

On/Off and Shut-off Valves

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

PCTFE, PEEK, ETFE (Tefzel®) ETFE, Polyimide (Vespe®)

Valve Stem

17-4 PH Stainless Steel

O-Rings

Nitrile, Buna-N, FFKM, Perfluoroelastomer (Kalrez®), FKM (Viton®-A), Ethylene Propylene, Urethane

Back-up Rings

PTFE, PCTFE

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 Vespe® 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

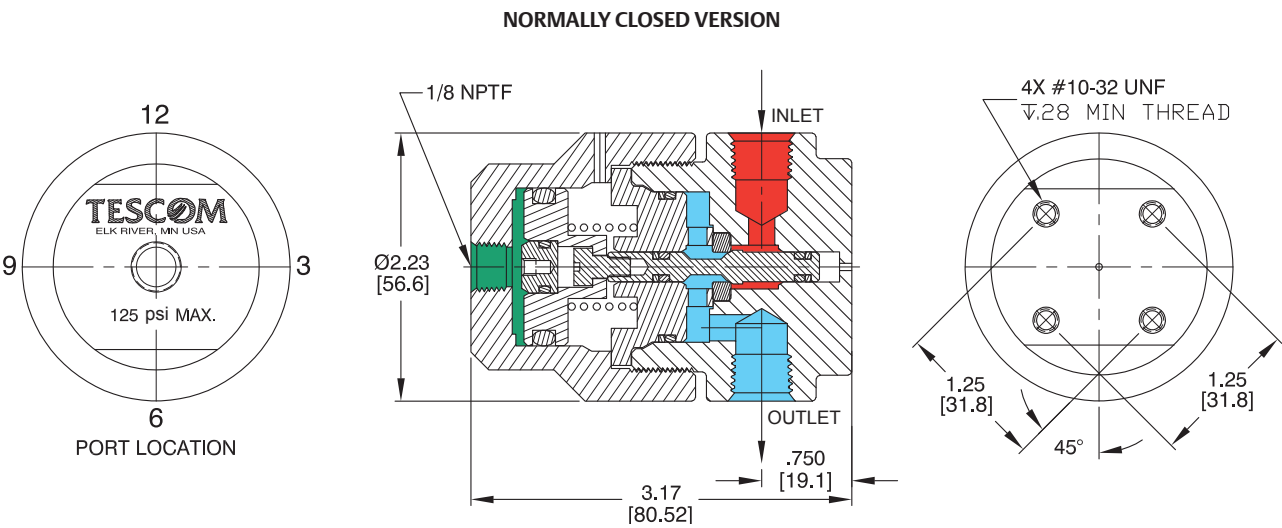
Features and Benefits

- 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

VA/VG Series Valve Drawings

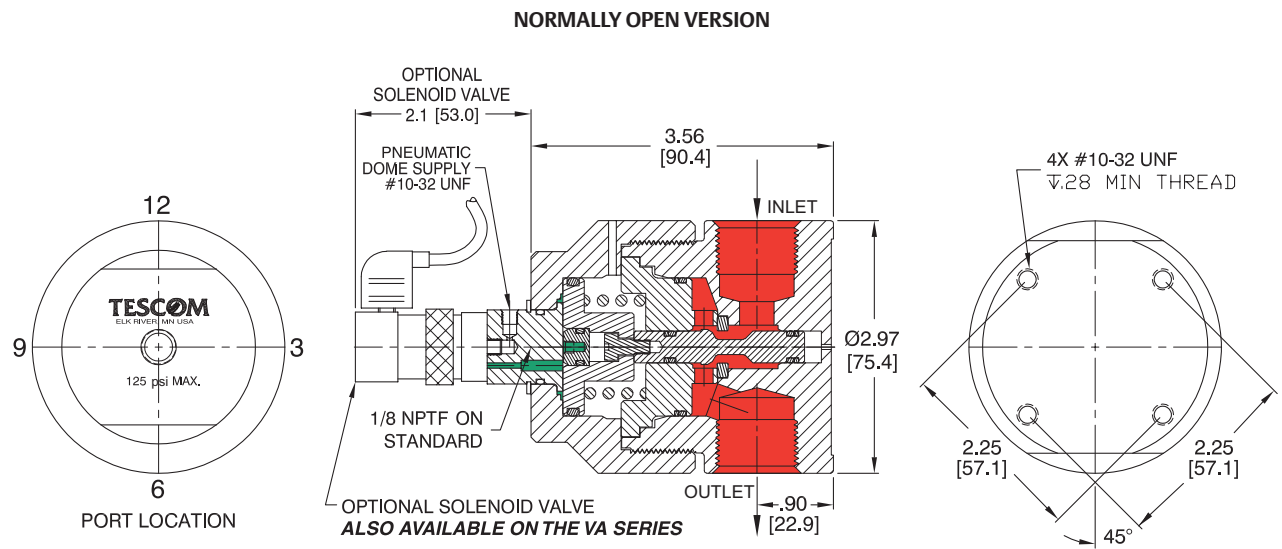
VA SERIES



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

100

100

100

100

100

100

100

VA/VG SERIES

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 SERIES						For Non-Metallic Kit					
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 P – Normally Open	1 – Brass	CB – PCTFE	Nitrile Buna-N	Brass 3500 psig 241 bar	-40°F to 165°F -40°C to 74°C 20°F to 165°F -7°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
		6 – 316 Stainless Steel	CK – PCTFE	Kalrez®**					G – 1/2" NPTF Inlet	D – 3/8" NPTF Outlet	D – 3/8" NPTF Outlet
	CV – PCTFE		FKM (Viton®-A)	Stainless Steel 3500 psig 241 bar	-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 – PCTFE		Ethylene Propylene			L – 3/8" SAE Inlet		H – 1/2" NPTF Outlet	H – 1/2" NPTF Outlet	H – 1/2" NPTF Outlet	
	CU – PCTFE		Urethane			P – 1/2" SAE Inlet		J – 3/4" NPTF Inlet	J – 3/4" NPTF Inlet	J – 3/4" NPTF Inlet	
	PB – PEEK		Nitrile Buna-N	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			K – 3/4" NPTF Outlet	K – 3/4" NPTF Outlet	K – 3/4" NPTF Outlet	
	PK – PEEK		Kalrez®**					L – 3/8" SAE Inlet	L – 3/8" SAE Inlet	L – 3/8" SAE Inlet	
	PV – PEEK		FKM (Viton®-A)	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			M – 3/8" SAE Outlet	M – 3/8" SAE Outlet	M – 3/8" SAE Outlet	
	PE – PEEK		Ethylene Propylene			P – 1/2" SAE Inlet		P – 1/2" SAE Inlet	P – 1/2" SAE Inlet	P – 1/2" SAE Inlet	
	PU – PEEK		Urethane			R – 1/2" SAE Outlet		R – 1/2" SAE Outlet	R – 1/2" SAE Outlet	R – 1/2" SAE Outlet	
	VB – Polymide (Vespel®)		Nitrile Buna-N	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	9 – None					
	VK – Polymide (Vespel®)		Kalrez®**	Stainless Steel	-15°F to 250°F -26°C to 121°C						
	VV – Polymide (Vespel®)		FKM (Viton®-A)	10,000 psig 690 bar	-40°F to 250°F -40°C to 121°C -40°F to 165°F -40°C to 74°C						
	VE – Polymide (Vespel®)		Ethylene Propylene								
	VU – Polymide (Vespel®)		Urethane								

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 6 – 316 Stainless Steel	AB – ETFE (Tefzel®)	PTFE	Nitrile, Buna-N	Brass 3500 psig / 241 bar	-40°F to 165°F / -40°C to 74°C 20°F to 250°F / -7°C to 121°C
			AK – ETFE (Tefzel®)	PTFE	Kalrez®**	Stainless Steel 3500 psig / 241 bar	-15°F to 250°F / -26°C to 121°C -40°F to 250°F / -40°C to 121°C
			AV – ETFE (Tefzel®)	PTFE	FKM (Viton®-A)		-40°F to 165°F / -40°C to 74°C
			AE – ETFE (Tefzel®)	PTFE	Ethylene Propylene		
			AU – ETFE (Tefzel®)	PTFE	Urethane		
				PTFE	Nitrile, Buna-N		
			CB – PCTFE	PTFE	Kalrez®**	Brass 3500 psig / 241 bar	-40°F to 165°F / -40°C to 74°C 20°F to 165°F / -7°C to 74°C
			CK – PCTFE	PTFE	FKM (Viton®-A)	Stainless Steel 500 psig / 241 bar	-15°F to 165°F / -26°C to 74°C -40°F to 165°F / -40°C to 74°C
			CV – PCTFE	PTFE	Ethylene Propylene		-40°F to 165°F / -40°C to 74°C
			CE – PCTFE	PTFE			-40°F to 165°F / -40°C to 74°C
			CU – PCTFE	PTFE	Urethane		
			PB – PEEK	PCTFE	Nitrile, Buna-N	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
			PK – PEEK	PCTFE	Kalrez®**	Stainless Steel	-15°F to 250°F / -26°C to 121°C -40°F to 250°F / -40°C to 121°C
			PV – PEEK	PCTFE	FKM (Viton®-A)	10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C
			PE – PEEK	PCTFE	Ethylene Propylene		
			PU – PEEK	PCTFE	Urethane		
			VB – Polyimide (Vespe®)	PCTFE	Nitrile, Buna-N	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
			VK – Polyimide (Vespe®)	PCTFE	Kalrez®**	Stainless Steel	-15°F to 250°F / -26°C to 121°C -40°F to 250°F / -40°C to 121°C
			VV – Polyimide (Vespe®)	PCTFE	FKM (Viton®-A)	10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C
			VE – Polyimide (Vespe®)	PCTFE	Ethylene Propylene		-40°F to 165°F / -40°C to 74°C
			VU – Polyimide (Vespe®)	PCTFE	Urethane		
			VG – Polyimide (Vespe®)	PCTFE	Buna-N 90 Duro		

* Brass body is limited to +200 °F (93 °C) maximum.

** FFKM, Perfluoroelastomer (Kalrez®)

VA/VG SERIES

VG Series Valve Modules



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 – PCTFE	PTFE	Nitrile, Buna-N	Brass	-40°F to 165°F / -40°C to 74°C
			CK – PCTFE	PTFE	Kalrez®**	3500 psig / 241 bar	20°F to 165°F / -7°C to 74°C
			CV – PCTFE	PTFE	FKM (Viton®-A)		-15°F to 165°F / -26°C to 74°C
			CE – PCTFE	PTFE	Ethylene Propylene	Stainless Steel	-40°F to 165°F / -40°C to 74°C
			CU – PCTFE	PTFE	Urethane	3500 psig / 241 bar	-40°F to 165°F / -40°C to 74°C
			PB – PEEK	PCTFE	Nitrile, Buna-N	Brass	-40°F to 165°F / -40°C to 74°C
			PK – PEEK	PCTFE	Kalrez®**	6000 psig / 414 bar	20°F to 250°F / -7°C to 121°C
			PV – PEEK	PCTFE	FKM (Viton®-A)		-15°F to 250°F / -26°C to 121°C
			PE – PEEK	PCTFE	Ethylene Propylene	Stainless Steel	-40°F to 250°F / -40°C to 121°C
			PU – PEEK	PCTFE	Urethane	10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C
			VB – Polymide (Vespel®)	PCTFE	Nitrile, Buna-N	Brass	-40°F to 165°F / -40°C to 74°C
			VK – Polymide (Vespel®)	PCTFE	Kalrez®**	6000 psig / 414 bar	20°F to 250°F / -7°C to 121°C
			VV – Polymide (Vespel®)	PCTFE	FKM (Viton®-A)		-15°F to 250°F / -26°C to 121°C
			VE – Polymide (Vespel®)	PCTFE	Ethylene Propylene	Stainless Steel	-40°F to 250°F / -40°C to 121°C
			VU – Polymide (Vespel®)	PCTFE	Urethane	10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C

* Brass body is limited to +200 °F (93 °C) maximum.

** FFKM, Perfluoroelastomer (Kalrez®)

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.