

VGA Series Pneumatic Three-Way Air Switching Valves

Selection Charts

VGA Three-Way Air Switching Valves

Code Number	Description	Ship. Wt. lb (kg)
VGA8A2GT+3008E	With Barbed Adaptors for 1/2 in. O.D. Poly tubing	4.3 (2.0)
VGA8B2GT+3008E	With Barbed Adaptors for 3/8 in. O.D. Poly tubing	4.3 (2.0)
VGA8C2GT+3008E	With Compression Adaptors for 1/2 in. O.D. Poly tubing ¹ or Copper Tubing	4.3 (2.0)

1. A plastic ferrule (F-1000-11, ordered separately) and a metal insert (F-1000-8, ordered separately) are required at all three compression adaptor connections when using poly tubing.

Accessories for VGA Valves

Code Number	Description	Ship. Wt. lb (kg)
V-3000-8012	Actuator Complete	1.1 (0.49)
Ring Pack Packing Kits:		
VG7000-6001	Single-Pack	0.08 (0.04)
VG7000-1003	Spring Kit	0.5 (0.23)
V-3100-6043	Actuator Set Screw (10-32 x 1/2 UNF-2A; Order in Multiples of 10)	0.01 (0.005)
V-9999-644	Replacement Split-Clamp Mounting Bracket	0.5 (0.23)

Note: For assembled pressure reducing stations, refer to A-4000-139 to -145 Oil Removal and Pressure Reducing Stations Catalog Page (LIT-1921160).

Description

The VGA Series Three-Way Air Switching Valves switch the flow of air from one supply pressure to another in dual supply pressure control systems. Refer to the *VGA Series Pneumatic Three-Way Air Switching Valves Product Bulletin (LIT-718155)* for important product information.

Features

- available with a choice of various factory-installed adaptor fittings
- high volume output rated for 125 psig (861kPa) systems
- Rugged cast bronze body with corrosion-resistant mounting bracket
- document flow characteristics and cross referencing
- equipped with V-3000 Series Actuator



VGA Series Three-Way Air Switching Valve

Repair Information

If the VGA Series Three-Way Air Switching Valve fails to operate within its specifications, replace the unit. For a replacement valve, contact the nearest Johnson Controls® representative.

Technical Specifications

VGA Series Pneumatic Three-Way Air Switching Valves		
Nominal Spring Range		9 to 13 psig (62 to 90 kPa)
Switchover		With Control Pressure Change of 0/15 psig (0/103 kPa) or 0/20 psig (0/138 kPa)
Switchover Point		Approximately 13 psig (90 kPa)
Valve Body Pressure/Temperature Rating		Meets Requirements of ANSI B16.15, Class 250
Maximum Input Pressure	Valve	125 psig (861 kPa)
	Actuator	30 psig (207 kPa); Air Supply Must Be Clean, Dry, and Oil-Free
Leakage		0.01% of Maximum Flow per ANSI/FCI 70-2, Class 4
Control Signal Air Connection		1/8 in. External NPT Barbed Fitting for 5/32 or 1/4 in. O.D. Poly tubing
Effective Diaphragm Area		8 sq in. (5,160 sq mm)
Normal Position	Upper Port	Closed — Control Signal Opens
	Lower Port	Open — Control Signal Closes
Ambient Temperature Limits		-10 to 150°F (-23 to 66°C)
Materials	Body	Cast Bronze
	Bonnet	Brass
	Stem	316 Stainless Steel
	Plug	Brass Against Molded Elastomeric Disk
	Packing	Self-Adjusting EPR (Ethylene Propylene Rubber) Ring Pack U-Cups
	Actuator	Die-Cast Aluminum

Nominal Flow Capacities, scim (mL/s)

VGA Series Pneumatic Three-Way Air Switching Valve	Supply Pressure: 15 psig (103 kPa)				Supply Pressure: 20 psig (138 kPa)				Supply Pressure: 30 psig (207 kPa)			
	Pressure Drop (psi)				Pressure Drop (psi)				Pressure Drop (psi)			
	0.125	0.250	0.500	1.00	0.125	0.250	0.500	1.00	0.125	0.250	0.500	1.00
With 1/2 in. Barbed Adaptors	4,320 (1,179)	6,480 (1,769)	9,504 (2,595)	12,960 (3,538)	5,184 (1,415)	7,344 (2,005)	10,368 (2,830)	12,960 (3,538)	5,616 (1,533)	8,208 (2,241)	11,664 (3,184)	16,416 (4,482)
With 3/8 in. Barbed Adaptors	2,074 (566)	2,938 (802)	3,888 (1,061)	5,616 (1,533)	2,160 (590)	3,024 (826)	4,320 (1,179)	6,048 (1,651)	2,592 (708)	3,456 (943)	4,752 (1,297)	7,344 (2,005)
With 1/2 in. Compression Adaptors	6,048 (1,651)	8,640 (2,359)	12,096 (3,302)	16,848 (4,600)	6,480 (1,769)	9,504 (2,595)	12,960 (3,538)	18,144 (4,953)	7,344 (2,005)	10,368 (2,830)	14,688 (4,010)	19,872 (5,425)
1/2 in. Internal NPT on All Ports (No Adaptors)	18,144 (4,953)	26,784 (7,312)	34,560 (9,435)	43,200 (11,794)	19,440 (5,307)	29,462 (8,043)	37,029 (10,109)	46,523 (12,701)	22,032 (6,015)	32,141 (8,774)	41,966 (11,457)	50,954 (13,910)