

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



VG SERIES VALVE

VA SERIES VALVE

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 (VespeI®)

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 VespeI® 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

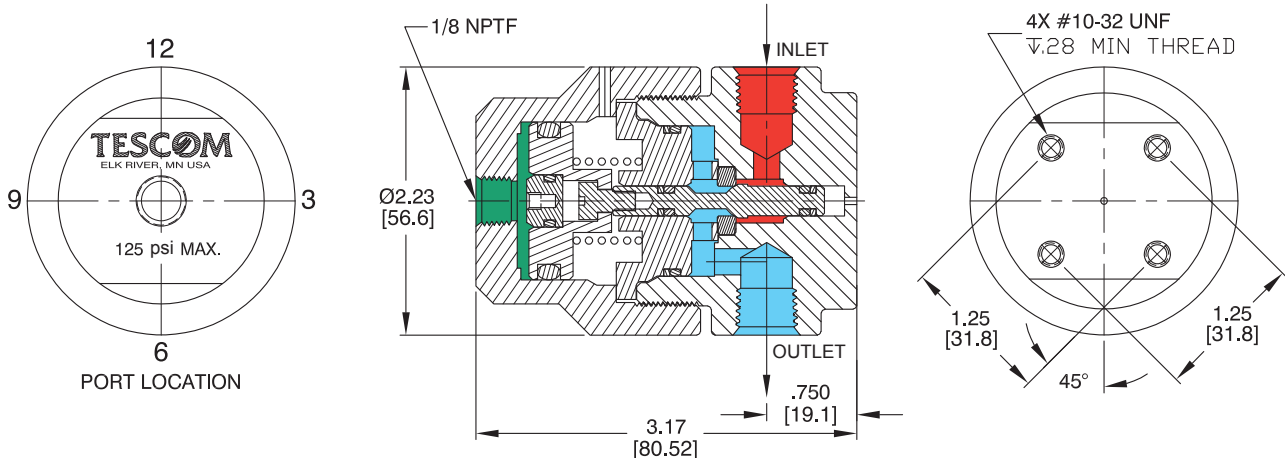
- Balanced poppet design means high reliability and exceptional cycle life
- High flow capacity: $C_V = 0.75$ or 2.0
- Normally open or normally closed
- Brass or 316 Stainless Steel machined bar stock
- Low actuation: 60 psig / 4.1 bar - minimum
- High operating pressure: 6000 psig / 414 bar maximum (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

NORMALLY CLOSED VERSION

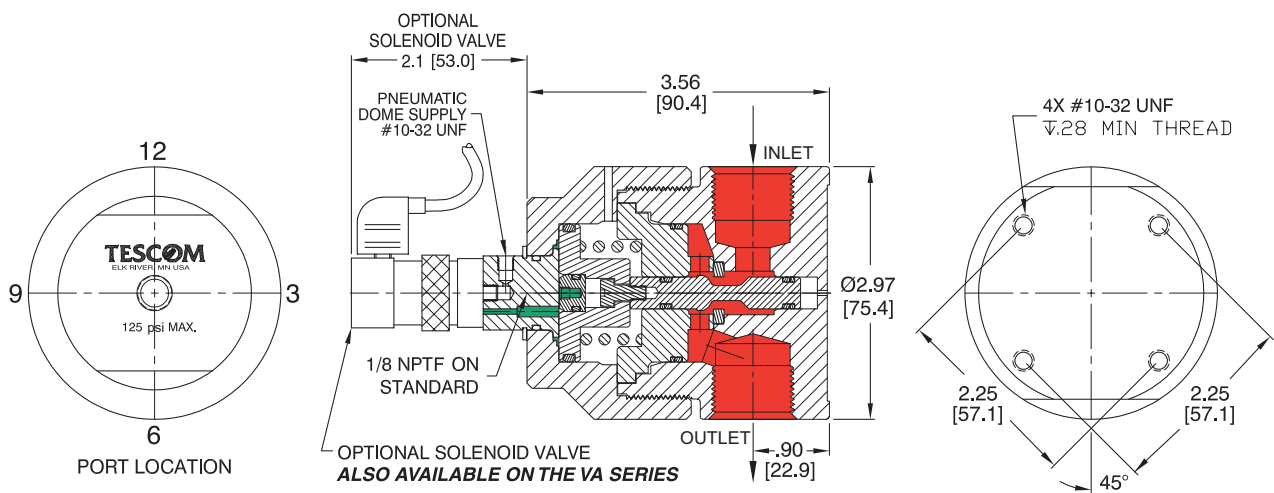


TOOLS FOR ASSEMBLY FOR VA VALVE

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 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 – ETFE (Tefzel®)	Nitrile, 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 C – 3/8" NPTF Inlet E – 1/4" SAE Inlet N – 1/8" NPTF Inlet (changes C _y 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 C _y to .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 C _y to .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 C _y to .5)
	P – Normally Open	6 – 316 Stainless Steel	AK – ETFE (Tefzel®)	Kalrez®**	241 bar	-7°C to 121°C					
			AV – ETFE (Tefzel®)	FKM (Viton®-A)	Stainless Steel	-15°F to 250°F -26°C to 121°C					
			AE – ETFE (Tefzel®)	E.P.	3500 psig	-40°F to 250°F -40°C to 121°C					
			AU – ETFE (Tefzel®)	Urethane	241 bar	-40°F to 165°F -40°C to 74°C					
			CB – PCTFE	Nitrile, Buna-N	Brass 3500 psig	-40°F to 165°F -40°C to 74°C					
			CK – PCTFE	Kalrez®**	241 bar	20°F to 165°F -7°C to 74°C					
			CV – PCTFE	FKM (Viton®-A)	Stainless Steel	-15°F to 165°F -26°C to 74°C					
			CE – PCTFE	Ethylene Propylene	3500 psig	-40°F to 165°F -40°C to 74°C					
			CU – PCTFE	Urethane	241 bar	-40°F to 165°F -40°C to 74°C					
			PB – PEEK	Nitrile, 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 – Polyimide (Vespel®)	Nitrile, Buna-N	Brass 6000 psig	-40°F to 165°F -40°C to 74°C					
			VK – Polyimide (Vespel®)	Kalrez®**	414 bar	20°F to 250°F -7°C to 121°C					
			VV – Polyimide (Vespel®)	FKM (Viton®-A)	Stainless Steel	-15°F to 250°F -26°C to 121°C					
			VE – Polyimide (Vespel®)	E.P.	10,000 psig	-40°F to 250°F -40°C to 121°C					
			VU – Polyimide (Vespel®)	Urethane	690 bar	-40°F to 165°F -40°C to 74°C					

* For additional porting types, consult factory.

* Brass body is limited to +200 °F (93 °C) maximum.
** FFKM, Perfluoroelastomer (Kalrez®)

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

For Non-Metallic Kit
K I T N

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 – PCTFE	Nitrile Buna-N	Brass 3500 psig 241 bar	-40°F to 165°F -40°C to 74°C 20°F to 165°F	9 – None C – CCL V – Solenoid Valve (24 volt) W – Solenoid Valve (12 volt)	C – 3/8" NPTF Inlet G – 1/2" NPTF Inlet J – 3/4" NPTF Inlet L – 3/8" SAE Inlet P – 1/2" SAE Inlet	C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet G – 1/2" NPTF Inlet H – 1/2" NPTF Outlet J – 3/4" NPTF Inlet K – 3/4" NPTF Outlet L – 3/8" SAE Inlet M – 3/8" SAE Outlet P – 1/2" SAE Inlet R – 1/2" SAE Outlet 9 – None	C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet G – 1/2" NPTF Inlet H – 1/2" NPTF Outlet J – 3/4" NPTF Inlet K – 3/4" NPTF Outlet L – 3/8" SAE Inlet M – 3/8" SAE Outlet P – 1/2" SAE Inlet R – 1/2" SAE Outlet 9 – None	C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet G – 1/2" NPTF Inlet H – 1/2" NPTF Outlet J – 3/4" NPTF Inlet K – 3/4" NPTF Outlet L – 3/8" SAE Inlet M – 3/8" SAE Outlet P – 1/2" SAE Inlet R – 1/2" SAE Outlet 9 – None
	P – Normally Open	6 – 316 Stainless Steel	CK – PCTFE	Kalrez®**	Stainless Steel 3500 psig 241 bar	-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					
			CV – PCTFE	FKM (Viton®-A)	Stainless Steel 3500 psig 241 bar	-40°F to 165°F -40°C to 74°C					
			CE – PCTFE	Ethylene Propylene		-40°F to 165°F -40°C to 74°C					
			CU – PCTFE	Urethane							
			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					
			PK – PEEK	Kalrez®**		-7°C to 121°C -15°F to 250°F					
			PV – PEEK	FKM (Viton®-A)	Stainless Steel 10,000 psig 690 bar	-26°C to 121°C -40°F to 250°F -40°C to 121°C					
			PE – PEEK	Ethylene Propylene		-40°F to 165°F -40°C to 74°C					
			PU – PEEK	Urethane							
			VB – Polyimide (VespeI®)	Nitrile Buna-N	Brass 6000 psig 414 bar	-40°F to 165°F -40°C to 74°C 20°F to 250°F					
			VK – Polyimide (VespeI®)	Kalrez®**	Stainless Steel	-7°C to 121°C -15°F to 250°F -26°C to 121°C					
			VV – Polyimide (VespeI®)	FKM (Viton®-A)	10,000 psig 690 bar	-40°F to 250°F -40°C to 121°C					
			VE – Polyimide (VespeI®)	Ethylene Propylene		-40°F to 165°F -40°C to 74°C					
			VU – Polyimide (VespeI®)	Urethane							

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

** FFKM, Perfluoroelastomer (Kalrez®)

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 – 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
		6 – 316 Stainless Steel	AK – ETFE (Tefzel®)	PTFE	Kalrez®**	Stainless Steel 3500 psig / 241 bar	-40°F to 250°F / -40°C to 121°C -40°F to 165°F / -40°C to 74°C
	AV – ETFE (Tefzel®)		PTFE	FKM (Viton®-A)			
	AE – ETFE (Tefzel®)		PTFE	Ethylene Propylene			
	AU – ETFE (Tefzel®)		PTFE	Urethane			
	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			
	CE – PCTFE		PTFE	Urethane			
	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 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	
	PV – PEEK		PCTFE	FKM (Viton®-A)			
	PE – PEEK	PCTFE	Ethylene Propylene				
	PU – PEEK	PCTFE	Urethane				
	VB – Polyimide (Vespel®)	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 (Vespel®)	PCTFE	Kalrez®**	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		
	VV – Polyimide (Vespel®)	PCTFE	FKM (Viton®-A)				
	VE – Polyimide (Vespel®)	PCTFE	Ethylene Propylene				
	VU – Polyimide (Vespel®)	PCTFE	Urethane				
	VG – Polyimide (Vespel®)	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 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	Kalrez®**			
			CV – PCTFE	PTFE	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	
			CE – PCTFE	PTFE	Ethylene Propylene Urethane			
			CU – PCTFE	PTFE				
	PB – PEEK PK – PEEK PV – PEEK PE – PEEK PU – PEEK	6 – 316 Stainless Steel	6 – 316 Stainless Steel	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®**		
				PV – PEEK	PCTFE	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
				PE – PEEK	PCTFE	Ethylene Propylene Urethane		
				PU – PEEK	PCTFE			
VB – Polymide (Vespe®) VK – Polymide (Vespe®) VV – Polymide (Vespe®) VE – Polymide (Vespe®) VU – Polymide (Vespe®)	6 – 316 Stainless Steel	6 – 316 Stainless Steel	VB – Polymide (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 – Polymide (Vespe®)	PCTFE	Kalrez®**			
			VV – Polymide (Vespe®)	PCTFE	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	
			VE – Polymide (Vespe®)	PCTFE	Ethylene Propylene Urethane			
			VU – Polymide (Vespe®)	PCTFE				

* 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.