



VD3 Series Diaphragm Valves

VD3 Series Pressure Rating up to 241bar (3500 psig)

Catalog #: VD3-0
Oct. 2012



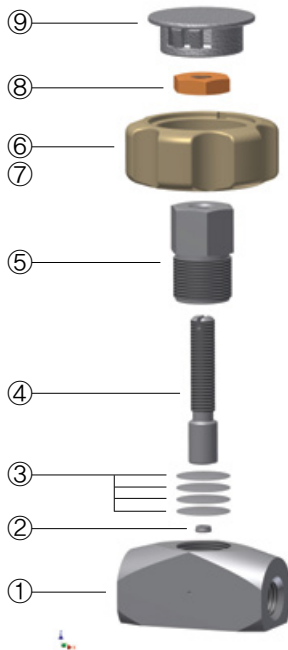
Features

- It is featured that the diaphragm valve serves economical, high performance and high cycle life time.
- The diaphragm valve is used for shut-off, isolation in gas control systems, and analyzer sampling systems.
- The valve ensures positive and consistent shut-off with manual and offers a metal to metal seal to atmosphere for leak integrity with thin plate diaphragm.

Technical Data

| Body Material | Seat Material | Temperature Rating °F (°C) | Pressure Rating @ -40 ~ 160 °F (-40 ~ 70°C) | Control Volume |
|---------------|---------------|-------------------------------|--|----------------|
| SS316L/A276 | PCTFE | -40 ~ 150 (-40 ~ 66) | 0 ~ 3,500 psig (241 barg) | 1 cc |
| BRASS/B16 | PCTFE | -40 ~ 150 (-40 ~ 66) | 0 ~ 3,500 psig (241 barg) | 1 cc |

Material of Construction



| No. | Component | VD3 Series (Standard) |
|-----|-----------|----------------------------|
| 1 | BODY | SS316L(A276) / Brass (B16) |
| 2 | SEAT | PCTFE |
| 3 | DIAPHRAGM | SS316L |
| 4 | STEM | SS316L |
| 5 | BONNET | SS316L |
| 6 | KNOB NUT | SS316L |
| 7 | KNOB | ABS |
| 8 | LOCK NUT | SS316L |
| 9 | KNOB CAP | ABS |

Factory Test

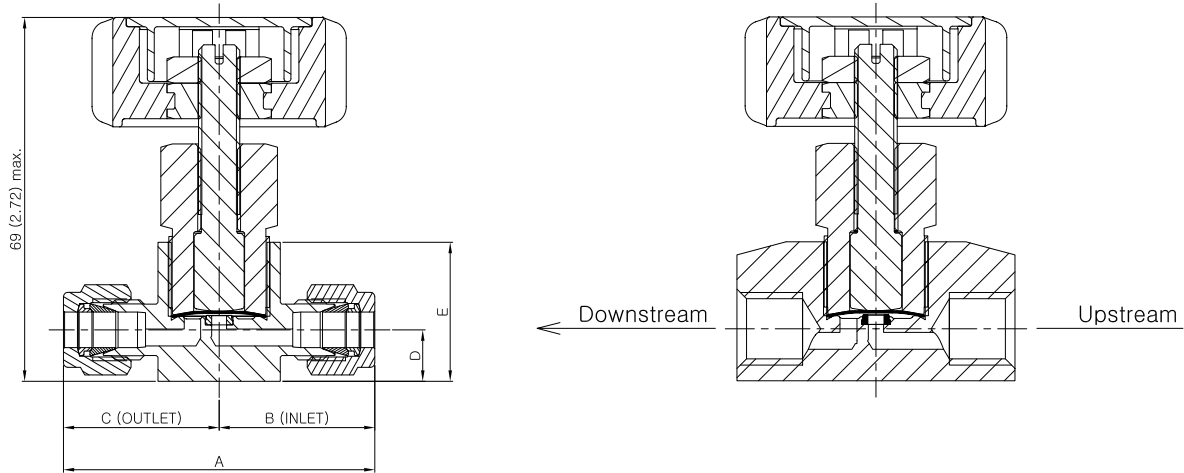
Every valve is factory tested with nitrogen gas at 265bar (3,850psig) for leakage to a maximum allowable leak rate of 0.1 SCCM at seat. Hydraulic shell test is optionally performed at 1.5 times the working pressure to a requirement of no detectable leakage with a liquid leak detector.

Cleaning and Packaging

Every valve is cleaned and packaged in accordance with DK-LOK cleaning standard DC-01. Special cleaning and packaging in accordance with DK-LOK DC-11 ensures compliance with product cleaning of ASTM G93 Level C is available on request for valves with PCTFE and PTFE seats.



Dimensions and Port Layout



| Basic Ordering Number | End Connections | | Dimensions mm (inches) | | | | | |
|-----------------------|--------------------|--------------------|------------------------|-------------|-------------|-------------|---------------|----------------|
| | Inlet (B) | Outlet (C) | Orifice | A | B | C | D | E |
| D-4T- | 1/4 in. Dk-Lok | | 2.8 (0.11) | 58.6 (2.31) | 29.3 (1.15) | 29.3 (1.15) | 9.4 (0.37) | 25.4 (1.00) |
| M-4N- | 1/4 in. Dk-Lok | | | 48.4 (1.91) | 24.2 (0.95) | 24.2 (0.95) | | |
| F-4N- | 1/4 in. Dk-Lok | | | 50.8 (2.00) | 25.4 (1.00) | 25.4 (1.00) | | |
| DF-4T4N- | 1/4 in. Dk-Lok | 1/4 in. Female NPT | | 54.7 (2.15) | 29.3 (1.15) | 25.4 (1.00) | | |
| FD-4N4T- | 1/4 in. Female NPT | 1/4 in. Dk-Lok | | | 25.4 (1.00) | 29.3 (1.15) | | |
| DM-4T4N- | 1/4 in. Dk-Lok | 1/4 in. Male NPT | | 53.5 (2.11) | 29.3 (1.15) | 24.2 (0.95) | | |
| MD-4N4T- | 1/4 in. Male NPT | 1/4 in. Dk-Lok | | | 24.2 (0.95) | 29.3 (1.15) | | |
| MF-4N4N- | 1/4 in. Male NPT | 1/4 in. Female NPT | | 49.6 (1.95) | 24.2 (0.95) | 25.4 (1.00) | | |
| FM-4N4N- | 1/4 in. Female NPT | 1/4 in. Male NPT | | | 25.4 (1.00) | 24.2 (0.95) | | |

How to Order

Select applicable valve basic ordering number, options and body material designator listed below.

VD3-F-4N

| Handle Type | Seat Materials | Body Material |
|---|---------------------------------|---|
| Nil: Handwheel A: Indicating Arrow L: Lever | Nil: Standard PCTFE PK: PEEK | ● S: 316L stainless steel ● B: Brass |

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance.

Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

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