

# 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



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.

#### MEDIA CONTACT MATERIALS

##### Body

Brass, 316 Stainless Steel

##### Seats

CTFE, PEEK, 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.

### Applications

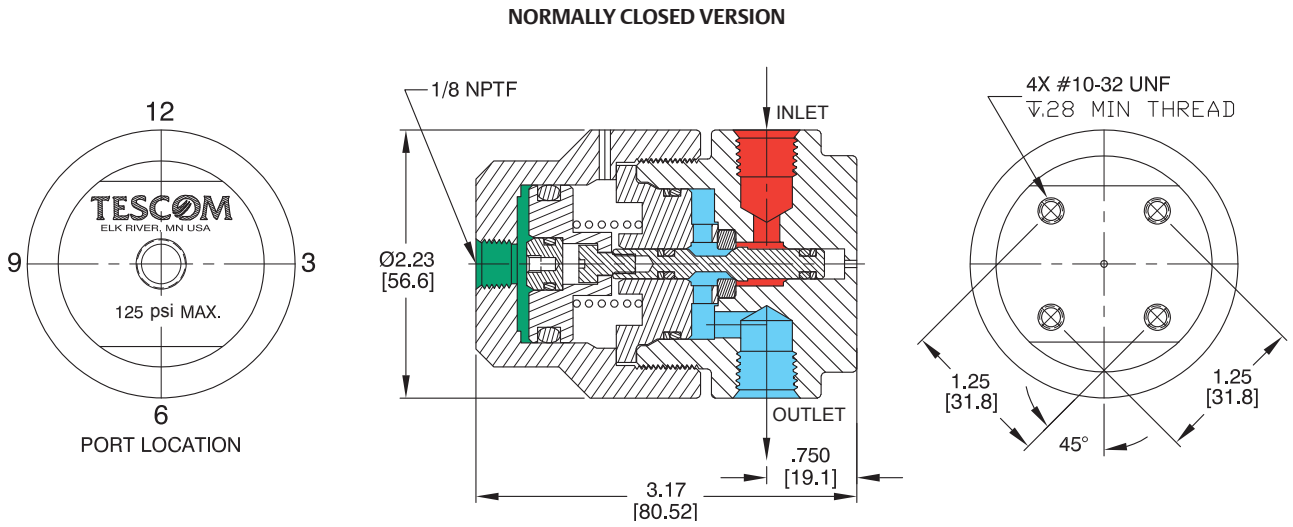
- High pressure cycling testing
- Pneumatic and hydraulic control panels
- R&D labs

### 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

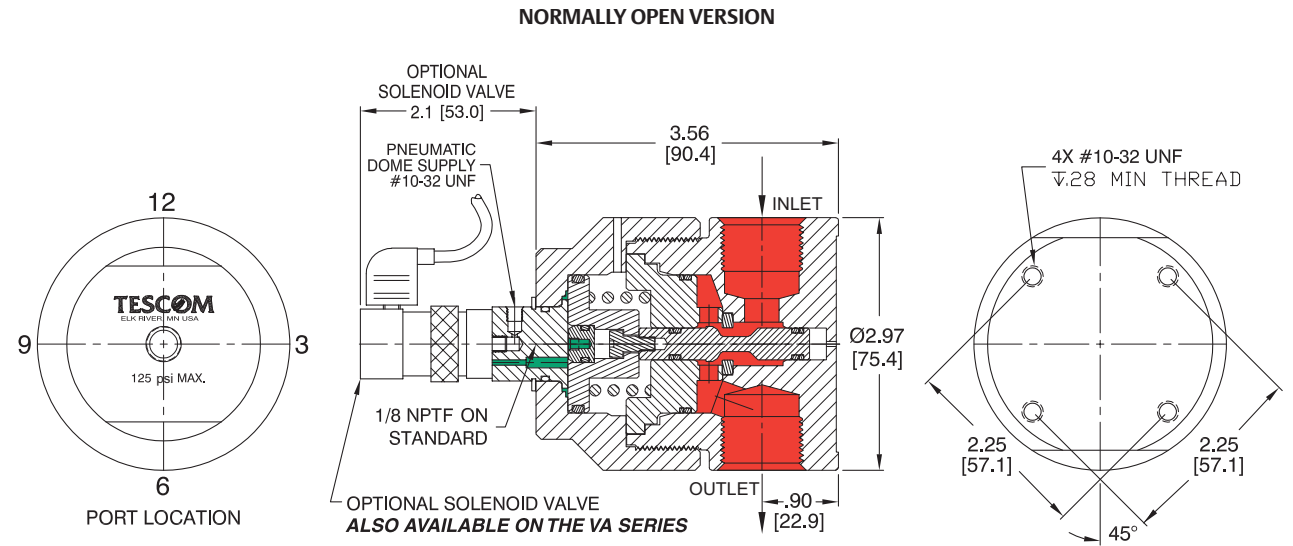
VA SERIES



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



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

## VA Series Valve Part Number Selector

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

Example for selecting a part number:

### VA SERIES



VA	C	1	AB				9	A	9	B	9
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					
VA	C – Normally Closed	1 – Brass	AB – Tefzel® ETFE	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)	A – 1/4" NPTF Inlet	A – 1/4" NPTF Inlet	A – 1/4" NPTF Inlet	A – 1/4" NPTF Inlet
	P – Normally Open	6 – 316 Stainless Steel	AK – Tefzel® ETFE AV – Tefzel® ETFE AE – Tefzel® ETFE AU – Tefzel® ETFE	Kalrez® Viton® E.P. Urethane	241 bar Stainless Steel 3500 psig 241 bar	20°F to 250°F -7°C to 121°C -15°F to 250°F -26°C to 121°C -40°F to 250°F -40°C to 121°C -40°F to 165°F -40°C to 74°C		C – 3/8" NPTF Inlet E – 1/4" SAE Inlet N – 1/8" NPTF Inlet (changes Cv to 0.5)	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)	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)	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)
			CB – CTFE CK – CTFE CV – CTFE CE – CTFE CU – CTFE	Buna-N Kalrez® Viton® E.P. Urethane	Brass 3500 psig 241 bar Stainless Steel 3500 psig 241 bar	-40°F to 165°F -40°C to 74°C 20°F to 165°F -7°C to 74°C -15°F to 165°F -26°C to 74°C -40°F to 165°F -40°C to 74°C -40°F to 165°F -40°C to 74°C		E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	
			PB – PEEK PK – PEEK PV – PEEK PE – PEEK PU – PEEK	Buna-N Kalrez® Viton® E.P. Urethane	Brass 6000 psig 414 bar Stainless Steel 10,000 psig 690 bar	-40°F to 165°F -40°C to 74°C 20°F to 250°F -7°C to 121°C -15°F to 250°F -26°C to 121°C -40°F to 250°F -40°C to 121°C -40°F to 165°F -40°C to 74°C					
			VB – Vespel® VK – Vespel® VV – Vespel® VE – Vespel® VU – Vespel®	Buna-N Kalrez® Viton® E.P. Urethane	Brass 6000 psig 414 bar Stainless Steel 10,000 psig 690 bar	-40°F to 165°F -40°C to 74°C 20°F to 250°F -7°C to 121°C -15°F to 250°F -26°C to 121°C -40°F to 250°F -40°C to 121°C -40°F to 165°F -40°C to 74°C					

\* For additional porting types, consult factory.

## VG Series Valve Part Number Selector

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

Example for selecting a part number:

### VG SERIES

For Non-Metallic Kit			
K	I	T	N

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		G – 1/2" NPTF Inlet	D – 3/8" NPTF Outlet	D – 3/8" NPTF Outlet	D – 3/8" NPTF Outlet
			CV – CTFE	Viton®	Stainless Steel 3500 psig	-15°F to 165°F -26°C to 74°C -40°F to 165°F -40°C to 74°C		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 -40°C to 74°C		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	H – 1/2" NPTF Outlet	H – 1/2" NPTF Outlet	H – 1/2" NPTF Outlet
			PB – PEEK	Buna-N	Brass 6000 psig	-40°F to 165°F -40°C to 74°C			J – 3/4" NPTF Inlet	J – 3/4" NPTF Inlet	J – 3/4" NPTF Inlet
			PK – PEEK	Kalrez®	414 bar	20°F to 250°F -7°C to 121°C			K – 3/4" NPTF Outlet	K – 3/4" NPTF Outlet	K – 3/4" NPTF Outlet
			PV – PEEK	Viton®		-15°F to 250°F -26°C to 121°C			L – 3/8" SAE Inlet	L – 3/8" SAE Inlet	L – 3/8" SAE Inlet
			PE – PEEK	E.P.	Steel 10,000 psig	-40°F to 250°F -40°C to 121°C			M – 3/8" SAE Outlet	M – 3/8" SAE Outlet	M – 3/8" SAE Outlet
			PU – PEEK	Urethane	690 bar	-40°F to 165°F -40°C to 74°C			P – 1/2" SAE Inlet	P – 1/2" SAE Inlet	P – 1/2" SAE Inlet
			VB – Vespel®	Buna-N	Brass 6000 psig	-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
			VK – Vespel®	Kalrez®	414 bar	20°F to 250°F -7°C to 121°C			9 – None	9 – None	9 – None
			VV – Vespel®	Viton®		-15°F to 250°F -26°C to 121°C					
			VE – Vespel®	E.P.	Steel 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 Series Valve Modules

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

Example for selecting a part number:

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		-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.		3500 psig / 241 bar
				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.		10,000 psig / 690 bar
				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	-15°F to 250°F / -26°C to 121°C	
			VE – Vespel®	CTFE	E.P.		10,000 psig / 690 bar	-40°F to 250°F / -40°C to 121°C
			VU – Vespel®	CTFE	Urethane		-40°F to 165°F / -40°C to 74°C	
			VG – Vespel®	CTFE	Buna-N 90 Duro		-40°F to 165°F / -40°C to 74°C	

## VG Series Valve Modules

**i Learn more about common options.**  
For modifications, repair kits and accessories, contact factory.

Example for selecting a part number:

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 PK – PEEK PV – PEEK PE – PEEK PU – PEEK	CTFE	Buna-N Kalrez® Viton® E.P. Urethane	Brass	6000 psig / 414 bar	-40°F to 165°F / -40°C to 74°C	
				20°F to 250°F / -7°C to 121°C			
				Stainless Steel	10,000 psig / 690 bar	-15°F to 250°F / -26°C to 121°C	
				-40°F to 250°F / -40°C to 121°C			
VB – Vespel® VK – Vespel® VV – Vespel® VE – Vespel® VU – Vespel®	CTFE	Buna-N Kalrez® Viton® E.P. Urethane	Brass	6000 psig / 414 bar	-40°F to 165°F / -40°C to 74°C		
			20°F to 250°F / -7°C to 121°C				
			Stainless Steel	10,000 psig / 690 bar	-15°F to 250°F / -26°C to 121°C		
			-40°F to 250°F / -40°C to 121°C				

### POPULAR MODIFICATIONS

- Cartridge style for manifolds – fitting reduction
- Explosion Proof solenoid, Class I, Div I & II, Groups A, B, C, D
- Oxygen model is available that has passed adiabatic compression test per ISO 10524 (VA Series only)
- On/Off switch
- Hand Toggle actuated option
- Stepper motor options 24VDC (VA Series only)
- 15,000 psig / 1034 bar
- 20,000 psig / 1379 bar (VA Series only)
- High force actuator to prevent flow with high delta (VA Series only)
- Special porting including welded fittings
- Captured breather ports (bonnet and body)

For additional modifications, consult the factory.



**WARNING!** Do not attempt to select, install, use or maintain this product until you have read and fully understood the *TESCOM Safety, Installation and Operation Precautions*.

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