# V46A series Hex. Body Needle Valves

Pressure rating up to 10 000 psig

Catalog No. V46A-1
Aug. 2009

## Features

- **Packing bolt** permits packing adjustment externally.
- **Chevron PTFE packing** design provides far improved sealing integrity.
- **Packing** below stem threads is to isolate **threads** from system fluid and lubricant washout.
- **Non-rotating** stem tip at closure for long-life and leak-tight shutoff.
- **Lock plate** ensures the valve fastened to the body.
- **NACE** MR0175/ISO 15156-3 applicable.

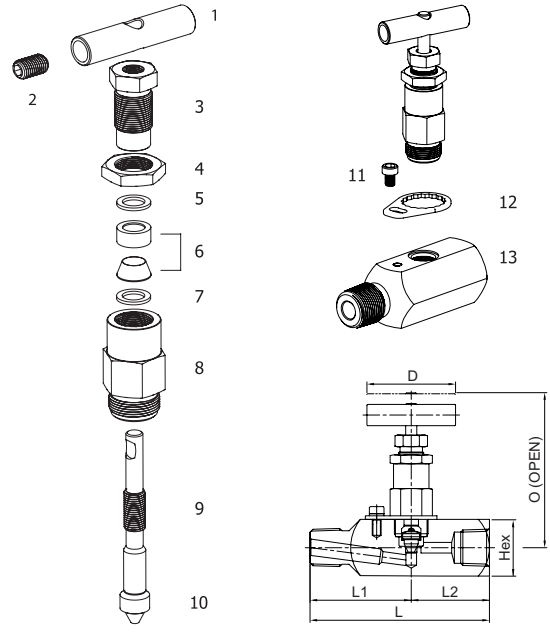
## Pressure-Temperature Ratings

| Body Material | Packing material | Temperature Rating | Pressure Rating @ 38 C (100 F) | Pressure Rating @ Max. Temp. |
|---|---|---|---|---|
| Stainless steel | PTFE | - 54 to 232 °C (-65 to 450 °F) | 689 bar (10 000 psig) | 285 bar@232 °C 4130 psig@450 °F |
| | Grafoil | -54 to 648 °C (-65 to 1200 °F) | | 118 bar@648 °C 1715 psig @ 1200 °F |
| Carbon steel | PTFE | - 29 to 176 °C (-20 to 350F) | 689 bar (10 000 psig) | 360 bar @ 176 °C (5230 psig @ 350 °F) |
| | Grafoil | - 29 to 176 °C (-20 to 350°F) | | |

## Materials of Construction

| Component | Valve Body Materials | |
|---|---|---|
| | Stainless Steel | Carbon steel |
| | Grade/ASTM Specification | |
| 1. Handle | Stainless Steel | Carbon steel |
| 2. Set screw | SS316/A276 or A479 | Carbon steel |
| 3. Packing bolt | | C.Steel/JIS G4051 |
| 4. Lock nut | | |
| 5. Upper gland | | SS316/A276 or A479 |
| 6. Packing | Standard chevron PTFE packing. Optional Grafoil. | |
| 7. Lower gland | SS316/A276 or A479 | SS316/A276 or A479 |
| 8. Bonnet | | C.Steel/JIS G4051 |
| 9. Stem | | SS316/A276 or A479 |
| 10. Non-rotating stem disc | SS630/A564 | |
| 11. Lock bolt | Stainless steel | |
| 12. Lock plate | | |
| 13. Body | SS316/A276 or A479 | C.Steel/ JIS G4051, White zinc galvanized. |

Wetted components listed in blue. Grafoil: TM UCAR




## Ordering Information and Dimensions

| Basic Ordering No. | | End Connection Inlet | End Connection Outlet | Orifice in. (mm) | CV | Dimensions inch (mm) L | L1 | L2 | Hex | D | O |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V46A- | F4N- | 1/4 Female NPT | | 0.185 (4.7) | 0.83 | 3.00 (76.2) | 1.50 (38.1) | 1.50 (38.1) | 1.25 (31.75) | 2.52 (64.0) | 3.48 (88.5) |
| | F6N- | 3/8 Female NPT | | | | | | | | | |
| | F8N- | 1/2 Female NPT | | | | | | | | | |
| | MF8N- | 1/2 Male NPT | 1/2 Female NPT | | | 3.50 (88.9) | 2.21 (56.1) | 1.29 (32.8) | | | |
| | MF12N8N- | 3/4 Male NPT | 1/2 Female NPT | | | | 2.00 (50.8) | 1.50 (38.1) | | | |

Dimensions shown are for reference only and subject to change.

## How to order

- To complete ordering number, add material designator **S** for stainless steel or **C** for carbon steel. Example V46A-F8N-**S**
- To order optional Grafoil packing, insert **GF** to the ordering number. Example V46A-F8N-**GF**-S
- To order NACE applicable valve, insert **SG** to the ordering number. Example V46A-F8N-GF-**SG**-S

## Factory test, cleaning and packaging

- Every valve is factory tested with nitrogen @ 69 bar (1000 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
- Stem packing is tested for no detectable leakage.
- Every valve is cleaned and packaged in accordance with DK Tech Corporation cleaning standard DC-01. Optional DC-11 cleaning for oxygen application is available on request.

## Packing adjustment and Actuation Torque

- Extreme or rapid temperature cycle while valve in service may require packing adjustment.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.

## 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.

Quality System Approvals | Dk-Lok Tube Fitting Certification Listing | D-Pro Valve Certification Listing

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