — AM

Series
14 = 1.5 oz Bowl
22 = 3.8 oz Bowl
32 = 8.5 oz Bowl
42 = 8.5 oz Bowl

Thread
— = NPT

Port Size
02 = 1/4 (14 & 22 Series Only)
03 = 3/8 (22 Series Only)
04 = 1/2 (22 & 32 Series Only)
06 = 3/4 (42 Series Only)
08 = 1 (42 Series Only)

Options
A = Auto Drain
M = Metal Bowl with Sight Glass
Q = Metal Manual Drain

Components
XFRLX = Particulate Filter/Regulator/Lubricator with Gauge
XPLXX = Filter-Regulator/Lubricator w/Gauge
VFRLX = Shut off/Particulate Filter/Regulator/ Lubricator with Gauge
VPLXX = Shut off/Filter-Regulator/Lubricator with Gauge

Shut off/Particulate Filter/Regulator/Lubricator with Gauge

		Particulate			Weight	
Model #	Shut Off	Filter	Regulator	Lubricator	LBS.	KGS
M14-02VFRLX	VS14-02	F14B-02	R14R-02G	L14L-02	2.55	1.17
M22-02VFRLX	VS22-02	F22B-02	R22R-02G	L22L-02	2.38	1.08
M22-03VFRLX	VS22-03	F22B-03	R22R-03G	L22L-03	2.38	1.08
M22-04VFRLX	VS22-04	F22B-04	R22R-04G	L22L-04	2.38	1.08
M32-04VFRLX	VS32-04	F32B-04	R32R-04G	L32L-04	4.78	2.17
M42-06VFRLX	VSL42-06	F42B-06	R42R-06G	L42L-06	16.65	7.55
M42-08VFRLX	VSL42-08	F42B-08	R42R-08E	L42L-08	16.65	7.55

To Order this unit without a shutoff valve, replace the 'V' in the model number with an 'X' (ie. M14-02XFRLX)

Shut off/Filter-Regulator/Lubricator with Gauge

		Particulate		Weight	
Model #	Shut Off	Regulator	Lubricator	LBS.	KGS
M14-02VPLXX	VS14-02	P14B-02G	L14L-02	2.05	0.93
M22-02VPLXX	VS22-02	P22B-02G	L22L-02	1.95	0.89
M22-03VPLXX	VS22-03	P22B-03G	L22L-03	1.95	0.89
M22-04VPLXX	VS22-04	P22B-04G	L22L-04	1.95	0.89
M32-04VPLXX	VS32-04	P32B-04G	L32L-04	3.92	1.78
M42-06VPLXX	VSL42-06	P42B-06G	L42L-06	13.70	6.21
M42-08VPLXX	VSL42-08	P42B-08G	L42L-08	13.70	6.21

To Order this unit without a shutoff valve, replace the 'V' in the model number with an 'X' (ie. M14-02XPLXX)

Configurable items on this page may be included in the Today Program

Particulate Filter—Flexiblok FRL Series

F14B, F22B, G32B, F42B Series

- Four convenient sizes
- 5 micron sintered elements standard
- Can be installed as modular or individual unit
- Includes screws and o-rings for modular connection
- Manual or automatic drain
- Polycarbonate bowl standard
- Optional metal bowl with sight glass
- Bowl seal held captive (22, 32 and 42 Series)

Operational & Technical Information

	POLYCARBONATE BOWL	CIRCLEVISION BOWL	METAL BOWL
Temperature Range (°F)	40-120	40-120	40-120
Temperature Range (°C)	4 - 50	4 - 50	4 - 50
Max. Pressure (PSIG)	150	250	200
Max. Pressure (Bar)	10	17	14
14 Series (Weight lbs)	0.60	0.80	0.65
14 Series (Weight kg)	0.28	0.36	0.30
22 Series (Weight lbs)	0.65	0.86	1.25
22 Series (Weight kg)	0.30	0.39	0.57
32 Series (Weight lbs)	1.30	1.70	2.50
32 Series (Weight kg)	0.59	0.77	1.14
42 Series (Weight lbs)	3.70	4.15	4.80
42 Series (Weight kg)	1.68	1.88	2.18

How To Order

F 22 B — 03 A

Model
F = Filter

Series
14 = 1.5 oz Bowl
22 = 3.8 oz Bowl
32 = 8.5 oz Bowl
42 = 8.5 oz Bowl

Element
B = 5 Micron Element

Threads
— = NPTF

Port Size
02 = 1/4 (14 & 22 Series Only)
03 = 3/8 (22 Series Only)
04 = 1/2 (22 & 32 Series Only)
06 = 3/4 (42 Series Only)
08 = 1 (42 Series Only)

Options
A = Auto Drain
M = Metal Bowl with Sight Glass
Q = Metal Manual Drain

Configurable items on this page may be included in the Today Program

Coalescing Filter—Flexiblok FRL Series

F14, F22, F32, F42 Series

- Four convenient sizes
- Cartridge element design
- Inner and outer support cores prevent element from crushing in either flow direction
- Available with manual or automatic drain
- Dp indicator standard on 14, 22, 32 and 42 Series

Operational & Technical Information

	POLYCARBONATE BOWL	CIRCLEVISION BOWL	METAL BOWL
Temperature Range (°F)	40-120	40-120	40-120
Temperature Range (°C)	4 - 50	4 - 50	4 - 50
Max. Pressure (PSIG)	150	250	200
Max. Pressure (Bar)	10	17	14
14 Series (Weight lbs)	0.65	0.82	0.70
14 Series (Weight kg)	0.30	0.37	0.32
22 Series (Weight lbs)	0.66	0.89	1.28
22 Series (Weight kg)	0.30	0.40	0.58
32 Series (Weight lbs)	1.42	1.83	2.56
32 Series (Weight kg)	0.65	0.83	1.16
42 Series (Weight lbs)	3.70	4.15	4.80
42 Series (Weight kg)	1.68	1.88	2.18

How To Order

F 22 D — 03 A

Model
F = Filter

Series
14 = 1.5 oz Bowl
22 = 3.8 oz Bowl
32 = 8.5 oz Bowl
42 = 8.5 oz Bowl

Element
D = 0.3 Micron Fine Coalescer

Threads
— = NPTF

Port Size
02 = 1/4 (14 & 22 Series Only)
03 = 3/8 (22 Series Only)
04 = 1/2 (22 & 32 Series Only)
06 = 3/4 (42 Series Only)
08 = 1 (42 Series Only)

Options
A = Auto Drain
M = Metal Bowl with Sight Glass
Q = Metal Manual Drain

Configurable items on this page may be included in the Today Program

Regulators — Flexiblok FRL Series

R14, R22, R32, R42 Series

- Four convenient sizes
- High flow in compact size
- Locking adjustment knob
- Four different pressure ratings available
- Relieving or non-relieving models
- Can be installed as modular or individual unit
- Standard output pressure 0-125 PSIG

Operational & Technical Information

	14 SERIES	22 SERIES	32 SERIES	42 SERIES
Temperature Range (°F)	40-120	40-120	40-120	40-120
Temperature Range (°C)	4 - 50	4 - 50	4 - 50	4 - 50
Max. Pressure (PSIG)	250	200	250	250
Max. Pressure (Bar)	17	14	14	17
Weight (lbs.)	0.65	0.69	1.37	4.30
Weight (kg)	0.30	0.31	0.62	1.95
Body Material	Zinc	Aluminum	Aluminum	Aluminum

How To Order

R 32 R — 04 G

Model
R = Regulator

Series
14
22
32
42

Element
R = Relieving

Threads
— = NPTF

Port Size
02 = 1/4 (14 & 22 Series Only)
03 = 3/8 (22 Series Only)
04 = 1/2 (22 & 32 Series Only)
06 = 3/4 (42 Series Only)
08 = 1 (42 Series Only)

Options
G = Gauge
P = Panel Nut (14, 22 & 32 Series Only)

Configurable items on this page may be included in the Today Program

Particulate Regulators — Flexiblok FRL Series

P14, P22, P32, P42 Series

- Four convenient sizes
- 5 micron element standard
- Can be installed as modular or individual unit
- Non-rising knob
- Standard output pressure 0-125 PSIG

Operational & Technical Information

	14 SERIES	22 SERIES	32 SERIES	42 SERIES
Temperature Range (°F)	40-120	40-120	40-120	40-120
Temperature Range (°C)	4 - 50	4 - 50	4 - 50	4 - 50
Max. Pressure (PSIG)	250	200	200	250
Max. Pressure (Bar)	17	14	14	17
Weight (lbs.)	0.65	0.69	1.37	4.30
Weight (kg)	0.30	0.31	0.62	1.95
Body Material	Zinc	Aluminum	Aluminum	Aluminum

How To Order

P 14 B — 02 G

Model
P = Particulate/Regulator

Series
14 = 1.5 oz Bowl
22 = 3.8 oz Bowl
32 = 8.5 oz Bowl
42 = 8.5 oz Bowl

Element
B = 5 Micron Element

Threads
— = NPTF

Port Size
02 = 1/4 (14 & 22 Series Only)
03 = 3/8 (22 Series Only)
04 = 1/2 (22 & 32 Series Only)
06 = 3/4 (42 Series Only)
08 = 1 (42 Series Only)

Options
A = Auto Drain
G = Gauge
P = Panel Mount (14, 22 & 32 Series Only)
M = Metal Bowl with Sight Glass
Q = Metal Manual Drain

Configurable items on this page may be included in the Today Program

Lubricators — Flexiblok FRL Series

L14L, L22L, L32L, L42L Series

- Four convenient sizes
- Lubrication to begin at 2 SCFM
- Can be filled under pressure (32 and 42 Series Only)
- Tamper-resistant knob standard
- Optional metal bowl with sight glass
- Can be mounted as individual or modular unit
- Button head fill optional on all sizes
- Atomizing chamber develops longer life aerosols

Operational & Technical Information

	14 SERIES	22 SERIES	32 SERIES	42 SERIES
Temperature Range (°F)	40-120	40-120	40-120	40-120
Temperature Range (°C)	4 - 50	4 - 50	4 - 50	4 - 50
Max. Pressure (PSIG)	200	200	200	200
Max. Pressure (Bar)	14	14	14	14
Weight (lbs.)	0.60	0.69	1.37	4.15
Weight (kg)	0.27	0.31	0.62	2.18
Body Material	Zinc	Aluminum	Aluminum	Aluminum

How To Order

L 22 L — 04 M

Model
L = Lubricator

Series
14 = 1.5 oz Bowl
22 = 3.8 oz Bowl
32 = 8.5 oz Bowl
42 = 8.5 oz Bowl

Style
L = Standard Lubricator

Threads
— = NPTF

Options
M = Metal Bowl with Sight Glass

Port Size
02 = 1/4 (14 or 22 Series Only)
03 = 3/8 (22 Series Only)
04 = 1/2 (22 or 32 Series Only)
06 = 3/4 (32 or 42 Series Only)
08 = 1 (42 Series Only)

Configurable items on this page may be included in the Today Program

Solenoid Valves - Soft Start & Quick Exhaust Series

Soft Start & Quick Exhaust Series

- Solenoid Soft Start Quick Exhaust or Solenoid Quick Exhaust Valves available
- Lockout feature prevents unauthorized pressurization
- High exhaust capacity for quick depletion of pressure
- High inlet to outlet flow capability

Operational & Technical Information

Temperature range: 40°F to 120°F (4°C to 50°C)
Maximum Pressure: 150 PSIG (10 bar)
Flow Media: filtered air
Weight lbs. (kg):

14 Series	22 Series	32 Series	42 Series
1.25 (0.57)	1.15 (0.53)	1.75 (0.79)	3.45 (1.56)

How To Order

S 32 C — 06 BKL

Model
S = Solenoid Soft Start / Solenoid Quick Exhaust

Series
14 (Style E Only)
22
32
42

Style
C = Standard Solenoid Soft Start
E = Standard Solenoid Quick Exhaust

Threads
N = NPTF

Options
B = Revision Level (*included)
G = Gauge (22, 32, or 42 Series Only)
K = 24 VDC Coil (*included)
L = Plug with Light
M = Muffler

Port Size
01 = 1/8 (14 Series Only)
02 = 1/4 (14 or 22 Series Only)
03 = 3/8 (22 Series Only)
04 = 1/2 (22 or 32 Series Only)
06 = 3/4 (32 or 42 Series Only)
08 = 1 (42 Series Only)

* Options B (Revision Level) and K (24 VDC Coil) are standard offerings and included in all orders.

Lockout Valves — Standard Series & Slo-Start Feature

VL & VT32 Series

- High exhaust capacity
- Detented spool
- Low-friction startup
- Meets OSHA specifications

Operational & Technical Information

Temperature range: 40°F to 120°F (4°C to 50°C)
Maximum Pressure: 150 PSIG (10 bar)
Flow Media: filtered air
Weight: VL32 Series 2.70 lbs (1.23kg)
VT32 Series 3.05 lbs (1.39kg)

Model	Cv In-Out	Cv Out-Exh
VL32N03Y / VT32N03Y	5.0	5.5
VL32N04Y / VT32N04Y	6.0	6.0
VL32N06Y / VT32N06Y	8.3	6.0

How To Order

VL 32 N 03 AY

Model
L = Standard
T = Slo-Start™ Feature

Threads
N = NPTF

Options
A = Metal Muffler

Port Size
03 = 3/8 in/out, 1/2 exh.
04 = 1/2 in/out, 1/2 exh.
06 = 3/4 in/out, 1/2 exh.

Filter/Regulator — 342 Stainless Steel Series

342 Stainless Steel Series

- Stainless steel filter/regulator intended for corrosive environments and suitable for uses in potentially explosive atmospheres according to: ***ATEX directive 94/9/EC***
- All internal metal parts in 316L stainless steel
- Elastomers in low temperature viton
- Built-in overpressure relieving function
- Moisture removal by centrifugation of the air, 5 microns filtering element

Operational & Technical Information

	1/4" NPT	1/2" NPT
Temperature Range (°F)	-40-176	-40-176
Temperature Range (°C)	-40-80	-40-80
Max. Inlet Pressure (PSI)	290	290
Max. Adjustable Pressure (PSI)	7-145	7-145
Weight (lbs.)	3.50	3.40
Weight (kg)	1.60	1.55
Body Material	Stainless Steel	Stainless Steel

How To Order

342 A8 4 0 5 LTG

Seires
342

Change Letter
A8

Relief / Vent Hole
4 = Ø1/8" NPT thread

NACE Compliant
0 = None

Port Size / Filtration
5 = 1/4" NPT / 5 micron
7 = 1/2" NPT / 5 micron

Options
LT = Low Temperature: -50°C*
G = Stainless Steel Pressure Gauge
MB = Mounting Bracket

***LT Option automatically included with 342 Filter/Regulator**

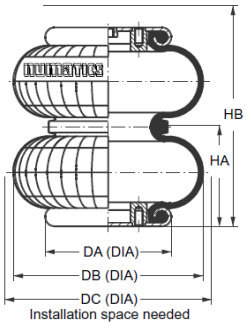
Configurable items on this page may be included in the Today Program

Air Bellows — Single, Double and Triple Convoluted Series

Specifications:

Medium: Filtered compressed air with or without lubrication
Ambient Temperature Range: -40°F to +140°F (-40°C to +70°C)
Working Pressure: Up to 120 PSIG (8 bar)
Materials: Caps, Galvanized steel. Bellows, Reinforced Rubber
Force: Up to 15,000 lbs
Stroke: Up to 16.75 inches

Typical Of
All Models

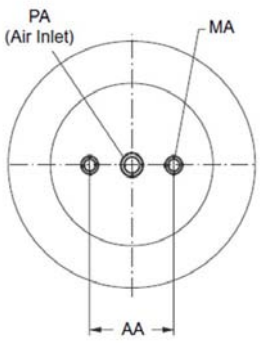


(Double Convoluted
Unit Shown)

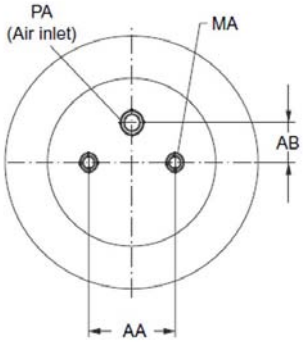
DA = Cap Diameter
DB = Maximum Bellows Diameter
DC = Installation Space Required
HA = Minimum Collapse Height**
HB = Maximum Extend Height**
*Do Not Exceed. May cause damage to bellow

End Cap Styles for Model Numbers Listed Below

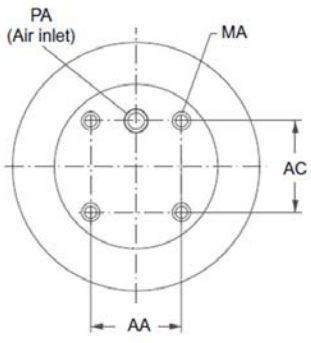
Air inlet caps shown. Opposite end does not include a supply port



ASNS11-2-1
ASNS18-3-1
ASND11-4-1
ASND18-5-1



ASNS31-3-1
ASNS51-3-1
ASND31-6-1
ASND51-7-1
ASNT51-11-1



ASNS82-4-1
ASND82-7-1
ASNT82-12-1

How To Order

Depending on your adapter selection, add either a –2 or –3 to end of bellows part number (ie. ASNS11-2-1-2)

Model Number Reference	Adapter Option Code											
Bellow Model	3/4 to 1/4	3/4 to 3/8	AA	AB	AC	DA	DB	DC	HA	HB	MA	PA
Single Convoluted												
ASNS11-2-1	-2	-3	1.75	N/A	N/A	4.25	6.50	7.09	2.00	4.50	3/8"-16 UNC	1/4"NPTF
ASNS18-3-1	-2	-3	2.75	N/A	N/A	5.55	8.47	9.06	2.00	5.30	3/8"-16 UNC	3/4"NPTF
ASNS31-3-1	-2	-3	3.50	1.50	N/A	6.34	9.84	10.43	2.00	5.60	3/8"-16 UNC	3/4"NPTF
ASNS51-3-1	-2	-3	6.20	2.88	N/A	8.98	12.80	13.40	2.20	6.00	3/8"-16 UNC	3/4"NPTF
ASNS82-4-1	-2	-3	6.25	N/A	6.25	11.30	15.16	15.75	2.20	6.90	3/8"-16 UNC	3/4"NPTF
Double Convoluted												
ASND11-4-1	-2	-3	1.75	N/A	N/A	4.25	6.50	7.09	3.00	7.90	3/8"-16 UNC	1/4"NPTF
ASND18-5-1	-2	-3	2.75	N/A	N/A	5.55	8.47	9.06	3.00	9.10	3/8"-16 UNC	3/4"NPTF
ASND31-6-1	-2	-3	3.50	1.50	N/A	6.34	9.84	10.43	3.00	10.80	3/8"-16 UNC	3/4"NPTF
ASND51-7-1	-2	-3	6.20	2.88	N/A	8.98	12.80	13.40	3.00	12.00	3/8"-16 UNC	3/4"NPTF
ASND82-7-1	-2	-3	6.25	N/A	6.25	11.30	14.96	15.75	3.00	12.20	3/8"-16 UNC	3/4"NPTF
Triple Convoluted												
ASNT51-11-1	-2	-3	6.20	2.88	N/A	8.98	12.80	13.40	4.40	18.10	3/8"-16 UNC	3/4"NPTF
ASNT82-12-1	-2	-3	6.25	N/A	6.25	11.30	14.96	15.94	4.40	21.30	3/8"-16 UNC	3/4"NPTF

All mounting holes are .625 deep

Return to Table of Contents

The **A Series** is an aluminum NFPA Interchangeable cylinder line that is designed and built to excel in the most demanding applications. The A Series encompasses many value-added features such as an extra long graphite filled cast iron rod bushing and a standard oversized wear band that is located on the rear of the piston. Additionally, the A Series includes the well-proven "T Seal" piston seal configuration made from carboxilated nitrile with self-lubricating Teflon® compound. These are just a sample of the features that make the A Series the *Superior* NFPA Interchangeable air cylinder line.

Tube
The **tube** is hard coat anodized. The hard coating is an electro-chemical process, which produces a very dense surface of aluminum oxide. This surface has extreme hardness (60 Rc), excellent wear and corrosion resistance, and a low coefficient of friction.

End Caps
The **end caps** are accurately machined from (6061-T6) solid aluminum bar stock. They are anodized for corrosion resistance. Additionally, a recess on the piston-mating surface (at both ends) enables the air to work on a larger piston area for effortless breakaway.

Rod Bushing
The A Series includes a graphite filled, cast iron **rod bushing** that is extra long in length. Graphite filled offers the best bearing surface when using a hard chrome plated steel piston rod. Cast iron provides maximum resistance against wear. The added length adds superior alignment and support of the piston rod as well as provides maximum load bearing support.

Rod Seal
The carboxilated nitrile with Teflon® compound **rod seal** is selflubricating and durable. The rounded lip design ensures proper sealing and long life.

Rod Wiper
The standard **rod wiper** construction is a highly durable polyurethane.

Piston Rod
High strength steel (100,000 psi minimum yield) **piston rod** has a ground, polished, and chrome plated surface. This surface provides maximum life for both the rod bushing and the seals.

Bushing Retainer
The **bushing retainer** allows cartridge removal (cylinder repair) without complete disassembly.

Tie Rods
The **tie rods** are 100,000 psi minimum yield steel for maximum holding power. The threads are roll formed for superior strength and engagement.

Piston Seal
The **piston seal** is a carboxilated nitrile with Teflon® compound making it self-lubricating. The "T" seal with back-up ring Construction prevents rolling and seals at all pressures.

Wear Band
The **wear band** is a stable, lubricating strip located on the piston. We separated the load bearing points by locating the wear band at the rear of the piston. This maximizes column strength at full extension.

Piston
The solid aluminum alloy **piston** is strong and durable.

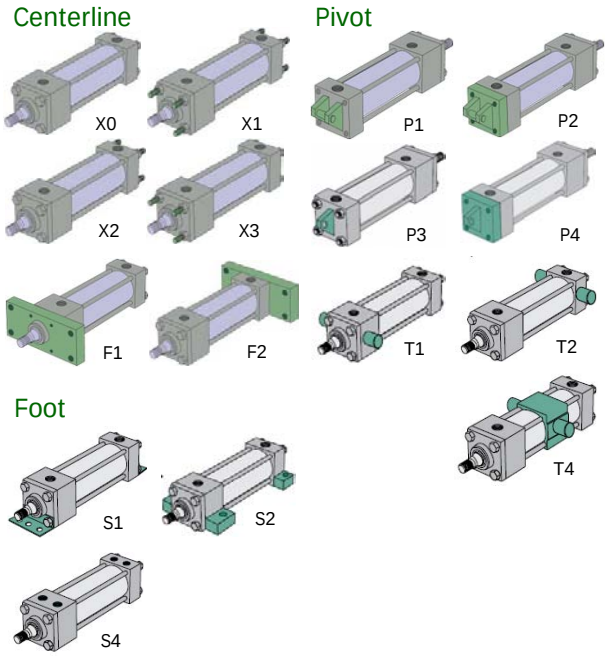
Cushion Seal
The floating **cushion seal** design enables rapid stroke reversal by providing instantaneous full flow to the piston. Each cushion has a flush, retained adjustment needle.

Tube End Seal
The **tube end seals** are compression type and reusable.

Ports
Our enhanced **port** design enables the cylinder to work more efficiently. Through the use of precise machining depths and tool shape, we are able to smooth the flow path into and out of the cylinder.
Teflon® is a registered trademark of DuPont™.

Standard Specifications:
- Meets NFPA specifications
- Bore sizes from 1-1/2" through 8"
- Piston rod diameters from 5/8" to 1-3/4"
- Nominal pressure rating is 250 psi air
- Standard temperature -10°F to 165°F (-23°C to 74°C)
- NPTF ports
- Flexible port and cushion location

Mounting Options:



How to Order

P1 A L — 04 A 1 D — C AA 0

Mount
F1 = Front Flange
F2 = Rear Flange
P1 = Fixed Clevis
P2 = Detachable Clevis
P3 = Fixed Eye
P4 = Detachable Eye
S1 = Angle Mount
S2 = Side Lug Mount
S4 = Bottom Tap
SE = Sleeve Bottom Tapped
SN = Sleeve Nut
T1 = Head Trunnion
T2 = Cap Trunnion
T4 = Mid Trunnion
X0 = Basic No Mount
X1 = Extended Tie Rod Both Ends
X2 = Extended Tie Rod Cap
X3 = Extended Tie Rod Head

Type
A = A Series NPFA Interchangeable

Bore
K = 1-1/2"
L = 2"
M = 2-1/2"
P = 3-1/4"
R = 4"
T = 5"
U = 6"

Full Inches of Stroke
00 = 0" Stroke
01 = 1" Stroke
02 = 2" Stroke
03 = 3" Stroke
" "
60 = 60" Stroke

Fractional Inches of Stroke

A = 0"	I = 1/2"
B = 1/16"	J = 9/16"
C = 1/8"	K = 5/8"
D = 3/16"	L = 11/16"
E = 1/4"	M = 3/4"
F = 5/16"	N = 13/16"
G = 3/8"	O = 7/8"
H = 7/16"	P = 15/16"

Rod Code
1 = Style #1 Standard Rod Diameter
2 = Style #2 Standard Rod Diameter
3 = Style #3 Standard Rod Diameter
4 = Special Standard Rod Diameter (must specify threads)
5 = Special Oversize Rod Diameter (must specify threads)
6 = Style #1 Oversize Rod Diameter
7 = Style #2 Oversize Rod Diameter
8 = Style #3 Oversize Rod Diameter

Magnet
0 = No Magnet
2 = Reed Magnet

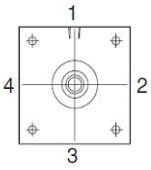
Options
AA = No Options
1A* = Rod Extension
2A* = Thread Extension
12* = Rod and Thread Extension
3A = Studded Rod End
BA** = Bumpers Both Ends
BC** = Bumper Cap Only
BH** = Bumper Head
BK = Back to Back
DA = Double Rod End
FB = Four Wrench Flats on Piston Rod
LB = Low Breakaway Seals
MA = Metallic Rod Scraper
VA = Viton Seals
**Specify Length*
***Bumpers add .062" to OAL (per bumper)*

Cushions

Postion	1	2	3	4	Fixed
No Cushion	A	A	A	A	A
Head and Cap	B	C	D	E	Y
Head Only	F	G	H	J	W
Cap Only	K	L	M	N	V

Ports

Postion	1/8"	1/4"	3/8"	1/2"	3/4"
1	B	C	D	E	F
2	H	I	J	K	L
3	N	O	P	Q	R
4	T	U	V	W	X



Cylinder Orientation

Ports are normally located in position 1.
Cushions are normally located in position 2.

Rod Diameter by Bore Size

Bore	Standard Dia.	Oversized Dia.
1-1/2"	0.625	1.000
2"	0.625	1.000
2-1/2"	0.625	1.000
3-1/4"	1.000	1.375
4"	1.000	1.375
5"	1.000	1.375
6"	1.375	1.750

Rod End Styles, Diameters and Threads

Diameter	Style #1 Standard Male	Style #2 Optional	Style #3
0.625	7/16-20	1/2-20	7/16-20
1.000	3/4-16	7/8-14	3/4-16
1.375	1-14	1 1/4-12	1-14
1.750	1 1/4-12	1 1/2-12	1 1/4-12

How to Order

P1 A W — 04 A 1 F — C AA 0

Mount
P1 = Fixed Clevis
P2 = Detachable Clevis
P3 = Fixed Eye
S1 = Angle Mount
S2 = Side Lug Mount
S4 = Bottom Tap
T1 = Head Trunnion
T2 = Cap Trunnion
T4* = Mid Trunnion
X0 = Basic No Mount
X1 = Extended Tie Rod Both Ends
X2 = Extended Tie Rod Cap
X3 = Extended Tie Rod Head

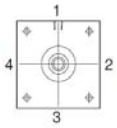
Type
A = A Series NPFA Interchangeable

Bore
W = 8"

Full Inches of Stroke
00 = 0" Stroke
01 = 1" Stroke
02 = 2" Stroke
03 = 3" Stroke
" "
60 = 60" Stroke

Fractional Inches of Stroke

A = 0"	I = 1/2"
B = 1/16"	J = 9/16"
C = 1/8"	K = 5/8"
D = 3/16"	L = 11/16"
E = 1/4"	M = 3/4"
F = 5/16"	N = 13/16"
G = 3/8"	O = 7/8"
H = 7/16"	P = 15/16"



Cylinder Orientation
Ports are normally located in position 1.
Cushions are normally located in position 2.

Magnet
0 = No Magnet
2 = Reed Magnet

Options
AA = No Options
1A* = Rod Extension
2A* = Thread Extension
3A = Studded Rod End
DA = Double Rod End
MA = Metallic Rod Scraper
Specify Length

Cushions

Postion	1	2	3	4
No Cushion	A	A	A	A
Head and Cap	B	C	D	E
Head Only	F	G	H	J
Cap Only	K	L	M	N

Ports

Postion	3/4"	1"	1-1/4"
1	F	G	1
2	L	M	2
3	R	S	3
4	X	Y	4

Rod Code
1 = Style #1 Standard Rod Diameter
2 = Style #2 Standard Rod Diameter
3 = Style #3 Standard Rod Diameter
4* = Special Standard Rod Diameter (must specify threads)
5* = Special Oversize Rod Diameter (must specify threads)
6 = Style #1 Oversize Rod Diameter
7 = Style #2 Oversize Rod Diameter
8 = Style #3 Oversize Rod Diameter
*Must specify threads

Rod End Styles, Diameters and Threads

Diameter	Style #1 Standard Male	Style #2 Optional	Style #3 Optional
1.38	1-14	1 1/4-12	1-14
1.75	1 1/4-12	1 1/2-12	1 1/4-12
2.00	1 1/4-12	1 3/4-12	1 1/2-12
2.50	1 7/8-12	2 1/4-12	1 7/8-12

Rod Diameter by Bore Size

Bore	Standard Dia.	Oversized Dia.
8"	1.375	1.750

Cylinder Repair Options—Piston Rod Assembly

Piston Rod Assembly

A92 K 1 N 0 — 01 A — AA

Type
A92 = A Series Piston Rod Assembly

Bore

K = 1-1/2"	R = 4"
L = 2"	T = 5"
M = 2-1/2"	U = 6"
P = 3-1/4"	W = 8"

Rod Code
1 = Style #1 Standard Rod Diameter
2 = Style #2 Standard Rod Diameter
3 = Style #3 Standard Rod Diameter
4* = Special Standard Rod Diameter
5* = Special Oversize Rod Diameter
6 = Style #1 Oversize Rod Diameter
7 = Style #2 Oversize Rod Diameter
8 = Style #3 Oversize Rod Diameter

Cushions
N = No Cushion
B = Both Ends Cushioned
H = Head End Cushioned
C = Cap End Cushioned

Magnet
0 = No Magnet
2 = Reed Manget (Is Included with Piston Rod Assembly)

Options
AA = No Options
1A* = Rod Extension
2A* = Thread Extension
12* = Rod and Thread Extension
3A = Studded Rod End
BH = Bumper Head
DA = Double Rod End
FB = Four Wrench Flats on Piston Rod
LB = Low Breakaway Seals
NN = Nylock Nuts
VA = Viton Seals
*Specify Length

Fractional Inches of Stroke

A = 0"	H = 7/16"	M = 3/4"
B = 1/16"	G = 3/8"	N = 13/16"
C = 1/8"	I = 1/2"	O = 7/8"
D = 3/16"	J = 9/16"	P = 15/16"
E = 1/4"	K = 5/8"	
F = 5/16"	L = 11/16"	

Full Inches of Stroke
00 = 0" Stroke
01 = 1" Stroke
02 = 2" Stroke
03 = 3" Stroke
" "
60 = 60" Stroke

Return to Table of Contents

A Series Cylinder Repair Options

Repair Kits

A98 — K 1 N — AA

Type
A98 = A Series Repair Kit

Bore

K = 1-1/2"	R = 4"
L = 2"	T = 5"
M = 2-1/2"	U = 6"
P = 3-1/4"	W = 8"

Rod Code
0 = Standard Rod
1 = Oversize Rod
2 = 2nd Oversize Rod

Options
AA = No Options
BK = Back to Back
DA = Double Rod End
LB = Low Breakaway Seals
MA = Metallic Rod Scraper
VA = Viton Seals
1A* = Rod Extension
2A* = Thread Extension
12* = Rod and Thread Extension
3A = Studded Rod End
*Specify Length

Cushions
N = No Cushion
B = Both Ends Cushioned
H = Head End Cushioned
C = Cap End Cushioned

Repair Kit
Includes loaded bushing, all cylinder seals and tube of lubricant. Loaded head is included with applicable series (contact factory for details)

Seal Kits

A97 — K 1 N — AA

Type
A97 = A Series Repair Kit

Bore

K = 1-1/2"	R = 4"
L = 2"	T = 5"
M = 2-1/2"	U = 6"
P = 3-1/4"	W = 8"

Rod Code
0 = Standard Rod
1 = Oversize Rod
2 = 2nd Oversize Rod

Options
AA = No Options
BK = Back to Back
DA = Double Rod End
LB = Low Breakaway Seals
MA = Metallic Rod Scraper
VA = Viton Seals
1A* = Rod Extension
2A* = Thread Extension
12* = Rod and Thread Extension
3A = Studded Rod End
*Specify Length

Cushions
N = No Cushion
B = Both Ends Cushioned
H = Head End Cushioned
C = Cap End Cushioned

Seal Kit
Includes all cylinder seals, wear band and tube of lubricant

Return to Table of Contents

Notes

ASCO Numatics Canada | Tel (1) 519-758-2700 | www.asconumatics.ca | email: asconumaticscanada@emerson.com

ANEC-R4