

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

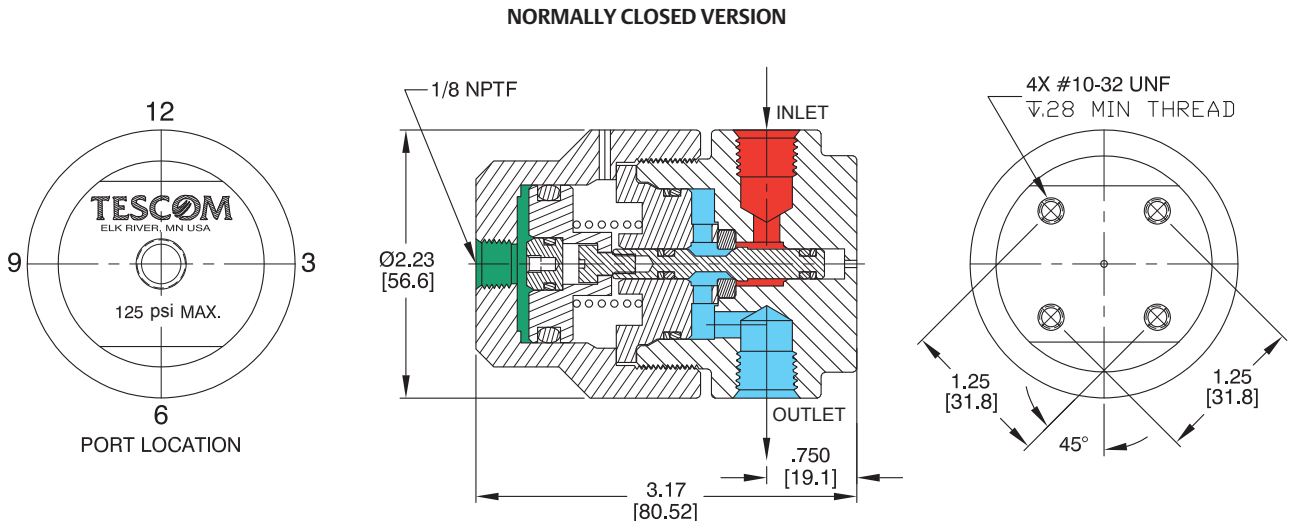
- High pressure cycling testing
- Pneumatic and hydraulic control panels
- R&D labs

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

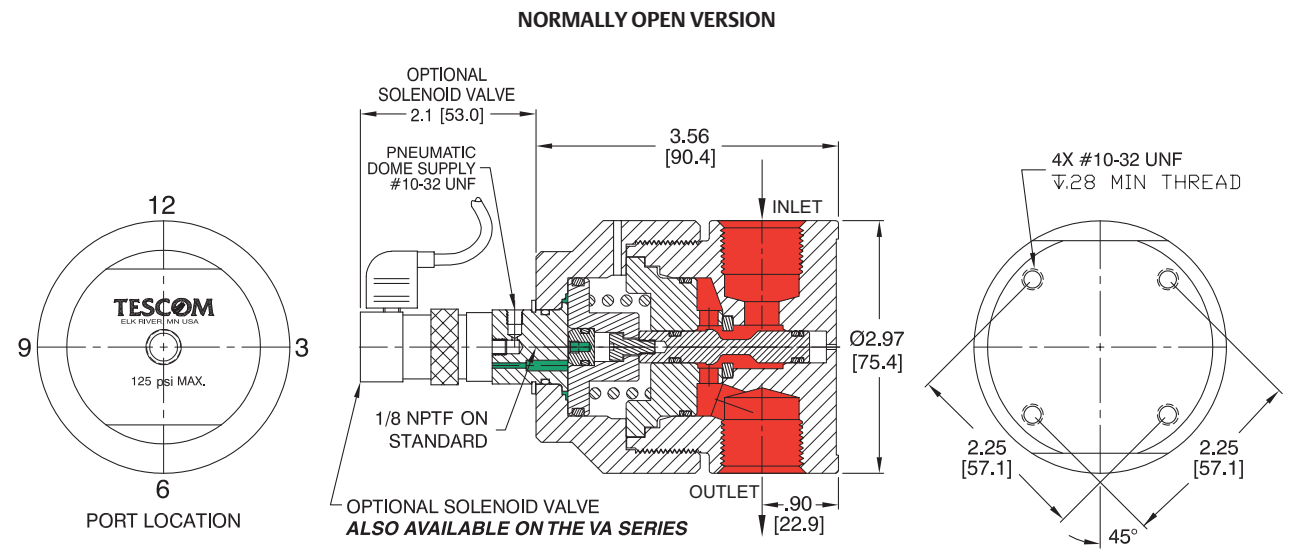
VA SERIES



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	Kalrez®	241 bar	20°F to 250°F -7°C to 121°C		C – 3/8" NPTF Inlet	B – 1/4" NPTF Outlet	B – 1/4" NPTF Outlet	B – 1/4" NPTF Outlet
			AV – Tefzel® ETFE	Viton®	Stainless Steel	-15°F to 250°F -26°C to 121°C		E – 1/4" SAE Inlet	C – 3/8" NPTF Inlet	C – 3/8" NPTF Inlet	C – 3/8" NPTF Inlet
			AE – Tefzel® ETFE	E.P.	3500 psig	-40°F to 250°F -40°C to 121°C		N – 1/8" NPTF Inlet (changes C _v to 0.5)	D – 3/8" NPTF Outlet	D – 3/8" NPTF Outlet	D – 3/8" NPTF Outlet
			AU – Tefzel® ETFE	Urethane	241 bar	-40°F to 165°F -40°C to 74°C			D – 3/8" NPTF Outlet	D – 3/8" NPTF Outlet	D – 3/8" NPTF Outlet
			CB – CTFE	Buna-N	Brass 3500 psig	-40°F to 165°F -40°C to 74°C			E – 1/4" SAE Inlet	E – 1/4" SAE Inlet	E – 1/4" SAE Inlet
			CK – CTFE	Kalrez®	241 bar	20°F to 165°F -7°C to 74°C			F – 1/4" SAE Outlet	F – 1/4" SAE Outlet	F – 1/4" SAE Outlet
			CV – CTFE	Viton®	Stainless Steel	-15°F to 165°F -26°C to 74°C			P – 1/8" NPTF Outlet (changes C _v to .5)	P – 1/8" NPTF Outlet (changes C _v to .5)	P – 1/8" NPTF Outlet (changes C _v to .5)
			CE – CTFE	E.P.	3500 psig	-40°F to 165°F -40°C to 74°C			9 – None	9 – None	9 – None
			CU – CTFE	Urethane	241 bar	-40°F to 165°F -40°C to 74°C					
			PB – PEEK	Buna-N	Brass 6000 psig	-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	-40°F to 250°F -40°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	-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	-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.

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



VG	C	1	CB				9	C	9	D	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					
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		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	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			9 – None	9 – None	9 – None
			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 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 P – Normally Open	1 – Brass	AB – Tefzel® ETFE AK – Tefzel® ETFE AV – Tefzel® ETFE AE – Tefzel® ETFE AU – Tefzel® ETFE	Teflon® Teflon® Teflon® Teflon® Teflon®	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 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
		6 – 316 Stainless Steel	CB – CTFE CK – CTFE CV – CTFE CE – CTFE CU – CTFE	Teflon® Teflon® Teflon® Teflon® Teflon®	Buna-N Kalrez® Viton® E.P. Urethane	Brass 3500 psig / 241 bar Stainless Steel 500 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
	PB – PEEK PK – PEEK PV – PEEK PE – PEEK PU – PEEK		CTFE CTFE CTFE CTFE CTFE	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® VG – Vespel®		CTFE CTFE CTFE CTFE CTFE CTFE	Buna-N Kalrez® Viton® E.P. Urethane Buna-N 90 Duro	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 -40°F to 165°F / -40°C to 74°C	

VG Series Valve Modules

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

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	-15°F to 165°F / -26°C to 74°C	
			CE – CTFE	Teflon®	E.P.	3500 psig / 241 bar	-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	-15°F to 250°F / -26°C to 121°C
				PE – PEEK	CTFE	E.P.	10,000 psig / 690 bar	-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	-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	

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.