

VA/VG Series

On/Off and Shut-off Valve

DVAVG1862X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Operating Pressure	3500, 6000, 10,000 psig / 241, 414, 690 bar
Design Proof Pressure	150% maximum rated
Leak Rate	Bubble-tight
Ambient Operating Temperature	See Part Number Selector
Flow Capacity	VA Series Valve: $C_v = 0.75$ VG Series Valve: $C_v = 2.0$
Low Actuation Pressure Range	60 psig / 4.1 bar
Maximum Actuation Pressure	VA Series Valve: 125 psig / 8.6 bar VG Series Valve: 150 psig / 10.3 bar
Actuation Times with 80 psig / 5.5 bar Actuation Pressure	VA Series Valve: 50 milliseconds VG Series Valve: 75 milliseconds

MEDIA CONTACT MATERIALS

Body	Brass, 316 Stainless Steel
Seats	CTFE, Tefzel® ETFE, Vespel®
Valve Stem	17-4 Stainless Steel
O-Rings	Buna-N, Kalrez®, Viton®, Ethylene Propylene (E.P.), Urethane
Back-up Rings	Teflon®, CTFE
Remaining Parts	316 Stainless Steel, Brass

OTHER

Cleaning	CGA 4.1 and ASTM G93
Weight (approximate)	VA Series Valve: 3 lbs / 1.4 kg VG Series Valve: 5 lbs / 2.3 kg

Kalrez®, Viton®, Tefzel®, Teflon®, and Vespel® are registered trademarks of E.I. du Pont de Nemours and Company.



TESCOM VA and VG Series are air operated valves offering normally open/normally closed capabilities, operating pressures of 6000, 10,000, and 15,000 psig / 414, 690, and 1034 bar, very high cycle life and optional integrated solenoid valve. Suitable for liquid and gas applications.

Applications

- High pressure cycling testing
- Pneumatic and hydraulic control panels
- R&D labs

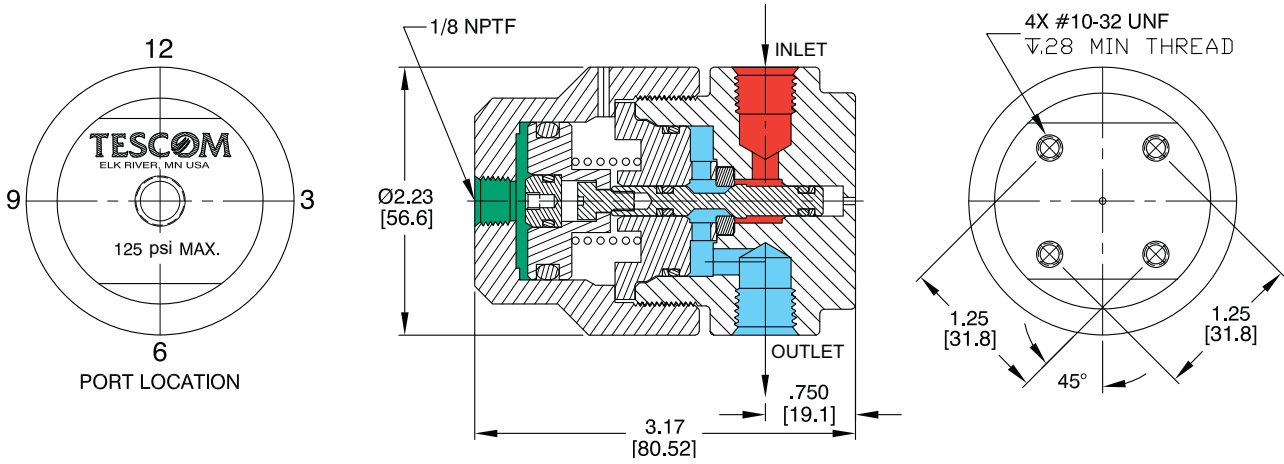
Features and Benefits

- Balanced poppet design means high reliability and exceptional cycle life
- High flow capacity: $C_v = 0.75$ or 2.0
- Normally open or normally closed
- Brass or 316 Stainless Steel machined bar stock
- Low actuation: 60 psig / 4.1 bar - minimum
- High operating pressure: 6000 psig / 414 bar maximum (Brass), 10,000 psig / 690 bar maximum (Stainless Steel)
- 15,000 psig / 1034 bar version is available
- Oxygen model is available that has passed adiabatic compression test per ISO 10524
- Optional pneumatic assist solenoid valve actuation (12V, 24V or 115V)

VA/VG Series Valve Drawings

VA SERIES

NORMALLY CLOSED VERSION

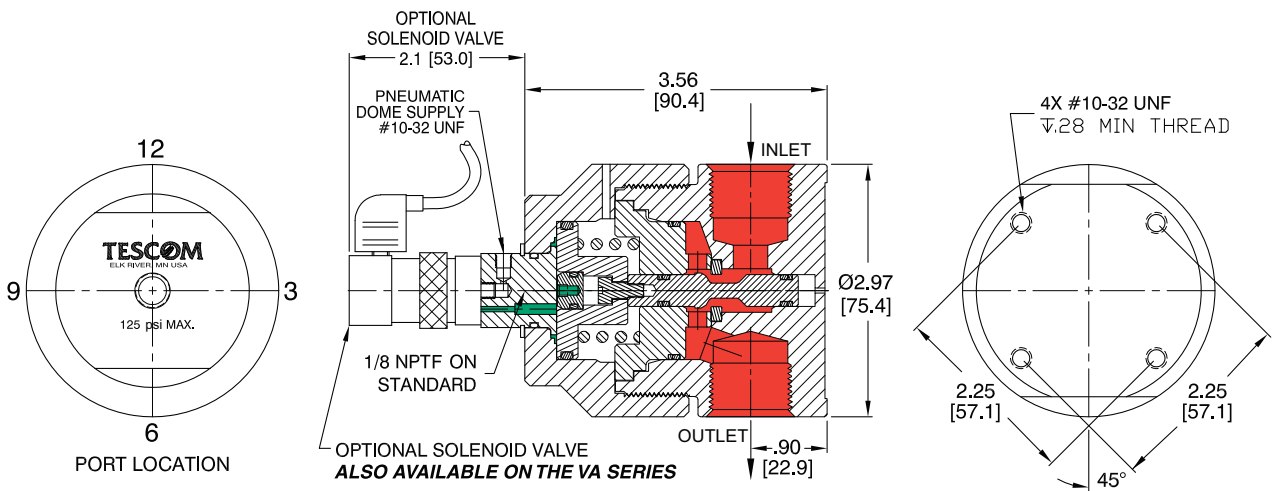


TOOLS FOR ASSEMBLY FOR VA VALVE

PART NO.	DESCRIPTION	QUANTITY	PART NO.	DESCRIPTION	QUANTITY
64082-1	Tool, Spacer	1	64096	Collet Spanner Wrench	1
64083-1	Tool, Base	1	64097	Collet, 1/4" / 6.35 mm	1
64095	Hex Collet Chuck	1	64084	Complete Kit	

VG SERIES

NORMALLY OPEN VERSION



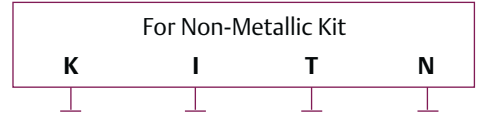
All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

VA/VG Series Valve Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

VA SERIES



SERIES	TYPE	BODY AND TRIM MATERIAL	SEAT				OPTIONS	For Non-Metallic Kit			
			SEAT MATERIAL	O-RING	MAXIMUM OPERATING PRESSURE	OPERATING TEMPERATURE		PORT LOCATION 3 SIZE AND TYPE	PORT LOCATION 6 SIZE AND TYPE	PORT LOCATION 9 SIZE AND TYPE	PORT LOCATION 12 SIZE AND TYPE
VA	C – Normally Closed P – Normally Open	1 – Brass 6 – 316 Stainless Steel	AB – Tefzel® ETFE	Buna-N	Brass 3500 psig 241 bar	-40°F to 165°F -40°C to 74°C	9 – None C – CCL V – Solenoid Valve (24 volt) W – Solenoid Valve (12 volt)	A – 1/4" NPTF Inlet C – 3/8" NPTF Inlet E – 1/4" SAE Inlet N – 1/8" NPTF Inlet (changes Cv to 0.5)	A – 1/4" NPTF Inlet B – 1/4" NPTF Outlet C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	A – 1/4" NPTF Inlet B – 1/4" NPTF Outlet C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	A – 1/4" NPTF Inlet B – 1/4" NPTF Outlet C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None
			CB – CTFE	Buna-N	Brass 3500 psig 241 bar	-40°F to 165°F -40°C to 74°C					
			CK – CTFE	Kalrez®	241 bar	20°F to 165°F -7°C to 74°C					
			CV – CTFE	Viton®	Stainless Steel	-15°F to 165°F -26°C to 74°C					
			CE – CTFE	E.P.	3500 psig 241 bar	-40°F to 165°F -40°C to 74°C					
			CU – CTFE	Urethane	241 bar	-40°F to 165°F -40°C to 74°C					
			PB – PEEK	Buna-N	Brass 6000 psig 414 bar	-40°F to 165°F -40°C to 74°C					
			PK – PEEK	Kalrez®	414 bar	20°F to 250°F -7°C to 121°C					
			PV – PEEK	Viton®	Stainless Steel	-15°F to 250°F -26°C to 121°C					
			PE – PEEK	E.P.	10,000 psig 690 bar	-15°F to 250°F -26°C to 121°C					
			PU – PEEK	Urethane	690 bar	-40°F to 165°F -40°C to 74°C					
			VB – Vespel®	Buna-N	Brass 6000 psig 414 bar	-40°F to 165°F -40°C to 74°C					
			VK – Vespel®	Kalrez®	414 bar	20°F to 250°F -7°C to 121°C					
			VV – Vespel®	Viton®	Stainless Steel	-15°F to 250°F -26°C to 121°C					
			VE – Vespel®	E.P.	10,000 psig 690 bar	-40°F to 250°F -40°C to 121°C					
			VU – Vespel®	Urethane	690 bar	-40°F to 165°F -40°C to 74°C					

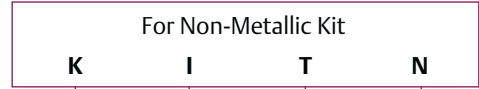
* For additional porting types, consult factory.

VA/VG Series Valve Part Number Selector

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Example for selecting a part number:

VG SERIES



SERIES	TYPE	BODY AND TRIM MATERIAL	SEAT				OPTIONS	PORT LOCATION 3 SIZE AND TYPE	PORT LOCATION 6 SIZE AND TYPE	PORT LOCATION 9 SIZE AND TYPE	PORT LOCATION 12 SIZE AND TYPE
			SEAT MATERIAL	O-RING	MAXIMUM OPERATING PRESSURE	OPERATING TEMPERATURE					
VG	C – Normally Closed	1 – Brass	CB – CTFE	Buna-N	Brass 3500 psig	-40°F to 165°F -40°C to 74°C	9 – None C – CCL V – Solenoid Valve (24 volt) W – Solenoid Valve (12 volt)	C – 3/8" NPTF Inlet	C – 3/8" NPTF Inlet	C – 3/8" NPTF Inlet	C – 3/8" NPTF Inlet
	P – Normally Open	6 – 316 Stainless Steel	CK – CTFE	Kalrez®	241 bar	20°F to 165°F -7°C to 74°C					
			CV – CTFE	Viton®	Stainless Steel 3500 psig	-15°F to 165°F -26°C to 74°C -40°F to 165°F		J – 3/4" NPTF Inlet	G – 1/2" NPTF Inlet	G – 1/2" NPTF Inlet	G – 1/2" NPTF Inlet
			CE – CTFE	E.P.	3500 psig	-40°F to 165°F		L – 3/8" SAE Inlet	H – 1/2" NPTF Outlet	H – 1/2" NPTF Outlet	H – 1/2" NPTF Outlet
			CU – CTFE	Urethane	241 bar	-40°F to 165°F -40°C to 74°C		P – 1/2" SAE Inlet	J – 3/4" NPTF Inlet	J – 3/4" NPTF Inlet	J – 3/4" NPTF Inlet
			PB – PEEK	Buna-N	Brass 6000 psig	-40°F to 165°F -40°C to 74°C			K – 3/4" NPTF Outlet	K – 3/4" NPTF Outlet	K – 3/4" NPTF Outlet
			PK – PEEK	Kalrez®	414 bar	20°F to 250°F -7°C to 121°C			L – 3/8" SAE Inlet	L – 3/8" SAE Inlet	L – 3/8" SAE Inlet
			PV – PEEK	Viton®	Stainless Steel 10,000 psig	-15°F to 250°F -26°C to 121°C			M – 3/8" SAE Outlet	M – 3/8" SAE Outlet	M – 3/8" SAE Outlet
			PE – PEEK	E.P.	10,000 psig	-40°F to 250°F -40°C to 121°C			P – 1/2" SAE Inlet	P – 1/2" SAE Inlet	P – 1/2" SAE Inlet
			PU – PEEK	Urethane	690 bar	-40°F to 165°F -40°C to 74°C			R – 1/2" SAE Outlet	R – 1/2" SAE Outlet	R – 1/2" SAE Outlet
			VB – Vespel®	Buna-N	Brass 6000 psig	-40°F to 165°F -40°C to 74°C					
			VK – Vespel®	Kalrez®	414 bar	20°F to 250°F -7°C to 121°C					
			VV – Vespel®	Viton®	Stainless Steel 10,000 psig	-15°F to 250°F -26°C to 121°C					
			VE – Vespel®	E.P.	10,000 psig	-40°F to 250°F -40°C to 121°C					
			VU – Vespel®	Urethane	690 bar	-40°F to 165°F -40°C to 74°C					

VA/VG Series Valve Part Number Selector

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Example for selecting a part number:

VALVE MODULES FOR VA SERIES VALVE

63583 - C 6 CV

SERIES	TYPE	BODY AND TRIM MATERIAL	SEAT MATERIAL	BACK-UP RING MATERIAL	O-RING	MAXIMUM OPERATING PRESSURE	OPERATING TEMPERATURE	
63583	C – Normally Closed	1 – Brass	AB – Tefzel® ETFE	Teflon®	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C	
			AK – Tefzel® ETFE	Teflon®	Kalrez®	3500 psig / 241 bar	20°F to 250°F / -7°C to 121°C	
	P – Normally Open	6 – 316 Stainless Steel	AV – Tefzel® ETFE	Teflon®	Viton®	Stainless Steel	-15°F to 250°F / -26°C to 121°C	
			AE – Tefzel® ETFE	Teflon®	E.P.	3500 psig / 241 bar	-40°F to 250°F / -40°C to 121°C	
				AU – Tefzel® ETFE	Teflon®	Urethane	Stainless Steel	-40°F to 165°F / -40°C to 74°C
				CB – CTFE	Teflon®	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C
				CK – CTFE	Teflon®	Kalrez®	3500 psig / 241 bar	20°F to 165°F / -7°C to 74°C
				CV – CTFE	Teflon®	Viton®	Stainless Steel	-15°F to 165°F / -26°C to 74°C
				CE – CTFE	Teflon®	E.P.	Stainless Steel	-40°F to 165°F / -40°C to 74°C
				CU – CTFE	Teflon®	Urethane	500 psig / 241 bar	-40°F to 165°F / -40°C to 74°C
				PB – PEEK	CTFE	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C
				PK – PEEK	CTFE	Kalrez®	6000 psig / 414 bar	20°F to 250°F / -7°C to 121°C
				PV – PEEK	CTFE	Viton®	Stainless Steel	-15°F to 250°F / -26°C to 121°C
				PE – PEEK	CTFE	E.P.	Stainless Steel	-40°F to 250°F / -40°C to 121°C
				PU – PEEK	CTFE	Urethane	10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C
				VB – Vespel®	CTFE	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C
			VK – Vespel®	CTFE	Kalrez®	6000 psig / 414 bar	20°F to 250°F / -7°C to 121°C	
			VV – Vespel®	CTFE	Viton®	Stainless Steel	-15°F to 250°F / -26°C to 121°C	
			VE – Vespel®	CTFE	E.P.	Stainless Steel	-40°F to 250°F / -40°C to 121°C	
			VU – Vespel®	CTFE	Urethane	10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C	
			VG – Vespel®	CTFE	Buna-N90 Duro	Stainless Steel	-40°F to 250°F / -40°C to 121°C	

VA/VG Series Valve Part Number Selector

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Example for selecting a part number:

VALVE MODULES FOR VG SERIES VALVE

67270 - C 6 VV

SERIES	TYPE	BODY AND TRIM MATERIAL	SEAT MATERIAL	BACK-UP RING MATERIAL	O-RING	MAXIMUM OPERATING PRESSURE	OPERATING TEMPERATURE	
67270	C – Normally Closed P – Normally Open	1 – Brass 6 – 316 Stainless Steel	CB – CTFE	Teflon®	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C	
			CK – CTFE	Teflon®	Kalrez®	3500 psig / 241 bar	20°F to 165°F / -7°C to 74°C	
			CV – CTFE	Teflon®	Viton®	Stainless Steel 3500 psig / 241 bar	-15°F to 165°F / -26°C to 74°C	
			CE – CTFE	Teflon®	E.P.		-40°F to 165°F / -40°C to 74°C	
			CU – CTFE	Teflon®	Urethane		-40°F to 165°F / -40°C to 74°C	
				PB – PEEK	CTFE	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C
				PK – PEEK	CTFE	Kalrez®	6000 psig / 414 bar	20°F to 250°F / -7°C to 121°C
				PV – PEEK	CTFE	Viton®	Stainless Steel 10,000 psig / 690 bar	-15°F to 250°F / -26°C to 121°C
				PE – PEEK	CTFE	E.P.		-40°F to 250°F / -40°C to 121°C
				PU – PEEK	CTFE	Urethane		-40°F to 165°F / -40°C to 74°C
			VB – Vespel®	CTFE	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C	
			VK – Vespel®	CTFE	Kalrez®	6000 psig / 414 bar	20°F to 250°F / -7°C to 121°C	
			VV – Vespel®	CTFE	Viton®	Stainless Steel 10,000 psig / 690 bar	-15°F to 250°F / -26°C to 121°C	
			VE – Vespel®	CTFE	E.P.		-40°F to 250°F / -40°C to 121°C	
			VU – Vespel®	CTFE	Urethane		-40°F to 165°F / -40°C to 74°C	