

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 (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

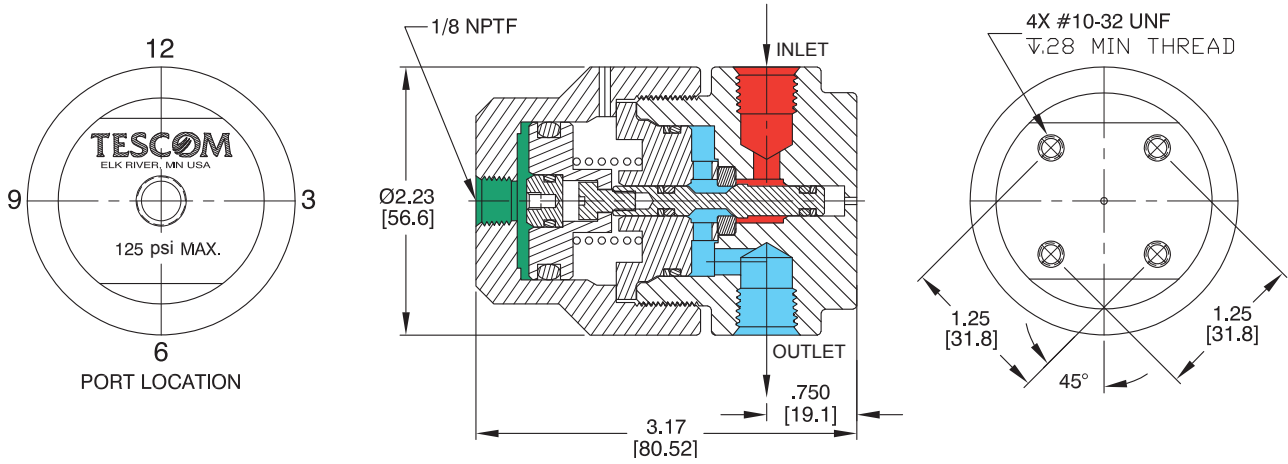
- Balanced poppet design means high reliability and exceptional cycle life
- High flow capacity: $C_V = 0.75$ or 2.0
- Normally open or normally closed
- Brass or 316 Stainless Steel machined bar stock
- Low actuation: 60 psig / 4.1 bar - minimum
- High operating pressure: 6000 psig / 414 bar maximum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

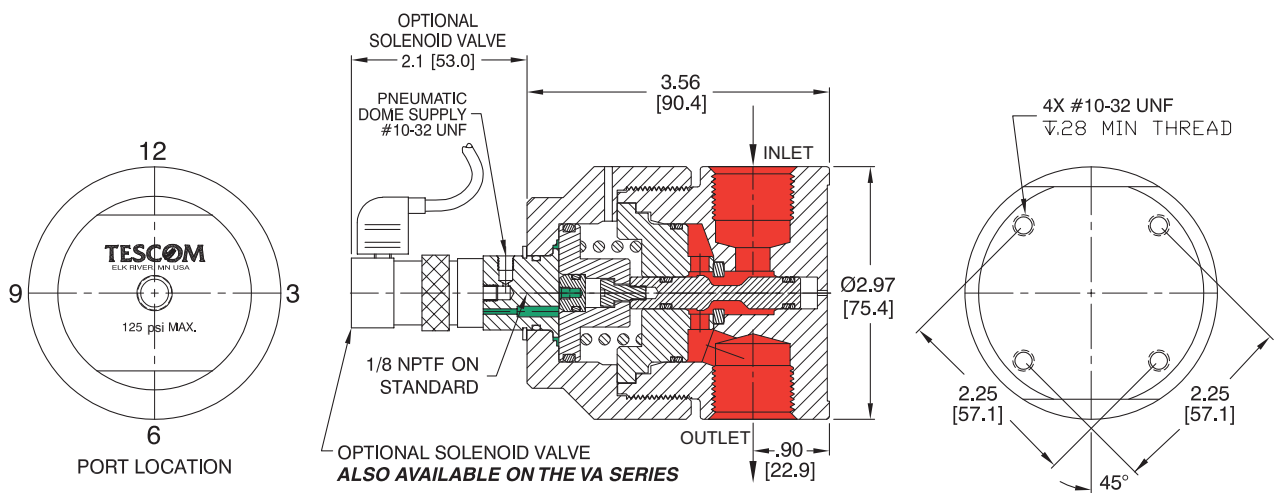


TOOLS FOR ASSEMBLY FOR VA VALVE

| 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



| 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 P – Normally Open | 1 – Brass 6 – 316 Stainless Steel | AB – ETFE (Tefzel®) | Nitrile, 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 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) |
| | | | AK – ETFE (Tefzel®) | Kalrez®** | | 20°F to 250°F -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 241 bar | -40°F to 250°F -40°C to 121°C | | | | | |
| | | | AU – ETFE (Tefzel®) | Urethane | | -40°F to 165°F -40°C to 74°C | | | | | |
| | | | CB – PCTFE | Nitrile, Buna-N | Brass 3500 psig 241 bar | -40°F to 165°F -40°C to 74°C | | | | | |
| | | | CK – PCTFE | Kalrez®** | | 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 241 bar | -40°F to 165°F -40°C to 74°C | | | | | |
| | | | CU – PCTFE | Urethane | | -40°F to 165°F -40°C to 74°C | | | | | |
| | | | PB – PEEK | Nitrile, Buna-N | Brass 6000 psig 414 bar | -40°F to 165°F -40°C to 74°C | | | | | |
| | | | PK – PEEK | Kalrez®** | | 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 | -40°F to 250°F -40°C to 121°C | | | | | |
| | | | PU – PEEK | Urethane | | -40°F to 165°F -40°C to 74°C | | | | | |
| | | | VB – Polyimide (Vespel®) | Nitrile, Buna-N | Brass 6000 psig 414 bar | -40°F to 165°F -40°C to 74°C | | | | | |
| | | | VK – Polyimide (Vespel®) | Kalrez®** | | 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 690 bar | -40°F to 250°F -40°C to 121°C | | | | | |
| | | | VU – Polyimide (Vespel®) | Urethane | | -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 SERIES | C TYPE | 1 BODY AND TRIM MATERIAL | CB SEAT | | | | 9 OPTIONS | C PORT LOCATION 3 SIZE AND TYPE | 9 PORT LOCATION 6 SIZE AND TYPE | D PORT LOCATION 9 SIZE AND TYPE | 9 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 – 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 – 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 | C – CCL V – Solenoid Valve (24 volt) W – Solenoid Valve (12 volt) | G – 1/2" NPTF Inlet J – 3/4" NPTF Inlet L – 3/8" SAE Inlet P – 1/2" SAE 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 | 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 | 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 |
| | | | 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®** | Stainless Steel 10,000 psig 690 bar | -7°C to 121°C -15°F to 250°F -26°C to 121°C | | | | | |
| | | | 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 10,000 psig 690 bar | -7°C to 121°C -15°F to 250°F -26°C to 121°C | | | | | |
| | | | VV – Polyimide (VespeI®) | FKM (Viton®-A) | Stainless Steel 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 – Polyimide (VespeI®) | Ethylene Propylene | | | | | | | |
| | | | 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 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) | | | | |
| | AE – ETFE (Tefzel®) | PTFE | Ethylene Propylene | | | | |
| | AU – ETFE (Tefzel®) | PTFE | Urethane | | | | |
| | AA – ETFE (Tefzel®) | 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 | -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 | 500 psig / 241 bar | -40°F to 165°F / -40°C to 74°C | | |
| | 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 | -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 (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 | -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) | 10,000 psig / 690 bar | -40°F to 165°F / -40°C to 74°C | | |
| | 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 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 | |
| | | | CK – PCTFE | PTFE | Kalrez®** | | | |
| | | | CV – PCTFE | PTFE | FKM (Viton®-A) | | | |
| | | | CE – PCTFE | PTFE | Ethylene Propylene | | | |
| | | | CU – PCTFE | PTFE | Urethane | | | |
| | | | | | | | | |
| | 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 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 |
| | | | | PK – PEEK | PCTFE | Kalrez®** | | |
| | | | | PV – PEEK | PCTFE | FKM (Viton®-A) | | |
| | | | | PE – PEEK | PCTFE | Ethylene Propylene | | |
| | | | | PU – PEEK | PCTFE | Urethane | | |
| | | | | | | | | |
| 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 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 | |
| | | | VK – Polymide (Vespe®) | PCTFE | Kalrez®** | | | |
| | | | VV – Polymide (Vespe®) | PCTFE | FKM (Viton®-A) | | | |
| | | | VE – Polymide (Vespe®) | PCTFE | Ethylene Propylene | | | |
| | | | VU – Polymide (Vespe®) | PCTFE | Urethane | | | |
| | | | | | | | | |

* 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.